PLANNING AND ZONING COMMISSION AGENDA
Monday, October 24, 2016
Ketchum City Hall
480 East Avenue North, Ketchum, ID 83340

1. **5:30 PM - CALL TO ORDER: City Hall, 480 East Avenue North, Ketchum, Idaho**

2. PUBLIC COMMENT - Communications from the public for items not on the agenda.

3. COMMUNICATIONS FROM STAFF
    a. Next Stage Theater Performing Arts Center Pre-Application Design Review: The applicant is proposing a complete reconstruction of the existing performing arts facility. The properties are 0.126 acres and 0.126 in size and zoned Community Core (CC), Sub-district A.
    b. *Continued from Monday, June 13, 2016, Monday, June 27, 2016, Monday, July 11, 2016, and Monday, October 10, 2016:* 911 North Main Street, Ketchum, ID (Ketchum AM Lot 5A Block 30 18,590 SF). The applicant is proposing to construct a motor vehicle fueling station with accessory food service. The property is 0.435 acres in size and zoned Light Industrial-1 (LI-1).
    c. Zoning Code Amendments, Phase II: City-initiated amendments to Chapter 17.125, Off Street Parking and Loading, to align the parking ordinance with objectives of the Comprehensive Plan, to promote uses that contribute to the vitality of downtown, to incentivize Community Housing, and to better reflect the needs of our full time and seasonal residents and visitors.

4. CONSENT CALENDAR
    a. Findings: Belling Driveway/Landscape Remodel Waterways Design Review
    b. Minutes: October 10, 2016

5. FUTURE PROJECTS AND NOTICING REQUIREMENTS

6. STAFF REPORTS & CITY COUNCIL MEETING UPDATE

7. COMMISSION REPORTS AND EX PARTE DISCUSSION DISCLOSURE

8. ADJOURNMENT

Any person needing special accommodations to participate in the meeting should contact the City Clerk's Office as soon as reasonably possible at 726-3841. All times indicated are estimated times, and items may be heard earlier or later than indicated on the agenda.

City of Ketchum
Planning & Building

STAFF REPORT
KETCHUM PLANNING AND ZONING COMMISSION
REGULAR MEETING OF October 24, 2016

PROJECT:	NexStage Theater Performing Arts Center
FILE NUMBER:	#16-075
OWNERS:	Sun Valley Performing Arts Center 501(c) 3; Tim Mott, Director
REPRESENTATIVE:	Michael Doty Associates, Architects
REQUEST:	Pre-Application Design Review approval of new construction of a place of assembly to replace an existing place of assembly.
LOCATION:	120 South Main Street AND 111 South Leadville Avenue (Ketchum, Lot 4, Block 1 AND Ketchum Lot 8, Block 1)
ZONING:	Commercial Core (CC), Subdistrict A
OVERLAY:	None
NOTICE:	Notice was mailed to adjacent property owners on October 10, 2016.
REVIEWER:	Carl Anderson, Associate Planner

INTRODUCTION

The Pre-application Design Review is an open discussion between the applicant, the Planning and Zoning Commission, and the public.

The site property is located in subdistrict A, Retail Core of the Community Core (CC) district. The site contains one existing building, located on Ketchum Lots 1 and 8 of Block 1. The applicant is proposing to entirely demolish the existing NexStage Theater Building and replace it with a new place of assembly, to be used as a theater, and for uses accessory to a theater operation. The applicant is proposing to construct a three story building with theater space on the first and second floors, meeting space on the second floor, and theater office space on all three floors. A portion of the second floor space will be open to the theater space below, located on the first floor.

ANALYSIS

The purpose of Pre-Application Design Review is to allow the Commission to exchange ideas and give direction to the applicant on the “design concept”, keeping in mind the purpose of this chapter and the application of

the evaluation standards. Design Review approval may be granted by the Commission only if the applicant demonstrates that:

- The project does not jeopardize the health, safety or welfare of the public.
- The project conforms to all applicable standards and criteria as set forth in this chapter, 17.96: Design Review, and any other standards as adopted or amended by the City of Ketchum from time to time.

If upon Pre-Application Design Review the Commission feels that all Design Review standards have been met or can be met the Commission may recommend the applicant to move forward with Design Review; the Commission may attach conditions to approval as it determines necessary to ensure the project complies with Design Review standards and ensures the health, safety, or welfare of the public. All conditions must cite the appropriate standard for imposing such condition. Such conditions include, but are not limited to:

- Ensuring compliance with applicable standards.
- Requiring conformity to approved plans and specifications.
- Requiring security for compliance with the terms of the approval.
- Minimizing adverse impact on other development.
- Controlling the sequence, timing and duration of development and ongoing maintenance.
- Requiring more restrictive standards than those generally found in the Ketchum Municipal Code.

Upon receipt the complete application and noticing of the application for Pre-Application Design Review the applicant has requested to continue the Pre-Application Design Review to the November 14, 2016 meeting in order to make material revisions.

As such staff has not attached the plans and exhibits initially submitted with the application since the designs are being revised. All exhibits will be attached to the staff report that is prepared for the meeting that the application is continued to. The application is attached; however, staff notes that the percent of building coverage, Floor Area Ratio, and setbacks will change subject to the revised dimensions of the proposed development.

STAFF RECOMMENDATION

Staff recommends continuing the application to the November 14th, 2016 Planning and Zoning Commission meeting.

COMMISSION OPTIONS

1. **Continuation of the Application.** "Motion to continue the application from Sun Valley Performing Arts Center for Pre-Application Design Review to a date certain of [insert date of meeting] in order to address the following design changes [Commission to insert design changes]".

RECOMMENDED CONDITIONS

None at this time.

ATACHMENTS:

A. Application

City of Ketchum
Planning & Building

OFFICE USE ONLY
File Number:
Date Received:
By:
Pre Application Fee Paid:
Design Review Fee Paid:
Approved Date:
Denied Date:
By:
ADRE: Yes ☐

Design Review Application

APPLICANT INFORMATION	
Project Name: NexStage Theater Performing Arts Center	Phone: 650-740-2456
Owner: Sun Valley Performing Arts Center 501(c)3; Tim Mott, Director	Mailing Address: PO Box 1702; Ketchum, Idaho 83340
Email: tim@mottventures.com	
Architect/Representative: Michael Doty Associates, Architects	Phone: 208-726-4228
Email: brenda@mda-arc.com	Mailing Address: PO Box 2792; Ketchum, Idaho 83340
Architect License Number: AR-1612	
Engineer of Record:	Phone:
Email:	Mailing Address:
Engineer License Number:	

All design review plans and drawings for public commercial projects, residential buildings containing more than four (4) dwelling units and development projects containing more than four (4) dwelling units shall be prepared by an Idaho licensed architect or an Idaho licensed engineer.

PROJECT INFORMATION			
Legal Land Description: Ketchum Lot 4, Block 1; West 10' of Alley AND Ketchum Lot 8, Block 1; East 10' of Alley			
Street Address: current addressing: 120 South Main Street and 111 South Leadville Avenue [subject to change following Fire Department direction]			
Lot Area (Square Feet): 12,100 SF			
Zoning District: CC, subdistrict A			
Overlay District: ☐Floodplain	☐ Avalanche	☐Mountain	
Type of Construction: ■New	☐Addition	☐Remodel	☐Other
Anticipated Use: Place of assembly		Number of Residential Units: 0	

TOTAL FLOOR AREA	Proposed	Existing
Basements	9,055 SF (not counted in F.A.R.) Sq. Ft.	-- Sq. Ft.
1st Floor	10,958 SF Sq. Ft.	-- Sq. Ft.
2nd Floor	8,046 SF Sq. Ft.	-- Sq. Ft.
3rd Floor	3,175 SF Sq. Ft.	-- Sq. Ft.
Mezzanine	-- Sq. Ft.	-- Sq. Ft.
Total	31,234 GSF; 22,179 F.A.R. Sq. Ft.	-- Sq. Ft.

FLOOR AREA RATIO		
Community Core: 1.83 proposed,1.0 permitted	Tourist: --	General Residential-High: --

BUILDING COVERAGE/OPEN SPACE
Percent of Building Coverage: 96.7% (building coverage @ 11,699.0 SF / lot size @ 12,100 SF (55'x220'))

DIMENSIONAL STANDARDS/PROPOSED SETBACKS			
Front: 2'-6" min. proposed, 0 ft allowed	**Side:** 9" prop'd, 0 ft allowed	**Side:** 0 ft prop'd, 0 ft allowed	**Rear:** 1'-3" prop'd, 0 ft allowed
Building Height: 42 feet			

OFF STREET PARKING
Parking Spaces Provided: 0
Curb Cut: 0 Sq. Ft. 0 %

WATER SYSTEM	
■ Municipal Service	☐ Ketchum Spring Water

The Applicant agrees in the event of a dispute concerning the interpretation or enforcement of the Design Review Application in which the city of Ketchum is the prevailing party, to pay the reasonable attorney fees, including attorney fees on appeal and expenses of the city of Ketchum. I, the undersigned, certify that all information submitted with and upon this application form is true and accurate to the best of my knowledge and belief.

Signature of Owner/Representative Date

City of Ketchum
Planning & Building

October 24, 2016

Planning and Zoning Commission
City of Ketchum
Ketchum, Idaho

Commissioners:

STAFF REPORT
KETCHUM PLANNING AND ZONING COMMISSION
REGULAR MEETING OF OCTOBER 24, 2016

PROJECT:	Bracken Station Conditional Use Permit (CUP)
FILE NUMBERS:	#16-034
OWNER:	North Town Partners LLP
REPRESENTATIVE:	Steve Cook, AIA
REQUEST:	Conditional Use Permit (CUP) for a motor vehicle fueling station and food service establishment
LOCATION:	911 N. Main Street (Ketchum, AM Lot 5A, Block 30)
ZONING:	Light Industrial District Number 1 (LI-1)
NOTICE:	Property owners within 300 foot radius of subject property were mailed notice on May, 16, 2016. A public hearing notice was published in the Legal Notices of the Idaho Mountain Express on May 25, 2016. Notice was posted on the subject property and in three public City locations on May, 17, 2016. Continuation of the hearing to June 27, 2016, was announced during the June 13, 2016, hearing. Continuation to July 11, 2016, was announced during the June 27, 2016, meeting. Continuation to July 25, 2016 was announced at the July 11, 2016 meeting. Continuation to October 10, 2016 was announced at the July 25, 2016 meeting. Continuation to October 24, 2016, was announced at the October 10, 2016, meeting.
REVIEWER:	Brittany Skelton, Senior Planner

Introduction

No new analysis is contained in this staff report. The only changes are to the attachments, as follows:

- Attachment F - "Bracken Station – Additional Information Requested Response" memo from Hales Engineering, dated October 4, 2016, has been replaced with a copy of the memo that bears an engineer's stamp.
- Attachment GG - Ketchum – Bracken Station TIS, Additional Information memorandum, dated July 6, 2016, has been replaced with a copy of the memo that bears an engineer's stamp.
- Appendix A – "Bracken Station Traffic Impact Study Updated" dated October 3, 2016 and attached to the October 10, 2016 staff report has been replaced with a copy of that report that contains an engineer's stamp.
- Appendix B – "Ketchum Gas Station Traffic Impact Study Updated" dated May 2016 and attached to the October 10, 2016 staff report has not been included.
- Appendix C – Public Comment Received June 25, 2016 through October 4, 2016, attached to the October 10, 2016 staff report has not been included because no additional comments have been accepted since the hearing was closed to public comment during the October 10, 2016 meeting.

The applicant is requesting a Conditional Use Permit (CUP) to allow redevelopment of 911 N. Main for a motor vehicle fueling station and a food service establishment. Motor vehicle fueling stations and food service (subject to limitations on hours of operation and size) are only allowed in the LI-1 District if a Conditional Use Permit (CUP) is approved. The definition of motor vehicle fueling station permits retail sales of items of convenience to the motoring public. The Planning and Zoning Commission (Commission) has complete discretionary authority to approve, deny, or conditionally approve either use (fueling station or restaurant) or approve, deny, or conditionally approve both uses on the site, basing the decision upon findings of fact.

The first public hearing for this proposal occurred on June 13, 2016. The hearing was continued to June 27, 2016 and July 11, 2016. After receiving verbal public comment on July 11, 2016 the Commission closed the hearing and continued the application to July 25, 2016 to allow for the applicant's rebuttal and the Commission's deliberation. During the July 25, 2016 meeting the applicant provided rebuttal, the Commission deliberated and requested additional information of the applicant, and the application was continued to October 10, 2016. The Commission also re-opened the hearing to accept public comment on the new information.

Following the July 25, 2016 meeting on August 3, 2016 staff transmitted a letter to the applicant summarizing additional information requested by the Commission and new information requested by staff. This letter is attached, Attachment B. On September 30, 2016 staff transmitted an additional request for information to the applicant in a list format. This list is attached, Attachment E.

The report that follows contains an analysis of the new information submitted by the applicant as of Tuesday, October 4, 2016. The report addresses the implications of the proposed motor vehicle fueling station and food service on the proposed location and contains recommendations for how the Planning and Zoning Commission may mitigate impacts. Public comment received by 5:00 p.m. on Tuesday, October 4, 2016 for the October 10, 2016 public hearing is attached to the staff report.

Current Report

The location proposed for a motor vehicle fueling station and food service establishment is located on Lot 5A, Block 30, Ketchum Townsite, otherwise known as 911 N. Main Street. Three buildings currently exist on the site that are proposed to be substantially altered or removed for the project. Building "A" is the northernmost building, "B" is located in the center, and "C" is the southernmost building. The applicant proposes to partially demolish building "B" and to remodel and add an addition and a trellis patio to the remaining portion of the building. The applicant is also proposing to construct a canopy structure associated with the motor vehicle fueling station. The applicant is proposing to entirely demolish buildings "A" and "C" along with installing sidewalks, crosswalks, landscaping, lighting, parking, and drainage improvements to accommodate the development. The site does not currently meet city standards for the existing or proposed development and the site will require significant upgrades for the proposed project if the Planning and Zoning Commission determines a conditional use permit can be approved. Recommended improvements to meet city standards are contained within this report.

All city departments have completed their review of the applicant's submittals. This report contains an analysis of new information submitted by 5:00 p.m. Tuesday, October 4, 2016 for the October 10, 2016 hearing and contains an analysis of the information previously submitted for the July 11, 2016 hearing, which the Commission considered at the July 11, 2016 and July 25, 2016 meetings.

Currently there are three fueling stations in the LI District, two restaurants, and one food mart to service the area. In total there are five existing fueling stations within a 1.5 mile radius of the proposed site. The Commission must decide if the proposed uses are appropriate for the site and location and if the uses are necessary to serve the LI district.

Summary of New Information Received and Analysis

- Attachment A. summarizes comments from all departments on the proposed development. *Updated from the July 25, 2016 staff report*
- Attachment B. is a letter from staff to the applicant dated August 3, 2016 requesting additional information and also contains a table summarizing the applicant's responses to the August 3, 2016 letter.
- Attachment C. summarizes and is an analysis of the new vehicle circulation exhibits received.
- Attachment D. consists of the new vehicle circulation exhibits.
- Attachment E. is a list of additional information and clarification requested by staff on September 30, 2016.
- Attachment F. is a memo from Hales Engineering dated October 4, 2016 responding to staff's September 30, 2016 request.
- Attachment G. is an analysis of the proposed project and the zoning standards required for all projects.
- Attachment H. is an analysis of the proposed project and the Conditional Use Permit required standards. *Updated from the July 25, 2016 staff report*
- Attachment I. summarizes the applicant's proposed public and private improvements. *Updated from the July 25, 2016 staff report*
- Attachment J. summarizes staff's additional recommended public improvements. *Updated from the July 25, 2016 staff report*

Summary of Prior Information Received and Analysis and Excerpts from Title 17: Zoning

- Attachment K. is an image depicting the subject property and its relationship to an existing footpath extending north from the Frenchman's Place condominium development to the subject property

- Attachment L. is a summary and analysis of new plans, studies and information received for the July 11, 2016 meeting that the Commission considered at the July 11 and July 25, 2016 meetings. *No new analysis is contained in this attachment.*
- Attachment M. lists the uses permitted in the LI-1 zoning district. *No new analysis is contained in this attachment.*
- Attachment N. describes the dimensional standards required in the LI-1 zoning district. *No new analysis is contained in this attachment.*
- Attachment O. describes the maximum building height and lot coverage permitted in the LI-1 zoning district and the building height and lot coverage proposed for the Bracken Station project. *No new analysis is contained in this attachment.*

Summary of Exhibits Submitted by the Applicant

- All other plans, studies and exhibits submitted by the applicant and not specified above are attached. Plans, studies and exhibits are arranged in reverse chronological order with the newest submittals appearing first.
- The Traffic Impact Study dated October 3, 2016 is attached as Appendix A.
- The Traffic Impact Study dated May 2016 is attached as Appendix B.

Summary of Public Comment Received

- All public comment submitted for the record is attached as Appendix C. Public comments received for the October 10, 2016 meeting appear first.

Conditional Use Permit Overview

The Planning and Zoning Commission must determine if a Conditional Use Permit can be approved for the fueling station and restaurant proposed for the LI-1 district. According to the Zoning Ordinance, conditional uses by definition possess characteristics that require review and appraisal by the Commission to determine whether or not the use would cause any public health, safety or welfare concerns. Conditional uses may only be allowed if the Commission determines there would be no impact to the public health, safety and welfare of the community.

A conditional use permit may be granted by the commission only if the applicant demonstrates that:

- The characteristics of the conditional use will not be unreasonably incompatible with the types of uses permitted in the applicable zoning district;
- The conditional use will not materially endanger the health, safety and welfare of the community;
- The conditional use is such that pedestrian and vehicular traffic associated with the use will not be hazardous or conflict with existing and anticipated traffic in the neighborhood;
- The conditional use will be supported by adequate public facilities or services and will not adversely affect public services to the surrounding area, or conditions can be established to mitigate adverse impacts;
- The conditional use is not in conflict with the policies of the comprehensive plan or the basic purposes of the Zoning Ordinance.

Should the Commission agree a CUP can be approved, they may attach additional conditions to the application approval as it determines necessary in order to make the uses more compatible with the vicinity and adjoining uses, mitigate impacts, and allow for health, safety and welfare. Such conditions may include, but are not limited to:

A. Minimizing adverse impact on other development.
B. Controlling the sequence and timing of development.
C. Controlling the duration of development.
D. Assuring that development is maintained properly.
E. Designating the exact location and nature of development.
F. Requiring the provision for on site or off site public facilities or services.
G. Requiring more restrictive standards than those generally required in an ordinance.
H. Requiring mitigation of effects of the proposed development upon service delivery by any political subdivision, including school districts, providing services within the city. (Ord. 1135, 2015)

STAFF RECOMMENDATION

Staff's analysis and concerns regarding the proposed Conditional Use are detailed in the attachments. In summary staff's concerns are as follows:

1. Staff has concerns with on-site circulation and resulting external impacts to traffic on Main Street. These concerns have not been resolved by the circulation exhibits submitted. See Attachment C, Attachment D, and Attachment H for detail.
2. Staff has concerns with traffic queuing that remain unresolved. See Attachment C, Attachment E, Attachment F, and Attachment H for detail.

After considering the above concerns raised by staff, the Commission must consider the Bracken Station CUP application as it relates to the criteria used for evaluating conditional use permits and has the option of approval or denial. If the Planning and Zoning Commission chooses to approve the application, staff recommends requiring the conditions of approval as identified in this report as a minimum. The Commission may require additional conditions based on findings received through public comment, testimony, or other discovery.

COMMISSION OPTIONS

1. **Denial of the Application**: "Motion to deny the application from North Town Partners LLP for a Conditional Use Permit application for a motor vehicle fueling station and food service, finding the application **does not** meet the standards for approval under Chapter 17.116 of Ketchum Zoning Code Title 17, for the following reasons: [cite findings for denial]."
2. **Approval of the Application**: "Motion to approve the application from North Town Partners LLP for a Conditional Use Permit application for a motor vehicle fueling station and food service, finding the application meets the standards for approval under Chapter 17.116 of Ketchum Zoning Code Title 17 with the following conditions: [insert conditions of approval here]"
3. **Continuation of the Application**: "Motion to continue the application from North Town Partners LLP to a date certain of [insert date of meeting]."

RECOMMENDED CONDITIONS

Ketchum City Engineer, Streets, Utilities, Fire and Building Department requirements shall be met, including:

1. All departmental conditions as described in Table 1.
2. All building and fire code requirements as dictated by 2012 family of international building codes shall apply to all construction onsite.
3. Snow removal outside the travel lanes of Highway 75 shall be the responsibility of the property owner.
4. All light fixtures mounted on or recessed into the lower surface of the service station canopy shall be fully shielded and utilize flat lenses. Such shielding must be provided by the fixture itself; shielding by surrounding structures, such as canopy edge, is not permitted.

5. The applicant shall construct the public improvements recommended by staff described in Table 1.
6. The applicant shall construct the public improvements recommended by staff as described in Table 6.
7. The applicant shall construct the public improvement recommended by staff described in Table 7.
8. All storm water retention improvements shall meet the latest standards for motor vehicle fueling stations and shall be approved by the Public Works Director.
9. Per Title 17, Section 17.116.080: TERM OF PERMITS: Conditional Use Permit approval shall expire one (1) year from the date of approval if not acted upon within that time frame; and
10. This Conditional Use Permit approval is based on representations made and other components of the application presented and approved at the meeting on October 10th, 2016.

ATTACHMENTS:

A. Table 1: Requirements for All Applications
B. Table 2: Summary of additional information requested in the August 3, 2016 letter from staff as submitted by the applicant by October 4, 2016
C. Table 3: Analysis of Vehicle Circulation Exhibits dated September 16, October 3 and October 4, 2016
D. Circulation Exhibits dated September 16, 2016, October 3, 2016 and October 4, 2016
E. Additional Information Requested by Staff on September 30, 2016
F. "Bracken Station – Additional Information Requested Response" stamped memo from Hales Engineering, dated October 4, 2016
G. Table 4: Table 4. Zoning Standards Analysis
H. Table 5: Conditional Use Permit Requirements
I. Table 6: Required Public and Private Improvements
J. Table 7: Recommended Additional Public Improvements
K. Aerial Photo of subject property and footpath connecting to Frenchmen's Place
L. Table 8. Summary and Analysis of New Plans, Studies and Information Received for the July 11, 2016, meeting
M. Table 9: Uses in the LI-1 Zone
N. Table 10: Dimensional Standards for the LI-1 Zone
O. Table 11: Potential Build Out for 911 N. Main Street
P. Application
Q. Revised Site Plan, dated September 16, 2016
R. Revised Overall Site Plan, dated September 16, 2016
S. Site Plan Changes exhibit, dated September 16, 2016
T. Kellerstrass Oil Company letter, dated September 23, 2016
U. Kellerstrass Oil Company letter, dated October 1, 2016
V. Kellerstrass Delivery Truck Dimensions
W. Letter from Ned Williamson, applicant's attorney, dated July 22, 2016
X. Plans as submitted for the July 11, 2016 meeting
    a. A.0 – Coversheet, dated May 23, 2016
    b. Existing Site Plan
    c. A-2 – Conditional Use / Preapplication Site Plan, dated June 30, 2016
    d. A-2.1 – Overall Conditional Use / Preapplicaiton Site plan, dated June 30, 2016
    e. A.3 – North Elevation, dated May 23, 2016
    f. A.5 – Proposed Flood Plan and Proposed East Elevation, dated May 23, 2016
    g. A.6 – Proposed Retaining Walls at Alley, dated May 23, 2016
    h. EX – Preliminary Improvements Plan, dated June 3, 2016
    i. EX – Preliminary Grading & Drainage Plan, dated June 3, 2016
    j. On-Site Vehicle Turn Exhibit, dated July 11, 2016
    k. 10th Street Vehicle Turn Exhibit, dated July 11, 2016
    l. Highway 75 Frenchman Sidewalk Connection, dated July 11, 2016
    m. Profile From North of 10th Street to South of 10th Street, dated July 11, 2016
    n. L1.0 – Landscape Plan, dated July 1, 2016
    o. Proposed North Elevation – 10th Street View
    p. L.1 – Lighting Plan, dated June 30, 2016
    q. Site lighting fixtures, types A-F
    r. Photometric Plan, black and white, dated June 20, 2016
    s. Photometric Plan, color, no date
    t. Radiosity Plan, dated June 20, 2016
Y. Motor Fueling Station Pedestrian Analysis, dated June 29, 2016
Z. Connector Sidewalk from Bracken Station to Frenchman's e-mail, dated June 27, 2016

AA. Retail S Analysis, dated January 2016
BB. Renderings - existing conditions and proposed development, north and south views
CC. Chevron monument sign example
DD. Idaho Department of Environmental Quality's Rules Regulating Underground Storage Tank Systems
EE. Seismic Behavior of Xerxes Underground Tanks memorandum, dated September 11, 2007
FF. Xerxes Fiberglass Underground Storage Tanks brochure
GG. Ketchum – Bracken Station TIS, Additional Information memorandum, dated July 6, 2016

Appendix A – "Bracken Station Traffic Impact Study Updated" dated October 3, 2016

Appendix B – "Ketchum Gas Station Traffic Impact Study Updated" dated May 2016

Attachment A

Table 1: Requirements for All Applications

General Requirements for All Applications				
Compliant			**Standards and Staff Comments**	
Yes	**No**	**N/A**	**City Code**	**City Standards and *Staff Comments***
☒	☐	☐	**17.116.040(A)**	**Complete Application**
☐	☒	☐	**Department and Boards/ Commissions Comments**	**Public Works Department:** 1. The On Site Vehicle Turn Exhibit, dated July 11, 2016, did not adequately indicate that the fueling station would not cause congestion on Main Street/HWY 75. It appeared that north-bound trucks with trailers or box trucks would not be able to maneuver the site when other vehicles were positioned at the fueling islands. Additional exhibits depicting recreational vehicles, commercial delivery trucks, and fuel delivery trucks circulating the site within the context of the composition of vehicles observed at a comparable development were requested. An analysis of the new exhibits is contained in Attachment C., Table 3. As detailed in the table, the exhibits do not adequately prove that the size and configuration of the site can simultaneously accommodate the circulation of the fueling and delivery trucks, whose deliveries are necessary to operate the business, and patrons of the business in such a manner that will not cause queuing or backing up on Main Street/HWY 75 during peak times. A number of exhibits illustrate optimal conditions in which commercial delivery vehicles, fuel delivery trucks, passenger vehicles towing RVs, and other oversize vehicles can circulate the site, but in many cases the optimal condition is dependent on one particular or two tandem fuel pumps being available. If an oversize vehicle is forced to queue and wait on site for an optimal fuel pump to become available, and vehicles in position at fueling pumps are not parked optimally, pinch points are created at the entrance to the site. The pinch points could constrain or prevent vehicles in the travel or turn lane from entering the site thus causing traffic backups on Main Street/HWY 75. Each circulation exhibit is described in detail in Attachment C., Table 3, and all circulation exhibits are attached as Attachment D. 2. The configuration of the sidewalk design creates a challenge for the City's snow removal operations. If the project is approved, a condition of approval will require the owner to remove the snow to the west of the valley gutter and the snow may not be placed back out in the roadway. 3. The additional crosswalk crossing Main Street at the northern end of the site, as proposed in the Motor Fueling Station Pedestrian Analysis and with ADA compliant ramps, is recommended. 4. Colored pedestrian areas, as proposed #4 in Figure 2 in the

				Pedestrian Analysis, is recommended; a Maintenance Agreement stating that owner shall maintain the pedestrian areas will be required if the conditional use permit is approved. 5. To address pedestrian traffic from the southwestern pedestrian catchment area referenced in the Pedestrian Analysis, further analysis of the need for the Rectangular Rapid Flashing Beacon at the intersection of Warm Springs Road and 10th is needed. 6. As proposed in the Pedestrian Analysis, further study of the feasibility of defining the gap in the sidewalk on the north side of 10th Street between Warm Springs Road and Main Street is needed. 7. The property owner will need to maintain the landscaping in the right-of-way, according to ITD standards. 8. The initial On Site Vehicle Turn Exhibit only illustrates turn movements in an empty parking lot, which does not adequately prove turn movements can be made in real world conditions. In order to recommend approval of the conditional use permit the On-Site Vehicle Turn Exhibit needs to be revised to include turn movements, vehicles in the parking lot, and the location(s) where vehicles can stack on site. 9. The Preliminary Grading and Drainage Plan has been reviewed and is acceptable. Prior to issuance of a building permit a seepage test will need to be conducted and clarification regarding the infiltration rate and storm intensity and number of dry wells will be required. 10. The 5' sidewalk connecting to Frenchman's Place is acceptable. The existing drywell indicated on the plan is a catch basin and it shall be abandoned after installation of the new drywells.
				Fire Department: 1. The project shall meet all 2012 International Fire Code requirements in addition to specific City Building and Fire Ordinances. 2. An approved fire detection system shall be installed per City of Ketchum Ordinance #1125 ***(www.ketchumfire.org)*** and the requirements of NFPA 72. Two (2) sets of alarm system plans shall be submitted to the Ketchum Fire Department for approval and a permit is required prior to installation of alarm systems. Inspections of fire detection systems by the Fire Chief or an appointee are required and shall be scheduled at least 48 hours in advance. 3. An approved access roadway per 2012 International Fire Code Appendix D ***(www.ketchumfire.org)*** shall be installed prior to any combustible construction on the site. The road shall be a minimum of twenty (20) feet in width and capable of supporting an imposed load of at least 75,000 pounds. The road must be an all-weather driving surface maintained free, clear, and unobstructed at all times. 4. Fire extinguishers shall be installed and maintained per 2012 IFC Section 906 both during construction and upon occupancy of the building. 5. An approved key box shall be installed, with the appropriate keys, for emergency fire department access in a location approved by the fire department. The key box shall be a Knox box brand and sized to accommodate keys to every door of the project. 6. The underground fuel tanks will be installed and tested following the

				2012 International Fire Code, Sections 5704.2.11 through Section 5704.2.12.2. 7. Motor fuel dispensing stations will be installed following the 2012 International Fire Code, Section 2306.7 through Section 2306.7.7.2. 8. The Liquefied Petroleum Gas fuel dispensing will be installed following the 2012 International Fire Code, Section 2307.1 through Section 2307.7
				Building: • Building plans must meet 2012 International Building Code.
				Police Department: • No comment.
				Utilities: • No comment.
				Parks/Arborist: 1. The owner shall maintain the landscaping in the right-of-way, which is managed by ITD. 2. The southeastern-most Abies lasiocarpa is in close proximity to the overhead transmission line, substitute a more hardy bristlecone pine. 3. The other species are good and the diversity and placement are appreciated. 4. Staff recommends retaining the tree that is adjacent to the existing power pole in the right-of-way on Main Street if ITD will allow it.

Attachment B

Table 2. Summary of additional information requested in the August 3, 2016 letter from staff as submitted by the applicant by October 4, 2016

Information requested by staff and the Commission in the letter to the applicant dated August 3, 2016, is detailed in the rows shaded in yellow. An analysis of the items submitted is detailed in the rows with a white background.
Traffic Study
1. Design Horizon a. Use a design horizon of 10 years, or as defined by the Public Works Director.
The Public Works Director requested design horizons of 2020 and 2026; these horizons were used in the "Bracken Station Traffic Impact Study Updated," prepared by Hales Engineering, dated October 3, 2016, and attached to the staff report in Appendix A.
2. Peak time periods a. Use 7:00 – 9:00 a.m. instead of 8:00 – 9:00 a.m. b. Use 4:00 – 6:00 p.m. instead of 4:15-5:15 p.m.
Traffic counts were taken at the intersection of 10th Street and SH-75 (Main Street) and 5th Street and SH-75 (Main Street) on Thursday, September 1st, 2016 and Monday, September 5th, 2016 (Labor Day). The traffic volumes were highest on Thursday, September 1st with the a.m. peak hour being 8:00 a.m. to 9:00 a.m. and the p.m. peak hour being 4:15 to 5:15 p.m. Detailed traffic count data is included as Appendix A to the "Bracken Station Traffic Impact Study Updated," dated October 3, 2016, by Hales Engineering.
3. Trip Generation a. The study must identify the ITE trip generation rated used. The existing study only shows the total daily trips and total trips in a.m. and p.m. periods. The study does not show the factor used to compute the trips—for example; ITE has a trip generation factor for hourly, a.m. peak and p.m. peak. Indicate the factor used to verify the project trip generation is correct. b. Trip generation also needs to include daily, a.m., and p.m. trips associated with a high turnover restaurant, per the ITE generation rates, in addition to the trip generation for Gasoline/Service Station with Convenience Market - 8 Vehicle Fueling Positions. i. Include tables indicating average length of stay in a parking space for such uses. ii. Address whether the proposed number of on-site parking spaces adequately meets the demand for parking spaces based on the uses and average length of stay in a parking space.
Staff directed the applicant to collect data at the Chevron gas station located at 209 S. Main Street in Hailey, Idaho because the Chevron was the closest, most comparable operation in the Wood River Valley for which permission to collect observational data could be obtained. The Chevron in Hailey, Idaho has fuel pumps, accessory retail, and a mobile food vendor often operates on the property. The mobile food vendor was parked on the premises during the time period data was collected on September 1, 2016. Hales Engineering contracted with L2 Data Collection of Boise, ID to collect trip generation, length of stay, and observational data at the Hailey Chevron on Thursday, September 1, 2016 and Monday, September 5, 2016. Data was collected by filming the location and then analyzing the film to quantify trip generation, vehicle composition, and lengths of stay. Trip generation was higher on Thursday, September 1, 2016 than Monday, September 5, 2016 and staff directed Hales Engineering to use the September 1 data.

On page ii of the Executive Summary to the "Bracken Station Traffic Impact Study Updated," dated October 3, 2016, Hales Engineering reports:

"As directed by Ketchum City staff, trip generation for the development was calculated using data collected at an existing gas station in the area that was determined to be characteristically similar to the proposed Bracken Station. Data was gathered in the morning (7:00 to 9:00 a.m.) and afternoon (3:00 to 7:00 p.m.) peak periods on Thursday, September 1, 2016. The number of entering and exiting vehicles, the vehicle classification, and the duration of time that each vehicle remained on-site was recorded. A summary of these data can be found in Appendix E, however for information purposes, the average dwell time for a fueling vehicles was 5 minutes and 05 seconds, average dwell time for someone using the C-store was 5 minutes and 51 seconds, and the average dwell time for someone fueling and using the C-store was 9 minutes and 37 seconds. These data were used to determine a trip generation rate using the number of fueling positions as the independent variable (similar to the method used in the Institute of Transportation Engineers (ITE) Trip Generation (9th Edition, 2012)).

Trip generation for the proposed project is as follows:

- p.m. Peak Hour Trips: 90"

c. It appears the existing traffic analysis uses "net" trips generated by the project instead of the ITE trip generation rates. This needs more explanation; we need to understand and agree with any reduction factor used to determine net vs. ITE trips generated.

As stated in the preceding section, trip generation for the study was determined by observing trips to the Hailey Chevron, as directed by staff.

4. Existing Background Traffic Conditions

a. Background/cumulative traffic period should extend 10 years and include daily trips and a.m. and p.m. peak hour trips projected for Warm Springs Ranch development and Community School, and any other projects filed or approved but not yet built.

i. Background traffic/cumulative should be based on the 1.1% traffic growth factor, plus the projected traffic from approved developments.

Trip generation information for the Community School, Warm Springs Ranch Resort, and redevelopment of the Stock Lumberyard site (1000 Warm Springs Road) were included in the 2020 and 2026 traffic analyses. Trip generation during the p.m. peak hour at the 10th Street / Main Street intersection for the projects is as follows:

- Community School – 4 trips
- Warm Springs Ranch Resort – 15 trips
- Stock Lumberyard Redevelopment – 38 trips

This information is provided in Appendix G of the Traffic Impact Study dated October 3, 2016.

b. Show LOS and impact to turning movements at 10th Street & Highway 75 and 5th Street & Highway 75 intersections with the following charts:

1. Existing LOS and turning movements
2. Future / cumulative LOS and turning movements
3. Future / cumulative with project traffic added and impact to LOS and turning movements

LOS and turn movements for the 10th Street and 5th Street intersections with Highway 75 were included in the updated Traffic Information Study, dated October 3, 2016, as directed.

5. Project Trip Distribution

a. It appears that the existing traffic study projects 15% of the trips come from the north and 85% of the trips come from the south and that these projections impact the turning analysis. Due to the nature of the use it is likely that a greater share of trips – perhaps 30-40%

– are coming from the north.

The revised traffic study projects 40% of trips coming from the north and 60% coming from the south. Hales Engineering's memo "Bracken Station – Additional Information Request Responses," dated October 4, 2016, states that the 40%/60% split was used because the August 3, 2016 letter from city staff to the applicant postulated that perhaps 30-40% of trips may be generated from the north.

b. Indicate how the left and right turns into and out of the project site are derived

"The Highway Capacity Manual 2010 (HCM 2010) 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 and all-way stop 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 approach."

"Using Synchro/SimTraffic, which follow the Highway Capacity Manual (HCM) 2010 methodology introduced in Chapter I, the p.m. peak hour LOS was computed for the study intersection. Multiple runs of SimTraffic were used to provide a statistical evaluation of the intersection. These results serve as a baseline condition for the impact analysis of the proposed development during existing (2016) conditions."

" 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 in close proximity to the site. The resulting distribution of projected generated trips is as follows:
To/From Project:

- 40% North
- 60% South

These trip distribution assumptions and the prevailing movements at each intersection were used to assign the evening peak hour generated traffic at the study intersections to create trip assignment for the proposed development."

6. Intersection Analysis – Turn Movements

a. Evaluate the 10th Street & Highway 75 intersection.

b. Evaluate the 5th Street and Highway 75 intersection; activity at this intersection directly impacts the turning movements at 10th & Highway 75, particularly southbound traffic on Highway 75 which often backs up to the project site during the p.m. peak due to the signal at 5th Street & Highway 75.

7. Project Vehicle Composition

a. Based on comparable uses (gas station with accessory food service and retail) and comparable sites (gas stations located along Main Street in neighboring or similar mountain/resort communities, for example) provide an analysis of the composition of vehicles utilizing the sites during weekday, weekend, and a.m. and p.m. peak time periods. Categorize vehicles as passenger vehicles, recreational vehicles, other oversize passenger vehicles (Sprinters, SUVs towing boats, etc.) and commercial oversize vehicles (trucks towing trailers, semi-trucks, etc.).

Staff directed the applicant to analyze the Chevron gas station located at 209 S. Main Street in Hailey, Idaho as a comparable project. The Hailey Chevron has fuel pumps, accessory retail sales, and a food truck parks on

the premises. L2 Data Collection filmed the Chevron on Thursday, September 1, 2016 and Monday, September 5, 2016 during the hours of 7:00 – 9:00 a.m. and 3:00 p.m. – 7:00 p.m. and reviewed the film in order to categorize vehicles as passenger vehicles, recreational vehicles, commercial vehicles, motorcycles, and pedestrians/cyclists. Data from Thursday, September 1, 2016 was used to inform the vehicle composition depicted in the circulation exhibits.

L2 classified the data as follows:

Commercial Vehicles
- All vehicles, regardless of make or model, that bore a company logo
- All vehicles towing construction/landscaping trailers

Recreational Vehicles
- Any personal vehicle towing a boat, trailer with ATVs or motorcycles, or any other trailer that was not obviously a construction/landscaping trailer
- Recreational vehicles

Passenger Vehicles
- All other passenger vehicles, regardless of size

Motorcycles
- Motorcycles

Cyclists/Pedestrians
- Pedestrians and cyclists

b. This composition count must be approved by a licensed engineer. Any self-reporting will be rejected.

The composition data was provided by L2 Data Collection, a professional traffic data collection firm based in Boise, ID.

8. Queuing Analysis

a. The existing traffic study assumes there is an 80 foot stacking lane available for cars turning left. However, the stacking lane for cars entering into the project appears to be less than 80 feet as indicated on the Site Plan. Additionally, it appears the analysis only focuses on the delay and stacking for cars turning left onto 10th Street and does not take into account cars turning left into the project and how that impacts cars turning left on 10th Street. For instance, a car turning left onto 10th Street is not going to que behind a car waiting to turn left into the project.
   i. The analysis needs to look at those two turning movements separately and determine if the stacking lane is sufficient to accommodate each independent turning movement.
   ii. The study needs to address impacts to through traffic if one of the two turning lanes is over capacity and cars are stacked up in the travel lane.
   iii. Show how the traffic light at 5th Street and the current traffic issues merging onto Warm Springs will be impacted by the gas station. Currently, this is one of the most congested areas of the city and the Bracken project has yet to address these concerns satisfactory to staff.

Hales Engineering reports the following in the October 4, 2016, memo "Bracken Station – Additional Information Request Response" :

"Although it is debatable whether or not a vehicle turning left onto 10th Street would queue behind a vehicle waiting to turn left into the project, the two turning movements were in fact analyzed separately in each version of the TIS report. In each instance, it was determined that the stacking distance for each movement is sufficient to accommodate each independent turning movement.

If the left-turn queuing demand were to exceed the capacity at either 10th Street or the project access, then the left-turn queue would block the thru lane, just as happens currently at the 10th Street / Main Street (SH-75) intersection. The addition of the left-turn lane along the project frontage would cause the thru lane to be blocked less often than it is currently with the current lane configuration.

With the addition of the gas station, approximately 27 vehicles would be added to the existing volumes on the southbound approach to the 5th Street / Main Street (SH-75) intersection during the evening peak hour (an increase of less than 4%). Queues of several hundred feet have been reported on this approach, and it is likely that vehicles leaving the gas station heading south on Main Street (SH-75) would end up in this existing queue. It is difficult to say how the Warm Springs Road / Main Street (SH-75) intersection will be impacted, as this intersection was not in the scope outlined by city staff. However, based on the analyses of the 5th Street / Main Street (SH-75) intersection, it is likely that the impact of the traffic added by the gas station would be insignificant."

Traffic Study – Pedestrian and Cyclists

9. Pedestrian and Cyclist Traffic Study

a. Either incorporated into the revised Traffic Study or as a separate document analyze projected pedestrian and cyclist trip generation for the proposed uses.

Hales Engineering projects that the project will generate six pedestrian/bicycle trips during the p.m. peak hour, or that 6% of all trips would be pedestrian/bicycle trips. This projection is based on observations at the comparable Hailey Chevron site.

b. Provide existing conditions - pedestrian and cyclist counts.

Hales Engineering reports that significant pedestrian/bicycle volumes were observed on September 1st at the 5th Street / Main Street intersection and that no pedestrians or bicyclists were observed at the 10th Street / Main Street intersection on September 1st. On the alternative data collection day 17 pedestrians/bicycles were observed at the 10th Street / Main Street intersection, with 3 observed during the peak p.m. hour.

c. Analyze pedestrian and cyclist circulation to and within the site.

The Site Plan has been revised and now includes enhanced pedestrian access.

Southern Access: From south of the site to the proposed store/food service, a pedestrian at Frenchmen's Place could take the proposed connector sidewalk to the southeast corner of the site and walk on an newly proposed on-site sidewalk bordering the southwest property line to access the store/food service. A pedestrian on the east side of Main Street/HWY 75 could cross Main Street just south of the 9th Street / Main Street intersection, using the crosswalk with rapid flashing beacon that the applicant previously proposed, and could then use the same on-site sidewalk to reach the store/food service.

Western Access: From west of the site on 10th Street a pedestrian can use the previously proposed staircase to access the site at the southwest corner of the site. The alignment of the staircase has been revised in order to allow better vehicle circulation in the parking lot, however no pedestrian functionality was lost. The pedestrian staircase directly connects to the on-site sidewalk that provides access to the store/food service.

Northern Access: The previously proposed crosswalk spanning 10th Street remains.

Eastern Property Line: The eastern property line of the site is adjacent to Main Street/HWY 75. ITD requires an 84' wide boulevard approach to the site. The applicant previously proposed installing surface materials across

the pedestrian zone of the 84' boulevard approach that would distinguish the pedestrian zone from the asphalt; this proposal remains.

Additionally, Hales Engineering recommends that if the city requires crosswalks at intersections that are not stop controlled, pedestrian activated rapid flashing beacons should be installed to increase the visibility of pedestrians. Hales Engineering notes that by installing rapid flashing beacons or other pedestrian crossing enhancements at 9th Street and/or 10th Street that the relative visibility of the existing mid-block pedestrian crosswalks at approximately 8th Street and 7th Street may be reduced; Hales recommends that the City consider installing rapid flashing beacons at these locations or consider removing those crossings due to redundancy.

d. Provide warrants for all recommended improvements, including the pedestrian signals, crosswalks, and other infrastructure.

The Traffic Impact Study dated October 3, 2016 recommends construction of a two-way left-turn lane from a location north of 10th Street to a location south of the project in order to allow northbound left-turning vehicles to 10th Street or into the project access to decelerate and/or queue without blocking the flow of through traffic.

On page vii of the Executive Summary the Traffic Impact Study states, "Although pedestrian volumes during the p.m. peak hour are anticipated to be relatively low, if pedestrian crosswalks are installed on Main Street (SH-75) at 9th Street, it should be done in accordance with the Idaho Transportation Department with their permit process. It is also recommended that pedestrian activated rectangular rapid flashing beacon signs be installed to increase visibility of the crossings." The Traffic Impact Study does not provide warrants for the pedestrian crosswalks, signals, or other infrastructure.

Circulation Diagrams

10. Revised Circulation Exhibits

a. Revise circulation exhibits to show:

i. Additional turn movements of large vehicles circulating the site with large vehicles parked on site in, and with a fuel delivery truck on site, order to show site is large enough to accommodate a variety of vehicles without causing traffic to back up into the travel right-of-way.

ii. Queuing scenarios based on projected composition of vehicles that will visit the site.

iii. All on-site circulation exhibits must reflect the traffic study, updated vehicle composition numbers, and other revised data.

Benchmark Associates provided additional circulation exhibits for the abovementioned scenarios. The circulation exhibits are detailed in Attachment C, Table 3.

10th Street Parallel Parking

11. Examine the slope on 10th Street and discuss the feasibility of parallel parking during the winter.

a. If on-site parking spaces are proposed to be eliminated and parallel parking spaces on 10th Street are proposed to make up the difference address the feasibility of parking on 10th Street during winter conditions with respect to the slope of 10th Street.

The revised site plan dated September 16, 2016 reflects the removal of several previously proposed parking spaces in order to provide additional circulation space on the site. Parking spaces required for the project are still provided entirely on site.

Attachment C:

Table 3: Analysis of Vehicle Circulation Exhibits dated September 16, October 3 and October 4, 2016

Exhibit	Conditions	Comments
#1 – On-Site Circulation – Worst Case Scenario	This exhibit depicts a northbound car towing a camper trailer 48.7' in length circulating onto the site and queuing north of the fuel pumps, 2 passenger cars 19' in length circulating onto the site and maneuvering between the queuing RV and the passenger cars fueling at pumps #1 and #3, and a box truck 30' in length queuing in the turn lane because the location of the queuing passenger car towing the RV prohibits the box truck from circulating onto the site. There are 9 stationary passenger cars 19' in length on site with 6 positioned at fuel pumps and 3 parked.	Benchmark notes that 5 passenger cars and 2 commercial vehicles were observed simultaneously on site at the Hailey Chevron for a total of 2 minutes on September 1, 2016 and 5 passenger cars and 1 commercial vehicle were observed simultaneously on site at the Hailey Chevron for a total of 4 minutes on September 1, 2016. Staff requested this exhibit, which depicts 1 commercial vehicle and 1 RV, to reflect a scenario more congested than conditions observed at the Hailey Chevron. This exhibit illustrates that if a passenger car towing an RV arrives to the site and must queue while waiting for an available fuel pump a box truck or other commercial vehicle must queue in the turn lane. The exhibit illustrates that northbound and southbound passenger vehicles can circulate onto the site while a passenger car towing an RV is queued north of the fueling island. Staff's concerns include: 1. The maneuvers of passenger cars onto the site while a passenger car towing an RV queues and passenger cars are fueling at pumps #1 an #3 are constrained; and 2. A southbound passenger vehicle and the northbound box truck and RV must drive onto the curb to successfully maneuver onto the site; and 3. Circulation of the box truck to the loading zone is constrained when fuel pumps #1, #2, #3, and the ADA parking space are occupied.
#1A – On-Site Circulation – Worst Case Scenario	This exhibit depicts a northbound box truck 30' in length circulating onto the site and parking in the loading zone, followed by a northbound car towing a camper trailer 48.7' in length circulating onto the site and exiting, and a southbound passenger car 19' in length	Benchmark notes that 5 passenger cars and 2 commercial vehicles were observed simultaneously on site at the Hailey Chevron for a total of 2 minutes on September 1, 2016 and 5 passenger cars and 1 commercial vehicle were observed simultaneously on site at the Hailey Chevron for a total of 4 minutes on September 1, 2016. Benchmark notes that a commercial vehicle and RV were never observed on site the same time during the period observational data was collected.

	circulating onto the site and exiting. There are 9 stationary passenger cars 19' in length on site with 6 positioned at fuel pumps and 3 parked.	Staff requested this exhibit, which depicts 1 commercial vehicle and 1 RV, to reflect a scenario more congested than conditions observed at the Hailey Chevron. This exhibit illustrates that if a 30' box truck enters the site and parks in the loading space a passenger car and a passenger car towing an RV can circulate through the site. Based on the overlapping turn movements for the box truck and the passenger vehicle towing an RV a box truck could not circulate onto the site if the passenger car towing the RV were queued on site north of the fuel pumps. Staff's concerns include: 1. A northbound box truck and car with RV must drive onto the curb to successfully maneuver onto the site while a vehicle is fueling at pump #3, passenger vehicles fueling at pumps #1 and #2 create constrained circulation; and 2. A southbound passenger vehicle must drive onto the curb to successfully maneuver onto the site while a vehicle is fueling at pump #3, passenger vehicles fueling at pumps #1 and #2 create constrained circulation.
#2 – On-Site Circulation – RV Fueling; Commercial Vehicle Queuing	This exhibit depicts a northbound passenger car towing an RV circulating onto the site and fueling at pumps #1 and #2, a northbound box truck arriving to the site afterwards and quieting north of the fuel pumps, and a southbound passenger car circulating onto the site and maneuvering between the queued box truck and fueling passenger cars. There are 8 stationary passenger cars on site with 5 positioned at fuel pumps and 3 parked.	Benchmark notes that 5 passenger cars and 2 commercial vehicles were observed simultaneously on site at the Hailey Chevron for a total of 2 minutes on September 1, 2016 and 5 passenger cars and 1 commercial vehicle were observed simultaneously on site at the Hailey Chevron for a total of 4 minutes on September 1, 2016. Benchmark notes that a commercial vehicle and RV were never observed on site the same time during the period observational data was collected. Staff requested this exhibit, which depicts 1 commercial vehicle and 1 RV, to reflect a scenario more congested than conditions observed at the Hailey Chevron. This exhibit illustrates that a passenger car can circulate through the site while a box truck is queued north of the fueling island and passenger cars and a passenger car towing an RV fuel.

		Staff's concerns include: 1. Based on this exhibit and the "Recreational Vehicle Access and Circulation" exhibit described later in this table, a northbound passenger vehicle towing an RV can only maneuver into fuel pumps #1 and #2. The conditions in this exhibit are based on the RV circulating onto the site when the optimal condition of both pumps #1 and #2 being vacant. If both pumps #1 and #2 are not vacant the RV will be forced to queue on site which will result in a northbound box truck and/or RV and any northbound passenger vehicles queuing in the turn lane; and 2. Northbound box trucks and passenger vehicles towing RVs must drive onto the curb to successfully maneuver onto the site and circulate around a passenger vehicle fueling at pump #3.
#3 – On-Site Circulation – RV Queuing; Commercial Vehicle Fueling	This exhibit depicts a northbound passenger car towing an RV circulating onto the site, queuing, and exiting the site, a southbound box truck circulating onto the site and fueling on the west side of pump #4, and a southbound passenger car circulating onto the site and maneuvering between the queued RV and the fueling passenger cars. There are 8 stationary passenger cars on site with 5 positioned at fuel pumps and 3 parked.	Benchmark notes that 5 passenger cars and 2 commercial vehicles were observed simultaneously on site at the Hailey Chevron for a total of 2 minutes on September 1, 2016 and 5 passenger cars and 1 commercial vehicle were observed simultaneously on site at the Hailey Chevron for a total of 4 minutes on September 1, 2016. Benchmark notes that a commercial vehicle and RV were never observed on site the same time during the period observational data was collected. Staff requested this exhibit, which depicts 1 commercial vehicle and 1 RV, to reflect a scenario more congested than conditions observed at the Hailey Chevron. This exhibit illustrates that a northbound passenger vehicle towing an RV can queue and circulate onto the site when a southbound box truck is fueling at pump #4. Additionally, a passenger vehicle can circulate through the site while a passenger vehicle towing an RV is queuing. Staff's concerns include: 1. Based on the "Recreational Vehicle Access and Circulation" exhibit described later in this table a southbound box truck can maneuver to all fuel pumps when there are no other vehicles on site. Based on this exhibit a box truck can maneuver to the west side of pumps #3 and #4 if other pumps are

		occupied. If the box truck fuels at pump #3 rather than #4, depending on the length of the box truck that extended north beyond the fuel pump, circulation of other vehicles onto the site would be constrained or may be impossible; 2. Circulation of a passenger vehicle is constrained when a passenger car towing an RV is queued north of the fuel island and pump #1 is occupied; and 3. Northbound passenger vehicles towing RVs and southbound passenger vehicles and box trucks will be required to drive on the curb to successfully maneuver onto the site.
Recreational Vehicle Access and Circulation	This exhibit depicts several circulation scenarios of northbound and southbound passenger vehicles towing RVs. There are no stationary vehicles parked on site.	This exhibit illustrates three possible maneuvers for southbound passenger vehicles towing RVs and three possible maneuvers for northbound passenger vehicles towing RVs to circulate the site. Staff's concerns: 1. Northbound - There is only one possible scenario for fueling available, which requires two pumps in tandem to be available at the same time; 2. Southbound - There are only two scenarios for fueling available, which both require two pumps in tandem to be available at the same time; 3. Multiple scenarios require the vehicle to drive onto the curb; and 4. If the vehicle fueled at the northern pumps rather than the southern pumps circulation on the north side of the pumps would be further constrained.
Box Truck Access and Circulation	This exhibit depicts several circulation scenarios of northbound and southbound box trucks. There are no stationary vehicles parked on site.	This exhibit illustrates four possible maneuvers of northbound box trucks and two possible maneuvers of southbound box trucks to circulate the site. Staff's concerns: 1. Northbound - There are only two fueling positions possible, fueling on the east side of pump #1 and fueling on the east side of pump #2, with fueling at pump #2 dependent on pump #1 being open in order for the box truck to maneuver into position;

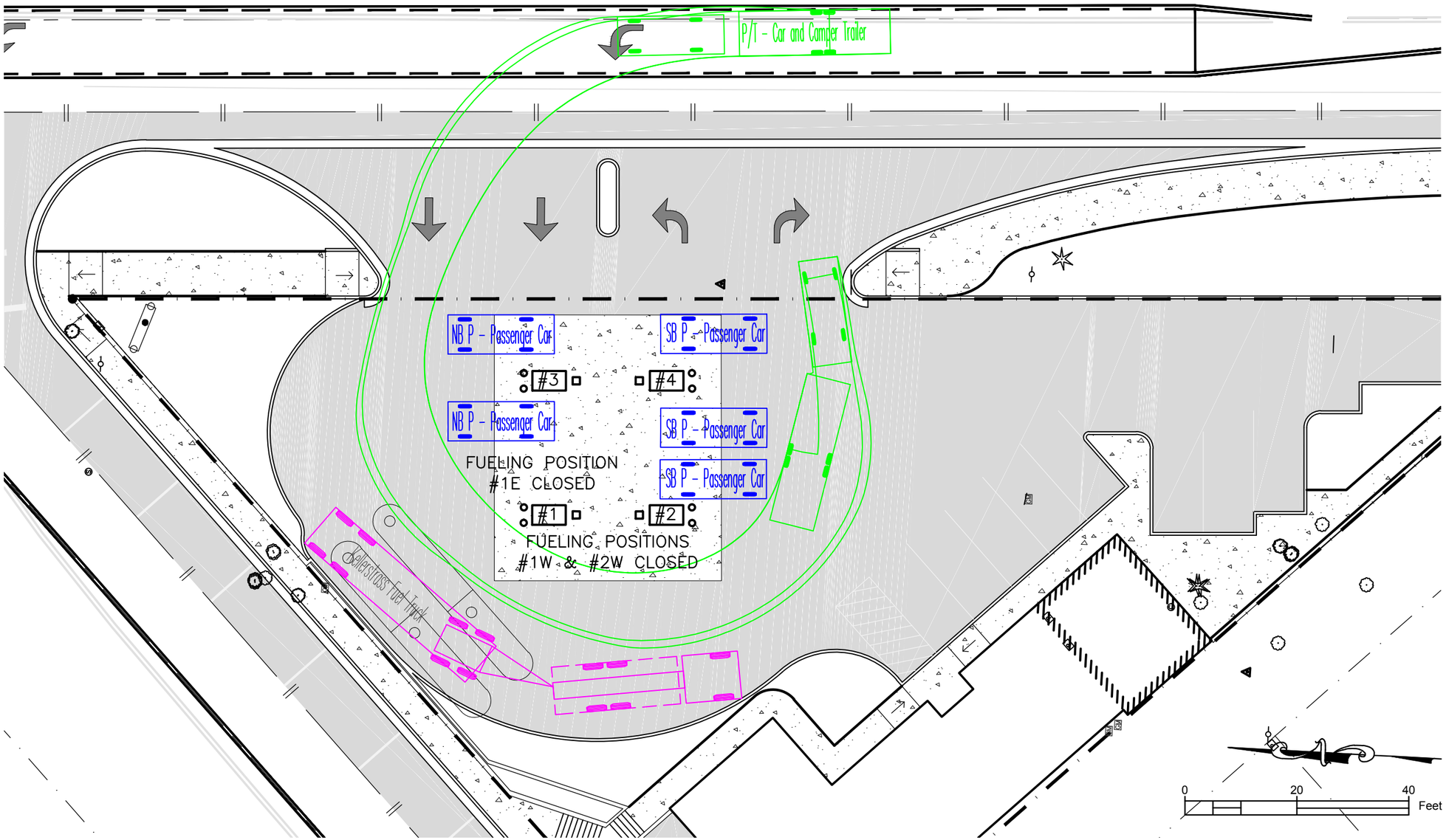
		2. Southbound – While there are several scenarios for fueling available, half of the scenarios require two pumps in tandem to be available at the same time in order to access the southernmost pumps; 3. Maneuvering into the loading zone is dependent the east side of pump #4 to be open; 4. Multiple scenarios require the box truck to drive onto the curb; 5. If a box truck fuels at pump #3 or #4 the length of the vehicle may encroach into the area north of the fueling island that all vehicles use as ingress to circulate the site; and 6. Fueling at pump #2 as depicted in the exhibit encroaches into the area south of the fueling island that vehicles use to circulate to the parking spaces.
Fuel Truck Delivery – RV Circulation	This exhibit depicts a northbound passenger vehicle towing an RV circulating the site while a fuel delivery truck is on site. There are 5 passenger vehicles positioned at fuel pumps.	This exhibit illustrates that when a fueling truck is on site in the fueling location and the east and west sides of pump #1 are closed and the west side of pump #2 is closed a passenger vehicle towing an RV can circulate onto the site and maneuver past the fuel truck to queue near the exit or exit the site. Staff's concerns: 1. Benchmark did not have enough information to accurately model the fuel delivery truck in motion and was not able to show the turn movements of the fuel delivery truck entering the site and maneuvering into position; staff cannot analyze the ability of the fuel delivery truck to make the maneuvers while pumps #1 and #3 are occupied and therefore is concerned about the queue in the turn lane while the fuel delivery truck circulates on the site; 2. The applicant has provided a letter from Dallas Green, Director of Operations of Kellestrass Oil, stating that the timing of fuel delivery truck trips to the site can be scheduled. However, conditioning approval of the Conditional Use Permit to include conditions of the times that fuel and retail deliveries can occur is a challenging and burdensome condition to continually enforce in perpetuity.

Fuel Truck Delivery – Box Truck Circulation	This exhibit depicts a northbound box truck circulating the site while a fuel delivery truck is on site. There are 5 passenger vehicles positioned at fuel pumps.	This exhibit illustrates that when a fueling truck is on site in the fueling location and the east and west sides of Pump #1 are closed and the west side of pump #2 is closed a box truck can circulate onto the site and maneuver past the fuel truck to queue near the exit or exit the site. Staff's concerns: 1. Benchmark did not have enough information to accurately model the fuel delivery truck in motion and was not able to show the turn movements of the fuel delivery truck entering the site and maneuvering into position; staff cannot analyze the ability of the fuel delivery truck to make the maneuvers while pumps #1 and #3 are occupied and therefore is concerned about the queue in the turn lane while the fuel delivery truck circulates into position on site; 2. The applicant has provided a letter from Dallas Green, Director of Operations of Kellestrass Oil Company, stating that the timing of fuel delivery truck trips to the site can be scheduled for non-high traffic times. However, condoning approval of the Conditional Use Permit to include conditions of the times that fuel and retail deliveries can occur is a challenging and burdensome condition to continually enforce in perpetuity.
Semi-Truck Delivery Circulation	This exhibit depicts a northbound semi-tuck 45.5' in length circulating the site. There are 6 passenger vehicles positioned at fuel pumps.	The exhibit notes that deliveries made by trucks larger than a WB-40, an Intermediate Semi-Trailer 45.5' in length, shall be made in the alley. The exhibit also notes that deliveries will be scheduled so no more than two trucks (one in the surface level loading zone and one in the alley) are on site at once. This exhibit illustrates that a northbound WB-40 semi-trailer can circulate onto the site and maneuver into the loading zone when the west sides of pumps #1 and #2 are closed and passenger vehicles occupy all other fuel pumps. Staff's concerns: 1. While the exhibit illustrates that a semi-truck can circulate the site and maneuver into the loading zone while passenger vehicles occupy the fuel pumps circulation onto the site is constrained by a 19' passenger vehicle fueling on the east side of pump #3; a larger vehicle at this fueling location would

		prohibit a ingress into the site and would impact queue lengths in the turn lane; and 2. While the semi-truck is in position in the loading zone a vehicle parked in the southernmost parking space would not be able to exit the parking space; 3. The applicant has provided a letter from Dallas Green, Director of Operations of Kellestrass Oil Company, stating that the timing of fuel delivery truck trips to the site can be scheduled for non-high traffic times. However, condoning approval of the Conditional Use Permit to include conditions of the times that fuel and retail deliveries can occur is a challenging and burdensome condition to continually enforce in perpetuity.

Attachment D:

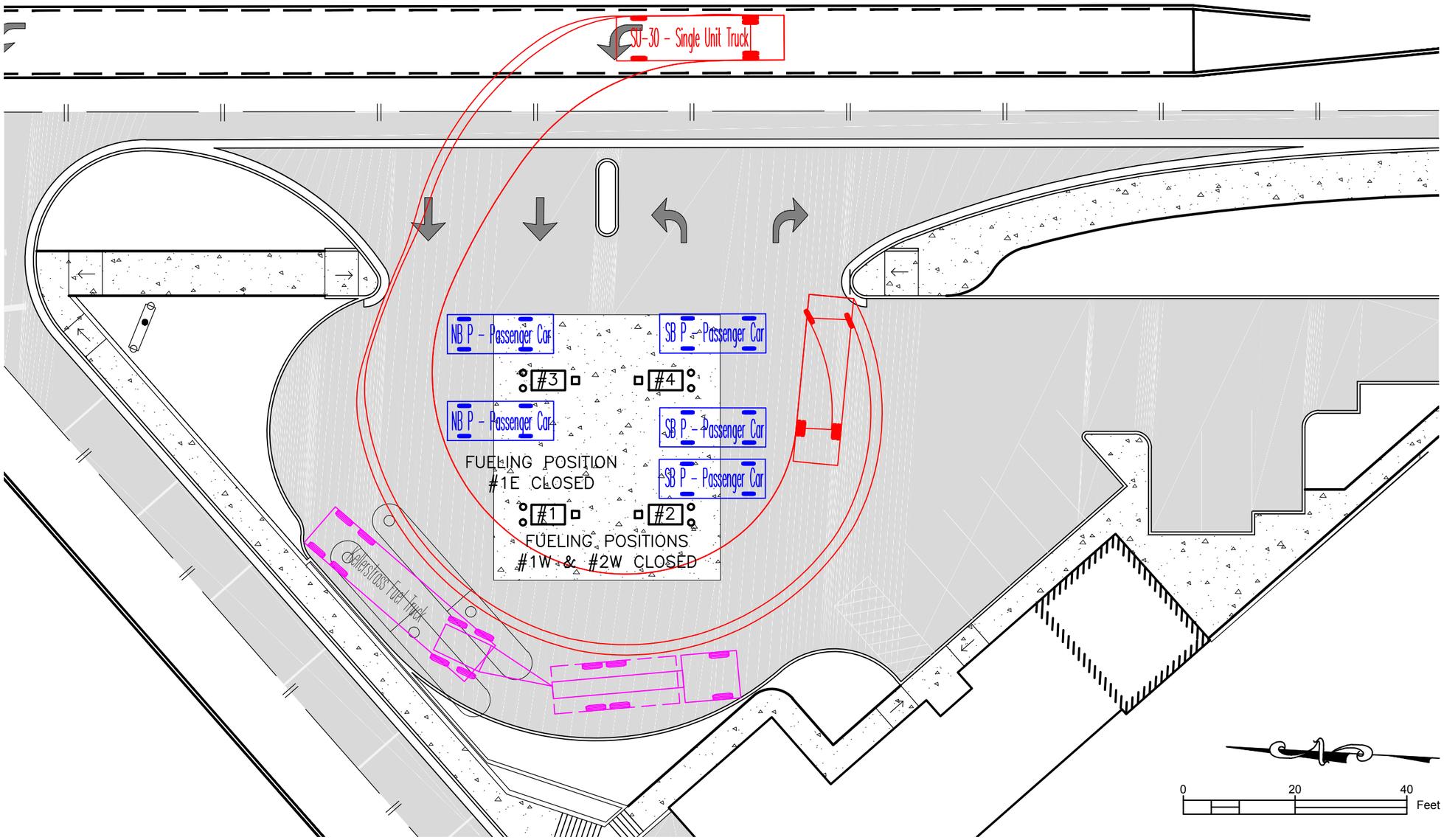
Circulation Exhibits dated September 16, 2016, October 3, 2016 and October 4, 2016



FUEL TRUCK DELIVERY– RV CIRCULATION

(Revised 10/4/16 per email request received at 9:57 AM)

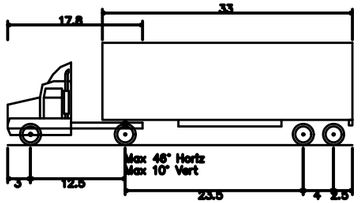
OCTOBER 4TH, 2016



FUEL TRUCK DELIVERY– BOX TRUCK CIRCULATION

(Revised 10/4/16 per email request received at 9:57 AM)

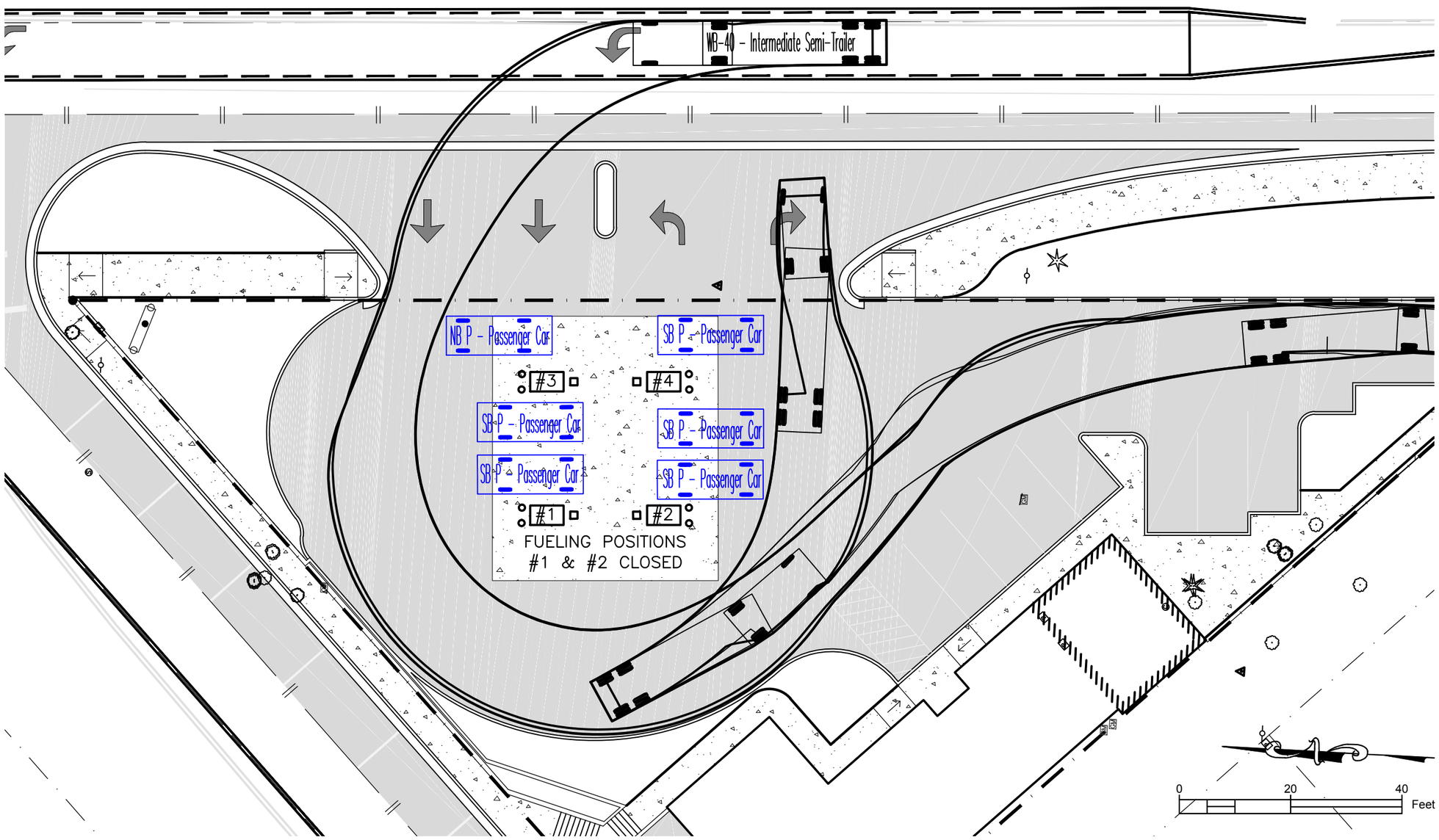
OCTOBER 4TH, 2016



WB–40 – Intermediate Semi–Trailer	
Overall Length	45.499ft
Overall Width	8.000ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.334ft
Track Width	8.000ft
Lock–to–lock time	4.00s
Max Steering Angle (Virtual)	20.30°

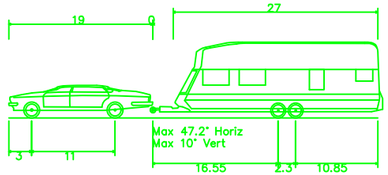
NOTES:

1. DELIVERIES MADE BY TRUCKS LARGER THAN A WB–40 SHALL BE MADE IN THE ALLEY.
2. DELIVERIES WILL BE SCHEDULED SO NO MORE THAN TWO TRUCKS (ONE IN LOADING ZONE AND ONE IN ALLEY) ARE ON SITE AT ONCE.



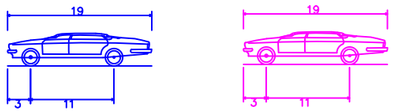
SEMI–TRUCK DELIVERY CIRCULATION

SEPTEMBER 30TH, 2016



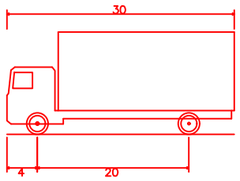
P/T – Car and Camper Trailer

Overall Length	48.701ft
Overall Width	8.000ft
Overall Body Height	10.008ft
Min Body Ground Clearance	0.795ft
Max Track Width	8.000ft
Lock–to–lock time	4.00s
Max Steering Angle (Virtual)	21.50°



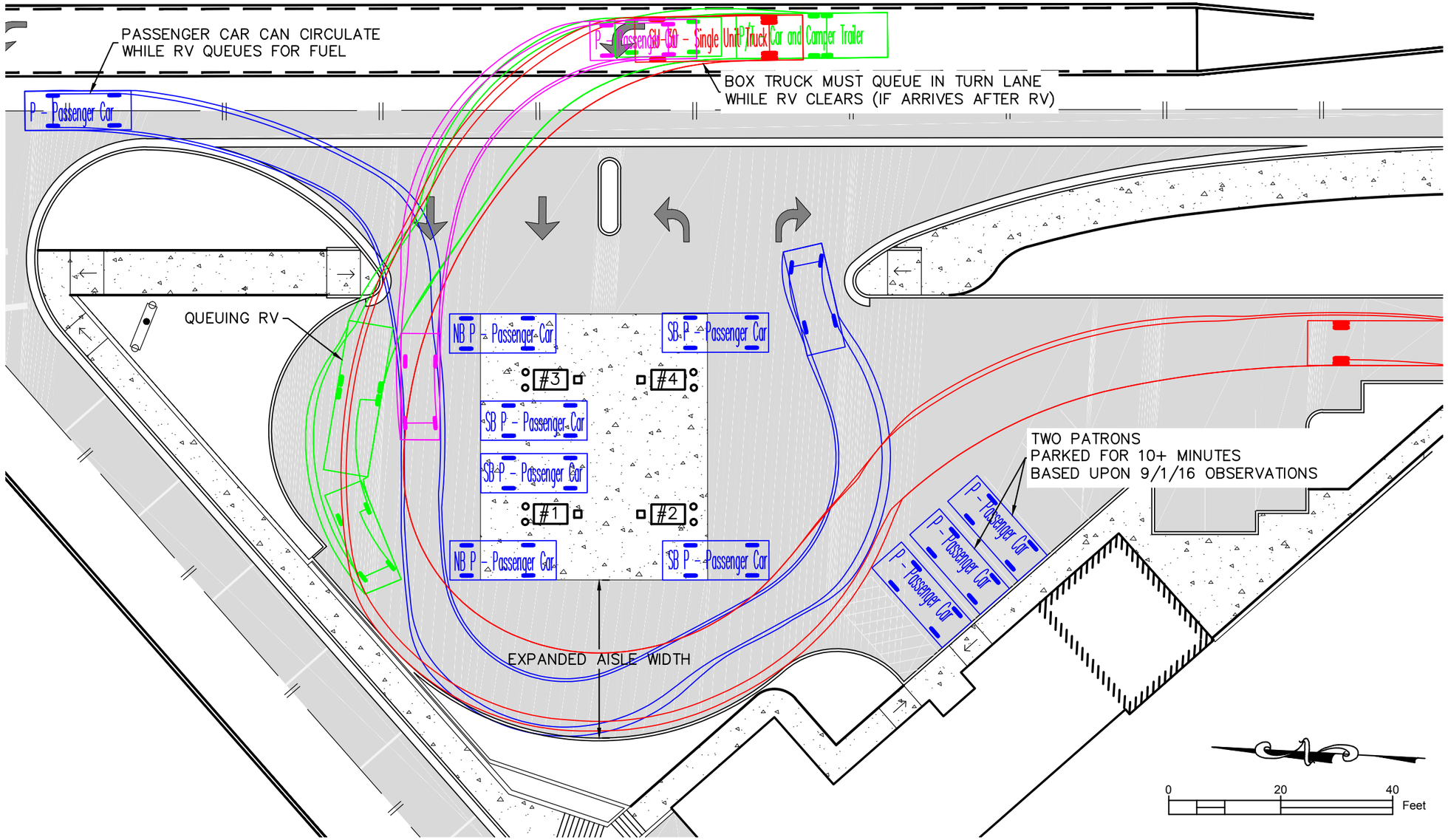
P – Passenger Car

Overall Length	19.000ft
Overall Width	7.000ft
Overall Body Height	4.300ft
Min Body Ground Clearance	1.115ft
Track Width	6.000ft
Lock–to–lock time	4.00s
Max Steering Angle (Virtual)	31.60°



SU–30 – Single Unit Truck

Overall Length	30.000ft
Overall Width	8.000ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.367ft
Track Width	8.000ft
Lock–to–lock time	5.00s
Max Steering Angle (Virtual)	31.80°



NOTES:

1. VEHICLE COMPOSITION SHOWN IS BASED UPON OBSERVATIONS MADE AT THE MAIN STREET ACCESS OF THE CHEVRON GAS STATION IN HAILEY, ID ON THURSDAY, 9/1/16 WITH THE ADDITION OF A ONE (1) RECREATIONAL VEHICLE (CAR+TRAILER) PER THE CITY OF KETCHUM STAFF'S REQUEST.
2. A COMMERCIAL VEHICLE (BOX TRUCK) AND RECREATIONAL VEHICLE (CAR+TRAILER) WERE NEVER OBSERVED ON SITE AT THE SAME TIME DURING DATA COLLECTED ON 9/1/16 AND 9/5/16 FROM 7:00AM–9:00AM AND 3:00PM–7:00PM.
3. THE WORST CASE (BUSIEST) SCENARIO ON–SITE TRAFFIC COMPOSITION SHOWN WAS REQUESTED BY THE CITY OF KETCHUM STAFF. THE WORST CASE COMPOSITION SHOWN INCLUDES:
   (5) PASSENGER VEHICLES
   (1) COMMERCIAL VEHICLES–BOX TRUCK
   (1) RECREATIONAL VEHICLE PER THE CITY OF KETCHUM STAFF'S REQUEST

OBSERVED VEHICLE COMPOSITION A

(5) PASSENGER VEHICLES + (2) COMMERCIAL VEHICLES OBSERVED FOR 2 MINUTES ON 9/1/16 OCCURRED <1% (0.56%) OF OBSERVED TIME ON 9/1/16

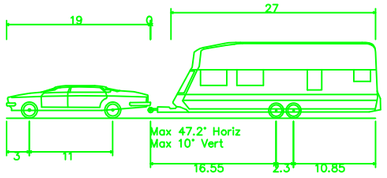
OBSERVED VEHICLE COMPOSITION B

(5) PASSENGER VEHICLES + (1) COMMERCIAL VEHICLES OBSERVED FOR 4 MINUTES ON 9/1/16 OCCURRED 1.1% OF OBSERVED TIME ON 9/1/16

ON–SITE CIRCULATION EXHIBIT #1– WORST CASE SCENARIO

RECREATIONAL VEHICLE QUEUING; COMMERCIAL VEHICLE DELIVERY

SEPTEMBER 16TH, 2016



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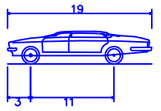

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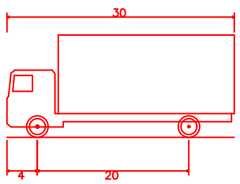

SU–30 – Single Unit Truck

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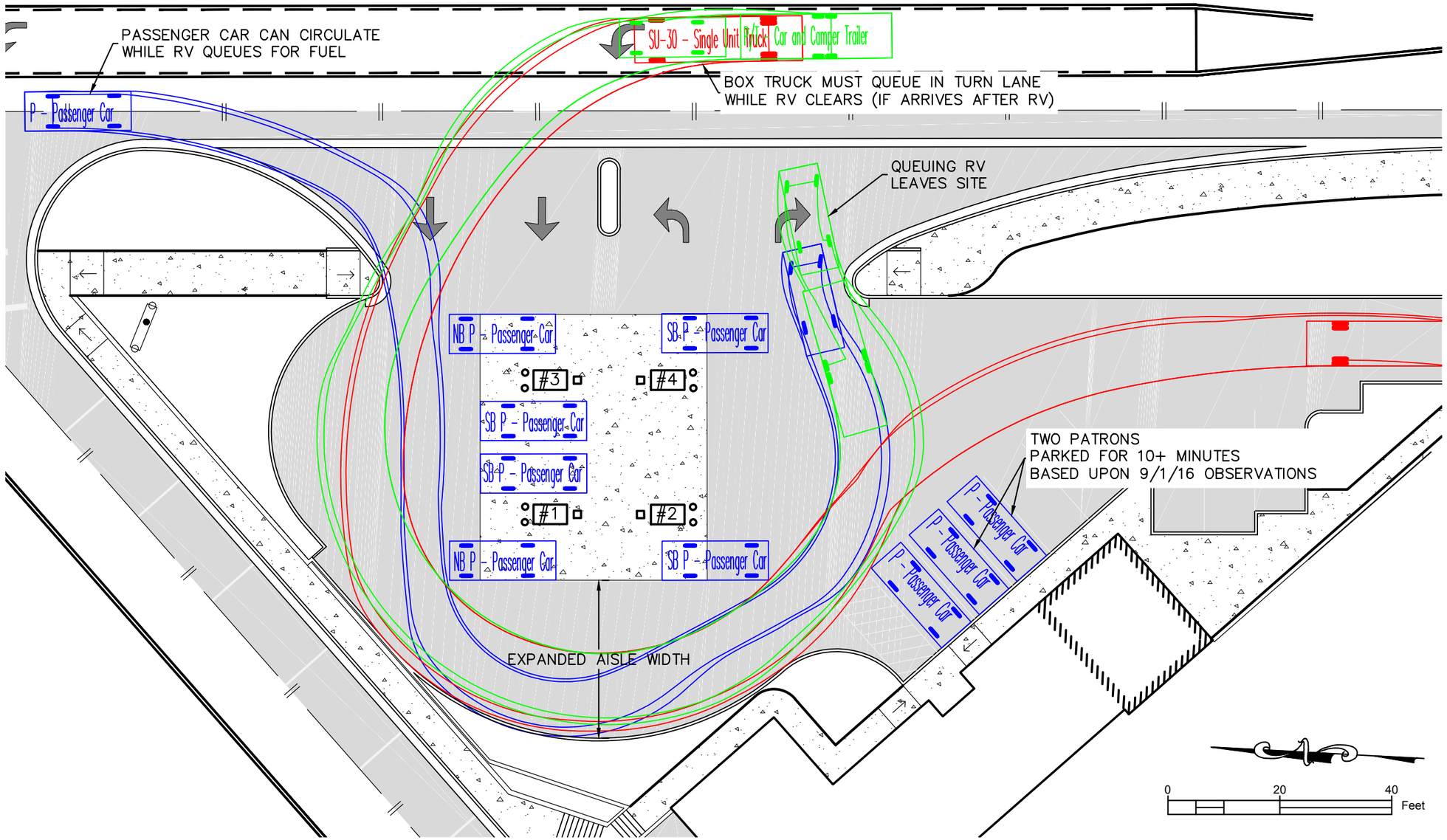

NOTES:

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OBSERVED VEHICLE COMPOSITION B

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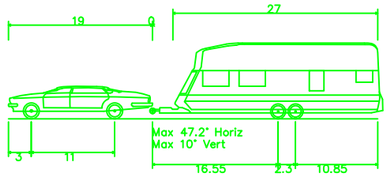
ON–SITE CIRCULATION EXHIBIT #1A– WORST CASE SCENARIO

RECREATIONAL VEHICLE QUEUING; COMMERCIAL VEHICLE DELIVERY

SEPTEMBER 16TH, 2016



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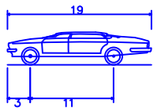

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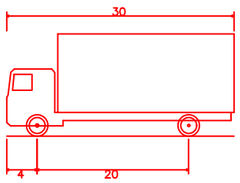

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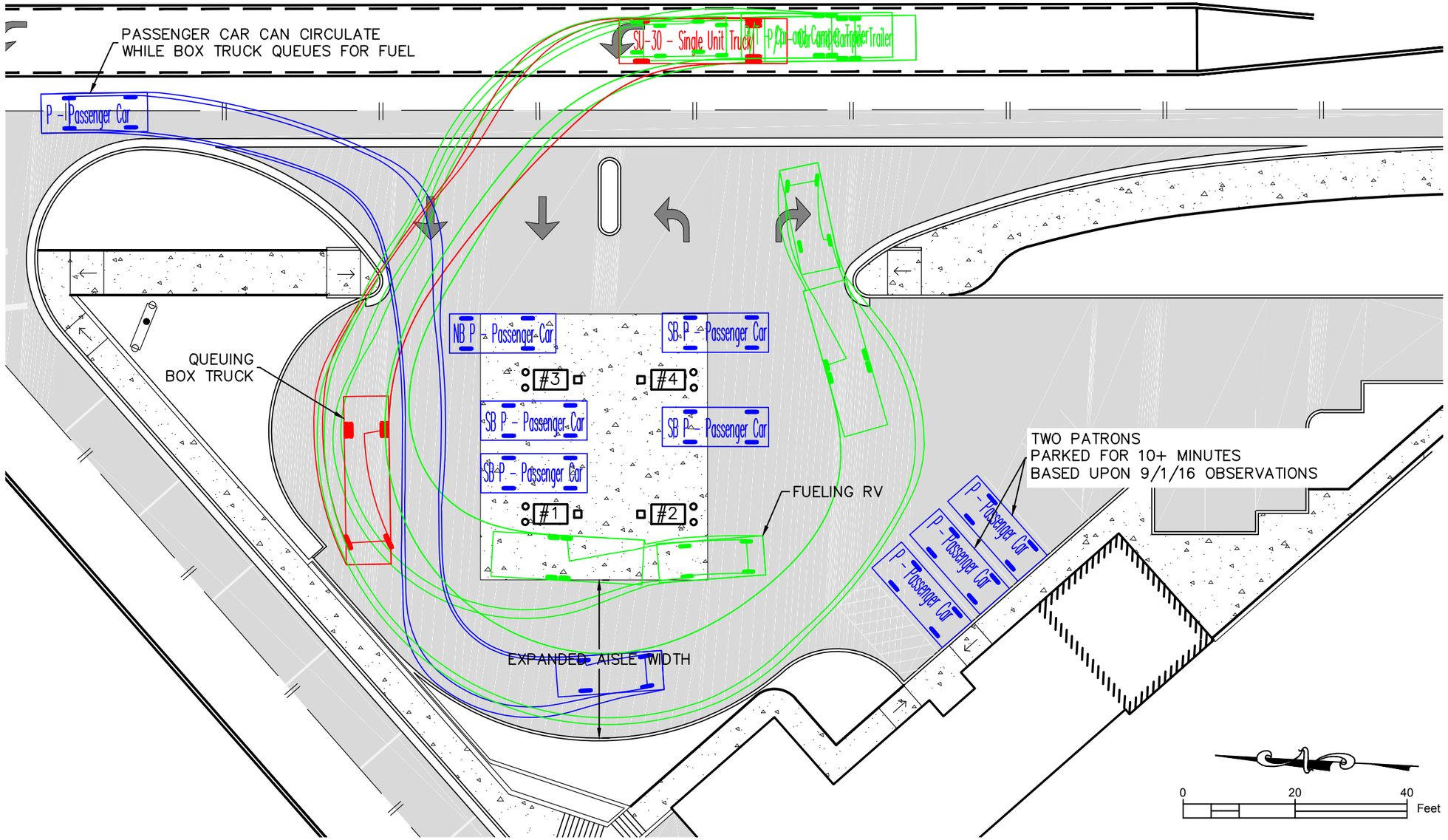

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OBSERVED VEHICLE COMPOSITION B

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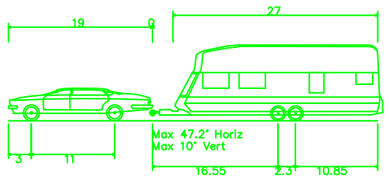
ON–SITE CIRCULATION EXHIBIT #2

RECREATIONAL VEHICLE FUELING; COMMERCIAL VEHICLE QUEUING

SEPTEMBER 16TH, 2016



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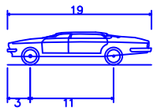

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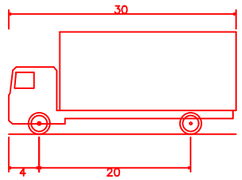

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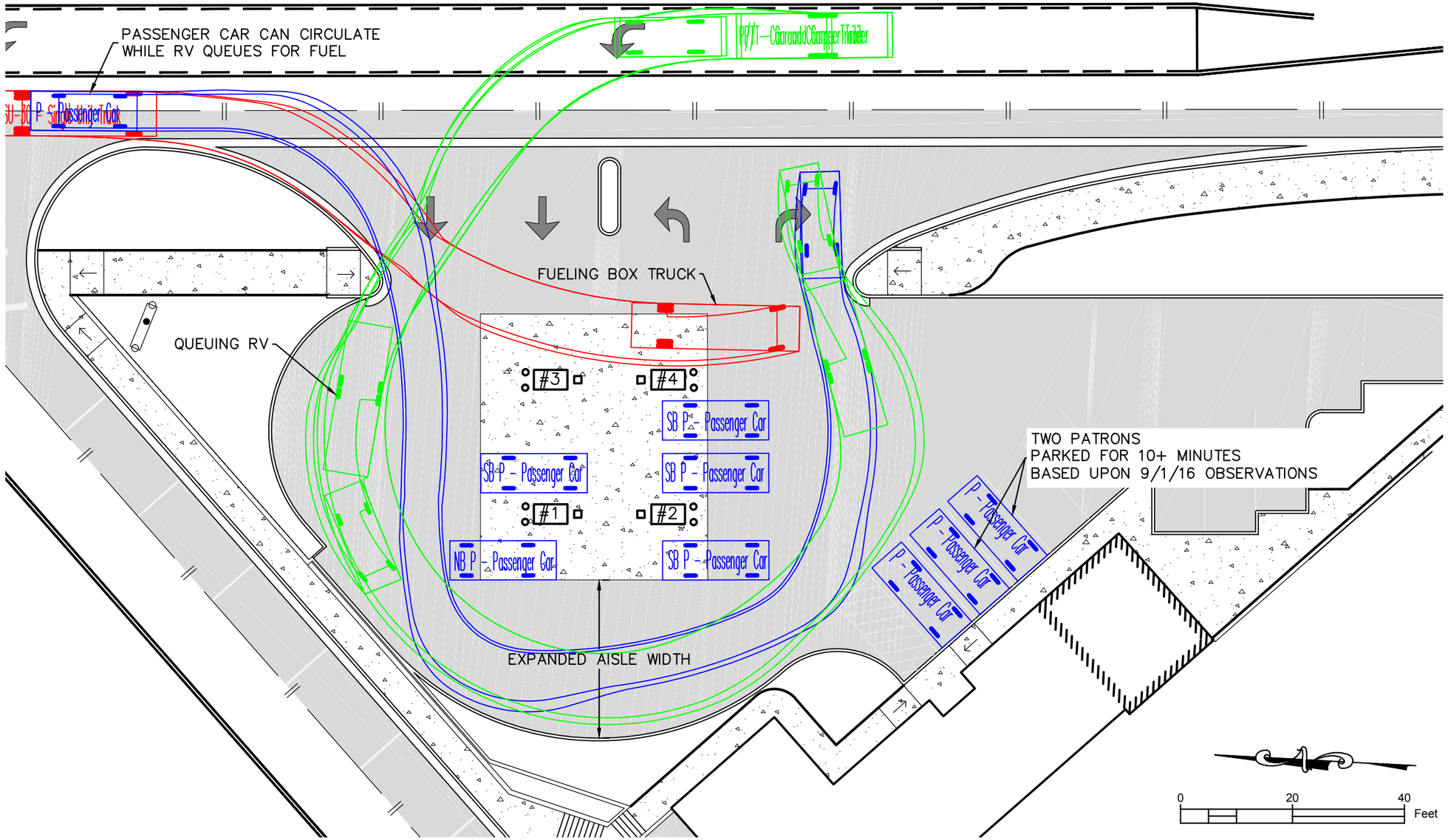

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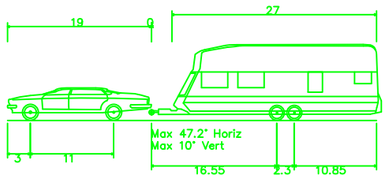
ON–SITE CIRCULATION EXHIBIT #3

RECREATIONAL VEHICLE QUEUING; COMMERCIAL VEHICLE FUELING

SEPTEMBER 16TH, 2016

NOTE:
VEHICLE TURNS SHOW ACCESS POINTS FOR A PASSENGER VEHICLE AND TRAILER FUELING, QUEUING, AND PARKING.



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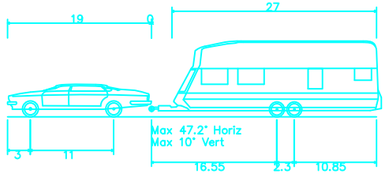
NORTH BOUND TRAFFIC



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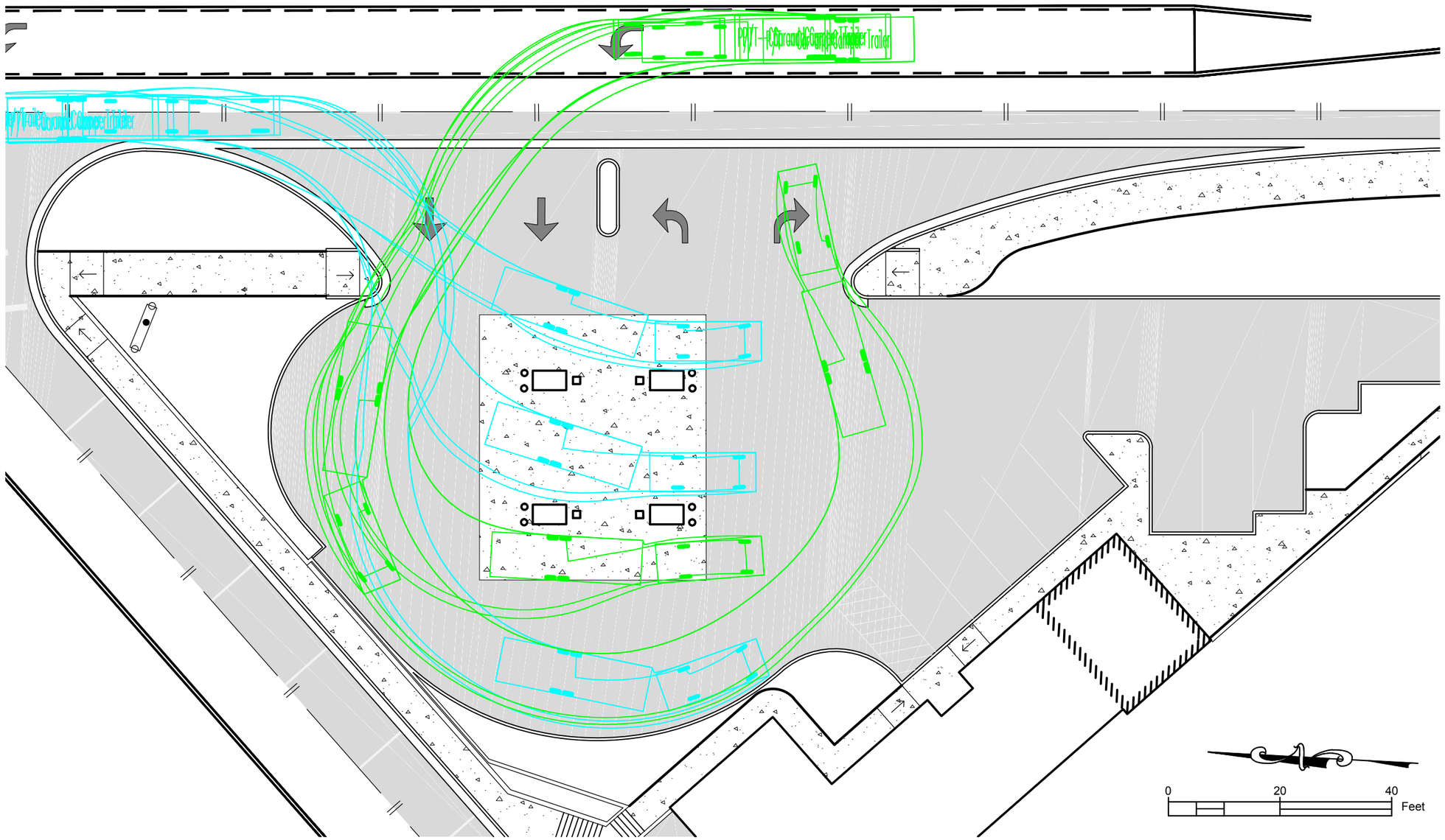
SOUTH BOUND TRAFFIC

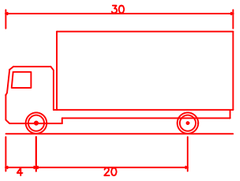


RECREATIONAL VEHICLE ACCESS AND CIRCULATION

SEPTEMBER 16TH, 2016

NOTES:

1. TRUCK TURNS SHOW ACCESS POINTS FOR BOX TRUCK FUELING, QUEUING, AND MAKING DELIVERIES.
2. DELIVERIES WILL ALSO TAKE PLACE IN THE ALLEY.



SU-30 - Single Unit Truck

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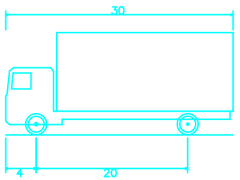
NORTH BOUND TRAFFIC



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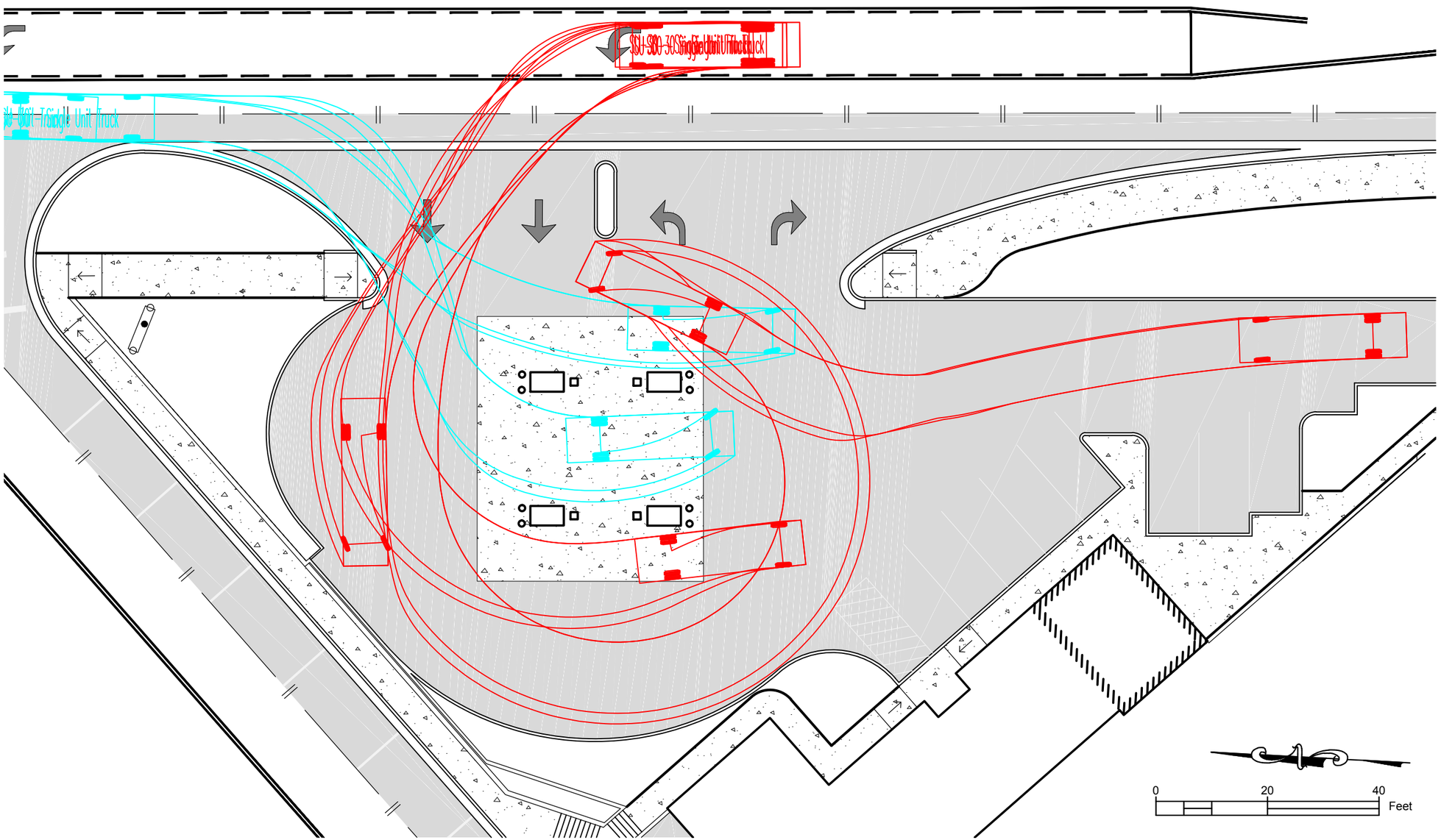
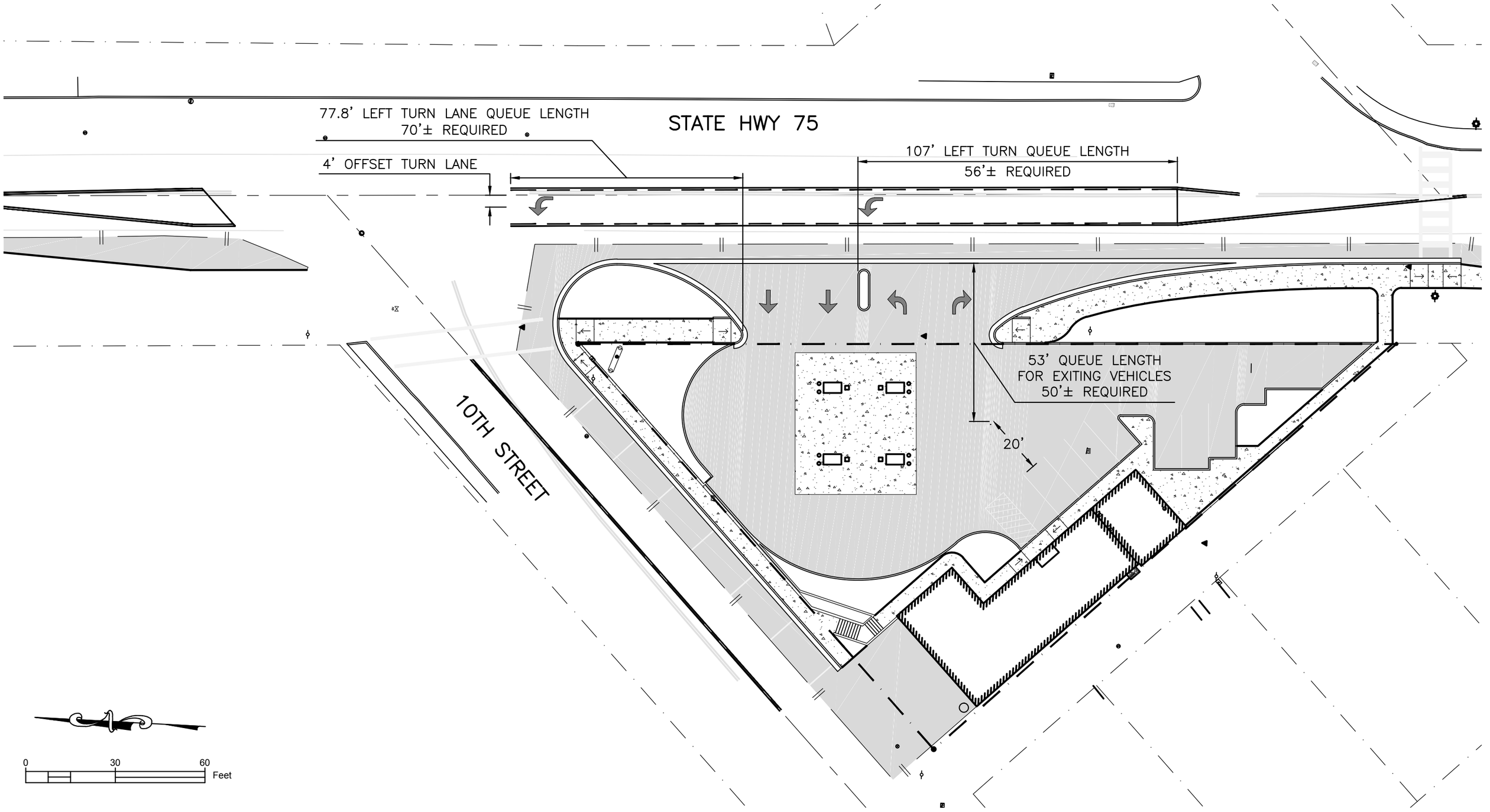


BOX TRUCK ACCESS AND CIRCULATION

SEPTEMBER 16TH, 2016



QUEUE LENGTH EXHIBIT

SEPTEMBER 16TH, 2016

Attachment E:

Additional Information Requested by Staff on September 30, 2016

Bracken Station – Conditional Use Permit application

Additional Information Requested by City of Ketchum staff

September 30, 2016

Vehicle Observation and Classification

1. Please verify that the food truck was on site and operating at the Chevron during the entire time period observation data was collected.
2. Please clarify vehicle classification:
    a. How were the following oversized passenger vehicles classified?
        i. Personal Sprinter or other make/model of oversize vans(without an commercial logos)
        ii. Personal vehicles towing boats
        iii. Personal vehicles towing flatbed trailers with ATVs, motorbikes, or other items
        iv. Personal vehicles, without company logos, towing construction trailers
    b. Please confirm that passenger vehicles with company logos, such as Chevrolet/Ford/etc. trucks, were classified as commercial vehicles.
3. Please detail the total number of minutes each combination of vehicles was present on site during the 360 minute observation period:

Vehicles located on site	Total number of minutes this composition of vehicles was present on site
1 passenger vehicle	
2 passenger vehicles	
3 passenger vehicles	
4 passenger vehicles	
5 passenger vehicles	
6 passenger vehicles	
1 passenger vehicle + 1 RV or commercial	
2 passenger vehicles + 1 RV or commercial	
3 passenger vehicles + 1 RV or commercial	
4 passenger vehicles + 1 RV or commercial	
5 passenger vehicles + 1 RV or commercial	
6 passenger vehicles + 1 RV or commercial	
1 passenger vehicle + 2 RV or commercial	
2 passenger vehicles + 2 RV or commercial	
3 passenger vehicles + 2 RV or commercial	
4 passenger vehicles + 2 RV or commercial	
5 passenger vehicles + 2 RV or commercial	
6 passenger vehicles + 2 RV or commercial	
Other (describe)	
Other (describe)	

4. Using the above information, please provide a bar chart or pie chart displaying the data.

Traffic Study

5. Are the queue lengths calculated based on traffic counts and turn movements taken September 1st on HWY 75, the observation data collected at the Chevron, or some other data? Please explain. Queue lengths should be based on the L2 counts and turn movements from September 1st.
6. Is LOS based on traffic counts and turn movements taken on September 1st on HWY 75, the observation data collected at the Chevron, or some other data? Please explain. LOS should be based on the L2 counts and turn movements from September 1st.
7. Please explain why the following occur:
    a. Existing (2016) Background Conditions queue lengths for NB 10th / HWY 75 and EB 10th / HWY 75 are both 85'; with the Existing (2016) Plus Project Conditions, the NB 10th / HWY 75 queue length reduces to 80' and the EB 10th / HWY 75 queue length reduces to 70'. Why is there a reduction in queue length for both intersections?
    b. The Existing (2016) Plus Project Conditions Analysis reports that the anticipated NB project access queue length will be 50' and the level of service for the EB approach to the project is A. Why was an EB level of service cited rather than a NB level of service for the project access? Similarly, why were NB access queue lengths referenced for the 2020 and 2026 Project Plus Conditions analyses while EB levels of service were reported?
    c. The Future (2020) Background Conditions for the NB 10th / HWY 75 and EB 10th / HWY 75 queue lengths for are80' and 70' respectively, which are less than the Existing (2016) Background Condition queue lengths of 85'. Why are the queue lengths less in 2020?
    d. The Future (2020) Plus Project Conditions Analysis reports the NB 10th / HWY 75 queue length to be 50', which is less than NB 10th / HWY 75 queue for the 2020 Background Conditions and the 2016 Plus Project conditions. Please explain why.
    e. The Future (2020) Plus Project Conditions Analysis reports that the EB 10th / HWY 75
8. Address the methodology used to collect the data at the gas station/convenience store/Gandolfo's in Provo and how the methodology and the classification of the use compares to ITE's process for incorporating new uses in the ITE manual. In other words, address whether the gas station/convenience store/Gandolfo's data will be used, or if it is intended to be used, in forthcoming editions of the ITE manual.
9. Include discussion of the Provo example in the Executive Summary section.
10. Provide the date of revision or label the study "revised" on the front cover of the Traffic Impact Study.
11. Based on the updated traffic study, our interpretation is that left and right turn movements into and out of the project site were derived by assigning 40% of trips to the site from the north and 60% of trips to the site from the south, prevailing movements at each intersection determined by data collected in September 2016 and permitted turn movements, and Snychro/SimTraffic. Please confirm and explain more thoroughly or explain otherwise.
12. Address these points from the August 3, 2016 information request letter in narrative form:

    "4a. The existing traffic study assumes there is an 80 foot stacking lane available for cars turning left. However, the stacking lane for cars entering into the project appears to be less than 80 feet as indicated on the Site Plan. Additionally, it appears the analysis only focuses on the delay and stacking for cars turning left onto 10th Street and does not take into account cars turning left into the project and how that impacts cars turning left on 10th Street. For instance, a car turning left onto 10th Street is not going to que behind a car waiting to turn left into the project.

    i. The analysis needs to look at those two turning movements separately and determine if the stacking lane is sufficient to accommodate each independent turning movement.

    ii. The study needs to address impacts to through traffic if one of the two turning lanes is over capacity and cars are stacked up in the travel lane.

Attachment F

"Bracken Station – Additional Information Requested Response" memo from Hales Engineering, dated October 4, 2016

HALES ENGINEERING
innovative transportation solutions

MEMORANDUM

Date: October 4, 2016

To: Brittany Skelton, Senior Planner
City of Ketchum

From: Hales Engineering
Benchmark Associates

Subject: Bracken Station – Additional Information Request Response

UT16-851

This memorandum addresses the questions and requests for clarification or information posed in a memo titled "Bracken Station – Conditional Use Permit application, Additional Information Requested by City of Ketchum staff," dated September 30, 2016. Each question/request posed by the city staff will be reproduced below in italics, followed by a response from Hales Engineering and/or Benchmark Associates as appropriate.

Vehicle Observation and Classification

1. Please verify that the food truck was on site and operating at the Chevron during the entire time period observation data was collected.

The food truck was onsite and operating during the September 1st data collection activities.

2. Please clarify vehicle classification:

a. How were the following oversized passenger vehicles classified?

i. Personal Sprinter or other make/model of oversize vans(without an commercial logos)

ii. Personal vehicles towing boats

iii. Personal vehicles towing flatbed trailers with ATVs, motorbikes, or other items

iv. Personal vehicles, without company logos, towing construction trailers

b. Please confirm that passenger vehicles with company logos, such as Chevrolet/Ford/etc. trucks, were classified as commercial vehicles.

Personal “Sprinters” or other oversize vans without company logos were classified as passenger vehicles. Any personal vehicle towing a boat, trailer with ATVs or motorcycles, or any other trailer that was not obviously a construction/landscaping trailer was classified as an RV. All vehicles towing construction/landscaping trailers were classified as commercial vehicles. All vehicles, regardless of make or model, that bore a company logo were classified as commercial vehicles.

3. Please detail the total number of minutes each combination of vehicles was present on site during the 360 minute observation period:

The worst case scenarios that Benchmark Associates and City Staff agreed on represent the most constrained site conditions. Their durations are shown below:

Vehicle Composition	Duration	Percentage of Occurance During 360 Observation Period
5 Passenger + 2 Commercial	2 minutes	0.56%
6 Passenger + 1 Commercial	1 minute	0.28%
5 Passenger + 1 Commercial	4 minutes	1.1%
4 Passenger + 2 Commercial	3 minutes	0.83%

Durations for the additional vehicle combinations requested by city staff do not affect the design of Bracken Station because all lesser combinations would show fewer constraints and improve site circulation.

4. Using the above information, please provide a bar chart or pie chart displaying the data.

See the above table.

Traffic Study

5. Are the queue lengths calculated based on traffic counts and turn movements taken September 1st on HWY 75, the observation data collected at the Chevron, or some other data? Please explain. Queue lengths should be based on the L2 counts and turn movements from September 1st.

As is stated in the “Bracken Station Traffic Impact Study UPDATED” report submitted to Ketchum City staff on September 26, 2016, in Chapter II Section C, the traffic counts used for the Existing (2016) Background Conditions analysis of the 10th Street / Main Street (SH-75) and 5th Street / Main Street (SH-75) intersections were collected on September 1st as directed by city staff. These data collected on September 1st were also used to project future 2020 and 2026 background traffic volumes at the study intersections (explained in Chapter V Section C and in Chapter VII Section C) that were used for the

Future (2020) Background Conditions and Future (2040) Background Conditions analyses.

Also as directed by city staff, the data from the September 1st counts at the Hailey Chevron were used to calculate trip generation for the proposed Bracken Station. These generated trips were added to each of the observed or projected background volumes at the study intersections to study "Plus Project" conditions. This is explained in more detail in the previously mentioned document submitted to Ketchum City staff on September 26, 2016 (see Chapter III, Chapter IV Section B, Chapter VI Section B, and Chapter VIII Section B).

All 95th percentile queue lengths and levels of service (LOS) presented in the previously mentioned report are based on data collected at the 10th Street / Main Street (SH-75) and 5th Street / Main Street (SH-75) intersections and the Hailey Chevron on September 1, 2016.

6. Is LOS based on traffic counts and turn movements taken on September 1st on HWY 75, the observation data collected at the Chevron, or some other data? Please explain. LOS should be based on the L2 counts and turn movements from September 1st.

Please see response to question/comment 5.

7. Please explain why the following occur:
a. Existing (2016) Background Conditions queue lengths for NB 10th / HWY 75 and EB 10th / HWY 75 are both 85'; with the Existing (2016) Plus Project Conditions, the NB 10th / HWY 75 queue length reduces to 80' and the EB 10th / HWY 75 queue length reduces to 70'. Why is there a reduction in queue length for both intersections?

The 10th Street / Main Street (SH-75) intersection was studied with the existing lane configuration for the Existing (2016) Background Conditions analysis (see Chapter II Section A as well as Figure 2). The intersection currently consists of a shared thru/left-turn lane on the northbound approach, a shared thru/right-turn lane on the southbound approach, and a shared right/left-turn lane on the eastbound approach. In the current configuration, if a vehicle traveling northbound on Main Street (SH-75) wishes to turn left onto 10th Street, they must slow down and/or stop in the single northbound lane until an acceptable gap in the southbound traffic is available before they can execute the turning movement. In turn, vehicles wishing to continue traveling north on Main Street (SH-75) must queue behind the stopped left-turning vehicle.

Vehicles on 10th Street waiting to turn left onto Main Street (SH-75) must yield to both left-turning and thru vehicles on Main Street (SH-75), and wait for an acceptable gap to execute the turning movement. Vehicles wishing to turn right onto Main Street (SH-75) must also queue behind the left-turning vehicles and vice versa.

The Existing (2016) Plus Project Conditions analysis assumed that a similar shared thru/left-turn lane would serve the project access (see Figure 4). While a northbound vehicle waits for an acceptable gap to execute a left-turn movement into the project access, all thru vehicles must queue behind the left-turning vehicle. This left-turn ingress movement at the project access shifts some of the queueing that normally would have occurred at 10th Street south to the project access resulting in a shorter 95th percentile queue length on the northbound approach to the 10th Street / Main Street (SH-75) intersection.
The northbound queuing at the project access also creates more or longer gaps in northbound traffic at the 10th Street / Main Street (SH-75) intersection, resulting in a reduction in the time vehicles have to wait for an acceptable gap to execute the turning movement. This also results in a shorter 95th percentile queue length on the eastbound approach to the 10th Street / Main Street (SH-75) intersection.

b. The Existing (2016) Plus Project Conditions Analysis reports that the anticipated NB project access queue length will be 50' and the level of service for the EB approach to the project is A. Why was an EB level of service cited rather than a NB level of service for the project access? Similarly, why were NB access queue lengths referenced for the 2020 and 2026 Project Plus Conditions analyses while EB levels of service were reported?

As is stated in Chapter I Section C of the "Bracken Station Traffic Impact Study UPDATED" report submitted to Ketchum City staff on September 26, 2016, level of service for signalized and all-way stop controlled intersections is based on the weighted average of all approach delays. For all other unsignalized intersections, LOS is based on the worst approach. The LOS for the eastbound approach was reported because the average delay for vehicles on that approach was greater than the average delay for vehicles on either of the other two approaches.

The northbound queue length was referenced because queuing on the northbound approach was a point of emphasis in the memo from Brittany Skelton to Steve Cook dated August 3, 2016, outlining the scope for the TIS as directed by Ketchum City staff, and because queues blocking thru lanes are generally of more concern to governing entities than queues backing onto a project site due to potential impacts to the surrounding transportation network.

Average delay and 95th percentile queue lengths are not necessarily correlated, especially when volumes on the approaches are unbalanced (meaning the volumes on the project access are much smaller than the volumes on Main Street (SH-75)), and one approach is stop-controlled while another is uncontrolled.

As stated in Chapter IV Section D, (as well as Chapter VI Section D and Chapter VII Section D) detailed queuing reports are provided in Appendix D. (Detailed LOS reports are also provided in Appendix B.)

c. The Future (2020) Background Conditions for the NB 10th / HWY 75 and EB 10th / HWY 75 queue lengths for are 80' and 70' respectively, which are less than the Existing (2016) Background Condition queue lengths of 85'. Why are the queue lengths less in 2020?

As shown in Appendix D of the previously mentioned report, the 85th percentile queue lengths for the nouthbound and eastbound approaches to the 10th Street / Main Street (SH-75) intersection are actually 80 feet and 77 feet, respectively.

As is discussed several times throughout the report, multiple runs of Synchro/SimTraffic are used to provide a statistical evaluation of traffic conditions. Each run of the model uses a different random vehicle generator (while adhering to hourly volumes at each intersection, peak hour factors, and other quantified values) so that results can be calculated from a variety of possible conditions, as opposed to one single statistical sample. As such, small variations in calculated values (such as 5-7 feet of 95th percentile queue length) are statistically insignificant, especially when traffic volumes increased by such a small number. For this reason, it was reported in Chapter V Section E that no significant changes to the 95th percentile queues are anticipated with future (2020) background conditions.

d. The Future (2020) Plus Project Conditions Analysis reports the NB 10th / HWY 75 queue length to be 50', which is less than NB 10th / HWY 75 queue for the 2020 Background Conditions and the 2016 Plus Project conditions. Please explain why.

As is stated in Chapter VI Section B (as well as shown in Figure 6), for the Future (2020) Plus Project Conditions analysis it was assumed that a center two-way left-turn lane had been installed along the project frontage (as recommended in Chapter IV Section E). This two-way left-turn lane allows northbound vehicles on Main Street (SH-75) wishing to turn left onto 10th Street to slow down, stop, and queue without blocking the northbound thru lane. In the Future (2020) Background Conditions and the Existing (2016) Plus Project Conditions analyses, all left-turning vehicles were required to slow down and queue in the shared thru/left-turn lane. Since thru vehicles do not have to wait for turning vehicles to execute left-turn movements, fewer cars end up queuing at the intersection and thus the 95th percentile queue lengths are shorter.

e. The Future (2020) Plus Project Conditions Analysis reports that the EB 10th / HWY 75

This question/comment appears to be incomplete.

8. Address the methodology used to collect the data at the gas station/convenience store/Gandolfo's in Provo and how the methodology and the classification of the use compares to ITE's process for incorporating new uses in the ITE manual. In other words, address whether the gas station/convenience store/Gandolfo's data will be used, or if it is intended to be used, in forthcoming editions of the ITE manual.

As is stated in Chapter 9 Section B of the previously discussed report, this data was collected by university students for the Institute of Transportation Engineers (ITE), and not by or for Hales Engineering. The observed hourly volumes, directional distributions (vehicles entering and exiting), and a brief description of the site were provided to Hales Engineering as a courtesy. ITE paid for this data collection to be used in a future edition of their *Trip Generation Manual*.

9. Include discussion of the Provo example in the Executive Summary section.

This has been added to the Executive Summary section of the report dated October 3, 2016, and is noted as a hypothetical scenario analyses.

10. Provide the date of revision or label the study "revised" on the front cover of the Traffic Impact Study.

The date has been added to the cover page of the document.

11. Based on the updated traffic study, our interpretation is that left and right turn movements into and out of the project site were derived by assigning 40% of trips to the site from the north and 60% of trips to the site from the south, prevailing movements at each intersection determined by data collected in September 2016 and permitted turn movements, and Snychro/SimTraffic. Please confirm and explain more thoroughly or explain otherwise.

In the original TIS report, we distributed 85% to/from the south and 15% to/from the north. This calculation was based on the existing directional distribution of traffic on Main Street (SH-75). In the previously mentioned memo from Brittany Skelton to Steve Cook dated August 3, 2016, outlining the scope for the TIS as directed by Ketchum City staff, staff explained that 30-40% of trips would be coming from the north, and thus 60%/40% distribution should be used in subsequent analyses.

12. Address these points from the August 3, 2016 information request letter in narrative form: "4a. The existing traffic study assumes there is an 80 foot stacking lane available for cars turning left. However, the stacking lane for cars entering into the project appears to be less than 80 feet as indicated on the Site Plan. Additionally, it appears the analysis only

focuses on the delay and stacking for cars turning left onto 10th Street and does not take into account cars turning left into the project and how that impacts cars turning left on 10th Street. For instance, a car turning left onto 10th Street is not going to que behind a car waiting to turn left into the project.
i. The analysis needs to look at those two turning movements separately and determine if the stacking lane is sufficient to accommodate each independent turning movement.
ii. The study needs to address impacts to through traffic if one of the two turning lanes is over capacity and cars are stacked up in the travel lane.
iii. Show how the traffic light at 5th Street and the current traffic issues merging onto Warm Springs will be impacted by the gas station. Currently, this is one of the most congested areas of the city and the Bracken project has yet to address these concerns satisfactory to staff."

Although it is debatable whether or not a vehicle turning left onto 10th Street would queue behind a vehicle waiting to turn left into the project, the two turning movements were in fact analyzed separately in each version of the TIS report. In each instance, it was determined that the stacking distance for each movement is sufficient to accommodate each independent turning movement.

If the left-turn queuing demand were to exceed the capacity at either 10th Street or the project access, then the left-turn queue would block the thru lane, just as happens currently at the 10th Street / Main Street (SH-75) intersection. The addition of the left-turn lane along the project frontage would cause the thru lane to be blocked less often than it is currently with the current lane configuration.

With the addition of the gas station, approximately 27 vehicles would be added to the existing volumes on the southbound approach to the 5th Street / Main Street (SH-75) intersection during the evening peak hour (an increase of less than 4%). Queues of several hundred feet have been reported on this approach, and it is likely that vehicles leaving the gas station heading south on Main Street (SH-75) would end up in this existing queue. It is difficult to say how the Warm Springs Road / Main Street (SH-75) intersection will be impacted, as this intersection was not in the scope outlined by city staff. However, based on the analyses of the 5th Street / Main Street (SH-75) intersection, it is likely that the impact of the traffic added by the gas station would be insignificant.

13. Address the impact of traffic coming from 9th Street and turning northbound onto the highway, into the turn lane, and into the project site. Address the impact of such traffic on overall traffic flow in the vicinity of the project site.

The analysis of the 9th Street / Main Street (SH-75) intersection was not included in the scope that was provided by city staff. Therefore, no data was collected for that intersection and the intersection was not analyzed. However, it can be assumed that vehicles turning

right from 9th Street will have to wait for an acceptable gap in traffic, just as they do now, before executing the turning movement.

14. Provide information about the characteristics of the Community School, Warm Springs Ranch Resort, and Stock Lumberyard proposal as used to generate future conditions. Provide a table summarizing trips each use will generate or an appendix.

This has been added to the Appendix section of the report dated October 3, 2016.

15. Explain the implications of queuing in the 77.8' NB L turn lane potentially exceeding the 77.8' length and vehicles queening in the area of the turn lane that NB vehicles use to exit the project site.

Vehicles exiting the project site, whether they are turning left or right, must yield to traffic on 10th Street. When vehicles are queued and waiting to turn left, at either 10th Street or at the project access, left-turning vehicles leaving the site must wait for the queue to clear before executing the turning movement. While it is possible that queues on Main Street (SH-75) will block the left-turn egress movements from the site, this is only anticipated to happen on rare occasions.

Exhibits

16. Exhibit #1 – Provide a variation showing two commercial delivery vehicles on the site. Show a semi-truck sized delivery truck circulating into the site, into location at the loading zone, and circulation out of the loading zone (including backing up maneuvers). The second commercial delivery vehicle may be a 30' box truck.

Deliveries to Bracken Station will take place both in the loading space provided in the southern corner of the site and in the alley accessed from 10th Street. Two commercial delivery vehicles are not anticipated on site.

17. Exhibit #2 – Provide a variation, with all passenger vehicles at the same locations, showing a semi-truck sized delivery truck circulating to the loading zone and circulating out of the loading zone (including backing up maneuvers).

"Semi-Truck Delivery Circulation" exhibit provided via email 10/4/16, 8:28 AM.

Attachment G

Table 4. Zoning Standards Analysis

Compliance with Zoning Standards				
Compliant			**Standards and Staff Comments**	
Yes	**No**	**N/A**	**Guideline**	**City Standards and *Staff Comments***
☒	☐	☐	**17.12.030.C**	**Lot Area**
			Staff Comments	*8,000 square feet minimum is required. The lot is 0.4267 acres or 18,590 square feet.*
☒	☐	☐	**17.12.030.C & 17.128.020.C**	**Setbacks and Supplementary Yard Requirements**
			Staff Comments	*Buildings "A" and "C" currently have non-conforming setbacks on the front (eastern) property line. Building "B" currently conforms to setbacks. The applicant is proposing to demolish buildings "A" and "C" and to build an addition to building "B" which will result in a site with structures that meet setback requirements.* *Proposed Front (north – 10th Street) –20'* *Proposed Side (east – Main Street) – 13–'4"* *Proposed Rear – (west 0 alley) – 0'* *The proposed setbacks meet setback requirements.*
☒	☐	☐	**17.12.030.C**	**Building Coverage**
			Staff Comments	*Permitted - 75% Proposed – 23% (including gas station canopy)*
☒	☐	☐	**17.12.030.C**	**Building Height**
			Staff Comments	*Maximum building height permitted is 35'; the existing buildings are 13'-8" above grade on Main Street and 24'-8" above grade on 10th Street; the proposed addition to building "B" is 13'-8" above grade on Main Street and 24-8" above grade on 10th Street. The proposed canopy is 18' above grade on Main Street and 20' above grade from 10th Street at the eastern edge of the structure and 24' above grade from 10th Street at the western edge of the structure.*
☒	☐	☐	**17.125.030.H**	**Curb Cut**
			Staff Comments	*A maximum of thirty five percent (35%) of the linear footage of any street frontage can be devoted to access off street parking.* *The curb cut design was recommended by ITD is 84' (40' entrance, 4' island, 4' exit) in width, which equates to 30.6% of the linear footage frontage of the lot. (The linear footage of lot frontage is 273.97'.)*
☒	☐	☐	**17.124.060.M**	**Parking Spaces**
			Staff Comments	*Required:* *The off street parking standards apply when an existing structure or use is expanded or enlarged. Additional off street parking spaces shall be required only to serve the enlarged or expanded area, not the entire building or use.* *2 spaces per fuel pump at fuel pump; 4 pumps require 8 spaces.* *1 space per 250 square feet retail;* *1 space per 250 square feet restaurant*

				There is a 508 square foot addition to the existing 2,084 square foot building proposed; 3 spaces are required. *Proposed:* • *8 for temporary holding at the fuel pumps* • *12 to serve retail/restaurant (4 spaces are lower level accessed from 10th Street)* • *There are 4 additional lower level parking spaces accessed from 10th Street to serve the existing uses.*
☒	☐	☐	**17.125.040**	**Off Street Parking and Loading Areas**
				17.125.040 - In the LI-1, LI-2 and LI-3 districts, off street loading areas (containing 180 square feet with no 1 dimension less than 10 feet) shall be required as an accessory use for new construction or major additions involving an increase in floor area, as follows: One off street loading space for floor area in excess of two thousand (2,000) square feet, provided no loading space occupies any part of a public street, alley, driveway or sidewalk; except, that where practicable to do so, an alley may be used in lieu of the requirement of this section if prior permission is granted by the commission. *The project consists of 2,592 square feet on the second floor of the building, which is at grade when accessed from Main Street. The existing first floor of the building is 2,084 and is accessible from 10th Street and the alley behind the building. With 4,676 square feet 2 off-street loading spaces are require for the site.* *The minimum permitted size of an off-street loading space is 10' x 18'; the site plan indicates 1 off-street loading space of 10' x 26' which satisfies this requirement. The Commission may grant permission for use of the alley to satisfy the requirement for a second loading space.*
☒	☐	☐	***17.18.140, 17.12.020 and 17.08.020***	**Zoning Matrix & Definitions**
				17.18.140 - A. Purpose: The LI-1 light industrial district number 1 is established as a transition area providing limited commercial service industries, limited retail, small light manufacturing, research and development, and offices related to building, maintenance and construction and which generate little traffic from tourists and the general public. (Ord. 1135, 2015) *Staff notes that uses in the LI-1 district are intended to generate little traffic from tourists and the general public.* *17.12.020 – Motor Vehicle Fueling Stations are allowed in the LI-1 zone with a Conditional Use Permit. The applicant is proposing a motor vehicle fueling station with 4 fuel pumps, two electric vehicle charging stations, and retail sales for the convenience of the motoring public. Food Service is allowed in the LI-1 zone with a Conditional Use Permit when the conditions described in footnote #15 are adhered to.* *The applicant is proposing to remodel the existing building, consisting of 2,084 square feet, and to add an addition of 508 square feet and an attached outdoor patio area with seating. The applicant is proposing to utilize the*

				remodeled and expanded building for a retail store associated with the motor vehicle fueling station and for a deli service restaurant. The site plan indicates a food service area of 280 square feet. *Footnote #15 limits the hours of operation of restaurants that require a conditional use permit to no later than 9:00 p.m. but gives the Commission the authority to expressly permit operation of the restaurant past 9:00 p.m. as part of the conditional use permit approval.* *The zoning code does not specify hours of operation for fuel pumps or retail sales for the convenience of the motoring public that are associated with motor vehicle fueling stations. However, the Commission may condition hours of operation in order to minimize adverse impact on other development.* *17.08.020 – Definitions: Motor Vehicle Fueling Station - A facility providing the retail sale and direct delivery to motor vehicles of fuel, including electric charging stations, lubricants and minor accessories, and retail sales for the convenience of the motoring public.* *Food Service - An establishment where food and drink are prepared, served and consumed on site with associated outdoor dining, or distributed to customers through take out, delivery or catering. Typical uses include, but are not limited to restaurants, cafes, delis, catering services and brewpubs that do not distribute beer produced for off-site consumption.* *Footnote #15. Catering and food preparation is permitted. Restaurants require a conditional use permit and shall not exceed 1,000 square feet and serve no later than 9:00 P.M. unless expressly permitted through approval of the conditional use permit.*
☒	☐	☐	***17.132.020J & 17.132.020K***	***Dark Skies***
				J. The average foot-candle lighting for service stations is required to be no greater than 30 foot-candles, as set by the IESNA for urban service stations. *K. [Canopy lights] shall be recessed sufficiently as to ensure that no light source is visible from or causes glare on public rights of way or adjoining property.* *As indicated in the Photometric Plan, the average foot-candle lighting for the canopy is 28.51 foot-candle.* *As indicated by the Lighting Fixtures exhibit, all canopy lights are CRUS-SC-LED and CRUS-AC-LED fixtures. The light source Is recessed within the fixture and the fixtures themselves will be flush mounted to the underside of the canopy.*

Attachment H

Table 5: Conditional Use Permit Requirements

Conditional Use Requirements

1. EVALUATION STANDARDS: 17.116.030 and § 67-6512 of Idaho Code

A conditional use permit shall be granted by the commission only if the applicant demonstrates that:

Compliance and Analysis				
Yes	**No**	**N/A**	**Code**	**City Standards and *Staff Comments***
☐	☒	☐	**17.116.030(A) CONDITIONAL USE**	**The characteristics of the conditional use will not be unreasonably incompatible with the types of uses permitted in the applicable zoning district.**
			Staff Comments	*Staff's analysis from the July 25, 2016 staff report remains unchanged and is as follows:* *The LI-1 district allows for one of the widest varieties of uses in the zoning code use matrix; uses ranging from manufacturing to personal service to warehousing and wholesaling to automotive uses are permitted.* *The LI-1 and LI-2 districts are the only districts that permit motor vehicle fueling stations within the City of Ketchum and in both the LI-1 and LI-2 districts motor vehicle fueling stations are permitted only with a conditional use permit. The city has ten districts classified as commercial or light industrial; food service is permitted in six districts of those districts and is permitted conditionally in two districts (LI-1 and LI-2).* *The proposed uses of a motor vehicle fueling station with associated food service are generally compatible with the types of uses permitted in the LI-1 district. However, Ketchum zoning code section 17.18.140 defines the purpose of the Light Industrial District Number 1 as: "A. Purpose: The LI-1 light industrial district number 1 is established as a transition area providing limited commercial service industries, limited retail, small light manufacturing, research and development, and offices related to building, maintenance and construction and which generate little traffic from tourists and the general public. (Ord. 1135, 2015)"* *The Retail S Analysis, dated January 2016 and conducted by Gmap USA and provided by the applicant states, "The population is around 3,200 people within 2.0 miles and the median age is about 47 years old. The population is somewhat lighter than ideal for this type of site location and the median age is a little high for ideal C-store customer base population. However the focus for this site is the winter and especially the summer tourists that pass through the town."* *With respect to business projections, the Retail S Analysis states, "One of the keys for this site is to provide a good operation with a good offering that will bring in the commuter that passes by the intersection on a consistent basis…The focus on the merchandising should be having a quality offering that entices the commuter/tourist traffic that passes by the site on a regular basis.*

				The site should have a large fountain and coffee offering to entice the commuters to use the site as their refreshment spot….Overall the site is on a good corner is[sic] the area and has good potential. The traffic passing by the site is strong and along with the residential backup the location should do well." *As such, while the proposed uses are generally compatible with the types of uses permitted in the LI-1 zone, the proposed uses on this specific site are dependent on traffic from tourists and the general public, which is in conflict with the purpose of the LI-1 zone.*
☐	☒	☐	**17.116.030(B)**	**The conditional use will not materially endanger the health, safety and welfare of the community.**
			Staff Comments	*In regards to health, safety and welfare concerns of the underground fuel storage tanks associated with the use, as noted by the Fire Department, the underground fueling tanks and fueling stations must be constructed to meet applicable Fire Code. Additionally, state and federal environmental standards for the construction of fuel storage tanks and operation of fuel pumps will have to be met. The applicant has provided a copy of the Idaho Department of Environmental Quality's "Rules Regulating Underground Storage Tank Systems", IDAPA 58.01.07.* *The applicant has also submitted an exhibit from J.M. Plenik, P.E., regarding the Xerxes Corporation underground fuel storage tanks proposed for the site. The exhibit states that seismic activity occurring at a distance away from the tanks could be withstood but that seismic activity occurring at or very near the tanks would rupture the tanks. The applicant has also submitted a brochure for the proposed Xerxes underground tanks, which notes safety features.* *The applicant addressed concerns regarding gas spillage from fuel pumps onto snow or ice and drainage into the on-site oil/water separator at the July 11, 2016 meeting and no further information was requested by the Commission or staff.* *Additionally, as analyzed in Attachment I, Table #: Required Public and Private Improvements and Attachment J: Recommended Additional Public Improvements, the majority of pedestrian and vehicular safety and welfare concerns could be addressed by the sidewalks, crosswalks, rapid flashing beacon, turning lane, and reduced curb cut width proposed by the applicant.* *However, after review and analysis of the new vehicle circulation exhibits prepared for the October 10, 2016, meeting, concerns still exist regarding on-site circulation and potential negative externalities. These concerns as discussed in detail in the next section.* *As such, at this time the applicant has not proved that the conditional use will not materially endanger the health, safety, and welfare of the community.*
☐	☒	☐	**17.116.030(C)**	**The conditional use is such that pedestrian and vehicular traffic associated with the use will not be hazardous or conflict with existing and anticipated traffic in the neighborhood.**
			Staff Comments	*The applicant has submitted an updated Traffic Study prepared by Hales*

				Engineering, dated October 3, 2016, which analyzes existing traffic levels of service at the Main Street and 10th Street, Main Street and 5th Street, and Main Street and Project Access intersections based on existing conditions, projected future conditions with background conditions but without the proposed use, and projected future conditions with background conditions and with the proposed use. The Traffic Study recommends improvements, namely the proposed turning lane, in order to maintain level of service. *The applicant previously submitted a Pedestrian Study prepared by Alta Planning + Design. The Pedestrian Study analyzes three pedestrian catchment areas where pedestrians traveling to the site are anticipated to be drawn from and recommends specific improvements to enhance pedestrian safety. Some recommendations reinforce recommendations previously made by staff, some recommendations are new, and some are slight variations to recommendations previously made by staff. These recommendations are discussed in depth in Attachment L, Table 8, Summary and Analysis of New Plans, Studies and Information Received for the July 11, 2016 meeting. Staff finds that some of the recommended improvements in Table 6: Required Public and Private Improvements and Table 7: recommended Additional Public Improvements could adequately mitigate the majority of potential hazards or conflict with existing and anticipated pedestrian and vehicular traffic associated with the use in the context of travel to the site, however, some of the recommendations in the Pedestrian Study will require further study and analysis before staff can make a recommendation.* *The applicant previously submitted several circulation exhibits for the July 11, 2016 meeting. Staff's analysis was that neither the initial On-Site Vehicle Turn Exhibit nor the revised On-Site Vehicle Turn Exhibit-Circulation adequately proved turn movements could be made in real world conditions in such a manner that did not cause traffic to back up on Main Street/Highway 75. For the October 10th, 2016 meeting staff requested additional exhibits indicating the turn movements and queuing locations of delivery trucks, recreational vehicles, and fueling trucks based on conditions observed at a comparable site.* *The analysis of the new exhibits is detailed in Attachment C, Table 3 Analysis of Vehicle Circulation Exhibits dated September 16, October 3 and October 4, 2016: As noted in Table 3, while there are scenarios illustrated in each exhibit where optimal conditions enable commercial or recreational vehicles to maneuver to a fuel pump, adequate circulation is often dependent on 1 particular pump of the 8 pumps on site being available or 2 pumps in tandem both being available at the same time. Additionally, the ability of oversize vehicles to enter the site and circulate past the fueling island to park in a parking space or park in the loading space depends on each vehicle parking at a fuel pump in such a way that the vehicle's encroachment into the circulation areas is minimized; the encroachment into the circulation area of just one oversize vehicle parked at just one fuel pump could constrain or prevent vehicles in the travel lane or turn lane from entering the site. Furthermore, during the lengths of time that a fuel delivery truck is on site the ability of a box truck 30' in length or a passenger vehicle towing an rv to enter the site and circulate is dependent on the east side of pump #1 and the west side of*

				pumps #1 and #2 being closed for the box truck or the west side of pumps #1 and #2 being closed for the rv because it is physically impossible for the box truck or rv to circulate through the site if vehicles are fueling at the pumps noted while a fuel delivery truck is on site. *Although Hales Engineering notes in their memo dated October 4, 2016 that the occasions when 2 commercial vehicles and 4 or 5 passenger vehicles were observed on site were 3 minute (0.83% of the time observed) and 2 minute (0.56% of the time observed) lengths of time respectively, L2 Data Collection observed that 26.9% of all trips to the Hailey Chevron between the hours of 7:00 – 9:00 a.m. were commercial vehicles and during the hours of 3:00 – 7:00 p.m. 10.5% of all trips were commercial vehicles.* *The ability of the proposed development to adequately accommodate on site circulation in such a manner that does not adversely impact traffic on Main Street in the southbound travel lane or in the proposed northbound turn lane cannot be evaluated by assuming the only potential impact will occur the 0.56% or 0.83% of the time that 4 or 5 passenger vehicles and 2 commercial vehicles were observed on site. Rather, the ability of the site to mitigate external traffic impacts should be evaluated more comprehensively.* *For example, a northbound box truck can only maneuver to the west side of pumps #1 and #2 to fuel unless a 3, 4, or 5 point turn is made to maneuver to pump #3 or #4. The box truck's ability to fuel at pump #2 is dependent on pump #1 also being open. The percentage of time that the east side of pumps #1 and #2 will be available cannot be determined, but a simple 1-in-8 probability is 12.5%; and while not all commercial vehicles observed were box trucks, 10.5% of all p.m. trips and 26.9% of all a.m. trips to the Hailey Chevron were commercial vehicles. Ninety (90) total trips during the p.m. peak hour represents 45 vehicles circulating into the site and 45 vehicles circulating out of the site during the hour.* *If the optimal conditions do not exist on every occasion that an oversize vehicle enters or attempts to enter the site the oversize vehicle will be forced to queue alongside the fueling island, which creates a pinch point for on-site circulation, or at the entrance to the site, which could cause traffic to back up in the travel lane and/or turn lane.* *As such staff can not recommend approval of the Conditional Use Permit because it has not been proved that vehicular traffic associated with the use will not be hazardous or conflict with existing and anticipated traffic in the neighborhood.*
☒	☐	☐	**17.116.030(D)**	**The conditional use will be supported by adequate public facilities or services and will not adversely affect public services to the surrounding area or conditions can be established to mitigate adverse impacts.**
			Staff Comments	*Due to the proposed pedestrian and vehicular public improvements, and review of the proposed use and the site, the conditional uses can be supported by adequate public facilities or services and will not adversely affect public services to the surrounding area.*
☐	☒	☐	**17.116.030(E)**	**The conditional use is not in conflict with the policies of the Comprehensive Plan or the basic purposes of this Section.**
			Staff Comments	*Staff's analysis from the July 25, 2016 staff report remains unchanged and is*

				as follows: *The Comprehensive Plan designates the property for mixed-industrial use. Primary uses specified include light manufacturing, wholesale, services, automotive, workshops, studios, research, storage, construction supply, distribution and offices make up the bulk of development within this district. Secondary uses specified include a limited range of residential housing types and supporting retail. Uses should generate little traffic from tourists and the general public.* *Similar to the compatibility of the proposed uses with the purpose of the LI-1 zone as stated in the zoning code, the proposed motor vehicle fueling station and food service as uses are generally consistent with the Comprehensive Plan. However, due to the location of the specific site, the use proposed will generate additional traffic from both the public and visiting tourists. This is a conflict between the Comprehensive Plan and the zoning code, which only conditionally allow for the motor vehicle fueling station and food service uses in the LI-1 and LI-2 zones.* *Further, the introduction of a new fueling station and restaurant into the LI-1 District is a discretionary decision. There are currently three fueling stations in the LI District, two restaurants, and one food mart to service the area. The Commission must decide if the uses proposed are appropriate for the site and the location and are necessary to serve the LI district.*

Attachment I

All developments are required to install a minimum amount of infrastructure, however conditional uses may be required to contribute more than the minimum due to the nature of the use and projected impacts. The following table represents the public and private improvements as proposed by the applicant.

Table 6: Required Public and Private Improvements

Analysis of Proposed Public and Private Improvements	
Improvement	**Description**
***New* - On Site Sidewalk**	The revised site plan dated September 16, 2016 indicates new on-site sidewalk that extends from the southern corner of the property, borders the southwest side of the property, connects to the structure where the accessory retail and foodservice are proposed, and connects to the proposed staircase leading to 10th Street. This internal, on-site sidewalk proposed by the applicant will allow pedestrians accessing the site to connect to the retail and foodservice without entering the parking lot where vehicles will be circulating.
Main Street – Sidewalk and Landscaping	The existing buildings "A" and "C" currently have a 0' setback from Main Street/Hwy 75. There is no defined curb cut on Main Street and the entire frontage is utilized for vehicular egress to the site and parking. No sidewalk currently exists. The applicant is proposing to construct a new 8' sidewalk and landscaping in the right-of-way adjacent to Main Street spanning the entire property frontage. The applicant proposes to maintain the landscaping. The 8' sidewalk will have a 84' gap between the northern and southern segments of the sidewalk in order to accommodate the boulevard approach for vehicles. The applicant is proposing to install a surface material that is 8' in width, in alignment with the sidewalk, and visually distinguishable from the surface of the parking lot in order to provide a visual cue to pedestrian and motorists that pedestrians will be utilizing the area.
Main Street – Turn Lane	The applicant retained Hales Engineering to prepare a traffic study for the proposed use and redevelopment of the site. The traffic study recommended constructing a new turn lane on Main Street to facilitate vehicular access to the site. The applicant is proposing to construct the turn lane and staff has accepted the design. An existing valley gutter on the eastern side of Main Street/Hwy 75 across from the southern end of the site prevents the turn lane from extending further south. Circulation at the 10th Street intersection prevents the turn lane from extending further north.
Main Street and 10th Street, southwest	The applicant has proposed reconfiguring the curb radius at the southwest corner of the Main Street and 10th Street intersection in order to better accommodate vehicular southbound turns from 10th Street to Main Street. ITD has approved the

corner curb radius	curb radius.
10th Street - Sidewalk	There is not currently a sidewalk on the 10th Street frontage of the site. The applicant is proposing to construct a 5' paved sidewalk in the right-of-way adjacent to the property for the length of the property frontage on 10th Street.
10th Street - Staircase	The applicant is proposing to construct a new staircase at the western property corner that will provide access to the sidewalk that will be constructed on 10th Street. The staircase will be lit with six (6) wall mounted 4" diameter, cylinder shaped light fixtures that point downward and fully shield the LED bulbs in order to enhance pedestrian safety and draw pedestrians from 10th Street to the staircase in order to access the site.

Attachment J

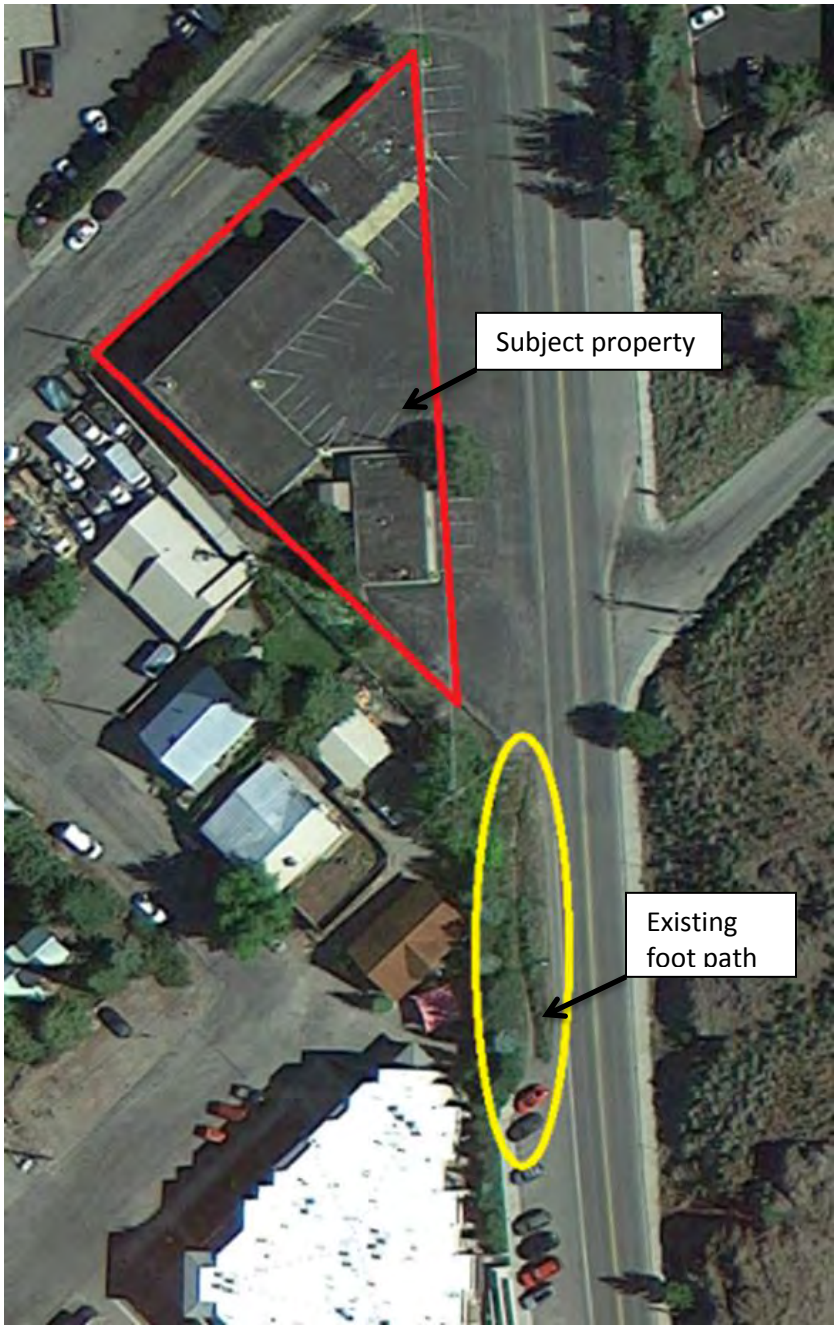
In addition to the public improvement the applicant is proposing in the table above, staff and the Pedestrian Analysis have identified several other necessary public improvements that are required to mitigate negative impacts of the proposed development. Staff recommends the following improvements as a minimum and other improvements or conditions may be appropriate or discovery through the public process.

Table 7: Recommended Additional Public Improvements

Recommended Public Improvements to Mitigate Impacts of Development	
Public Improvement	**Description**
Boulevard Approach Pedestrian Definition	As proposed in the Pedestrian Analysis, staff recommends visually differentiating the pedestrian zone spanning across the boulevard approach with the use of color pavers or an alternative material. The owner shall enter into a Maintenance Agreement with the City to maintain the pedestrian zone. The applicant agrees to install this improvement as indicated on the Overall Site Plan (A-2.1).
Main Street – Pedestrian Crosswalk	Staff is recommending the applicant to construct a painted pedestrian crosswalk across Main Street/Hwy 75 at the southeast corner of the site. The crosswalk will include a new ADA compliant ramp to provide access to the sidewalk at the southeast corner of the site and will utilize an existing ramp on the opposite side of Main Street/Hwy 75. The applicant agrees to install this improvement as indicated on the Overall Site Plan (A-2.1).
Main Street & 9th Street – Rapid Flashing Beacon at Crosswalk	Staff is recommending the applicant to install a rapid flashing beacon at the Main Street/Hwy 75 crosswalk. The rapid flashing beacon will contain sensors that can be activated by pedestrians seeking to use cross. The applicant agrees to install this improvement as indicated on the Overall Site Plan (A-2.1).
Main Street & 10th Street Intersection – Pedestrian Crosswalk across 10th Street	Staff is recommending a painted pedestrian crosswalk across 10th Street at the intersection of 10th Street and Main Street/HWY 75. The applicant agrees to install this improvement as indicated on the Overall Site Plan (A-2.1).
10th Street & Main Street Intersection – Pedestrian Crosswalk across Main Street	As proposed in the Pedestrian Analysis, staff is recommending a painted pedestrian crosswalk across Main Street at the intersection of 10th Street and Main Street/HWY 75.
10th Street Pedestrian Zone definition	As proposed in the Pedestrian Analysis, this recommendation requires further review and analysis to determine feasibility in light of the existing right of way and current conditions.
10th Street and Warm Springs Road Rapid Flashing Beacon	As proposed in the Pedestrian Analysis, this recommendation requires further study and preparation of pedestrian warrants to assess if this is an appropriate device for this location.

Main Street Sidewalk Extension	Staff recommends extending the 5' sidewalk on Main Street an additional 175' in length (approximately) to connect to the existing public sidewalk located adjacent to the Frenchmen's Place condominium development. There is not currently a sidewalk connecting the two properties but there is an informally created and well-worn pedestrian foot path; the new uses proposed for the site will generate additional pedestrian trips and a 5', paved, and ADA compliant sidewalk is recommended for safety purposes. See Attachment F. The applicant agrees to install 5' sidewalk connecting to Frenchmen's Place, which has been approved by ITD, as indicated on the Overall Site Plan (A-2.1).

Attachment K.



Attachment L:

Table 8. Summary and Analysis of New Plans, Studies and Information Received for the July 11, 2016, meeting

Staff Note: No new analysis for the October 10, 2016 meeting is contained in this table.

Information Requested by Commission	Submittal from applicant	Analysis
1. Produce a pedestrian study. a. Address the locations of all proposed crosswalks. b. Address the rapid flashing beacon. c. Address whether a different/additional location for a crosswalk may be better or feasible (across Main Street at Frenchman's, for example).	"Motor Vehicle Fueling Station Pedestrian Analysis", dated June 29, 2016, Alta Planning + Design	Three major pedestrian catchment areas were defined to be associated with the site: an eastern catchment area, a southwestern catchment area, and a northwestern catchment area. Major pedestrian routes were determined to be 10th Street and Main Street with the major crossings identified as Main Street at 10th Street and Main Street at 9th Street. Recommendations to accommodate pedestrian traffic were given for specific locations; some recommendations aligned with public improvements already proposed by the City and other recommendations were new or were alternatives to recommendations proposed by the City. **Eastern Catchment Area** In the eastern catchment area the study recommends a 5' wide sidewalk connection from the site to Frenchman's Place and the rapid flashing beacon, ramps, and crosswalk across Main Street near 9th Street. These improvements align with recommendations previously made by the City that the applicant has agreed to and are indicated in the site and civil plans that have been submitted. **Southwestern Catchment Area** The southwestern catchment area includes Hemingway Elementary School. A pedestrian route identified to the site is the northern side of 10th Street; the northern side is identified as being more desirable due to the existing sidewalk, which contains only a small gap between Warm Springs Road and Main Street. Among the study recommendations are defining a pedestrian zone through the gap in the sidewalk on the northern side of 10th Street. This will require further analysis to determine if this recommendation is feasible given the right of way and current conditions. Options to define the pedestrian zone may include changing the pavement material or color in order to increase visibility of the pedestrian zone. At this time, more analysis is necessary to determine feasibility. The study reaffirms the recommendation of a crosswalk at

		the intersection of Main Street and 10th Street that spans 10th Street, which the applicant has agreed to and indicates on the site and civil plans. The planning and public works departments concur with the recommendation to install an additional crosswalk spanning Main Street at the Main Street and 10th Street intersection. The study recommends crosswalks at the Warm Springs Road and 10th Street intersection as well as consideration of a rectangular rapid flashing beacon at the intersection; crosswalks at this location already exist. The feasibility and installation of a flashing beacon requires further study and pedestrian counts to determine if pedestrian use warrants this type of device. At this time, staff cannot recommend installation of the beacon without future study. **Northwest Catchment Area** The recommendations in the Pedestrian Analysis for the southwest catchment area cover the northwest catchment area as well. Recommendations for the northwestern catchment are the same as the recommendations for the southwestern catchment area. **Motor Fueling Station** Of the recommendations for the Motor Fueling Station, the Public Works Department agrees with the recommendation to install materials to differentiate the pedestrian zone and to install the crosswalk crossing Main Street at the intersection of Main Street and 10th Street already described in the southeastern catchment area improvements section. Due to the boulevard approach being ITD's standard, the rolled curbs described in the study are not recommended, and due to the proposed sidewalk and parking improvements on 10th Street being the city's standards, the landscaped area and reduced travel lane on 10th Street are not recommended. Finally, the applicant has proposed a slight realignment of the crosswalk crossing Main Street at the southern end of the site rather than moving the crosswalk further south; the Public Works Department recommends the realignment of the crosswalk as indicated on A.2 – Site Plan.
2. Obtain traffic counts at 10th Street/Main Street intersection in order to corroborate the 2008 data in the traffic study already conducted. If the traffic engineer wants to make the case that the need for new data is superfluous, and submits a narrative	"Ketchum – Bracken Station TIS, Additional Information" memorandum, dated July 6, 2016	Peak hour turning movement counts were collected on June 29, 2016; when compared to the data from February 2008, which was adjusted 30% to reflect peak seasonal conditions and was adjusted at a 1.1% growth rate per year, the estimated counts were 5% higher than the volumes collected on June 29, 2016.

explaining why, that would be acceptable. However, the request for current data at the 10th Street/Main Street intersection is driven by public comment and providing this data also serves the purpose of addressing public concern, so obtaining the new counts is recommended.		
3. Address the projected makeup of vehicles that will be using the gas station. **a.** What percentage will be oversized vehicles (RVs, construction trailers, et cetera)? **i)** Address how the proportion of oversized vehicles impacts the amount of vehicles that can queue in the turn lane. **b.** Address potential back-up of northbound traffic lining up to make a left turn into the gas station and the implications of exceeding the length of the turn lane (e.g. traffic backed up further south than the turn lane extends).	"Ketchum – Bracken Station TIS, Additional Information" memorandum, dated July 6, 2016	On Saturday, July 2nd, 2016 between 10 a.m. and 5 p.m. and on Sunday, July 3rd between 12 p.m. and 5 p.m. Roy Bracken analyzed vehicle types patronizing the Shell gas station located at 211 Lewis Street in the LI-1 zone and reported the findings to Hales Engineering. The memo from Hales Engineering reports that during those time periods 7% of vehicles observed were large vehicles (i.e. trucks pulling trailers or recreational vehicles) and 93% were passenger cars and pickup trucks. As such, Hales Engineering determined it was not necessary to modify their assumptions of 20' of length per vehicle queuing in the proposed turn lane. The memo reiterates that the traffic study found that with future (2020) conditions plus traffic conditions generated by the project the 95th percentile queue at the intersection would extend approximately 105' and that the proposed turn lane is more than adequate to accommodate queues of such length. The memo states that it is unlikely that the left-turn queue would overflow into the thru-traffic lane but in such cases, events would likely have minimal short-term impacts on thru traffic. Further, delays for northbound left-turning vehicles at the gas station access and for vehicles at 10th Street are anticipated to be short and that when delays are short queues dissipate quickly.
4. Obtain the Idaho	Letter from	The letter from Dave Jenson of ITD confirms that the ITD

Transportation Department (ITD)'s approval for the Frenchman's Place connector sidewalk.	Dave Jensen, ITD District 4 Permit Coordinator, dated June 27, 2016	permit committee has approved the design of the sidewalk proposed to connect Bracken Station to the Frenchmen's Place development.
5. Address the potential for northbound (left) and southbound (right) turn lanes on 10th Street to facilitate left and right turns onto Main Street.	"Ketchum – Bracken Station TIS, Additional Information" memorandum, dated July 6, 2016	The memorandum states, "A separate right-turn lane is not recommended at this location. Turning movement wheel path analyses show that with the current approach geometry, larger vehicles are able to execute right-turn movements with minimal encroachments into opposing traffic lanes. It is likely that the addition of a separate right-turn lane would constrain the right-turn movement such as to require significant encroachment into opposing traffic lanes. The traffic impact study found that delays at this intersection are anticipated to be relatively low, and therefore a separate right turn lane would not provide significant benefit."
6. Provide information addressing fuel spillage onto snow and snow removal from the site; what are the implications and how will they be mitigated?	No exhibit submitted.	Applicant will address this issue during the hearing.
7. Provide site circulation/turning radii information for vehicles of various sizes within the site.	On-Site Vehicle Turn Exhibit, dated July 11, 2016 and On-Site Vehicle Turn Exhibit-Circulation, dated July 11, 2016	The exhibit depicts turning radii on the site for two vehicles: a 30' length single unit truck and a 48.7' camper trailer connected to a passenger car. The exhibit depicts the circulation of each vehicle entering the site, navigating around the fueling island canopy, and exiting the site. The first On-Site Vehicle Turn Exhibit illustrates unimpeded circulation of each of the two vehicle types when no other vehicles are present on the site and does not adequately prove turn movements can be made in real world conditions. The revised On-Site Vehicle Turn Exhibit-Circulation does not adequately indicate that the fueling station will not cause congestion on Main Street/HWY 75. It appears that north-bound trucks with trailers or box trucks would not be able to maneuver the site when other vehicles are positioned at the fueling islands. Submission of additional figures or modeling to show that cars and trucks will not end up queuing or backing up on Main Street/HWY 75 during peak times would be necessary to adequately address concerns regarding queuing.
8. Provide a section drawing showing Bracken Station site, canopy, and the Tenth Street Light Industrial	Site Profile, dated July 11, 2016	The site profile illustrates the grade change between the Tenth Street Light Industrial Development (491 E. 10th Street) and the proposed Bracken Station property (911 N. Main) at the 10th Street and Main Street intersection. The

development.		height of the proposed gas station canopy and the landscaping proposed to buffer the canopy are shown. This cross section was requested so that the height of the proposed canopy and the canopy lighting could be evaluated with respect to the lower grade of 491 E. 10th Street. The site profile, in conjunction with the new LS 1.1 plan illustrating additional landscaping and the revised L 1.0 plan, indicates that the majority of the 50' length of the canopy facing 10th Street will be screened and buffered by 9 Spartan Juniper trees that are 10' at the time of planting, 1 Lodge Pole Pine that is 14' at time of planting and 1 Lodge Pole Pine that is 16' at time of planting.
Information Requested by Staff	**Submittal from applicant**	**Analysis**
1. Provide a conceptual drainage plan that indicates the site has the capacity to retain all storm water.	C.2.1 Preliminary Drainage Exhibit, dated June 3, 2016	The Public Works Department has reviewed this plan and finds it acceptable. The drainage plans include a proposed oil/water separator at the southernmost corner of the site that the on-site drywell and catch basins drain to. However, prior to issuance of a building permit a seepage test will need to be conducted and clarification regarding the infiltration rate and storm intensity and number of dry wells will be required.
2. Indicate Frenchman's connector sidewalk on site plan and landscape and civil plans to the same level of detail as the already proposed sidewalks have been shown on those plans.	A.2.1 Overall Site Plan, dated June 30, 2016 and C.2.4 Preliminary Frenchman's Sidewalk Exhibit, dated July 11, 2016	Both plans indicate a new sidewalk connecting the proposed Bracken Station property to the Frenchmen's Place development to the south. The sidewalk is indicated on C.2.4 to be 5' in width. The Public Works Department finds the 5' width to be acceptable.
3. Provide photometric data for proposed site lighting, including canopy.	Photometric Lighting Proposal (black and white), Photometric Lighting Proposal (color), dated June 30, 2016, Radiosity exhibit dated June 30, 2016	The applicant submitted a Radiosity exhibit that illustrates illuminance from canopy lighting at night. The Photometric plans indicate foot-candles calculated at a grid of points overlaid on the site plan. The Photometric plans indicate a range of 0.0 to 0.9 foot-candles measured on the northern and western property lines and a range of 0.0 to 4.9 foot-candles along the eastern property line, nearest the canopy. The average foot-candles under the canopy are calculated to be 28.51, with the minimum measurement calculated at 11.3 and the maximum at 41.3. Ketchum code 17.132.020 J. states that the average foot-candle lighting level for new and existing service stations shall be no greater than 30 foot-candles, as set by the IESNA standards for urban service stations.
4. Provide a copy of Idaho Department of Environmental Quality	Idaho Department of Environmental	The applicant submitted IDAPA 58.01.07, "Rules Regulating Underground Storage Tank Systems". The rules establish standards and procedures necessary for the regulation of

(DEQ) /and Environmental Protection Agency (EPA) regulations for gas stations.	Quality's "Rules Regulating Underground Storage Tank Systems", IDAPA 58.01.07, submitted June 20, 2016, Seismic Behavior of Xerxes Underground Tanks memorandum, Xerxes Fiberglass Underground Storage Tanks brochure	underground storage tank systems and the rules state compliance with IDAPA 58.01.07 shall not relieve persons from the obligation to comply with other applicable state or federal laws. IDAPA 58.01.07 contains rules for protecting ground water from contamination, rules for reporting when an underground storage tank releases (spills) petroleum, requirements for training of primary and daily on-site operators, and information on inspections and penalties for violations. The memorandum addresses seismic activity occurring at a distance away from the tank, which the tanks can withstand, and seismic activity occurring at or very near the location of the tank, which would cause the tank to rupture just as the ground ruptures at and near the location of seismic activity. The brochure addresses construction and safety features of Xerxes double-wall underground storage tanks.

Attachment M.

Table 9: Uses in the LI-1 Zone

Table 7: Uses in the LI-1 Zone

"P" = PERMITTED "C" CONDITIONAL "A" = ACCESSORY

	USES	LI-1
RES.	Dwelling, Multi-family	C[14]
	Dwelling, One-Family	
	Residential Care Facility	
COMMERCIAL	Agriculture, Commercial	
	Adult Only Business	
	Business Support Service	P
	Convenience Store	P[12]
	Daycare Center	C[17]
	Daycare Facility	C[17]
	Drive-Through Facility	
	Equestrian Facility	
	Food Service	PC[15]
	Golf Course	
	Grocery Store	
	Health and Fitness Facility	C
	Hotel	
	Hybrid Production Facility	P
	Instructional Service	P
	Kennel, Boarding	P
	Laundry, Industrial	P
	Lodging Establishment	
	Maintenance Service Facility	P
	Manufacturing	P
	Mortuary	
	Motor Vehicle Fueling Station	C
	Motor Vehicle Sales	C
	Motor Vehicle Service	P
	Office, Business	
	Outdoor Entertainment	
	Personal Service	P[13]
	Professional Service	P
	Recreation Facility, Commercial	
	Repair Shop	P
	Retail Trade	P[12]
	Self-Service Storage Facility	P
	Ski Facility	
	Storage Yard	P
	Studio, Commercial	P
	Tourist House	
	Tourist Housing Accommodation	
	Truck Terminal	P
	TV and Radio Broadcasting Station	P
	Veterinary Service Establishment	P
	Warehouse	P
	Wholesale	P
	Wireless Communication Facility	C[23]
PUBLIC & INSTITUTIONAL	Assembly, Place of	
	Cemetery	
	Cultural Facility	
	Geothermal Utility	
	Hospital	
	Medical Care Facility	
	Nature Preserve	P
	Parking Facility, Off-Site	
	Parking, Shared	
	Performing Arts Production	
	Public Use	C
	Public Utility	P
	Recreation Facility, Public	P
	Recycling Center	
	Semi-Public Use	
ACCESSORY	Agriculture, Urban	A[22]
	Daycare Home	C[4]
	Daycare, Onsite Employees	A
	Dwelling Unit, Accessory	
	Energy System, Solar	A
	Energy System, Wind	A
	Fallout Shelter	
	Guesthouse	
	Home Occupation	A
	Recreation Facility, Residential	A
	Equestrian Facility, Residential	
	Sawmill, Temporary	

1. A multi-family development containing up to two (2) dwelling units is permitted.

2. Two (2) one-family dwellings are permitted.

3. Religious institutions are allowed through the provision of a conditional use permit. No other assembly uses as defined in Chapter 17.08 are permitted.

4. Use is not permitted in the Avalanche Zone. Reference Zoning Map.

5. Retail trade is permitted but must not exceed 2,500 square feet.

6. Uses must be subordinate to and operated within tourist housing and not to exceed ten percent (10%) of the gross floor area of the tourist housing facility.

7. Utility for offsite use.

8. See section 17.125.070 for shared parking standards.

9. Drive-throughs are not allowed in association with food service establishments.

10. This is a permitted use, however offices and professional services on the ground floor with street frontage require a conditional use permit.

11. Tourist houses shall only be located in existing one-family dwellings. Additions to the home shall not exceed 20 percent (20%) of the existing square footage.

12. The following forms of retail trade are permitted: (a) Equipment rental, including sporting equipment and entertainment equipment, (b) Building, construction and landscaping materials; small engines with associated sales (c) Retail in conjunction with manufacturing, warehousing or wholesaling not to exceed 30% gross floor area or 800 square feet, whichever is less; no advertising is displayed from windows or building facades; and no access onto a major arterial is allowed if an alternative access is available.

13. Personal service is not allowed except for laundromats and dry cleaning establishments.

14. See section 17.124.090 of this title for industrial districts residential development standards.

15. Catering and food preparation is permitted. Restaurants require a conditional use permit and shall not exceed 1,000 square feet and serve no later than 9:00 P.M. unless expressly permitted through approval of the conditional use permit.

16. The following forms of retail trade are permitted: (a) Equipment rental, including sporting equipment and entertainment equipment (b) Building, construction and landscaping materials; small engines with associated sales (c) Furniture and appliances in conjunction with warehousing not to exceed 18% gross floor area or 900 square feet, whichever is less; (d) Other retail in conjunction with manufacturing, warehousing or wholesaling; it is limited to 10% gross floor area or 500 square feet, whichever is less. ---- Retail uses (c) & (d) shall have no advertising displayed from windows or building facades; and no access will be permitted onto a major arterial if an alternative access is available.

17. See section 17.124.120.C of this title for industrial districts daycare development standards.

18. See section 17.124.070 of this title for accessory dwelling unit development standards.

19. A maximum of five (5) dwelling units are allowed through a conditional use permit and shall be a minimum of 400 square feet and not exceed 1,200 square feet in size.

20. Indoor only.

21. Only allowed in conjunction with an equestrian facility.

22. See section 17.124.080 of this title for urban agriculture development standards.

23. See chapter 17.140 for wireless communications facility provisions.

24. Allowed on the ground floor only.

25. See section 17.124.050 of this title for hotel development standards.

26. Ground floor street frontage uses are limited to retail and/or office uses. In subdistrict A office uses require a conditional use permit.

27. Ground floor only.

28. Through the provision of a conditional use permit, the planning and zoning commission may approve a 20% increase to the total existing square footage of an existing nonconforming one-family dwelling.

29. Use is allowed as an accessory use through the provision of a conditional use permit.

Attachment N.

Table 10: Dimensional Standards for the LI-1 Zone

Table 8: Dimensional Standards for the LI-1 Zone

Dimensional Standards for LI-1

Minimum Lot Area	Minimum Lot Area w/ PUD. *See Title 16.*	Minimum Lot Area, Townhouse Sublot	Lot Width	Building Height	Maximum Building Coverage	Minimum Open Space	Front Setback	Side setback	Rear Setback	Lot Lines created by Townhouse Sublots	Setbacks from Hwy 75	Any setback along Warm Springs Road	Setbacks along 200' Former Railroad ROW
8,000 SF	N/A	N/A	80' Min.	35'	75%	N/A	20'	Zero (0')[1] for internal side yards and a min. of 10' for street side yards.	Zero (0')[1]	N/A	N/A	N/A	N/A

1. If the lot adjoins a more restrictive district on the side or rear, the more restrictive setbacks of that district shall apply.

Attachment O.

Table 11: Potential Build Out for 911 N. Main Street

Lot size	18,590 square feet
Maximum coverage in LI-1 zone	75%
Potential Lot Coverage	13, 942 square feet
Proposed Project, Lot Coverage	23%
Proposed Project, Lot Coverage Square Footage	2,592 square feet ground floor building; 1,720 square foot canopy. Total lot coverage 4,312 square feet.

Maximum building height in LI-1 zone	35'
Proposed building height, Main Street grade	13’-8”
Proposed building height, 10th Street grade	24’-8”
Proposed canopy height, Main Street grade	18'
Proposed canopy height, 10th Street grade	20' at eastern edge of canopy and 24' at western edge of canopy

RECEIVED
APR 29 2016
CITY OF KETCHUM

File No.: 16-034
Reference Design Review 16-035

CITY OF KETCHUM CONDITIONAL USE PERMIT APPLICATION

Name of Applicant: RRJ.LLC

Name of Owner of Record: NORTH TOWN PARTNERS LLC

Mailing Address: P.O. BOX 5277 KETCHUM, ID. 83340

Contact Phone Number: 208.721.0000

Street Address of Property Requiring a CUP: 911 N MAIN STREET

Legal Description of Property Requiring a CUP: KETCHUM AMENDED LOT 5A BLK 30 RPK0000030005A

Description of Proposed Conditional Use: MOTOR VEHICLE FUELING STATION AND RETAIL STORE

Description of Proposed and Existing Exterior Lighting: PROPOSED: RECESSED SOFFIT DN LIGHTS IN EXISTING ROOF OVERHANG/NEW LED, FLUSH MOUNT 16"x16" SQ FIXTURES IN CANOPY - 6 TO 8 IN NUMBER - SOFT WARM COLOR AS PER (KELVIN TEMP.)

Zoning District: LI.1

Overlay District: Flood_____ Avalanche_____ Pedestrian_____ Mountain_____

The Applicant agrees in the event of a dispute concerning the interpretation or enforcement of the Conditional Use Permit Application in which the City of Ketchum is the prevailing party to pay reasonable attorney fees, including attorney fees on appeal, and expenses of the City of Ketchum. **I hereby acknowledge** I have filled in this application accurately and provided the required information to the best of by knowledge.

Applicant's Signature

Date 4-28-16

Pursuant to Resolution No. 08-123, any direct costs incurred by the City of Ketchum to review this application will be the responsibility of the applicant. Costs include but are not limited to: engineer review, attorney review, legal noticing, and copying costs associated with the application. The City will require a retainer to be paid by the applicant at the time of application submittal to cover said costs. Following a decision or other closure of an application, the applicant will either be reimbursed for unexpended funds or billed for additional costs incurred by the City.

1/A-2 CONDTIONAL USE APPLICATION - SITE PLAN

NOTE: SEE CIVIL ENGINEERING DRAWINGS FOR ALL SITE DRAINAGE AND STREET GRADING DESIGN

scale: 1"= 10'

GENERAL CONTRACTOR AND ALL SUBCONTRACTORS TO ASSURE ALL WORK CONFORMS TO NATIONAL, STATE, AND LOCAL CODES THAT APPLY TO THIS PROJECT. WHEN INCONSISTENCIES EXIST BETWEEN DRAWINGS OR SPECS. AND APPLICABLE CODE REQUIREMENTS, CONFORMANCE TO ALL CODES SHALL HAVE PRECEDENCE OVER DRAWINGS AND SPECS.

STEVE R. COOK, ARCHITECT
323 SOUTH LEWIS ST. SUITE H, P.O. BOX 680, KETCHUM ID, 83340
PH#: (208) 725-5566
FX#: (208) 725-5568
MEMBER AMERICAN INSTITUTE OF ARCHITECTS

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PRELIMINARY DESIGN PHASE - LOT 5A BLK 30

LOT 5A / BLK 30 / ZONE LI - 1

KETCHUM, ID

REVISION RECORD		
NO.	DATE	BY
1	9/16/16	SC

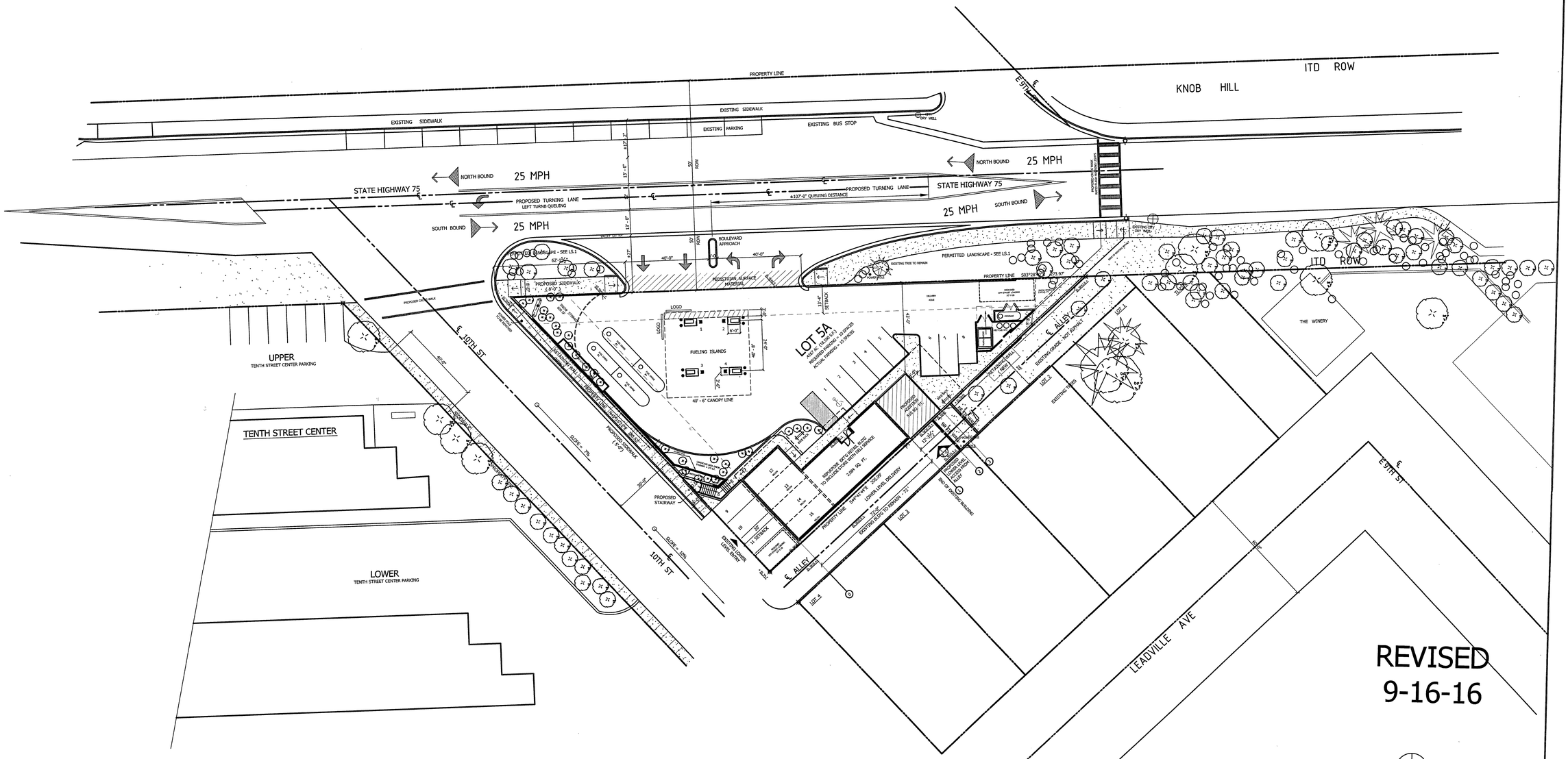
DRAWING NAME: SITE PLAN

DATE OF ISSUE: SUPERSEDES ALL PREVIOUS DRAWINGS

SCALE: 1"=10'

PLOT DATE: 9/16/16

SHEET NO. A-2



REVISED 9-16-16

OVERALL SITE PLAN
CONDTIONAL USE/ PREAPPLICATION SITE PLAN

1 / A-2

NOTE: SEE CIVIL ENGINEERING DRAWINGS FOR ALL SITE DRAINAGE AND STREET GRADING DESIGN

scale: 1"= 20'

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PRELIMINARY DESIGN PHASE - LOT 5A BLK 30

LOT 5A / BLK 30 / ZONE LI - 1

KETCHUM, ID

REVISION RECORD		
NO.	DATE	BY
1	9/16/16	SC

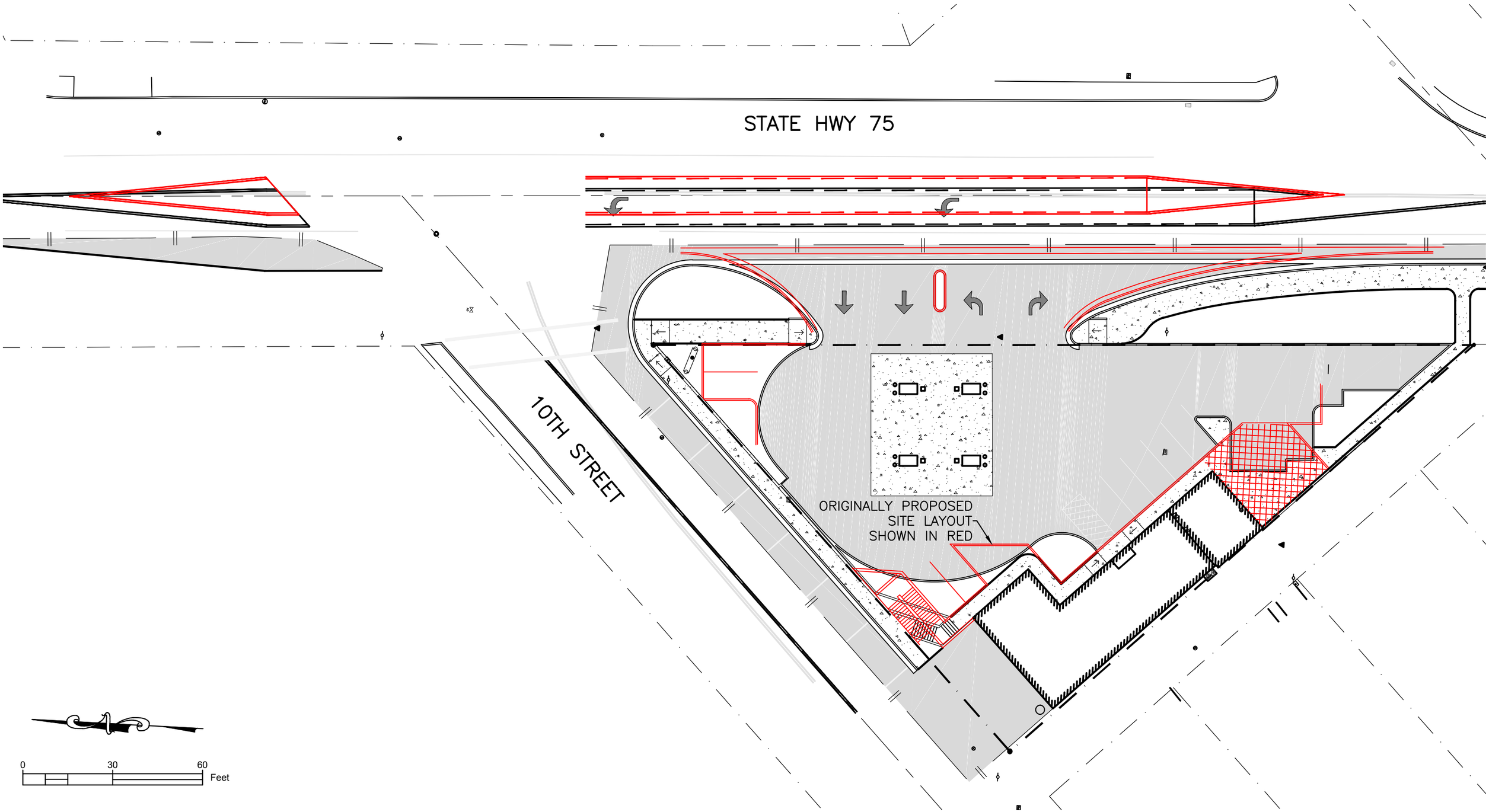
DRAWING NAME: SITE PLAN

DATE OF ISSUE: SUPERSEDES ALL PREVIOUS DRAWINGS

PLOT DATE: 9/16/16

SCALE: 1"=20'

SHEET NO. A-2.1



0 30 60 Feet

SITE CHANGES

CURRENT PROPOSAL VS. ORIGINAL SITE PLAN(S)

SEPTEMBER 16TH, 2016

Kellerstrass OIL COMPANY

A DBA OF KELLERSTRASS ENTERPRISES INC.
Corporate Office
P.O. Box 1067 • 1500 West 2550 South • Ogden, Utah 84402
(801) 392-9516 • Fax (801) 392-9589

Date September 23, 2016

To The City Of Ketchum,

Kellerstrass Oil Company has been approved by Chevron to supply the proposed Bracken Chevron Station to be located in Ketchum, Idaho with quality Chevron Fuels. As a Chevron distributor we currently supply over 75 stations in Utah, Wyoming, Montana, Nevada and Idaho. Many of these stations are similar in site layout and traffic follow as this proposed station. As the Director of Operations for Kellerstrass Oil I can assure you that with our Transportation Department running 24/7, 365 days a year, all fuel delivers to this proposed station would be done during non-high traffic times. This is a customary practice in our industry and is required for safe and efficient fuel drops. These scheduled fuel deliveries would not include Holidays as well. We will work with Roy Bracken to make sure our fuel delivers are planned well in advance so that his staff is prepared and that our drivers can make quick and safe deliveries as to not interfere with customers and traffic flow on site and with the highway traffic. Any questions please feel free to call me.

Best Regards,

Kellerstrass Oil Company

Dallas Green

Director of Operations

Cell- (801) 648-4969

Office- (801) 392-9516 ext. 42

Email- DGreen@Kellerstrassoil.com

Kellerstrass OIL COMPANY

A DBA OF KELLERSTRASS ENTERPRISES INC.
Corporate Office
P.O. Box 1067 • 1500 West 2550 South • Ogden, Utah 84402
(801) 392-9516 • Fax (801) 392-9589

Date October 1, 2016

To The City Of Ketchum,

As the Director of Operations for Kellerstrass Oil Company I have reviewed the exhibits showing a truck and trailer making a fuel delivery at the proposed Bracken Chevron C-store to be located in Ketchum, Idaho. It is my opinion that this exhibit is very accurate and that our delivery trucks with this same combination of truck and trailer can make deliveries to the fuel tanks shown. These combinations of truck and trailer have two pivot points one at the pintle hitch and one at the turn table located under the front of the pull trailer. They are designed to be able to maneuver in tight places and the trailer will track behind the truck with only a 3.5 foot off-track. These combinations are also very easy to back up to place the unit over fuel tanks located away from fuel dispensers and in such places as the exhibit shows. I would be available to answer any questions the commission might have.

Best Regards,

Kellerstrass Oil Company

Dallas Green

Director of Operations

Cell- (801) 648-4969

Office- (801) 392-9516 ext. 42

Email- DGreen@Kellerstrassoil.com

Truck Measurement Data

T 154 / PT 151

84' 4"

20.67	9.58	17.58	28.17
A	B	C	D

Off Track
3.15

13' 4"

18' 6"

22' 10"

45' 8"

49' 9"

73' 9"

77' 10"

NED C. WILLIAMSON
ATTORNEY AT LAW
115 SECOND AVENUE SOUTH
HAILEY, IDAHO 83333
(208) 788-6688
FAX (208) 788-7901

July 22, 2016

Ketchum Planning and Zoning Commission
City of Ketchum
P.O. Box 2315
Ketchum, ID 83340-2315

Re: Bracken CUP Application

Dear Commission Members:

As you know, I am the attorney for Roy Bracken, the applicant for a conditional use permit for a motor vehicle fueling station and food service establishment. This letter is intended to provide rebuttal or clarification to some of the public comment and to portions of the staff report.

A. Standards

We have consistently urged the Commission to approve the CUP application because we felt the evidence showed the applicant has met all of the five applicable criteria set forth in § 17.116.030 of the Ketchum Municipal Code. At the first hearing on June 13, 2016, I pointed out that the CUP staff report showed that the application met four out of five criteria and that the CUP staff report stated there was non-compliance with the standard requiring compliance with the comprehensive plan. At the first hearing, based on *Urrutia v. Blaine County*, 134 Idaho 353, 2 P.3d 738 (2000) and several other appellate cases, I argued that it was inappropriate to deny this application based on an alleged incompatibility with the Comprehensive Plan. At the last hearing on July 11, 2016, I pointed out that the staff report was modified just before the meeting to show noncompliance with four out of five criteria. Staff argued that their recommendations were modified after receiving the applicant's information. I would like to respond to each revised recommendation by staff.

1. Compatibility of Uses. Standard §17.116.030(A) provides that *"[t]he characteristics of the conditional use will not be unreasonably incompatible with the types of uses permitted in the applicable zoning district."* In the first staff report, staff noted that a motor vehicle fueling station and a food service establishment were compatible with the uses permitted in the LI-1 zoning district. In the recently revised staff report, staff then relied on a needs analysis by Gmap USA which merely stated the obvious--the site will be served by traffic from the general public and tourists. From that observation, staff then concluded the proposed uses are incompatible with the purpose section of the LI-1 zoning district. The purpose section of the LI-1 zoning district states:

> A. Purpose: The LI-1 light industrial district number 1 is established as a transition area providing limited commercial service industries, limited retail, small light manufacturing, research and development, and offices related to building, maintenance and construction and which generate little traffic from tourists and the general public.

Ketchum Municipal Code §17.18.140(A).

Staff's interpretation will gut the allowed uses in this LI-1 zoning district. The LI-1 zoning district allows, as either permitted or conditional uses, many other uses which generate heavy traffic from the general public and/or tourists, such as convenience stores, day care facilities, health and fitness facilities, instructional services, outdoor entertainment, repair shop, retail trade, commercial studios, truck terminals, veterinary service establishments, public use and public recreational facility. *Ketchum Municipal Code § 17.12.020.* If the Commission follows the suggestion of staff, then the purpose section of the LI-1 zoning district will trump the numerous enumerated conditional and permitted uses allowed in the LI-1 zoning district.

A court construes a local ordinance as it construes a statute. *Friends of Farm to Market v. Valley County*, 137 Idaho 192, 196, 46 P.3d 9, 13 (2002). Statutory construction always begins with the literal language of the statute or ordinance. *Id.* at 197, 46 P.3d at 14. If an ordinance is unambiguous, a court need not consider rules of statutory construction and the statute will be given its plain meaning. *Hamilton ex rel. Hamilton v. Reeder Flying Serv.,* 135 Idaho 568, 572, 21 P.3d 890, 894 (2001); *Canal/Norcrest/Columbus Action Comm. v. City of Boise,* 136 Idaho 666, 670, 39 P.3d 606, 610 (2001). Where the language of a statute is ambiguous, a court applies rules of construction for guidance. *Friends of Farm to Market,* 137 Idaho at 197, 46 P.3d at 14. Courts disfavor constructions that lead to absurd or unreasonably harsh results. *Id.* All sections of the applicable statute must be construed together to determine the legislative body's intent. *Id.* (*citing Lockhart v. Dept. of Fish and Game,* 121 Idaho 894, 897, 828 P.2d 1299, 1302 (1992)). Statutes and ordinances must be construed so as to give effect to all their provisions and not to render any part superfluous or insignificant. *Id.* (*citing Brown v. Caldwell Sch. Dist. No. 132,* 127 Idaho 112, 117, 898 P.2d 43, 48 (1995)). When laws conflict, a later or more specific law controls over a more general law. *Johnson v. Boundary Sch. Dist. No. 101,* 138 Idaho 331, 335, 63 P.3d 457, 461 (2003); *Hyde v. Fisher,* 143 Idaho 782, 786, 152 P.3d 653, 657 (Ct. App. 2007).

Based on these well-established rules of statutory construction, I believe the specific enumeration of a motor vehicle fueling station and a food service establishment is unambiguous, but if the Commission finds that the purpose section of the LI-1 zoning district creates an ambiguity, then courts require the specific enumeration of a motor vehicle fueling station and a food service establishment to control over the general purpose provision found in the LI-1 zoning district.

Notably, the LI-1, LI-2 and LI-3 zoning districts all contain the same language in their respective purpose sections. The purpose sections of these light industrial zoning districts provide that the uses will "generate little traffic from tourists and the general public." *Ketchum Municipal Code §§17.18.140(A), 17.18.150(A) and 17.18.160(A).* If adopted, staff's interpretation would make the existing gas stations in Warm Springs non-conforming.

Moreover, staff's interpretation ignores the positive impact this application would have on eliminating traffic in the congested Lewis Street area. This application would promote the relocation of traffic from the core of the light industrial areas to the fringe of the light industrial zones along a state highway. In reality, this application is consistent with the purpose section of the light industrial districts by reducing traffic in the heart of the light industrial districts.

2. Health, Safety and Welfare. Standard §17.116.030(B) provides that *"[t]he conditional use will not materially endanger the health, safety and welfare of the community."* Again, the first staff report noted that the proposed uses would not materially endanger the public health, safety and welfare. The initial assessment was largely based on an evaluation by the Public Works and Fire Departments. The revised staff report now cites "concerns about on-site circulation and potential negative externalities" and concerns about gas spillage. During the last hearing, we presented testimony from qualified engineers who addressed traffic off- and on-site and petroleum experts about safety and spillage. Benchmark Engineering is still attempting to address any concerns that the Public Works Department raised in the last hearing about circulation and traffic flow. The applicant will construct a state-of-the-art facility which will be safer than any other gas station in Ketchum and will support traffic in and out of the facility better than any other station in Ketchum. When considering this standard, please remember that the non-conforming structures will be removed, that turn lanes will be constructed and that pedestrian safety will be addressed by the traffic crossings, beacons, sidewalks and pathway. This station will also provide the only electric charging station for cars in the city.

3. Pedestrian and Vehicular Traffic. Standard §17.116.030(C) provides that *"[t]he conditional use is such that pedestrian and vehicular traffic associated with the use will not be hazardous or conflict with existing and anticipated traffic in the neighborhood."* The initial staff report noted that the Hales traffic study was reviewed by the Public Works Department and that the applicant met this standard. Now, staff questions the same traffic study and the on-site vehicle turn and 10th Street turn exhibits. For on-site circulation, we have demonstrated that passenger cars, trucks and trailers can maneuver into, on and out of the site. As mentioned above, Benchmark is still working to address any lingering concerns about circulation. Again, we believe this design is safer than the existing site with non-conforming buildings and is superior to other gas stations in Ketchum. For southbound traffic exiting 10th Street, issues were raised about the turning radius. Please remember that ITD approved of the design which is in their right-of-way. Based on comments during the June 13 meeting, the design team modified the design of the improvements at the intersection of 10th Street and Highway 75 to help with the turning radius concerns. As established by Benchmark Engineering, the turning radius meets standards and is adequate for most traffic.

4. Comprehensive Plan. Standard §17.116.030(E) provides that *"[t]he conditional use is note in conflict with the policies of the Comprehensive Plan or the basic purposes of this Section."* The staff reports have been consistent in stating that the application is noncompliant with this standard. In my capacity as the Hailey City Attorney, I have recommended this type of standard be deleted as a standard for zoning and subdivision permits. I know that many other city and county attorneys agree. Following *Blaine County v. Urrutia*, *supra*, the courts have repeatedly stated that the comprehensive plan is not controlling law, that a city or county cannot deny a use allowed by a zoning ordinance based on noncompliance with the comprehensive plan and that if there is a conflict between a comprehensive plan and a zoning ordinance, the zoning ordinance controls. *Sanders Orchard v. Gem County,* 137 Idaho 695, 700, 52 P.3d 840, 845 (2002). The alleged conflict is based on a statement in the comprehensive plan that "mixed-industrial" uses "should generate little traffic from tourists and the general public." Of course, this is very much like the language found in the purpose section of the LI-1 zoning district. *See discussion supra § A(1).* But as stated above, the designation of a motor vehicle fueling station and a food service establishment in the LI-1 zoning district will control over the general statement found in the comprehensive plan. *Sanders Orchard, supra.*

In the discussion about the comprehensive plan, the staff report suggests that the Commission should decide whether a new fueling station and restaurant in the LI-1 zoning district is necessary in the LI-1 zoning district. In making this suggestion, staff did not cite to any particular provision of the comprehensive plan. Such a suggestion is not appropriate because the express standards of a conditional use do not address necessity and because it puts the Commission in the position of making an economic decision. I would contend that is not the role of a planning and zoning commission.

B. Wendland's Comments

Mr. Wendland states that the Hales traffic study is materially deficient. To support his contention, Mr. Wendland uses customer counts from his Warm Springs gas station. The documents contain redacted information which only shows the number of customers. Mr. Wendland states his site is 50% smaller than the proposed Bracken site but handles on the average of 1,003 daily customers, which is greater than the Hales projections. As pointed out by Scott Johnson of Hales Engineering, the traffic study used standard traffic counting techniques, not receipts. By way of example, a car with 4 passengers could purchase gas, with each occupant individually buying goods, resulting in five sales receipts. Of course, five receipts would not equal one vehicle trip. On June 13, 2016, Mr. Wendland stated that his Warm Springs station only pumped 600 gallons/day during the peak season. If every one of the 1,003 customers purchased gas, each vehicle would pump on average only .6 gallons. Obviously that cannot be the case. Please rely on industry standards, not an unprecedented date collecting technique. Mr Wendland also states the proposed development poses a "grave fire danger." I would recommend that you rely on your fire department who is more qualified to analyze safety concerns. The fire department has commented that it will have adequate access to the facility in an emergency.

C. Surveys

I previously expressed the problems with City initiated survey. In short, I believe the survey is illegal and only encourages a popularity contest. To comply with procedural due process, the Idaho Courts require the identification of a person who communicates with a decision maker. *See Idaho Historic Preservation Council v. Boise,* 134 Idaho 651, 655-56. 8 P.3d 646, 650-51 (2000) [failure to identify ex parte communications is a violation of procedural due process]. I believe the city-initiated survey is even worse than an improperly disclosed ex parte communication because the city actively solicited anonymous comments.

D. Gas Dispensing Options

At the conclusion of the last hearing, Commissioner Mizell asked whether the applicant would entertain the installation of vaporizer at the nozzle of the gas dispensers. I was informed by Leonard Petroleum that such a system was not as effective as a no drip nozzle, was not commonly installed and was not required by the regulating authorities. Leonard Petroleum suggested and the applicant agrees to install a no drip nozzle on the dispensers. Apparently, the no drip nozzle is very effective at eliminating the spillage of fuel.

E. Nature of Comments

During the hearings, I have been discouraged by the lack of civility by the participants. In contrast, the Commission has been courteous, civil and professional during these contentious hearings. Unfortunately, certain members of the public have taken potshots at the applicant and his representatives. The lack of civility does not aid anyone in the process. Some have questioned the applicant's integrity but have utterly failed to produce independent studies showing that the applicant's studies were flawed. In contrast, I believe the applicant has added objectivity to the process by providing expert testimony, which came at no small expense to the applicant. Roy's goal in this process has been to address the standards and legitimate questions raised by the Commission and public.

F. Conclusion

The applicant is proposing a small to moderate sized facility which is appropriate in scale to this community. This application will better serve the general community and tourists by providing an accessible and state of the art gas station. The city has previously planned this property by zoning it light industrial and allowing the proposed uses in this district. The facility will be conforming and will replace non-conforming structures. The evidence in this case shows substantial compliance with the applicable standards. Evidence has been submitted which allows the Commission to approve the application.

Thank you for your consideration.

Sincerely,

Ned C. Williamson

NCW/jrs
cc: Roy Bracken
Stephanie Bonney


PROPERTY LINE
E 9TH ST
EXISTING SIDEWALK
CITY DRY WELL
EXISTING SIDEWALK
EXISTING PARKING
EXISTING BUS STOP
NORTH BOUND
25 MPH
PROPOSED CROSS WALK RAPID FLASH WARNING LIGHTS
NORTH BOUND
25 MPH
STATE HIGHWAY 75
PROPOSED TURNING LANE
STATE HIGHWAY 75
±107'-0" QUEUING DISTANCE
PROPOSED TURNING LANE
LEFT TURNB QUEUING
SOUTH BOUND
25 MPH
SOUTH BOUND
25 MPH
EXISTING CITY DRY WELL
VALLEY GUTTER
50' ROW
BOULEVARD APPROACH
PERMITTED LANDSCAPE - SEE LS.1
PERMITTED LANDSCAPE - SEE LS.1
EXISTING TREE TO REMAIN
POWER POLE
PROPERTY LINE S03°28'40"E 273.97'
PROPOSED SIDEWALK (8'-0")
PEDESTRIAN SURFACE MATERIAL
PROPOSED CROSS WALK
POWER POLE TO BE REMOVED
SNOW STORAGE 600 SF
LOGO
FUELING ISLANDS
40' - 6" CANOPY LINE
LOT 5A
.4267 AC (18,590 S.F.)
REQUIRED PARKING = 10 SPACES
ACTUAL PARKING = 15 SPACES
SETBACK
DELIVERY AISLE
REQUIRED OFF-STREET LOADING 10' X 26'
SNOW STORAGE 110 SQ. FT.
PROPANE
RECYCLE/ STO
TRASH
RETAINING WALL (NEW)
ALLEY
EXISTING GRADE - NOT ASPHALT
LOT 1
LOT 2
EXISTING TREES
10TH ST
SIDEWALK
PROPERTY LINE
ENTER
RETAINING WALL (NEW)
PROPERTY LINE N45°16'21"E 180.52'
PROPOSED SIDEWALK (5'-0")
SLOPE = 7%
GUARD RAIL
LANDSCAPE AREA /SNOW STORAGE = 275 S.F.
PROPOSED STAIRWAY
PROPOSED ADDITION 510 SQ. FT.
BIKE RACK
RR TIE WALL
POWER POLE
REPURPOSE EXT'G RETAIL BLDG TO INCLUDE STORE WITH DELI SERVICE
2,084 SQ. FT.
LOWER LEVEL DELIVERY
PROPERTY LINE S44°41'44"E 205.99'
PROPOSED LOWER LEVEL ACCESS FROM ALLEY
END OF EXISTING BUILDING
EXISTING BLDG TO REMAIN - 72'
20' SETBACK
REQUIRED OFF-STREET LOADING 10' X 18'
EXISTING LOWER LEVEL ENTRY
SLOPE = 10%
10TH ST
ALLEY
LOT 3
LOT 4
REVISED 9-16-16
LOWER
TENTH STREET CENTER PARKING
DRAWING NORTH
CONDTIONAL USE APPLICATION - SITE PLAN
NOTE: SEE CIVIL ENGINEERING DRAWINGS FOR ALL SITE DRAINAGE AND STREET GRADING DESIGN
scale: 1"= 10'

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PRELIMINARY DESIGN PHASE - LOT 5A BLK 30

LOT 5A / BLK 30 / ZONE LI - 1

KETCHUM, ID

REVISION RECORD		
NO.	DATE	BY
1	9/16/16	SC

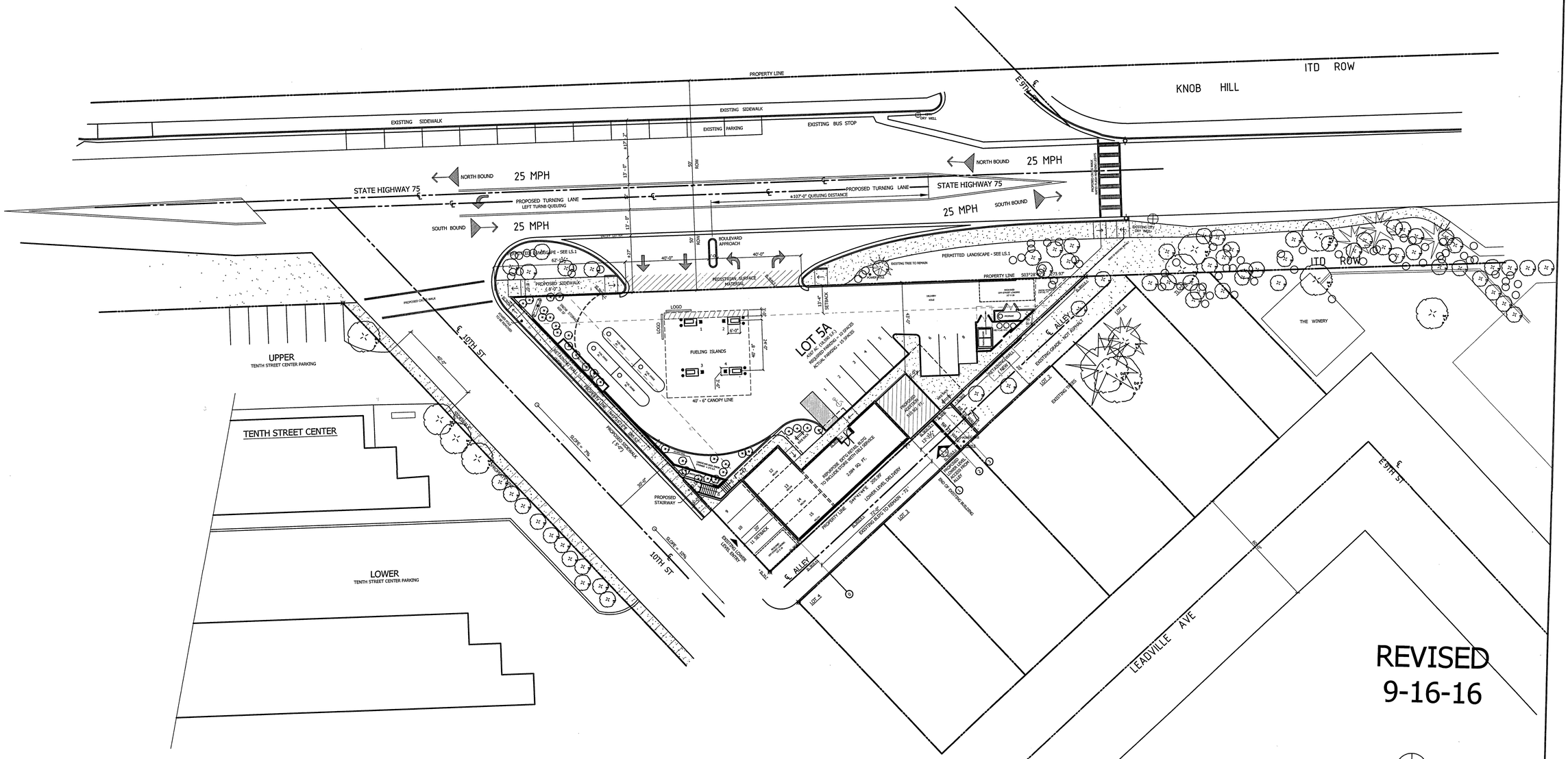
DRAWING NAME: SITE PLAN

DATE OF ISSUE:

PLOT DATE: 9/16/16

SCALE: 1"=10'

SHEET NO. A-2



REVISED 9-16-16

N — DRAWING NORTH

OVERALL SITE PLAN
CONDTIONAL USE/ PREAPPLICATION SITE PLAN

1 / A-2

NOTE: SEE CIVIL ENGINEERING DRAWINGS FOR ALL SITE DRAINAGE AND STREET GRADING DESIGN

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SCALE: 1"=20'

PLOT DATE: 9/16/16

SHEET NO. A-2.1

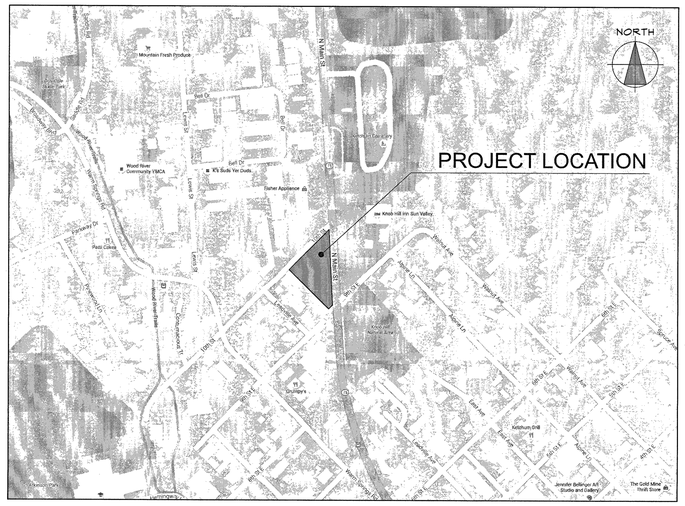
BRACKEN STATION

A CONDITIONAL USE PERMIT / DESIGN REVIEW APPLICATION

FOR:

A MOTOR VEHICLE FUELING STATION

LOT 5A / BLK 30 / ZONE LI-1



LOCATOR MAP

SITE PHOTO

DRAWING INDEX	
A.0	COVER PAGE.
A.1	EXISTING SITE PLAN. 1"= 10'
A.2	PROPOSED SITE PLAN. 1"= 10'
A.3	10TH STREET VIEW: EXISTING AND PROPOSED. 1/8"= 1'
A.4	ALLEY VIEW: EXISTING AND PROPOSED. 1/8"= 1'
A.5	STORE FRONT ELEVATION AND FLOOR PLANS WITH AREA SQ. FOOTAGE CALCULATIONS. 1/4"= 1'
A.6	ENLARGED VIEW - ALLEY RETAINING WALLS. 1/4"= 1'
C.1	SITE SURVEY.
C.2	CIVIL ACCESS PLAN TO HWY 75.
L.1.0	LANDSCAPE PLAN.
	COMPUTER GENERATED MODELS: • NORTH VIEW – BEFORE / AFTER • SOUTH VIEW – BEFORE / AFTER • NORTH ENLARGED VIEW • SOUTH ENLARGED VIEW

GENERAL CONTRACTOR AND ALL SUBCONTRACTORS TO ASSURE ALL WORK CONFORMS TO NATIONAL, STATE, AND LOCAL CODES THAT APPLY TO THIS PROJECT. WHEN INCONSISTENCIES EXIST BETWEEN DRAWINGS OR SPECS. AND APPLICABLE CODE REQUIREMENTS, CONFORMANCE TO ALL CODES SHALL HAVE PRECEDENCE OVER DRAWINGS AND SPECS.

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■ ■ ■ MEMBER AMERICAN INSTITUTE OF ARCHITECTS ■ ■ ■

[redacted] - LOT 5A BLK 30

LOT 5A / BLK 30 / ZONE LI - 1

KETCHUM, ID

REVISION RECORD		
NO.	DATE	BY

DRAWING NAME: COVER PAGE

DATE OF ISSUE: 5.23.16 SUPERSEDES ALL PREVIOUS DRAWINGS

PLOT DATE: 4/27/16

SCALE: NONE

SHEET NO. A.0

9TH STREET
PROPERTY
APPROX. EDGE OF EXISTING TRAVEL LANE
50' ROW
STATE HIGHWAY 75
STATE HIGHWAY 75
50' ROW
APPROX. EDGE OF EXISTING TRAVEL LANE
S 3°9'9" E
273.97'
TRASH
PARKING (ASPALT)
LOT 5A
ALLEY
LOT 1
LOT 2
BUILDING C (EXISTING FLAT ROOF)
SHED
BUILDING A (EXISTING FLAT ROOF)
WOOD DECK
PARKING AREA
EXISTING PLANTINGS
RAILROAD TIE RETAINING WALL
ENTRANCE
10TH STREET
TENTH STREET CENTER
SLOPE
PARKING (ASPHALT)
N 45°40'02"
180.51'
SINGLE STORY
TWO (2) STORY
BUILDING B (EXISTING FLAT ROOF)
PARKING
39'-4"
8%-9% SLOPE
6%-7% SLOPE
LOT 3
TOOL SHED
EXISTING BUILDINGS
ALLEY
EXIST. BLDG
LOT 4
20' SETBACK
EQUIPMENT STORAGE PARKING
STEVE R. COOK, ARCHITECT
323 SOUTH LEWIS ST. SUITE H, P.O. BOX 680, KETCHUM ID 83340
MEMBER AMERICAN INSTITUTE OF ARCHITECTS
REVISION RECORD
NO. DATE BY
DRAWING NAME:
SCALE: 1"=10'-0"
DATE OF ISSUE:
PLOT DATE:
SHEET NO.

PROPERTY LINE
EXISTING SIDEWALK
EXISTING PARKING
EXISTING BUS STOP
CITY DRY WELL
APPROX EDGE OF EXISTING TRAVEL LANE (FOG LINE)
NORTH BOUND 25 MPH
STATE HIGHWAY 75
PROPOSED TURNING LANE
SOUTH BOUND 25 MPH
PROPOSED CROSS WALK RAPID FLASH WARNING LIGHTS
50' ROW
VALLEY GUTTER
PROPOSED SIDEWALK (8'-0")
PERMITTED LANDSCAPE - SEE LS.1
EXISTING TREE TO REMAIN
POWER POLE
PROPERTY LINE S03°28'40"E 273.97'
BOULEVARD APPROACH PEDISTRIAN SURFACE MATERIAL
OFF-STREET LOADING 14' X 55'
SNOW STORAGE
SIGN
LOGO
FUELING ISLANDS
43' CANOPY LINE
DEMO THIS EXIST. BLDG
BIKE RACK
GARBAGE
PROPANE LOCATION
SCREENED RECYCLE/ STO
PROPOSED PATIO AREA
RETAINING WALL (NEW)
LOT 5A .4267 AC (18,590 S.F.)
SETBACK
CHARGING STATION
POWER POLE TO BE REMOVED
DEMO EXIST. BLDG
DEMO THIS PORTION OF EXIST. BLDG
℄ 10TH ST
(Install below grade fuel tanks)
NEW PROPOSED PARALLEL PKG
PROPERTY LINE N45°16'21"E 180.52'
SNOW STORAGE = 857 SF
40'-0" EXT'G CURB CUT
30'-0"
SLOPE = 7%
SLOPE = 10%
SIDEWALK
PROPERTY LINE
PROPOSED STAIRWAY
PROPOSED SIDEWALK (5'-0")
20'X 25.5' PROPOSED ADDITION 508 SQ. FT.
REPURPOSE EXT'G RETAIL BLD'G TO INCLUDE STORE WITH DELI SERVICE 2,084 SQ. FT.
RR TIE WALL
FUTURE EXPANSION
PROPOSED LOWER LEVEL ACCESS FROM ALLEY
END OF EXISTING BUILDING
PROPERTY LINE S44°41'44"E 205.99'
EXISTING BLD'G TO REMAIN - 72'
20' SETBACK
EXISTING LOWER LEVEL ENTRY
℄ ALLEY
EXISTING GRADE - NOT ASPHALT
LOT 1
LOT 2
LOT 3
LOT 4
ENTER
LOWER TENTH STREET CENTER PARKING
REVISED 6-30-16
DRAWING NORTH

1 A-2 CONDTIONAL USE/ PREAPPLICATION SITE PLAN

NOTE: SEE CIVIL ENGINEERING DRAWINGS FOR ALL SITE DRAINAGE AND STREET GRADING DESIGN

scale: 1" = 10'

GENERAL CONTRACTOR AND ALL SUBCONTRACTORS TO ASSURE ALL WORK CONFORMS TO NATIONAL, STATE, AND LOCAL CODES THAT APPLY TO THIS PROJECT. WHEN INCONSISTENCIES EXIST BETWEEN DRAWINGS OR SPECS. AND APPLICABLE CODE REQUIREMENTS, CONFORMANCE TO ALL CODES SHALL HAVE PRECEDENCE OVER DRAWINGS AND SPECS.

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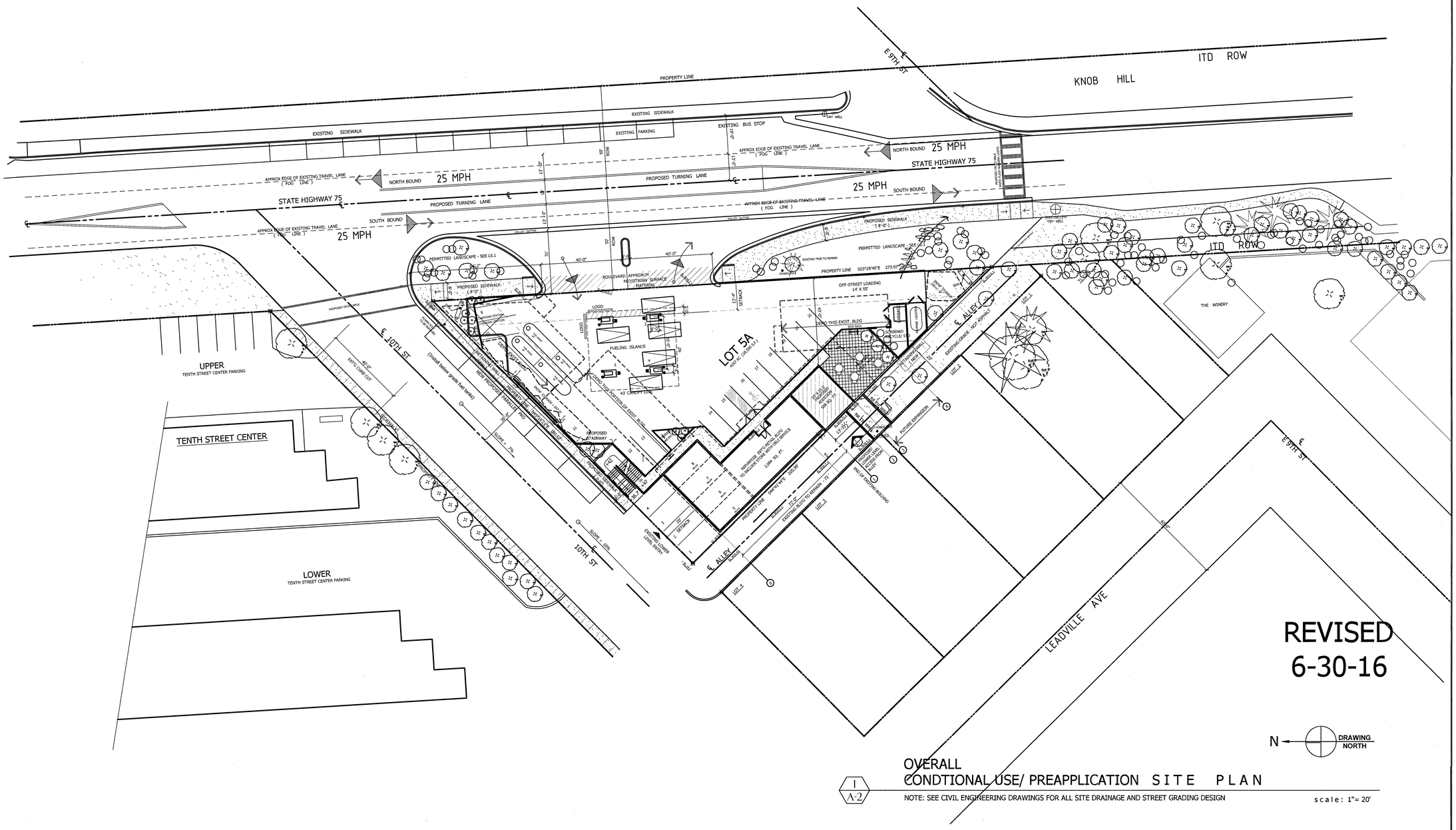
MEMBER AMERICAN INSTITUTE OF ARCHITECTS

PRELIMINARY DESIGN PHASE - LOT 5A BLK 30

LOT 5A / BLK 30 / ZONE LI - 1

KETCHUM, ID

REVISION RECORD			DRAWING NAME:	DATE OF ISSUE:	PLOT DATE:
NO.	DATE	BY	SITE PLAN	SCALE: 1"=10'	6/23/16
					SHEET NO. A-2



REVISED
6-30-16

N DRAWING NORTH

1 / A-2

OVERALL
CONDTIONAL USE/ PREAPPLICATION SITE PLAN

NOTE: SEE CIVIL ENGINEERING DRAWINGS FOR ALL SITE DRAINAGE AND STREET GRADING DESIGN

scale: 1"= 20'

GENERAL CONTRACTOR AND ALL SUBCONTRACTORS TO ASSURE ALL WORK CONFORMS TO NATIONAL, STATE, AND LOCAL CODES THAT APPLY TO THIS PROJECT. WHEN INCONSISTENCIES EXIST BETWEEN DRAWINGS OR SPECS. AND APPLICABLE CODE REQUIREMENTS, CONFORMANCE TO ALL CODES SHALL HAVE PRECEDENCE OVER DRAWINGS AND SPECS.

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PRELIMINARY DESIGN PHASE - LOT 5A BLK 30

LOT 5A / BLK 30 / ZONE LI - 1

KETCHUM, ID

REVISION RECORD		
NO.	DATE	BY

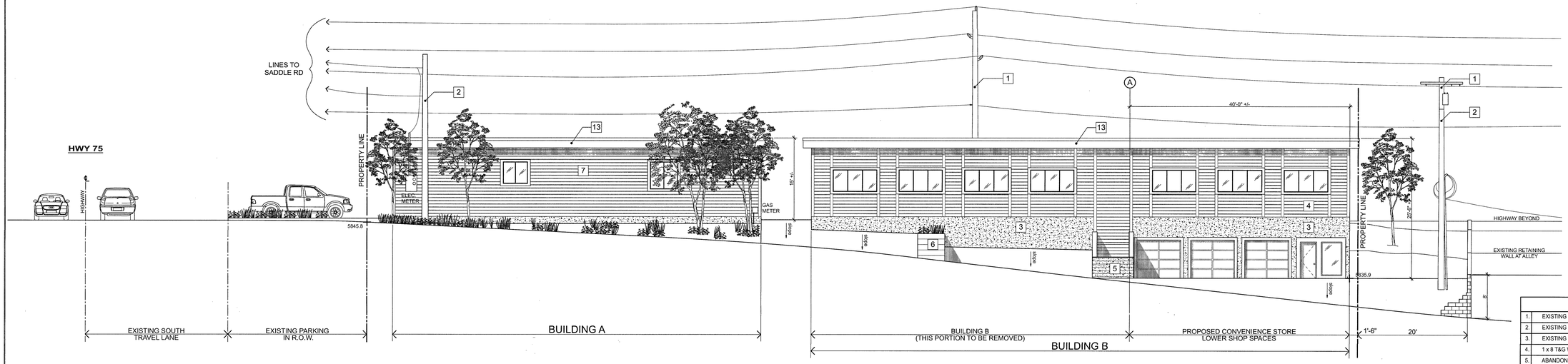
DRAWING NAME: SITE PLAN

DATE OF ISSUE: SUPERSEDES ALL PREVIOUS DRAWINGS

PLOT DATE: 6/23/16

SCALE: 1"=20'

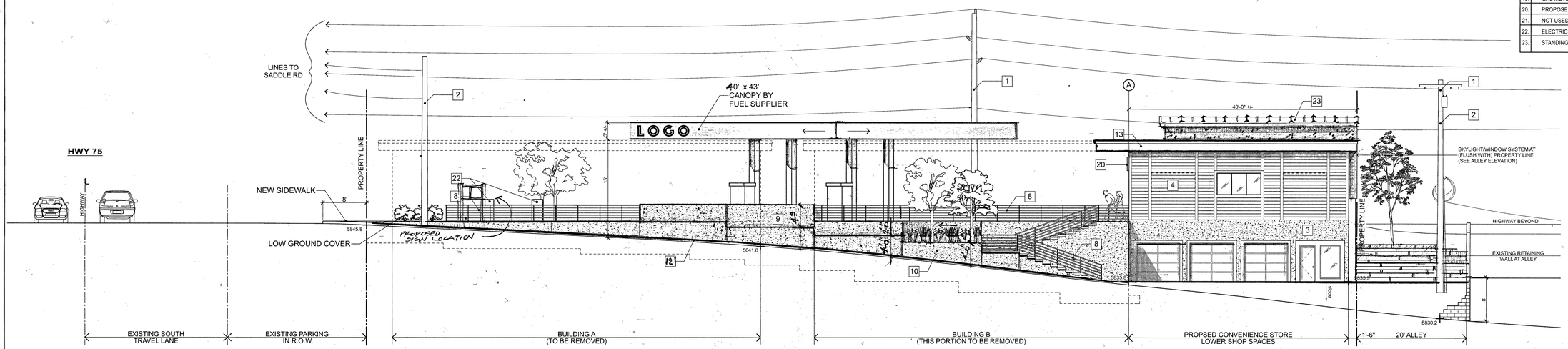
SHEET NO. A-2.1



1 EXISTING NORTH ELEVATION - 10th STREET VIEW

scale: 1/8"= 1'-0"

KEY INDEX	
1.	EXISTING POWER POLE- HWY 75.
2.	EXISTING POWER POLE- 10TH STREET/ALLEY.
3.	EXISTING CONC. WALL (MARINA GREY #1599).
4.	1 x 8 T&G WD SIDING (ROLLING HILLS #1497).
5.	ABANDONED STAIRWAY.
6.	ABANDONED RAILROAD PLANTER.
7.	EXISTING HORIZ. WOOD SIDING.
8.	NEW METAL GUARDRAIL/HANDRAIL- BLACK.
9.	NEW POURED-IN-PLACE RETAINING WALL- SANDBLAST (MARINA GREY STAIN).
10.	NEW STAIR - MID LANDING PLANTER.
11.	EXISTING RAILROAD RETAINING WALL AT ALLEY.
12.	PROPOSED SIDWALK.
13.	EXISTING FASCIA.
14.	MATCH EXISTING FASCIA.
15.	NEW SKYLIGHT.
16.	ELEC. METERS.
17.	RAIN GUTTER / DOWNSPOUT.
18.	ROOF DRAIN (INTERNAL).
19.	GAS METERS.
20.	PROPOSED SIGN.
21.	NOT USED.
22.	ELECTRIC CHARGING STATION(S).
23.	STANDING SEAM METAL ROOF SKYLIGHT.



2 PROPOSED NORTH ELEVATION - 10th STREET VIEW

scale: 1/8"= 1'-0"

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CUP APPLICATION AND DESIGN REVIEW – PRE-APP

LOT 5A / BLK 30 / ZONE LI - 1

KETCHUM, ID

REVISION RECORD		
NO.	DATE	BY

DRAWING NAME: EXTERIOR ELEVATIONS: NORTH

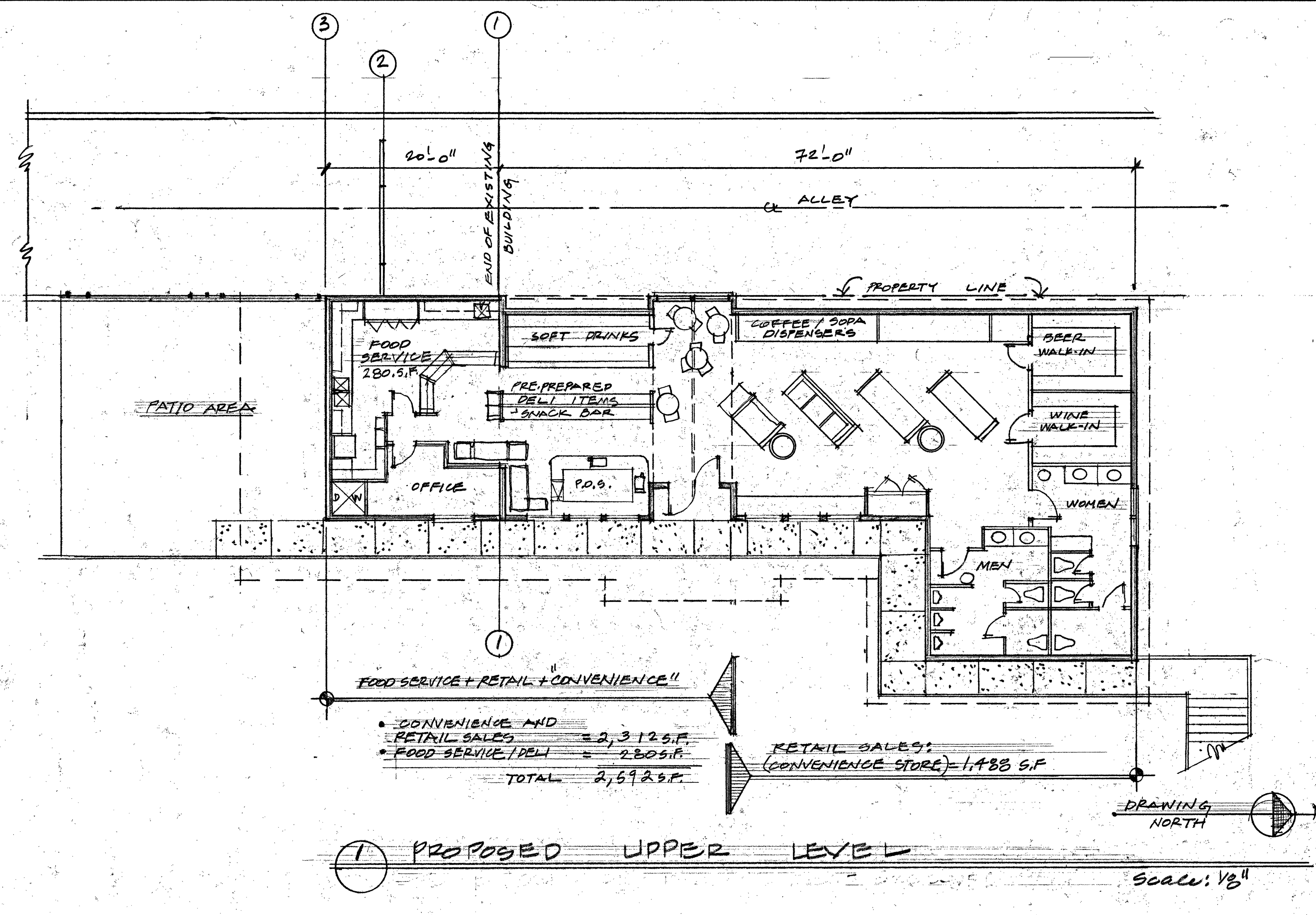
DATE OF ISSUE: 5.23.16 (SUPERSEDES ALL PREVIOUS DRAWINGS)

SCALE: 1/8" = 1'-0"

PLOT DATE: 4/27/16

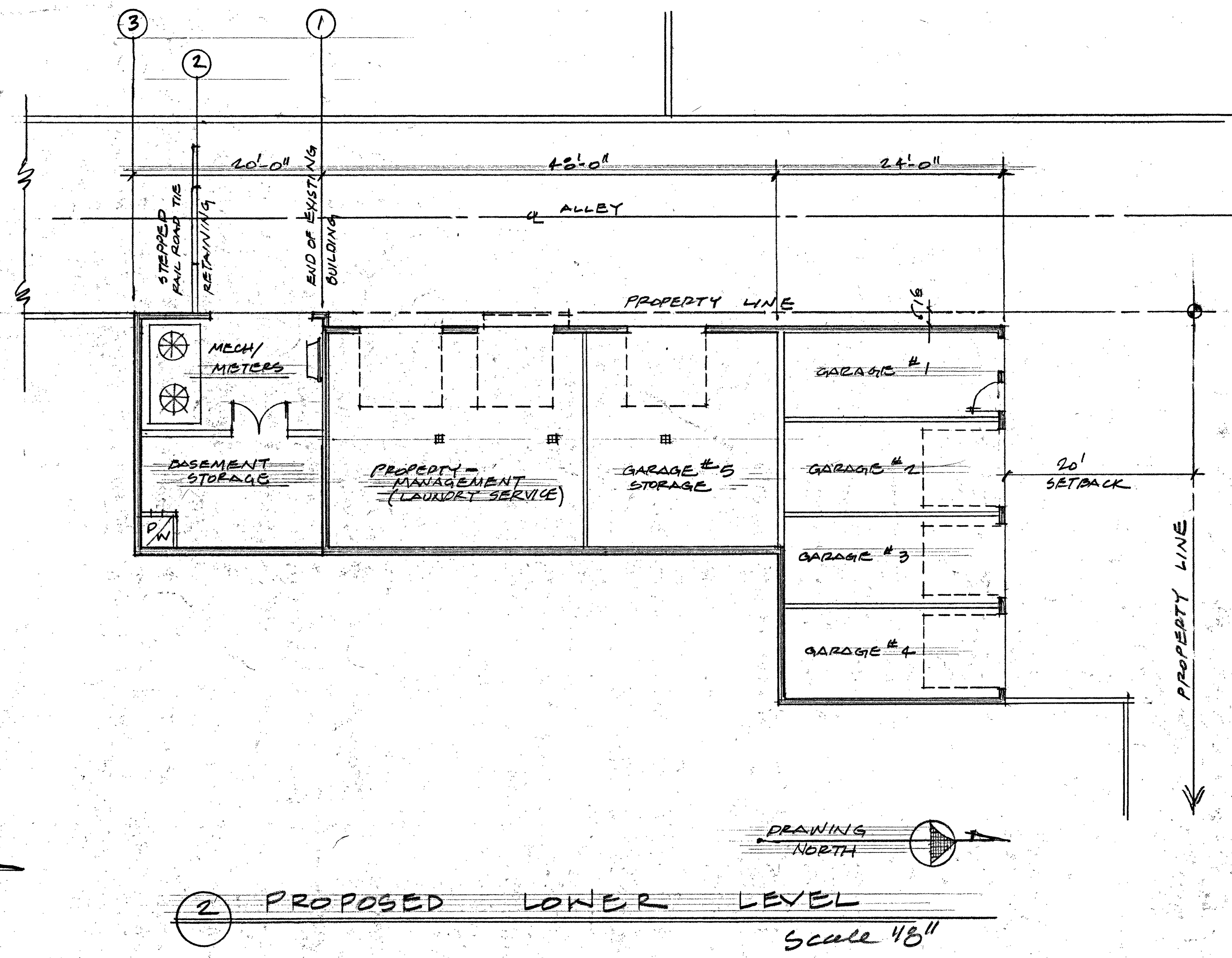
SHEET NO. A.3

5/10/16 / 5/23/16



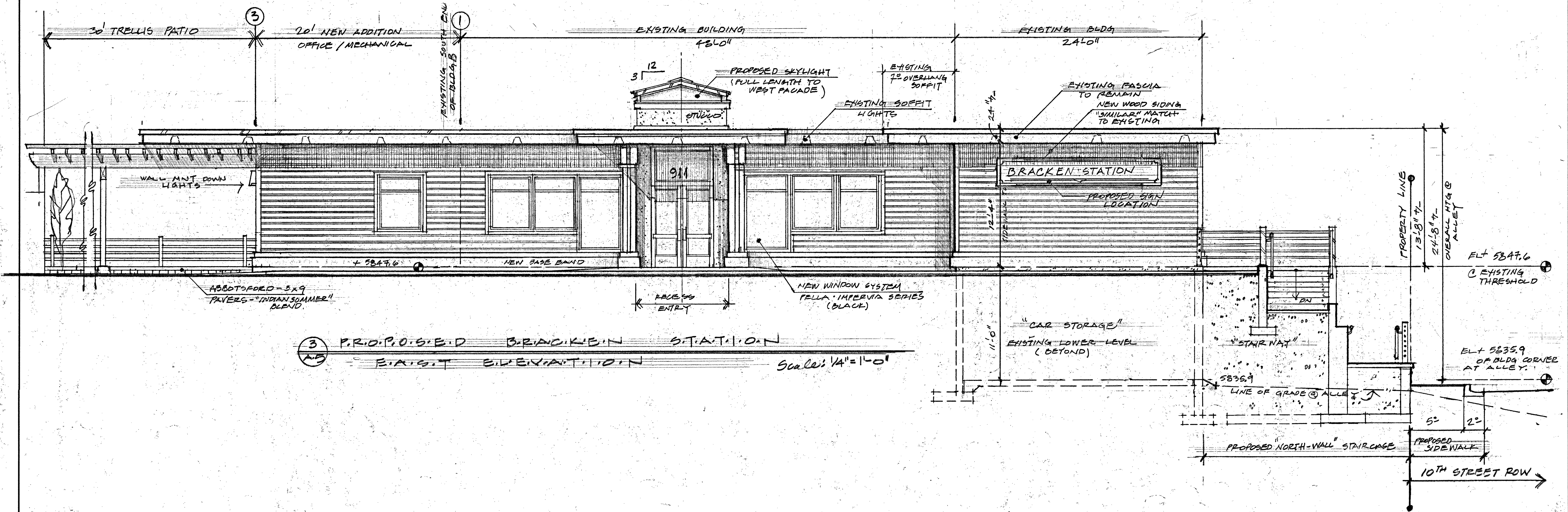
1 PROPOSED UPPER LEVEL

Scale: 1/8"



2 PROPOSED LOWER LEVEL

Scale 1/8"



3 PROPOSED BRACKEN STATION EAST ELEVATION

Scale: 1/4" = 1'-0"

THE BRACKEN STATION
LOT 5A, BLK 30, LT. 1
KETCHUM • IDAHO

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REVISION RECORD

NO.	DATE	BY

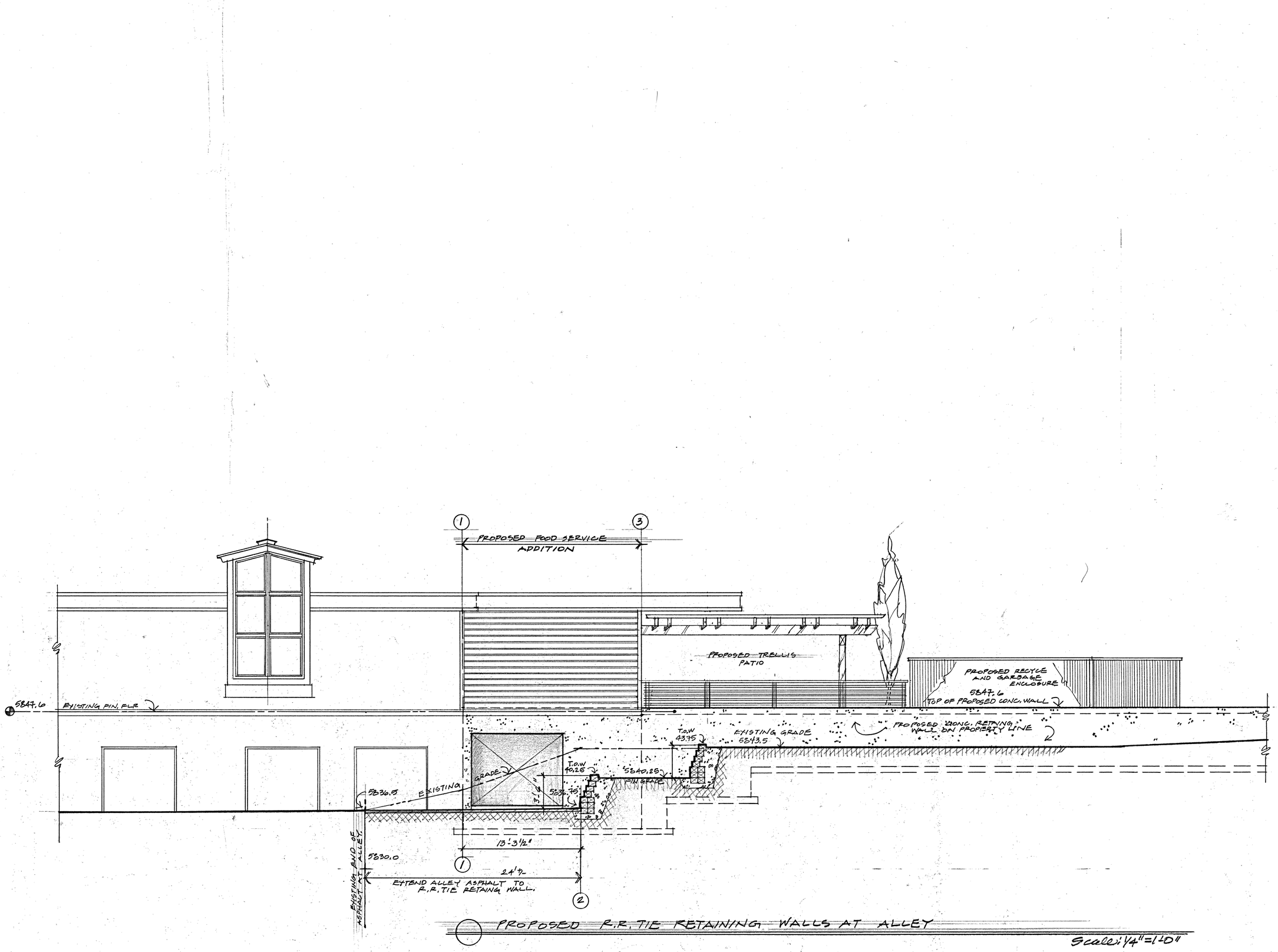
DRAWING NAME: PROPOSED FRONT ELEVATION

SCALE: 1/4" = 1'-0"

DATE OF ISSUE: 5.23.16

PLOT DATE:

SHEET NO. A•5



PROPOSED R.R.TIE RETAINING WALLS AT ALLEY

Scale: 1/4"=1'-0"

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MEMBER AMERICAN INSTITUTE OF ARCHITECTS

BRACKEN STATION
LOT 6A - BLK 30
KETCHUM, IDAHO
CUP APPLICATION AND DESIGN REVIEW - PREAPP

REVISION RECORD

NO.	DATE	BY

DRAWING NAME: ALLEY R.R.TIE RETAINING WALLS

SCALE: 1/4"=1'-0"

DATE OF ISSUE: 5.23.16

PLOT DATE:

SHEET NO. A-6

LEGEND:
EXISTING PROPERTY LINE
EXISTING ADJOINER
EXISTING CENTERLINE
PROPOSED CONCRETE CURB & GUTTER
PROPOSED CONCRETE
PROPOSED ASPHALT
PROPOSED PAVERS

0 20 40 Feet

KETCHUM BLOCK 50 LOT 1AA
KETCHUM BLOCK 50 LOT 2A
KETCHUM BLOCK 29 LOT 1 & 2
E 9TH STREET ℄
RECTANGULAR RAPID FLASHING BEACON
EXISTING PARALLEL PARKING
62.5'
EXISTING STRIPING
PROPOSED STRIPING
50'± 13' 13' 12' 13'
100'± R.O.W.
STATE HWY 75 ℄
71.2' (50' MIN.)
62.5'
25' 35' 23' 19'
R480'
R200'
R30'
R50'
40' 40'
13.9'
4'
R3' TYP.
50'±
PROPOSED 2' VALLEY GUTTER
ITD SNOW STORAGE AND PERMITTED LANSCAPING; SEE LANSCAPE PLANS
RETAIN AND PROTECT EXISTING TREE
ITD SNOW STORAGE AND PERMITTED LANSCAPING; SEE LANSCAPE PLANS
CONNECT TO EXISTING SIDEWALK
RETAIN AND PROTECT EXISTING POWER POLE
RECTANGULAR RAPID FLASHING BEACON
EXISTING STRIPING
PROPOSED ℄ STRIPING
8'
24'
12.9'
10' TYP.
13'
20' TYP.
KETCHUM BLOCK 30 LOT 5A
PROPOSED ADDITION
EXISTING BUILDING
60'
E 10TH STREET ℄
ALLEY
LOT 1
LOT 2
LOT 3
LOT 4
N LEADVILLE AVENUE ℄
TENTH ST LIGHT INDUSTRIAL COMPLEX
TL 4808

1 EX VICINITY MAP
SCALE: N.T.S.

PRELIMINARY ONLY NOT FOR CONSTRUCTION

REVISIONS

No.	DESCRIPTION	DATE	BY
1	EXTEND TURN LANE SOUTH	6/3/16	SKS
2	ADD DRAINAGE IMPROVEMENTS	6/28/16	SKS

PREPARED BY:
BENCHMARK ASSOCIATES, P.A.
P.O. BOX 733 100 BELL DRIVE
KETCHUM, IDAHO 83340
(208) 726-9512
FAX 726-9514
WEB: WWW.BMA5B.COM
MAIL: WWW.BMA5B.COM

PRELIMINARY IMPROVEMENTS PLAN

KETCHUM TOWNSITE BLOCK 30, LOT 5A
T4N, R17E, SEC 13, B.M., BLAINE COUNTY, IDAHO

PREPARED FOR: ROY BRACKEN

DRAWN BY: SKS
DESIGNED BY: JPG
CHECKED BY: SB
DATE: 05/03/16
PROJECT NO.: 16051

SHEET NUMBER

EX

STATE HIGHWAY 75

MAIN STREET BASIN
AREA= 0.2 ACRES

BASIN 1
AREA= 0.39 ACRES

BASIN 2
AREA= 0.27 ACRES

10TH STREET

PROPOSED DRYWELL #2

PROPOSED DRYWELL #1

PROPOSED CATCH BASIN #1

PROPOSED CATCH BASIN #2

PROPOSED CATCH BASIN #3

PROPOSED 4"ø D3034 STORM DRAIN

PROPOSED 8"ø D3034 STORM DRAIN

PROPOSED OIL/WATER SEPARATOR #2

CONNECT TO ROOF AND FOUNDATION DRAINS

5846

5847

5845.8 PP

PP NOEL

GB

EOA

SLM

W03

0 10 20 Feet

LEGEND:

- EXISTING PROPERTY LINE
- EXISTING ADJOINER
- EXISTING CENTERLINE
- PROPOSED CONCRETE CURB & GUTTER
- PROPOSED CONCRETE
- PROPOSED ASPHALT
- PROPOSED PAVERS

Infiltration System Sizing Worksheet

The proposed infiltration system design below allows for infiltration of stormwater collected in the largest basin.

Onsite Native Soil Infiltration

Infiltration Rate:	300	in/hr
Factor of Safety:	1.5	
Design Infiltration Rate:	200	**in/hr**

Assumed T_c:	15 min
Intensity (25-yr, 15 min):	0.43 in/hr
Intensity (25-yr, 1 hr):	1.72 in/hr

Site Infiltration Sizing

Impervious Area:	0.400	ac
Runoff Coefficient (Imp.):	0.98	
25-Year Design Runoff:	0.674	cfs

Drywell Structure Dimensions

Drywell Manhole Diameter:	24	in
Drain Rock Thickness:	24	in
Drain Rock Void Ratio:	0.4	
Drywell Rim Elevation:	100.00	
Lowest Inlet Invert Elevation:	99.00	
Depth to Bottom of Drywell:	7.2	ft
Bottom Elevation:	92.8	

8' MIN. DEPTH TO REACH FREE-DRAINING MATERIAL BELOW FROST DEPTH.

Drywell Stage-Storage-Discharge

Drywell Stage	Water Surface Depth	Elevation	Storage in MH	Storage in Drain Rock	Total Storage	Bottom Wetted Area	Side Wetted Area	Total Wetted Area	Drywell Infiltration Flow Rate
(ft)	(ft)		(cf)	(cf)	(cf)	(sf)	(sf)	(sf)	(cfs)
0.00	7.23	92.77	0.0	0.0	0.0	28.3	0.0	28.3	0.131
0.62	6.60	93.40	2.0	6.3	8.2	28.3	11.7	40.0	0.185
1.25	5.98	94.02	3.9	12.5	16.4	28.3	23.5	51.7	0.240
1.87	5.36	94.64	5.9	18.8	24.6	28.3	35.2	63.5	0.294
2.49	4.74	95.26	7.8	25.0	32.9	28.3	46.9	75.2	0.348
3.11	4.11	95.89	9.8	31.3	41.1	28.3	58.7	87.0	0.403
3.74	3.49	96.51	11.7	37.6	49.3	28.3	70.4	98.7	0.457
4.36	2.87	97.13	13.7	43.8	57.5	28.3	82.2	110.4	0.511
4.98	2.25	97.75	15.6	50.1	65.7	28.3	93.9	122.2	0.566
5.60	1.62	98.38	17.6	56.3	73.9	28.3	105.6	133.9	0.620
6.23	**1.00**	**99.00**	**19.6**	**62.6**	**82.2**	**28.3**	**117.4**	**145.6**	**0.674**

Drywell Design

Ketchum Villiage, Blk 30, Lot 5
Bracken Station
T4N, R17E, SEC 13, B.M., Blaine County, ID
BY: SKS DATE: 06/29/16

PRELIMINARY ONLY NOT FOR CONSTRUCTION

REVISIONS

No.	DESCRIPTION	DATE	BY
1	EXTEND TURN LANE SOUTH	6/3/16	SKS

PREPARED BY:
BENCHMARK ASSOCIATES, P.A.
P.O. BOX 733 100 BELL DRIVE
KETCHUM, IDAHO 83340
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WEB: WWW.BMA5B.COM
MAIL: WWW.BMA5B.COM

PRELIMINARY GRADING & DRAINAGE PLAN

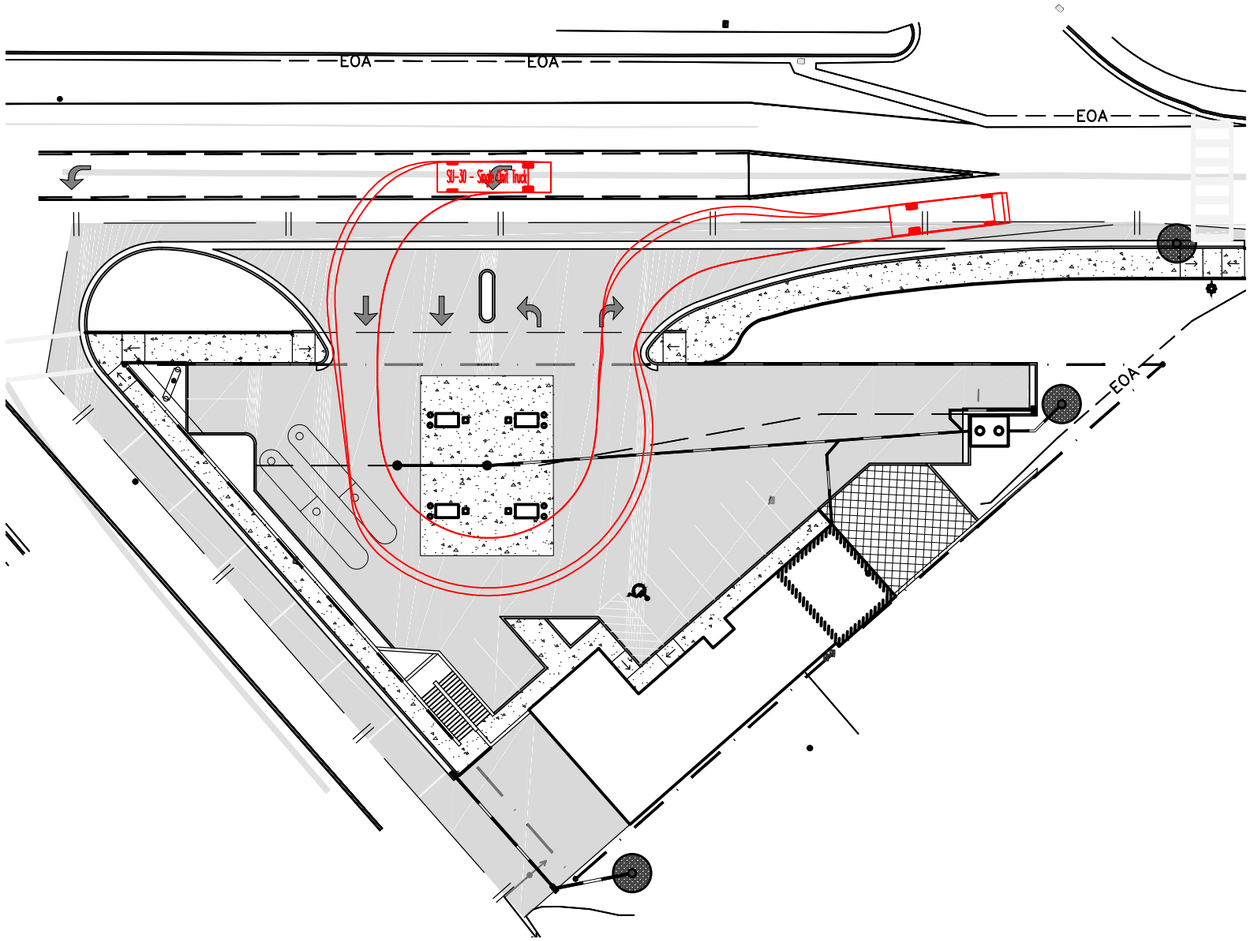
KETCHUM TOWNSITE BLOCK 30, LOT 5A
T4N, R17E, SEC 13, B.M., BLAINE COUNTY, IDAHO

PREPARED FOR: ROY BRACKEN

DRAWN BY: SKS
DESIGNED BY: JPG
CHECKED BY: SB
DATE: 05/03/16
PROJECT NO.: 16051

SHEET NUMBER

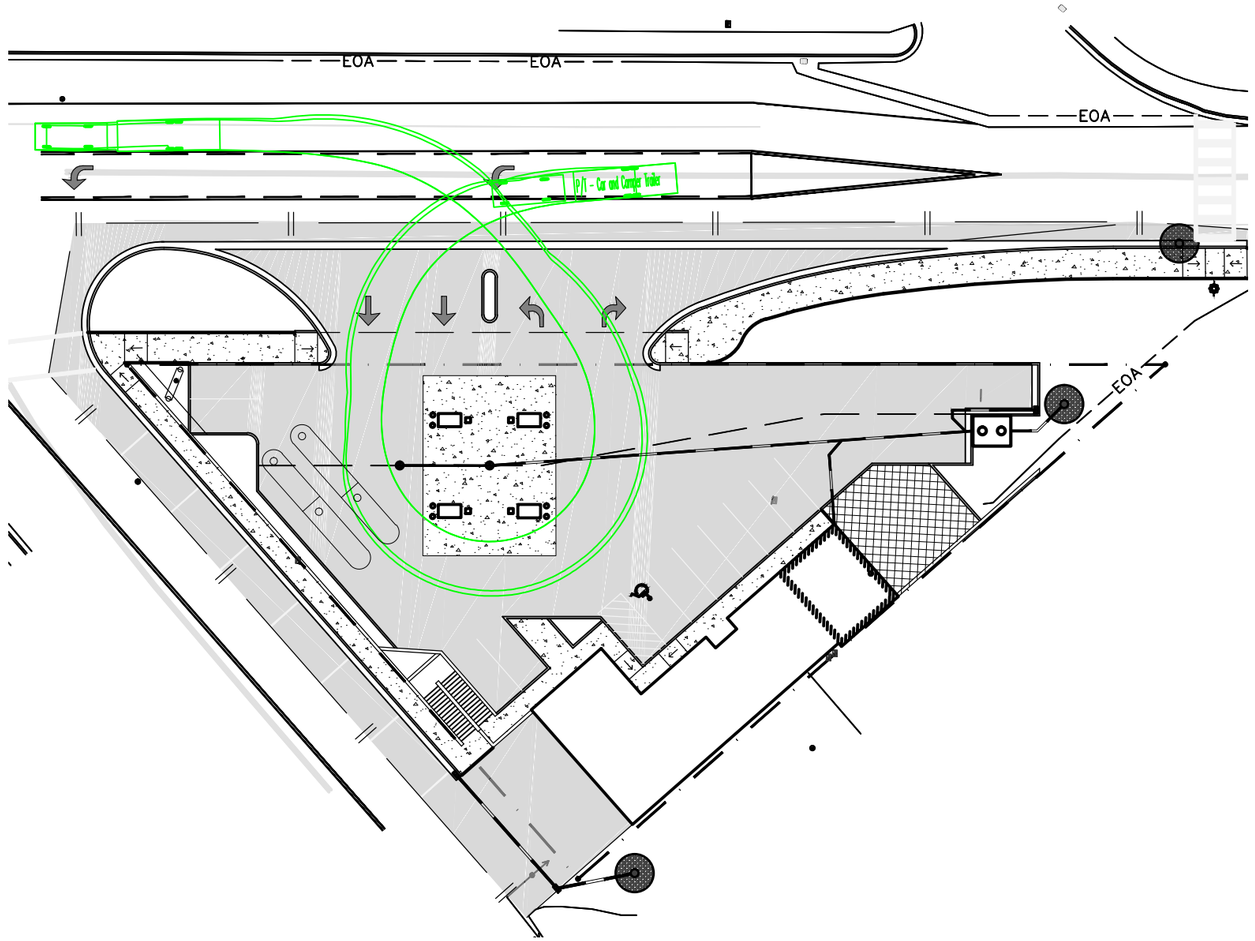
EX



SU–30 – Single Unit Truck

Overall Length	30.000ft
Overall Width	8.000ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.367ft
Track Width	8.000ft
Lock–to–lock time	5.00s
Max Steering Angle (Virtual)	31.80°

1 — BOX TRUCK TURN
SCALE: SCALE



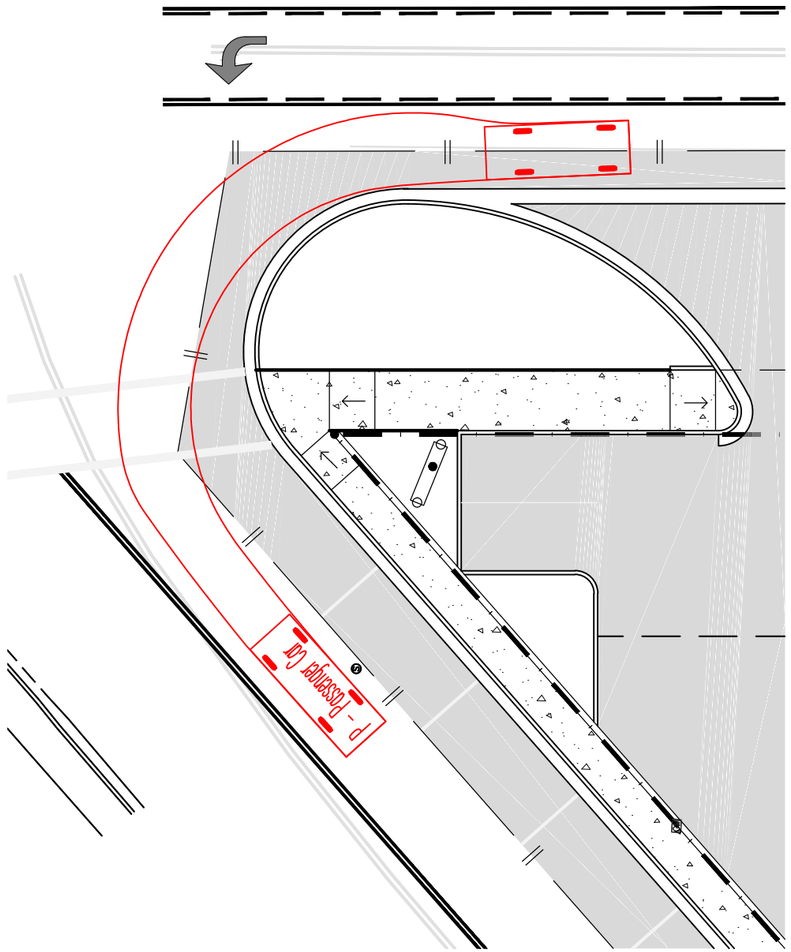
P/T – Car and Camper Trailer

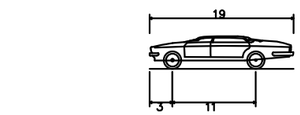
Overall Length	48.701ft
Overall Width	8.000ft
Overall Body Height	10.008ft
Min Body Ground Clearance	0.795ft
Max Track Width	8.000ft
Lock–to–lock time	4.00s
Max Steering Angle (Virtual)	21.50°

2 — PASSENGER CAR WITH TRAILER TURN
SCALE: SCALE

ON–SITE VEHICLE TURN EXHIBIT

JULY 11TH, 2016

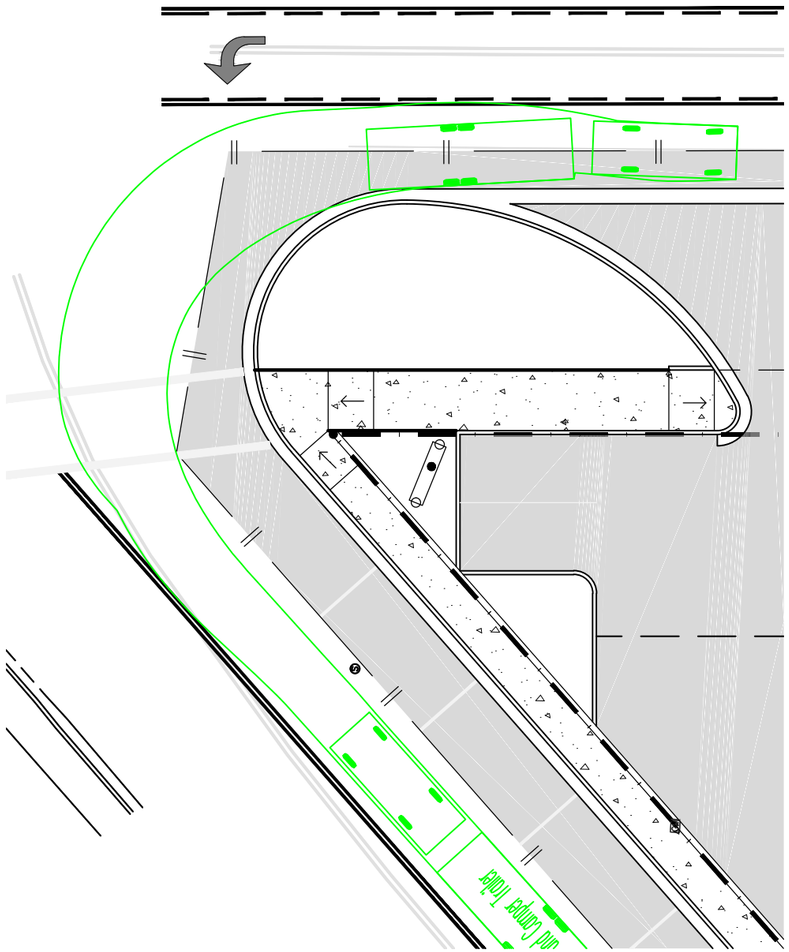


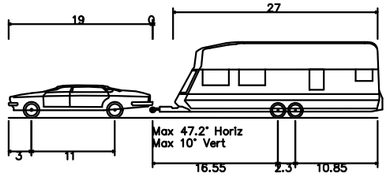


P – Passenger Car

Overall Length	19.000ft
Overall Width	7.000ft
Overall Body Height	4.300ft
Min Body Ground Clearance	1.115ft
Track Width	6.000ft
Lock–to–lock time	4.00s
Max Steering Angle (Virtual)	31.60°

1 — PASSENGER CAR TURN
SCALE: SCALE

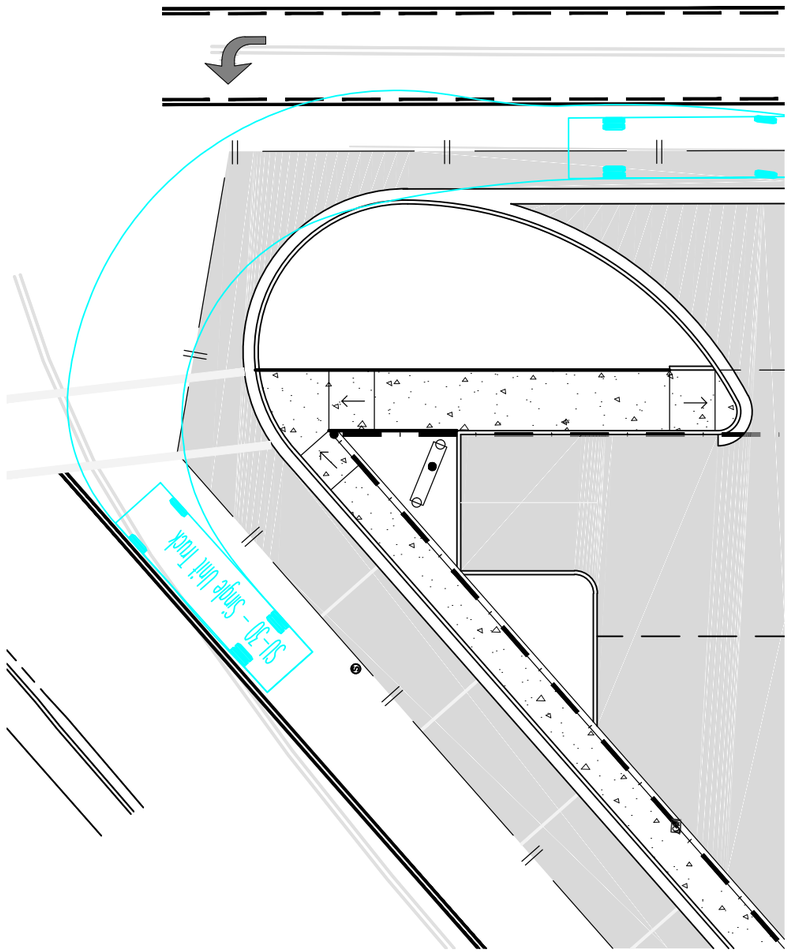


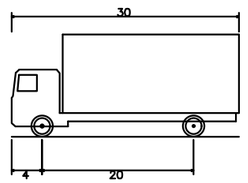


P/T – Car and Camper Trailer

Overall Length	48.701ft
Overall Width	8.000ft
Overall Body Height	10.008ft
Min Body Ground Clearance	0.795ft
Max Track Width	8.000ft
Lock–to–lock time	4.00s
Max Steering Angle (Virtual)	21.50°

2 — PASSENGER CAR WITH TRAILER TURN
SCALE: SCALE





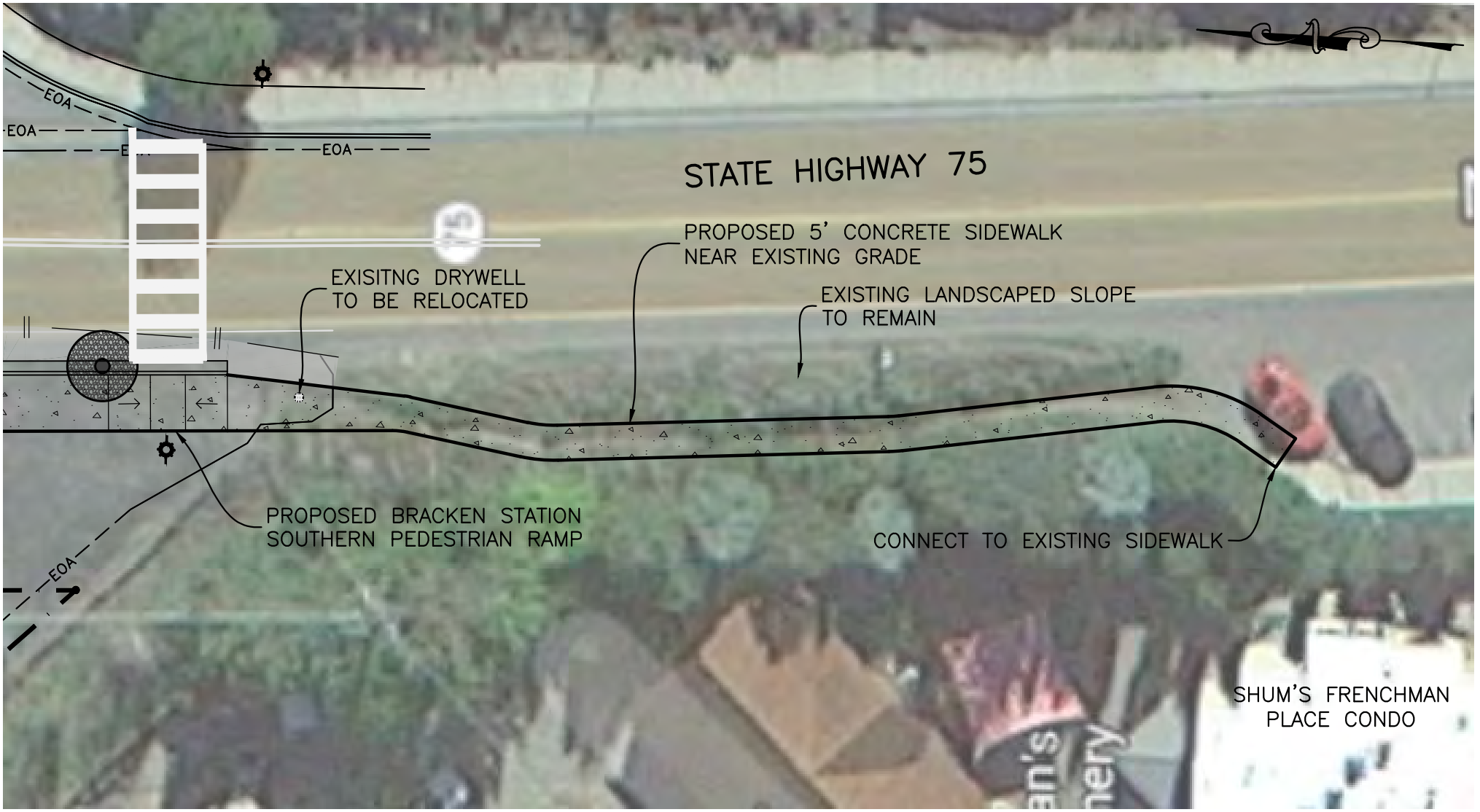
SU–30 – Single Unit Truck

Overall Length	30.000ft
Overall Width	8.000ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.367ft
Track Width	8.000ft
Lock–to–lock time	5.00s
Max Steering Angle (Virtual)	31.80°

3 — BOX TRUCK TURN
SCALE: SCALE

10TH STREET VEHICLE TURN EXHIBIT

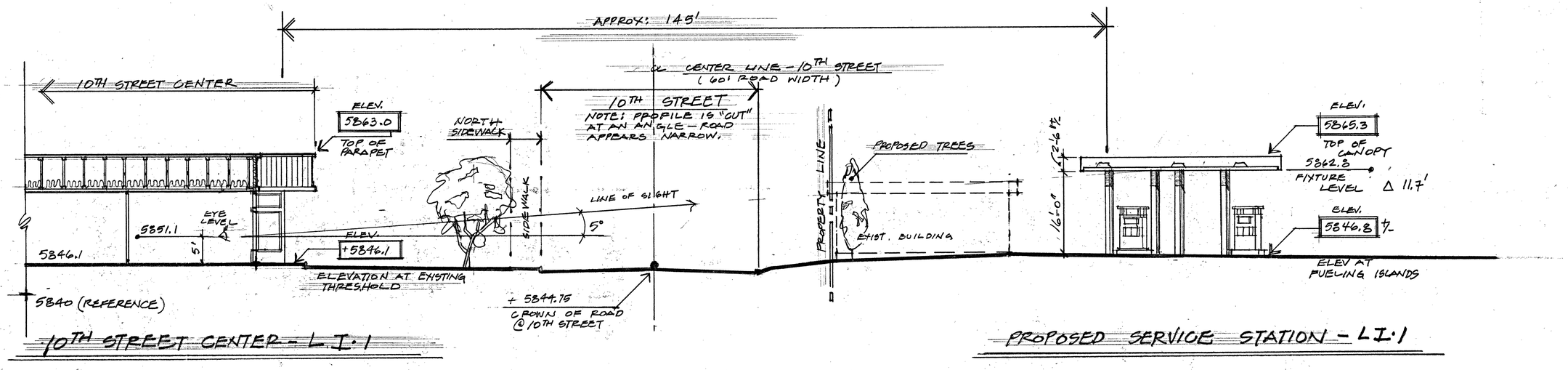
JULY 11TH, 2016



0 20 40 Feet

HIGHWAY 75 FRENCHMAN SIDEWALK CONNECTION

JULY 11TH, 2016



1 A·PF EXISTING PROFILE - FROM NORTH OF 10TH STREET TO SOUTH OF 10TH STREET

Scale: 1" = 10'-0"

GENERAL CONTRACTOR AND ALL SUBCONTRACTORS TO ASSURE ALL WORK CONFORMS TO NATIONAL, STATE, AND LOCAL CODES THAT APPLY TO THIS PROJECT. WHEN INCONSISTENCIES EXIST BETWEEN DRAWINGS OR SPECS, AND APPLICABLE CODE REQUIREMENTS, CONFORMANCE TO ALL CODES SHALL HAVE PRECEDENCE OVER DRAWINGS AND SPECS.

STEVE R. COOK, ARCHITECT
323 SOUTH LEWIS ST. SUITE H, P.O. BOX 680, KETCHUM ID. 83340
PH: (208) 725-5566
FAX: (208) 725-5568
■ ■ ■ MEMBER AMERICAN INSTITUTE OF ARCHITECTS ■ ■ ■

BRACKEN · STATION
HOT SPA KETCHUM, ID.
SITE PROFILE

REVISION RECORD

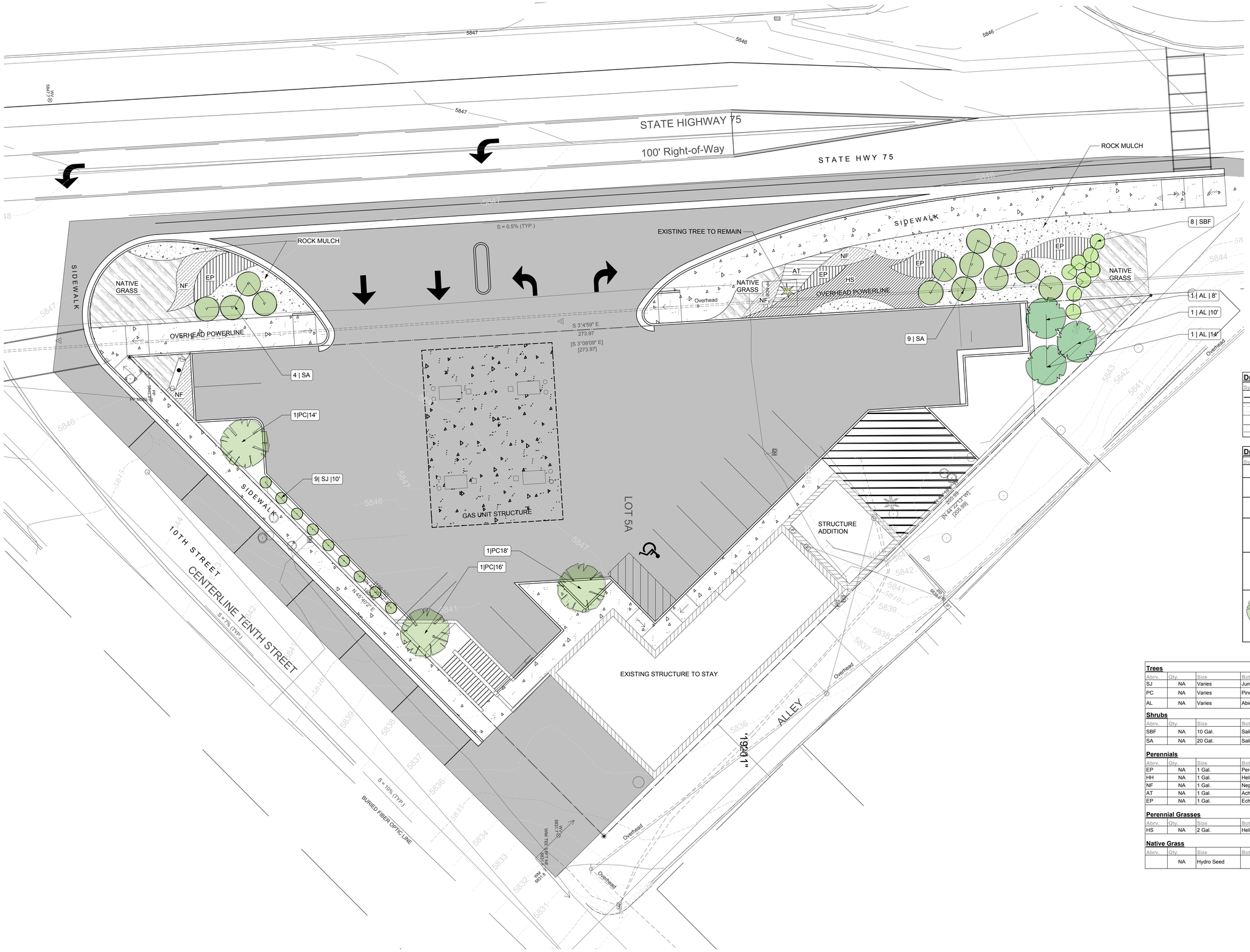
NO.	DATE	BY

DRAWING NAME: SITE PROFILE
S:\CAAD\CUGHBLK.DWG

SCALE: 1:10

DATE OF ISSUE: 7.11.16
SUPERSEDES ALL PREVIOUS DRAWINGS
PLOT DATE:

SHEET NO. A·PF



Drawing Legend

Symbol	Definition
	Property Line
(80) (79)	Existing Contours
80 79	Proposed Contours

Drawing Legend

Symbol	Definition
	Concrete Walkeway
	River Rock Mulch
	Proposed Perennials: See Planting Schedule
	Existing Trees To Remain
	Proposed Shrubs: See Planting Schedule
	Proposed Evergreen Trees: See Planting Schedule

Trees

Abrv.	Qty.	Size	Botanical Name	Common Name	Spacing
SJ	NA	Varies	Juniperus chinensis 'Spartan	Spartan Juniper	Per Plan
PC	NA	Varies	Pinus contorta	Lodge Pole Pine	Per Plan
AL	NA	Varies	Abies lasiocarpa	Sub Alpine Fir	Per Plan

Shrubs

Abrv.	Qty.	Size	Botanical Name	Common Name	Spacing
SBF	NA	10 Gal.	Salix brachycarpa 'Blue Fox'	Blue Fox Willow	Per Plan
SA	NA	20 Gal.	Salix arctica	Arctic Willow	Per Plan

Perennials

Abrv.	Qty.	Size	Botanical Name	Common Name	Spacing
EP	NA	1 Gal.	Perovskia atriplicifolia	Russian Sage	Per Plan
HH	NA	1 Gal.	Heliopsis helianthoides	Sun Flower	Per Plan
NF	NA	1 Gal.	Nepeta x faassinni	Catmint	Per Plan
AT	NA	1 Gal.	Achillea millefolium 'Terracotta'	Yarrow	Per Plan
EP	NA	1 Gal.	Echinacea	Purple Cone Flower	Per Plan

Perennial Grasses

Abrv.	Qty.	Size	Botanical Name	Common Name	Spacing
HS	NA	2 Gal.	Helictotrichon sempervirens	Blue Oat Grass	Per Plan

Native Grass

Abrv.	Qty.	Size	Botanical Name	Common Name	Spacing
	NA	Hydro Seed		Native Grass Mix	Per Plan

N

0 10 20 30 40 FT

SCALE: 1"= 10'-0"

BYLA
BEN YOUNG LANDSCAPE ARCHITECTS
323 Lewis _ | Ketchum, ID
(208) 726 5997 - (208) 720 0215
www.byla.us

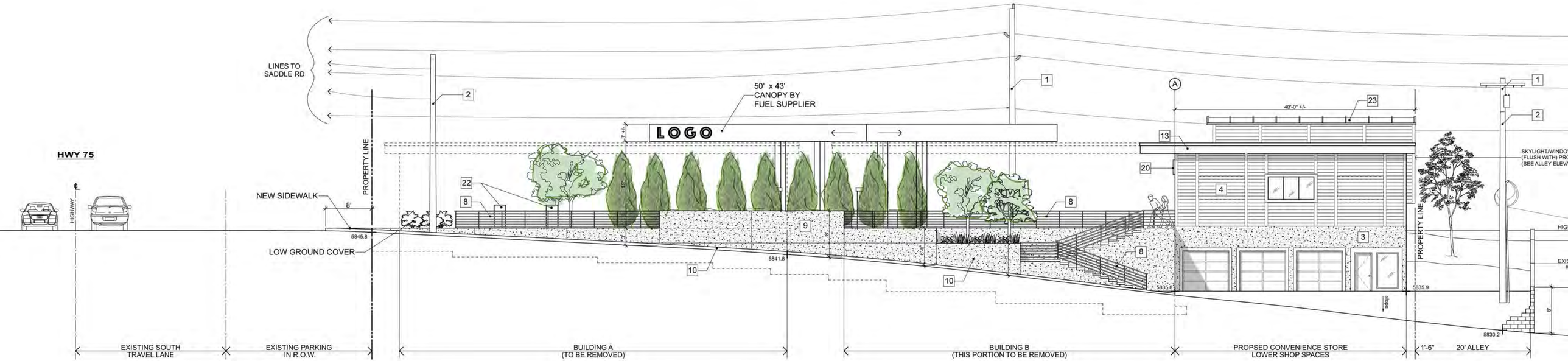
No.	Description	Signature	Date

BRACKEN STATION
BRACKEN BUILDING
LOT 5A | BLK 30 | SONE LI-1, KETCHUM, ID

LANDSCAPE OVERVIEW

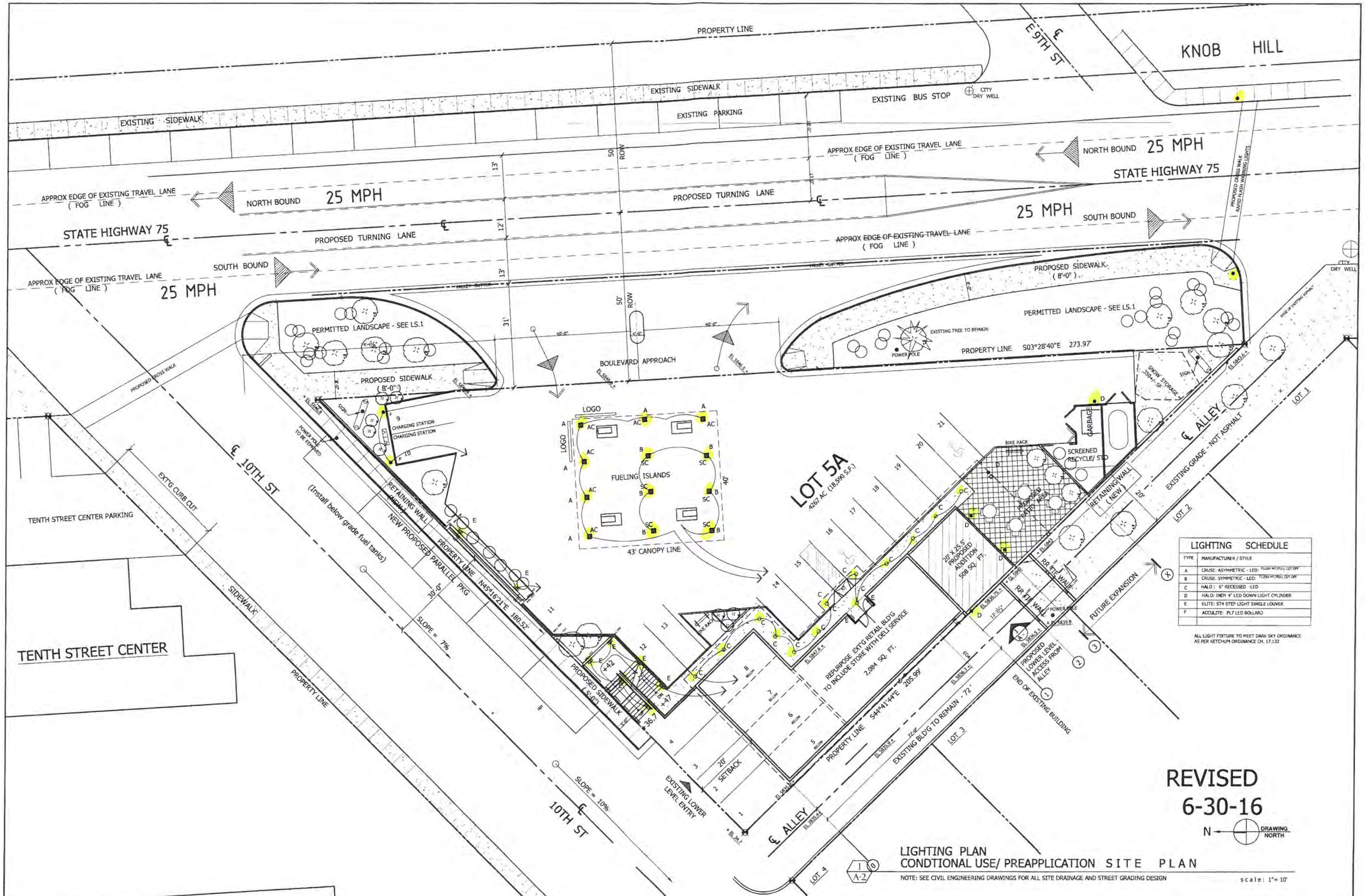
Date: 07.01.2016
Drawn By: TB
Checked By: CG
File: Filename

Sheet No.
L1.0



2 PROPOSED NORTH ELEVATION - 10th STREET VIEW

scale: 1/8"= 1'-0"



PROPERTY LINE
E 9TH ST
KNOB HILL
EXISTING SIDEWALK
EXISTING BUS STOP
CITY DRY WELL
EXISTING PARKING
APPROX EDGE OF EXISTING TRAVEL LANE (FOG LINE)
NORTH BOUND 25 MPH
STATE HIGHWAY 75
PROPOSED TURNING LANE
25 MPH SOUTH BOUND
PROPOSED SIDEWALK (8'-0")
PERMITTED LANDSCAPE - SEE LS.1
EXISTING TREE TO REMAIN
PROPERTY LINE S03°28'40"E 273.97'
BOULEVARD APPROACH
LOGO
FUELING ISLANDS
43' CANOPY LINE
CHARGING STATION
LOT 5A
.4267 AC (18,590 S.F.)
GARBAGE
SCREENED RECYCLE/ STO
BIKE RACK
ALLEY
EXISTING GRADE - NOT ASPHALT
LOT 1
LOT 2
LOT 3
LOT 4
RETAINING WALL (NEW)
FUTURE EXPANSION
PROPOSED ADDITION 508 SQ. FT.
REPURPOSE EXTG RETAIL BLDG TO INCLUDE STORE WITH DELI SERVICE 2,084 SQ. FT.
PROPERTY LINE S44°41'44"E 205.99'
EXISTING BLDG TO REMAIN - 72'
END OF EXISTING BUILDING
PROPOSED LOWER LEVEL ACCESS FROM ALLEY
20' SETBACK
EXISTING LOWER LEVEL ENTRY
PROPOSED SIDEWALK (5'-0")
RETAINING WALL
NEW PROPOSED PARALLEL PKG
PROPERTY LINE N45°16'21"E 180.52'
10TH ST
(Install below grade fuel tanks)
EXT'G CURB CUT
SLOPE = 7%
SLOPE = 10%
SIDEWALK
PROPERTY LINE
TENTH STREET CENTER PARKING
TENTH STREET CENTER
PROPOSED CROSS WALK
POWER POLE TO BE REMOVED
REVISED 6-30-16
DRAWING NORTH

LIGHTING SCHEDULE	
TYPE	MANUFACTURER / STYLE
A	CRUSE: ASYMMETRIC - LED: FLUSH MT/FULL CUT OFF
B	CRUSE: SYMMETRIC - LED: FLUSH MT/FULL CUT OFF
C	HALO : 6" RECESSED -LED
D	HALO: INDY 4" LED DOWN LIGHT CYLINDER
E	ELITE: ST4 STEP LIGHT SINGLE LOUVER
F	ACCULITE: PL7 LED BOLLARD

ALL LIGHT FIXTURE TO MEET DARK SKY ORDINANCE AS PER KETCHUM ORDINANCE CH. 17.132

1 / A-2

LIGHTING PLAN
CONDTIONAL USE/ PREAPPLICATION SITE PLAN

NOTE: SEE CIVIL ENGINEERING DRAWINGS FOR ALL SITE DRAINAGE AND STREET GRADING DESIGN

scale: 1"= 10'

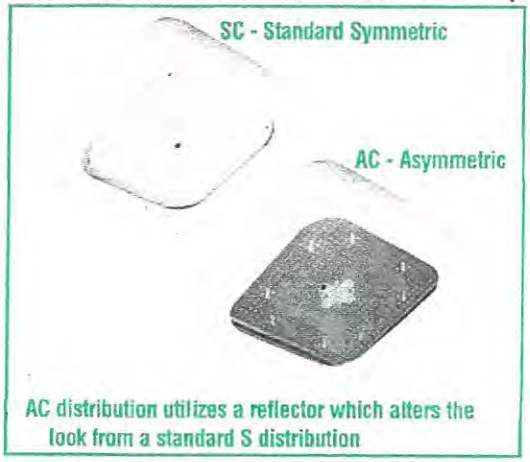
GENERAL CONTRACTOR AND ALL SUBCONTRACTORS TO ASSURE ALL WORK CONFORMS TO NATIONAL, STATE, AND LOCAL CODES THAT APPLY TO THIS PROJECT. WHEN INCONSISTENCIES EXIST BETWEEN DRAWINGS OR SPECS. AND APPLICABLE CODE REQUIREMENTS, CONFORMANCE TO ALL CODES SHALL HAVE PRECEDENCE OVER DRAWINGS AND SPECS.

STEVE R. COOK, ARCHITECT
323 SOUTH LEWIS ST. SUITE H, P.O. BOX 680, KETCHUM ID, 83340
MEMBER AMERICAN INSTITUTE OF ARCHITECTS

PRELIMINARY DESIGN PHASE - LOT 5A BLK 30
LOT 5A / BLK 30 / ZONE LI - I
KETCHUM, ID

REVISION RECORD	DRAWING NAME	DATE OF ISSUE	PLOT DATE
NO. DATE BY	LIGHTING PLAN	SCALE: 1"=10'	6/23/16
			SHEET NO. L .1

LED CANOPY LIGHT - LEGACY™ (CRUS)



AC distribution utilizes a reflector which alters the look from a standard S distribution

DOE LIGHTING FACTS

Department of Energy has verified representative product test data and results in accordance with its Lighting Facts Program. Visit www.lightingfacts.com for specific catalog strings.

US & Int'l. patents pending.

HOUSING - Low profile, durable die-cast, aluminum construction, providing a reliable weather-tight seal.

LEDS - Features an array of select, mid-power, high brightness, high efficiency LED chips; 5000K color temperature, 70 CRI (nominal).

DRIVE CURRENT - Choice of Very Low Wattage (VLW), Low Wattage (LW), Super Saver (SS), High Output (HO) or Very High Output (VHO).

OPTICS / DISTRIBUTION - Choice of Symmetrical or Asymmetrical, which directs light through a clear tempered glass lens, to provide a uniform distribution of light to vertical and horizontal surfaces.

OPTICAL UNIT - Features an ultra-slim 7/8" profile die-cast housing, with a flat glass lens. Unit is water-resistant, sealed to an IP67 rating. Integral designed heat sink does not trap dirt and grime, ensuring cool running performance over the life of the fixture.

PRESSURE STABILIZING VENT - Luminaire assembly incorporates a pressure stabilizing vent breather to prevent seal fatigue and failure.

HAZARDOUS LOCATION - Designed for lighter than air fuel applications. Product is suitable for Class 1 Division 2 only when properly installed per LSI installation instructions (consult factory).

DRIVER - State-of-the-art driver technology superior energy efficiency and optimum light output. Driver components are fully encased in potting for moisture resistance. Complies with IEC and FCC standards. 0-10 V dimming supplied standard with all drive currents.

DRIVER HOUSING - Die-cast aluminum, wet location rated driver/electrical enclosure is elevated above canopy deck to prevent water entry, provide easy "knock-out" connection of primary wiring and contributes to attaining the lowest operating temperatures available. Seals to optical housing via one-piece molded silicone gasket.

OPERATING TEMPERATURE - -40°C to 50°C (-40°F to +122°F)

ELECTRICAL - Universal voltage power supply, 120-277 VAC, 50/60 HZ input. Drivers feature two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Scenario 1, Location Category C.

FINISH - Standard color is white and is finished with LSI's DuraGrip® polyester powder coat process. DuraGrip withstands extreme weather changes without cracking or peeling.

INSTALLATION - One person installation. No additional sealant required. Installs in a 12" or 16" deck pan. Deck penetration consists of a 4" hole, simplifying installation and water sealing. Unit is designed to quickly retrofit into existing Scottsdale (4") hole as well as openings for Encore and Encore Top Access and to reconnect wiring for the SC/ECTA without having to relocate the conduit. Retro'panels are available for existing Encores (see back page) as well as kits for recessed and 2x2 installations (see separate spec sheets). Support brackets are provided standard, to prevent sagging of deck.

SHIPPING WEIGHT - 27 pounds (single pack), 48 pounds (double pack).

EXPECTED LIFE - Minimum 60,000 to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

WARRANTY - Limited 5-year warranty.

LISTING - UL and ETL listed to UL 1598, UL 8750 and other U.S. and International safety standards. Suitable for wet locations.

PHOTOMETRICS - Please visit our web site at **www.lsi-industries.com** for detailed photometric data.

Consult Factory

Class 1, Division 2 – Standard on SS & LW.

T5 Temperature Classification – The surface temperature of this product will not rise above 100°C., within a 40°C ambient.

Gas Groups A,B,C, and D – Group A: Acetylene / Group B: Hydrogen / Group C: Propane and Ethylene / Group D: Benzene, Butane, Methane & Propane.

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.

RoHS COMPLIANT · ETL Intertek wet location · IP67 · CE · cULus LISTED wet location · DLC

Project Name _____ Fixture Type _____

Catalog # _____

04/29/16

A B

LED CANOPY LIGHT - LEGACY™ (CRUS)

LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **CRUS SC LED HO 50 UE WHT**

Prefix	Distribution[1]	Light Source	Drive Current	Color Temperature	Input Voltage	Finish	Options
CRUS	SC - Standard Symmetric AC - Aymmetric	LED	VLW - Very Low Watt LW - Low Watt SS - Super Saver HO - High Output VHO - Very High Output	50 - 5000K	UE - Universal Voltage (120-277V) 347 - 480V	WHT - White BRZ - Bronze BLK - Black	None

FOOTNOTES:
1- AC distribution utilizes a reflector which alters the look from a standard S distribution.

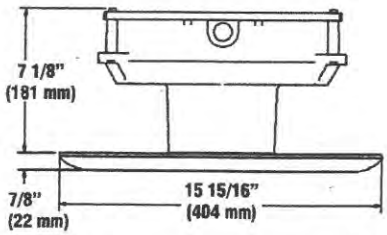
ACCESSORY ORDERING INFORMATION (Accessories are field installed)

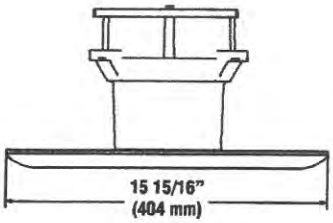
Description	Order Number
Retrofit Panels - EC / ECTA / SCF to CRU, for 16" Deck Panel	525946
Retrofit Panels - ECTA / SCF to CRU, for 12" Deck Panel	530281
Retrofit 2x2 Cover Panel Blank (no holes)	357282
Retrofit RIC Cover Panel Blank (no holes)	354702

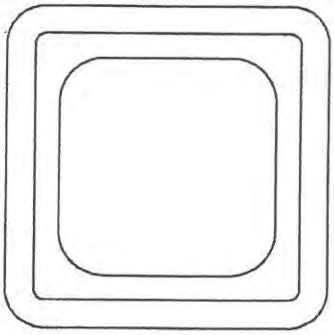
Description	Order Number
Kit - Hole Plugs and Silicone (enough for 25 retrofits)[1]	1320540

1- Consists of (25) 7/8" hole plugs and (1) 10.3 oz tube of RTV

DIMENSIONS







LIGHT OUTPUT - CRUS

		Lumens		Watts		LPW	
		SC	AC	SC	AC	SC	AC
Cool White	VLW - Very Low Watt	8842	–	79	–	112	–
	LW - Low Watt	10871	8746	88	83	124	105
	SS - Super Saver	13554	11518	114	111	119	104
	HO - High Output	18633	–	132	–	141	–
	VHO - Very High Output	22418	17262	159	157	141	110

Your Search For: 353TBZ

Only show: Bundle Items

Sort by: Relevance

BUNDLE ITEM

$21.99 /each
As low as: $21.11

Halo 353TBZ
Halo Recessed Lighting Trim, 6" Line Voltage Baffle Trim - Tuscan Bronze

Halo H7ICT 6" Recessed Lighting Can, AIRTITE Housing for New Construction

BRAND: HALO MODEL: H7ICT CONDITION: NEW WARRANTY: 1 YEAR SKU: 166218 CLEARANCE ITEM!

STATUS: IN STOCK

Regular Price: ~~$11.99~~

On Sale: **$9.15** + FREE Shipping! on qualified orders

Ships Same Day!
(Orders placed Mon-Fri before 1pm PST)
+ add your ZIP for shipping promos

− 1 + Add to Cart SAVE TO LIST

Get 10% Cashback in Westside Dollars

HALO View All Halo Recessed Lighting

Promo: 10% Off recessed cans when you buy at least 10 Lutron Li... ...mers

Feedback

Description
Features
Specifications
Warranty
Customer Reviews
Questions & Answers

Description

The **Halo H7ICT** is a 6" insulated recessess housing capable of beuing installed againat ceiling insulation. Its self regulating thermal protector deactives the light should overheating occur. Many homeowners who are looking to retrofit their homes with new accent lighting often run into challenges when installing new fixtures: insulation in their ceilings that results in a potential fire hazard when exposed to a light fixture's excess heat.

The Halo H7ICT remedies this problem by utilizing Halo's integral thermal protector technology. The Halo H7ICT is also easy to install no matter where you're going to use it. The wiring connections cab be made outside the junction box. Automatic flange leveling aligns the housing allowing one to hold the housing in one hand while simultaneously drive in nails with your otehr hand. Its a snap.

Allows wiring connections to be made outside thejunction box. It features simple captive bar hangers, which enable the housing to be used anywhere within the full 24" joist span. The socket also fastens tightly into the unit's trim for proper lamp positioning.

Perfect for any home's established décor, this unit is offered in a variety of colors, including black, bronze, copper, white and brushed nickel. The Halo H7ICT is also UL listed and CSA certified, making it one of the most popular choices for modern homes.

Use with 6" Lighting Recessed Trims

- Black
- Bronze
- Brushed Nickel
- Copper
- White

Features

- Thermally Protected IC Housing
- Housing may be covered with insulation
- For use with 120V Incandescent lamps

Specifications

- 10 1/2" Long
- 7 1/2" Wide
- 7 1/2" Tall

Warranty
One (1) year through the manufacturer

Customer Reviews
There are no reviews for this product yet. Be the first to review the product!

Write Your Own Review:

Nickname*

Summary of Your Review*

Review Text*

1 star 2 stars 3 stars 4 stars 5 stars
Quality
Price
Value

Indy 4in LC4B Series, LED, Wall Mount Cylinder

FINISHES / TYPES

Black Silver White

LINE ART

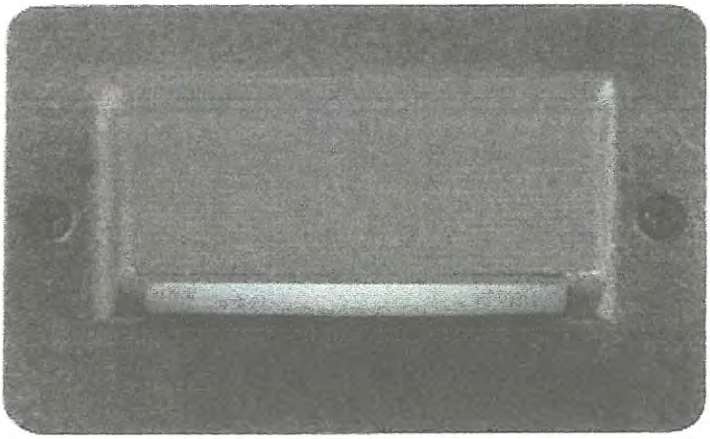
Indy™ 4-inch L-Series LED Cylinders are part of the latest generation of Indy L-Series luminaires, offering a fully coordinated family of commercial-grade quality luminaires, from LED color rendering to aperture sizes and trim finishes. These cylinders can be surface, cable, pendant, or wall-mounted. They are the energy-efficient choice for a wide range of commercial applications. Efficacies up to 111lm/W.

- Compact light source delivers uniform illumination without pixilation, enabling excellent beam control. Light levels range from 800 to 2,300 lumens
- LEDs are energy-efficient and offer exceptionally long service life
- Available in CCT's of 2700K, 3000K, 3500K and 4000K, high CRI of 80 lm/w. Optional 90 CRI and 97 CRI availble
- Lumen packages suitable for ceiling heights ranging from 8' to over 35'
- L-Series Cylinder fixtures offer hyperbolic, parabolic, baffle or wall wash reflectors and multiple trim color and finish options
- One piece heavy gauge aluminum with white, black or silver backed textured powder coat finish
- Passive Cooling; cast aluminum heat sink integrated directly with housing provides superior thermal management to ensure the long life of the LED
- LEDs contain no environmentally harmful mercury, lead, or PCBs and generate no UV or IR emissions
- LED driver accommodates 120V, 277V, or 347V inputs with 0-10V dimming standard; also available with DMX, DALI, phase cut, forward and reverse phase and Lutron drivers for use with EcoSystem®
- U/CSA Listed; RoHS compliant; ARRA compliant; ENERGY STAR® qualified

- Products
- >
- LED Step Light
- >
- ST4 Series
- >
- ST403

ST403

ST4 Series Single Louver Face Plate



Housing only:

- Specs
- Catalog

Features | Technical | Colors | Housing

Application
For concrete use only
Body
High grade die-cast aluminum with 0.3% Copper to prevent corrosion in concrete applications.
Supplied standard with four 3/4? NPS holes.
Face Plate
High-grade die-cast aluminum
Gasket
Single piece molded silicon for wet location
Lens
Frosted tempered glass
External Louver
Anodized 45" cut-off louver
Reflector
High performance aluminum reflector assembly for superb light output
Listing
UL/cUL for wet locations

AccuLite PL7 Series, LED, Parklume Bollards

View Larger

FINISHES / TYPES

Black Bronze White

LINE ART

energy Solutions

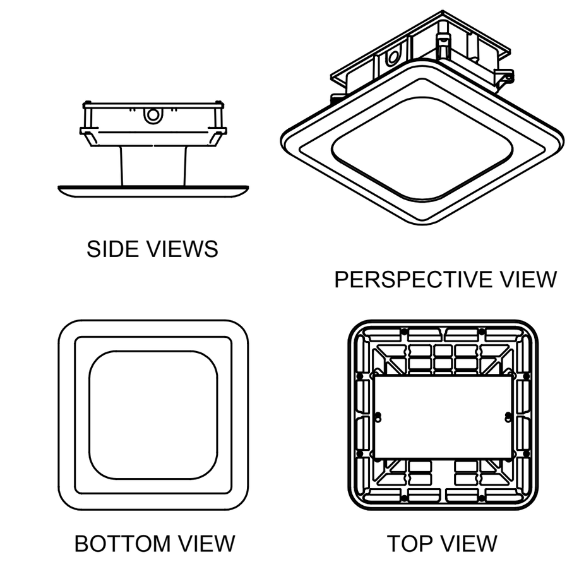
LED

Pin it Tweet

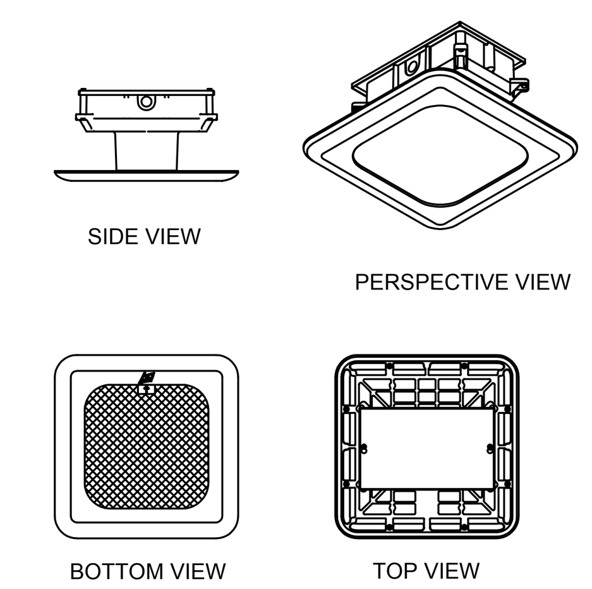
AccuLite™ Parklume area lighting bollards provide effective, energy-efficient pathway lighting in a variety of attractive styles. PL7- LED Series bollards offer a clean, contemporary look with a slim 7-inch diameter that blends easily with the landscape. LED version provides up to 1,000 lumens from just 25W input, while other efficient alternatives include HID and CFL light sources. All bollards feature vandal-resistant polycarbonate lenses and durable powder coat finishes.

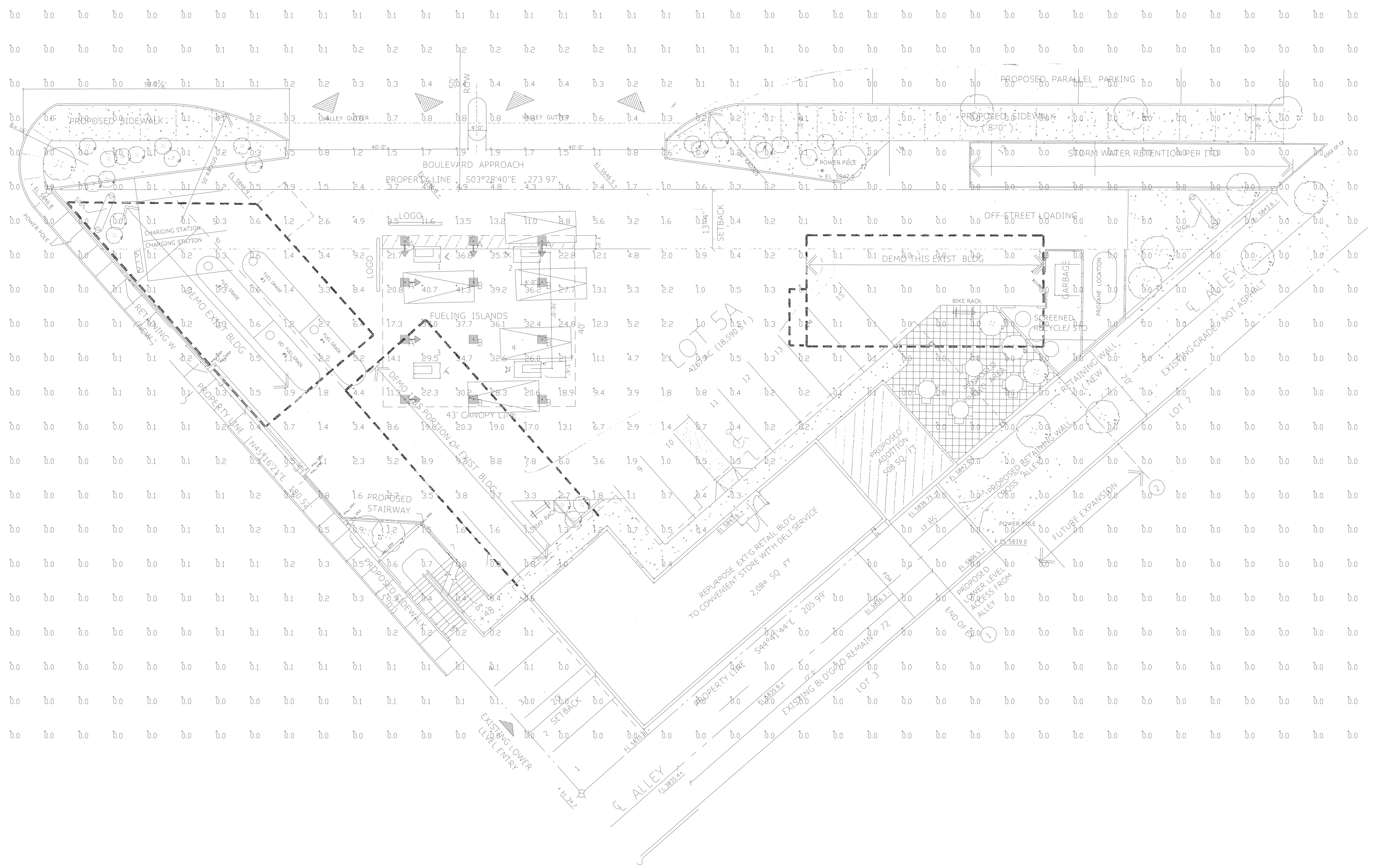
- LEDs feature a top reflector that collects light and a lower cone that spreads it to the surroundings; anodized reflectors smooth light for uniform distribution
- LEDs have an aluminum heat sink that reduces heat and helps assure rated service life of 50,000 hours; universal 120-277VAC LED driver, 60Hz input
- 7-inch diameter housings feature rugged extruded-aluminum construction with cast-aluminum top and base plate
- 160-degree house-side shield is optional
- 15W or 25W LED light source; other models accept HID or CFL lamps of various types and wattages
- UL/CSA Listed; suitable for wet locations

CRUS-SC-LED
LED CANOPY LIGHT - LEGACY



CRUS-AC-LED
LED CANOPY LIGHT - LEGACY





Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Description	LLF	Lumens/Lamp	Arr. Lum. Lumens	Arr. Watts
	6	A	SINGLE	CRUS-AC-LED-LW-CW DIMMED 15% MTD @ 15'	0.850	N.A.	8746	82.9
	6	B	SINGLE	CRUS-SC-LED-VLW-CW DIMMED 15% MTD @ 15'	0.850	N.A.	8842	78.7

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
ALL CALC POINTS	Illuminance	Fc	1.62	41.3	0.0	N.A.	N.A.
CANOPY	Illuminance	Fc	28.51	41.3	11.3	2.52	3.65

Based on the information provided, all dimensions and luminaire locations shown represent recommended positions. The engineer and/or architect must determine the applicability of the layout to existing or future field conditions.

This lighting plan represents illumination levels calculated from laboratory data taken under controlled conditions in accordance with The Illuminating Engineering Society (IES) approved methods. Actual performance of any manufacturer's luminaires may vary due to changes in electrical voltage, tolerance in lamps/LED's and other variable field conditions. Calculations do not include obstructions such as buildings, curbs, landscaping, or any other architectural elements unless noted.

Total Project Watts
Total Watts = 969.6

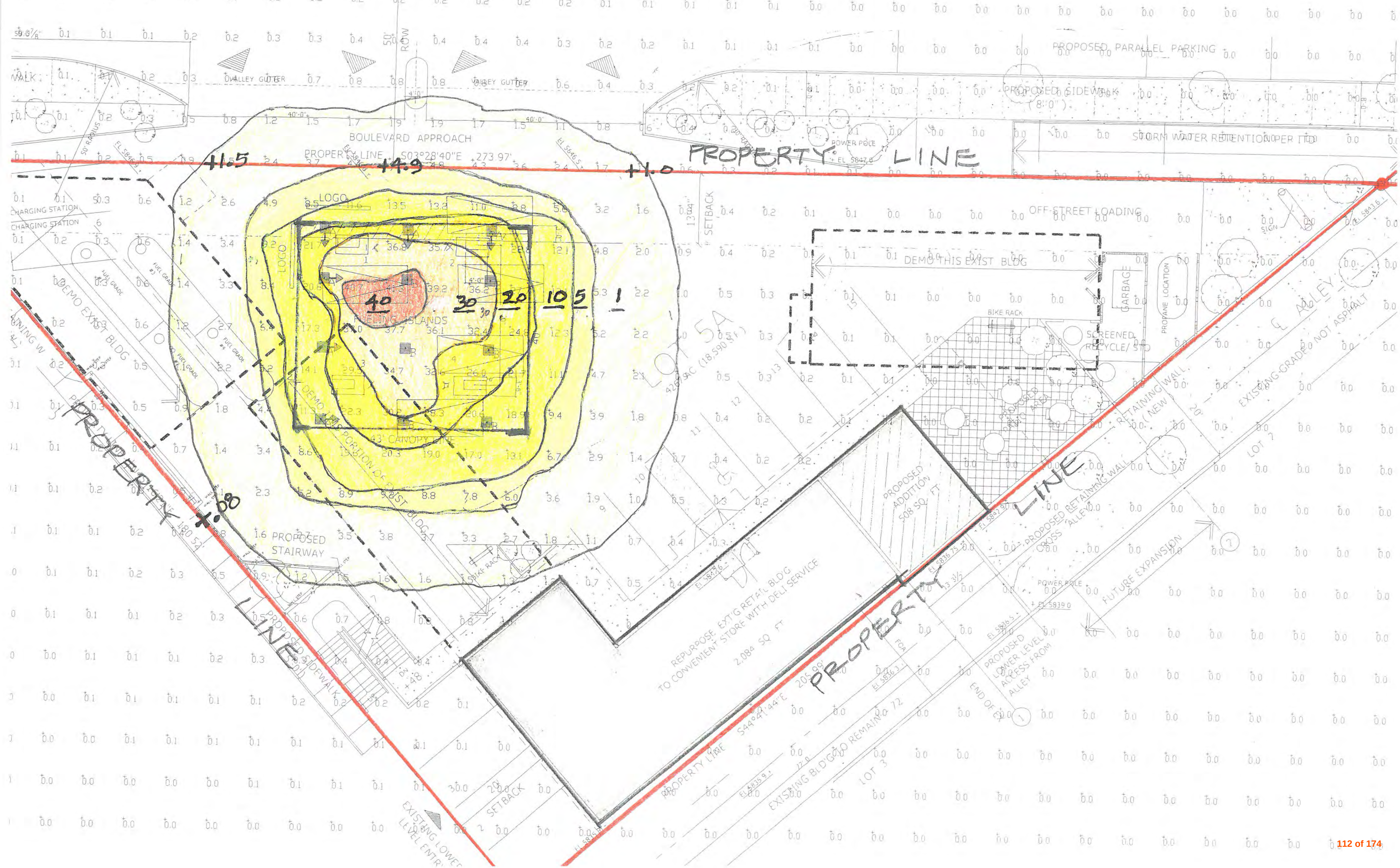
10000 ALLIANCE RD. CINCINNATI, OHIO 45242 USA
(513) 793-3200 • FAX (513) 793-6023

LIGHTING PROPOSAL LO-133509-2

43 X 40 CANOPY
STATE HWY 75
KETCHUM,ID

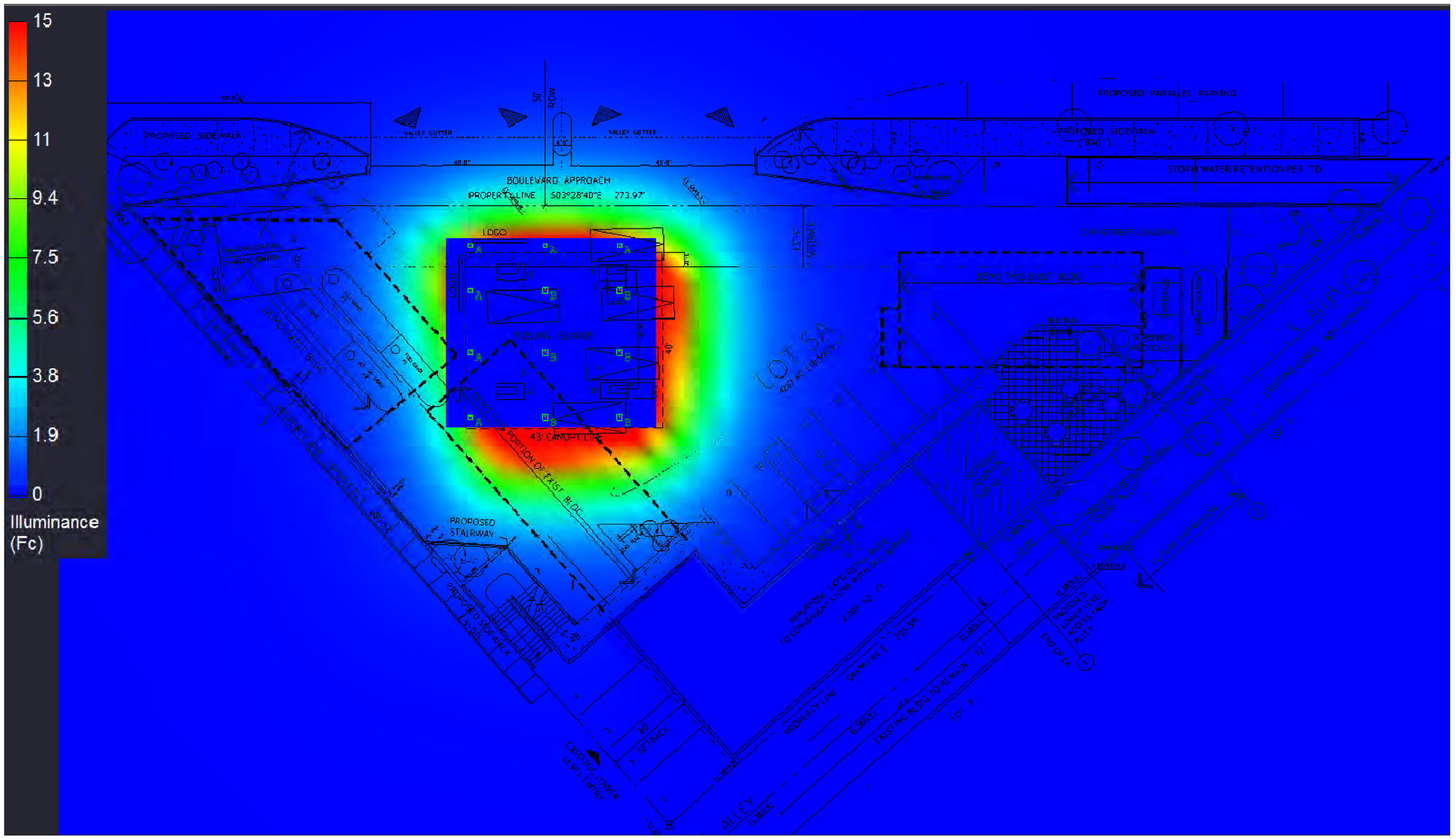
BY:MWE | DATE:6-20-16 | REV:6-30-16 | SHEET 1 OF 1

SCALE: 1"=16' 0 16



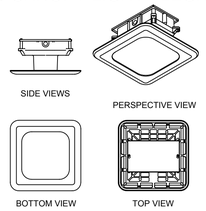
PROPOSED PARALLEL PARKING
VALLEY GUTTER
PROPOSED SIDEWALK (8'-0")
STORM WATER RETENTION PER ITD
BOULEVARD APPROACH
PROPERTY LINE S03°28'40"E 273.97'
PROPERTY LINE
+1.5
+4.9
+1.0
+.08
POWER POLE
EL 5847.0
50' ROW
50' RADIUS
SETBACK
OFF-STREET LOADING
SIGN
CHARGING STATION
CHARGING STATION
DEMO EXIST BLDG
FUEL GRADE
LOGO
LOGO
FUELING ISLANDS
43' CANOPY LINE
DEMO THIS PORTION OF EXIST BLDG
40
30
20
10
5
1
DEMO THIS EXIST BLDG
GARBAGE
PROPANE LOCATION
BIKE RACK
SCREENED RECYCLE/ STO
PROPOSED PATIO AREA
ALLEY
EXISTING GRADE NOT ASPHALT
RETAINING WALL (NEW)
LOT 2
LOT 5A
PROPOSED STAIRWAY
PROPOSED SIDEWALK
REPURPOSE EXT'G RETAIL BLD'G TO CONVENIENT STORE WITH DELI SERVICE
2,084 SQ FT
PROPOSED ADDITION 508 SQ FT
PROPOSED RETAINING WALL
CROSS ALLEY
FUTURE EXPANSION
POWER POLE
EL 5839.0
PROPOSED LOWER LEVEL ACCESS FROM ALLEY
END OF EX
S44°41'44"E 205.99'
EXISTING BLD'G TO REMAIN
LOT 3
SETBACK
EXISTING LOWER LEVEL ENTRY

LSI Industries™
American Innovation Through Technology
A SmartVision® for the Future
PROGRESSIVE REFINEMENT RADIOSITY SOLUTION

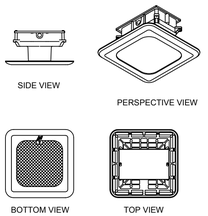


PSEUDO COLOR RADIOSITY - TOP VIEW - 15 FC SCALE

CRUS-SC-LED
LED CANOPY LIGHT - LEGACY



CRUS-AC-LED
LED CANOPY LIGHT - LEGACY



Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Description	LLF	Lumens/Lamp	Arr. Lum. Lumens	Arr. Watts
	6	A	SINGLE	CRUS-AC-LED-LW-CW DIMMED 15% MTD @ 15'	0.850	N.A.	8746	82.9
	6	B	SINGLE	CRUS-SC-LED-VLW-CW DIMMED 15% MTD @ 15'	0.850	N.A.	8842	78.7

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
ALL CALC POINTS	Illuminance	Fc	1.62	41.3	0.0	N.A.	N.A.
CANOPY	Illuminance	Fc	28.51	41.3	11.3	2.52	3.65

Total Project Watts
Total Watts = 969.6

Based on the information provided, all dimensions and luminaire locations shown represent recommended positions. The engineer and/or architect must determine the applicability of the layout to existing or future field conditions.

This lighting plan represents illumination levels calculated from laboratory data taken under controlled conditions in accordance with The Illuminating Engineering Society (IES) approved methods. Actual performance of any manufacturer's luminaires may vary due to changes in electrical voltage, tolerance in lamps/LED's and other variable field conditions. Calculations do not include obstructions such as buildings, curbs, landscaping, or any other architectural elements unless noted.

10000 ALLIANCE RD. CINCINNATI, OHIO 45242 USA
(513) 793-3200 • FAX (513) 793-6023

LIGHTING PROPOSAL LD-133509-2

43 X 40 CANOPY RADIOSITY
STATE HWY 75
KETCHUM,ID

BY:MWE | DATE:6-20-16 | REV:6-30-16 | SHEET 1 OF 1

SCALE: 1'=16' 0 16

MEMORANDUM

125 West Main Street
Bozeman, MT 59715
(406) 624-6117
www.altaplanning.com

To: Roy Bracken
North Town Partners Lot 5A Ketchum Idaho

From: Joe Gilpin, Principal

Date: June 29, 2016

Re: Motor Fueling Station Pedestrian Analysis

Introduction

This preliminary analysis of pedestrian access at the proposed Motor Fueling Station summarizes the site, pedestrian issues and design recommendations for the site as well as an approximately 3-block area study area.

To the Station Context and Recommendations

Located at the intersection of 10th Street and North Main Street, there are three major pedestrian catchment areas associated with the motor fueling station (illustrated in Figure 1). Pedestrians from these catchment areas will primarily access the site via North Main Street and 10th Street. Major pedestrian crossing points will include the intersections of:

- North Main Street and 9th Street
- North Main Street and 10th Street

Figure 1 illustrates catchment areas and major pedestrian access routes to the motor fueling station. The catchment areas and specific pedestrian issues and design recommendations areas are described below.

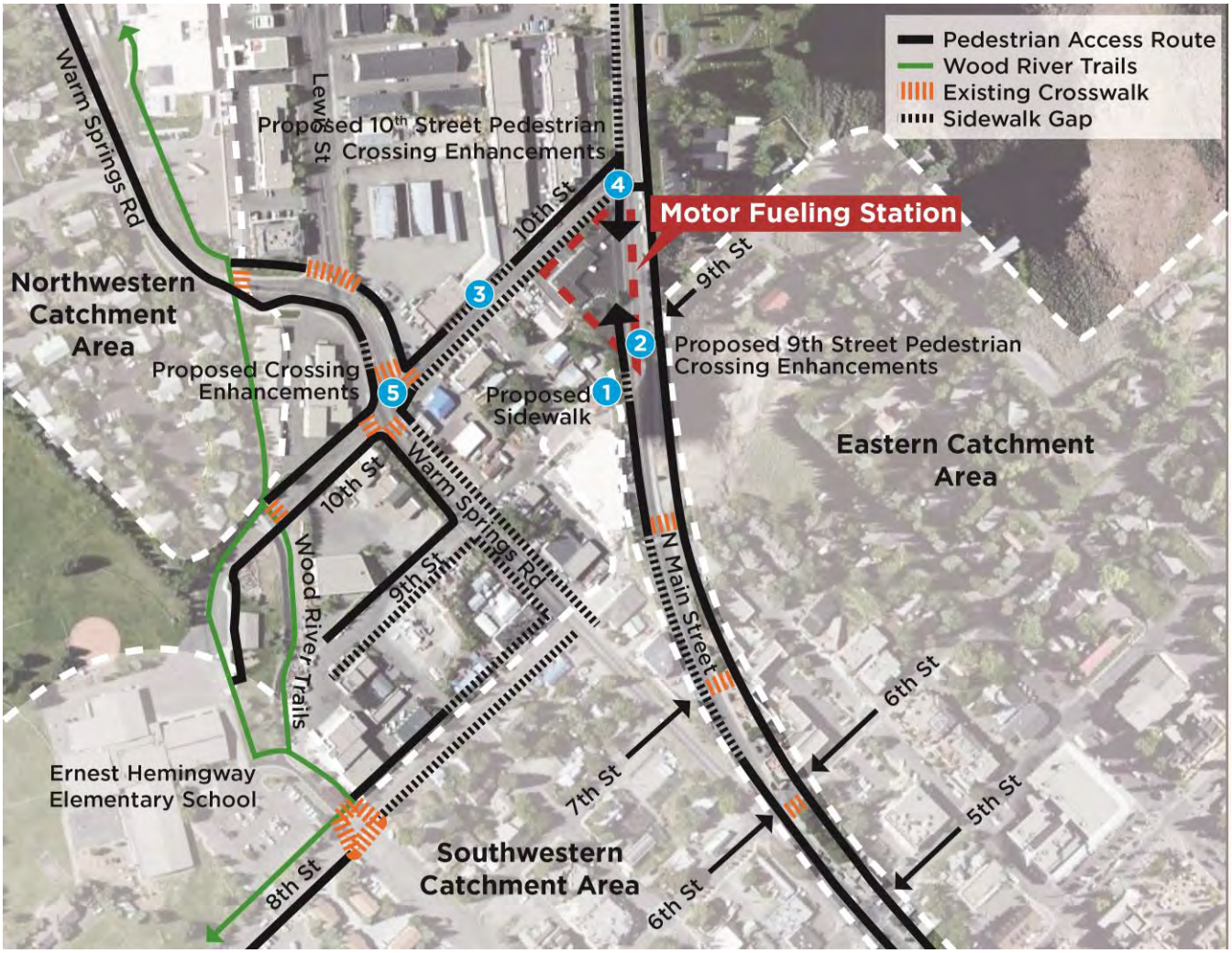


Figure 1: Pedestrian Catchment Areas and Circulation

Eastern Catchment Area Context and Recommendations

The eastern catchment area is comprised of a residential area and commercial district along North Main Street (State Highway 75). Pedestrians are likely to travel to the site along the eastern side of North Main Street and cross to the site at 9th Street. The sidewalk along the eastern side of North Main Street provides a connection from perpendicular streets to the site, with less g aps and driveway crossing than the western sidewalk. To address the existing gap in pedestrian facilities, a 5' concrete sidewalk (1) is proposed to connect pedestrians from Shum's Frenchman Place Condo to the motor fueling station.

A rectangular rapid flashing beacon (2), crosswalk and dedicated pedestrian ramps are proposed at the 9th Street crossing. The rectangular rapid flashing beacon (RRFB) would establish a high-visibility strobe-like warning to drivers when pedestrians are using the crosswalk, increasing motorist yielding compliance and pedestrian safety.

Southwestern Catchment Area Context and Recommendations

The southwestern catchment area is comprised of a residential area, commercial district along North Main Street, and the Ernest Hemingway Elementary School. Pedestrians are likely to travel to the motor fueling station along the western side of North Main Street or 10th Street. Driveways and parking along the length of 10th Street create large gaps in pedestrian facilities on both the north and south side of 10th Street. While the potential for pedestrian and vehicle conflicts are high along both sides of 10th, the north side is more desirable for pedestrian travel as only one large gap in sidewalk exists. There is no existing sidewalk on the south side of 10th, additionally the street is served with long banks of parallel parking, however there are two significant frontages where front-in perpendicular parking is present on both sides of the street. This is the least compatible parking type with pedestrians as the driver does not have any view of street conditions behind before backing up.

Options for clearly defining a pedestrian zone through this gap (3) are recommended. Converting the pull-in parking to angle parking bays would create space to establish a sidewalk between the business front and parking. If existing parking through this area prohibits a dedicated sidewalk facilities signage, changes in pavement material or color could help to define and increase visibility of pedestrian through this area.

Pedestrian crosswalks are recommended at the intersection of North Main Street and 10th Street (4) and Warm Springs Road and 10th Street (5). A RRFB should also be considered to increase pedestrian safety.

Northwestern Catchment Area Context and Recommendations

The northwestern catchment area is comprised of a residential area connected to the southwestern catchment area and motor fueling station via the Wood River Trail and existing sidewalks. Traveling along the trail or sidewalks, pedestrians are likely to travel to the motor fueling station along 10th Street.

Sidewalk and crossing improvement enhancements reflect recommendations along 10th Street outlined for the Southwestern Catchment Area.

Major Pedestrian Access Routes

Pull-in parking exists along many of the major pedestrian access routes and creates gaps in connectivity. While establishing continuous pedestrian facilities along these routes is outside of the scope of the Motor Fueling Station project, future initiatives should engage property and business owners to discuss converting pull-in spaces to angled parking bays. This would create space for the establishment of clear pedestrian zones between the angled parking and front of business, enhancing building fronts and connections to the surrounding area.

Another strategy for establishing continuous pedestrian facilities could include narrowing travel lanes and/or replacing pull-in parking with parallel parking. This would also allow for the establishment buffer area between the sidewalk and travel lanes, enhancing pedestrian comfort. The buffer area could be landscaped and act as snow storage in the winter. This strategy would result in significant loss of parking.

Motor Fueling Station Issues and Recommendations

Proposed plans (figure 2) for the Motor Fueling Station include pedestrian connections to and through the site. Existing proposals illustrate crosswalks across 10th Street and North Main Street, as described in previous catchment area recommendations. Proposed improvements also include ADA ramps at crosswalk sites and a sidewalk along North Main Street. A pedestrian crossing (1) should be considered south of the site in a location that it can be straight and moved away from the lane taper. A second pedestrian crossing should be considered in the illustrated location (2) unless moving to the north where the roadway is narrower could align with Knob Hill Inn Access. The northern crossing location would also require a pedestrian landing/sidewalk area.

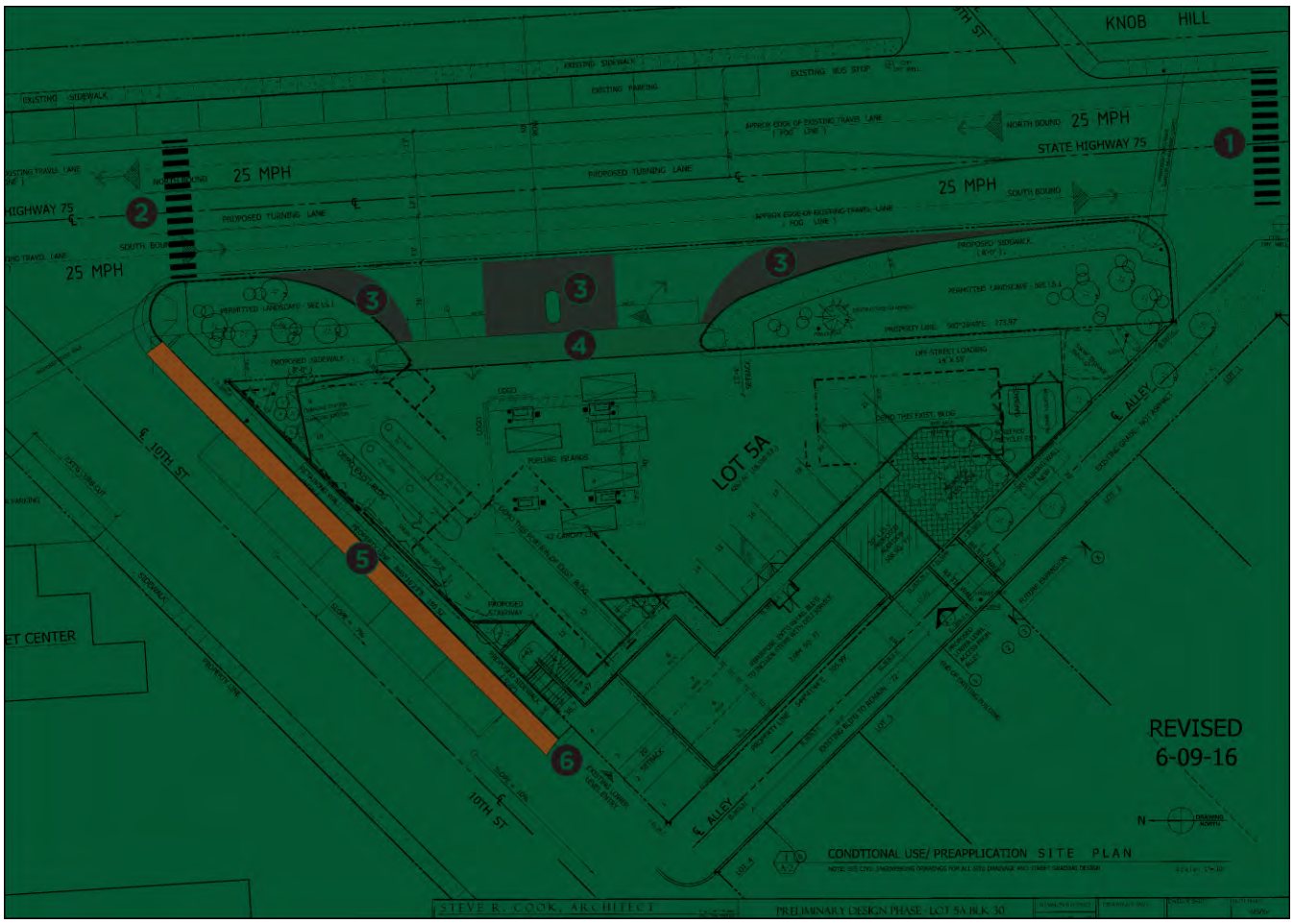


Figure 2: Proposed Site Plan

Pedestrian access to the site could be further enhanced by more clearly defining the pedestrian zone across the vehicle entrance through changes in the hardscape. One strategy is to better define the path for the most common vehicle to access the gas station (the passenger vehicle), while still allowing for the larger fueling trucks and other users to negotiate the entrance. The pictures below (figure 3) illustrate how the visibility of a pedestrian zone is enhanced through the use of colored/stamped pavement. Similar to the treatment below, the combination of rolled curbs and colored/stamped pavement (3) would maintain the wide turning radii required for large vehicles to access the site while lessening the gap in a dedicated pedestrian zone. Colored pedestrian areas (4) would also provide heightened awareness of walkers through primary vehicle access areas.

Figure 3: Stamped/colored pavement with rolled curb

Reducing the eastbound travel lane to 12' would allow for the addition of a 5' landscape area (5). The landscape area would serve as a year-round buffer between pedestrian and vehicle travel and in the winter serve as snow storage. West of this area (6), engineering solutions should be explored to continue the sidewalk beyond the retaining wall.

Gmail by Google

Steve Cook <steve@stevecookarchitect.com>

Connector Sidewalk from Bracken Station to Frenchmans

Dave Jensen <Dave.Jensen@itd.idaho.gov> Mon, Jun 27, 2016 at 10:41 AM
To: Josh Gilder <josh@bma5b.com>
Cc: Steve Cook <steve@stevecookarchitect.com>, Sam Stahlnecker <sam@bma5b.com>

The sidewalk design connecting Bracken Station to businesses to the South has been approved by the ITD permit committee.

Thank you,

Dave Jensen TTS

Permit Coordinator

Idaho Transportation Department, D-4

216 South Date Street

Shoshone ID 83352 1521

208-886-7853 office

208-886-7895 fax

208-316-6449 cell

dave.jensen@itd.idaho.gov

From: Josh Gilder [mailto:josh@bma5b.com]
Sent: Monday, June 27, 2016 9:54 AM
To: Dave Jensen
Cc: Steve Cook; Sam Stahlnecker
Subject: Connector Sidewalk from Bracken Station to Frenchmans

[Quoted text hidden]

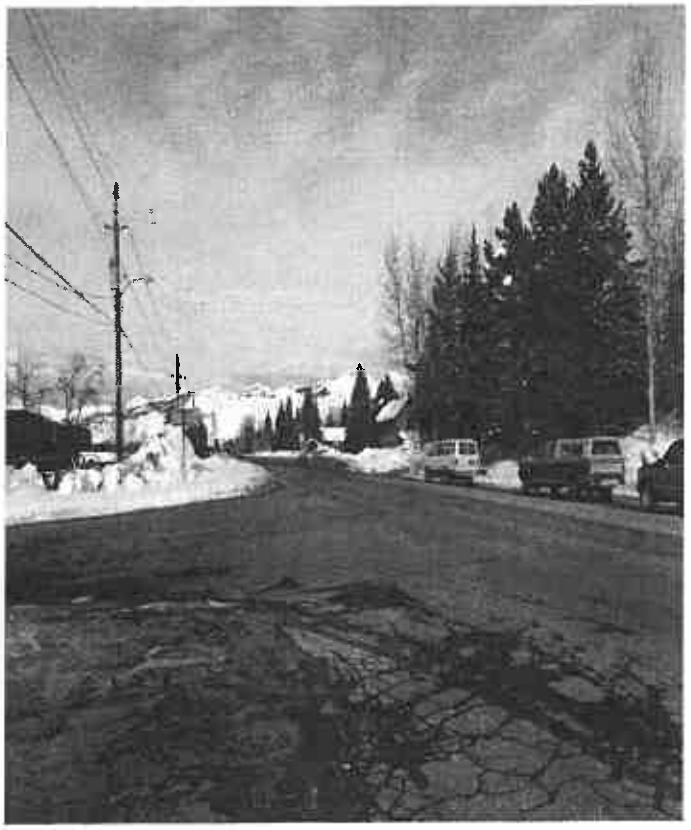
Retail S Analysis

- **Hwy 75 & 10th Street**
- **Sun Valley ID**
- **January 2016**
- **Scenario- Store with Gas**
- **GmapUSA**

GmapUSA
1023 Hartland Dr Lawrence KS 66049
703 919 2430

Retail S Analysis

- **Visibility and Access to Site**
- **Good Visibility - Open view on corner**
- **Good Access - Direct access to site from Hwy 75**



GmapUSA
1023 Hartland Dr Lawrence KS 66049
703 919 2430

Retail S Analysis

Investment Parameters

Site-type: Total New Site
Brand: Gas = Sinclair Store = Sun Valley Mart

The scope of this analysis will include the potential of a Gas and C-store site with front parking in Ketchum Idaho.

The analysis was based on a location that will offer 8 gas fueling positions. The store will be 2200 square foot with 7 front parking spots.

Data Field Review

This study is based on survey data collected for competitive retail sites within 1.00 miles of the focus site, which has no direct competition at this time.

A full site survey was completed for each of these sites. Additional demographic, and income data, as well as traffic count information, were utilized in the completion of the study.

Trade Area

The site is located at the corner of Highway 75 and 10th Street in Ketchum Idaho. It is an intersection that does not have a stoplight. The Site will have good visibility and will have good access due to wide open curb cuts and pace of traffic.

The layout with the new store and gas pumps should focus on traffic that travels on Hwy 75, which should continue to carry the main traffic flow past the site.

The population is around 3,200 people within 2.0 miles and the median age is about 47 years old. The population is somewhat lighter than ideal for this type of site location and the median age is a little high for ideal C-store customer base population. However the focus for this site is the winter and especially the summer tourists that pass through this town.

The traffic count for Hwy 75 is estimated to be about 12,000 cars a day.

There are major seasonal variations affecting this trade area.

Competitive Environment- Fuel and C-store

There is no real competition in the local trade area for this location. There are some locations off the main street but offer no real competition to the main traffic flow of this location. They are small format sites and the trade area is completely different that this location's in terms of potential customers.

So overall there is no real competition in the trade area, the opportunity exists to capture some good business at this location.

Site Layout Options

The Layout should focus on Hwy 75 and if possible the store should face the highway. The key for this site is to have a unique design and graphic package outside and inside the store. We would highly recommend using the design firm that has the ability to create a statement store for this area.

It is important that all retail options fit on the lot without interference to each other Convenience of use becomes a high priority when you are creating a new market area.

.

Business Projections

One of the keys for this site is to provide a good operation with a good offering that will bring in the commuter that passes by the intersection on a consistent basis. The store size is typically an important factor but in this area the offering and the access to the store are more important. However even more key will be the visibility and access to both the gas and store.

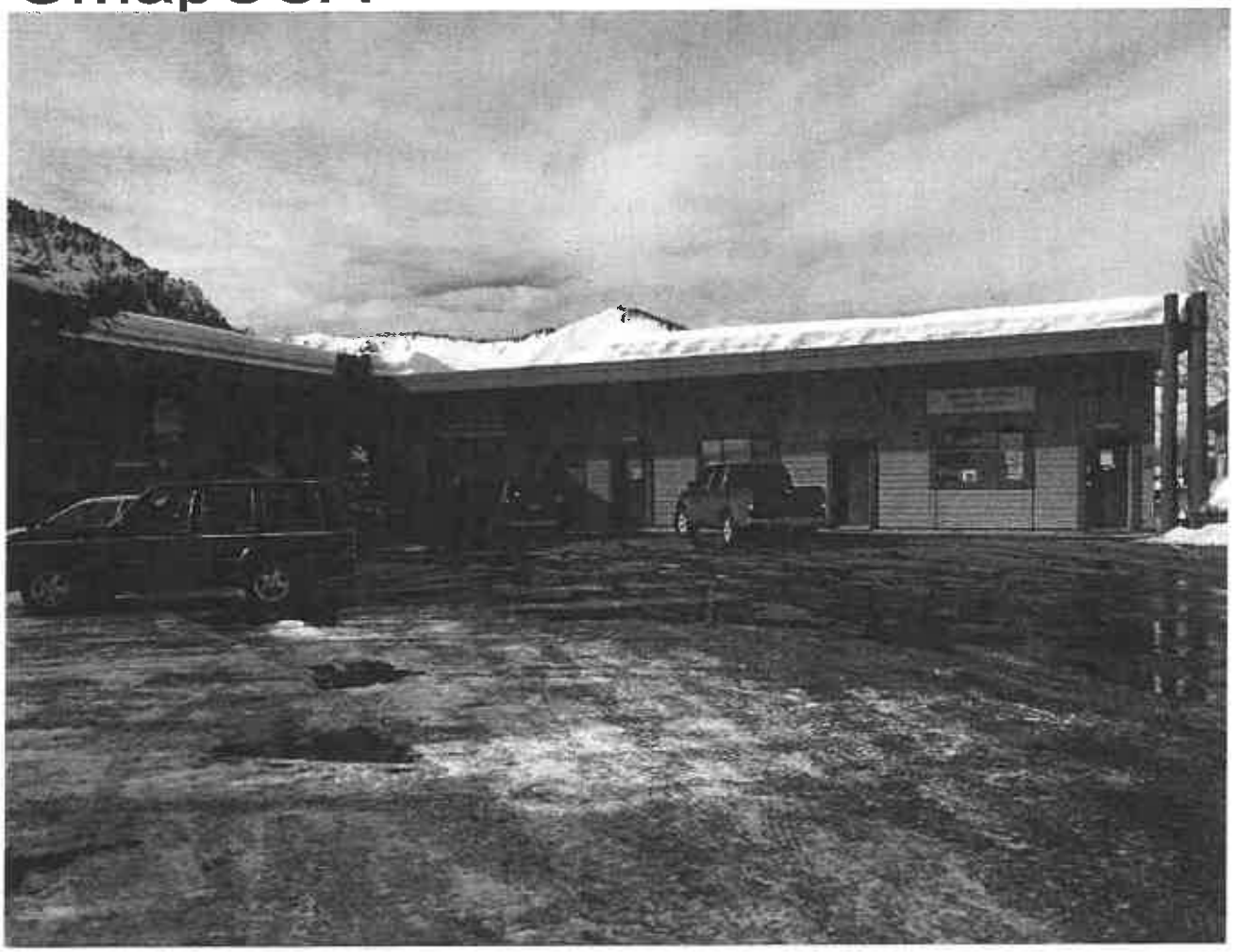
The focus on the merchandising should be having a quality offering that entices the commuter/tourist traffic that passes by the site on a regular basis. The site should have a large fountain and coffee offering to entice the commuters to use this site as their refreshment spot.

The site is on a key intersection in the local trade area, where there is no real competition within area this location, so care needs to be taken to make sure the car access points for the fuel islands and store are nice and easy with no negative impacts so this site can become a destination stop.

Overall the site is on a good corner is the area and has good potential. The traffic passing by the site is strong and along with the residential backup the location should do well. It might take a while to ramp up this location since the customer has not been conditioned to stop here, but an aggressive pricing posture would speed up the ramp up process.

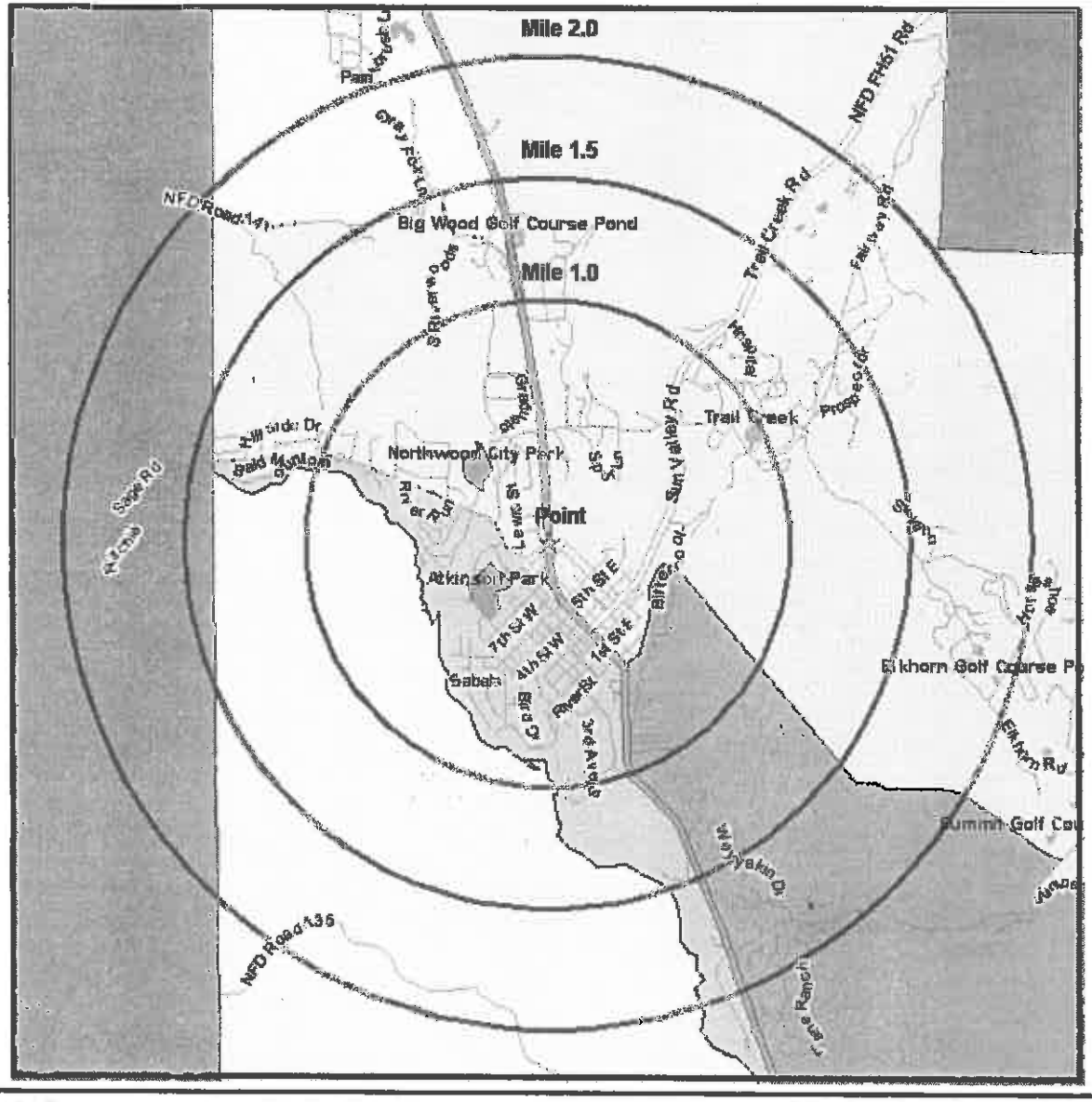
Field Survey Section Sun Valley Idado

- Hwy 75 & 10th Street
- January 2016
- GmapUSA



Population Current-Year

Sun Valley Site



N MAIN ST AT 10TH ST E
KETCHUM,ID 83340
Coord: 43.685806, -114.367549
Radius - See Appendix for Details

Legend

- Interstate Highways
- US Highways
- State Highways
- Major Highways
- Major Roads
- Roads
- Railroads
- Hydrography
- Block Groups

CY Total Population (Est.)

- 848 to 999
- 999 to 1,213
- 1,213 to 1,422
- 1,422 to 1,551
- 1,551 to 2,759
- State
- Ocean

0 miles 0.44 0.88

N W E S

Appendix: Area Listing

Area Name:

Type: Radius 1

Radius Definition:

N MAIN ST AT 10TH ST E
KETCHUM, ID 83340

Center Point: 43.685806 -114.367549
Circle/Band: 0.00 - 1.00

Area Name:

Type: Radius 2

Radius Definition:

N MAIN ST AT 10TH ST E
KETCHUM, ID 83340

Center Point: 43.685806 -114.367549
Circle/Band: 0.00 - 1.50

Area Name:

Type: Radius 3

Radius Definition:

N MAIN ST AT 10TH ST E
KETCHUM, ID 83340

Center Point: 43.685806 -114.367549
Circle/Band: 0.00 - 2.00

Project Information:

Site: 2

Order Number: 975616310

Pop-Facts: Demographic Snapshot 2015 Report

Sun Valley Site

Radius 1: N MAIN ST AT 10TH ST E, KETCHUM, ID 83340, aggregate
Radius 2: N MAIN ST AT 10TH ST E, KETCHUM, ID 83340, aggregate
Radius 3: N MAIN ST AT 10TH ST E, KETCHUM, ID 83340, aggregate

Description	0.00 - 1.00 miles *Radius 1*	%	0.00 - 1.50 miles *Radius 2*	%	0.00 - 2.00 miles *Radius 3*	%
Population						
2020 Projection	1,771		2,390		2,989	
2015 Estimate	1,892		2,533		3,153	
2010 Census	2,099		2,782		3,442	
2000 Census	2,369		3,097		3,786	
Growth 2015-2020	-6.39%		-5.65%		-5.22%	
Growth 2010-2015	-9.84%		-8.95%		-8.38%	
Growth 2000-2010	-11.42%		-10.17%		-9.09%	
2015 Est. Population by Single-Classification Race	1,892		2,533		3,153	
White Alone	1,694	89.53	2,290	90.41	2,850	90.39
Black or African American Alone	4	0.21	4	0.16	5	0.16
Amer. Indian and Alaska Native Alone	5	0.26	7	0.28	10	0.32
Asian Alone	30	1.59	38	1.50	46	1.46
Native Hawaiian and Other Pac. Isl. Alone	0	0.00	1	0.04	2	0.06
Some Other Race Alone	137	7.24	163	6.44	204	6.47
Two or More Races	22	1.16	30	1.18	37	1.17
2015 Est. Population by Hispanic or Latino Origin	1,892		2,533		3,153	
Not Hispanic or Latino	1,704	90.06	2,303	90.92	2,862	90.77
Hispanic or Latino:	188	9.94	230	9.08	291	9.23
Mexican	111	59.04	138	60.00	177	60.82
Puerto Rican	4	2.13	5	2.17	6	2.06
Cuban	0	0.00	0	0.00	0	0.00
All Other Hispanic or Latino	72	38.30	87	37.83	109	37.46
2015 Est. Hisp. or Latino Pop by Single-Class. Race	188		230		291	
White Alone	38	20.21	51	22.17	67	23.02
Black or African American Alone	1	0.53	1	0.43	2	0.69
American Indian and Alaska Native Alone	4	2.13	5	2.17	7	2.41
Asian Alone	5	2.66	6	2.61	6	2.06
Native Hawaiian and Other Pacific Islander Alone	0	0.00	0	0.00	0	0.00
Some Other Race Alone	135	71.81	160	69.57	200	68.73
Two or More Races	5	2.66	7	3.04	9	3.09

Pop-Facts: Demographic Snapshot 2015 Report

Sun Valley Site

Radius 1: N MAIN ST AT 10TH ST E, KETCHUM, ID 83340, aggregate
Radius 2: N MAIN ST AT 10TH ST E, KETCHUM, ID 83340, aggregate
Radius 3: N MAIN ST AT 10TH ST E, KETCHUM, ID 83340, aggregate

Description	0.00 - 1.00 miles *Radius 1*	%	0.00 - 1.50 miles *Radius 2*	%	0.00 - 2.00 miles *Radius 3*	%
2015 Est. Pop by Race, Asian Alone, by Category	30		38		46	
Chinese, except Taiwanese	0	0.00	0	0.00	0	0.00
Filipino	14	46.67	18	47.37	22	47.83
Japanese	6	20.00	8	21.05	10	21.74
Asian Indian	0	0.00	0	0.00	0	0.00
Korean	1	3.33	1	2.63	1	2.17
Vietnamese	0	0.00	0	0.00	0	0.00
Cambodian	0	0.00	0	0.00	0	0.00
Hmong	0	0.00	0	0.00	0	0.00
Laotian	0	0.00	0	0.00	0	0.00
Thai	9	30.00	11	28.95	13	28.26
All Other Asian Races Including 2+ Category	0	0.00	0	0.00	0	0.00
2015 Est. Population by Ancestry	1,892		2,533		3,153	
Arab	0	0.00	0	0.00	0	0.00
Czech	35	1.85	44	1.74	54	1.71
Danish	10	0.53	16	0.63	22	0.70
Dutch	25	1.32	32	1.26	40	1.27
English	266	14.06	372	14.69	473	15.00
French (except Basque)	48	2.54	62	2.45	76	2.41
French Canadian	0	0.00	0	0.00	0	0.00
German	208	10.99	283	11.17	355	11.26
Greek	4	0.21	5	0.20	6	0.19
Hungarian	1	0.05	2	0.08	4	0.13
Irish	129	6.82	170	6.71	210	6.66
Italian	55	2.91	72	2.84	88	2.79
Lithuanian	0	0.00	0	0.00	0	0.00
United States or American	82	4.33	111	4.38	139	4.41
Norwegian	101	5.34	130	5.13	159	5.04
Polish	18	0.95	22	0.87	26	0.82
Portuguese	0	0.00	1	0.04	1	0.03
Russian	4	0.21	6	0.24	7	0.22
Scottish	41	2.17	57	2.25	71	2.25
Scotch-Irish	47	2.48	58	2.29	70	2.22
Slovak	0	0.00	1	0.04	2	0.06
Subsaharan African	0	0.00	0	0.00	0	0.00
Swedish	30	1.59	39	1.54	47	1.49
Swiss	5	0.26	7	0.28	8	0.25
Ukrainian	0	0.00	0	0.00	0	0.00
Welsh	0	0.00	0	0.00	0	0.00
West Indian (except Hisp. groups)	0	0.00	0	0.00	0	0.00
Other ancestries	698	36.89	933	36.83	1,161	36.82

Pop-Facts: Demographic Snapshot 2015 Report

Sun Valley Site

Radius 1: N MAIN ST AT 10TH ST E, KETCHUM, ID 83340, aggregate
Radius 2: N MAIN ST AT 10TH ST E, KETCHUM, ID 83340, aggregate
Radius 3: N MAIN ST AT 10TH ST E, KETCHUM, ID 83340, aggregate

Description	0.00 - 1.00 miles *Radius 1*	%	0.00 - 1.50 miles *Radius 2*	%	0.00 - 2.00 miles *Radius 3*	%
2015 Est. Population by Ancestry						
Ancestry Unclassified	85	4.49	110	4.34	135	4.28
2015 Est. Pop Age 5+ by Language Spoken at Home	1,825		2,448		3,048	
Speak Only English at Home	1,465	80.27	1,972	80.56	2,459	80.68
Speak Asian/Pac. Isl. Lang. at Home	5	0.27	12	0.49	19	0.62
Speak IndoEuropean Language at Home	48	2.63	61	2.49	74	2.43
Speak Spanish at Home	307	16.82	402	16.42	496	16.27
Speak Other Language at Home	0	0.00	0	0.00	0	0.00
2015 Est. Population by Sex	1,892		2,533		3,153	
Male	975	51.53	1,305	51.52	1,624	51.51
Female	917	48.47	1,228	48.48	1,529	48.49
2015 Est. Population by Age	1,892		2,533		3,153	
Age 0 - 4	67	3.54	85	3.36	105	3.33
Age 5 - 9	85	4.49	107	4.22	131	4.15
Age 10 - 14	85	4.49	110	4.34	139	4.41
Age 15 - 17	47	2.48	64	2.53	81	2.57
Age 18 - 20	41	2.17	57	2.25	73	2.32
Age 21 - 24	48	2.54	71	2.80	93	2.95
Age 25 - 34	269	14.22	342	13.50	396	12.56
Age 35 - 44	270	14.27	344	13.58	410	13.00
Age 45 - 54	289	15.27	376	14.84	459	14.56
Age 55 - 64	304	16.07	419	16.54	539	17.09
Age 65 - 74	260	13.74	371	14.65	483	15.32
Age 75 - 84	101	5.34	150	5.92	198	6.28
Age 85 and over	24	1.27	36	1.42	46	1.46
Age 16 and over	1,638	86.58	2,209	87.21	2,750	87.22
Age 18 and over	1,607	84.94	2,167	85.55	2,697	85.54
Age 21 and over	1,566	82.77	2,110	83.30	2,624	83.22
Age 65 and over	385	20.35	557	21.99	727	23.06
2015 Est. Median Age	46.1		47.3		48.2	
2015 Est. Average Age	44.6		45.5		46.0	

Pop-Facts: Demographic Snapshot 2015 Report

Sun Valley Site

Radius 1: N MAIN ST AT 10TH ST E, KETCHUM, ID 83340, aggregate
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Radius 3: N MAIN ST AT 10TH ST E, KETCHUM, ID 83340, aggregate

Description	0.00 - 1.00 miles Radius 1	%	0.00 - 1.50 miles Radius 2	%	0.00 - 2.00 miles Radius 3	%
2015 Est. Male Population by Age	975		1,305		1,624	
Age 0 - 4	34	3.49	43	3.30	54	3.33
Age 5 - 9	45	4.62	55	4.21	66	4.06
Age 10 - 14	38	3.90	51	3.91	67	4.13
Age 15 - 17	25	2.56	33	2.53	42	2.59
Age 18 - 20	23	2.36	32	2.45	40	2.46
Age 21 - 24	26	2.67	39	2.99	51	3.14
Age 25 - 34	139	14.26	177	13.56	207	12.75
Age 35 - 44	155	15.90	197	15.10	232	14.29
Age 45 - 54	144	14.77	186	14.25	225	13.85
Age 55 - 64	156	16.00	214	16.40	275	16.93
Age 65 - 74	128	13.13	184	14.10	241	14.84
Age 75 - 84	47	4.82	72	5.52	98	6.03
Age 85 and over	15	1.54	21	1.61	27	1.66
2015 Est. Median Age, Male	45.2		46.4		47.4	
2015 Est. Average Age, Male	44.4		45.2		45.8	
2015 Est. Female Population by Age	917		1,228		1,529	
Age 0 - 4	33	3.60	42	3.42	52	3.40
Age 5 - 9	41	4.47	52	4.23	65	4.25
Age 10 - 14	47	5.13	59	4.80	72	4.71
Age 15 - 17	22	2.40	31	2.52	39	2.55
Age 18 - 20	18	1.96	25	2.04	33	2.16
Age 21 - 24	23	2.51	33	2.69	42	2.75
Age 25 - 34	130	14.18	164	13.36	190	12.43
Age 35 - 44	115	12.54	148	12.05	178	11.64
Age 45 - 54	145	15.81	190	15.47	233	15.24
Age 55 - 64	148	16.14	204	16.61	264	17.27
Age 65 - 74	131	14.29	187	15.23	242	15.83
Age 75 - 84	54	5.89	78	6.35	100	6.54
Age 85 and over	10	1.09	15	1.22	20	1.31
2015 Est. Median Age, Female	47.0		48.2		49.0	
2015 Est. Average Age, Female	44.8		45.7		46.2	

Pop-Facts: Demographic Snapshot 2015 Report

Sun Valley Site

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Radius 3: N MAIN ST AT 10TH ST E, KETCHUM, ID 83340, aggregate

Description	0.00 - 1.00 miles *Radius 1*	%	0.00 - 1.50 miles *Radius 2*	%	0.00 - 2.00 miles *Radius 3*	%
2015 Est. Pop Age 15+ by Marital Status	1,654		2,230		2,778	
Total, Never Married	584	35.31	730	32.74	849	30.56
Males, Never Married	368	22.25	462	20.72	539	19.40
Females, Never Married	215	13.00	268	12.02	310	11.16
Married, Spouse present	639	38.63	914	40.99	1,210	43.56
Married, Spouse absent	83	5.02	123	5.52	161	5.80
Widowed	52	3.14	87	3.90	116	4.18
Males Widowed	22	1.33	33	1.48	44	1.58
Females Widowed	30	1.81	53	2.38	71	2.56
Divorced	296	17.90	377	16.91	443	15.95
Males Divorced	111	6.71	154	6.91	192	6.91
Females Divorced	186	11.25	223	10.00	251	9.04
2015 Est. Pop Age 25+ by Edu. Attainment	1,518		2,038		2,531	
Less than 9th grade	69	4.55	85	4.17	101	3.99
Some High School, no diploma	37	2.44	45	2.21	53	2.09
High School Graduate (or GED)	181	11.92	231	11.33	277	10.94
Some College, no degree	281	18.51	385	18.89	493	19.48
Associate Degree	28	1.84	60	2.94	87	3.44
Bachelor's Degree	701	46.18	921	45.19	1,130	44.65
Master's Degree	164	10.80	210	10.30	251	9.92
Professional School Degree	38	2.50	64	3.14	85	3.36
Doctorate Degree	17	1.12	37	1.82	55	2.17
2015 Est. Pop Age 25+ by Edu. Attain., Hisp./Lat.	114		140		173	
No High School Diploma	80	70.18	98	70.00	120	69.36
High School Graduate	20	17.54	25	17.86	30	17.34
Some College or Associate's Degree	9	7.89	13	9.29	17	9.83
Bachelor's Degree or Higher	4	3.51	5	3.57	6	3.47
Households						
2020 Projection	899		1,198		1,484	
2015 Estimate	962		1,272		1,566	
2010 Census	1,071		1,401		1,712	
2000 Census	1,208		1,550		1,867	
Growth 2015-2020	-6.55%		-5.78%		-5.25%	
Growth 2010-2015	-10.17%		-9.24%		-8.55%	
Growth 2000-2010	-11.35%		-9.61%		-8.27%	

Pop-Facts: Demographic Snapshot 2015 Report

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Description	0.00 - 1.00 miles *Radius 1*	%	0.00 - 1.50 miles *Radius 2*	%	0.00 - 2.00 miles *Radius 3*	%
2015 Est. Households by Household Type	962		1,272		1,566	
Family Households	416	43.24	571	44.89	734	46.87
Nonfamily Households	546	56.76	701	55.11	832	53.13
2015 Est. Group Quarters Population	8		49		76	
2015 HHs by Ethnicity, Hispanic/Latino	58	6.03	70	5.50	87	5.56
2015 Est. Households by HH Income	962		1,272		1,566	
Income < $15,000	90	9.36	127	9.98	162	10.34
Income $15,000 - $24,999	83	8.63	106	8.33	132	8.43
Income $25,000 - $34,999	151	15.70	193	15.17	229	14.62
Income $35,000 - $49,999	113	11.75	150	11.79	189	12.07
Income $50,000 - $74,999	203	21.10	258	20.28	310	19.80
Income $75,000 - $99,999	125	12.99	157	12.34	184	11.75
Income $100,000 - $124,999	93	9.67	120	9.43	140	8.94
Income $125,000 - $149,999	25	2.60	37	2.91	52	3.32
Income $150,000 - $199,999	25	2.60	44	3.46	65	4.15
Income $200,000 - $249,999	13	1.35	20	1.57	27	1.72
Income $250,000 - $499,999	27	2.81	39	3.07	51	3.26
Income $500,000+	15	1.56	21	1.65	25	1.60
2015 Est. Average Household Income	$76,207		$78,250		$79,592	
2015 Est. Median Household Income	$55,476		$55,759		$55,671	
2015 Median HH Inc. by Single-Class. Race or Eth.						
White Alone	57,037		57,277		57,228	
Black or African American Alone	106,680		104,375		100,504	
American Indian and Alaska Native Alone	62,500		62,500		62,500	
Asian Alone	58,370		58,753		59,672	
Native Hawaiian and Other Pacific Islander Alone	0		56,250		56,250	
Some Other Race Alone	39,903		39,667		39,133	
Two or More Races	14,999		14,999		14,999	
Hispanic or Latino	58,723		58,516		57,610	
Not Hispanic or Latino	54,989		55,369		55,388	
2015 Est. Family HH Type by Presence of Own Child.	416		571		734	
Married-Couple Family, own children	115	27.64	152	26.62	194	26.43

Pop-Facts: Demographic Snapshot 2015 Report

Sun Valley Site

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Description	0.00 - 1.00 miles Radius 1	%	0.00 - 1.50 miles Radius 2	%	0.00 - 2.00 miles Radius 3	%
Married-Couple Family, no own children	222	53.37	320	56.04	422	57.49
Male Householder, own children	19	4.57	23	4.03	27	3.68
Male Householder, no own children	10	2.40	13	2.28	16	2.18
Female Householder, own children	32	7.69	40	7.01	47	6.40
Female Householder, no own children	18	4.33	22	3.85	26	3.54
2015 Est. Households by Household Size	962		1,272		1,566	
1-person	396	41.16	519	40 80	629	40.17
2-person	358	37.21	484	38.05	605	38.63
3-person	110	11.43	141	11.08	170	10.86
4-person	66	6.86	85	6.68	108	6.90
5-person	24	2.49	32	2.52	41	2.62
6-person	5	0.52	7	0.55	9	0.57
7-or-more-person	3	0.31	4	0.31	5	0.32
2015 Est. Average Household Size	1.96		1.95		1.97	
2015 Est. Households by Presence of People Under 18	962		1,272		1,566	
Households with 1 or More People under Age 18:	173	17.98	224	17.61	279	17.82
Married-Couple Family	116	67.05	154	68.75	197	70.61
Other Family, Male Householder	21	12.14	26	11.61	30	10.75
Other Family, Female Householder	33	19.08	42	18.75	50	17.92
Nonfamily, Male Householder	1	0.58	1	0.45	1	0.36
Nonfamily, Female Householder	1	0.58	1	0.45	1	0.36
Households with No People under Age 18:	789	82.02	1,048	82.39	1,286	82.12
Married-Couple Family	221	28.01	318	30.34	420	32.66
Other Family, Male Householder	8	1.01	11	1.05	13	1.01
Other Family, Female Householder	17	2.15	21	2.00	24	1.87
Nonfamily, Male Householder	294	37.26	376	35.88	448	34.84
Nonfamily, Female Householder	249	31.56	322	30.73	382	29.70
2015 Est. Households by Number of Vehicles	962		1,272		1,566	
No Vehicles	68	7.07	80	6.29	87	5.56
1 Vehicle	328	34.10	442	34.75	537	34.29
2 Vehicles	380	39.50	502	39.47	627	40.04
3 Vehicles	175	18.19	232	18.24	290	18.52
4 Vehicles	8	0.83	11	0.86	16	1.02
5 or more Vehicles	4	0.42	5	0.39	9	0.57
2015 Est. Average Number of Vehicles	1.7		1.7		1.8	

Pop-Facts: Demographic Snapshot 2015 Report

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Description	0.00 - 1.00 miles *Radius 1*	%	0.00 - 1.50 miles *Radius 2*	%	0.00 - 2.00 miles *Radius 3*	%
Family Households						
2020 Projection	391		541		699	
2015 Estimate	416		571		734	
2010 Census	460		624		797	
2000 Census	484		649		826	
Growth 2015-2020	-5.98%		-5.17%		-4.75%	
Growth 2010-2015	-9.67%		-8.60%		-7.94%	
Growth 2000-2010	-4.94%		-3.89%		-3.56%	
2015 Est. Families by Poverty Status	416		571		734	
2015 Families at or Above Poverty	410	98.56	563	98.60	723	98.50
2015 Families at or Above Poverty with Children	107	25.72	146	25.57	187	25.48
2015 Families Below Poverty	5	1.20	7	1.23	10	1.36
2015 Families Below Poverty with Children	1	0.24	1	0.18	2	0.27
2015 Est. Pop Age 16+ by Employment Status	1,638		2,209		2,750	
In Armed Forces	0	0.00	0	0.00	0	0.00
Civilian - Employed	1,044	63.74	1,403	63.51	1,744	63.42
Civilian - Unemployed	119	7.26	154	6.97	188	6.84
Not in Labor Force	474	28.94	652	29.52	819	29.78
2015 Est. Civ. Employed Pop 16+ by Class of Worker	1,061		1,423		1,769	
For-Profit Private Workers	648	61.07	888	62.40	1,104	62.41
Non-Profit Private Workers	53	5.00	64	4.50	79	4.47
Local Government Workers	26	2.45	42	2.95	59	3.34
State Government Workers	27	2.54	39	2.74	47	2.66
Federal Government Workers	2	0.19	4	0.28	6	0.34
Self-Employed Workers	302	28.46	385	27.06	470	26.57
Unpaid Family Workers	1	0.09	2	0.14	4	0.23
2015 Est. Civ. Employed Pop 16+ by Occupation	1,061		1,423		1,769	
Architect/Engineer	44	4.15	57	4.01	66	3.73
Arts/Entertainment/Sports	55	5.18	74	5.20	96	5.43
Building Grounds Maintenance	70	6.60	91	6.39	110	6.22
Business/Financial Operations	13	1.23	21	1.48	30	1.70
Community/Social Services	16	1.51	20	1.41	22	1.24
Computer/Mathematical	2	0.19	6	0.42	8	0.45
Construction/Extraction	115	10.84	142	9.98	169	9.55
Education/Training/Library	36	3.39	55	3.87	69	3.90

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Description	0.00 - 1.00 miles *Radius 1*	%	0.00 - 1.50 miles *Radius 2*	%	0.00 - 2.00 miles *Radius 3*	%
Farming/Fishing/Forestry	2	0.19	6	0.42	11	0.62
Food Prep/Serving	63	5.94	101	7.10	135	7.63
Health Practitioner/Technician	18	1.70	27	1.90	38	2.15
Healthcare Support	27	2.54	31	2.18	34	1.92
Maintenance Repair	19	1.79	27	1.90	39	2.20
Legal	16	1.51	19	1.34	22	1.24
Life/Physical/Social Science	1	0.09	2	0.14	3	0.17
Management	150	14.14	221	15.53	284	16.05
Office/Admin. Support	96	9.05	122	8.57	146	8.25
Production	20	1.89	27	1.90	38	2.15
Protective Services	15	1.41	21	1.48	27	1.53
Sales/Related	190	17.91	232	16.30	272	15.38
Personal Care/Service	47	4.43	67	4.71	85	4.80
Transportation/Moving	45	4.24	56	3.94	65	3.67
2015 Est. Pop 16+ by Occupation Classification	1,061		1,423		1,769	
Blue Collar	199	18.76	252	17.71	311	17.58
White Collar	637	60.04	855	60.08	1,057	59.75
Service and Farm	224	21.11	317	22.28	401	22.67
2015 Est. Workers Age 16+ by Transp. to Work	1,052		1,411		1,753	
Drove Alone	672	63.88	870	61.66	1,070	61.04
Car Pooled	97	9.22	127	9.00	157	8.96
Public Transportation	2	0.19	5	0.35	9	0.51
Walked	76	7.22	125	8.86	162	9.24
Bicycle	74	7.03	89	6.31	102	5.82
Other Means	11	1.05	16	1.13	21	1.20
Worked at Home	120	11.41	178	12.62	233	13.29
2015 Est. Workers Age 16+ by Travel Time to Work *						
Less than 15 Minutes	753		984		1,188	
15 - 29 Minutes	177		252		333	
30 - 44 Minutes	6		12		22	
45 - 59 Minutes	3		4		6	
60 or more Minutes	6		9		14	
2015 Est. Avg. Travel Time to Work in Minutes	10.20		10.53		11.00	
2015 Est. Occupied Housing Units by Tenure	962		1,272		1,566	
Owner Occupied	568	59.04	778	61.16	989	63.15
Renter Occupied	394	40.96	494	38.84	576	36.78

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Description	0.00 - 1.00 miles Radius 1	%	0.00 - 1.50 miles Radius 2	%	0.00 - 2.00 miles Radius 3	%
2015 Owner Occ. HUs: Avg. Length of Residence	17.3		17.3		17.4	
2015 Renter Occ. HUs: Avg. Length of Residence	7.9		7.8		7.7	
2015 Est. Owner-Occupied Housing Units by Value	568		778		989	
Value Less than $20,000	2	0.35	2	0.26	3	0.30
Value $20,000 - $39,999	7	1.23	8	1.03	11	1.11
Value $40,000 - $59,999	4	0.70	10	1.29	14	1.42
Value $60,000 - $79,999	2	0.35	3	0.39	6	0.61
Value $80,000 - $99,999	9	1.58	12	1.54	14	1.42
Value $100,000 - $149,999	16	2.82	21	2.70	27	2.73
Value $150,000 - $199,999	32	5.63	42	5.40	50	5.06
Value $200,000 - $299,999	29	5.11	40	5.14	49	4.95
Value $300,000 - $399,999	44	7.75	60	7.71	78	7.89
Value $400,000 - $499,999	18	3.17	34	4.37	46	4.65
Value $500,000 - $749,999	143	25.18	187	24.04	224	22.65
Value $750,000 - $999,999	102	17.96	137	17.61	172	17.39
Value $1,000,000 or more	160	28.17	222	28.53	294	29.73
2015 Est. Median All Owner-Occupied Housing Value	$711,172		$710,229		$718,271	
2015 Est. Housing Units by Units in Structure	2,322		3,297		4,211	
1 Unit Attached	72	3.10	110	3.34	142	3.37
1 Unit Detached	1,159	49.91	1,565	47.47	2,010	47.73
2 Units	151	6.50	235	7.13	310	7.36
3 or 4 Units	414	17.83	622	18.87	773	18.36
5 to 19 Units	374	16.11	581	17.62	754	17.91
20 to 49 Units	122	5.25	148	4.49	167	3.97
50 or More Units	19	0.82	22	0.67	26	0.62
Mobile Home or Trailer	10	0.43	13	0.39	29	0.69
Boat, RV, Van, etc.	0	0.00	0	0.00	0	0.00
2015 Est. Housing Units by Year Structure Built	2,322		3,297		4,211	
Housing Units Built 2010 or later	7	0.30	8	0.24	8	0.19
Housing Units Built 2000 to 2009	430	18.52	540	16.38	637	15.13
Housing Units Built 1990 to 1999	325	14.00	466	14.13	629	14.94
Housing Units Built 1980 to 1989	338	14.56	499	15.13	653	15.51
Housing Units Built 1970 to 1979	782	33.68	1,172	35.55	1,498	35.57
Housing Units Built 1960 to 1969	180	7.75	276	8.37	372	8.83
Housing Units Built 1950 to 1959	171	7.36	207	6.28	238	5.65

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Description	0.00 - 1.00 miles		0.00 - 1.50 miles		0.00 - 2.00 miles	
	Radius 1	*%*	*Radius 2*	*%*	*Radius 3*	*%*
Housing Units Built 1940 to 1949	29	1.25	43	1.30	63	1.50
Housing Unit Built 1939 or Earlier	61	2.63	85	2.58	113	2.68
2015 Est. Median Year Structure Built**	1979		1979		1979	

*This row intentionally left blank. No total category data is available.

**1939 will appear when at least half of the Housing Units in this reports area were built in 1939 or earlier.

Pop-Facts: Demographic Snapshot 2015 Report

Sun Valley Site

Appendix: Area Listing

Area Name:

Type: Radius 1 | Reporting Detail: Aggregate | Reporting Level: Block Group

Radius Definition:

N MAIN ST AT 10TH ST E
KETCHUM, ID 83340

Latitude/Longitude 43.685806 -114.367549
Radius 0.00 - 1.00

Area Name:

Type: Radius 2 | Reporting Detail: Aggregate | Reporting Level: Block Group

Radius Definition:

N MAIN ST AT 10TH ST E
KETCHUM, ID 83340

Latitude/Longitude 43.685806 -114.367549
Radius 0.00 - 1.50

Area Name:

Type: Radius 3 | Reporting Detail: Aggregate | Reporting Level: Block Group

Radius Definition:

N MAIN ST AT 10TH ST E
KETCHUM, ID 83340

Latitude/Longitude 43.685806 -114.367549
Radius 0.00 - 2.00

Project Information:

Site: 1

Order Number: 975616310


WARM SPRINGS
ROAD
BRACKEN STATION
WARM SPRINGS
ROAD


WARM SPRINGS
ROAD
BRACKEN STATION

Monument Signs

The modular primary ID sign system is also available in a monument structure. The system comprises a Hallmark, price sign and an APC sign panel. Monument signs are installed where local ordinances prohibit pole signs or require smaller signs.

- Mount monument signs in masonry, stucco, metal or wood.
- Paint the masonry, stucco, metal or wood Chevron GY-210 Gray (Dark) (Dark Gray) unless prohibited by local architectural controls.
- Install the vertical column adjacent to the Hallmark and closest to the street.
- Monument signs are available in the three sizes noted.
- Only 3-product price signs are available.
- Both numeral and product grade panels are changeable.
- When using monument signs with Grand Entrance architecture, paint the base Dark Gray or Havana Cream.

◀ Street Side

The monument primary ID includes the Hallmark and price sign.

Type	Width	Height	Area Sq. Ft.
C-30M (Hallmark and price sign)	5'-1 ¾"	2'-10 ¾"	14.9
C-30M APC	5'-1 ¾"	0'- 8 ½"	3.6
C-32M (Hallmark and price sign)	6'-11 ½"	3'-10"	26.2
C-32M APC	6'-11 ½"	0'- 9 ¾"	5.7
C-45M (Hallmark and price sign)	8'- 5 ½"	4'- 8"	38.8
C-45M APC	8'- 5 ½"	0'- 9 ¾"	6.9

Primary ID Sign - Monument Retrofit

Before

After

Legacy Monument Sign (Retrofit)

- Replace legacy Hallmark faces with new Hallmark face panels across all levels.
- The new Hallmark logo and 'with TECHRON' logo panel are required.
- Replace APC faces with new design faces. Short height/ Long APCs should be refaced and converted to 2 individual faces side by side, separated by an "H" bar divider.
- Replace legacy LPS faces with new Illuminated Price Sign faces.
- In cases where Chevron branded Diesel is available at the facility, install a new Green Pricer panel below the LPS, or reface the existing diesel pricer.
- Paint monument bases Dark Gray or to match building wainscot color if the C-Store is done in the Chevron approved color scheme.

Table of Contents

58.01.07 - Rules Regulating Underground Storage Tank Systems

IDAPA 58
TITLE 01
CHAPTER 07

58.01.07 - RULES REGULATING UNDERGROUND STORAGE TANK SYSTEMS

000. LEGAL AUTHORITY.
Chapters 1 and 88, Title 39, Idaho Code, grant authority to the Board of Environmental Quality to promulgate rules for the regulation of underground storage tank systems within the state of Idaho. (4-2-08)

001. TITLE AND SCOPE.

01. Title. These rules shall be cited as IDAPA 58.01.07, "Rules Regulating Underground Storage Tank Systems." (4-2-08)

02. Scope. These rules establish standards and procedures necessary for the regulation of underground storage tank systems. Compliance with these rules shall not relieve persons from the obligation to comply with other applicable state or federal laws. (4-2-08)

002. WRITTEN INTERPRETATIONS.
As described in Section 67-5201(19)(b)(iv), Idaho Code, the Department of Environmental Quality may have written statements which pertain to the interpretation of these rules. If available, such written statements can be inspected and copied at cost at the Department of Environmental Quality, 1410 N. Hilton, Boise, Idaho 83706-1255. (4-2-08)

003. ADMINISTRATIVE PROVISIONS.
Persons may be entitled to appeal agency actions authorized under these rules pursuant to IDAPA 58.01.23, "Rules of Administrative Procedure Before the Board of Environmental Quality." (4-2-08)

004. INCORPORATION BY REFERENCE.
Any reference to any document identified in Subsection 004.01 shall constitute the full adoption by reference into IDAPA 58.01.07. (4-2-08)

01. Documents Incorporated by Reference. Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks, 40 CFR Part 280, revised as of July 1, 2007. (4-2-08)

02. Hazardous Substance Underground Storage Tank Systems. (4-2-08)

a. The following items only apply to hazardous substance underground storage tank systems and do not apply to petroleum underground storage tank systems: (4-2-08)

i. The definition of "Hazardous substance UST system" in 40 CFR 280.12 and use of this term or regulations regarding hazardous substance in 40 CFR Part 280; and (4-2-08)

ii. 40 CFR 280.42 and any reference to 40 CFR 280.42 in 40 CFR Part 280. (4-2-08)

b. All other provisions of 40 CFR Part 280 and all provisions of IDAPA 58.01.07 shall apply to hazardous substance underground storage tank systems. (4-2-08)

03. Consistency. In the event of conflict or inconsistency between the language in IDAPA 58.01.07 and that found in 40 CFR Part 280, IDAPA 58.01.07 shall prevail. (4-2-08)

04. Stringency. IDAPA 58.01.07 shall be no more stringent than federal law or regulations governing underground storage tank systems. (4-2-08)

05. Availability of Referenced Material. The federal regulations adopted by reference can be obtained at the following locations: (4-2-08)

a. U.S. Government Printing Office, www.ecfr.gov; and (4-2-08)

b. Department of Environmental Quality, Hearing Coordinator, 1410 N. Hilton, Boise, ID 83706-1255, (208)373-0502. (4-2-08)

005. OFFICE HOURS -- MAILING ADDRESS AND STREET ADDRESS.
The state office of the Department of Environmental Quality and the office of the Board of Environmental Quality are located at 1410 N. Hilton, Boise, Idaho 83706-1255, (208) 373-0502, www.deq.idaho.gov. The office hours are 8 a.m. to 5 p.m. Monday through Friday. (4-2-08)

006. CONFIDENTIALITY OF RECORDS.
Information obtained by the Department under these rules is subject to public disclosure pursuant to the provisions of Title 74, Chapter 1, Idaho Code, and IDAPA 58.01.21, "Rules Governing the Protection and Disclosure of Records in the Possession of the Idaho Department of Environmental Quality." (4-2-08)

007. -- 009. (RESERVED)

010. DEFINITIONS.
For the purpose of the rules contained in IDAPA 58.01.07, "Rules Regulating Underground Storage Tank Systems," the following definitions apply: (4-2-08)

01. Board. The Idaho Board of Environmental Quality. (4-2-08)

02. Community Water System. A public water system that serves at least fifteen (15) service connections used by year-round residents of the area served by the system or regularly serves at least twenty-five (25) year-round residents. (4-2-08)

03. Department. The Idaho Department of Environmental Quality. (4-2-08)

04. Director.The Director of the Idaho Department of Environmental Quality or his authorized agent. (4-2-08)

05. Existing. Solely for purposes of determining when secondary containment is required, existing is when a petroleum underground storage tank, piping, motor fuel dispensing system, facility, public water system or potable drinking water well is in place when a new installation or replacement of a tank, piping, or motor fuel dispensing system begins. (4-2-08)

06. EPA. The United States Environmental Protection Agency. (4-2-08)

07. Installation of a New Motor Fuel Dispenser System. The installation of a new motor fuel dispenser and the equipment necessary to connect the dispenser to the petroleum underground storage tank system. This equipment may include flexible connectors, risers, or other transitional components that are beneath the dispenser, below the shear valve, and connect the dispenser to the piping. It does not mean the installation of a motor fuel dispenser installed separately from the equipment needed to connect the dispenser to the petroleum underground storage tank system. (4-2-08)

08. Installer. Any person who installs a new or replacement petroleum underground storage tank system. (4-2-08)

09. Motor Fuel. Petroleum or a petroleum-based substance that is motor gasoline, aviation gasoline, No. 1 or No. 2 diesel fuel, or any grade of petroleum-blended gasohol, and is typically used in the operation of a motor engine. This includes blended petroleum motor fuels such as biodiesel and ethanol petroleum blends. (4-2-08)

10. New Underground Storage Tank. Has the same meaning as "underground storage tank or UST" in 40 CFR 280.12, except that such term includes tanks that have been previously used and meet the requirements of 40 CFR 280.20(a). (4-2-08)

11. Non-Community Water System. A public water system that is not a community water system. A

non-community water system is either a transient non-community water system or a non-transient non-community water system. (4-2-08)

12. Person. An individual, trust, firm, joint stock company, federal agency, corporation, state, municipality, commission, political subdivision of a state, or any interstate body. "Person" also includes a consortium, a joint venture, a commercial entity, and the United States government. (4-2-08)

13. Piping. A hollow cylinder or a tubular conduit constructed of non-earthen materials that routinely contains and conveys regulated petroleum substances from the petroleum underground storage tank(s) to the dispenser(s) or other end-use equipment. It does not mean vent, vapor recovery, or fill lines that do not routinely contain regulated petroleum substances. (4-2-08)

14. Potable Drinking Water Well. Any hole (dug, driven, drilled, or bored) that extends into the earth until it meets ground water which supplies water for a non-community public water system or otherwise supplies water for household use (consisting of drinking, bathing, and cooking, or other similar uses). Such wells may provide water to entities such as a single-family residence, group of residences, businesses, schools, parks, campgrounds, and other permanent or seasonal communities. (4-2-08)

15. Product Deliverer. Any person who delivers or deposits product into a petroleum underground storage tank. This term may include major oil companies, jobbers, petroleum transportation companies, or other product delivery entities. (4-2-08)

16. Public Water System. A system for the provision to the public of water for human consumption through pipes or, after August 5, 1998, other constructed conveyances, if such system has at least fifteen (15) service connections or regularly serves an average of at least twenty-five (25) individuals daily at least sixty (60) days out of the year. Such term includes: any collection, treatment, storage, and distribution facilities under control of the operator of such system and used primarily in connection with such system; and, any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system. Such term does not include any "special irrigation district." A public water system is either a "community water system" or a "non-community water system." (4-2-08)

17. Red Tag. A tamper-resistant tag, device, or mechanism attached to the tank's fill pipes that clearly identifies a petroleum underground storage tank as ineligible for product delivery. The tag or device shall be visible to the product deliverer and shall clearly state that it is unlawful to deliver to, deposit into, or accept product into the ineligible petroleum underground storage tank. (4-2-08)

18. Repair. Solely for purposes of determining when secondary containment is required, as it applies to petroleum underground storage tanks, piping, and motor fuel dispensers systems, repair means any activity that does not meet the definition of replace. (4-2-08)

19. Replace. As it applies to petroleum underground storage tanks and piping, replace is defined as follows: (4-2-08)

a. Petroleum Underground Storage Tank. Replace means to remove an existing tank and install a new tank. (4-2-08)

b. Piping. Replace means to remove and put back in one hundred (100) percent of the piping, excluding connectors, connected to a single petroleum underground storage tank system. This definition does not alter the requirement in 40 CFR 280.33(c) to replace metal pipe sections and fittings that have released product as a result of corrosion or other damage. A replacement of metal pipe section and fittings pursuant to 40 CFR 280.33(c) shall be considered a replacement under this definition only if one hundred (100) percent of the metal piping, excluding connectors, is replaced. (4-2-08)

20. Secondary Containment. A release detection and prevention system that meets the requirements of 40 CFR 280.43(g). The piping shall have an inner and outer barrier and a method of monitoring the space between the inner and outer barriers for a leak or release. (4-2-08)

21. Under-Dispenser Spill Containment. Containment underneath a dispenser that will prevent leaks from the dispenser from reaching soil or ground water. Such containment must: (4-2-08)

a. At installation or modification, be liquid-tight on its sides, bottom, and at any penetrations; and (4-2-08)

b. Be compatible with the substance conveyed by the piping; and either (4-2-08)

c. Allow for visual inspection and access to the components in the containment system; or (4-2-08)

d. Be monitored for releases using a release detection method that meets the requirements of 40 CFR 280.43(g). (4-2-08)

011. – 099. (RESERVED)

100. ADDITIONAL MEASURES TO PROTECT GROUND WATER FROM CONTAMINATION.

01. Notification. An owner, operator or designee must: (4-2-08)

a. Provide written notice to the Department thirty (30) days prior to the installation of a new piping system or a new or replacement petroleum underground storage tank. (4-2-08)

b. Provide notice to the Department twenty-four (24) hours prior to the installation of a replacement piping system. (4-2-08)

02. Notification Forms. The written notice required in Subsection 100.01.a. shall be made upon forms provided by the Department. (4-2-08)

03. Requirements for Petroleum UST Systems. Owners, operators, and installers of a new or replacement petroleum underground storage tank or piping system shall comply with the following requirements. (4-2-08)

a. Each new petroleum underground storage tank, or piping connected to any such new tank, installed after February 23, 2007, or any existing petroleum underground storage tank, or existing piping connected to such existing tank, that is replaced after February 23, 2007, shall have secondary containment and be monitored for leaks if the new or replaced petroleum underground storage tank or piping is within one thousand (1,000) feet of any existing public water system or any existing potable drinking water well. At a minimum, secondary containment systems must be designed, constructed, and installed to contain regulated substances released from the tank system until they are detected and removed, prevent the release of regulated substances to the environment at any time during the operational life of the petroleum underground storage tank system, and be checked for evidence of a release at least every thirty (30) days. The following conditions are excluded: (4-2-08)

i. Suction piping that meets the requirements of 40 CFR 280.41(b)(2)(i) through (v); (4-2-08)

ii. Piping that manifolds two (2) or more petroleum underground storage tanks together; (4-2-08)

iii. Existing piping to which new piping is connected to install a dispenser; and (4-2-08)

iv. Tanks identified in 40 CFR 280.10(b). (4-2-08)

b. If the owner installs, within one (1) year, a potable drinking water well at the new facility that is within one thousand (1,000) feet of the petroleum underground tanks, piping, or motor fuel dispenser system as part of the new underground storage tank facility installation, secondary containment and under-dispenser containment are required, regardless of whether the well is installed before or after the petroleum underground tanks, piping, and motor fuel dispenser system are installed. (4-2-08)

c. The notice required in Subsection 100.01 shall indicate whether the new or replacement installation

is within one thousand (1,000) feet of an existing public water system or any existing potable drinking water well. If the owner and installer certify that the installation is not within one thousand (1,000) feet of an existing public water system or any existing potable drinking water well, the owner, operator or designee shall provide and maintain documentation showing that a reasonable investigation of water systems and drinking water wells was undertaken. A reasonable investigation includes, but is not limited to, a search of the records of: (4-2-08)

i. The public or private water service provider in the area which the new or replacement installation is located (if any); (4-2-08)

ii. The city or county in which the new or replacement installation is located; (4-2-08)

iii. The Idaho Department of Water Resources; and (4-2-08)

iv. The Idaho Department of Environmental Quality. (4-2-08)

d. In the case of a replacement of an existing petroleum underground storage tank or existing piping connected to the petroleum underground storage tank, Section 100 shall apply only to the specific petroleum underground storage tank or piping being replaced, not to other petroleum underground storage tanks and connected pipes comprising such system. (4-2-08)

e. Each installation of a new motor fuel dispenser system shall include under-dispenser spill containment if the new dispenser is within one thousand (1,000) feet of any existing public water system or any existing potable drinking water well. (4-2-08)

04. Requirements for Hazardous Substance UST Systems. Owners, operators, and installers of a new or replacement hazardous substance underground storage tank or piping system shall have secondary containment as required in 40 CFR 280.42. (4-2-08)

05. Certification. Owners and operators shall also comply with the certification requirements of 40 CFR 280.22(f) as incorporated by reference into these rules. (4-2-08)

101. -- 199. (RESERVED)

200. RELEASE REPORTING REQUIREMENTS.

01. Information to be Reported. (4-2-08)

a. In addition to the requirements in IDAPA 58.01.02, "Water Quality Standards," Subsection 851.01, owners or operators shall report the following information regarding confirmed petroleum underground storage tank releases to the Department on forms provided by the Department: (4-2-08)

i. The release source; and (4-2-08)

ii. The release cause. (4-2-08)

b. Releases less than twenty-five (25) gallons that are cleaned up within twenty-four (24) hours, and which do not cause a sheen on nearby surface water, do not need to be reported. (4-2-08)

02. Release Sources. Release sources may include, but are not limited to the following: (4-2-08)

a. Petroleum Underground Storage Tanks; (4-2-08)

b. Piping; (4-2-08)

c. Dispensers, which include the dispenser and equipment used to connect the dispenser to the piping. A release from a suction pump or components located above the shear valve would be an example of a release from the dispenser; (4-2-08)

d. Submersible turbine pump area, which includes the submersible turbine pump head (typically located in the tank sump), the line leak detector, and the piping that connects the submersible turbine pump to the petroleum underground storage tank; and (4-2-08)

e. Delivery problem, which identifies releases that occurred during product delivery to the petroleum underground storage tank. Typical causes associated with this source are spills and overfills. (4-2-08)

03. Release Causes. Release causes may include, but are not limited to the following: (4-2-08)

a. Spills which may occur when the delivery hose is disconnected from the fill pipe of the petroleum underground storage tank or when the nozzle is removed from the vehicle at the dispenser; (4-2-08)

b. Overfills which may occur from the fill pipe at the petroleum underground storage tank or when the nozzle fails to shut off at the dispenser; (4-2-08)

c. Physical or mechanical damage of all types except corrosion. Examples include a puncture of the petroleum underground storage tank or piping, loose fittings, broken components, and components that have changed dimension like elongation or swelling; (4-2-08)

d. Corrosion of a metal tank, piping, flex connector, or other component; and (4-2-08)

e. Installation problem that occurs specifically because the underground storage tank system was not installed properly. (4-2-08)

04. Requirements. The reporting required in Section 200 shall be reported to the Department within ninety (90) days of a confirmed release. The reporting requirement in Section 200 shall not relieve owners or operators from the obligation to comply with IDAPA 58.01.02, "Water Quality Standards," Section 851, "Petroleum Release Reporting, Investigation, and Confirmation," and IDAPA 58.01.02, "Water Quality Standards," Section 852, "Petroleum Release Response and Corrective Action." (4-2-08)

201. -- 299. (RESERVED)

300. TRAINING REQUIREMENTS.

01. Requirements. The Department shall adopt a training program to help owners and operators comply with the requirements of these rules. The training program requirements shall: (4-2-08)

a. Be consistent with 42 U.S.C. 6991i(a), as amended by the Underground Storage Tank Compliance Act, (Pub.L. 109-58, title XV, sec. 1524(a), Aug. 8, 2005); (4-2-08)

b. Be developed in cooperation with petroleum underground storage tank owners and tank operators; (4-2-08)

c. Take into consideration training programs implemented by petroleum underground storage tank owners and operators as of August 8, 2005; (4-2-08)

d. Provide for training to be conducted on site or at another mutually convenient location; and (4-2-08)

e. Be appropriately communicated to petroleum underground storage tank owners and operators. (4-2-08)

02. Operator Designation. For each petroleum underground storage tank system regulated under these rules, the owner or operator shall: (4-2-08)

a. Designate: (4-2-08)

i. The class A operator, who is the individual(s) having primary responsibility for on-site operation

and maintenance of the petroleum underground storage tank system. This does not require that the class A operator be on site; (4-2-08)

ii. The class B operator, who is the individual(s) having daily on-site responsibility for the operation and maintenance of the petroleum underground storage tank system. This does not require that the class B operator be on site at all times; and (4-2-08)

iii. The class C operator, who is the daily, on-site individual(s) having primary responsibility for addressing emergencies presented by a spill or release from the petroleum underground storage tank system. The class C operator can be designated by the class A or B operator. (4-2-08)

b. Maintain a record at the facility where the petroleum underground storage tank is located listing each person designated in Subsections 300.02.a.i., 300.02.a.ii., and 300.02.a.iii. (4-2-08)

c. Notify the Department in writing of the individual(s) designated in Subsections 300.02.a.i. and 300.02.a.ii. within thirty (30) days of the designation. (4-2-08)

03. Training. The owner or operator of each petroleum underground storage tank system regulated under these rules shall ensure that the individual(s) identified in Subsections 300.02.a.i. and 300.02.a.ii. participate in the training conducted by the Department or a state of Idaho approved third party. (4-2-08)

a. The individual(s) identified in Subsections 300.02.a.i. or 300.02.a.ii. shall provide training to the persons identified in Subsection 300.02.a.iii. (4-2-08)

b. The individual(s) identified in Subsection 300.02.a.iii. must be trained before assuming responsibility for responding to emergencies. (4-2-08)

c. The individual(s) identified in Subsections 300.02.a.i. and 300.02.a.ii. shall repeat the training within thirty (30) days if the petroleum underground storage tank system for which they have responsibility is determined to be out of compliance with these rules. (4-2-08)

04. Unattended Sites. In the case of unattended sites, a sign must be posted in a location visible from the dispensers indicating emergency shut-off procedures and emergency contact phone numbers. (4-2-08)

301. -- 399. (RESERVED)

400. INSPECTIONS.

01. Department Authority. In order to fulfill the statutory requirements of Chapter 88, Title 39, Idaho Code, officers, employees or representatives of the Department, or third-party inspectors as described in Subsection 400.02, are authorized to inspect petroleum underground storage tanks, contents of the tanks, and associated equipment and records relating to such tanks, contents, and associated equipment. (4-2-08)

02. Third-Party Inspections. (4-2-08)

a. Third-party inspectors must be certified, licensed, or registered by an approved state program to perform on-site inspections. At a minimum, third-party inspectors must meet the requirements listed in Subsections 400.02.a.i. through 400.02.a.v.: (4-2-08)

i. Be trained in the state-specific inspection protocols and procedures, and perform inspections pursuant to such protocols and procedures; (4-2-08)

ii. Successfully complete the state's required training program. The training program for third-party inspectors must be comparable to the training program for Department inspectors; (4-2-08)

iii. Not be the owner or operator of the petroleum underground storage tank, an employee of the owner or operator of the petroleum underground storage tank, or a person having daily on-site responsibility for the operation and maintenance of the petroleum underground storage tank; (4-2-08)

iv. Use an inspection report form developed by the Department. Review of applicable records and other activities that can be accomplished off-site may be combined with activities conducted at the site to fulfill the on-site inspection requirement; and (4-2-08)

v. Complete and submit the inspection report to the Department in the manner and time frame established by the Department. All third-party inspection reports must be submitted electronically to the Department for review and for the Department to make a compliance determination for each site. If requested by the Department, third-party inspectors shall provide all supporting documentation for its inspection reports. (4-2-08)

b. Third-party inspection procedures must contain an audit program, developed by the Department, to monitor third-party inspectors on a routine basis. The audit program must include a sufficient number of on-site inspections to effectively assess inspector performance. (4-2-08)

c. If a third-party inspector fails to demonstrate to the approved state program adequate competence and proficiency to perform petroleum underground storage tank inspections, or the approved state program otherwise determines it is not appropriate for the third-party inspector to conduct on-site inspections as part of a third-party inspection program, the approved state program must take appropriate action against the third-party inspector as provided by law. (4-2-08)

03. Inspections. All inspections shall be done in accordance with the provisions of Section 39-108, Idaho Code. At a minimum, an on-site inspection must assess compliance with the following: (4-2-08)

a. Notification; (4-2-08)

b. Corrosion protection; (4-2-08)

c. Overfill prevention in place and operational; (4-2-08)

d. Spill prevention in place and operational; (4-2-08)

e. Tank and piping release detection; (4-2-08)

f. Reporting suspected releases; (4-2-08)

g. Records of tank and piping repairs; (4-2-08)

h. Secondary containment where required; (4-2-08)

i. Financial responsibility; and (4-2-08)

j. Temporary closure. (4-2-08)

401. -- 499. (RESERVED)

500. DELIVERY PROHIBITION.

01. Prohibition. Effective August 8, 2007, it shall be unlawful for any person to deliver to, deposit into, or accept a regulated petroleum substance into a petroleum underground storage tank at a facility which has been identified by the Department to be ineligible for such delivery, deposit, or acceptance. (4-2-08)

02. Classification as Ineligible. The Department shall classify a petroleum underground storage tank as ineligible for delivery, deposit, or acceptance of a regulated petroleum substance as soon as practicable after the Department determines one or more of the following conditions exists: (4-2-08)

a. Required spill prevention equipment is not installed; (4-2-08)

b. Required overfill protection equipment is not installed; (4-2-08)

c. Required leak detection equipment is not installed; or (4-2-08)

d. Required corrosion protection equipment is not installed. (4-2-08)

03. Warning of Violations. The Department may classify a petroleum underground storage tank as ineligible for delivery, deposit, or acceptance of a regulated petroleum substance if the owner or operator of the tank has been issued a written warning for any of the following violations, and the owner or operator fails to initiate corrective action within thirty (30) days of the issuance of the written warning, unless the deadline is extended by the Department: (4-2-08)

a. Failure to properly operate or maintain leak detection equipment; (4-2-08)

b. Failure to properly operate or maintain spill, overfill, or corrosion protection equipment; or (4-2-08)

c. Failure to maintain financial responsibility. (4-2-08)

04. Service of Notice. If the Department classifies a petroleum underground storage tank as ineligible for delivery, deposit, or acceptance of a regulated petroleum substance pursuant to Subsections 500.02 or 500.03, the Department shall provide a written notice of the determination to the owner or operator prior to prohibiting the delivery, deposit, or acceptance of a regulated petroleum substance. Notice is considered properly served by the Department in any of the following ways: (4-2-08)

a. The notice is personally delivered to the owner or operator; or (4-2-08)

b. The notice is clearly posted at a public entrance to the facility where the petroleum underground storage tank is located and a copy of the notice is also sent by certified mail to the last known address of the owner or operator. (4-2-08)

05. Red-Tagging. Once service of the written notice of the ineligible determination is complete, the Department shall then attach a red tag to each fill pipe of the ineligible petroleum underground storage tank clearly identifying the tank as ineligible. The Department shall also maintain a list of all petroleum underground storage tanks that are classified as ineligible for delivery, deposit, or acceptance of a regulated petroleum substance. The Department shall make the list available to the public by posting the list on the Department's website at www.deq.idaho.gov. (4-2-08)

06. Written Notice. The written notice required by Subsection 500.04 must include: (4-2-08)

a. The specific reasons or violations that led to the ineligible classification; (4-2-08)

b. A statement notifying the owner and operator that the petroleum underground storage tank is ineligible for delivery and it is unlawful for any person to deliver to, deposit into, or accept a regulated petroleum substance into the petroleum underground storage tank; (4-2-08)

c. The effective date the petroleum underground storage tank is deemed ineligible for delivery; (4-2-08)

d. The name and address of the department representative to whom a written request for re-inspection can be made, if a re-inspection is necessary; (4-2-08)

e. A statement regarding the right to appeal the Department's action regarding ineligible classification pursuant to IDAPA 58.01.23, "Rules of Administrative Procedure Before the Board of Environmental Quality"; and (4-2-08)

f. The option to request a compliance conference pursuant to Subsection 500.07. (4-2-08)

07. Compliance Conference. The owner or operator may request a compliance conference with the Department within fifteen (15) days of receipt of the notice. A compliance conference shall be scheduled within twenty (20) days and conducted in an informal manner by the Department. At the compliance conference, the owner or operator may explain why he believes the petroleum underground storage tank should not be classified as ineligible. During the compliance conference, the owner or operator and the Department will identify and establish appropriate acts and a time schedule for compliance as necessary. (4-2-08)

08. Duration of Ineligible Classification. The classification of a petroleum underground storage tank as ineligible shall remain in effect until the conditions cited in the notice no longer exist. If the Department determines that an ineligible storage tank has returned to compliance and is now eligible for delivery, deposit, or acceptance of a regulated petroleum substance, the Department or an authorized designee shall, as soon as practicable, remove the red tag from the petroleum underground storage tank and also remove the petroleum underground storage tank from the ineligible list posted on its website. The Department will also send a written notice to the owner and operator that an ineligible storage tank has returned to compliance and is now eligible for delivery, deposit, or acceptance of a regulated petroleum substance. (4-2-08)

09. Declining Classification. The Director may decline to classify a petroleum underground storage tank as ineligible if the Director decides that classifying the petroleum underground storage tank as ineligible for delivery, deposit, or acceptance is not in the best interest of the public. (4-2-08)

a. The Director may only defer application of delivery prohibition for up to one hundred eighty (180) days after determining a petroleum underground storage tank is ineligible for delivery, deposit, or acceptance of a regulated petroleum substance. (4-2-08)

b. The Director may authorize the delivery, deposit, or acceptance of product into an ineligible petroleum underground storage tank if such activity is necessary to test or calibrate the underground storage tank or dispenser system. (4-2-08)

10. Department Authority. Nothing in Section 500 shall affect or preempt the authority of the Department to prohibit the delivery, deposit, or acceptance of a regulated petroleum substance to a petroleum underground storage tank under other existing authorities. (4-2-08)

11. Proper Notice. A person shall not be in violation of Subsection 500.01 if the Department fails to provide the notice required by Subsections 500.04 and 500.05. (4-2-08)

12. Unlawful to Tamper with Red Tag. It shall be unlawful for any person to tamper with and/or remove the red tag without the Department's approval. (4-2-08)

501. -- 599. (RESERVED)

600. PETROLEUM UNDERGROUND STORAGE TANK DATABASE.

01. Maintenance. The Department shall maintain a database which provides details on the status of all petroleum underground storage tanks in the state of Idaho which are subject to regulation. The database shall be updated no less than the end of each calendar quarter. (4-2-08)

02. Identification. The database shall identify any tanks subject to delivery prohibition. (4-2-08)

03. Petition. Petroleum underground storage tank owners or operators may petition the Department to correct any inaccurate information for their tanks and the Department shall correct any such inaccurate information within thirty (30) days after verification. (4-2-08)

04. Availability. The database shall be available to the public on the Department's website at www.deq.idaho.gov. (4-2-08)

601. -- 999. (RESERVED)

Subject Index

MEMORANDUM

TO: Jim Anderson
Xerxes Corporation
1210 N. Tustin Ave.
Anaheim, CA 92807

FROM: J.M. Plecnik
Consultant
1880 San Anseline
Long Beach, CA 90815
(562) 985-4406

DATE: September 11, 2007

SUBJECT: Seismic Behavior of Xerxes Underground Tanks

The behavior of Xerxes underground tanks under seismic loading can best be summarized in two different categories. The first category would consider seismic loads occurring at some distance away from the tank, so that the rupture of the earth's crust is not in the immediate vicinity of the underground tank. That is, any rupture in the earth's crust is not occurring directly at the site of the tank. In this case, the behavior of the seismic tank is similar to that of a ball in the ocean that is subjected to an oncoming wave. Since the size of the ball is much smaller than the wave, the ball will simply move up and down with the wave motion. Likewise, in the case of an earthquake which also emits energy waves (ground waves similar to that of water in the ocean), the underground tank simply rides this energy wave without causing large localized forces on the tank itself. The second category is more critical and it consists of the rupture (fault lines) of the earth's crust occurring at or very near the location of the tank. In this case, the tank is incapable of surviving the rupture of the earth's crust and, like the soil, will also rupture.

In mid 1990's, Xerxes Corporation commissioned the CSULB Structures Lab, under the direction of J.M. Plecnik, to analyze 8 ft. diameter Xerxes underground tanks subjected to

seismic loading. This research effort culminated in several lengthy reports, including the May 28, 1997 report titled *Evaluation of 8 ft. Diameter Xerxes Underground Tanks Under Seismic Loading*. This report was utilized to obtain a design US Patent, number US 6,397,168 B1, dated May 28, 2002. The basic conclusions of this research effort are summarized in the above two categories.

The underground fiberglass storage tanks usually come with additional components, including straps and deadmen. The straps and the deadmen are intended only for uplift forces caused by buoyancy when the underground tanks are located below the water table. Hence, the straps and the deadmen are not intended to mitigate or reduce the seismic loads imposed on the underground gasoline storage tanks.

In conclusion, the seismic loads in underground tanks, located away from the fault, consist of added lateral and vertical pressures on the tank wall, which are not significant in relation to stresses produced by external soil and external hydrostatic loads, as well as internal vacuum or internal hydrostatic loads. Seismic loads are relatively short term and these added seismic loads on the tank do increase the stress levels in the tank shell. However, the increase is not critical, due to the fact that the safety factors for fiberglass underground tanks under non-seismic load conditions exceed 5.0.

XERXES®
a ZCL company

Fiberglass Underground Storage Tanks for Petroleum Applications

making a lasting difference®

www.xerxes.com

Xerxes® Corporation – A trusted brand for more than 30 years

Xerxes History

Xerxes Corporation is widely viewed today as the leading manufacturer of underground storage tanks in the United States. Established in 1979, Xerxes has forged strong brand loyalty built on a reputation for innovation and the highest quality products and services.

Like most market leaders, we have a long history of design innovation including development of the first UL-listed double-wall fiberglass tank. We followed that with the introduction of a second-generation double-wall design, which for the first time incorporated a factory-installed hydrostatic monitoring system. This method of leak detection has become the most popular form of monitoring fiberglass underground tanks. More recently, we further improved our tank design by incorporating Parabeam®, a unique and proprietary three-dimensional glass fabric. Parabeam bonds the primary and secondary walls of our double-wall tank together for greater structural integrity, while also allowing for a free-flowing, clearly defined interstice between the two walls. Industry-leading innovations such as these, plus many others, are why petroleum equipment distributors, fuel marketers and commercial accounts rely on Xerxes for safe underground storage tank products.

One Company – Two Trusted Brands

Today, Xerxes is part of the ZCL® Composites group of companies manufacturing underground and aboveground fiberglass tanks for a wide range of applications, primarily petroleum products. ZCL Composites (ZCL) is a publicly traded company on the Toronto Stock Exchange (TSX: ZCL). Established in 1987, ZCL began manufacturing fiberglass tanks in Canada. Like Xerxes in the United States, ZCL's growth and the popularity of fiberglass tanks in Canada has been steady. Combined, the Xerxes brand in the United States and the ZCL brand in Canada make us North America's largest manufacturer of underground storage tanks. We service our underground storage tank customers from six strategically located North American manufacturing plants, four in the United States and two in Canada. Our extensive geographic coverage gives us unmatched ability to cost-effectively deliver tanks anywhere in North America. With more than 200,000 tanks installed, our position as the industry's leading manufacturer of underground storage tanks strengthens each year.

Benefits of Xerxes fiberglass underground storage tanks

Why choose a fiberglass tank?

Since their introduction in the 1960s, fiberglass underground tanks have rapidly grown in popularity. It was becoming clear that rusting steel tanks were leaking and creating serious environmental damage. Therefore, the initial focus of fiberglass manufacturers was to design storage vessels that weren't vulnerable to the effects of external corrosion.

Throughout the 1980s, major oil companies and other large fuel marketers quickly began to realize the benefits of fiberglass over steel underground tanks. Today the preference for fiberglass tanks reaches across all segments of the market and includes those who specify, install and own underground storage tanks. Further, the recognized benefits of fiberglass extend well beyond external corrosion protection. Today, with a greater industry-wide understanding of the increased regulatory burden and risks associated with storage tanks, tank buyers are much more educated and sophisticated in their product selection.

Consider the following features and benefits:

Corrosion Resistance – External corrosion protection will always be a concern, but, with the widespread use of ethanol-blended gasoline (E10, E15, E85), biodiesel fuels and ultra-low sulfer diesel (ULSD), the focus has shifted to internal corrosion protection. These new biofuels are creating increasing incidents of aggressive microbial-induced corrosion (MIC) of metal components in fueling systems. Fiberglass tanks are not vulnerable to internal corrosion caused by MIC. Neither do they rust externally due to corrosive soil environments.

Fuel Compatibility – In addition to creating corrosive conditions in tanks, new ethanol-blended fuels today also raise questions regarding compatibility of the stored fuel with tank materials. Xerxes double-wall fiberglass tanks are not only warranted for the full range of ethanol-blended gasoline, they are also UL-tested and UL-listed as compatible with 0-100 percent ethanol storage. This is a very clear and distinct difference from steel storage tanks.

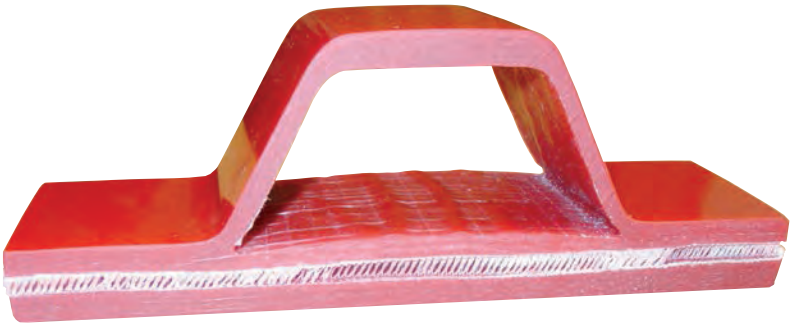
Track Record – With hundreds of thousands of tanks installed thoughout North America during the last three decades, fiberglass tanks have an outstanding record of both protecting the environment and minimizing tank owners' risk. The great majority of new underground tanks installed today for North America's largest fuel retailers and commercial fleet facilities are fiberglass tanks. After exploring their options and evaluating years of product performance, these tank owners overwhelmingly continue to choose fiberglass.

Why choose a Xerxes tank?

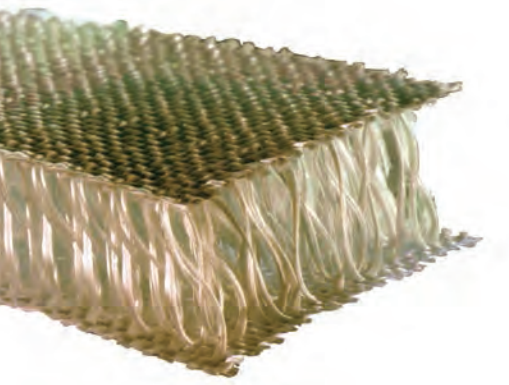
During the last three decades, Xerxes has gained a worldwide reputation as a leader in underground storage tank technology. Since its inception in 1979, Xerxes has steadily grown from a tank manufacturer with a small market share to its role today as the market leader. This recognition can be attributed to the many experienced Xerxes employees who strive to not only meet but to exceed our customers' requirements. Equally significant is the quality of the tanks and related products that we manufacture.

Underground storage tanks are not commodity products. Xerxes storage tanks offer customers a number of unique and significant design and performance differences superior to both competitive fiberglass tanks and steel tanks.

Consider the following:



Rib Design – Circumferential ribs are an important design element of any fiberglass underground vessel. Therefore, the rib geometry and how it's incorporated into the cylinder, or tank itself, is an important consideration for designers and customers as they compare products. In the Xerxes design, with its consistent, high-profile rib structure, ribs are fabricated directly into the tank cylinder – not as a secondary step in the process. This increases the overall strength of the tank and results in a structurally superior product.



Parabeam® Construction – As part of our history of continuous improvement, Xerxes introduced Parabeam, a unique and proprietary three-dimensional glass fabric, into its underground tank design. Parabeam enhances overall structural integrity by creating a bond between the primary and secondary cylinder walls, while providing a free-flowing interstitial space for monitoring capabilities. Another important benefit is the elimination of false alarms created by fluctuating reservoir levels that can be a recurring problem in other manufacturers' hydrostatically monitored tanks.

Maintenance-Free – Many manufacturers of steel tanks have reduced their warranty duration from 30 years to 10 years, and have incorporated language that requires ongoing maintenance and removal of water bottoms as a condition of warranty coverage. The presence of water in the bottom of fuel tanks is a common condition. Maintenance to frequently remove it can be expensive over both the short-term and long-term life of a tank, and can also leave an owner vulnerable to denied warranty claims should a steel tank corrode internally. Xerxes offers a 30-year limited warranty with no restrictions regarding water-bottom monitoring and removal.

Company Stability – Over the last 30 years, tank manufacturers have gone out of business or filed for bankruptcy and no longer provide warranty coverage. Customers who purchase underground tanks do so with the expectation that their tank will provide many years of trouble-free service, and that the manufacturer will be around to suppport its products and its warranties. Xerxes has a three-decade record of doing just that.

TRUCHEK®– State-of-the-art continuous monitoring

TRUCHEK® hydrostatic tank monitoring for double-wall tanks is an easy, precise and reliable method for continuous leak detection and for tank-tightness testing. For two decades, TRUCHEK has been successfully monitoring thousands of tanks in many different types of installations.

Continuous Monitoring

When you order a Xerxes double-wall tank with the TRUCHEK option, the interstice between the two tank walls is filled at the factory with a calcium-chloride fluid that also partially fills a reservoir, creating hydrostatic pressure throughout the interstice. An electronic probe placed in the tank's reservoir alarms when the fluid level either falls below or rises above the acceptable level. This increasingly popular method of leak monitoring gives tank owners greater peace of mind than the alternative method of using a simple liquid sensor, which often never detects an outer-wall breach. TRUCHEK has become the industry standard as a state-of-the-art technique for continuous monitoring.

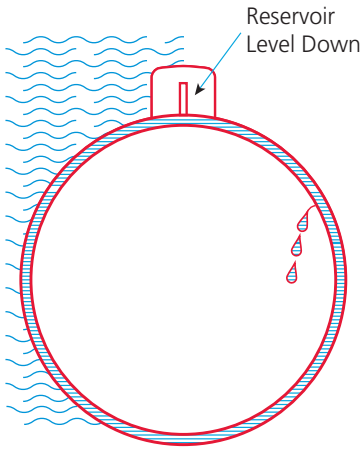
Changing regulations in some markets now require that new double-wall tanks have continuous leak detection using a constant vacuum, air pressure or hydrostatic pressure in the interstice. TRUCHEK is the ideal solution to this growing regulatory requirement.

Tank Tightness

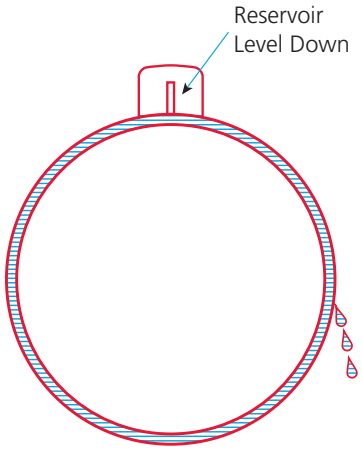
TRUCHEK also provides a simple, precise and reliable method to perform a tank-tightness test. The 10-hour tightness-test procedure meets the strict NFPA329 criteria. A shorter 4-hour test (while product is dispensing) exceeds EPA's criteria for a tank-tightness test.

How does TRUCHEK work?

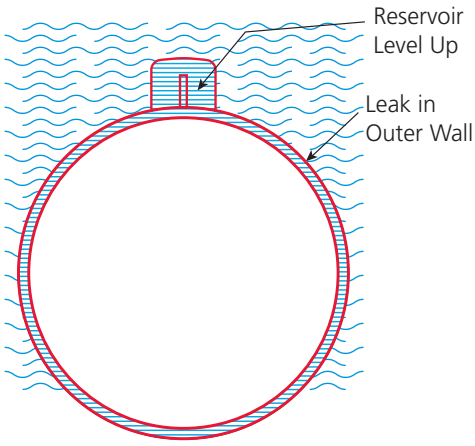
Primary-Tank Leak in Wet Hole or Dry Hole



Secondary-Tank Leak in Dry Hole



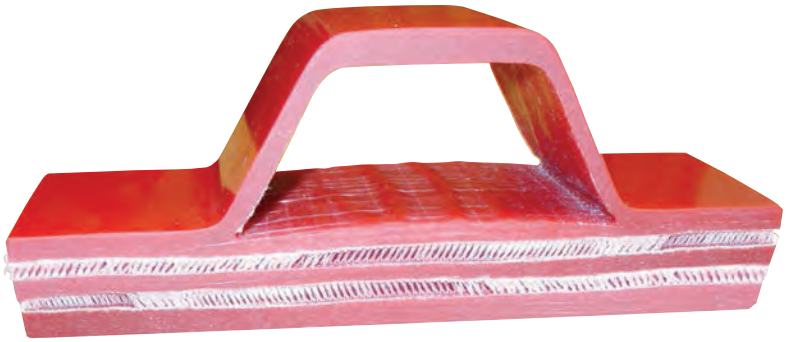
Secondary-Tank Leak in Wet Hole



Additional underground storage tank solutions

When a customer's needs go beyond the standard double-wall tank, Xerxes offers products that address a wide range of requirements. With a full line of tank accessories, we offer customers the most comprehensive range of solutions found in the petroleum equipment industry today. Please visit www.xerxes.com for additional information on each of these products.

Multicompartment Tanks – These Xerxes tanks are a popular choice among retail gasoline marketers and fleet fueling owners. The ability to store two or three grades of fuel, or gasoline and diesel, in a single tank is particularly appealing when the amount of onsite space needed for multiple tanks is either not available or difficult to obtain. Customers may also find installation and insurance cost savings when using multicompartment tanks. The Xerxes double-wall multicompartment tank comes standard with a double-wall bulkhead, while other tank manufacturers require an upgrade to a double-wall bulkhead. Xerxes offers a wide range of capacity options in 6-, 8- and 10-foot-diameter models.



Triple-Wall Tanks – Some customers and regulatory agencies now require even more enhanced protection than double-wall tanks provide. Conditions that lend themselves to considering a triple-wall tank are sensitive groundwater aquifers, or nearby lakes or streams. The Xerxes UL-listed triple-wall tank, with an additional Parabeam interstice, is the innovative and cost-effective answer when this level of containment is required.

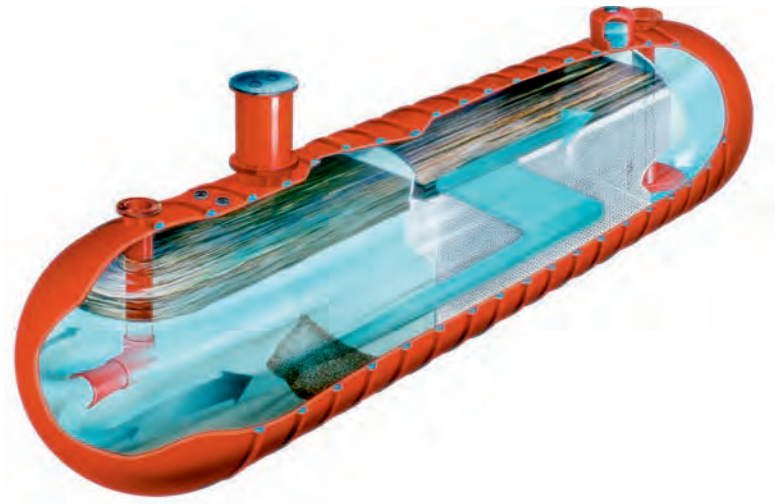
The ZCL Phoenix System® – In some situations, single-wall tanks that need to be upgraded to double-wall tanks offer site challenges that make removal of existing tanks either cost-prohibitive or extremely difficult. For instance, tanks are sometimes covered or surrounded by buildings, roads or rail lines. In such cases, converting a single-wall tank (either fiberglass or steel) into a double-wall tank might be done most efficiently with ZCL's Phoenix System. This ULC-listed system consists of two corrosion-resistant laminates with the proprietary Parabeam glass fabric between the laminates creating an interstitial space. The interstice can be either dry or hydrostatically monitored. The Phoenix System, applied onsite by trained installers, is biofuels compatible, including ethanol-blended fuels and biodiesels.

Additional underground storage tank solutions

Diesel Exhaust Fluid Tanks – Demand for diesel exhaust fluid (DEF) is growing significantly as increasing numbers of commercial, passenger, rail and marine diesel engines that require the use of DEF enter the market. A Xerxes underground tank is the ideal solution for the very unique storage requirements that DEF presents. Unlike carbon steel tanks, a Xerxes fiberglass tank does not require special coatings or linings to protect the purity of the DEF product. Extensive testing with third-party laboratories was conducted to verify the suitability of long-term storage while maintaining product quality.

Xerxes uses stainless steel fittings, manway covers and striker plates on all tanks designed for DEF storage. A UL label is attached to all tanks that meet listing criteria. Each tank interior is thoroughly cleaned and then sealed to prevent contamination during shipping and installation.

In the relatively brief period of time that DEF has been used in North America, Xerxes has established a leadership role in introducing fiberglass tanks as the bulk storage vessel of choice. With more than 1,000 DEF tanks in service, customers are clearly putting their trust in Xerxes' design innovation capabilities.



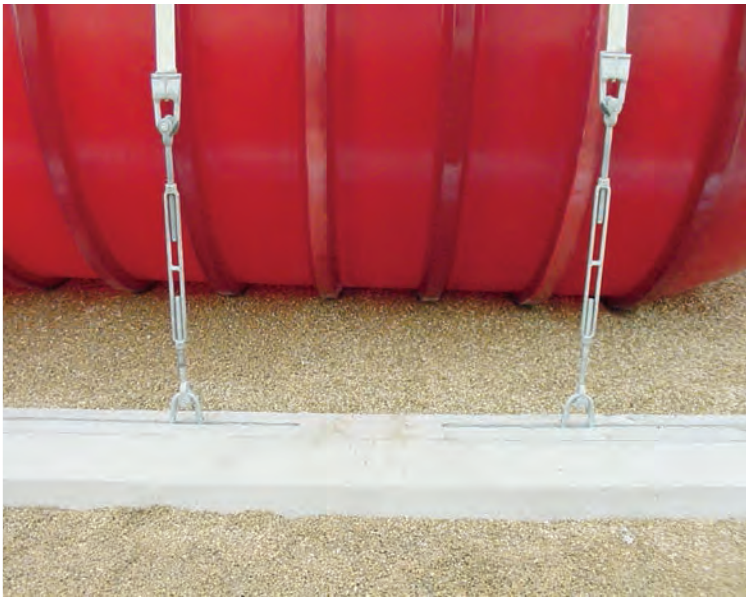
Oil/Water Separators – With a fiberglass underground tank at the heart of the design, a Xerxes oil/water separator incorporates unique refinements within the vessel to create a separator that removes free-floating oils and settleable sands from oil/water mixtures. A properly sized polypropylene vertical-tube coalescer is designed to produce effluent quality of 10 ppm free-floating oil. A Xerxes oil/water separator is an excellent choice for managing water runoff from parking lots or equipment washdown stations. This product is also available with a UL 2215 listing.

Storage tank accessories

Today's retail and commercial fueling facilities are sophisticated systems that are installed in a highly regulated environment. While the storage tank is the critical component in an underground fuel system, other important accessories are necessary in order to provide spill containment, tank anchoring, tank-top corrosion protection, leak detection and other important functions. Xerxes engineers have designed innovative, complimentary products that provide system designers and installers with cost-effective, easy-to-install accessories. Not all tank manufacturers provide the wide range of accessories that Xerxes offers. This is another example of how Xerxes' innovative spirit benefits customers.

As with many products, Xerxes tanks and accessories require proper installation to ensure that the customer receives the long-lasting, trouble-free performance that its products are designed for. To that end, Xerxes provides a comprehensive Installation Manual and Operating Guidelines document that outlines the easy, yet proper, steps necessary for a successful installation.

Storage tank accessories



Containment Sumps and Collars – Sumps and collars are common accessories found on virtually all double-wall tanks installed today. Xerxes supplies optional, factory-installed containment collars that provide secondary containment around tank fittings and manways. Designed to be a custom match to the collar, the Xerxes containment sump comes in a variety of models and sizes, all engineered to accommodate different customer preferences and needs. Xerxes sumps and collars are also available in double-wall models that can be monitored with the reliable TRUCHEK hydrostatic monitoring system.

Anchoring System – Site-specific installation conditions generally dictate whether a tank-anchoring system is necessary. Some customers choose to anchor all their tanks. Xerxes offers a complete tank-anchoring system, including reinforced precast concrete deadman (designed to American Concrete Institute standards), fiberglass anchoring straps and galvanized turnbuckles. Each component is engineered to specific tank sizes and for ease of installation. In most cases concrete deadmen can be delivered on the same trailer as the tank. This both minimizes the shipping cost and assures that deadmen are ready for use when the tank is set.

Hydrostatic Monitoring – The image on page 8 illustrates the functional design of the highly effective TRUCHEK hydrostatic monitoring system. A "jacket" of calcium-chloride solution is factory-installed in the tank interstice and connected to a tank-top reservoir where the fluid level is monitored with a simple level sensor. The unique Parabeam construction of a Xerxes double-wall tank eliminates false leak alarms that can occur with other tank designs. In addition to its simple, yet highly effective, monitoring capabilities, TRUCHEK provides true continuous monitoring of both tank walls regardless of site conditions. This continuous-monitoring feature is increasingly attractive to state and federal regulators, and may become a requirement for all new double-wall tanks in the future.

Guide Specifications for Xerxes Underground Petroleum Storage Tanks

Short form:
The contractor shall provide a double-wall or triple-wall fiberglass reinforced plastic (FRP) UL-listed underground storage tank as shown on the drawings. The tank size, fittings and accessories shall be as shown on the drawings. The fiberglass tank shall be manufactured by Xerxes Corporation.

The tank shall be tested and installed according to the Xerxes Installation Manual and Operating Guidelines for Fiberglass Underground Storage Tanks in effect at time of installation.

Long form:

Part I: General

1.01 Quality Assurance

A. Acceptable Manufacturer: Xerxes Corporation

B. Governing Standards, as applicable:

1. Underwriters Laboratories (UL) Standard for Safety 1316 Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols, and Alcohol-Gasoline Mixtures. A UL label shall be attached to each tank.
2. National Fire Protection Association (NFPA) Standards: NFPA 30: Flammable and Combustible Liquids Code, NFPA 30A: Code for Motor Fuel Dispensing Facilities and Repair Garages, NFPA 31: Standard for the Installation of Oil-Burning Equipment.
3. City of New York Department of Buildings M.E.A., #161-89-M.
4. American Concrete Institute (ACI) standard ACI 318-11, Building Code Requirements for Structural Concrete.

C. Submittals

1. Contractor shall submit ___ copies of shop drawings, manufacturer's product brochures, and Installation Instructions.

Part II: Products

2.01 Double-Wall and Triple-Wall Fiberglass Reinforced Plastic (FRP) Underground Storage Tanks:

A. Loading Conditions – Tank shall meet these design criteria:

1. **Interstitial Pressure** – The interstitial space of the tank shall withstand a minimum 20-psig pressure test.
2. **Internal Load** – Tank shall withstand a 5-psig air-pressure test with a 5:1 safety factor.
3. **Surface Loads** – Tank shall withstand surface H-20 and HS-20 axle loads when properly installed according to Xerxes' current Installation Manual and Operating Guidelines.
4. **External Hydrostatic Pressure** – Tank shall be designed for 7' of overburden over the top of the tank, the hole fully flooded and a safety factor of 5:1 against general buckling.

B. Product Storage:

1. The primary compartment of double-wall and triple-wall tanks shall be vented and operated at atmospheric pressure only.
2. Tank shall be capable of storing liquids with a specific gravity up to 1.1.
3. Tank shall be capable of storing products identified in the manufacturer's standard limited warranty in effect at the time of purchase.

C. Materials:

1. The primary and secondary walls of the tank shall be manufactured with 100% premium resin and glass-fiber reinforcement. No sand or silica fillers shall be added to the resin.
2. The interstitial space between the primary and secondary walls shall be constructed with a glass reinforcement material such as Parabeam®, which provides a structural bond between the two tank walls, while creating a defined interstice that allows for free flow of liquid.

D. Tank Dimensions (Refer to Xerxes literature on gallonage):

1. Tank shall have nominal capacity of _____ gallons.
2. Tank shall have nominal outside diameter of _____ feet.
3. Tank shall have a nominal overall length of _____ feet/inches.

2.02 Tank Monitoring System

A. General

1. Tank shall be continuously monitored with the TRUCHEK® hydrostatic leak monitoring system.
2. The continuous monitoring system shall include monitoring fluid factory-installed in the interstitial space and within a fiberglass tank-top mounted reservoir.
3. The monitoring system shall be recognized by the National Work Group on Leak Detection Evaluations (NWGLDE) as continuous leak detection and as a precision tank test.
4. The monitoring system shall be independently tested by a qualified third party and verified to be capable of detecting leaks as small as .05 gallons per hour when TRUCHEK tank-tightness test procedures are followed.

B. Design

1. The continuous monitoring system shall be designed to detect a leak in either the primary or secondary wall at all times, regardless of the water-table conditions at the installation site.
2. The interstice of the tank shall be designed for a 5:1 safety factor beyond normal hydrostatic operating pressure to ensure structural integrity and to prevent false leak alarms.

2.03 Accessories

A. Tank Anchoring

1. Anchor straps shall be as supplied by tank manufacturer and designed for a maximum load of 25,000 lbs.
2. Galvanized turnbuckles (two per anchor strap) shall be supplied by the tank manufacturer.
3. Prefabricated concrete anchors shall be supplied by the tank manufacturer, designed to the ACI 318-11 standard, manufactured with 4,000 psi concrete, and shall have adjustable anchor points.

B. Manways

1. The standard manway shall be flanged, 22" I.D. and complete with UL-listed gaskets, bolts and covers as shown on tank drawings.

C. Threaded Fittings

1. All threaded fittings shall be NPT half or full couplings, in 2", 4" or 6" diameters.
2. Fittings shall be installed on the tank-top centerline or in the cover of the manway as shown on the tank drawings.

D. Containment Collars & Sumps

1. The tank shall have factory-installed 42"-or 48"-diameter containment collars as shown on the tank drawings.
2. Containment sumps in 42"-or 48"-diameter, provided by the tank manufacturer and designed for mounting on the containment collars, shall be supplied as shown on the tank drawings.
3. Adhesive shall be provided by the tank manufacturer with each containment collar and sump.
4. Containment collars and sumps shall be designed and supplied as a containment system. Only sumps provided by the manufacturer shall be allowed.

Part III: Testing and Installation

3.01 Testing

A. Testing – Tank shall be tested according to the Xerxes Installation Manual and Operating Guidelines in effect at time of installation.

3.02 Installation

A. Installation – Tank shall be installed according to the Xerxes Installation Manual and Operating Guidelines in effect at time of installation.

Part IV: Limited Warranty

4.01 Limited Warranty

A. Limited Warranty – Warranty shall be manufacturer's standard limited warranty in effect at time of purchase.

Xerxes Underground Double-Wall Tank Data

	Nominal Capacity (gallons)	Actual Capacity (gallons)	Tank Length (feet/inches)	Nominal Shipping Weights (lbs) (dry interstitial)	Nominal Shipping Weights (lbs) (wet interstitial)	Number of Anchor Straps Required
4-foot-diameter	600	602	7′-3 1/2″	900	1,100	2
	1,000	1,009	11′-7 1/2″	1,400	1,700	2
	2,000	2,013	22′ -3 5/8″	2,800	3,400	2
6-foot-diameter	2,500	2,324	13′-5 3/4″	2,200	2,800	2
	3,000	2,910	16′-4 1/4″	2,600	3,300	2
	4,000	3,789	20′-8″	3,600	4,400	2
	5,000	4,961	26′-5″	4,300	5,200	4
	6,000	5,840	30′-8 3/4″	5,000	6,100	4
8-foot-diameter	4,000	4,190	15′- 1/2″	2,700	3,600	2
	5,000	5,089	17′-8 1/2″	3,200	4,200	2
	6,000	6,044	20′-6 1/2″	3,700	4,900	2
	8,000	7,899	26′- 1/2″	4,800	6,200	4
	10,000	9,753	31′-6 1/2″	5,900	7,500	4
	12,000	11,608	37′- 1/2″	7,000	8,800	4
	15,000	14,881	46′- 9″	9,100	11,200	6
10-foot-diameter	10,000	10,420	21′-5 1/4″	4,900	6,400	4
	12,000	11,904	24′- 1/4″	5,600	7,200	4
	15,000	15,041	29′-5 3/4″	7,000	8,900	4
	20,000	19,782	37′-8 3/4″	9,000	11,300	6
	25,000	25,431	47′-6 3/4″	11,800	14,600	8
	30,000	30,172	55′-9 3/4″	14,000	17,200	10
	35,000	34,912	64′- 3/4″	16,500	20,100	12
	40,000	40,443	73′-8 1/4″	19,000	23,100	14
12-foot-diameter	20,000	20,638	29′ -4″	14,000	16,700	6
	25,000	25,381	35′ -7″	16,600	19,700	8
	30,000	31,072	43′ -1″	19,900	23,500	10
	35,000	35,815	49′ -4″	22,500	26,500	12
	40,000	39,609	54′ -4″	24,600	28,900	12
	45,000	44,352	60′ -7″	27,400	32,100	16
	48,000	48,146	65′ -7″	29,500	34,500	18
	50,000	50,044	68′ -1″	30,500	35,700	18

Notes:

1. Tank data for single-wall and multicompartment tank models is available at www.xerxes.com.
2. Actual height of the tank may be greater than the actual diameter due to fittings and accessories. Load height during shipping may vary due to tank placement on the shipping trailer.
3. If an overfill-protection device is installed in the tank, the actual capacity will be reduced.

North American Manufacturing Facilities

ZCL Manufacturing Facilities

Edmonton, AB
Drummondville, QC

Xerxes Manufacturing Facilities

Anaheim, CA
Hagerstown, MD
Seguin, TX
Tipton, IA

ZCL® COMPOSITES INC.

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www.zcl.com

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MEMORANDUM

Date: July 6, 2016

To: Brittany Skelton
City of Ketchum Department of Planning and Building

From: Hales Engineering

Subject: Ketchum – Bracken Station TIS, Additional Information

UT16-851

The purpose of this memorandum is to address requests for additional information from the City of Ketchum Planning Commission regarding the proposed Bracken Station in Ketchum, Idaho. This memo will address only requests regarding traffic related issues. Each request is stated as received in italics, followed by the response from Hales Engineering.

1. *Obtain traffic counts at 10th Street/Main Street intersection in order to corroborate the 2008 data in the traffic study already conducted. If the traffic engineer wants to make the case that the need for new data is superfluous, and submits a narrative explaining why, that would be acceptable. However, the request for current data at the 10th Street/Main Street intersection is driven by public comment and providing this data also serves the purpose of addressing public concern, so obtaining the new counts is recommended.*

   Hales Engineering utilized peak-hour turning movement count data collected in February 2008 for a previous traffic impact study performed in the area. Using historical traffic data for SH-75 obtained from the Idaho Transportation Department (ITD), a growth rate of 1.1% per year was calculated based on recent trends. This 1.1% growth rate as well as a 30% seasonal adjustment, to reflect peak season traffic conditions, were used to estimate 2016 traffic conditions. These estimated traffic data were used for the traffic impact study.

   In order to address concerns raised at the planning commission meeting held on June 13, 2016, additional peak hour turning movement counts were collected on June 29, 2016. When compared with the previously discussed estimated data, it was found that the traffic volumes used in the traffic impact study were **5% higher** than the volumes collected on June 29th.

2. *Address the projected makeup of vehicles that will be using the gas station.*
    a. *What percentage will be oversized vehicles (RVs, construction trailers, et cetera)?*
        i. *Address how the proportion of oversized vehicles impacts the amount of vehicles that can queue in the turn lane.*
    b. *Address potential back-up of northbound traffic lining up to make a left turn into the gas station and the implications of exceeding the length of the turn lane (e.g. traffic backed up further south than the turn lane extends).*

Vehicle classification data were collected at a local gas station over two days. Only 7% of vehicles observed during data collection activities were larger vehicles (i.e. trucks pulling trailers or recreational vehicles). The remaining 93% of vehicles observed were passenger cars or pickup trucks. Using these data, we project that the vast majority of vehicles that will use the Bracken Station will be passenger cars and pickup trucks.

Standard practice for queuing analyses is to assume an average 20 feet of queuing length per vehicle. Obviously, larger vehicles (i.e. tractor trailers, RVs, etc.) will occupy more than 20 feet of queuing length. However, the projected vehicle classification does not suggest that it would be necessary to modify the 20 feet per vehicle assumption.

The proposed left-turn lane would serve vehicles turning left from Main Street (SH-75) into the gas station, as well as vehicles turning left onto 10th Street. The traffic impact study found that with future (2020) plus project traffic conditions, the 95th percentile queue at the intersection would extend for approximately 105 feet. The proposed left-turn lane is more than adequate to accommodate queues of this length.

Although it is unlikely that the left-turn queue would overflow into the thru lane, such an event would likely have minimal short-term impacts on thru traffic. Delay for northbound left-turning vehicles at the gas station access, as well as at 10th Street are anticipated to be quite short. When delays are short, queues tend to dissipate quickly. As soon as the queue is shortened to a length that can be accommodated by the left-turn lane, the flow of thru traffic is restored.

3. *Address the potential for northbound (left) and southbound (right) turn lanes on 10th Street to facilitate left and right turns onto Main Street.*

Separate right- and left-turn lanes at stop-controlled approaches to unsignalized intersections can help to mitigate delay on the approach by allowing right-turning vehicles to execute a right-turn movement while bypassing waiting left-turning vehicles, or vice versa.

A separate right-turn lane is not recommended at this location. Turning movement wheel path analyses show that with the current approach geometry, larger vehicles are able to execute right-turn movements with minimal encroachments into opposing

traffic lanes. It is likely that the addition of a separate right-turn lane would constrain the right-turn movement such as to require significant encroachment into opposing traffic lanes. The traffic impact study found that delays at this intersection are anticipated to be relatively low, and therefore a separate right-turn lane would not provide significant benefit.

If you have any questions regarding this memo, please feel free to contact us.

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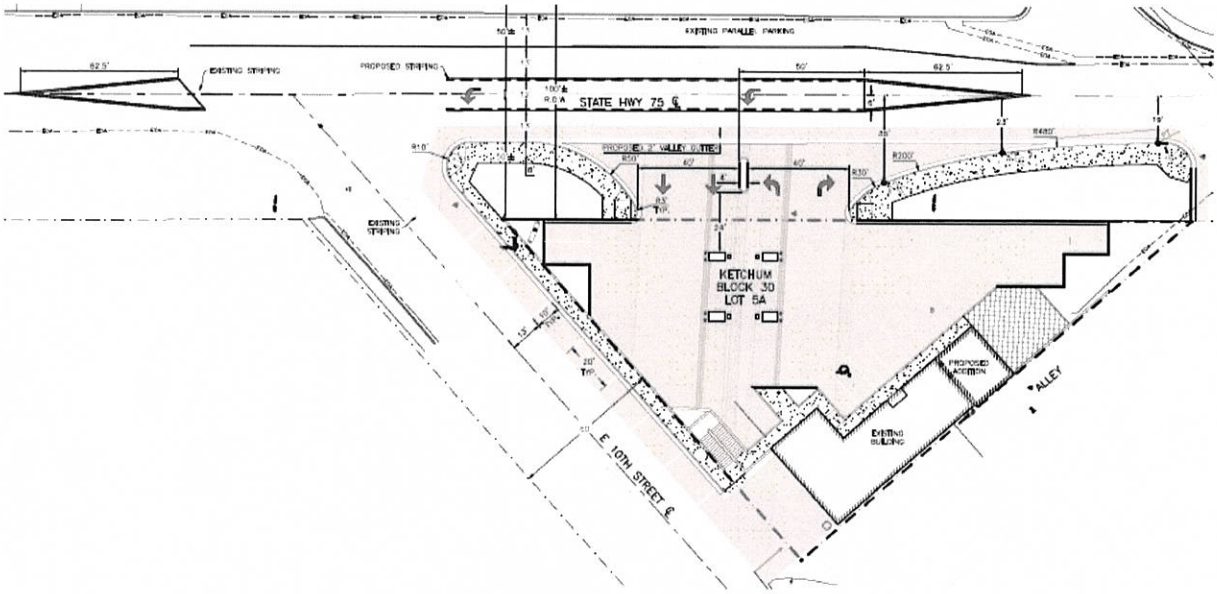
Bracken Station

Traffic Impact Study *UPDATED*



Ketchum, Idaho

October 3, 2016

UT16-851

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EXECUTIVE SUMMARY

This study addresses the traffic impacts associated with the proposed Bracken Station in Ketchum, Idaho. The proposed gas station will be located on the southwest corner of the 10th Street / Main Street (SH-75) intersection.

Included within the analyses for this study are the traffic operations and recommended mitigation measures for existing conditions and plus project conditions (conditions after development of the proposed project) at key intersections and roadways in the vicinity of the site. Future 2020 and 2026 conditions are also analyzed.

TRAFFIC ANALYSIS

The following is an outline of the traffic analysis performed by Hales Engineering for the traffic conditions of this project.

Existing (2016) Background Conditions Analysis

Hales Engineering performed weekday morning (7:00 to 9:00 a.m.) and afternoon (3:00 to 7:00 p.m.) peak period traffic counts at the following intersections:

- 10th Street / Main Street (SH-75)
- 5th Street / Main Street (SH-75)

These counts were performed on Thursday, September 1, 2016. The morning peak hour was determined to be between 8:00 and 9:00 a.m. and the evening peak hour was determined to be between 4:15 and 5:15 p.m. The evening peak hour volumes were found to be significantly 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. At the request of Ketchum City staff, anticipated traffic from the nearby Ketchum Community School was also added into the existing (2016) background traffic.

As shown in Table ES-1, both study intersections are currently operating at LOS B during the p.m. peak hour. The 95th percentile queues on the north- and eastbound approaches to the 10th Street / Main Street (SH-75) intersection were observed to extend for approximately 85 feet. The queues on the four approaches to the 5th Street / Main Street (SH-75) intersection were observed to extend between approximately 120 feet and 200 feet. No other significant queuing was observed.

Project Conditions Analysis

The proposed land use for the development has been identified as follows:

- Gasoline/Service Station with Convenience Market 8 Vehicle Fueling Positions

As directed by Ketchum City staff, trip generation for the development was calculated using data collected at an existing gas station in the area that was determined to be characteristically similar to the proposed Bracken Station. Data was gathered in the morning (7:00 to 9:00 a.m.) and afternoon (3:00 to 7:00 p.m.) peak periods on Thursday, September 1, 2016. The number of entering and exiting vehicles, the vehicle classification, and the duration of time that each vehicle remained on-site was recorded. A summary of these data can be found in Appendix E, however for information purposes, the average dwell time for a fueling vehicles was 5 minutes and 05 seconds, average dwell time for someone using the C-store was 5 minutes and 51 seconds, and the average dwell time for someone fueling and using the C-store was 9 minutes and 37 seconds. These data were used to determine a trip generation rate using the number of fueling positions as the independent variable (similar to the method used in the Institute of Transportation Engineers (ITE) *Trip Generation (9th Edition, 2012)*).

Trip generation for the proposed project is as follows:

- p.m. Peak Hour Trips: 90

Existing (2016) Plus Project Conditions Analysis

As shown in Table ES-1 both study intersections, as well as the project access, are anticipated to operate at acceptable levels of service during the p.m. peak hour with project traffic added. During the p.m. peak hour, the 95th percentile queue lengths on the 10th Street / Main Street (SH-75) intersection are anticipated to extend for approximately 70 feet on the eastbound approach and approximately 80 feet on the northbound approach with project traffic added. The 95th percentile queue length on northbound Main Street (SH-75) at the proposed project access is anticipated to extend for approximately 50 feet. The queues on the four approaches to the 5th Street / Main Street (SH-75) intersection are anticipated to remain in the range of approximately 120 feet and 200 feet with project traffic added.

Future (2020) Background Conditions Analysis

As shown in Tables ES-1, both study intersections are anticipated to operate at LOS B during the p.m. peak hour with future (2020) background traffic conditions. No significant changes to the 95th percentile queues are anticipated with projected future (2020) background traffic conditions.

Future (2020) Plus Project Conditions Analysis

As shown in Tables ES-1, both study intersections, as well as the project access, are anticipated to operate at acceptable levels of service during the p.m. peak hour with project traffic added. During the p.m. peak hour, the 95th percentile queue length on the northbound approach to the Main Street (SH-75) / 10th Street intersection is anticipated to extend for approximately 50 feet, while the queue length on the eastbound approach is anticipated to extend for approximately 80 feet. The northbound queue length on Main Street (SH-75) at the proposed project access is anticipated to extend for approximately 45 feet. It is anticipated that the 95th percentile queues at the 5th Street / Main Street (SH-75) intersection will remain unchanged with project traffic added.

Future (2026) Background Conditions Analysis

As shown in Tables ES-1 both study intersections are anticipated to operate at LOS B during the p.m. peak hour with future (2020) background traffic conditions. The anticipated 95th percentile queue lengths at the 10th Street / Main Street (SH-75) intersection are anticipated to extend for approximately 110 feet on both the north- and eastbound approaches with projected future (2020) background traffic conditions. The 95th percentile queues on the northbound approach to the 5th Street / Main Street (SH-75) intersection are anticipated to extend for over 350 feet.

Future (2026) Plus Project Conditions Analysis

As shown in Tables ES-1, the 10th Street / Main Street (SH-75) intersection is anticipated to operate at LOS F during the p.m. peak hour with project traffic added. All other study intersections are anticipated to operate at acceptable levels of service. During the p.m. peak hour, the 95th percentile queue length on the northbound approach to the Main Street (SH-75) / 10th Street intersection is anticipated to extend for approximately 70 feet, while the queue length on the eastbound approach is anticipated to extend for approximately 250 feet. The northbound queue length on Main Street (SH-75) at the proposed project access is anticipated to extend for approximately 60 feet. It is anticipated that the 95th percentile queues on the northbound approach to the 5th Street / Main Street (SH-75) intersection will extend for approximately 450 feet with project traffic added.

Hypothetical Future (2026) Plus Project Conditions Analysis

The analysis of this scenario was requested by Ketchum City staff. Trip generation for this hypothetical scenario was determined using data collected by university students in February 2010 at a gas station on US-89 in Provo, Utah. As shown in Tables ES-1, the 10th Street / Main Street (SH-75) intersection would be anticipated to operate at LOS F during the p.m. peak hour with project traffic added. All other study intersections would be anticipated to

operate at acceptable levels of service. During the p.m. peak hour, the 95th percentile queue length on the northbound approach to the Main Street (SH-75) / 10th Street intersection would be anticipated to extend for approximately 70 feet, while the queue length on the eastbound approach is anticipated to extend for approximately 350 feet. The northbound queue length on Main Street (SH-75) at the proposed project access would be anticipated to extend for approximately 80 feet. It would be anticipated that the 95th percentile queues on the northbound approach to the 5th Street / Main Street (SH-10) intersection will extend for approximately 450 feet with project traffic added.

TABLE ES-1
P.M. Peak Hour
ID Ketchum - Bracken Station TIS

Intersection	Projected 2016 Background	Projected 2016 Plus Project	Future 2020 Background	Future 2020 Plus Project	Future 2026 Background	Future 2026 Plus Project	Hypothetical Future 2026 Plus Project
Description	LOS (Sec/Veh[1])	LOS (Sec/Veh[1])	LOS (Sec/Veh[1])	LOS (Sec/Veh[1])	LOS (Sec/Veh[1])	LOS (Sec/Veh[1])	LOS (Sec/Veh[1])
10th Street / Main Street (SH-75)	**B (10.7) / EB**	**B (11.5) / EB**	**B (10.2) / EB**	**B (10.8) / EB**	**B (13.7) / EB**	**F (>50) / EB**	**F (>50) / EB**
5th Street / Main Street (SH-75)	**B (10.8)**	**B (10.7)**	**B (11.2)**	**B (11.1)**	**B (16.5)**	**B (18.9)**	**C (25.2)**
Project Access / Main Street (SH-75)	**-**	**A (5.9) / EB**	**-**	**A (7.9) / EB**	**-**	**B (13.1) / EB**	**C (17.4) / EB**

1. Intersection LOS and delay (seconds/vehicle) values represent the overall intersection average for signalized and all-way stop controlled intersections and the worst approach for all other unsignalized intersections.

2. This is a project intersection and is only analyzed in the plus project scenarios.

Source: Hales Engineering, October 2016

RECOMMENDATIONS

The following mitigation measures are recommended:

Existing (2016) Background Conditions Analysis

No mitigation measures are recommended.

Existing (2016) Plus Project Conditions Analysis

Although the delays at the study intersections are anticipated to be minimal, it is recommended that a two-way left-turn lane be constructed from a location north of 10th Street to a location south of the project. This will allow northbound left-turning vehicles to 10th Street or into the project access to decelerate and/or queue without blocking the flow of through

traffic. This will improve traffic safety in the area, as well as minimize delays. No other mitigation measures are recommended.

Future (2020) Background Conditions Analysis

No mitigation measures are recommended.

Future (2020) Plus Project Conditions Analysis

No additional mitigation measures are recommended.

Future (2026) Background Conditions Analysis

A mitigation that could be implemented at 10th Street / Main Street (SH-75) is to signalize the intersection when traffic volume warrants are met, as identified in the *Manual on Uniform Traffic Control Devices* (MUTCD), Federal Highway Administration, 2009. No additional mitigation measures are recommended.

Future (2026) Plus Project Conditions Analysis

Although significant delays are anticipated on the eastbound approach to the 10th Street / Main Street (SH-75) intersection, it is generally expected that executing a left-turn movement from a stop-controlled approach onto a busy highway during peak traffic periods. The addition of a separate right-turn lane on the eastbound approach to the 10th Street / Main Street (SH-75) intersection would likely mitigate the delay and queuing on the approach. However, the skewed geometry of the intersection may render this mitigation measure unworkable due to the constrained turning radius that would be created. No additional mitigation measures are recommended.

SUMMARY OF KEY FINDINGS/RECOMMENDATIONS

The following is a summary of key findings and recommendations:

- Data Collection
  - Turning movement count data were collected at the 10th Street / Main Street (SH-75) and 5th Street / Main Street (SH-75) intersections on Thursday, September 1, 2019 and Monday, September 5, 2016 (Labor Day).
  - At the direction of Ketchum City Staff, trip generation data was collected at an existing gas station that was determined to be characteristically similar to the proposed Bracken Station.
  - At the direction of Ketchum City staff, data from the Thursday, September 1, 2016 counts were used for these analyses, as it produced a "worst case" scenario.
- Project Characteristics
  - The proposed gas station will have eight fueling positions.
  - It is anticipated that the proposed gas station will generate approximately 90 vehicle trips, and six pedestrian/bicycle trips during the p.m. peak hour.
- 10th Street / Main Street (SH-75) Intersection
  - This intersection is currently operating at an acceptable level of service, and is anticipated to continue to do so through 2020. In year 2026 with all known projects (Ketchum Community School, Warm Springs Ranch Resort, redevelopment of the Stock property), the intersection will become constrained.
  - With future (2026) background conditions, the 95th percentile queue lengths on the northbound and eastbound approaches are anticipated to extend for approximately 110 feet.
- 5th Street / Main Street (SH-75) Intersection
  - This intersection is currently operating at an acceptable level of service, and is anticipated to continue to do so through 2026.
  - With future (2026) background conditions, the 95th percentile queue length on the northbound approach is anticipated to extend for approximately 370 feet.
- Project Access
  - The proposed project access is anticipated to operate at an acceptable level of service through 2026.
  - The 95th percentile queue length for northbound left-turning vehicles at the proposed project access is anticipated to extend for approximately 60 feet with future (2026) plus project conditions.

- Recommended Mitigation Measures
  - It is recommended that a two-way left-turn lane be constructed on Main Street (SH-75) along the project frontage. This will serve as a left-turn lane for northbound vehicles turning into the project access, and for northbound vehicles turning onto 10th Street.
  - Although pedestrian volumes during the p.m. peak hour are anticipated to be relatively low, if pedestrian crosswalks are installed on Main Street (SH-75) at 9th Street, it should be done in accordance with the Idaho Transportation Department with their permit process. It is also recommended that pedestrian activated rectangular rapid flashing beacon signs be installed to increase visibility of the crossings.

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I. INTRODUCTION

A. Purpose

This study addresses the traffic impacts associated with the proposed Bracken Station in Ketchum, Idaho. The proposed gas station will be located on the southwest corner of the 10th Street / Main Street (SH-75) intersection. Figure 1 shows a vicinity map of the proposed development.

Included within the analyses for this study are the traffic operations and recommended mitigation measures for existing conditions and plus project conditions (conditions after development of the proposed project) at key intersections and roadways in the vicinity of the site. Future 2020 and 2026 conditions are also analyzed.

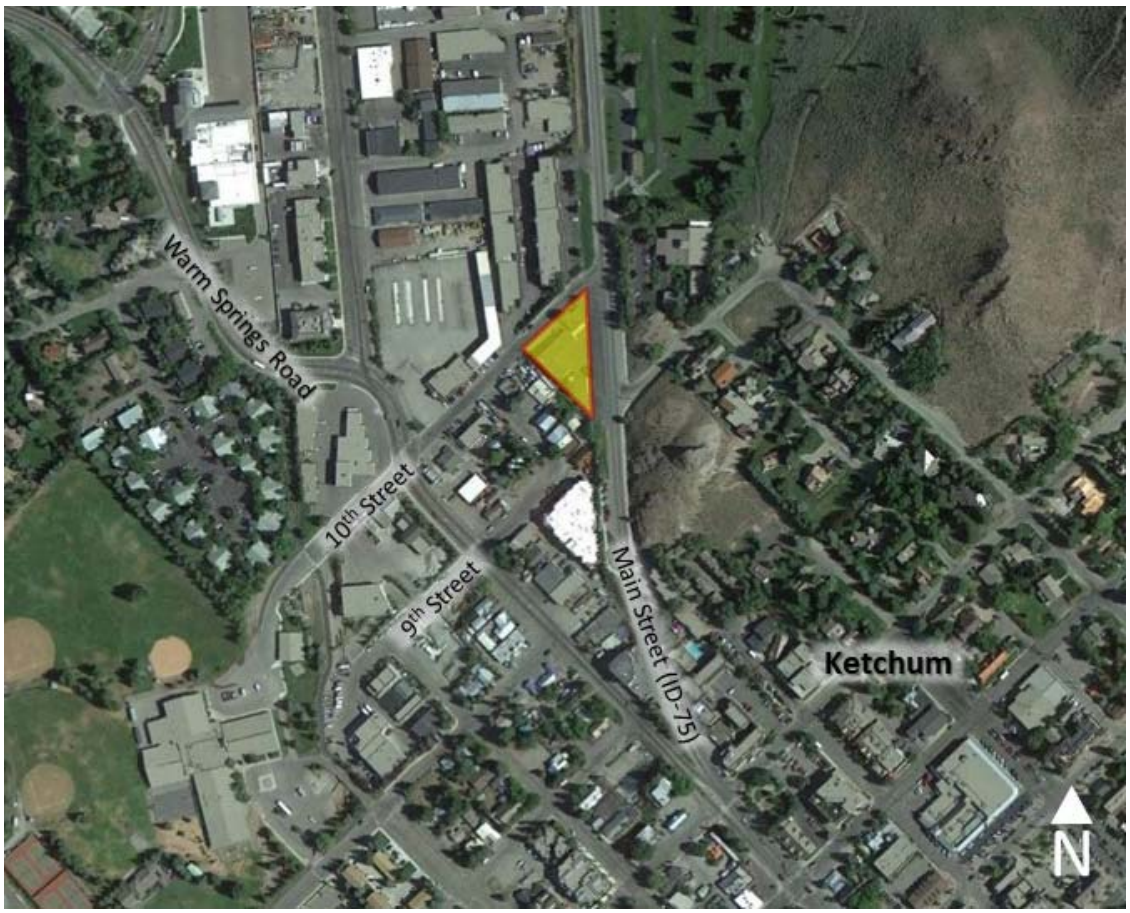

Figure 1 Vicinity map showing the project location in Ketchum, Idaho

B. Scope

The study area was defined based on conversations with the development team, following general guidelines for traffic impact studies. This study was scoped to evaluate the traffic operational performance impacts of the project on the following intersection:

- 10th Street / Main Street (SH-75)
- 5th Street / Main Street (SH-75)

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 2010 (HCM 2010) 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 and all-way stop 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 approach.

D. Level of Service Standards

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

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Table 1 Level of Service Descriptions

Level of Service	Description of Traffic Conditions	Average Delay (seconds/vehicle)
Signalized Intersections		**Overall Intersection**
A	Extremely favorable progression and a very low level of control delay. Individual users are virtually unaffected by others in the traffic stream.	0 ≤ 10.0
B	Good progression and a low level of control delay. The presence of other users in the traffic stream becomes noticeable.	> 10.0 and ≤ 20.0
C	Fair progression and a moderate level of control delay. The operation of individual users becomes somewhat affected by interactions with others in the traffic stream.	>20.0 and ≤ 35.0
D	Marginal progression with relatively high levels of control delay. Operating conditions are noticeably more constrained.	> 35.0 and ≤ 55.0
E	Poor progression with unacceptably high levels of control delay. Operating conditions are at or near capacity.	> 55.0 and ≤ 80.0
F	Unacceptable progression with forced or breakdown operating conditions.	> 80.0
Unsignalized Intersections		**Worst Approach**
A	Free Flow / Insignificant Delay	0 ≤ 10.0
B	Stable Operations / Minimum Delays	>10.0 and ≤ 15.0
C	Stable Operations / Acceptable Delays	>15.0 and ≤ 25.0
D	Approaching Unstable Flows / Tolerable Delays	>25.0 and ≤ 35.0
E	Unstable Operations / Significant Delays	>35.0 and ≤ 50.0
F	Forced Flows / Unpredictable Flows / Excessive Delays	> 50.0

Source: Hales Engineering Descriptions, based on Highway Capacity Manual, 2010 Methodology (Transportation Research Board, 2010)

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II. EXISTING (2016) BACKGROUND CONDITIONS

A. Purpose

The purpose of the existing (2016) 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 will provide 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 (SH-75) – is a state-maintained roadway that is classified by the Idaho Transportation Department (ITD) as a "regional" route in the vicinity of the project. SH-75 is a north/south route connecting Ketchum, as well as other communities such as Sun Valley and Hailey, to US-20 to the south. As a regional route in an urban area with a speed limit less than 35 mph, this roadway has minimum signal spacing of 2,640 feet, and a minimum street spacing of 660 feet. The minimum driveway distance from an upstream intersection is 250 feet, the minimum distance from a downstream intersection is 660 feet, and the minimum distance between accesses is 250 feet. Main Street (SH-75) has one travel lane in each direction and the posted speed limit in the vicinity of the proposed project is 25 mph.

C. Traffic Volumes

Hales Engineering performed weekday morning (7:00 to 9:00 a.m.) and afternoon (3:00 to 7:00 p.m.) peak period traffic counts at the following intersections:

- 10th Street / Main Street (SH-75)
- 5th Street / Main Street (SH-75)

These counts were performed on Thursday, September 1, 2016. The morning peak hour was determined to be between 8:00 and 9:00 a.m. and the evening peak hour was determined to be between 4:15 and 5:15 p.m. The evening peak hour volumes were found to be significantly 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. At the request of Ketchum City staff, anticipated traffic from the nearby Ketchum Community School was also added into the existing (2016) background traffic.

Peak period pedestrian/bicycle volumes were collected along with the vehicular volumes at each of the study intersections. While significant pedestrian/bicycle volumes were observed at the 5th Street / Main Street (SH-75) intersection, no pedestrians or bicyclists were observed at the 10th Street / Main Street (SH-75) intersection. Data collected on an alternative day (Monday, September 5, 2016, Labor Day) showed a total of 17 pedestrians/bicyclists at the 10th Street / Main Street (SH-75) intersection, with only 3 of those being during the p.m. peak hour. (Pedestrian/bicycle data is included alongside the vehicle count data in Appendix A.)

Figure 2 shows the existing p.m. peak hour volume as well as intersection geometry at the study intersections.

D. Level of Service Analysis

Using Synchro/SimTraffic, which follow the Highway Capacity Manual (HCM) 2010 methodology introduced in Chapter I, the p.m. peak hour LOS was computed for the study intersection. The results of this analysis are reported in Table 2 (see Appendix B for the detailed LOS reports). Multiple runs of SimTraffic were used to provide a statistical evaluation of the intersection. These results serve as a baseline condition for the impact analysis of the proposed development during existing (2016) conditions. As shown in Table 2, both study intersections are currently operating at LOS B during the p.m. peak hour.

Table 2 Existing (2016) Background p.m. Peak Hour Level of Service

Intersection		Worst Approach			Overall Intersection	
Description	Control	Approach[1,3]	Aver. Delay (Sec/Veh)[1]	LOS[1]	Aver. Delay (Sec/Veh)[2]	LOS[2]
10th Street / Main Street (SH-75)	EB Stop	EB	10.7	B	-	-
5th Street / Main Street (SH-75)	Signal	-	-	-	10.8	B

1. This represents the worst approach LOS and delay (seconds / vehicle) and is only reported for non-all-way stop unsignalized intersections.
2. This represents the overall intersection LOS and delay (seconds / vehicle) and is reported for all-way stop, roundabout, and signalized intersections.
3. Southbound = Southbound approach, etc.

Source: Hales Engineering, September 2016

E. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. The queue reports can be found in Appendix D. The 95th percentile queues on the north- and eastbound approaches to the 10th Street / Main Street (SH-75) intersection were observed to extend for approximately 85 feet. The queues on the four approaches to the 5th Street / Main

Street (SH-75) intersection were observed to extend for between approximately 120 feet and 200 feet. No other significant queuing was observed.

F. Mitigation Measures

No mitigation measures are recommended.

Figure 2 Existing (2016) background p.m. peak hour traffic volumes.

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III. PROJECT CONDITIONS

A. Purpose

The project conditions analysis 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 the Introduction.

B. Project Description

This study addresses the traffic impacts associated with the gas station in Ketchum, Idaho. The proposed gas station will be located on the southwest corner of the Main Street (SH-75) / 10th Street intersection. A site plan for the proposed development can be found in Appendix C.

The proposed land use for the development has been identified as follows:

- Gasoline/Service Station with Convenience Market 8 Vehicle Fueling Positions

C. Trip Generation

As directed by Ketchum City staff, trip generation for the development was calculated using data collected at an existing gas station in the area that was determined to be characteristically similar to the proposed Bracken Station. The gas station identified by Ketchum City staff is also located on SH-75 in the nearby town of Hailey, Idaho. This gas station has 14 fueling stations, a convenience store, and a reportedly popular food truck on site.

Data was gathered in the morning (7:00 to 9:00 a.m.) and afternoon (3:00 to 7:00 p.m.) peak periods on Thursday, September 1, 2016. The number of entering and exiting vehicles, the vehicle classification, and the duration of time that each vehicle remained on-site was recorded. A summary of these data can be found in Appendix E, however for information purposes, the average dwell time for a fueling vehicles was 5 minutes and 05 seconds, average dwell time for someone using the C-store was 5 minutes and 51 seconds, and the average dwell time for someone fueling and using the C-store was 9 minutes and 37 seconds. These data were used to determine a trip generation rate using the number of fueling positions as the independent variable (similar to the method used in the Institute of Transportation Engineers (ITE) *Trip Generation (9th Edition, 2012)*). Trip Generation for the proposed project is included in Table 3.

Data collected at the characteristically similar gas station showed that approximately six percent of all trips to the gas station were pedestrian/bicycle trips. This would equate to 6 pedestrian/bicycle trips during the p.m. peak hour.

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 in close proximity to the site. The resulting distribution of projected generated trips is as follows:

To/From Project:

- 40% North
- 60% South

These trip distribution assumptions and the prevailing movements at each intersection 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.

Table 3
ID Ketchum Gas Station TIS
Trip Generation

P.M. Peak Hour Land Use[1]	Number of Units	Unit Type	Trip Generation	% Entering	% Exiting	Trips Entering	Trips Exiting	Total p.m. Trips
Gasoline/Service Station with Convenience Marke	8	Vehicle Fueling Positions	90	50%	50%	45	45	**90**
Project Total p.m. Peak Hour Trips						**45**	**45**	**90**

1. Land Use Code from the Institute of Transportation Engineers Trip Generation Manual (9th Edition - 2012)

SOURCE: Hales Engineering, September 2016

E. Access

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

Main Street (SH-75):

- One full-movement "boulevard approach" accesses is proposed on Main Street (SH-75) approximately 77 feet south of 10th Street. A "boulevard approach" consists of two forty-foot wide openings in the curb separated by a small island. One opening is for ingress movements, and the other for egress movements.

E. Pedestrian Access and Circulation

Pedestrians and bicyclists will access the site from the sidewalk that is planned to be constructed along the frontage of the proposed project, as well as from a proposed stairway to be constructed down to 10th Street.

A pedestrian analysis was completed in June 2016 by Alta Planning and Design. (This report is included in Appendix F.) The Alta report identified three “catchment areas” from where pedestrians would travel to arrive at the proposed project site, likely travel routes to and from each area, as well as deficiencies in pedestrian facilities along each of these routes. This study recommends that gaps in sidewalk connectivity be filled along Main Street (SH-75) and 10th Street; that crosswalks be installed at the 10th Street / Main Street (SH-75) and 10th Street / Warm Springs Road intersections; a crosswalk and dedicated pedestrian ramps at 9th Street; and that pedestrian facility enhancements (such as rectangular rapid flashing beacons (RRFB)) be installed on Main Street (SH-75) to enhance safety.

A low number of pedestrians and bicyclists were observed during the a.m. and p.m. peak traffic periods. Alternate data collection on a holiday showed more pedestrian and bicycle activity, suggesting that this type of traffic is more prevalent at off-peak times or on weekends.

If it is determined by city staff that marked pedestrian crosswalks are to be installed at mid-block locations, or at approaches to intersections that are not stop controlled, pedestrian activated RRFBs should be installed to increase the visibility of the pedestrian facility to drivers on Main Street (SH-75).

It is also possible that by installing RRFBs, or other pedestrian crossing enhancements, at 9th Street and/or 10th Street, that the relative visibility of the existing mid-block pedestrian crossings at approximately 8th Street and 7th Street may be reduced. It is recommended that Ketchum City consider installing pedestrian activated RRFBs at these locations, or consider removing redundant mid-block pedestrian crossings on this segment of Main Street (SH-75).

Figure 3 Trip assignment for p.m. peak hour.

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IV. EXISTING (2016) PLUS PROJECT CONDITIONS

A. Purpose

This section of the report examines the traffic impacts of the proposed project at each of the study intersections. The net trips generated by the proposed development were combined with the existing background traffic volumes to create the existing plus project conditions. This scenario provides valuable insight into the potential impacts of the proposed project on background traffic conditions.

B. Traffic Volumes

Project trips were assigned to the study intersections based on the trip distribution percentages discussed in Chapter III and permitted intersection turning movements. The existing (2016) plus project p.m. peak hour volumes were generated for the study intersections and are shown in Figure 4.

C. Level of Service Analysis

Using Synchro/SimTraffic, which follow the Highway Capacity Manual (HCM) 2010 methodology introduced in Chapter I, the p.m. peak hour LOS was computed for each study intersection. The results of this analysis are reported in Table 4 (see Appendix B for the detailed LOS reports). Multiple runs of SimTraffic were used to provide a statistical evaluation of the interaction between the intersections. As shown in Table 4, both study intersections, as well as the project access, are anticipated to operate at acceptable levels of service during the p.m. peak hour with project traffic added.

D. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. The queue reports can be found in Appendix D. During the p.m. peak hour, the 95th percentile queue lengths on the 10th Street / Main Street (SH-75) intersection are anticipated to extend for approximately 70 feet on the eastbound approach and approximately 80 feet on the northbound approach with project traffic added (note: this occurs with a single northbound lane). The 95th percentile queue length on northbound Main Street (SH-75) at the proposed project access is anticipated to extend for approximately 50 feet. The queues on the four approaches to the 5th Street / Main Street (SH-75) intersection are anticipated to remain in the range of approximately 120 feet and 200 feet with project traffic added.

E. Mitigation Measures

Although the delays at the study intersections are anticipated to be minimal, it is recommended that a two-way left-turn lane be constructed from a location north of 10th Street to a location south of the project. This will allow northbound vehicles turning left onto 10th Street or into the project access to decelerate and/or queue without blocking the flow of through traffic. This will improve traffic safety in the area, as well as minimize delays. No other mitigation measures are recommended.

Table 4 Existing (2016) Plus Project p.m. Peak Hour Level of Service

Intersection		Worst Approach			Overall Intersection	
Description	Control	Approach[1,3]	Aver. Delay (Sec/Veh)[1]	LOS[1]	Aver. Delay (Sec/Veh)[2]	LOS[2]
10th Street / Main Street (SH-75)	EB Stop	EB	11.5	B	-	-
5th Street / Main Street (SH-75)	Signal	-	-	-	10.7	B
Project Access / Main Street (SH-75)	EB Stop	EB	5.9	A	-	-

1. This represents the worst approach LOS and delay (seconds / vehicle) and is only reported for non-all-way stop unsignalized intersections.
2. This represents the overall intersection LOS and delay (seconds / vehicle) and is reported for all-way stop, roundabout, and signalized intersections.
3. Southbound = Southbound approach, etc.

Source: Hales Engineering, September 2016

Figure 4 Existing (2016) plus project p.m. peak hour traffic volumes.

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V. FUTURE (2020) BACKGROUND CONDITIONS

A. Purpose

The purpose of the future (2020) background analysis is to study the intersections and roadways during the peak travel periods of the day for future background traffic and geometric conditions. Through this analysis, future background traffic operational deficiencies can be identified and potential mitigation measures recommended.

B. Roadway Network

Based on information received from city staff, no improvements are planned for any of the roadways or intersections within the study area before 2020.

C. Traffic Volumes

Hales Engineering used data from a nearby automatic traffic recorder (ATR 68) to calculate an annual growth rate of 1.1% for traffic on Main Street (SH-75). This growth rate was used to project future (2020) traffic volumes for the study intersections. At the request of Ketchum City staff, anticipated traffic from the nearby Ketchum Community School was also added into the future (2020) background traffic volumes. Future 2020 p.m. peak hour turning movement volumes are shown in Figure 5.

D. Level of Service Analysis

Using Synchro/SimTraffic, which follow the Highway Capacity Manual (HCM) 2010 methodology introduced in Chapter I, the p.m. peak hour LOS was computed for each study intersection. The results of this analysis are reported in Table 5 (see Appendix B for the detailed LOS reports). Multiple runs of SimTraffic were used to provide a statistical evaluation of the interaction between the intersections. These results serve as a baseline condition for the impact analysis of the proposed development for future (2020) conditions. As shown in Table 5, both study intersections are anticipated to operate at LOS B during the p.m. peak hour with future (2020) background traffic conditions.

E. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. The queue reports can be found in Appendix D. No significant changes to the 95th percentile queues are anticipated with projected future (2020) background traffic conditions.

F. Mitigation Measures

No mitigation measures are recommended.

Table 5 Future (2020) Background p.m. Peak Hour Level of Service

Intersection		Worst Approach			Overall Intersection	
Description	Control	Approach[1,3]	Aver. Delay (Sec/Veh)[1]	LOS[1]	Aver. Delay (Sec/Veh)[2]	LOS[2]
10th Street / Main Street (SH-75)	EB Stop	EB	10.2	B	-	-
5th Street / Main Street (SH-75)	Signal	-	-	-	11.2	B

1. This represents the worst approach LOS and delay (seconds / vehicle) and is only reported for non-all-way stop unsignalized intersections.
2. This represents the overall intersection LOS and delay (seconds / vehicle) and is reported for all-way stop, roundabout, and signalized intersections.
3. Southbound = Southbound approach, etc.

Source: Hales Engineering, September 2016

Figure 5 Future (2020) background p.m. peak hour volumes.

VI. FUTURE (2020) PLUS PROJECT CONDITIONS

A. Purpose

The purpose of the future (2020) plus project analysis is to study the intersections and roadways during the peak travel periods of the day for future 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 future background traffic conditions.

B. Traffic Volumes

Trips were assigned to the study intersections based on the trip distribution percentages discussed in Chapter III and permitted intersection turning movements. It was also assumed that the previously recommended center two-way left-turn lane had been constructed along the project frontage.

The future (2020) plus project p.m. peak hour volumes were generated for the study intersections and are shown in Figure 6.

C. Level of Service Analysis

Using Synchro/SimTraffic, which follow the Highway Capacity Manual (HCM) 2010 methodology introduced in Chapter I, the p.m. peak hour LOS was computed for each study intersection. The results of this analysis are reported in Table 6 (see Appendix B for the detailed LOS reports). Multiple runs of SimTraffic were used to provide a statistical evaluation of the interaction between the intersections. As shown in Table 6, both study intersections, as well as the project access, are anticipated to operate at acceptable levels of service during the p.m. peak hour with project traffic added.

D. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. The queue reports can be found in Appendix D. During the p.m. peak hour, the 95th percentile queue length on the northbound approach to the Main Street (SH-75) / 10th Street intersection is anticipated to extend for approximately 50 feet, while the queue length on the eastbound approach is anticipated to extend for approximately 80 feet. The northbound queue length on Main Street (SH-75) at the proposed project access is anticipated to extend for approximately 45 feet. It is anticipated that the 95th percentile queues at the 5th Street / Main Street (SH-10) intersection will remain unchanged with project traffic added.

E. Mitigation Measures

No additional mitigation measures are recommended.

Table 6 Future (2020) Plus Project p.m. Peak Hour Level of Service

Intersection		Worst Approach			Overall Intersection	
Description	Control	Approach[1,3]	Aver. Delay (Sec/Veh)[1]	LOS[1]	Aver. Delay (Sec/Veh)[2]	LOS[2]
10th Street / Main Street (SH-75)	EB Stop	EB	10.8	B	-	-
5th Street / Main Street (SH-75)	Signal	-	-	-	11.1	B
Project Access / Main Street (SH-75)	EB Stop	EB	7.9	A	-	-

1. This represents the worst approach LOS and delay (seconds / vehicle) and is only reported for non-all-way stop unsignalized intersections.
2. This represents the overall intersection LOS and delay (seconds / vehicle) and is reported for all-way stop, roundabout, and signalized intersections.
3. Southbound = Southbound approach, etc.

Source: Hales Engineering, September 2016

Figure 6 Future (2020) plus project p.m. peak hour volumes.

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VII. FUTURE (2026) BACKGROUND CONDITIONS

A. Purpose

The purpose of the future (2026) background analysis is to study the intersections and roadways during the peak travel periods of the day for future background traffic and geometric conditions. Through this analysis, future background traffic operational deficiencies can be identified and potential mitigation measures recommended.

B. Roadway Network

Based on information received from city staff, no improvements are planned for any of the roadways or intersections within the study area before 2026. It was assumed that the signal timing plan at the 5th Street / Main Street (SH-75) intersection had been updated.

C. Traffic Volumes

Hales Engineering used data from a nearby automatic traffic recorder (ATR 68) to calculate an annual growth rate of 1.1% for traffic on Main Street (SH-75). This growth rate was used to project future (2026) traffic volumes for the study intersections. At the request of Ketchum City staff, anticipated traffic from the nearby Ketchum Community School, the proposed Warm Springs Ranch Resort, and the reported potential development of the Stock Lumber site were also added into the future (2026) background traffic volumes. Future 2026 p.m. peak hour turning movement volumes are shown in Figure 7.

D. Level of Service Analysis

Using Synchro/SimTraffic, which follow the Highway Capacity Manual (HCM) 2010 methodology introduced in Chapter I, the p.m. peak hour LOS was computed for each study intersection. The results of this analysis are reported in Table 7 (see Appendix B for the detailed LOS reports). Multiple runs of SimTraffic were used to provide a statistical evaluation of the interaction between the intersections. These results serve as a baseline condition for the impact analysis of the proposed development for future (2026) conditions. As shown in Table 7, both study intersections are anticipated to operate at LOS B during the p.m. peak hour with future (2026) background traffic conditions.

E. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. The queue reports can be found in Appendix D. The anticipated 95th percentile queue lengths at the 10th Street / Main Street (SH-75) intersection are anticipated to extend for approximately 110

feet on both the north- and eastbound approaches with projected future (2026) background traffic conditions. The 95th percentile queues on the northbound approach to the 5th Street / Main Street (SH-75) intersection are anticipated to extend for over 350 feet.

F. Mitigation Measures

A mitigation that could be implemented at 10th Street / Main Street (SH-75) is to signalize the intersection when traffic volume warrants are met, as identified in the *Manual on Uniform Traffic Control Devices* (MUTCD), Federal Highway Administration, 2009. No additional mitigation measures are recommended.

Table 7 Future (2026) Background p.m. Peak Hour Level of Service

Intersection		Worst Approach			Overall Intersection	
Description	Control	Approach[1,3]	Aver. Delay (Sec/Veh)[1]	LOS[1]	Aver. Delay (Sec/Veh)[2]	LOS[2]
10th Street / Main Street (SH-75)	EB Stop	EB	13.7	B	-	-
5th Street / Main Street (SH-75)	Signal	-	-	-	16.5	B

1. This represents the worst approach LOS and delay (seconds / vehicle) and is only reported for non-all-way stop unsignalized intersections.
2. This represents the overall intersection LOS and delay (seconds / vehicle) and is reported for all-way stop, roundabout, and signalized intersections.
3. Southbound = Southbound approach, etc.

Source: Hales Engineering, September 2016

Figure 7 Future (2026) background p.m. peak hour volumes.

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VIII. FUTURE (2026) PLUS PROJECT CONDITIONS

A. Purpose

The purpose of the future (2026) plus project analysis is to study the intersections and roadways during the peak travel periods of the day for future 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 future background traffic conditions.

B. Traffic Volumes

Trips were assigned to the study intersections based on the trip distribution percentages discussed in Chapter III and permitted intersection turning movements. It was also assumed that the previously recommended center TWLTL had been constructed along the project frontage.

The future (2026) plus project p.m. peak hour volumes were generated for the study intersections and are shown in Figure 8.

C. Level of Service Analysis

Using Synchro/SimTraffic, which follow the Highway Capacity Manual (HCM) 2010 methodology introduced in Chapter I, the p.m. peak hour LOS was computed for each study intersection. The results of this analysis are reported in Table 8 (see Appendix B for the detailed LOS reports). Multiple runs of SimTraffic were used to provide a statistical evaluation of the interaction between the intersections. As shown in Table 8, the 10th Street / Main Street (SH-75) intersection is anticipated to operate at LOS F during the p.m. peak hour with project traffic added. All other study intersections are anticipated to operate at acceptable levels of service.

D. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. The queue reports can be found in Appendix D. During the p.m. peak hour, the 95th percentile queue length on the northbound approach to the Main Street (SH-75) / 10th Street intersection is anticipated to extend for approximately 70 feet, while the queue length on the eastbound approach is anticipated to extend for approximately 250 feet. The northbound queue length on Main Street (SH-75) at the proposed project access is anticipated to extend for approximately 60 feet. It is anticipated that the 95th percentile queues on the northbound approach to the 5th Street / Main Street (SH-10) intersection will extend for approximately 450 feet with project traffic added.

E. Mitigation Measures

Although significant delays are anticipated on the eastbound approach to the 10th Street / Main Street (SH-75) intersection, it is generally expected that executing a left-turn movement from a stop-controlled approach onto a busy highway during peak traffic periods. The addition of a separate right-turn lane on the eastbound approach to the 10th Street / Main Street (SH-75) intersection would likely mitigate the delay and queuing on the approach. However, the skewed geometry of the intersection may render this mitigation measure unworkable due to the constrained turning radius that would be created. No additional mitigation measures are recommended.

Table 8 Future (2026) Plus Project p.m. Peak Hour Level of Service

Intersection		Worst Approach			Overall Intersection	
Description	Control	Approach[1,3]	Aver. Delay (Sec/Veh)[1]	LOS[1]	Aver. Delay (Sec/Veh)[2]	LOS[2]
10th Street / Main Street (SH-75)	EB Stop	EB	>50	F	-	-
5th Street / Main Street (SH-75)	Signal	-	-	-	18.9	B
Project Access / Main Street (SH-75)	EB Stop	EB	13.1	B	-	-

1. This represents the worst approach LOS and delay (seconds / vehicle) and is only reported for non-all-way stop unsignalized intersections.
2. This represents the overall intersection LOS and delay (seconds / vehicle) and is reported for all-way stop, roundabout, and signalized intersections.
3. Southbound = Southbound approach, etc.

Source: Hales Engineering, September 2016

Figure 8 Future (2026) plus project p.m. peak hour volumes.

IX. HYPOTHETICAL FUTURE (2026) PLUS PROJECT CONDITIONS

A. Purpose

The purpose of the hypothetical future (2026) plus project analysis is to study the intersections and roadways during the peak travel periods of the day for future background traffic and geometric conditions plus the net trips generated by a hypothetical land use. The analysis of this scenario was requested by Ketchum City staff.

B. Trip Generation

As directed by Ketchum City staff, trip generation for this hypothetical scenario was determined using data collected by university students in February 2010 at a gas station on US-89 in Provo, Utah. The data collected showed that approximately 185 total trips were generated at this gas station during the p.m. peak hour.

C. Traffic Volumes

Trips were assigned to the study intersections based on the trip distribution percentages discussed in Chapter III and permitted intersection turning movements. The hypothetical future (2026) plus project p.m. peak hour volumes were generated for the study intersections and are shown in Figure 9.

D. Level of Service Analysis

Using Synchro/SimTraffic, which follow the Highway Capacity Manual (HCM) 2010 methodology introduced in Chapter I, the p.m. peak hour LOS was computed for each study intersection. The results of this analysis are reported in Table 9 (see Appendix B for the detailed LOS reports). Multiple runs of SimTraffic were used to provide a statistical evaluation of the interaction between the intersections. As shown in Table 9, the 10th Street / Main Street (SH-75) intersection would be anticipated to operate at LOS F during the p.m. peak hour with project traffic added. All other study intersections would be anticipated to operate at acceptable levels of service.

E. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. The queue reports can be found in Appendix D. During the p.m. peak hour, the 95th percentile queue length on the northbound approach to the Main Street (SH-75) / 10th Street intersection would be anticipated to extend for approximately 70 feet, while the queue length on the eastbound approach is anticipated to extend for approximately 350 feet. The northbound queue length on Main Street (SH-75) at the proposed project access would be anticipated to extend for

approximately 80 feet. It would be anticipated that the 95th percentile queues on the northbound approach to the 5th Street / Main Street (SH-10) intersection will extend for approximately 450 feet with project traffic added.

Table 9 Hypothetical Future (2026) Plus Project p.m. Peak Hour Level of Service

Intersection		Worst Approach			Overall Intersection	
Description	Control	Approach[1,3]	Aver. Delay (Sec/Veh)[1]	LOS[1]	Aver. Delay (Sec/Veh)[2]	LOS[2]
10th Street / Main Street (SH-75)	EB Stop	EB	>50	F	-	-
5th Street / Main Street (SH-75)	Signal	-	-	-	25.2	C
Project Access / Main Street (SH-75)	EB Stop	EB	17.4	C	-	-

1. This represents the worst approach LOS and delay (seconds / vehicle) and is only reported for non-all-way stop unsignalized intersections.
2. This represents the overall intersection LOS and delay (seconds / vehicle) and is reported for all-way stop, roundabout, and signalized intersections.
3. Southbound = Southbound approach, etc.

Source: Hales Engineering, September 2016

Figure 9 Hypothetical future (2026) plus project p.m. peak hour volumes.

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APPENDIX A

Turning Movement Counts

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: HALE0048
Intersection: SH-75 / 10th Street
City: Ketchum, Idaho
Control: Stop Sign

File Name : SH75 & 10th D1
Site Code : 00000000
Start Date : 9/1/2016
Page No : 1

Groups Printed- General Traffic - 3+ Axle Heavy Trucks

	SH-75 From North				SH-75 From South				10th Street From Southwest				
Start Time	Bear Right	Thru	Peds	App. Total	Thru	Hard Left	Peds	App. Total	Hard Right	Bear Left	Peds	App. Total	Int. Total
07:00 AM	4	13	0	17	34	4	0	38	3	3	0	6	61
07:15 AM	5	21	0	26	51	2	0	53	0	11	0	11	90
07:30 AM	14	26	0	40	52	10	0	62	3	14	0	17	119
07:45 AM	14	36	0	50	47	7	0	54	3	10	0	13	117
Total	37	96	0	133	184	23	0	207	9	38	0	47	387
08:00 AM	5	32	0	37	58	7	0	65	4	17	0	21	123
08:15 AM	3	31	0	34	60	8	0	68	12	12	0	24	126
08:30 AM	4	30	0	34	57	7	0	64	8	11	0	19	117
08:45 AM	8	28	0	36	60	8	0	68	7	13	0	20	124
Total	20	121	0	141	235	30	0	265	31	53	0	84	490

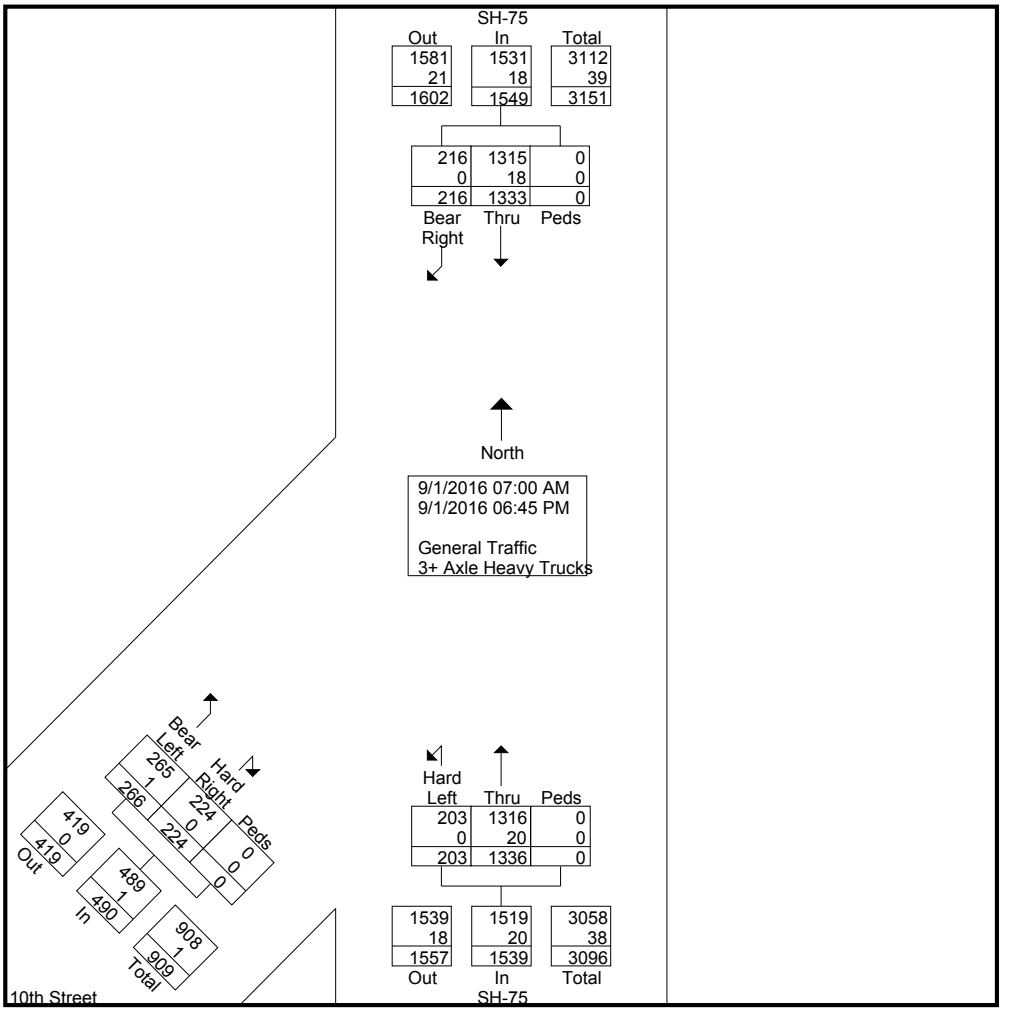
03:00 PM	9	70	0	79	59	12	0	71	12	15	0	27	177
03:15 PM	7	82	0	89	73	13	0	86	13	14	0	27	202
03:30 PM	8	81	0	89	50	10	0	60	14	6	0	20	169
03:45 PM	12	75	0	87	59	12	0	71	10	12	0	22	180
Total	36	308	0	344	241	47	0	288	49	47	0	96	728
04:00 PM	20	85	0	105	61	10	0	71	21	10	0	31	207
04:15 PM	15	87	0	102	65	11	0	76	10	10	0	20	198
04:30 PM	10	91	0	101	54	10	0	64	11	15	0	26	191
04:45 PM	14	112	0	126	69	13	0	82	21	8	0	29	237
Total	59	375	0	434	249	44	0	293	63	43	0	106	833
05:00 PM	15	81	0	96	70	14	0	84	19	18	0	37	217
05:15 PM	9	55	0	64	53	12	0	65	8	22	0	30	159
05:30 PM	8	61	0	69	63	5	0	68	15	10	0	25	162
05:45 PM	5	58	0	63	52	6	0	58	6	8	0	14	135
Total	37	255	0	292	238	37	0	275	48	58	0	106	673
06:00 PM	9	57	0	66	54	5	0	59	9	10	0	19	144
06:15 PM	8	37	0	45	62	10	0	72	6	5	0	11	128
06:30 PM	9	48	0	57	34	1	0	35	6	7	0	13	105
06:45 PM	1	36	0	37	39	6	0	45	3	5	0	8	90
Total	27	178	0	205	189	22	0	211	24	27	0	51	467
Grand Total	216	1333	0	1549	1336	203	0	1539	224	266	0	490	3578
Apprch %	13.9	86.1	0		86.8	13.2	0		45.7	54.3	0		
Total %	6	37.3	0	43.3	37.3	5.7	0	43	6.3	7.4	0	13.7	
General Traffic	216	1315	0	1531	1316	203	0	1519	224	265	0	489	3539
% General Traffic	100	98.6	0	98.8	98.5	100	0	98.7	100	99.6	0	99.8	98.9
3+ Axle Heavy Trucks	0	18	0	18	20	0	0	20	0	1	0	1	39
% 3+ Axle Heavy Trucks	0	1.4	0	1.2	1.5	0	0	1.3	0	0.4	0	0.2	1.1

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: HALE0048
Intersection: SH-75 / 10th Street
City: Ketchum, Idaho
Control: Stop Sign

File Name : SH75 & 10th D1
Site Code : 00000000
Start Date : 9/1/2016
Page No : 2



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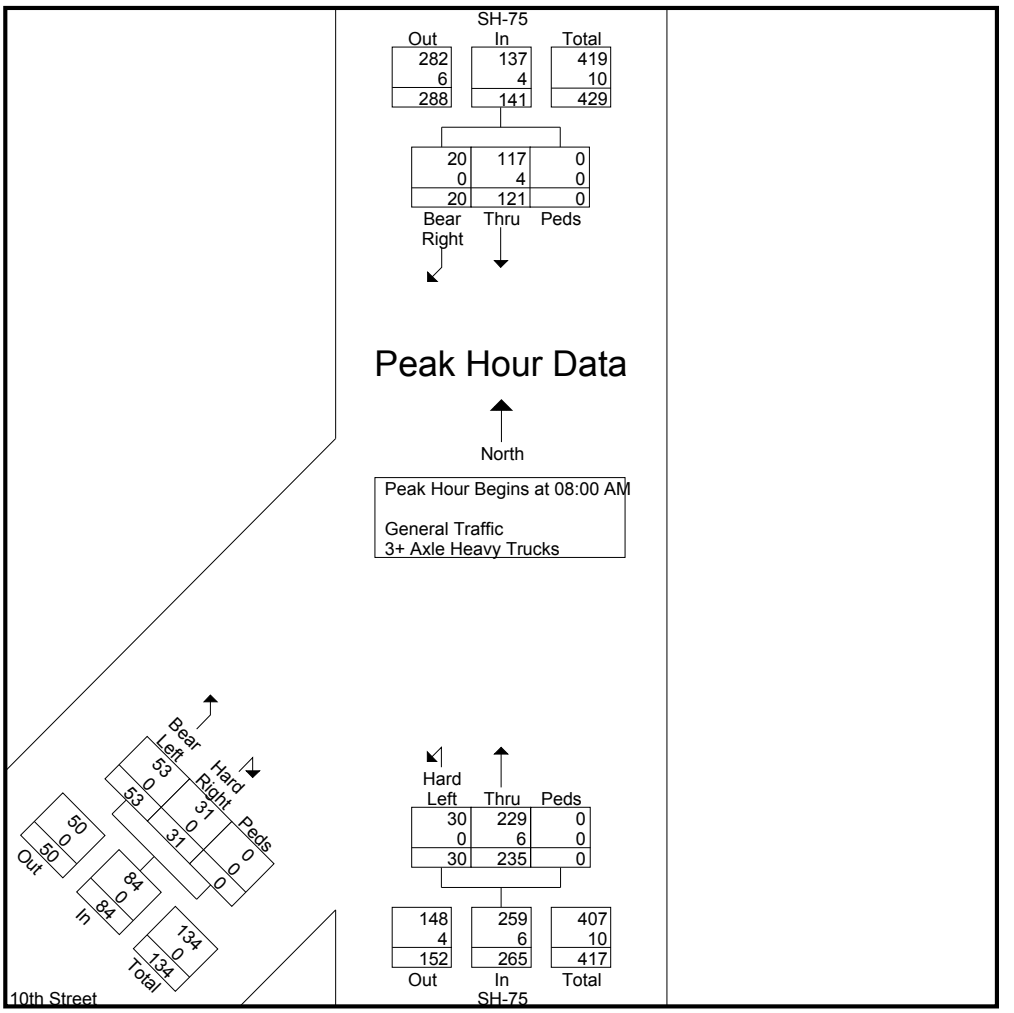
Study: HALE0048
Intersection: SH-75 / 10th Street
City: Ketchum, Idaho
Control: Stop Sign

File Name : SH75 & 10th D1
Site Code : 00000000
Start Date : 9/1/2016
Page No : 3

	SH-75 From North				SH-75 From South				10th Street From Southwest				
Start Time	Bear Right	Thru	Peds	App. Total	Thru	Hard Left	Peds	App. Total	Hard Right	Bear Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	5	**32**	0	**37**	58	7	0	65	4	**17**	0	21	123
08:15 AM	3	31	0	34	**60**	**8**	0	**68**	**12**	12	0	**24**	**126**
08:30 AM	4	30	0	34	57	7	0	64	8	11	0	19	117
08:45 AM	**8**	28	0	36	60	8	0	68	7	13	0	20	124
Total Volume	20	121	0	141	235	30	0	265	31	53	0	84	490
% App. Total	14.2	85.8	0		88.7	11.3	0		36.9	63.1	0		
PHF	.625	.945	.000	.953	.979	.938	.000	.974	.646	.779	.000	.875	.972
General Traffic	20	117	0	137	229	30	0	259	31	53	0	84	480
% General Traffic	100	96.7	0	97.2	97.4	100	0	97.7	100	100	0	100	98.0
3+ Axle Heavy Trucks	0	4	0	4	6	0	0	6	0	0	0	0	10
% 3+ Axle Heavy Trucks	0	3.3	0	2.8	2.6	0	0	2.3	0	0	0	0	2.0



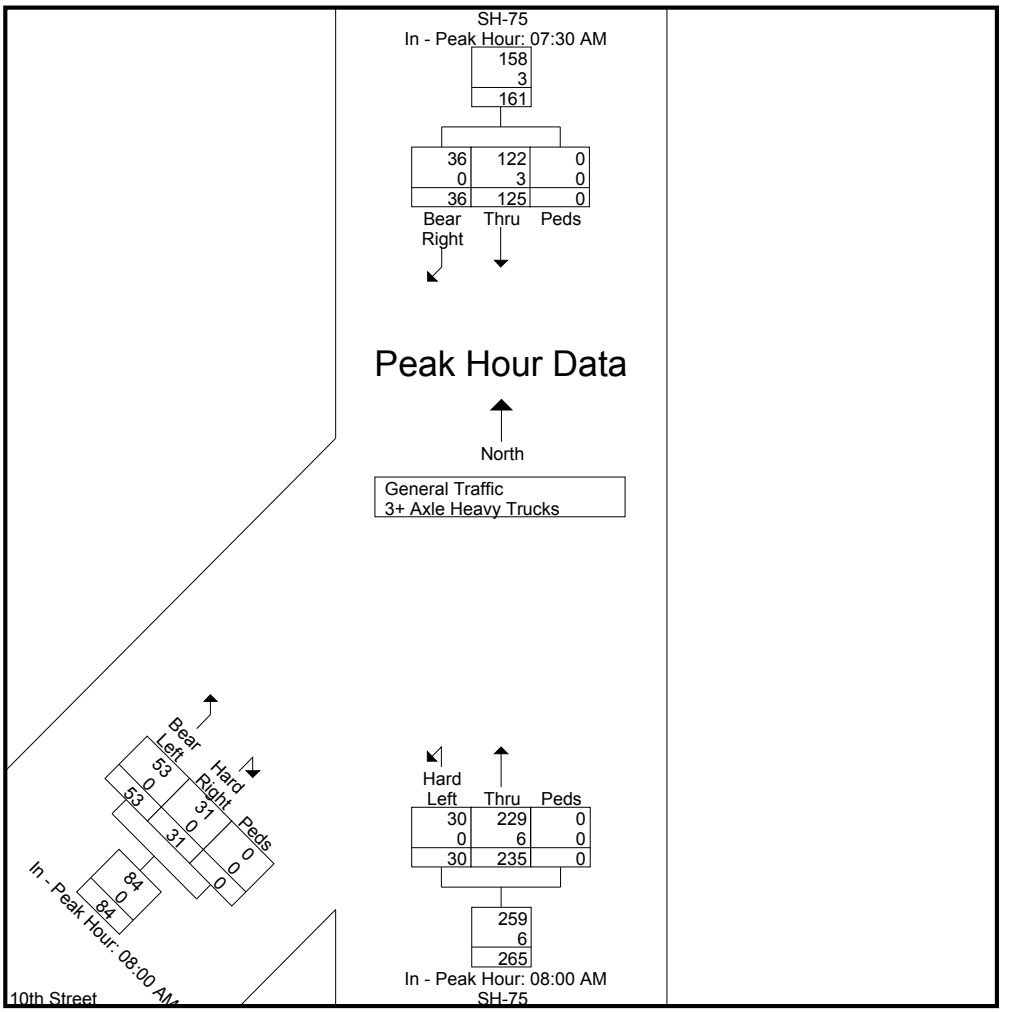
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: HALE0048
Intersection: SH-75 / 10th Street
City: Ketchum, Idaho
Control: Stop Sign

File Name : SH75 & 10th D1
Site Code : 00000000
Start Date : 9/1/2016
Page No : 4

	SH-75 From North				SH-75 From South				10th Street From Southwest				
Start Time	Bear Right	Thru	Peds	App. Total	Thru	Hard Left	Peds	App. Total	Hard Right	Bear Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	07:30 AM				08:00 AM				08:00 AM				
+0 mins.	**14**	26	0	40	58	7	0	65	4	**17**	0	21	
+15 mins.	14	**36**	0	**50**	**60**	**8**	0	**68**	**12**	12	0	**24**	
+30 mins.	5	32	0	37	57	7	0	64	8	11	0	19	
+45 mins.	3	31	0	34	60	8	0	68	7	13	0	20	
Total Volume	36	125	0	161	235	30	0	265	31	53	0	84	
% App. Total	22.4	77.6	0		88.7	11.3	0		36.9	63.1	0		
PHF	.643	.868	.000	.805	.979	.938	.000	.974	.646	.779	.000	.875	
General Traffic	36	122	0	158	229	30	0	259	31	53	0	84	
% General Traffic	100	97.6	0	98.1	97.4	100	0	97.7	100	100	0	100	
3+ Axle Heavy Trucks	0	3	0	3	6	0	0	6	0	0	0	0	
% 3+ Axle Heavy Trucks	0	2.4	0	1.9	2.6	0	0	2.3	0	0	0	0	



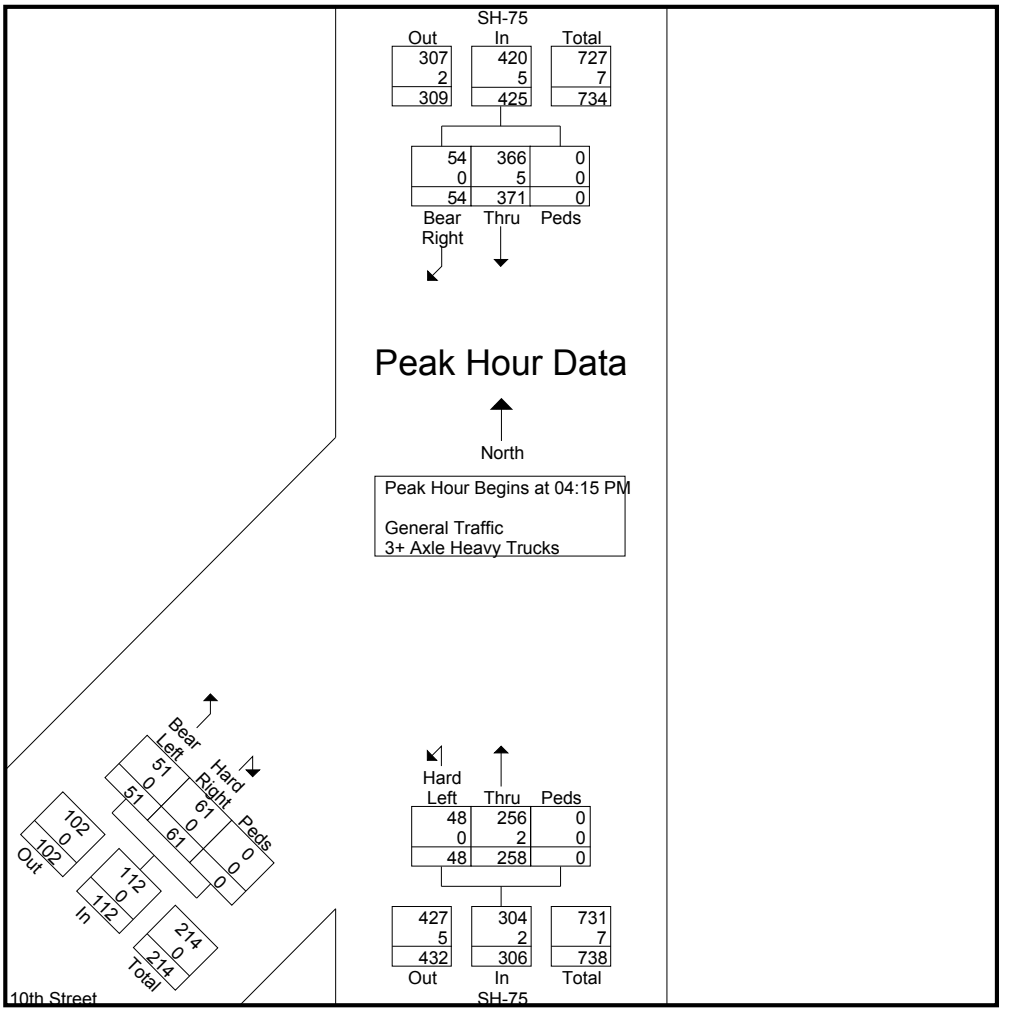
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: HALE0048
Intersection: SH-75 / 10th Street
City: Ketchum, Idaho
Control: Stop Sign

File Name : SH75 & 10th D1
Site Code : 00000000
Start Date : 9/1/2016
Page No : 5

	SH-75 From North				SH-75 From South				10th Street From Southwest				
Start Time	Bear Right	Thru	Peds	App. Total	Thru	Hard Left	Peds	App. Total	Hard Right	Bear Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	**15**	87	0	102	65	11	0	76	10	10	0	20	198
04:30 PM	10	91	0	101	54	10	0	64	11	15	0	26	191
04:45 PM	14	**112**	0	**126**	69	13	0	82	**21**	8	0	29	**237**
05:00 PM	15	81	0	96	**70**	**14**	0	**84**	19	**18**	0	**37**	217
Total Volume	54	371	0	425	258	48	0	306	61	51	0	112	843
% App. Total	12.7	87.3	0		84.3	15.7	0		54.5	45.5	0		
PHF	.900	.828	.000	.843	.921	.857	.000	.911	.726	.708	.000	.757	.889
General Traffic	54	366	0	420	256	48	0	304	61	51	0	112	836
% General Traffic	100	98.7	0	98.8	99.2	100	0	99.3	100	100	0	100	99.2
3+ Axle Heavy Trucks	0	5	0	5	2	0	0	2	0	0	0	0	7
% 3+ Axle Heavy Trucks	0	1.3	0	1.2	0.8	0	0	0.7	0	0	0	0	0.8



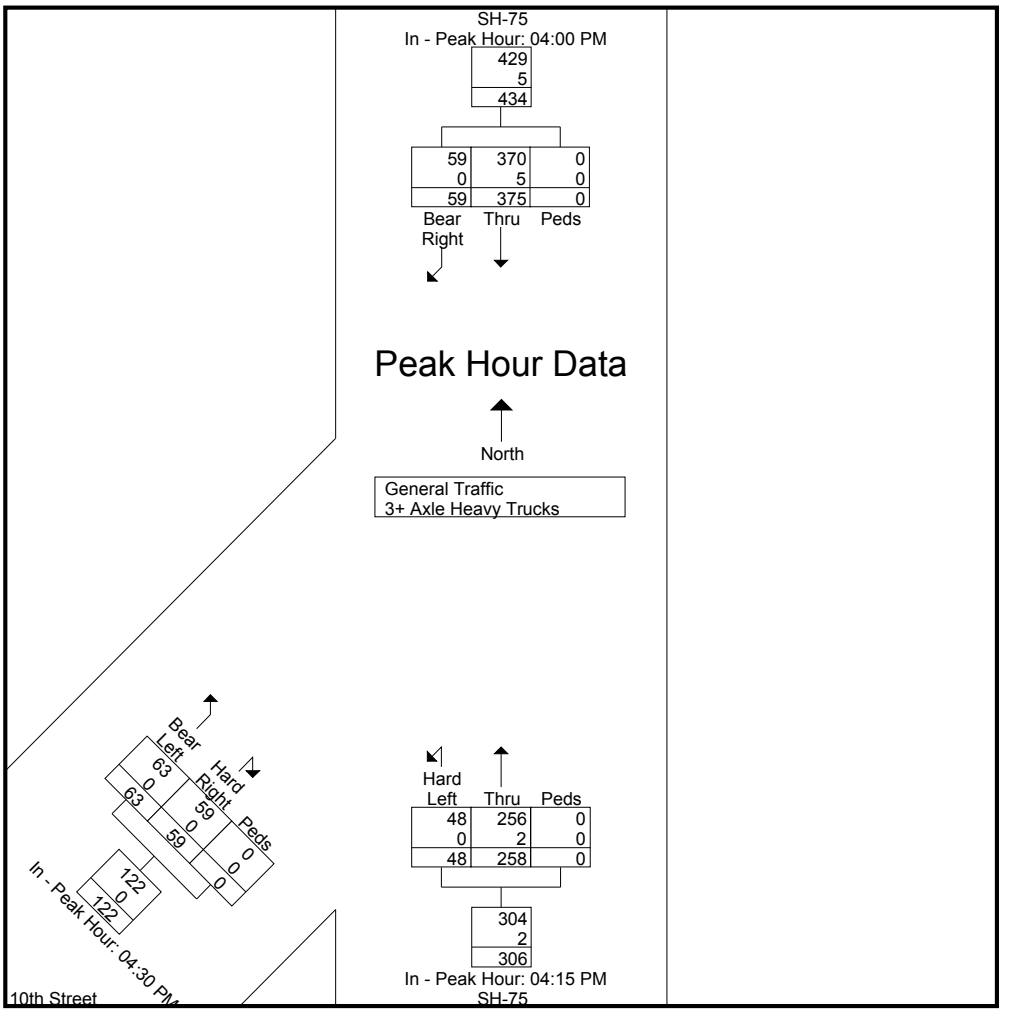
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: HALE0048
Intersection: SH-75 / 10th Street
City: Ketchum, Idaho
Control: Stop Sign

File Name : SH75 & 10th D1
Site Code : 00000000
Start Date : 9/1/2016
Page No : 6

	SH-75 From North				SH-75 From South				10th Street From Southwest				
Start Time	Bear Right	Thru	Peds	App. Total	Thru	Hard Left	Peds	App. Total	Hard Right	Bear Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	04:00 PM				04:15 PM				04:30 PM				
+0 mins.	**20**	85	0	105	65	11	0	76	11	15	0	26	
+15 mins.	15	87	0	102	54	10	0	64	**21**	8	0	29	
+30 mins.	10	91	0	101	69	13	0	82	19	18	0	**37**	
+45 mins.	14	**112**	0	**126**	**70**	**14**	0	**84**	8	**22**	0	30	
Total Volume	59	375	0	434	258	48	0	306	59	63	0	122	
% App. Total	13.6	86.4	0		84.3	15.7	0		48.4	51.6	0		
PHF	.738	.837	.000	.861	.921	.857	.000	.911	.702	.716	.000	.824	
General Traffic	59	370	0	429	256	48	0	304	59	63	0	122	
% General Traffic	100	98.7	0	98.8	99.2	100	0	99.3	100	100	0	100	
3+ Axle Heavy Trucks	0	5	0	5	2	0	0	2	0	0	0	0	
% 3+ Axle Heavy Trucks	0	1.3	0	1.2	0.8	0	0	0.7	0	0	0	0	



L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: HALE0048
Intersection: SH-75 / 10th Street
City: Ketchum, Idaho
Control: Stop Sign

File Name : SH75 & 10th D1
Site Code : 00000000
Start Date : 9/1/2016
Page No : 7

Image 1

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: HALE0048
Intersection: SH-75 / 5th Street
City: Ketchum, Idaho
Control: Signalized

File Name : SH75 & 5th D1
Site Code : 00000000
Start Date : 9/1/2016
Page No : 1

Groups Printed- General Traffic - 3+ Axle Heavy Trucks

	SH-75 From Northwest					5th Street From Northeast					SH-75 From Southeast					5th Street From Southwest					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	7	39	9	1	56	4	4	1	2	11	4	91	7	1	103	4	3	4	5	16	186
07:15 AM	5	32	7	0	44	6	2	0	1	9	2	112	8	0	122	2	8	8	3	21	196
07:30 AM	5	61	2	1	69	6	2	2	1	11	2	146	5	0	153	2	7	11	1	21	254
07:45 AM	13	76	11	3	103	4	11	3	1	19	3	166	1	2	172	5	11	11	4	31	325
Total	30	208	29	5	272	20	19	6	5	50	11	515	21	3	550	13	29	34	13	89	961
08:00 AM	9	83	17	0	109	4	7	1	4	16	6	149	4	0	159	7	16	7	1	31	315
08:15 AM	13	72	13	0	98	4	7	3	0	14	5	117	6	0	128	1	11	15	1	28	268
08:30 AM	11	85	16	3	115	7	3	3	1	14	7	134	3	1	145	5	7	8	4	24	298
08:45 AM	10	67	13	4	94	8	4	3	7	22	7	127	5	1	140	3	8	14	2	27	283
Total	43	307	59	7	416	23	21	10	12	66	25	527	18	2	572	16	42	44	8	110	1164

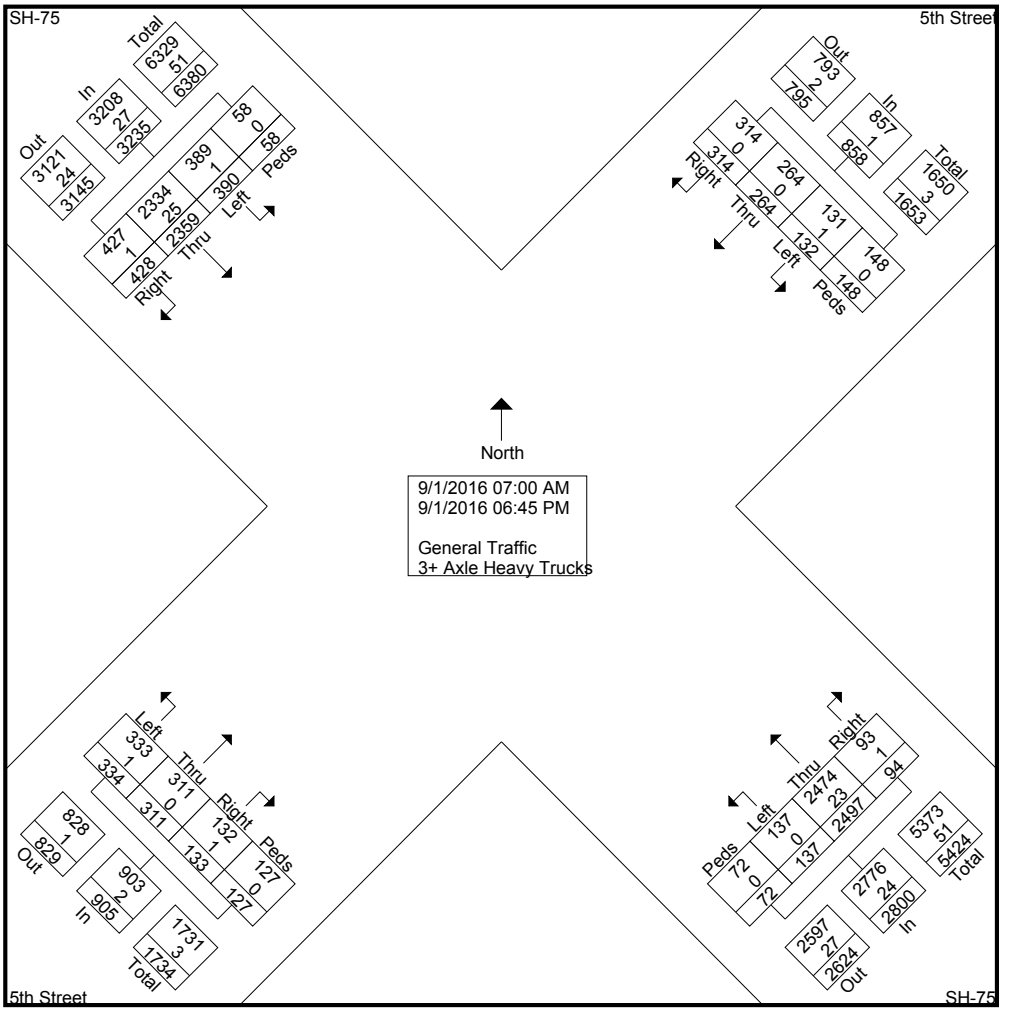
03:00 PM	15	136	19	2	172	12	13	3	8	36	3	91	12	4	110	6	24	29	5	64	382
03:15 PM	24	129	13	8	174	19	12	9	11	51	4	104	6	5	119	9	20	15	11	55	399
03:30 PM	24	132	24	0	180	19	13	11	8	51	4	83	3	4	94	12	18	16	4	50	375
03:45 PM	30	111	23	4	168	14	17	10	15	56	6	93	7	3	109	10	14	23	4	51	384
Total	93	508	79	14	694	64	55	33	42	194	17	371	28	16	432	37	76	83	24	220	1540
04:00 PM	42	126	15	0	183	21	25	7	3	56	5	102	7	2	116	6	23	19	5	53	408
04:15 PM	22	134	27	4	187	19	21	7	13	60	4	93	3	1	101	7	12	13	7	39	387
04:30 PM	28	129	23	1	181	15	16	8	16	55	3	101	7	5	116	9	17	13	8	47	399
04:45 PM	27	137	20	6	190	20	15	6	8	49	1	110	10	13	134	5	17	22	5	49	422
Total	119	526	85	11	741	75	77	28	40	220	13	406	27	21	467	27	69	67	25	188	1616
05:00 PM	37	137	20	1	195	22	18	7	7	54	5	105	4	3	117	3	24	22	3	52	418
05:15 PM	22	122	25	4	173	17	27	7	10	61	2	113	7	4	126	5	10	16	5	36	396
05:30 PM	11	122	15	0	148	27	6	4	0	37	2	98	3	12	115	2	12	14	9	37	337
05:45 PM	20	89	20	2	131	21	11	7	14	53	5	81	4	8	98	8	7	10	13	38	320
Total	90	470	80	7	647	87	62	25	31	205	14	397	18	27	456	18	53	62	30	163	1471
06:00 PM	19	91	16	3	129	17	9	9	6	41	4	80	5	1	90	9	16	12	8	45	305
06:15 PM	10	92	10	6	118	13	9	5	1	28	2	82	6	2	92	3	7	14	11	35	273
06:30 PM	15	86	13	3	117	10	9	11	7	37	5	59	7	0	71	3	9	9	6	27	252
06:45 PM	9	71	19	2	101	5	3	5	4	17	3	60	7	0	70	7	10	9	2	28	216
Total	53	340	58	14	465	45	30	30	18	123	14	281	25	3	323	22	42	44	27	135	1046
Grand Total	428	2359	390	58	3235	314	264	132	148	858	94	2497	137	72	2800	133	311	334	127	905	7798
Apprch %	13.2	72.9	12.1	1.8		36.6	30.8	15.4	17.2		3.4	89.2	4.9	2.6		14.7	34.4	36.9	14		
Total %	5.5	30.3	5	0.7	41.5	4	3.4	1.7	1.9	11	1.2	32	1.8	0.9	35.9	1.7	4	4.3	1.6	11.6	
General Traffic	427	2334	389	58	3208	314	264	131	148	857	93	2474	137	72	2776	132	311	333	127	903	7744
% General Traffic	99.8	98.9	99.7	100	99.2	100	100	99.2	100	99.9	98.9	99.1	100	100	99.1	99.2	100	99.7	100	99.8	99.3
3+ Axle Heavy Trucks	1	25	1	0	27	0	0	1	0	1	1	23	0	0	24	1	0	1	0	2	54
% 3+ Axle Heavy Trucks	0.2	1.1	0.3	0	0.8	0	0	0.8	0	0.1	1.1	0.9	0	0	0.9	0.8	0	0.3	0	0.2	0.7

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: HALE0048
Intersection: SH-75 / 5th Street
City: Ketchum, Idaho
Control: Signalized

File Name : SH75 & 5th D1
Site Code : 00000000
Start Date : 9/1/2016
Page No : 2



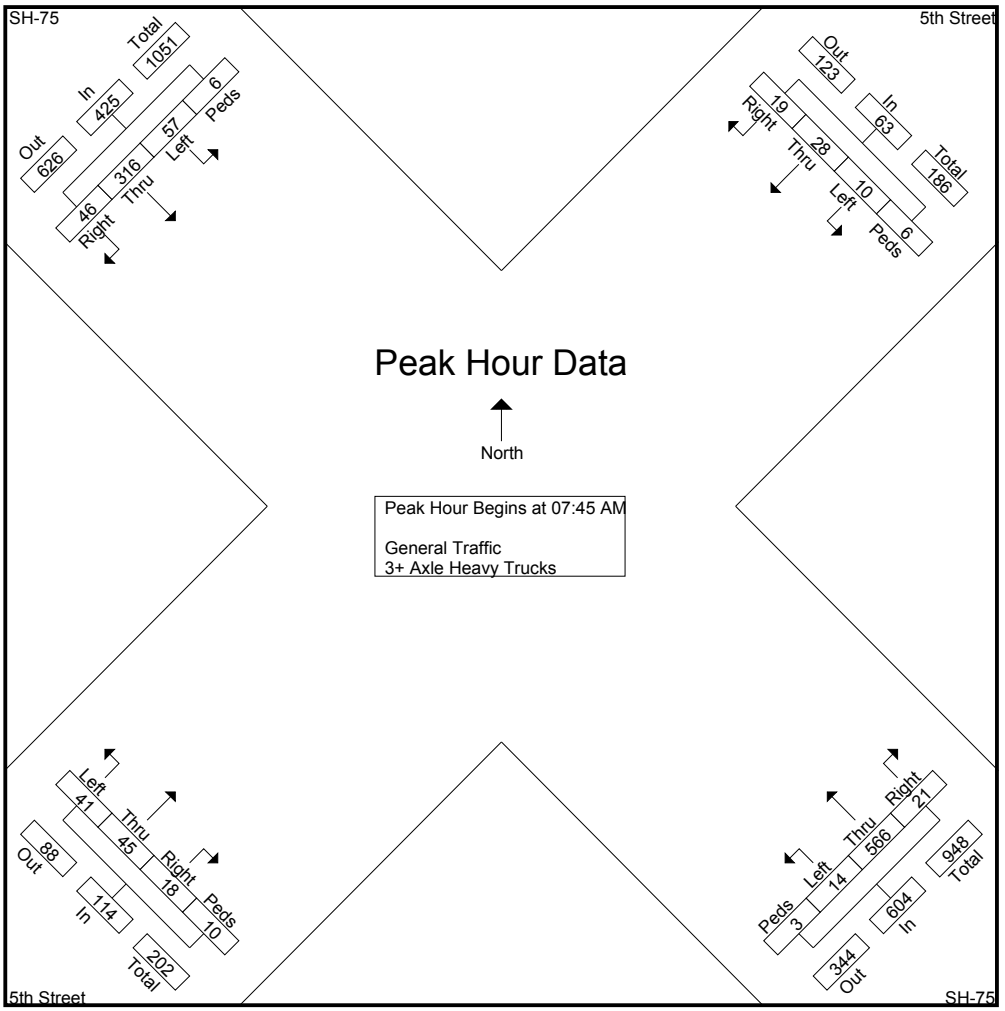
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: HALE0048
Intersection: SH-75 / 5th Street
City: Ketchum, Idaho
Control: Signalized

File Name : SH75 & 5th D1
Site Code : 00000000
Start Date : 9/1/2016
Page No : 3

	SH-75 From Northwest					5th Street From Northeast					SH-75 From Southeast					5th Street From Southwest					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	**13**	76	11	**3**	103	4	**11**	**3**	1	**19**	3	**166**	1	**2**	**172**	5	11	11	**4**	**31**	**325**
08:00 AM	9	83	**17**	0	109	4	7	1	**4**	16	6	149	4	0	159	**7**	**16**	7	1	31	315
08:15 AM	13	72	13	0	98	4	7	3	0	14	5	117	**6**	0	128	1	11	**15**	1	28	268
08:30 AM	11	**85**	16	3	**115**	**7**	3	3	1	14	**7**	134	3	1	145	5	7	8	4	24	298
Total Volume	46	316	57	6	425	19	28	10	6	63	21	566	14	3	604	18	45	41	10	114	1206
% App. Total	10.8	74.4	13.4	1.4		30.2	44.4	15.9	9.5		3.5	93.7	2.3	0.5		15.8	39.5	36	8.8		
PHF	.885	.929	.838	.500	.924	.679	.636	.833	.375	.829	.750	.852	.583	.375	.878	.643	.703	.683	.625	.919	.928



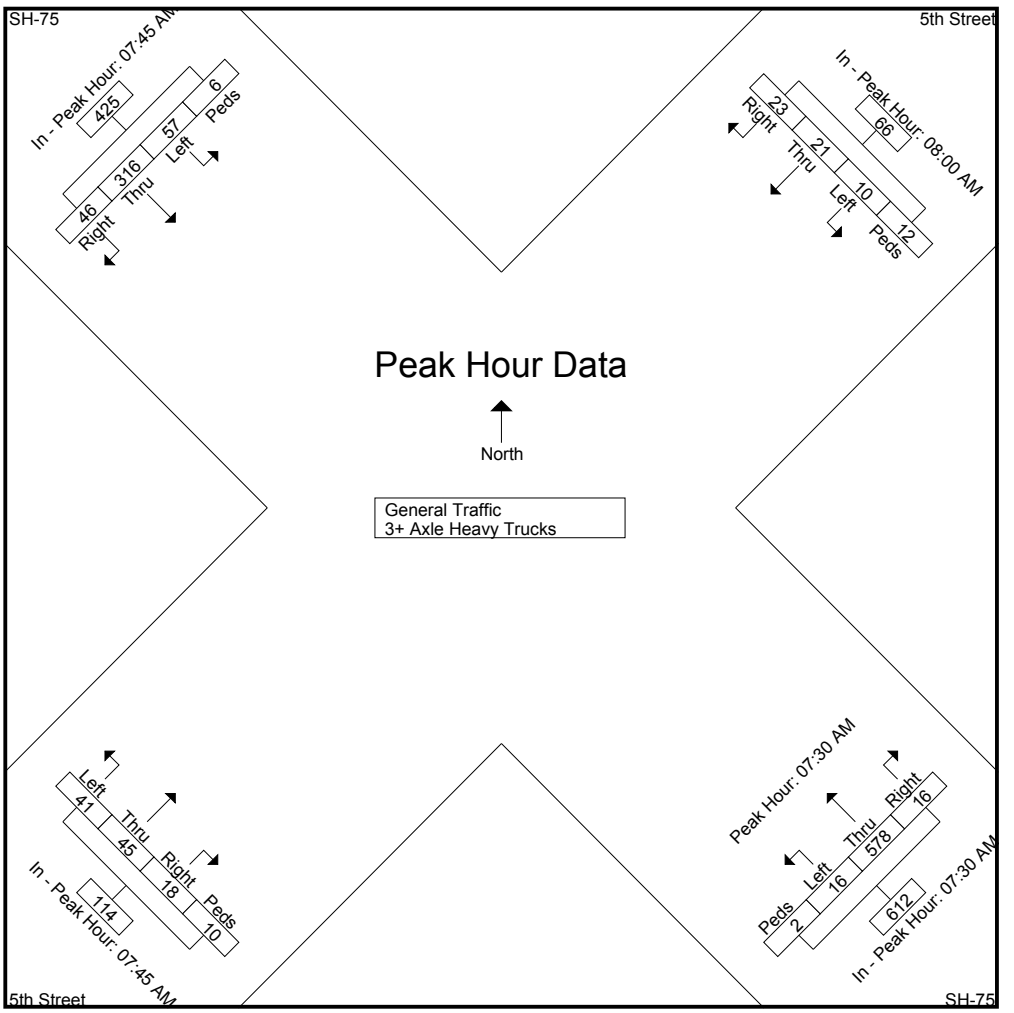
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: HALE0048
Intersection: SH-75 / 5th Street
City: Ketchum, Idaho
Control: Signalized

File Name : SH75 & 5th D1
Site Code : 00000000
Start Date : 9/1/2016
Page No : 4

	SH-75 From Northwest					5th Street From Northeast					SH-75 From Southeast					5th Street From Southwest					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	07:45 AM					08:00 AM					07:30 AM					07:45 AM					
+0 mins.	**13**	76	11	**3**	103	4	**7**	1	4	16	2	146	5	0	153	5	11	11	**4**	**31**	
+15 mins.	9	83	**17**	0	109	4	7	**3**	0	14	3	**166**	1	**2**	**172**	**7**	**16**	7	1	31	
+30 mins.	13	72	13	0	98	7	3	3	1	14	**6**	149	4	0	159	1	11	**15**	1	28	
+45 mins.	11	**85**	16	3	**115**	**8**	4	3	**7**	**22**	5	117	**6**	0	128	5	7	8	4	24	
Total Volume	46	316	57	6	425	23	21	10	12	66	16	578	16	2	612	18	45	41	10	114	
% App. Total	10.8	74.4	13.4	1.4		34.8	31.8	15.2	18.2		2.6	94.4	2.6	0.3		15.8	39.5	36	8.8		
PHF	.885	.929	.838	.500	.924	.719	.750	.833	.429	.750	.667	.870	.667	.250	.890	.643	.703	.683	.625	.919	



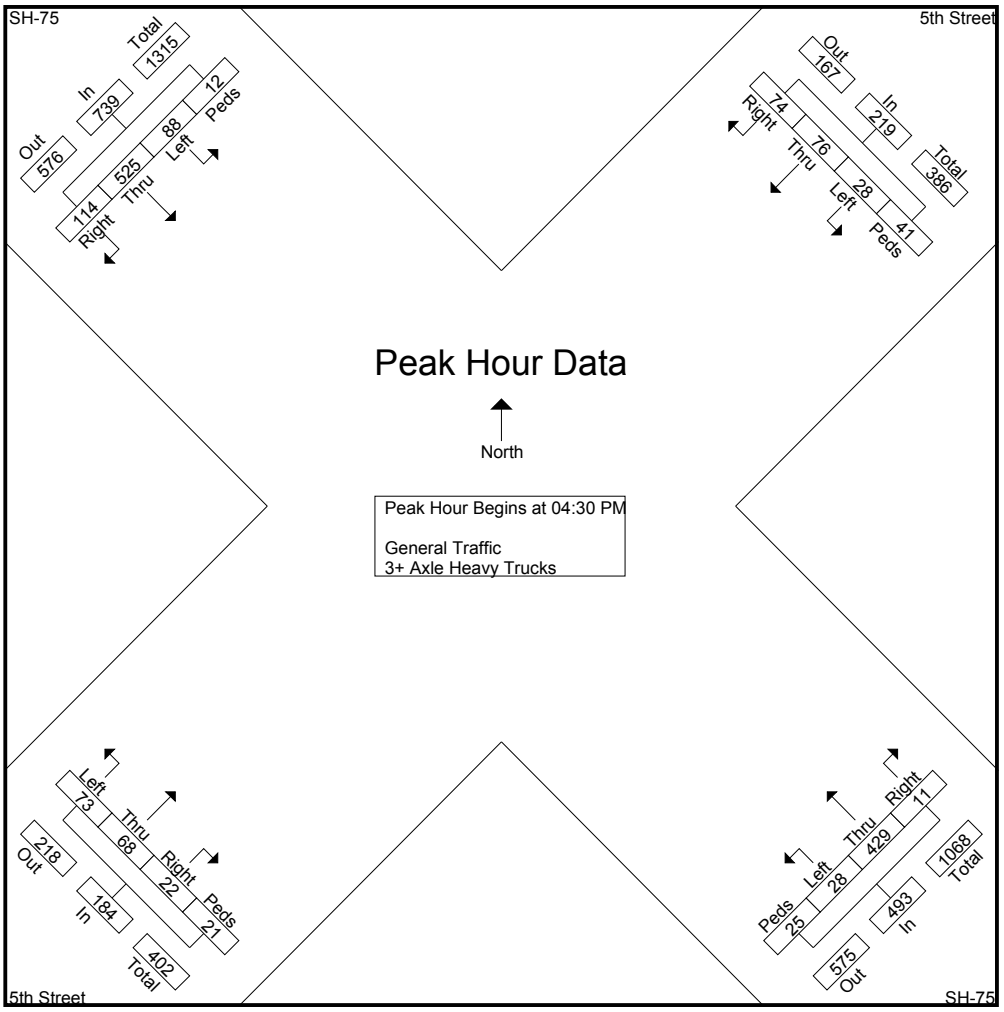
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: HALE0048
Intersection: SH-75 / 5th Street
City: Ketchum, Idaho
Control: Signalized

File Name : SH75 & 5th D1
Site Code : 00000000
Start Date : 9/1/2016
Page No : 5

	SH-75 From Northwest					5th Street From Northeast					SH-75 From Southeast					5th Street From Southwest					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	28	129	23	1	181	15	16	**8**	**16**	55	3	101	7	5	116	**9**	17	13	**8**	47	399
04:45 PM	27	**137**	20	**6**	190	20	15	6	8	49	1	110	**10**	**13**	**134**	5	17	**22**	5	49	**422**
05:00 PM	**37**	137	20	1	**195**	**22**	18	7	7	54	**5**	105	4	3	117	3	**24**	22	3	**52**	418
05:15 PM	22	122	**25**	4	173	17	**27**	7	10	**61**	2	**113**	7	4	126	5	10	16	5	36	396
Total Volume	114	525	88	12	739	74	76	28	41	219	11	429	28	25	493	22	68	73	21	184	1635
% App. Total	15.4	71	11.9	1.6		33.8	34.7	12.8	18.7		2.2	87	5.7	5.1		12	37	39.7	11.4		
PHF	.770	.958	.880	.500	.947	.841	.704	.875	.641	.898	.550	.949	.700	.481	.920	.611	.708	.830	.656	.885	.969



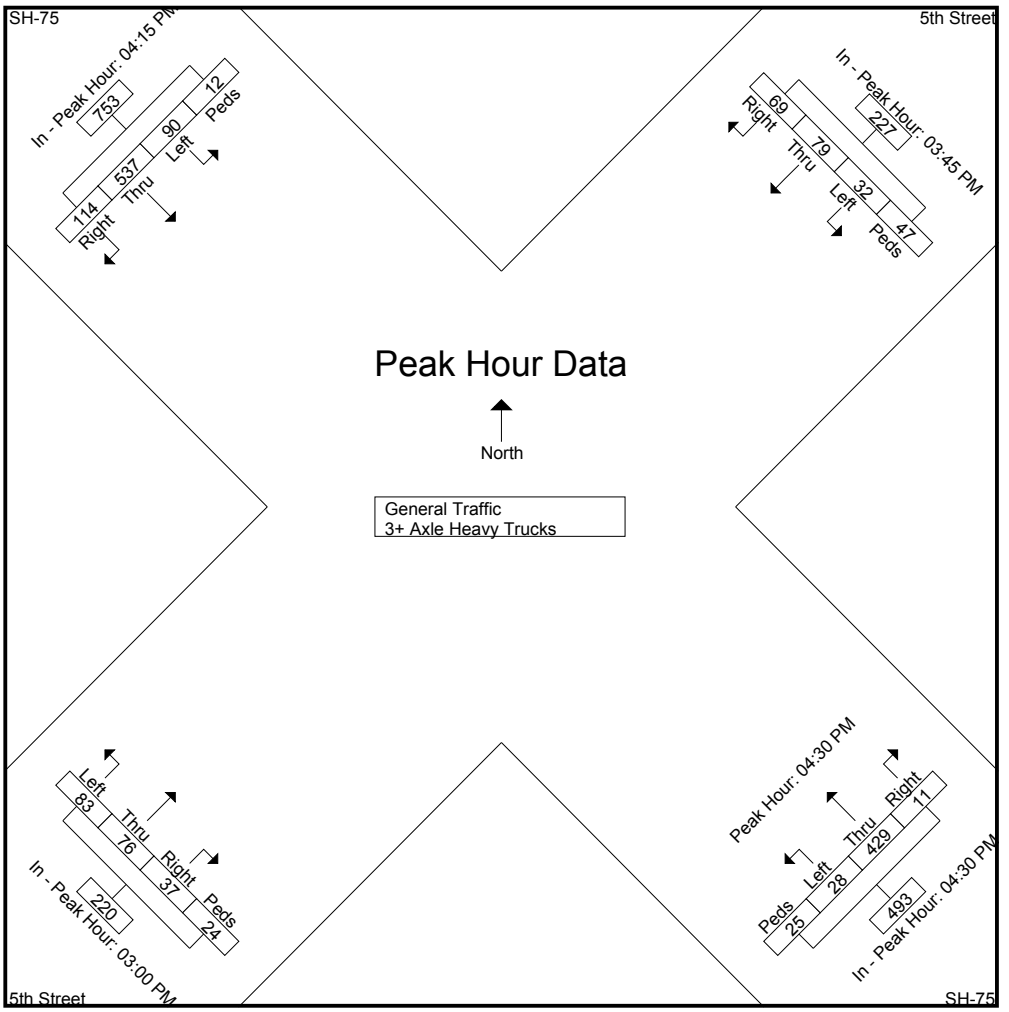
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: HALE0048
Intersection: SH-75 / 5th Street
City: Ketchum, Idaho
Control: Signalized

File Name : SH75 & 5th D1
Site Code : 00000000
Start Date : 9/1/2016
Page No : 6

	SH-75 From Northwest					5th Street From Northeast					SH-75 From Southeast					5th Street From Southwest					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	04:15 PM					03:45 PM					04:30 PM					03:00 PM					
+0 mins.	22	134	**27**	4	187	14	17	**10**	15	56	3	101	7	5	116	6	**24**	**29**	5	**64**	
+15 mins.	28	129	23	1	181	**21**	**25**	7	3	56	1	110	**10**	**13**	**134**	9	20	15	**11**	55	
+30 mins.	27	**137**	20	**6**	190	19	21	7	13	**60**	**5**	105	4	3	117	**12**	18	16	4	50	
+45 mins.	**37**	137	20	1	**195**	15	16	8	**16**	55	2	**113**	7	4	126	10	14	23	4	51	
Total Volume	114	537	90	12	753	69	79	32	47	227	11	429	28	25	493	37	76	83	24	220	
% App. Total	15.1	71.3	12	1.6		30.4	34.8	14.1	20.7		2.2	87	5.7	5.1		16.8	34.5	37.7	10.9		
PHF	.770	.980	.833	.500	.965	.821	.790	.800	.734	.946	.550	.949	.700	.481	.920	.771	.792	.716	.545	.859	



L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: HALE0048
Intersection: SH-75 / 5th Street
City: Ketchum, Idaho
Control: Signalized

File Name : SH75 & 5th D1
Site Code : 00000000
Start Date : 9/1/2016
Page No : 7

Image 1

HALES ENGINEERING
innovative transportation solutions

APPENDIX B

Level of Service Results

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: ID Ketchum - Bracken Station TIS
Analysis Period: *Existing (2016) Background*
Time Period: *p.m. Peak Hour* **Project #:** *UT16-851*

Intersection: 10th Street & Main Street (SH-75)
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	48	52	108	5.4	*A*
	T	530	533	101	0.9	*A*
	Subtotal	578	585	101	1.3	*A*
SB	T	373	365	98	0.9	*A*
	R	54	58	108	0.6	*A*
	Subtotal	427	423	99	0.9	*A*
NE	L	51	50	99	14.7	*B*
	R	61	65	107	7.7	*A*
	Subtotal	***112***	***115***	***103***	***10.7***	***B***
Total		1,116	1,123	101	2.1	*A*

Intersection: 5th Street & Main Street (SH-75)
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	28	26	92	15.5	*B*
	T	431	440	102	11.0	*B*
	R	11	11	100	3.1	*A*
	Subtotal	470	477	101	11.1	*B*
SE	L	88	89	101	15.7	*B*
	T	527	522	99	8.1	*A*
	R	114	119	104	4.7	*A*
	Subtotal	729	730	100	8.5	*A*
NE	L	73	70	96	18.2	*B*
	T	68	63	93	19.2	*B*
	R	22	26	117	12.7	*B*
	Subtotal	163	159	98	17.7	*B*
SW	L	28	24	85	16.9	*B*
	T	76	75	99	16.6	*B*
	R	74	73	99	9.3	*A*
	Subtotal	178	172	97	13.5	*B*
Total		1,540	1,538	100	10.8	*B*

1: 10th Street & Main Street (SH-75) Performance by movement Interval #1 4:15

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.4	0.3	0.1	0.2	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	4.7	1.0	0.8	0.5	15.0	7.0	2.0
Vehicles Entered	13	129	90	15	12	16	275
Vehicles Exited	12	128	90	15	13	15	273
Hourly Exit Rate	48	512	360	60	52	60	1092
Input Volume	48	524	369	53	50	60	1104
% of Volume	100	98	98	113	104	100	99

1: 10th Street & Main Street (SH-75) Performance by movement Interval #2 4:30

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.3	0.3	0.2	0.2	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	6.0	0.9	0.9	0.6	15.1	7.5	2.2
Vehicles Entered	12	133	91	16	13	19	284
Vehicles Exited	12	134	92	16	12	19	285
Hourly Exit Rate	48	536	368	64	48	76	1140
Input Volume	48	524	369	53	50	60	1104
% of Volume	100	102	100	121	96	127	103

1: 10th Street & Main Street (SH-75) Performance by movement Interval #3 4:45

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.4	0.5	0.2	0.2	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	5.1	0.9	0.9	0.7	12.5	5.6	1.9
Vehicles Entered	13	137	94	13	12	15	284
Vehicles Exited	13	137	94	13	12	15	284
Hourly Exit Rate	52	548	376	52	48	60	1136
Input Volume	49	546	385	56	53	63	1152
% of Volume	106	100	98	93	91	95	99

1: 10th Street & Main Street (SH-75) Performance by movement Interval #4 5:00

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.3	0.3	0.2	0.2	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	5.3	0.8	0.9	0.5	14.0	9.3	2.1
Vehicles Entered	14	134	90	14	12	15	279
Vehicles Exited	14	133	91	14	12	16	280
Hourly Exit Rate	56	532	364	56	48	64	1120
Input Volume	48	524	369	53	50	60	1104
% of Volume	117	102	99	106	96	107	101

1: 10th Street & Main Street (SH-75) Performance by movement Entire Run

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.3	0.3	0.2	0.2	0.1
Total Delay (hr)	0.1	0.1	0.1	0.0	0.2	0.1	0.7
Total Del/Veh (s)	5.4	0.9	0.9	0.6	14.7	7.7	2.1
Vehicles Entered	52	533	366	58	49	65	1123
Vehicles Exited	52	533	365	58	50	65	1123
Hourly Exit Rate	52	533	365	58	50	65	1123
Input Volume	48	530	373	54	51	61	1116
% of Volume	108	101	98	108	99	107	101

2: 5th Street & Main Street (SH-75) Performance by movement Interval #1 4:15

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	0.1	0.2	0.2	0.3	0.1	0.2	0.2	0.3	0.1	0.2	0.2
Total Delay (hr)	0.1	0.3	0.0	0.0	0.3	0.0	0.1	0.1	0.0	0.0	0.1	0.0
Total Del/Veh (s)	12.2	7.6	4.2	13.7	9.5	1.9	16.5	15.7	12.4	17.3	16.9	9.4
Vehicles Entered	22	126	31	6	107	3	16	16	7	6	20	18
Vehicles Exited	21	124	31	5	106	3	17	16	7	6	22	18
Hourly Exit Rate	84	496	124	20	424	12	68	64	28	24	88	72
Input Volume	87	522	113	28	427	11	72	67	22	28	75	73
% of Volume	97	95	110	71	99	109	94	96	127	86	117	99

2: 5th Street & Main Street (SH-75) Performance by movement Interval #1 4:15

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.2
Total Delay (hr)	1.1
Total Del/Veh (s)	9.7
Vehicles Entered	378
Vehicles Exited	376
Hourly Exit Rate	1504
Input Volume	1525
% of Volume	99

2: 5th Street & Main Street (SH-75) Performance by movement Interval #2 4:30

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.1	0.4	0.3	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Total Delay (hr)	0.1	0.3	0.0	0.0	0.3	0.0	0.1	0.1	0.0	0.0	0.1	0.0
Total Del/Veh (s)	14.8	7.4	4.4	14.9	10.2	2.5	18.0	18.8	11.4	18.7	14.7	8.2
Vehicles Entered	22	131	28	7	112	4	17	16	7	6	17	19
Vehicles Exited	22	133	29	7	113	4	16	16	6	6	17	18
Hourly Exit Rate	88	532	116	28	452	16	64	64	24	24	68	72
Input Volume	87	522	113	28	427	11	72	67	22	28	75	73
% of Volume	101	102	103	100	106	145	89	96	109	86	91	99

2: 5th Street & Main Street (SH-75) Performance by movement Interval #2 4:30

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.2
Total Delay (hr)	1.1
Total Del/Veh (s)	10.1
Vehicles Entered	386
Vehicles Exited	387
Hourly Exit Rate	1548
Input Volume	1525
% of Volume	102

2: 5th Street & Main Street (SH-75) Performance by movement Interval #3 4:45

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.7	0.3	0.4	0.3	0.3	0.1	0.2	0.2	0.3	0.1	0.2	0.2
Total Delay (hr)	0.1	0.3	0.0	0.0	0.4	0.0	0.1	0.1	0.0	0.0	0.1	0.1
Total Del/Veh (s)	18.6	8.8	5.1	14.6	12.1	3.4	19.4	20.9	15.2	17.9	14.7	9.9
Vehicles Entered	25	133	30	7	115	3	19	16	6	6	18	18
Vehicles Exited	26	133	30	7	114	3	19	17	6	6	18	18
Hourly Exit Rate	104	532	120	28	456	12	76	68	24	24	72	72
Input Volume	91	543	118	29	444	11	75	70	23	29	78	76
% of Volume	114	98	102	97	103	109	101	97	104	83	92	95

2: 5th Street & Main Street (SH-75) Performance by movement Interval #3 4:45

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.3
Total Delay (hr)	1.3
Total Del/Veh (s)	11.8
Vehicles Entered	396
Vehicles Exited	397
Hourly Exit Rate	1588
Input Volume	1587
% of Volume	100

2: 5th Street & Main Street (SH-75) Performance by movement Interval #4 5:00

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.7	0.2	0.3	0.2	0.3	0.1	0.2	0.3	0.2	0.3	0.2	0.2
Total Delay (hr)	0.1	0.3	0.0	0.0	0.3	0.0	0.1	0.1	0.0	0.0	0.1	0.0
Total Del/Veh (s)	15.2	8.3	4.8	14.2	10.8	3.9	16.0	19.1	10.2	14.1	15.6	8.7
Vehicles Entered	21	133	29	7	108	2	18	15	6	6	19	19
Vehicles Exited	20	132	29	7	108	2	18	14	6	6	18	19
Hourly Exit Rate	80	528	116	28	432	8	72	56	24	24	72	76
Input Volume	87	522	113	28	427	11	72	67	22	28	75	73
% of Volume	92	101	103	100	101	73	100	84	109	86	96	104

2: 5th Street & Main Street (SH-75) Performance by movement Interval #4 5:00

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.3
Total Delay (hr)	1.2
Total Del/Veh (s)	10.6
Vehicles Entered	383
Vehicles Exited	379
Hourly Exit Rate	1516
Input Volume	1525
% of Volume	99

2: 5th Street & Main Street (SH-75) Performance by movement Entire Run

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.5	0.2	0.3	0.3	0.3	0.1	0.2	0.2	0.3	0.2	0.2	0.2
Total Delay (hr)	0.4	1.2	0.2	0.1	1.4	0.0	0.4	0.3	0.1	0.1	0.3	0.2
Total Del/Veh (s)	15.7	8.1	4.7	15.5	11.0	3.1	18.2	19.2	12.7	16.9	16.6	9.3
Vehicles Entered	90	523	119	26	441	11	69	63	26	24	74	73
Vehicles Exited	89	522	119	26	440	11	70	63	26	24	75	73
Hourly Exit Rate	89	522	119	26	440	11	70	63	26	24	75	73
Input Volume	88	527	114	28	431	11	73	68	22	28	76	74
% of Volume	101	99	104	92	102	100	96	93	117	85	99	99

2: 5th Street & Main Street (SH-75) Performance by movement Entire Run

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	4.7
Total Del/Veh (s)	10.8
Vehicles Entered	1539
Vehicles Exited	1538
Hourly Exit Rate	1538
Input Volume	1540
% of Volume	100

Total Network Performance By Interval

Interval Start	4:15	4:30	4:45	5:00	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.3	0.3	0.4	0.3	0.3
Total Delay (hr)	1.5	1.6	1.8	1.6	6.5
Total Del/Veh (s)	12.0	12.6	14.0	12.9	13.8
Vehicles Entered	404	416	422	409	1646
Vehicles Exited	404	410	423	410	1647
Hourly Exit Rate	1616	1640	1692	1640	1647
Input Volume	5992	5992	6243	5992	6055
% of Volume	27	27	27	27	27

Intersection: 1: 10th Street & Main Street (SH-75), Interval #1

Movement	NB	NE
Directions Served	LT	LR
Maximum Queue (ft)	83	79
Average Queue (ft)	30	42
95th Queue (ft)	85	87
Link Distance (ft)	263	1050
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 1: 10th Street & Main Street (SH-75), Interval #2

Movement	NB	B9	B9	NE
Directions Served	LT	T		LR
Maximum Queue (ft)	95	4	3	77
Average Queue (ft)	31	1	0	44
95th Queue (ft)	91	7	6	82
Link Distance (ft)	263	194	194	1050
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 1: 10th Street & Main Street (SH-75), Interval #3

Movement	NB	NE
Directions Served	LT	LR
Maximum Queue (ft)	88	72
Average Queue (ft)	32	41
95th Queue (ft)	91	74
Link Distance (ft)	263	1050
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 1: 10th Street & Main Street (SH-75), Interval #4

Movement	NB	B9	NE
Directions Served	LT	T	LR
Maximum Queue (ft)	75	2	86
Average Queue (ft)	28	0	43
95th Queue (ft)	78	4	87
Link Distance (ft)	263	194	1050
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 1: 10th Street & Main Street (SH-75), All Intervals

Movement	NB	B9	B9	NE
Directions Served	LT	T		LR
Maximum Queue (ft)	128	5	3	104
Average Queue (ft)	30	0	0	43
95th Queue (ft)	86	4	3	83
Link Distance (ft)	263	194	194	1050
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: 5th Street & Main Street (SH-75), Interval #1

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	124	112	171	84	118	120
Average Queue (ft)	85	75	102	21	69	70
95th Queue (ft)	130	117	180	92	123	118
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: 5th Street & Main Street (SH-75), Interval #2

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	119	114	188	133	111	115
Average Queue (ft)	87	74	110	33	69	66
95th Queue (ft)	126	122	194	139	114	121
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: 5th Street & Main Street (SH-75), Interval #3

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	126	130	206	115	132	118
Average Queue (ft)	98	84	136	29	78	67
95th Queue (ft)	136	139	222	115	150	124
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: 5th Street & Main Street (SH-75), Interval #4

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	114	124	181	120	131	116
Average Queue (ft)	86	83	116	31	73	66
95th Queue (ft)	130	130	192	120	142	121
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: 5th Street & Main Street (SH-75), All Intervals

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	134	141	237	181	173	154
Average Queue (ft)	89	79	116	29	72	67
95th Queue (ft)	131	128	200	118	134	121
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Network Summary

Network wide Queuing Penalty, Interval #1: 0
Network wide Queuing Penalty, Interval #2: 0
Network wide Queuing Penalty, Interval #3: 0
Network wide Queuing Penalty, Interval #4: 0
Network wide Queuing Penalty, All Intervals: 0

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: ID Ketchum - Bracken Station TIS
Analysis Period: *Existing (2016) Plus Project*
Time Period: *p.m. Peak Hour* **Project #:** *UT16-851*

Intersection: 10th Street & Main Street (SH-75)
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	48	47	97	4.4	*A*
	T	279	277	99	0.9	*A*
	Subtotal	327	324	99	1.4	*A*
SB	T	391	380	97	0.9	*A*
	R	54	54	100	0.5	*A*
	Subtotal	445	434	98	0.9	*A*
NE	L	51	54	106	16.0	*C*
	R	61	63	104	7.6	*A*
	Subtotal	***112***	***117***	***104***	***11.5***	***B***
Total		884	875	99	2.5	*A*

Intersection: 5th Street & Main Street (SH-75)
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	28	26	92	17.1	*B*
	T	451	447	99	10.9	*B*
	R	11	11	100	2.6	*A*
	Subtotal	490	484	99	11.0	*B*
SE	L	91	93	102	14.4	*B*
	T	547	546	100	8.2	*A*
	R	118	116	98	4.5	*A*
	Subtotal	756	755	100	8.4	*A*
NE	L	76	75	99	19.5	*B*
	T	68	66	97	18.0	*B*
	R	22	22	99	13.4	*B*
	Subtotal	166	163	98	18.1	*B*
SW	L	28	29	103	16.9	*B*
	T	76	74	98	15.7	*B*
	R	78	77	99	8.7	*A*
	Subtotal	182	180	99	12.9	*B*
Total		1,594	1,582	99	10.7	*B*

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: ID Ketchum - Bracken Station TIS
Analysis Period: *Existing (2016) Plus Project*
Time Period: *p.m. Peak Hour* **Project #:** *UT16-851*

Intersection: Main Street (SH-75) & Project Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	27	24	88	4.7	*A*
	T	577	578	100	1.4	*A*
	Subtotal	604	602	100	1.5	*A*
SB	T	434	426	98	0.4	*A*
	R	18	18	99	0.2	*A*
	Subtotal	452	444	98	0.4	*A*
EB	L	18	16	88	8.9	*A*
	R	27	27	99	4.2	*A*
	Subtotal	***45***	***43***	***96***	***5.9***	***A***
Total		1,102	1,089	99	1.3	*A*

Intersection:
Type:

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
Total						

1: 10th Street & Main Street (SH-75) Performance by movement Interval #1 4:15

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.4	0.5	0.2	0.2	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	4.4	0.9	0.9	0.5	14.3	9.4	2.5
Vehicles Entered	11	73	99	13	13	17	226
Vehicles Exited	11	73	98	14	13	16	225
Hourly Exit Rate	44	292	392	56	52	64	900
Input Volume	48	276	387	53	50	60	874
% of Volume	92	106	101	106	104	107	103

1: 10th Street & Main Street (SH-75) Performance by movement Interval #2 4:30

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.3	0.3	0.2	0.2	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Total Del/Veh (s)	4.5	0.9	0.8	0.4	13.0	5.8	2.2
Vehicles Entered	11	64	90	12	12	15	204
Vehicles Exited	11	64	91	12	13	15	206
Hourly Exit Rate	44	256	364	48	52	60	824
Input Volume	48	276	387	53	50	60	874
% of Volume	92	93	94	91	104	100	94

1: 10th Street & Main Street (SH-75) Performance by movement Interval #3 4:45

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.3	0.3	0.2	0.2	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	4.6	0.9	0.8	0.5	18.4	6.4	2.6
Vehicles Entered	12	72	96	15	14	14	223
Vehicles Exited	12	72	96	15	14	14	223
Hourly Exit Rate	48	288	384	60	56	56	892
Input Volume	49	288	403	56	53	63	912
% of Volume	98	100	95	107	106	89	98

1: 10th Street & Main Street (SH-75) Performance by movement Interval #4 5:00

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.3	0.4	0.1	0.2	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	4.0	0.9	0.9	0.6	14.6	7.4	2.5
Vehicles Entered	13	68	95	13	14	18	221
Vehicles Exited	13	68	95	13	14	18	221
Hourly Exit Rate	52	272	380	52	56	72	884
Input Volume	48	276	387	53	50	60	874
% of Volume	108	99	98	98	112	120	101

1: 10th Street & Main Street (SH-75) Performance by movement Entire Run

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.4	0.4	0.2	0.2	0.2
Total Delay (hr)	0.1	0.1	0.1	0.0	0.2	0.1	0.6
Total Del/Veh (s)	4.4	0.9	0.9	0.5	16.0	7.6	2.5
Vehicles Entered	47	277	380	54	53	64	875
Vehicles Exited	47	277	380	54	54	63	875
Hourly Exit Rate	47	277	380	54	54	63	875
Input Volume	48	279	391	54	51	61	884
% of Volume	97	99	97	100	106	104	99

2: 5th Street & Main Street (SH-75) Performance by movement Interval #1 4:15

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	0.1	0.3	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.2
Total Delay (hr)	0.1	0.3	0.0	0.0	0.3	0.0	0.1	0.1	0.0	0.0	0.1	0.0
Total Del/Veh (s)	14.9	8.2	5.1	15.8	10.8	2.2	19.0	15.4	12.0	17.7	16.1	8.5
Vehicles Entered	24	136	31	6	110	3	20	16	6	8	17	19
Vehicles Exited	23	133	30	6	109	3	21	16	6	8	19	19
Hourly Exit Rate	92	532	120	24	436	12	84	64	24	32	76	76
Input Volume	90	541	117	28	446	11	75	67	22	28	75	77
% of Volume	102	98	103	86	98	109	112	96	109	114	101	99

2: 5th Street & Main Street (SH-75) Performance by movement Interval #1 4:15

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.2
Total Delay (hr)	1.2
Total Del/Veh (s)	10.7
Vehicles Entered	396
Vehicles Exited	393
Hourly Exit Rate	1572
Input Volume	1577
% of Volume	100

2: 5th Street & Main Street (SH-75) Performance by movement Interval #2 4:30

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	0.1	0.3	0.2	0.3	0.1	0.2	0.2	0.1	0.2	0.2	0.2
Total Delay (hr)	0.1	0.3	0.0	0.0	0.3	0.0	0.1	0.1	0.0	0.0	0.1	0.0
Total Del/Veh (s)	13.4	7.5	3.9	15.3	10.2	2.6	18.9	17.0	13.1	12.2	14.7	7.0
Vehicles Entered	25	130	27	7	108	3	16	15	6	8	17	20
Vehicles Exited	26	135	27	7	109	3	16	15	6	7	16	19
Hourly Exit Rate	104	540	108	28	436	12	64	60	24	28	64	76
Input Volume	90	541	117	28	446	11	75	67	22	28	75	77
% of Volume	116	100	92	100	98	109	85	90	109	100	85	99

2: 5th Street & Main Street (SH-75) Performance by movement Interval #2 4:30

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.2
Total Delay (hr)	1.1
Total Del/Veh (s)	9.8
Vehicles Entered	382
Vehicles Exited	386
Hourly Exit Rate	1544
Input Volume	1577
% of Volume	98

2: 5th Street & Main Street (SH-75) Performance by movement Interval #3 4:45

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.4	0.2	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2
Total Delay (hr)	0.1	0.3	0.0	0.0	0.4	0.0	0.1	0.1	0.0	0.0	0.1	0.1
Total Del/Veh (s)	15.6	8.6	4.1	17.9	11.3	2.5	20.6	18.8	14.9	17.2	14.3	9.7
Vehicles Entered	22	139	32	7	120	2	20	17	6	7	21	19
Vehicles Exited	22	138	31	6	120	2	20	17	6	7	21	20
Hourly Exit Rate	88	552	124	24	480	8	80	68	24	28	84	80
Input Volume	94	564	122	29	465	11	78	70	23	29	78	80
% of Volume	94	98	102	83	103	73	103	97	104	97	108	100

2: 5th Street & Main Street (SH-75) Performance by movement Interval #3 4:45

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.2
Total Delay (hr)	1.3
Total Del/Veh (s)	11.3
Vehicles Entered	412
Vehicles Exited	410
Hourly Exit Rate	1640
Input Volume	1643
% of Volume	100

2: 5th Street & Main Street (SH-75) Performance by movement Interval #4 5:00

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	0.1	0.4	0.3	0.3	0.1	0.2	0.2	0.1	0.2	0.2	0.2
Total Delay (hr)	0.1	0.3	0.0	0.0	0.3	0.0	0.1	0.1	0.0	0.0	0.1	0.0
Total Del/Veh (s)	13.3	7.9	4.3	16.9	9.9	3.1	17.3	17.7	10.3	16.3	16.3	8.1
Vehicles Entered	23	141	28	7	108	3	18	17	4	7	18	19
Vehicles Exited	22	140	28	6	108	3	19	17	4	7	18	19
Hourly Exit Rate	88	560	112	24	432	12	76	68	16	28	72	76
Input Volume	90	541	117	28	446	11	75	67	22	28	75	77
% of Volume	98	104	96	86	97	109	101	101	73	100	96	99

2: 5th Street & Main Street (SH-75) Performance by movement Interval #4 5:00

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.2
Total Delay (hr)	1.1
Total Del/Veh (s)	10.1
Vehicles Entered	393
Vehicles Exited	391
Hourly Exit Rate	1564
Input Volume	1577
% of Volume	99

2: 5th Street & Main Street (SH-75) Performance by movement Entire Run

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	0.1	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2
Total Delay (hr)	0.4	1.2	0.1	0.1	1.4	0.0	0.4	0.3	0.1	0.1	0.3	0.2
Total Del/Veh (s)	14.4	8.2	4.5	17.1	10.9	2.6	19.5	18.0	13.4	16.9	15.7	8.7
Vehicles Entered	94	547	117	27	447	11	74	64	22	28	73	77
Vehicles Exited	93	546	116	26	447	11	75	66	22	29	74	77
Hourly Exit Rate	93	546	116	26	447	11	75	66	22	29	74	77
Input Volume	91	547	118	28	451	11	76	68	22	28	76	78
% of Volume	102	100	98	92	99	100	99	97	99	103	98	99

2: 5th Street & Main Street (SH-75) Performance by movement Entire Run

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	4.7
Total Del/Veh (s)	10.7
Vehicles Entered	1581
Vehicles Exited	1582
Hourly Exit Rate	1582
Input Volume	1594
% of Volume	99

3: Main Street (SH-75) & Project Access Performance by movement Interval #1 4:15

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.1
Total Del/Veh (s)	8.6	4.1	4.1	1.5	0.4	0.2	1.3
Vehicles Entered	5	7	6	144	110	5	277
Vehicles Exited	4	7	6	146	109	5	277
Hourly Exit Rate	16	28	24	584	436	20	1108
Input Volume	18	27	27	571	430	18	1091
% of Volume	89	104	89	102	101	111	102

3: Main Street (SH-75) & Project Access Performance by movement Interval #2 4:30

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.1
Total Del/Veh (s)	8.0	3.9	4.4	1.3	0.4	0.2	1.2
Vehicles Entered	3	6	6	138	102	4	259
Vehicles Exited	4	6	5	137	101	4	257
Hourly Exit Rate	16	24	20	548	404	16	1028
Input Volume	18	27	27	571	430	18	1091
% of Volume	89	89	74	96	94	89	94

3: Main Street (SH-75) & Project Access Performance by movement Interval #3 4:45

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.1
Total Del/Veh (s)	6.7	4.4	4.3	1.4	0.4	0.1	1.2
Vehicles Entered	4	8	5	155	106	4	282
Vehicles Exited	4	8	6	153	107	4	282
Hourly Exit Rate	16	32	24	612	428	16	1128
Input Volume	19	28	28	595	447	19	1136
% of Volume	84	114	86	103	96	84	99

3: Main Street (SH-75) & Project Access Performance by movement Interval #4 5:00

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.1
Total Del/Veh (s)	10.1	4.8	5.2	1.4	0.4	0.2	1.3
Vehicles Entered	4	6	7	138	109	4	268
Vehicles Exited	4	6	7	142	109	4	272
Hourly Exit Rate	16	24	28	568	436	16	1088
Input Volume	18	27	27	571	430	18	1091
% of Volume	89	89	104	99	101	89	100

3: Main Street (SH-75) & Project Access Performance by movement Entire Run

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.2	0.0	0.0	0.4
Total Del/Veh (s)	8.9	4.2	4.7	1.4	0.4	0.2	1.3
Vehicles Entered	16	28	24	575	426	18	1087
Vehicles Exited	16	27	24	578	426	18	1089
Hourly Exit Rate	16	27	24	578	426	18	1089
Input Volume	18	27	27	577	434	18	1102
% of Volume	88	99	88	100	98	99	99

Total Network Performance By Interval

Interval Start	4:15	4:30	4:45	5:00	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.3	0.3	0.3	0.3	0.3
Total Delay (hr)	1.7	1.5	1.8	1.6	6.6
Total Del/Veh (s)	12.9	11.8	13.3	12.4	13.5
Vehicles Entered	435	413	450	426	1724
Vehicles Exited	436	410	454	429	1729
Hourly Exit Rate	1744	1640	1816	1716	1729
Input Volume	6047	6047	6301	6047	6110
% of Volume	29	27	29	28	28

Intersection: 1: 10th Street & Main Street (SH-75), Interval #1

Movement	NB	NE
Directions Served	LT	LR
Maximum Queue (ft)	73	81
Average Queue (ft)	25	43
95th Queue (ft)	70	83
Link Distance (ft)	84	1050
Upstream Blk Time (%)	1	
Queuing Penalty (veh)	2	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 1: 10th Street & Main Street (SH-75), Interval #2

Movement	NB	NE
Directions Served	LT	LR
Maximum Queue (ft)	67	70
Average Queue (ft)	23	38
95th Queue (ft)	69	72
Link Distance (ft)	84	1050
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	1	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 1: 10th Street & Main Street (SH-75), Interval #3

Movement	NB	SB	NE
Directions Served	LT	TR	LR
Maximum Queue (ft)	78	2	77
Average Queue (ft)	27	0	45
95th Queue (ft)	76	4	87
Link Distance (ft)	84	604	1050
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	1		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 1: 10th Street & Main Street (SH-75), Interval #4

Movement	NB	SB	NE
Directions Served	LT	TR	LR
Maximum Queue (ft)	69	2	95
Average Queue (ft)	25	0	42
95th Queue (ft)	70	5	82
Link Distance (ft)	84	604	1050
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	1		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 1: 10th Street & Main Street (SH-75), All Intervals

Movement	NB	SB	NE
Directions Served	LT	TR	LR
Maximum Queue (ft)	88	4	117
Average Queue (ft)	25	0	42
95th Queue (ft)	71	3	81
Link Distance (ft)	84	604	1050
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	1		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: 5th Street & Main Street (SH-75), Interval #1

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	126	128	198	117	149	109
Average Queue (ft)	92	80	118	30	79	71
95th Queue (ft)	131	138	203	118	146	122
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: 5th Street & Main Street (SH-75), Interval #2

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	118	106	188	119	120	106
Average Queue (ft)	93	72	120	30	71	61
95th Queue (ft)	132	116	200	126	126	107
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: 5th Street & Main Street (SH-75), Interval #3

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	131	128	210	116	134	117
Average Queue (ft)	98	79	126	30	79	75
95th Queue (ft)	146	131	226	141	139	129
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: 5th Street & Main Street (SH-75), Interval #4

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	122	126	174	89	127	125
Average Queue (ft)	92	84	112	26	73	70
95th Queue (ft)	134	132	187	98	134	125
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: 5th Street & Main Street (SH-75), All Intervals

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	142	143	233	188	176	148
Average Queue (ft)	94	79	119	29	75	69
95th Queue (ft)	136	130	205	122	137	121
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 3: Main Street (SH-75) & Project Access, Interval #1

Movement	EB	EB	NB
Directions Served	L	R	LT
Maximum Queue (ft)	32	46	50
Average Queue (ft)	15	22	12
95th Queue (ft)	41	53	44
Link Distance (ft)	92	92	1131
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Main Street (SH-75) & Project Access, Interval #2

Movement	EB	EB	NB
Directions Served	L	R	LT
Maximum Queue (ft)	27	38	50
Average Queue (ft)	11	17	15
95th Queue (ft)	35	45	54
Link Distance (ft)	92	92	1131
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Main Street (SH-75) & Project Access, Interval #3

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (ft)	40	41	56	3
Average Queue (ft)	15	23	16	0
95th Queue (ft)	45	50	58	6
Link Distance (ft)	92	92	1131	84
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Main Street (SH-75) & Project Access, Interval #4

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (ft)	39	46	61	12
Average Queue (ft)	14	20	19	2
95th Queue (ft)	43	51	67	16
Link Distance (ft)	92	92	1131	84
Upstream Blk Time (%)		0		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Main Street (SH-75) & Project Access, All Intervals

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (ft)	48	56	82	15
Average Queue (ft)	14	20	15	1
95th Queue (ft)	41	50	56	8
Link Distance (ft)	92	92	1131	84
Upstream Blk Time (%)	0	0		
Queuing Penalty (veh)	0	0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty, Interval #1: 2
Network wide Queuing Penalty, Interval #2: 1
Network wide Queuing Penalty, Interval #3: 1
Network wide Queuing Penalty, Interval #4: 1
Network wide Queuing Penalty, All Intervals: 1

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: ID Ketchum - Bracken Station TIS
Analysis Period: *Future (2020) Background*
Time Period: *p.m. Peak Hour* **Project #:** *UT16-851*

Intersection: 10th Street & Main Street (SH-75)
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	50	46	92	5.1	*A*
	T	552	560	101	0.9	*A*
	Subtotal	602	606	101	1.2	*A*
SB	T	389	398	102	0.9	*A*
	R	56	54	97	0.5	*A*
	Subtotal	445	452	102	0.9	*A*
NE	L	53	50	95	13.6	*B*
	R	64	68	107	7.7	*A*
	Subtotal	***117***	***118***	***101***	***10.2***	***B***
Total		1,164	1,176	101	2.0	*A*

Intersection: 5th Street & Main Street (SH-75)
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	29	28	96	19.3	*B*
	T	450	453	101	11.2	*B*
	R	12	11	92	3.3	*A*
	Subtotal	491	492	100	11.5	*B*
SE	L	92	95	103	15.5	*B*
	T	550	560	102	8.4	*A*
	R	119	122	102	4.5	*A*
	Subtotal	761	777	102	8.7	*A*
NE	L	76	78	103	19.7	*B*
	T	71	68	96	19.4	*B*
	R	23	25	108	11.9	*B*
	Subtotal	170	171	101	18.4	*B*
SW	L	29	28	96	19.0	*B*
	T	79	76	97	18.1	*B*
	R	77	74	96	10.1	*B*
	Subtotal	185	178	96	14.9	*B*
Total		1,606	1,618	101	11.2	*B*

1: 10th Street & Main Street (SH-75) Performance by movement Interval #1 4:15

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.4	0.3	0.2	0.2	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	4.8	0.9	0.9	0.4	14.0	8.8	2.2
Vehicles Entered	13	137	102	13	14	18	297
Vehicles Exited	12	136	101	13	15	17	294
Hourly Exit Rate	48	544	404	52	60	68	1176
Input Volume	49	547	385	55	52	63	1151
% of Volume	98	99	105	95	115	108	102

1: 10th Street & Main Street (SH-75) Performance by movement Interval #2 4:30

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.4	0.4	0.1	0.2	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	4.5	0.9	0.9	0.6	11.6	5.7	1.7
Vehicles Entered	11	139	98	14	11	16	289
Vehicles Exited	12	139	98	14	11	16	290
Hourly Exit Rate	48	556	392	56	44	64	1160
Input Volume	49	547	385	55	52	63	1151
% of Volume	98	102	102	102	85	102	101

1: 10th Street & Main Street (SH-75) Performance by movement Interval #3 4:45

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.4	0.4	0.2	0.2	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	5.4	0.8	0.9	0.5	14.8	7.5	2.0
Vehicles Entered	11	142	99	14	13	17	296
Vehicles Exited	11	142	100	14	13	17	297
Hourly Exit Rate	44	568	400	56	52	68	1188
Input Volume	52	569	401	58	55	66	1201
% of Volume	85	100	100	97	95	103	99

1: 10th Street & Main Street (SH-75) Performance by movement Interval #4 5:00

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.3	0.3	0.1	0.2	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	5.2	0.8	0.9	0.5	12.7	7.5	1.9
Vehicles Entered	11	143	99	13	12	18	296
Vehicles Exited	11	142	99	13	12	18	295
Hourly Exit Rate	44	568	396	52	48	72	1180
Input Volume	49	547	385	55	52	63	1151
% of Volume	90	104	103	95	92	114	103

1: 10th Street & Main Street (SH-75) Performance by movement Entire Run

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.0	0.0	0.4	0.3	0.2	0.2	0.2
Total Delay (hr)	0.1	0.1	0.1	0.0	0.2	0.1	0.6
Total Del/Veh (s)	5.1	0.9	0.9	0.5	13.6	7.7	2.0
Vehicles Entered	46	560	399	54	50	68	1177
Vehicles Exited	46	560	398	54	50	68	1176
Hourly Exit Rate	46	560	398	54	50	68	1176
Input Volume	50	552	389	56	53	64	1164
% of Volume	92	101	102	97	95	107	101

2: 5th Street & Main Street (SH-75) Performance by movement Interval #1 4:15

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.6	0.2	0.3	0.2	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.1
Total Delay (hr)	0.1	0.4	0.0	0.0	0.4	0.0	0.1	0.1	0.0	0.0	0.1	0.0
Total Del/Veh (s)	15.5	8.8	4.6	22.4	11.3	4.6	18.8	15.6	11.5	17.1	17.7	8.5
Vehicles Entered	22	143	30	6	113	3	18	16	7	7	19	17
Vehicles Exited	21	139	30	6	110	3	19	16	7	7	20	18
Hourly Exit Rate	84	556	120	24	440	12	76	64	28	28	80	72
Input Volume	91	544	118	29	445	12	75	70	23	29	78	76
% of Volume	92	102	102	83	99	100	101	91	122	97	103	95

2: 5th Street & Main Street (SH-75) Performance by movement Interval #1 4:15

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.3
Total Delay (hr)	1.3
Total Del/Veh (s)	11.2
Vehicles Entered	401
Vehicles Exited	396
Hourly Exit Rate	1584
Input Volume	1590
% of Volume	100

2: 5th Street & Main Street (SH-75) Performance by movement Interval #2 4:30

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	0.1	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2
Total Delay (hr)	0.1	0.3	0.0	0.0	0.3	0.0	0.1	0.1	0.0	0.0	0.1	0.1
Total Del/Veh (s)	14.3	7.8	4.6	14.6	9.9	1.9	20.3	20.2	11.4	17.0	17.6	10.3
Vehicles Entered	23	138	28	7	111	3	19	14	6	9	20	18
Vehicles Exited	24	142	28	7	115	3	19	14	6	9	19	18
Hourly Exit Rate	96	568	112	28	460	12	76	56	24	36	76	72
Input Volume	91	544	118	29	445	12	75	70	23	29	78	76
% of Volume	105	104	95	97	103	100	101	80	104	124	97	95

2: 5th Street & Main Street (SH-75) Performance by movement Interval #2 4:30

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.2
Total Delay (hr)	1.2
Total Del/Veh (s)	10.5
Vehicles Entered	396
Vehicles Exited	404
Hourly Exit Rate	1616
Input Volume	1590
% of Volume	102

2: 5th Street & Main Street (SH-75) Performance by movement Interval #3 4:45

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.5	0.1	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2
Total Delay (hr)	0.1	0.3	0.0	0.0	0.4	0.0	0.1	0.1	0.0	0.0	0.1	0.1
Total Del/Veh (s)	15.6	8.1	4.4	17.0	10.8	3.5	20.3	20.2	13.2	22.7	18.7	9.9
Vehicles Entered	25	141	32	7	120	3	19	20	6	6	19	20
Vehicles Exited	25	141	32	7	117	3	18	20	6	6	20	20
Hourly Exit Rate	100	564	128	28	468	12	72	80	24	24	80	80
Input Volume	95	567	123	30	464	12	78	73	24	30	81	79
% of Volume	105	99	104	93	101	100	92	110	100	80	99	101

2: 5th Street & Main Street (SH-75) Performance by movement Interval #3 4:45

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.2
Total Delay (hr)	1.3
Total Del/Veh (s)	11.3
Vehicles Entered	418
Vehicles Exited	415
Hourly Exit Rate	1660
Input Volume	1656
% of Volume	100

2: 5th Street & Main Street (SH-75) Performance by movement Interval #4 5:00

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.5	0.1	0.3	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Total Delay (hr)	0.1	0.3	0.0	0.0	0.4	0.0	0.1	0.1	0.0	0.0	0.1	0.1
Total Del/Veh (s)	16.0	8.6	4.4	20.6	11.5	3.1	16.8	18.2	11.6	17.5	17.2	9.9
Vehicles Entered	25	138	32	8	111	2	20	17	6	6	18	18
Vehicles Exited	24	138	31	8	111	2	21	17	6	6	17	19
Hourly Exit Rate	96	552	124	32	444	8	84	68	24	24	68	76
Input Volume	91	544	118	29	445	12	75	70	23	29	78	76
% of Volume	105	101	105	110	100	67	112	97	104	83	87	100

2: 5th Street & Main Street (SH-75) Performance by movement Interval #4 5:00

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.2
Total Delay (hr)	1.3
Total Del/Veh (s)	11.1
Vehicles Entered	401
Vehicles Exited	400
Hourly Exit Rate	1600
Input Volume	1590
% of Volume	101

2: 5th Street & Main Street (SH-75) Performance by movement Entire Run

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.5	0.1	0.3	0.2	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Total Delay (hr)	0.4	1.3	0.2	0.2	1.4	0.0	0.4	0.4	0.1	0.1	0.4	0.2
Total Del/Veh (s)	15.5	8.4	4.5	19.3	11.2	3.3	19.7	19.4	11.9	19.0	18.1	10.1
Vehicles Entered	96	560	122	29	455	11	77	67	25	27	76	74
Vehicles Exited	95	560	122	28	453	11	78	68	25	28	76	74
Hourly Exit Rate	95	560	122	28	453	11	78	68	25	28	76	74
Input Volume	92	550	119	29	450	12	76	71	23	29	79	77
% of Volume	103	102	102	96	101	92	103	96	108	96	97	96

2: 5th Street & Main Street (SH-75) Performance by movement Entire Run

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	5.1
Total Del/Veh (s)	11.2
Vehicles Entered	1619
Vehicles Exited	1618
Hourly Exit Rate	1618
Input Volume	1606
% of Volume	101

Total Network Performance By Interval

Interval Start	4:15	4:30	4:45	5:00	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.2
Denied Del/Veh (s)	0.3	0.3	0.3	0.3	0.3
Total Delay (hr)	1.8	1.6	1.8	1.8	7.0
Total Del/Veh (s)	13.7	12.7	13.6	13.4	14.3
Vehicles Entered	431	422	444	426	1725
Vehicles Exited	429	426	437	430	1722
Hourly Exit Rate	1716	1704	1748	1720	1722
Input Volume	6247	6247	6512	6247	6313
% of Volume	27	27	27	28	27

Intersection: 1: 10th Street & Main Street (SH-75), Interval #1

Movement	NB	NE
Directions Served	LT	LR
Maximum Queue (ft)	72	78
Average Queue (ft)	26	45
95th Queue (ft)	74	80
Link Distance (ft)	263	1050
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 1: 10th Street & Main Street (SH-75), Interval #2

Movement	NB	SB	NE
Directions Served	LT	TR	LR
Maximum Queue (ft)	81	2	64
Average Queue (ft)	30	0	37
95th Queue (ft)	85	4	66
Link Distance (ft)	263	604	1050
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 1: 10th Street & Main Street (SH-75), Interval #3

Movement	NB	NE
Directions Served	LT	LR
Maximum Queue (ft)	90	70
Average Queue (ft)	28	43
95th Queue (ft)	88	77
Link Distance (ft)	263	1050
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 1: 10th Street & Main Street (SH-75), Interval #4

Movement	NB	SB	NE
Directions Served	LT	TR	LR
Maximum Queue (ft)	72	2	76
Average Queue (ft)	25	0	45
95th Queue (ft)	72	0	85
Link Distance (ft)	263	604	1050
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 1: 10th Street & Main Street (SH-75), All Intervals

Movement	NB	SB	NE
Directions Served	LT	TR	LR
Maximum Queue (ft)	119	4	90
Average Queue (ft)	27	0	43
95th Queue (ft)	80	2	77
Link Distance (ft)	263	604	1050
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: 5th Street & Main Street (SH-75), Interval #1

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	129	129	202	124	124	120
Average Queue (ft)	97	88	122	34	71	69
95th Queue (ft)	137	141	211	129	134	119
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: 5th Street & Main Street (SH-75), Interval #2

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	122	121	172	99	121	130
Average Queue (ft)	87	78	121	19	73	74
95th Queue (ft)	135	128	185	81	126	137
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: 5th Street & Main Street (SH-75), Interval #3

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	127	128	197	118	133	140
Average Queue (ft)	99	85	120	33	84	76
95th Queue (ft)	141	142	212	127	148	152
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)		0				
Queuing Penalty (veh)		0				
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: 5th Street & Main Street (SH-75), Interval #4

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	135	122	195	137	126	118
Average Queue (ft)	96	84	123	39	75	71
95th Queue (ft)	140	127	226	147	133	126
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: 5th Street & Main Street (SH-75), All Intervals

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	143	151	254	202	169	169
Average Queue (ft)	95	84	122	31	76	72
95th Queue (ft)	139	135	210	123	136	135
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)		0				
Queuing Penalty (veh)		0				
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Network Summary

Network wide Queuing Penalty, Interval #1: 0
Network wide Queuing Penalty, Interval #2: 0
Network wide Queuing Penalty, Interval #3: 0
Network wide Queuing Penalty, Interval #4: 0
Network wide Queuing Penalty, All Intervals: 0

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: ID Ketchum - Bracken Station TIS
Analysis Period: *Future (2020) Plus Project*
Time Period: *p.m. Peak Hour* **Project #:** *UT16-851*

Intersection: 10th Street & Main Street (SH-75)
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	50	45	90	5.0	*A*
	T	290	293	101	0.2	*A*
	Subtotal	340	338	99	0.8	*A*
SB	T	407	405	99	0.9	*A*
	R	56	58	104	0.7	*A*
	Subtotal	463	463	100	0.9	*A*
NE	L	53	52	99	14.9	*B*
	R	64	67	105	7.6	*A*
	Subtotal	***117***	***119***	***102***	***10.8***	***B***
Total		919	920	100	2.2	*A*

Intersection: 5th Street & Main Street (SH-75)
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	29	31	106	17.0	*B*
	T	470	468	100	11.1	*B*
	R	12	13	108	2.7	*A*
	Subtotal	511	512	100	11.2	*B*
SE	L	95	95	100	15.8	*B*
	T	570	567	99	8.3	*A*
	R	123	126	102	4.9	*A*
	Subtotal	788	788	100	8.7	*A*
NE	L	79	79	100	18.8	*B*
	T	71	68	96	19.8	*B*
	R	23	23	99	12.0	*B*
	Subtotal	173	170	98	18.3	*B*
SW	L	29	30	103	18.2	*B*
	T	79	77	98	17.2	*B*
	R	81	83	102	9.1	*A*
	Subtotal	189	190	101	13.8	*B*
Total		1,661	1,660	100	11.1	*B*

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: ID Ketchum - Bracken Station TIS
Analysis Period: *Future (2020) Plus Project*
Time Period: *p.m. Peak Hour* **Project #:** *UT16-851*

Intersection: Main Street (SH-75) & Project Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	27	26	95	4.0	*A*
	T	602	605	100	0.2	*A*
	Subtotal	629	631	100	0.4	*A*
SB	T	453	454	100	0.4	*A*
	R	18	18	99	0.2	*A*
	Subtotal	471	472	100	0.4	*A*
EB	L	18	19	104	13.0	*B*
	R	27	31	114	4.8	*A*
	Subtotal	***45***	***50***	***111***	***7.9***	***A***
Total		1,146	1,153	101	0.7	*A*

Intersection:
Type:

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
Total						

1: 10th Street & Main Street (SH-75) Performance by movement Interval #1 4:15

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.4	0.4	0.2	0.2	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Total Del/Veh (s)	4.2	0.2	0.9	0.6	13.0	6.7	2.0
Vehicles Entered	11	72	96	16	13	15	223
Vehicles Exited	11	72	96	17	13	15	224
Hourly Exit Rate	44	288	384	68	52	60	896
Input Volume	49	287	403	55	52	63	909
% of Volume	90	100	95	124	100	95	99

1: 10th Street & Main Street (SH-75) Performance by movement Interval #2 4:30

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.4	0.4	0.2	0.2	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	5.2	0.2	1.0	0.6	12.7	6.5	2.1
Vehicles Entered	14	71	99	14	12	18	228
Vehicles Exited	14	72	98	14	12	17	227
Hourly Exit Rate	56	288	392	56	48	68	908
Input Volume	49	287	403	55	52	63	909
% of Volume	114	100	97	102	92	108	100

1: 10th Street & Main Street (SH-75) Performance by movement Interval #3 4:45

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.4	0.4	0.2	0.1	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	4.8	0.2	0.9	0.8	15.4	8.5	2.2
Vehicles Entered	10	78	103	14	13	18	236
Vehicles Exited	10	78	103	14	14	17	236
Hourly Exit Rate	40	312	412	56	56	68	944
Input Volume	52	298	420	58	55	66	949
% of Volume	77	105	98	97	102	103	99

1: 10th Street & Main Street (SH-75) Performance by movement Interval #4 5:00

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.4	0.4	0.1	0.2	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	5.1	0.2	0.9	0.5	15.0	7.9	2.3
Vehicles Entered	11	72	107	13	14	17	234
Vehicles Exited	11	72	108	14	14	17	236
Hourly Exit Rate	44	288	432	56	56	68	944
Input Volume	49	287	403	55	52	63	909
% of Volume	90	100	107	102	108	108	104

1: 10th Street & Main Street (SH-75) Performance by movement Entire Run

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.0	0.0	0.4	0.4	0.2	0.2	0.2
Total Delay (hr)	0.1	0.0	0.1	0.0	0.2	0.1	0.6
Total Del/Veh (s)	5.0	0.2	0.9	0.7	14.9	7.6	2.2
Vehicles Entered	45	294	405	58	52	67	921
Vehicles Exited	45	293	405	58	52	67	920
Hourly Exit Rate	45	293	405	58	52	67	920
Input Volume	50	290	407	56	53	64	919
% of Volume	90	101	99	104	99	105	100

2: 5th Street & Main Street (SH-75) Performance by movement Interval #1 4:15

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.4	0.2	0.3	0.2	0.3	0.1	0.2	0.3	0.1	0.2	0.2	0.2
Total Delay (hr)	0.1	0.3	0.0	0.0	0.3	0.0	0.1	0.1	0.0	0.0	0.1	0.0
Total Del/Veh (s)	14.7	7.8	4.9	15.8	10.6	2.5	19.3	19.2	12.5	15.3	14.8	8.1
Vehicles Entered	24	136	30	8	113	3	21	17	6	8	21	19
Vehicles Exited	23	134	29	8	109	3	22	18	6	9	22	20
Hourly Exit Rate	92	536	116	32	436	12	88	72	24	36	88	80
Input Volume	94	564	122	29	465	12	78	70	23	29	78	80
% of Volume	98	95	95	110	94	100	113	103	104	124	113	100

2: 5th Street & Main Street (SH-75) Performance by movement Interval #1 4:15

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.2
Total Delay (hr)	1.2
Total Del/Veh (s)	10.6
Vehicles Entered	406
Vehicles Exited	403
Hourly Exit Rate	1612
Input Volume	1644
% of Volume	98

2: 5th Street & Main Street (SH-75) Performance by movement Interval #2 4:30

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.4	0.1	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total Delay (hr)	0.1	0.3	0.0	0.0	0.4	0.0	0.1	0.1	0.0	0.0	0.1	0.1
Total Del/Veh (s)	15.5	8.4	4.4	15.1	10.7	1.7	18.1	18.7	9.5	15.8	17.9	8.8
Vehicles Entered	23	145	32	8	115	3	21	17	7	6	19	21
Vehicles Exited	23	147	32	8	118	3	20	17	6	7	18	20
Hourly Exit Rate	92	588	128	32	472	12	80	68	24	28	72	80
Input Volume	94	564	122	29	465	12	78	70	23	29	78	80
% of Volume	98	104	105	110	102	100	103	97	104	97	92	100

2: 5th Street & Main Street (SH-75) Performance by movement Interval #2 4:30

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.2
Total Delay (hr)	1.3
Total Del/Veh (s)	10.7
Vehicles Entered	417
Vehicles Exited	419
Hourly Exit Rate	1676
Input Volume	1644
% of Volume	102

2: 5th Street & Main Street (SH-75) Performance by movement Interval #3 4:45

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.4	0.1	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total Delay (hr)	0.1	0.3	0.0	0.0	0.4	0.0	0.1	0.1	0.0	0.0	0.1	0.1
Total Del/Veh (s)	16.5	7.8	4.9	17.5	11.1	2.0	17.0	18.5	11.7	21.1	16.4	9.9
Vehicles Entered	24	140	34	8	125	4	19	17	6	7	18	22
Vehicles Exited	24	139	34	8	124	3	19	18	6	7	18	22
Hourly Exit Rate	96	556	136	32	496	12	76	72	24	28	72	88
Input Volume	98	588	127	30	485	12	81	73	24	30	81	84
% of Volume	98	95	107	107	102	100	94	99	100	93	89	105

2: 5th Street & Main Street (SH-75) Performance by movement Interval #3 4:45

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.2
Total Delay (hr)	1.3
Total Del/Veh (s)	10.8
Vehicles Entered	424
Vehicles Exited	422
Hourly Exit Rate	1688
Input Volume	1713
% of Volume	99

2: 5th Street & Main Street (SH-75) Performance by movement Interval #4 5:00

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.7	0.2	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total Delay (hr)	0.1	0.4	0.0	0.0	0.4	0.0	0.1	0.1	0.0	0.0	0.1	0.0
Total Del/Veh (s)	14.5	8.6	5.2	19.7	10.6	3.6	18.9	20.8	10.8	18.9	16.7	8.2
Vehicles Entered	26	148	32	7	118	3	18	17	6	8	18	20
Vehicles Exited	24	146	32	7	118	4	19	16	5	8	18	20
Hourly Exit Rate	96	584	128	28	472	16	76	64	20	32	72	80
Input Volume	94	564	122	29	465	12	78	70	23	29	78	80
% of Volume	102	104	105	97	102	133	97	91	87	110	92	100

2: 5th Street & Main Street (SH-75) Performance by movement Interval #4 5:00

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.3
Total Delay (hr)	1.3
Total Del/Veh (s)	11.0
Vehicles Entered	421
Vehicles Exited	417
Hourly Exit Rate	1668
Input Volume	1644
% of Volume	101

2: 5th Street & Main Street (SH-75) Performance by movement Entire Run

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.5	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total Delay (hr)	0.4	1.3	0.2	0.1	1.5	0.0	0.4	0.4	0.1	0.2	0.4	0.2
Total Del/Veh (s)	15.8	8.3	4.9	17.0	11.1	2.7	18.8	19.8	12.0	18.2	17.2	9.1
Vehicles Entered	96	569	126	31	472	13	78	68	24	29	77	82
Vehicles Exited	95	567	126	31	468	13	79	68	23	30	77	83
Hourly Exit Rate	95	567	126	31	468	13	79	68	23	30	77	83
Input Volume	95	570	123	29	470	12	79	71	23	29	79	81
% of Volume	100	99	102	106	100	108	100	96	99	103	98	102

2: 5th Street & Main Street (SH-75) Performance by movement Entire Run

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	5.1
Total Del/Veh (s)	11.1
Vehicles Entered	1665
Vehicles Exited	1660
Hourly Exit Rate	1660
Input Volume	1661
% of Volume	100

3: Main Street (SH-75) & Project Access Performance by movement Interval #1 4:15

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	9.1	4.4	3.8	0.2	0.4	0.1	0.6
Vehicles Entered	6	7	7	147	107	4	278
Vehicles Exited	5	7	7	146	107	4	276
Hourly Exit Rate	20	28	28	584	428	16	1104
Input Volume	18	27	27	596	448	18	1134
% of Volume	111	104	104	98	96	89	97

3: Main Street (SH-75) & Project Access Performance by movement Interval #2 4:30

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.3	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	10.4	4.7	4.1	0.2	0.5	0.2	0.7
Vehicles Entered	4	9	7	150	111	5	286
Vehicles Exited	4	9	7	150	112	5	287
Hourly Exit Rate	16	36	28	600	448	20	1148
Input Volume	18	27	27	596	448	18	1134
% of Volume	89	133	104	101	100	111	101

3: Main Street (SH-75) & Project Access Performance by movement Interval #3 4:45

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	13.5	5.2	4.6	0.2	0.4	0.3	0.7
Vehicles Entered	4	7	6	158	115	4	294
Vehicles Exited	5	7	6	158	115	4	295
Hourly Exit Rate	20	28	24	632	460	16	1180
Input Volume	19	28	28	622	467	19	1183
% of Volume	105	100	86	102	99	84	100

3: Main Street (SH-75) & Project Access Performance by movement Interval #4 5:00

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	14.5	4.3	3.6	0.2	0.4	0.2	0.7
Vehicles Entered	5	8	7	151	120	5	296
Vehicles Exited	5	8	6	150	120	5	294
Hourly Exit Rate	20	32	24	600	480	20	1176
Input Volume	18	27	27	596	448	18	1134
% of Volume	111	119	89	101	107	111	104

3: Main Street (SH-75) & Project Access Performance by movement Entire Run

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.1	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	13.0	4.8	4.0	0.2	0.4	0.2	0.7
Vehicles Entered	19	31	27	606	453	18	1154
Vehicles Exited	19	31	26	605	454	18	1153
Hourly Exit Rate	19	31	26	605	454	18	1153
Input Volume	18	27	27	602	453	18	1146
% of Volume	104	114	95	100	100	99	101

Total Network Performance By Interval

Interval Start	4:15	4:30	4:45	5:00	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.2
Denied Del/Veh (s)	0.3	0.3	0.3	0.4	0.3
Total Delay (hr)	1.7	1.8	1.8	1.8	7.2
Total Del/Veh (s)	12.7	13.2	13.2	13.3	14.0
Vehicles Entered	446	452	460	458	1815
Vehicles Exited	444	449	461	455	1808
Hourly Exit Rate	1776	1796	1844	1820	1808
Input Volume	7391	7391	7708	7391	7470
% of Volume	24	24	24	25	24

Intersection: 1: 10th Street & Main Street (SH-75), Interval #1

Movement	NB	NE
Directions Served	L	LR
Maximum Queue (ft)	36	66
Average Queue (ft)	16	41
95th Queue (ft)	44	74
Link Distance (ft)	79	1043
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 1: 10th Street & Main Street (SH-75), Interval #2

Movement	NB	SB	NE
Directions Served	L	TR	LR
Maximum Queue (ft)	48	13	77
Average Queue (ft)	24	3	44
95th Queue (ft)	52	22	79
Link Distance (ft)	79	609	1043
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 1: 10th Street & Main Street (SH-75), Interval #3

Movement	NB	SB	NE
Directions Served	L	TR	LR
Maximum Queue (ft)	38	6	78
Average Queue (ft)	16	1	45
95th Queue (ft)	44	9	88
Link Distance (ft)	79	609	1043
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 1: 10th Street & Main Street (SH-75), Interval #4

Movement	NB	NE
Directions Served	L	LR
Maximum Queue (ft)	44	76
Average Queue (ft)	17	42
95th Queue (ft)	49	77
Link Distance (ft)	79	1043
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 1: 10th Street & Main Street (SH-75), All Intervals

Movement	NB	SB	NE
Directions Served	L	TR	LR
Maximum Queue (ft)	54	16	97
Average Queue (ft)	18	1	43
95th Queue (ft)	48	12	80
Link Distance (ft)	79	609	1043
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: 5th Street & Main Street (SH-75), Interval #1

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	124	123	188	121	124	122
Average Queue (ft)	92	86	113	31	81	71
95th Queue (ft)	130	137	201	126	135	126
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: 5th Street & Main Street (SH-75), Interval #2

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	136	129	200	78	125	114
Average Queue (ft)	99	88	128	17	76	68
95th Queue (ft)	142	139	197	59	124	119
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: 5th Street & Main Street (SH-75), Interval #3

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	118	132	226	132	125	144
Average Queue (ft)	95	83	128	28	76	77
95th Queue (ft)	128	138	222	110	128	130
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: 5th Street & Main Street (SH-75), Interval #4

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	136	147	199	123	120	122
Average Queue (ft)	102	96	121	31	70	68
95th Queue (ft)	143	154	207	109	118	121
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)		0				
Queuing Penalty (veh)		0				
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: 5th Street & Main Street (SH-75), All Intervals

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	146	168	258	194	144	166
Average Queue (ft)	97	88	123	27	76	71
95th Queue (ft)	136	143	208	104	127	124
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)		0				
Queuing Penalty (veh)		0				
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 3: Main Street (SH-75) & Project Access, Interval #1

Movement	EB	EB	NB
Directions Served	L	R	LT
Maximum Queue (ft)	37	42	38
Average Queue (ft)	17	21	12
95th Queue (ft)	44	48	40
Link Distance (ft)	92	92	102
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Main Street (SH-75) & Project Access, Interval #2

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (ft)	38	53	46	5
Average Queue (ft)	16	25	14	1
95th Queue (ft)	44	59	48	11
Link Distance (ft)	92	92	102	79
Upstream Blk Time (%)		0		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Main Street (SH-75) & Project Access, Interval #3

Movement	EB	EB	NB
Directions Served	L	R	LT
Maximum Queue (ft)	44	48	45
Average Queue (ft)	18	22	12
95th Queue (ft)	50	55	42
Link Distance (ft)	92	92	102
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Main Street (SH-75) & Project Access, Interval #4

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (ft)	42	44	43	2
Average Queue (ft)	17	24	14	0
95th Queue (ft)	47	53	44	4
Link Distance (ft)	92	92	102	79
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Main Street (SH-75) & Project Access, All Intervals

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (ft)	56	65	64	7
Average Queue (ft)	17	23	13	0
95th Queue (ft)	46	54	44	6
Link Distance (ft)	92	92	102	79
Upstream Blk Time (%)	0	0		
Queuing Penalty (veh)	0	0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty, Interval #1: 0
Network wide Queuing Penalty, Interval #2: 0
Network wide Queuing Penalty, Interval #3: 0
Network wide Queuing Penalty, Interval #4: 0
Network wide Queuing Penalty, All Intervals: 0

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: ID Ketchum - Bracken Station TIS
Analysis Period: *Future (2026) Background*
Time Period: *p.m. Peak Hour* **Project #:** *UT16-851*

Intersection: 10th Street & Main Street (SH-75)
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	69	65	95	5.9	*A*
	T	687	676	98	1.1	*A*
	Subtotal	756	741	98	1.5	*A*
SB	T	414	413	100	1.1	*A*
	R	64	64	100	0.7	*A*
	Subtotal	478	477	100	1.0	*A*
NE	L	68	65	96	18.3	*C*
	R	95	98	103	10.7	*B*
	Subtotal	***163***	***163***	***100***	***13.7***	***B***
Total		1,397	1,381	99	2.8	*A*

Intersection: 5th Street & Main Street (SH-75)
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	31	31	99	34.8	*C*
	T	593	580	98	22.4	*C*
	R	12	12	100	6.2	*A*
	Subtotal	636	623	98	22.7	*C*
SE	L	98	98	100	25.8	*C*
	T	752	746	99	11.4	*B*
	R	127	132	104	6.3	*A*
	Subtotal	977	976	100	12.2	*B*
NE	L	81	82	101	20.2	*C*
	T	75	71	95	20.8	*C*
	R	25	27	107	13.9	*B*
	Subtotal	181	180	99	19.5	*B*
SW	L	31	29	93	18.4	*B*
	T	84	83	99	18.1	*B*
	R	82	79	96	10.9	*B*
	Subtotal	197	191	97	15.2	*B*
Total		1,992	1,970	99	16.5	*B*

1: 10th Street & Main Street (SH-75) Performance by movement Interval #1 4:15

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.4	0.4	0.2	0.2	0.2
Total Delay (hr)	0.0	0.1	0.0	0.0	0.1	0.1	0.3
Total Del/Veh (s)	6.1	1.1	1.0	0.6	17.2	12.1	3.0
Vehicles Entered	17	168	103	15	18	25	346
Vehicles Exited	17	167	104	15	18	25	346
Hourly Exit Rate	68	668	416	60	72	100	1384
Input Volume	68	680	410	63	67	94	1382
% of Volume	100	98	101	95	107	106	100

1: 10th Street & Main Street (SH-75) Performance by movement Interval #2 4:30

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.5	0.4	0.2	0.2	0.2
Total Delay (hr)	0.0	0.1	0.0	0.0	0.1	0.1	0.3
Total Del/Veh (s)	6.1	1.2	1.1	0.8	17.9	8.5	2.7
Vehicles Entered	17	163	105	18	15	24	342
Vehicles Exited	17	164	105	18	15	24	343
Hourly Exit Rate	68	656	420	72	60	96	1372
Input Volume	68	680	410	63	67	94	1382
% of Volume	100	96	102	114	90	102	99

1: 10th Street & Main Street (SH-75) Performance by movement Interval #3 4:45

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.4	0.5	0.2	0.2	0.2
Total Delay (hr)	0.0	0.1	0.0	0.0	0.1	0.1	0.3
Total Del/Veh (s)	6.3	1.3	1.0	0.7	17.1	11.1	2.9
Vehicles Entered	16	173	107	16	17	23	352
Vehicles Exited	16	173	107	16	17	24	353
Hourly Exit Rate	64	692	428	64	68	96	1412
Input Volume	71	709	427	66	70	98	1441
% of Volume	90	98	100	97	97	98	98

1: 10th Street & Main Street (SH-75) Performance by movement Interval #4 5:00

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.4	0.3	0.2	0.2	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.1	0.2
Total Del/Veh (s)	4.6	0.9	1.0	0.5	17.7	9.7	2.5
Vehicles Entered	15	174	97	16	15	25	342
Vehicles Exited	15	173	97	16	15	25	341
Hourly Exit Rate	60	692	388	64	60	100	1364
Input Volume	68	680	410	63	67	94	1382
% of Volume	88	102	95	102	90	106	99

1: 10th Street & Main Street (SH-75) Performance by movement Entire Run

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.0	0.0	0.4	0.4	0.2	0.2	0.2
Total Delay (hr)	0.1	0.2	0.1	0.0	0.3	0.3	1.1
Total Del/Veh (s)	5.9	1.1	1.1	0.7	18.3	10.7	2.8
Vehicles Entered	65	678	412	64	65	98	1382
Vehicles Exited	65	676	413	64	65	98	1381
Hourly Exit Rate	65	676	413	64	65	98	1381
Input Volume	69	687	414	64	68	95	1397
% of Volume	95	98	100	100	96	103	99

2: 5th Street & Main Street (SH-75) Performance by movement Interval #1 4:15

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	1.4	0.5	0.8	0.4	0.3	0.1	0.2	0.2	0.2	0.1	0.2	0.2
Total Delay (hr)	0.2	0.5	0.1	0.1	0.7	0.0	0.1	0.1	0.0	0.0	0.1	0.1
Total Del/Veh (s)	25.1	10.5	5.9	23.0	17.0	2.8	22.7	22.3	18.9	17.0	18.6	10.7
Vehicles Entered	23	180	34	8	148	3	20	19	7	7	20	18
Vehicles Exited	23	177	33	8	143	3	20	19	7	7	20	18
Hourly Exit Rate	92	708	132	32	572	12	80	76	28	28	80	72
Input Volume	97	744	126	31	587	12	80	74	25	31	83	81
% of Volume	95	95	105	103	97	100	100	103	112	90	96	89

2: 5th Street & Main Street (SH-75) Performance by movement Interval #1 4:15

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.4
Total Delay (hr)	2.0
Total Del/Veh (s)	14.6
Vehicles Entered	487
Vehicles Exited	478
Hourly Exit Rate	1912
Input Volume	1971
% of Volume	97

2: 5th Street & Main Street (SH-75) Performance by movement Interval #2 4:30

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	4.7	2.5	3.6	0.3	0.3	0.1	0.2	0.2	0.2	0.2	0.3	0.2
Total Delay (hr)	0.2	0.6	0.1	0.1	0.7	0.0	0.1	0.1	0.0	0.0	0.1	0.1
Total Del/Veh (s)	23.1	11.1	6.0	25.8	16.8	4.3	20.5	18.0	10.6	17.1	16.2	9.3
Vehicles Entered	27	183	31	8	142	2	19	15	8	8	18	21
Vehicles Exited	27	186	32	8	143	3	19	15	7	8	19	21
Hourly Exit Rate	108	744	128	32	572	12	76	60	28	32	76	84
Input Volume	97	744	126	31	587	12	80	74	25	31	83	81
% of Volume	111	100	102	103	97	100	95	81	112	103	92	104

2: 5th Street & Main Street (SH-75) Performance by movement Interval #2 4:30

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	1.6
Total Delay (hr)	2.0
Total Del/Veh (s)	14.1
Vehicles Entered	482
Vehicles Exited	488
Hourly Exit Rate	1952
Input Volume	1971
% of Volume	99

2: 5th Street & Main Street (SH-75) Performance by movement Interval #3 4:45

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	3.3	1.8	1.8	0.3	0.3	0.2	0.2	0.2	0.1	0.4	0.2	0.2
Total Delay (hr)	0.2	0.7	0.1	0.1	1.3	0.0	0.1	0.1	0.0	0.0	0.1	0.1
Total Del/Veh (s)	28.3	12.2	6.5	42.6	30.0	8.6	17.8	20.2	12.5	18.9	17.4	10.6
Vehicles Entered	28	196	35	7	149	4	21	18	8	6	22	21
Vehicles Exited	28	194	34	7	150	3	20	18	7	6	22	21
Hourly Exit Rate	112	776	136	28	600	12	80	72	28	24	88	84
Input Volume	101	775	131	32	611	12	84	77	26	32	87	85
% of Volume	111	100	104	88	98	100	95	94	108	75	101	99

2: 5th Street & Main Street (SH-75) Performance by movement Interval #3 4:45

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	1.1
Total Delay (hr)	2.8
Total Del/Veh (s)	19.2
Vehicles Entered	515
Vehicles Exited	510
Hourly Exit Rate	2040
Input Volume	2053
% of Volume	99

2: 5th Street & Main Street (SH-75) Performance by movement Interval #4 5:00

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	2.3	1.2	1.7	0.2	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.3
Total Delay (hr)	0.1	0.6	0.1	0.1	0.9	0.0	0.1	0.1	0.0	0.0	0.1	0.1
Total Del/Veh (s)	24.4	11.0	6.3	39.9	22.3	6.1	17.3	19.6	12.1	20.7	18.4	11.5
Vehicles Entered	20	188	32	9	146	2	21	17	5	8	21	19
Vehicles Exited	20	188	32	8	144	3	22	18	5	8	22	19
Hourly Exit Rate	80	752	128	32	576	12	88	72	20	32	88	76
Input Volume	97	744	126	31	587	12	80	74	25	31	83	81
% of Volume	82	101	102	103	98	100	110	97	80	103	106	94

2: 5th Street & Main Street (SH-75) Performance by movement Interval #4 5:00

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.8
Total Delay (hr)	2.3
Total Del/Veh (s)	16.2
Vehicles Entered	488
Vehicles Exited	489
Hourly Exit Rate	1956
Input Volume	1971
% of Volume	99

2: 5th Street & Main Street (SH-75) Performance by movement Entire Run

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.1	0.3	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	3.0	1.5	1.9	0.3	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Total Delay (hr)	0.7	2.4	0.2	0.3	3.7	0.0	0.5	0.4	0.1	0.2	0.4	0.2
Total Del/Veh (s)	25.8	11.4	6.3	34.8	22.4	6.2	20.2	20.8	13.9	18.4	18.1	10.9
Vehicles Entered	99	747	132	32	584	12	81	70	27	29	82	78
Vehicles Exited	98	746	132	31	580	12	82	71	27	29	83	79
Hourly Exit Rate	98	746	132	31	580	12	82	71	27	29	83	79
Input Volume	98	752	127	31	593	12	81	75	25	31	84	82
% of Volume	100	99	104	99	98	100	101	95	107	93	99	96

2: 5th Street & Main Street (SH-75) Performance by movement Entire Run

Movement	All
Denied Delay (hr)	0.5
Denied Del/Veh (s)	1.0
Total Delay (hr)	9.1
Total Del/Veh (s)	16.5
Vehicles Entered	1973
Vehicles Exited	1970
Hourly Exit Rate	1970
Input Volume	1992
% of Volume	99

Total Network Performance By Interval

Interval Start	4:15	4:30	4:45	5:00	All
Denied Delay (hr)	0.1	0.2	0.2	0.1	0.6
Denied Del/Veh (s)	0.5	1.6	1.2	0.8	1.0
Total Delay (hr)	2.7	2.7	3.6	2.9	11.9
Total Del/Veh (s)	17.4	16.8	21.6	18.6	20.0
Vehicles Entered	519	517	545	519	2100
Vehicles Exited	516	516	541	525	2096
Hourly Exit Rate	2064	2064	2164	2100	2096
Input Volume	7563	7563	7881	7563	7642
% of Volume	27	27	27	28	27

Intersection: 1: 10th Street & Main Street (SH-75), Interval #1

Movement	NB	NE
Directions Served	LT	LR
Maximum Queue (ft)	110	107
Average Queue (ft)	44	61
95th Queue (ft)	111	118
Link Distance (ft)	263	1050
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 1: 10th Street & Main Street (SH-75), Interval #2

Movement	NB	B9	B9	SB	NE
Directions Served	LT	T		TR	LR
Maximum Queue (ft)	91	3	4	2	105
Average Queue (ft)	39	0	1	0	56
95th Queue (ft)	96	7	8	4	102
Link Distance (ft)	263	194	194	604	1050
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 1: 10th Street & Main Street (SH-75), Interval #3

Movement	NB	B9	B9	SB	NE
Directions Served	LT	T		TR	LR
Maximum Queue (ft)	117	12	12	4	112
Average Queue (ft)	44	0	0	1	58
95th Queue (ft)	126	4	4	7	115
Link Distance (ft)	263	194	194	604	1050
Upstream Blk Time (%)	0				
Queuing Penalty (veh)	1				
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 1: 10th Street & Main Street (SH-75), Interval #4

Movement	NB	B9	SB	NE
Directions Served	LT	T	TR	LR
Maximum Queue (ft)	78	11	2	107
Average Queue (ft)	30	2	0	57
95th Queue (ft)	72	20	5	107
Link Distance (ft)	263	194	604	1050
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 1: 10th Street & Main Street (SH-75), All Intervals

Movement	NB	B9	B9	SB	NE
Directions Served	LT	T		TR	LR
Maximum Queue (ft)	158	15	14	9	151
Average Queue (ft)	39	1	0	0	58
95th Queue (ft)	104	10	5	5	111
Link Distance (ft)	263	194	194	604	1050
Upstream Blk Time (%)	0				
Queuing Penalty (veh)	0				
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 2: 5th Street & Main Street (SH-75), Interval #1

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	148	159	294	260	156	117
Average Queue (ft)	110	107	183	94	93	72
95th Queue (ft)	152	165	313	276	160	121
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)	0	0				
Queuing Penalty (veh)	0	1				
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: 5th Street & Main Street (SH-75), Interval #2

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	152	174	305	268	133	133
Average Queue (ft)	121	114	179	86	73	74
95th Queue (ft)	164	176	327	287	131	137
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)	0	0				
Queuing Penalty (veh)	0	1				
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: 5th Street & Main Street (SH-75), Interval #3

Movement	SE	SE	B9	NW	NW	NE	SW
Directions Served	LT	TR	T	LT	TR	LTR	LTR
Maximum Queue (ft)	169	175	3	330	280	132	138
Average Queue (ft)	126	124	0	236	159	80	74
95th Queue (ft)	175	185	6	451	421	141	144
Link Distance (ft)	194	194	986	872	872	838	1044
Upstream Blk Time (%)	0	1					
Queuing Penalty (veh)	1	1					
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 2: 5th Street & Main Street (SH-75), Interval #4

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	153	152	297	271	126	136
Average Queue (ft)	117	113	200	99	74	83
95th Queue (ft)	162	167	361	313	126	138
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)	0	0				
Queuing Penalty (veh)	0	1				
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: 5th Street & Main Street (SH-75), All Intervals

Movement	SE	SE	B9	NW	NW	NE	SW
Directions Served	LT	TR	T	LT	TR	LTR	LTR
Maximum Queue (ft)	190	205	3	415	371	175	167
Average Queue (ft)	119	115	0	199	109	80	76
95th Queue (ft)	164	174	3	370	331	141	136
Link Distance (ft)	194	194	986	872	872	838	1044
Upstream Blk Time (%)	0	0					
Queuing Penalty (veh)	0	1					
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Network Summary

Network wide Queuing Penalty, Interval #1: 1
Network wide Queuing Penalty, Interval #2: 1
Network wide Queuing Penalty, Interval #3: 3
Network wide Queuing Penalty, Interval #4: 1
Network wide Queuing Penalty, All Intervals: 2

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: ID Ketchum - Bracken Station TIS
Analysis Period: *Future (2026) Plus Project*
Time Period: *p.m. Peak Hour* **Project #:** *UT16-851*

Intersection: 10th Street & Main Street (SH-75)
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	69	70	102	12.3	*B*
	T	307	304	99	0.2	*A*
	Subtotal	376	374	99	2.5	*A*
SB	T	732	733	100	1.7	*A*
	R	64	63	99	1.0	*A*
	Subtotal	796	796	100	1.6	*A*
NE	L	68	67	99	75.3	*F*
	R	95	93	98	54.7	*F*
	Subtotal	***163***	***160***	***98***	***63.3***	***F***
Total		1,334	1,330	100	9.4	*A*

Intersection: 5th Street & Main Street (SH-75)
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	31	28	90	44.9	*D*
	T	616	606	98	28.3	*C*
	R	12	12	100	8.4	*A*
	Subtotal	659	646	98	28.6	*C*
SE	L	101	101	100	32.7	*C*
	T	772	778	101	11.6	*B*
	R	131	127	97	7.5	*A*
	Subtotal	1,004	1,006	100	13.2	*B*
NE	L	84	89	106	20.5	*C*
	T	75	77	103	19.4	*B*
	R	25	24	95	15.4	*B*
	Subtotal	184	190	103	19.4	*B*
SW	L	31	30	96	18.6	*B*
	T	84	85	101	20.4	*C*
	R	86	87	101	10.8	*B*
	Subtotal	201	202	100	16.0	*B*
Total		2,049	2,044	100	18.9	*B*

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: ID Ketchum - Bracken Station TIS
Analysis Period: *Future (2026) Plus Project*
Time Period: *p.m. Peak Hour* **Project #:** *UT16-851*

Intersection: Main Street (SH-75) & Project Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	27	27	99	6.7	*A*
	T	759	759	100	0.2	*A*
	Subtotal	786	786	100	0.4	*A*
SB	T	809	807	100	0.7	*A*
	R	18	21	115	0.3	*A*
	Subtotal	827	828	100	0.7	*A*
EB	L	18	17	93	21.7	*C*
	R	27	29	106	8.1	*A*
	Subtotal	***45***	***46***	***102***	***13.1***	***B***
Total		1,659	1,660	100	0.9	*A*

Intersection:
Type:

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
Total						

1: 10th Street & Main Street (SH-75) Performance by movement Interval #1 4:15

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.7	0.6	0.2	0.2	0.5
Total Delay (hr)	0.1	0.0	0.1	0.0	0.2	0.2	0.6
Total Del/Veh (s)	11.4	0.2	1.6	1.0	49.8	34.2	6.4
Vehicles Entered	16	77	180	16	15	23	327
Vehicles Exited	16	77	180	16	15	22	326
Hourly Exit Rate	64	308	720	64	60	88	1304
Input Volume	68	304	724	63	67	94	1320
% of Volume	94	101	99	102	90	94	99

1: 10th Street & Main Street (SH-75) Performance by movement Interval #2 4:30

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.8	0.7	0.2	0.3	0.5
Total Delay (hr)	0.1	0.0	0.1	0.0	0.4	0.4	0.9
Total Del/Veh (s)	10.0	0.2	1.6	1.1	73.3	48.0	9.3
Vehicles Entered	19	73	180	14	17	25	328
Vehicles Exited	19	73	182	14	16	24	328
Hourly Exit Rate	76	292	728	56	64	96	1312
Input Volume	68	304	724	63	67	94	1320
% of Volume	112	96	101	89	96	102	99

1: 10th Street & Main Street (SH-75) Performance by movement Interval #3 4:45

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.8	0.7	0.2	0.2	0.5
Total Delay (hr)	0.1	0.0	0.1	0.0	0.4	0.4	0.9
Total Del/Veh (s)	15.2	0.2	1.9	1.1	62.3	56.8	9.7
Vehicles Entered	18	75	190	18	19	23	343
Vehicles Exited	18	75	189	17	17	22	338
Hourly Exit Rate	72	300	756	68	68	88	1352
Input Volume	71	316	755	66	70	98	1376
% of Volume	101	95	100	103	97	90	98

1: 10th Street & Main Street (SH-75) Performance by movement Interval #4 5:00

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.7	0.6	0.2	0.2	0.4
Total Delay (hr)	0.1	0.0	0.1	0.0	0.5	0.5	1.1
Total Del/Veh (s)	12.1	0.2	1.6	0.8	80.6	64.1	11.2
Vehicles Entered	17	78	184	16	17	23	335
Vehicles Exited	17	79	182	16	19	24	337
Hourly Exit Rate	68	316	728	64	76	96	1348
Input Volume	68	304	724	63	67	94	1320
% of Volume	100	104	101	102	113	102	102

1: 10th Street & Main Street (SH-75) Performance by movement Entire Run

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.2	0.0	0.0	0.0	0.2
Denied Del/Veh (s)	0.0	0.0	0.8	0.7	0.2	0.2	0.5
Total Delay (hr)	0.2	0.0	0.3	0.0	1.4	1.4	3.5
Total Del/Veh (s)	12.3	0.2	1.7	1.0	75.3	54.7	9.4
Vehicles Entered	70	304	734	63	67	94	1332
Vehicles Exited	70	304	733	63	67	93	1330
Hourly Exit Rate	70	304	733	63	67	93	1330
Input Volume	69	307	732	64	68	95	1334
% of Volume	102	99	100	99	99	98	100

2: 5th Street & Main Street (SH-75) Performance by movement Interval #1 4:15

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	2.2	1.1	0.5	0.4	0.3	0.1	0.2	0.2	0.2	0.3	0.2	0.2
Total Delay (hr)	0.2	0.6	0.1	0.1	1.3	0.0	0.1	0.1	0.0	0.0	0.1	0.1
Total Del/Veh (s)	32.6	11.7	7.7	44.2	29.6	4.3	19.5	20.7	12.9	18.6	19.2	12.9
Vehicles Entered	24	191	32	6	156	3	22	19	7	6	22	24
Vehicles Exited	23	187	32	6	146	2	25	19	7	7	22	24
Hourly Exit Rate	92	748	128	24	584	8	100	76	28	28	88	96
Input Volume	100	764	130	31	610	12	83	74	25	31	83	85
% of Volume	92	98	98	77	96	67	120	103	112	90	106	113

2: 5th Street & Main Street (SH-75) Performance by movement Interval #1 4:15

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.7
Total Delay (hr)	2.8
Total Del/Veh (s)	19.5
Vehicles Entered	512
Vehicles Exited	500
Hourly Exit Rate	2000
Input Volume	2028
% of Volume	99

2: 5th Street & Main Street (SH-75) Performance by movement Interval #2 4:30

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	3.3	1.7	0.8	0.3	0.3	0.2	0.2	0.2	0.2	0.4	0.2	0.2
Total Delay (hr)	0.3	0.6	0.1	0.1	1.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0
Total Del/Veh (s)	37.5	11.2	7.9	31.7	22.6	4.9	18.4	16.0	13.2	15.2	16.7	7.2
Vehicles Entered	25	195	30	6	149	3	18	22	5	7	20	21
Vehicles Exited	26	200	30	6	156	3	17	22	5	7	19	21
Hourly Exit Rate	104	800	120	24	624	12	68	88	20	28	76	84
Input Volume	100	764	130	31	610	12	83	74	25	31	83	85
% of Volume	104	105	92	77	102	100	82	119	80	90	92	99

2: 5th Street & Main Street (SH-75) Performance by movement Interval #2 4:30

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	1.0
Total Delay (hr)	2.4
Total Del/Veh (s)	16.7
Vehicles Entered	501
Vehicles Exited	512
Hourly Exit Rate	2048
Input Volume	2028
% of Volume	101

2: 5th Street & Main Street (SH-75) Performance by movement Interval #3 4:45

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	1.0	0.4	0.4	0.4	0.3	0.1	0.2	0.2	0.3	0.3	0.2	0.2
Total Delay (hr)	0.2	0.6	0.1	0.1	1.2	0.0	0.1	0.1	0.0	0.0	0.2	0.1
Total Del/Veh (s)	28.4	11.1	6.6	44.9	27.1	13.2	21.6	18.8	14.4	20.2	22.6	12.9
Vehicles Entered	26	201	30	8	154	3	24	18	7	7	22	21
Vehicles Exited	27	199	30	7	150	2	23	18	7	8	23	20
Hourly Exit Rate	108	796	120	28	600	8	92	72	28	32	92	80
Input Volume	104	796	135	32	635	12	87	77	26	32	87	89
% of Volume	104	100	89	88	94	67	106	94	108	100	106	90

2: 5th Street & Main Street (SH-75) Performance by movement Interval #3 4:45

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.4
Total Delay (hr)	2.8
Total Del/Veh (s)	18.6
Vehicles Entered	521
Vehicles Exited	514
Hourly Exit Rate	2056
Input Volume	2112
% of Volume	97

2: 5th Street & Main Street (SH-75) Performance by movement Interval #4 5:00

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	2.1	0.5	0.3	0.4	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Total Delay (hr)	0.2	0.6	0.1	0.1	1.3	0.0	0.1	0.1	0.0	0.0	0.1	0.1
Total Del/Veh (s)	28.6	11.6	7.6	45.9	28.7	9.7	20.3	18.8	16.6	14.0	18.9	8.6
Vehicles Entered	25	194	36	7	155	3	23	18	5	8	21	22
Vehicles Exited	25	192	36	8	154	3	24	18	5	8	21	22
Hourly Exit Rate	100	768	144	32	616	12	96	72	20	32	84	88
Input Volume	100	764	130	31	610	12	83	74	25	31	83	85
% of Volume	100	101	111	103	101	100	116	97	80	103	101	104

2: 5th Street & Main Street (SH-75) Performance by movement Interval #4 5:00

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.5
Total Delay (hr)	2.8
Total Del/Veh (s)	18.8
Vehicles Entered	517
Vehicles Exited	516
Hourly Exit Rate	2064
Input Volume	2028
% of Volume	102

2: 5th Street & Main Street (SH-75) Performance by movement Entire Run

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	2.1	0.9	0.5	0.4	0.3	0.1	0.2	0.2	0.2	0.3	0.2	0.2
Total Delay (hr)	0.9	2.5	0.3	0.3	4.8	0.0	0.5	0.4	0.1	0.2	0.5	0.3
Total Del/Veh (s)	32.7	11.6	7.5	44.9	28.3	8.4	20.5	19.4	15.4	18.6	20.4	10.8
Vehicles Entered	101	780	128	27	614	12	87	77	24	29	85	88
Vehicles Exited	101	778	127	28	606	12	89	77	24	30	85	87
Hourly Exit Rate	101	778	127	28	606	12	89	77	24	30	85	87
Input Volume	101	772	131	31	616	12	84	75	25	31	84	86
% of Volume	100	101	97	90	98	100	106	103	95	96	101	101

2: 5th Street & Main Street (SH-75) Performance by movement Entire Run

Movement	All
Denied Delay (hr)	0.4
Denied Del/Veh (s)	0.6
Total Delay (hr)	10.9
Total Del/Veh (s)	18.9
Vehicles Entered	2052
Vehicles Exited	2044
Hourly Exit Rate	2044
Input Volume	2049
% of Volume	100

3: Main Street (SH-75) & Project Access Performance by movement Interval #1 4:15

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	18.8	6.8	6.1	0.2	0.6	0.3	0.8
Vehicles Entered	4	6	7	190	198	4	409
Vehicles Exited	4	7	7	189	198	4	409
Hourly Exit Rate	16	28	28	756	792	16	1636
Input Volume	18	27	27	751	801	18	1642
% of Volume	89	104	104	101	99	89	100

3: Main Street (SH-75) & Project Access Performance by movement Interval #2 4:30

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	18.1	8.4	6.8	0.2	0.7	0.4	0.9
Vehicles Entered	5	8	7	186	200	6	412
Vehicles Exited	5	8	7	187	201	6	414
Hourly Exit Rate	20	32	28	748	804	24	1656
Input Volume	18	27	27	751	801	18	1642
% of Volume	111	119	104	100	100	133	101

3: Main Street (SH-75) & Project Access Performance by movement Interval #3 4:45

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	16.9	8.8	7.2	0.2	0.7	0.3	0.9
Vehicles Entered	4	8	6	185	206	5	414
Vehicles Exited	4	8	6	184	205	6	413
Hourly Exit Rate	16	32	24	736	820	24	1652
Input Volume	19	28	28	783	834	19	1711
% of Volume	84	114	86	94	98	126	97

3: Main Street (SH-75) & Project Access Performance by movement Interval #4 5:00

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	34.1	8.4	7.0	0.3	0.6	0.3	1.0
Vehicles Entered	4	6	7	198	202	5	422
Vehicles Exited	4	6	7	198	203	5	423
Hourly Exit Rate	16	24	28	792	812	20	1692
Input Volume	18	27	27	751	801	18	1642
% of Volume	89	89	104	105	101	111	103

3: Main Street (SH-75) & Project Access Performance by movement Entire Run

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.1	0.1	0.1	0.0	0.1	0.0	0.4
Total Del/Veh (s)	21.7	8.1	6.7	0.2	0.7	0.3	0.9
Vehicles Entered	17	29	27	759	806	21	1659
Vehicles Exited	17	29	27	759	807	21	1660
Hourly Exit Rate	17	29	27	759	807	21	1660
Input Volume	18	27	27	759	809	18	1659
% of Volume	93	106	99	100	100	115	100

Total Network Performance By Interval

Interval Start	4:15	4:30	4:45	5:00	All
Denied Delay (hr)	0.1	0.2	0.1	0.1	0.5
Denied Del/Veh (s)	0.9	1.2	0.6	0.7	0.9
Total Delay (hr)	4.1	4.0	4.4	4.6	17.0
Total Del/Veh (s)	24.4	23.7	25.2	26.3	26.9
Vehicles Entered	552	543	568	557	2221
Vehicles Exited	542	548	557	571	2219
Hourly Exit Rate	2168	2192	2228	2284	2219
Input Volume	9998	9998	10415	9998	10102
% of Volume	22	22	21	23	22

Intersection: 1: 10th Street & Main Street (SH-75), Interval #1

Movement	NB	SB	NE
Directions Served	L	TR	LR
Maximum Queue (ft)	53	8	158
Average Queue (ft)	28	1	90
95th Queue (ft)	63	9	182
Link Distance (ft)	79	609	1043
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 1: 10th Street & Main Street (SH-75), Interval #2

Movement	NB	SB	NE
Directions Served	L	TR	LR
Maximum Queue (ft)	64	17	180
Average Queue (ft)	35	3	120
95th Queue (ft)	71	21	248
Link Distance (ft)	79	609	1043
Upstream Blk Time (%)	1		
Queuing Penalty (veh)	1		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 1: 10th Street & Main Street (SH-75), Interval #3

Movement	NB	SB	NE
Directions Served	L	TR	LR
Maximum Queue (ft)	86	23	214
Average Queue (ft)	39	5	113
95th Queue (ft)	81	25	226
Link Distance (ft)	79	609	1043
Upstream Blk Time (%)	2		
Queuing Penalty (veh)	5		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 1: 10th Street & Main Street (SH-75), Interval #4

Movement	NB	SB	NE
Directions Served	L	TR	LR
Maximum Queue (ft)	70	42	218
Average Queue (ft)	34	7	138
95th Queue (ft)	73	44	310
Link Distance (ft)	79	609	1043
Upstream Blk Time (%)	2		
Queuing Penalty (veh)	3		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 1: 10th Street & Main Street (SH-75), All Intervals

Movement	NB	SB	NE
Directions Served	L	TR	LR
Maximum Queue (ft)	96	57	271
Average Queue (ft)	34	4	116
95th Queue (ft)	72	28	248
Link Distance (ft)	79	609	1043
Upstream Blk Time (%)	1		
Queuing Penalty (veh)	2		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: 5th Street & Main Street (SH-75), Interval #1

Movement	SE	SE	B9	NW	NW	NE	SW
Directions Served	LT	TR	T	LT	TR	LTR	LTR
Maximum Queue (ft)	192	192	22	379	341	130	147
Average Queue (ft)	124	129	3	237	146	88	90
95th Queue (ft)	198	198	37	463	424	141	168
Link Distance (ft)	194	194	980	872	872	838	1044
Upstream Blk Time (%)	1	1					
Queuing Penalty (veh)	5	4					
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 2: 5th Street & Main Street (SH-75), Interval #2

Movement	SE	SE	B9	NW	NW	NE	SW
Directions Served	LT	TR	T	LT	TR	LTR	LTR
Maximum Queue (ft)	194	188	2	354	303	126	113
Average Queue (ft)	127	134	0	209	122	77	69
95th Queue (ft)	200	206	5	387	357	130	113
Link Distance (ft)	194	194	980	872	872	838	1044
Upstream Blk Time (%)	1	1					
Queuing Penalty (veh)	2	2					
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 2: 5th Street & Main Street (SH-75), Interval #3

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	189	174	356	297	151	168
Average Queue (ft)	132	126	211	127	89	89
95th Queue (ft)	202	199	423	371	148	167
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)	1	1				
Queuing Penalty (veh)	3	5				
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: 5th Street & Main Street (SH-75), Interval #4

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	170	179	378	327	130	120
Average Queue (ft)	129	131	240	152	83	75
95th Queue (ft)	183	192	499	436	147	131
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)	0	0	0			
Queuing Penalty (veh)	1	1	0			
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: 5th Street & Main Street (SH-75), All Intervals

Movement	SE	SE	B9	NW	NW	NE	SW
Directions Served	LT	TR	T	LT	TR	LTR	LTR
Maximum Queue (ft)	228	212	22	467	426	165	188
Average Queue (ft)	128	130	1	224	137	84	81
95th Queue (ft)	196	199	18	446	399	143	148
Link Distance (ft)	194	194	980	872	872	838	1044
Upstream Blk Time (%)	1	1		0			
Queuing Penalty (veh)	3	3		0			
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 3: Main Street (SH-75) & Project Access, Interval #1

Movement	EB	EB	NB	B9	B9	SB
Directions Served	L	R	LT	T		TR
Maximum Queue (ft)	42	37	56	5	4	22
Average Queue (ft)	16	20	18	1	1	3
95th Queue (ft)	45	45	55	8	8	20
Link Distance (ft)	92	92	102	194	194	79
Upstream Blk Time (%)			0			0
Queuing Penalty (veh)			0			0
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 3: Main Street (SH-75) & Project Access, Interval #2

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (ft)	35	45	65	11
Average Queue (ft)	16	25	18	2
95th Queue (ft)	42	55	64	13
Link Distance (ft)	92	92	102	79
Upstream Blk Time (%)			0	
Queuing Penalty (veh)			1	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Main Street (SH-75) & Project Access, Interval #3

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (ft)	42	49	40	18
Average Queue (ft)	15	27	17	3
95th Queue (ft)	44	56	46	18
Link Distance (ft)	92	92	102	79
Upstream Blk Time (%)	0	0		
Queuing Penalty (veh)	0	0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Main Street (SH-75) & Project Access, Interval #4

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (ft)	46	40	56	10
Average Queue (ft)	17	16	20	2
95th Queue (ft)	52	44	55	12
Link Distance (ft)	92	92	102	79
Upstream Blk Time (%)	1	0	0	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Main Street (SH-75) & Project Access, All Intervals

Movement	EB	EB	NB	B9	B9	SB
Directions Served	L	R	LT	T		TR
Maximum Queue (ft)	56	55	76	5	4	35
Average Queue (ft)	16	22	18	0	0	2
95th Queue (ft)	46	51	56	4	4	16
Link Distance (ft)	92	92	102	194	194	79
Upstream Blk Time (%)	0	0	0			0
Queuing Penalty (veh)	0	0	0			0
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Network Summary

Network wide Queuing Penalty, Interval #1: 9
Network wide Queuing Penalty, Interval #2: 6
Network wide Queuing Penalty, Interval #3: 12
Network wide Queuing Penalty, Interval #4: 5
Network wide Queuing Penalty, All Intervals: 8

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: ID Ketchum - Bracken Station TIS
Analysis Period: *Hypothetical Future (2026) Plus Projec*
Time Period: *p.m. Peak Hour* **Project #:** *UT16-851*

Intersection: 10th Street & Main Street (SH-75)
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	69	64	93	12.0	*B*
	T	325	317	97	0.2	*A*
	Subtotal	394	381	97	2.2	*A*
SB	T	751	740	99	1.8	*A*
	R	64	62	97	1.1	*A*
	Subtotal	815	802	98	1.7	*A*
NE	L	68	65	96	89.6	*F*
	R	95	94	99	74.4	*F*
	Subtotal	***163***	***159***	***98***	***80.6***	***F***
Total		1,371	1,342	98	11.4	*B*

Intersection: 5th Street & Main Street (SH-75)
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	31	31	99	60.8	*E*
	T	645	643	100	44.8	*D*
	R	12	14	117	17.3	*B*
	Subtotal	688	688	100	45.0	*D*
SE	L	101	102	101	41.8	*D*
	T	801	779	97	12.5	*B*
	R	131	128	98	7.7	*A*
	Subtotal	1,033	1,009	98	14.9	*B*
NE	L	84	88	105	19.0	*B*
	T	75	73	98	19.3	*B*
	R	25	26	103	13.9	*B*
	Subtotal	184	187	102	18.4	*B*
SW	L	31	28	90	17.7	*B*
	T	84	84	100	17.5	*B*
	R	86	90	105	10.1	*B*
	Subtotal	201	202	100	14.2	*B*
Total		2,107	2,086	99	25.2	*C*

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: ID Ketchum - Bracken Station TIS
Analysis Period: *Hypothetical Future (2026) Plus Projec*
Time Period: *p.m. Peak Hour* **Project #:** *UT16-851*

Intersection: Main Street (SH-75) & Project Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	56	58	104	8.0	*A*
	T	759	765	101	0.4	*A*
	Subtotal	815	823	101	0.9	*A*
SB	T	809	797	98	0.8	*A*
	R	37	37	99	0.3	*A*
	Subtotal	846	834	99	0.8	*A*
EB	L	37	35	94	29.3	*D*
	R	56	50	90	9.1	*A*
	Subtotal	***93***	***85***	***91***	***17.4***	***C***
Total		1,754	1,742	99	1.7	*A*

Intersection:
Type:

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
Total						

1: 10th Street & Main Street (SH-75) Performance by movement Interval #1 4:15

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.8	0.7	0.2	0.3	0.5
Total Delay (hr)	0.0	0.0	0.1	0.0	0.3	0.3	0.8
Total Del/Veh (s)	8.5	0.2	1.8	1.0	62.3	47.7	8.1
Vehicles Entered	16	78	181	16	16	24	331
Vehicles Exited	16	78	182	15	16	23	330
Hourly Exit Rate	64	312	728	60	64	92	1320
Input Volume	68	322	743	63	67	94	1357
% of Volume	94	97	98	95	96	98	97

1: 10th Street & Main Street (SH-75) Performance by movement Interval #2 4:30

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.7	0.7	0.2	0.2	0.5
Total Delay (hr)	0.0	0.0	0.1	0.0	0.4	0.4	1.0
Total Del/Veh (s)	9.6	0.2	1.7	1.2	78.6	63.7	10.3
Vehicles Entered	16	80	183	16	17	22	334
Vehicles Exited	16	81	182	16	16	21	332
Hourly Exit Rate	64	324	728	64	64	84	1328
Input Volume	68	322	743	63	67	94	1357
% of Volume	94	101	98	102	96	89	98

1: 10th Street & Main Street (SH-75) Performance by movement Interval #3 4:45

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.0	0.0	0.8	0.6	0.2	0.2	0.5
Total Delay (hr)	0.1	0.0	0.1	0.0	0.5	0.7	1.4
Total Del/Veh (s)	15.6	0.3	1.9	1.0	91.6	81.9	14.3
Vehicles Entered	15	78	192	16	17	28	346
Vehicles Exited	15	78	192	16	16	27	344
Hourly Exit Rate	60	312	768	64	64	108	1376
Input Volume	71	335	774	66	70	98	1414
% of Volume	85	93	99	97	91	110	97

1: 10th Street & Main Street (SH-75) Performance by movement Interval #4 5:00

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.8	0.7	0.2	0.2	0.5
Total Delay (hr)	0.1	0.0	0.1	0.0	0.4	0.5	1.1
Total Del/Veh (s)	13.5	0.2	1.7	1.1	85.1	72.0	11.7
Vehicles Entered	17	81	186	16	15	21	336
Vehicles Exited	18	81	184	16	17	23	339
Hourly Exit Rate	72	324	736	64	68	92	1356
Input Volume	68	322	743	63	67	94	1357
% of Volume	106	101	99	102	101	98	100

1: 10th Street & Main Street (SH-75) Performance by movement Entire Run

Movement	NBL	NBT	SBT	SBR	NEL	NER	All
Denied Delay (hr)	0.0	0.0	0.2	0.0	0.0	0.0	0.2
Denied Del/Veh (s)	0.0	0.0	0.8	0.7	0.2	0.2	0.5
Total Delay (hr)	0.2	0.0	0.4	0.0	1.7	2.0	4.3
Total Del/Veh (s)	12.0	0.2	1.8	1.1	89.6	74.4	11.4
Vehicles Entered	65	318	742	63	66	96	1350
Vehicles Exited	64	317	740	62	65	94	1342
Hourly Exit Rate	64	317	740	62	65	94	1342
Input Volume	69	325	751	64	68	95	1371
% of Volume	93	97	99	97	96	99	98

2: 5th Street & Main Street (SH-75) Performance by movement Interval #1 4:15

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	2.9	1.0	1.7	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total Delay (hr)	0.3	0.7	0.1	0.1	1.9	0.0	0.1	0.1	0.0	0.0	0.1	0.1
Total Del/Veh (s)	39.9	12.6	7.5	56.1	40.7	13.9	17.1	18.8	11.2	16.0	18.0	10.9
Vehicles Entered	26	195	31	9	165	3	22	15	6	8	22	21
Vehicles Exited	25	187	30	8	157	4	22	16	7	8	22	22
Hourly Exit Rate	100	748	120	32	628	16	88	64	28	32	88	88
Input Volume	100	793	130	31	638	12	83	74	25	31	83	85
% of Volume	100	94	92	103	98	133	106	86	112	103	106	104

2: 5th Street & Main Street (SH-75) Performance by movement Interval #1 4:15

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.8
Total Delay (hr)	3.6
Total Del/Veh (s)	23.8
Vehicles Entered	523
Vehicles Exited	508
Hourly Exit Rate	2032
Input Volume	2085
% of Volume	97

2: 5th Street & Main Street (SH-75) Performance by movement Interval #2 4:30

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	2.2	0.9	0.6	0.4	0.4	0.2	0.2	0.1	0.2	0.1	0.2	0.2
Total Delay (hr)	0.2	0.7	0.1	0.2	2.3	0.0	0.1	0.1	0.0	0.0	0.1	0.1
Total Del/Veh (s)	34.5	11.6	7.2	62.7	46.7	19.8	17.0	16.2	11.1	18.8	15.1	9.3
Vehicles Entered	25	195	31	8	161	3	21	17	6	6	21	23
Vehicles Exited	25	201	31	8	162	3	20	17	5	6	21	23
Hourly Exit Rate	100	804	124	32	648	12	80	68	20	24	84	92
Input Volume	100	793	130	31	638	12	83	74	25	31	83	85
% of Volume	100	101	95	103	102	100	96	92	80	77	101	108

2: 5th Street & Main Street (SH-75) Performance by movement Interval #2 4:30

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.6
Total Delay (hr)	3.8
Total Del/Veh (s)	25.1
Vehicles Entered	517
Vehicles Exited	522
Hourly Exit Rate	2088
Input Volume	2085
% of Volume	100

2: 5th Street & Main Street (SH-75) Performance by movement Interval #3 4:45

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	8.2	3.7	1.3	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total Delay (hr)	0.4	0.7	0.1	0.1	2.3	0.0	0.1	0.1	0.0	0.0	0.1	0.1
Total Del/Veh (s)	52.5	13.0	7.5	56.3	46.5	17.4	19.7	21.3	16.7	15.7	19.3	10.4
Vehicles Entered	26	200	33	7	164	3	21	21	7	8	21	21
Vehicles Exited	25	198	33	7	168	4	21	21	7	7	20	20
Hourly Exit Rate	100	792	132	28	672	16	84	84	28	28	80	80
Input Volume	104	826	135	32	665	12	87	77	26	32	87	89
% of Volume	96	96	98	88	101	133	97	109	108	88	92	90

2: 5th Street & Main Street (SH-75) Performance by movement Interval #3 4:45

Movement	All
Denied Delay (hr)	0.3
Denied Del/Veh (s)	2.0
Total Delay (hr)	4.2
Total Del/Veh (s)	26.9
Vehicles Entered	532
Vehicles Exited	531
Hourly Exit Rate	2124
Input Volume	2172
% of Volume	98

2: 5th Street & Main Street (SH-75) Performance by movement Interval #4 5:00

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	4.9	1.5	1.5	0.3	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Total Delay (hr)	0.3	0.6	0.1	0.1	1.6	0.0	0.1	0.1	0.0	0.0	0.1	0.1
Total Del/Veh (s)	34.1	11.8	8.0	53.3	34.8	14.3	18.7	18.2	14.2	18.3	15.3	8.3
Vehicles Entered	26	193	33	8	159	4	23	19	7	7	21	25
Vehicles Exited	26	192	34	7	157	4	25	19	7	7	21	26
Hourly Exit Rate	104	768	136	28	628	16	100	76	28	28	84	104
Input Volume	100	793	130	31	638	12	83	74	25	31	83	85
% of Volume	104	97	105	90	98	133	120	103	112	90	101	122

2: 5th Street & Main Street (SH-75) Performance by movement Interval #4 5:00

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	1.0
Total Delay (hr)	3.2
Total Del/Veh (s)	21.1
Vehicles Entered	525
Vehicles Exited	525
Hourly Exit Rate	2100
Input Volume	2085
% of Volume	101

2: 5th Street & Main Street (SH-75) Performance by movement Entire Run

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Denied Delay (hr)	0.1	0.4	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	4.6	1.8	1.3	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total Delay (hr)	1.2	2.7	0.3	0.5	8.2	0.1	0.5	0.4	0.1	0.1	0.4	0.3
Total Del/Veh (s)	41.8	12.5	7.7	60.8	44.8	17.3	19.0	19.3	13.9	17.7	17.5	10.1
Vehicles Entered	102	783	128	31	650	14	87	73	26	28	84	90
Vehicles Exited	102	779	128	31	643	14	88	73	26	28	84	90
Hourly Exit Rate	102	779	128	31	643	14	88	73	26	28	84	90
Input Volume	101	801	131	31	645	12	84	75	25	31	84	86
% of Volume	101	97	98	99	100	117	105	98	103	90	100	105

2: 5th Street & Main Street (SH-75) Performance by movement Entire Run

Movement	All
Denied Delay (hr)	0.7
Denied Del/Veh (s)	1.1
Total Delay (hr)	14.8
Total Del/Veh (s)	25.2
Vehicles Entered	2096
Vehicles Exited	2086
Hourly Exit Rate	2086
Input Volume	2107
% of Volume	99

3: Main Street (SH-75) & Project Access Performance by movement Interval #1 4:15

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	25.8	8.5	9.3	0.4	0.8	0.3	1.7
Vehicles Entered	10	12	14	188	198	8	430
Vehicles Exited	9	12	14	187	198	8	428
Hourly Exit Rate	36	48	56	748	792	32	1712
Input Volume	37	55	55	751	801	37	1736
% of Volume	97	87	102	100	99	86	99

3: Main Street (SH-75) & Project Access Performance by movement Interval #2 4:30

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	21.5	8.8	6.9	0.4	0.8	0.4	1.4
Vehicles Entered	8	13	14	191	195	8	429
Vehicles Exited	8	13	14	191	195	8	429
Hourly Exit Rate	32	52	56	764	780	32	1716
Input Volume	37	55	55	751	801	37	1736
% of Volume	86	95	102	102	97	86	99

3: Main Street (SH-75) & Project Access Performance by movement Interval #3 4:45

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.1	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	32.9	10.1	9.5	0.4	0.9	0.3	1.9
Vehicles Entered	10	12	14	192	207	11	446
Vehicles Exited	9	12	14	192	207	11	445
Hourly Exit Rate	36	48	56	768	828	44	1780
Input Volume	38	58	58	783	834	38	1809
% of Volume	95	83	97	98	99	116	98

3: Main Street (SH-75) & Project Access Performance by movement Interval #4 5:00

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	29.9	8.8	6.7	0.3	0.8	0.3	1.6
Vehicles Entered	8	12	16	196	198	10	440
Vehicles Exited	9	12	15	195	197	10	438
Hourly Exit Rate	36	48	60	780	788	40	1752
Input Volume	37	55	55	751	801	37	1736
% of Volume	97	87	109	104	98	108	101

3: Main Street (SH-75) & Project Access Performance by movement Entire Run

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.3	0.1	0.1	0.1	0.2	0.0	0.8
Total Del/Veh (s)	29.3	9.1	8.0	0.4	0.8	0.3	1.7
Vehicles Entered	35	50	59	766	798	37	1745
Vehicles Exited	35	50	58	765	797	37	1742
Hourly Exit Rate	35	50	58	765	797	37	1742
Input Volume	37	56	56	759	809	37	1754
% of Volume	94	90	104	101	98	99	99

Total Network Performance By Interval

Interval Start	4:15	4:30	4:45	5:00	All
Denied Delay (hr)	0.2	0.1	0.4	0.2	0.8
Denied Del/Veh (s)	1.0	0.8	2.2	1.2	1.3
Total Delay (hr)	5.1	5.6	6.5	5.2	22.3
Total Del/Veh (s)	29.6	31.5	35.1	28.8	34.1
Vehicles Entered	570	568	590	573	2302
Vehicles Exited	557	565	586	581	2290
Hourly Exit Rate	2228	2260	2344	2324	2290
Input Volume	10393	10393	10830	10393	10502
% of Volume	21	22	22	22	22

Intersection: 1: 10th Street & Main Street (SH-75), Interval #1

Movement	NB	SB	NE
Directions Served	L	TR	LR
Maximum Queue (ft)	49	41	207
Average Queue (ft)	29	8	115
95th Queue (ft)	57	48	249
Link Distance (ft)	79	609	1043
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 1: 10th Street & Main Street (SH-75), Interval #2

Movement	NB	SB	NE
Directions Served	L	TR	LR
Maximum Queue (ft)	55	21	228
Average Queue (ft)	28	5	134
95th Queue (ft)	61	22	319
Link Distance (ft)	79	609	1043
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	1		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 1: 10th Street & Main Street (SH-75), Interval #3

Movement	NB	SB	NE
Directions Served	L	TR	LR
Maximum Queue (ft)	86	25	297
Average Queue (ft)	38	5	175
95th Queue (ft)	81	28	443
Link Distance (ft)	79	609	1043
Upstream Blk Time (%)	3		
Queuing Penalty (veh)	6		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 1: 10th Street & Main Street (SH-75), Interval #4

Movement	NB	SB	NE
Directions Served	L	TR	LR
Maximum Queue (ft)	75	11	247
Average Queue (ft)	36	2	144
95th Queue (ft)	80	16	339
Link Distance (ft)	79	609	1043
Upstream Blk Time (%)	2		
Queuing Penalty (veh)	4		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 1: 10th Street & Main Street (SH-75), All Intervals

Movement	NB	SB	NE
Directions Served	L	TR	LR
Maximum Queue (ft)	99	57	389
Average Queue (ft)	33	5	142
95th Queue (ft)	71	31	346
Link Distance (ft)	79	609	1043
Upstream Blk Time (%)	1		
Queuing Penalty (veh)	3		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: 5th Street & Main Street (SH-75), Interval #1

Movement	SE	SE	B9	NW	NW	NE	SW
Directions Served	LT	TR	T	LT	TR	LTR	LTR
Maximum Queue (ft)	199	212	48	444	395	138	140
Average Queue (ft)	130	136	7	308	221	78	80
95th Queue (ft)	207	213	60	574	546	138	138
Link Distance (ft)	194	194	980	872	872	838	1044
Upstream Blk Time (%)	2	2					
Queuing Penalty (veh)	10	8					
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 2: 5th Street & Main Street (SH-75), Interval #2

Movement	SE	SE	NW	NW	NE	SW
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (ft)	180	185	459	417	115	111
Average Queue (ft)	131	132	314	229	75	71
95th Queue (ft)	190	204	659	616	124	121
Link Distance (ft)	194	194	872	872	838	1044
Upstream Blk Time (%)	0	1	2	0		
Queuing Penalty (veh)	1	3	0	0		
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: 5th Street & Main Street (SH-75), Interval #3

Movement	SE	SE	B9	NW	NW	NE	SW
Directions Served	LT	TR	T	LT	TR	LTR	LTR
Maximum Queue (ft)	200	206	47	515	457	129	143
Average Queue (ft)	146	143	6	342	280	86	75
95th Queue (ft)	222	223	76	678	630	139	139
Link Distance (ft)	194	194	980	872	872	838	1044
Upstream Blk Time (%)	4	2					
Queuing Penalty (veh)	18	9					
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 2: 5th Street & Main Street (SH-75), Interval #4

Movement	SE	SE	B9	NW	NW	NE	SW
Directions Served	LT	TR	T	LT	TR	LTR	LTR
Maximum Queue (ft)	192	203	42	418	383	125	117
Average Queue (ft)	132	135	6	266	212	86	71
95th Queue (ft)	208	215	61	507	481	147	121
Link Distance (ft)	194	194	980	872	872	838	1044
Upstream Blk Time (%)	1	1					
Queuing Penalty (veh)	6	4					
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 2: 5th Street & Main Street (SH-75), All Intervals

Movement	SE	SE	B9	NW	NW	NE	SW
Directions Served	LT	TR	T	LT	TR	LTR	LTR
Maximum Queue (ft)	236	241	96	614	567	160	168
Average Queue (ft)	135	137	5	308	236	81	75
95th Queue (ft)	208	214	57	611	574	138	131
Link Distance (ft)	194	194	980	872	872	838	1044
Upstream Blk Time (%)	2	1		0	0		
Queuing Penalty (veh)	9	6		0	0		
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 3: Main Street (SH-75) & Project Access, Interval #1

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (ft)	60	54	76	34
Average Queue (ft)	29	30	33	6
95th Queue (ft)	62	62	81	34
Link Distance (ft)	92	92	102	79
Upstream Blk Time (%)	0	0	1	0
Queuing Penalty (veh)	0	0	3	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Main Street (SH-75) & Project Access, Interval #2

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (ft)	44	70	74	34
Average Queue (ft)	24	33	33	6
95th Queue (ft)	52	68	77	35
Link Distance (ft)	92	92	102	79
Upstream Blk Time (%)		0	0	0
Queuing Penalty (veh)		0	1	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Main Street (SH-75) & Project Access, Interval #3

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (ft)	63	55	80	27
Average Queue (ft)	34	30	37	5
95th Queue (ft)	66	63	80	26
Link Distance (ft)	92	92	102	79
Upstream Blk Time (%)	1	0	0	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Main Street (SH-75) & Project Access, Interval #4

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (ft)	56	64	67	26
Average Queue (ft)	29	32	33	5
95th Queue (ft)	61	64	71	26
Link Distance (ft)	92	92	102	79
Upstream Blk Time (%)	0	0	0	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Main Street (SH-75) & Project Access, All Intervals

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (ft)	74	79	101	57
Average Queue (ft)	29	31	34	6
95th Queue (ft)	61	64	78	31
Link Distance (ft)	92	92	102	79
Upstream Blk Time (%)	0	0	0	0
Queuing Penalty (veh)	0	0	1	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty, Interval #1: 21
Network wide Queuing Penalty, Interval #2: 6
Network wide Queuing Penalty, Interval #3: 34
Network wide Queuing Penalty, Interval #4: 14
Network wide Queuing Penalty, All Intervals: 19

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APPENDIX C

Site Plan

PROPERTY LINE

EXISTING SIDEWALK

EXISTING PARKING

EXISTING BUS STOP

CITY DRY WELL

E 9TH ST

KNOB HILL

EXISTING SIDEWALK

APPROX EDGE OF EXISTING TRAVEL LANE (FOG LINE)

NORTH BOUND 25 MPH

50' ROW

13'

PROPOSED TURNING LANE

12'

STATE HIGHWAY 75

APPROX EDGE OF EXISTING TRAVEL LANE (FOG LINE)

NORTH BOUND 25 MPH

STATE HIGHWAY 75

PROPOSED CROSS WALK RAPID FLASH WARNING LIGHTS

APPROX EDGE OF EXISTING TRAVEL LANE (FOG LINE)

SOUTH BOUND 25 MPH

13'

VALLEY GUTTER

APPROX EDGE OF EXISTING TRAVEL LANE (FOG LINE)

SOUTH BOUND 25 MPH

VALLEY GUTTER

PROPOSED SIDEWALK

CITY DRY WELL

PERMITTED LANDSCAPE - SEE LS.1

50' ROW

40'-0"

4'-0"

40'-0"

BOULEVARD APPROACH

EL. 5846.0 ±

EL. 5846.5 ±

PERMITTED LANDSCAPE - SEE LS.1

POWER POLE

PROPERTY LINE S03°28'40"E 273.97'

EDGE OF EXISTING ASPHALT

EL. 5843.8 ±

PROPOSED CROSS WALK

PROPOSED SIDEWALK

EL. 5846.8

SIGN

DEMO THIS EXIST. BLDG

13'-4" SETBACK

OFF-STREET LOADING

LOGO

CHARGING STATION

CHARGING STATION

9

10

LOGO

1

2

4'-0"

20'-3"

FUEL GRADE #1

FUEL GRADE #2

FUEL GRADE #3

FUEL GRADE #4

FUELING ISLANDS

40'

59'-3"

3

4

DEMO THIS PORTION OF EXIST. BLDG.

43' CANOPY LINE

LOT 5A

.4267 AC. (18,590 S.F.)

21

20

19

18

17

16

15

14

13

12

11

BIKE RACK

SCREENED RECYCLE/ STO

GARBAGE

PROPANE LOCATION

PROPOSED PATIO ROOF

RETAINING WALL (NEW)

20'

EXISTING GRADE - NOT ASPHALT

LOT 2

℄ ALLEY

LOT 1

℄ 10TH ST

EXT'G CURB CUT

TENTH STREET CENTER PARKING

(Install below grade fuel tanks)

RETAINING WALL (NEW)

NEW PROPOSED PARALLEL PKG

PROPERTY LINE N45°16'21"E 180.52'

26'-0"

SLOPE = 7%

PROPOSED STAIRWAY

PROPOSED SIDEWALK (5'-0")

DN. +48

PROPOSED ADDITION 508 SQ. FT.

EL. 5838.2 ±

EL. 5838.0 ±

13'-3½"

RR TIE WALL

POWER POLE

EL. 5839.8

EL. 5838.4 ±

FUTURE EXPANSION

PROPOSED LOWER LEVEL ACCESS FROM ALLEY

END OF EXISTING BUILDING

REPURPOSE EXT'G RETAIL BLDG TO INCLUDE STORE WITH DELI SERVICE

2,484 SQ. FT.

8 BELOW

7 BELOW

6 BELOW

5 BELOW

PROPERTY LINE S44°41'44"E 205.99'

EL. 5838.0 ±

72'-0"

EXISTING BLDG TO REMAIN - 72'

EL. 5838.4 ±

LOT 3

4

3

20' SETBACK

2

1

EXISTING LOWER LEVEL ENTRY

EL. 5838.4 ±

℄ ALLEY

+ EL. 34.7

LOT 4

SLOPE = 10%

℄ 10TH ST

TENTH STREET CENTER

SIDEWALK

PROPERTY LINE

REVISED 5-23-16

N DRAWING NORTH

1 / A-2

CONDTIONAL USE/ PREAPPLICATION SITE PLAN

NOTE: SEE CIVIL ENGINEERING DRAWINGS FOR ALL SITE DRAINAGE AND STREET GRADING DESIGN

scale: 1"= 10'

GENERAL CONTRACTOR AND ALL SUBCONTRACTORS TO ASSURE ALL WORK CONFORMS TO NATIONAL, STATE, AND LOCAL CODES THAT APPLY TO THIS PROJECT. WHEN INCONSISTENCIES EXIST BETWEEN DRAWINGS OR SPECS. AND APPLICABLE CODE REQUIREMENTS, CONFORMANCE TO ALL CODES SHALL HAVE PRECEDENCE OVER DRAWINGS AND SPECS.

STEVE R. COOK, ARCHITECT
323 SOUTH LEWIS ST. SUITE H, P.O. BOX 680, KETCHUM ID, 83340
PHn: (208) 725-5566
FAX: (208) 725-5568
MEMBER AMERICAN INSTITUTE OF ARCHITECTS

PRELIMINARY DESIGN PHASE - LOT 5A BLK 30

LOT 5A / BLK 30 / ZONE LI - 1

KETCHUM, ID

REVISION RECORD		
NO.	DATE	BY

DRAWING NAME: SITE PLAN

DATE OF ISSUE: 4/5/16 (SUPERSEDES ALL PREVIOUS DRAWINGS)

SCALE: 1"=10'

PLOT DATE: 4/5/16

SHEET NO. A-2

HALES ENGINEERING
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APPENDIX D

95th Percentile Queue Length Reports

SimTraffic Queueing Report
Project: ID Ketchum - Bracken Station TIS
Time Period: p.m. Peak Hour
95th Percentile Queue Length (feet)

HALES ENGINEERING
Innovative transportation solutions

Project #: UT16-851

Intersection	Time Period	B9		NB	NE		NW		SE		SW
		T	(blank)	LT	LR	LTR	LT	TR	LT	TR	LTR
10th Street & Main Street (SH-75)	Existing (2016) Background	4	3	86	83	--	--	--	--	--	--
5th Street & Main Street (SH-75)	Existing (2016) Background	--	--	--	--	134	200	118	131	128	121

SimTraffic Queueing Report
Project: ID Ketchum - Bracken Station TIS
Time Period: p.m. Peak Hour
95th Percentile Queue Length (feet)

HALES ENGINEERING
Innovative transportation solutions

Project #: UT16-851

Intersection	Time Period	EB		NB	NE		NW		SB	SE		SW
		L	R	LT	LR	LTR	LT	TR	TR	LT	TR	LTR
10th Street & Main Street (SH-75)	Existing (2016) Plus Project	--	--	71	81	--	--	--	3	--	--	--
5th Street & Main Street (SH-75)	Existing (2016) Plus Project	--	--	--	--	137	205	122	--	136	130	121
Main Street (SH-75) & Project Access	Existing (2016) Plus Project	41	50	56	--	--	--	--	8	--	--	--

SimTraffic Queueing Report

Project: ID Ketchum - Bracken Station TIS

Time Period: p.m. Peak Hour

95th Percentile Queue Length (feet)

HALES ENGINEERING
Innovative transportation solutions

Project #: UT16-851

Intersection	Time Period	NB	NE		NW		SB	SE		SW
		LT	LR	LTR	LT	TR	TR	LT	TR	LTR
10th Street & Main Street (SH-75)	Future (2020) Background	80	77	--	--	--	2	--	--	--
5th Street & Main Street (SH-75)	Future (2020) Background	--	--	136	210	123	--	139	135	135

SimTraffic Queueing Report

Project: ID Ketchum - Bracken Station TIS

Time Period: p.m. Peak Hour

95th Percentile Queue Length (feet)

HALES ENGINEERING
Innovative transportation solutions

Project #: UT16-851

Intersection	Time Period	EB		NB		NE		NW		SB	SE		SW
		L	R	L	LT	LR	LTR	LT	TR	TR	LT	TR	LTR
10th Street & Main Street (SH-75)	Future (2020) Plus Project	--	--	48	--	80	--	--	--	12	--	--	--
5th Street & Main Street (SH-75)	Future (2020) Plus Project	--	--	--	--	--	127	208	104	--	136	143	124
Main Street (SH-75) & Project Access	Future (2020) Plus Project	46	54	--	44	--	--	--	--	6	--	--	--

SimTraffic Queueing Report
Project: ID Ketchum - Bracken Station TIS
Time Period: p.m. Peak Hour
95th Percentile Queue Length (feet)

HALES ENGINEERING
Innovative transportation solutions

Project #: UT16-851

Intersection	Time Period	B9		NB	NE		NW		SB	SE		SW
		T	(blank)	LT	LR	LTR	LT	TR	TR	LT	TR	LTR
10th Street & Main Street (SH-75)	Future (2026) Background	10	5	104	111	--	--	--	5	--	--	--
5th Street & Main Street (SH-75)	Future (2026) Background	3	--	--	--	141	370	331	--	164	174	136

SimTraffic Queueing Report

Project: ID Ketchum - Bracken Station TIS

Time Period: p.m. Peak Hour

95th Percentile Queue Length (feet)

HALES ENGINEERING
Innovative transportation solutions

Project #: UT16-851

Intersection	Time Period	B9		EB		NB		NE		NW		SB	SE		SW
		T	(blank)	L	R	L	LT	LR	LTR	LT	TR	TR	LT	TR	LTR
10th Street & Main Street (SH-75)	Future (2026) Plus Project	--	--	--	--	72	--	248	--	--	--	28	--	--	--
5th Street & Main Street (SH-75)	Future (2026) Plus Project	18	--	--	--	--	--	--	143	446	399	--	196	199	148
Main Street (SH-75) & Project Acce	Future (2026) Plus Project	4	4	46	51	--	56	--	--	--	--	16	--	--	--

SimTraffic Queueing Report

Project: ID Ketchum - Bracken Station TIS

Time Period: p.m. Peak Hour

95th Percentile Queue Length (feet)

HALES ENGINEERING
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Project #: UT16-851

Intersection	Time Period	B9	EB		NB		NE		NW		SB	SE		SW
		T	L	R	L	LT	LR	LTR	LT	TR	TR	LT	TR	LTR
10th Street & Main Street (SH-75)	Hypothetical Future (2026) Plus Project	--	--	--	71	--	346	--	--	--	31	--	--	--
5th Street & Main Street (SH-75)	Hypothetical Future (2026) Plus Project	57	--	--	--	--	--	138	611	574	--	208	214	131
Main Street (SH-75) & Project Access	Hypothetical Future (2026) Plus Project	--	61	64	--	78	--	--	--	--	31	--	--	--

HALES ENGINEERING
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APPENDIX E

Surrogate Lane Use Data Summary

Hailey Chevron

9/1/2016

		AM East		AM West		AM Combined		
		In	Out	In	Out	In	Out	Total
7:00	7:15	4	3	1	1	5	4	9
7:15	7:30	10	8	7	5	17	13	30
7:30	7:45	5	7	9	7	14	14	28
7:45	8:00	10	9	9	13	19	22	41
8:00	8:15	7	7	10	7	17	14	31
8:15	8:30	10	9	3	5	13	14	27
8:30	8:45	4	7	6	5	10	12	22
8:45	9:00	4	2	5	5	9	7	16

Hourly Summary				
		In	Out	Total
7:00	8:00	55	53	108
7:15	8:15	67	63	130
7:30	8:30	63	64	127
7:45	8:45	59	62	121
8:00	9:00	49	47	96

Vehicle Composition					
	Psngr	RV	Cmrcl	Moto	Ped
AM East	47	0	5	0	2
AM West	23	0	23	0	4
AM Total	70	0	28	0	6
	67.3%	**0.0%**	**26.9%**	**0.0%**	**5.8%**

		PM East		PM West		PM Combined		
		In	Out	In	Out	In	Out	Total
3:00	3:15	10	6	3	2	13	8	21
3:15	3:30	7	9	5	4	12	13	25
3:30	3:45	15	12	7	6	22	18	40
3:45	4:00	13	14	4	7	17	21	38
4:00	4:15	11	11	11	6	22	17	39
4:15	4:30	8	9	10	13	18	22	40
4:30	4:45	9	10	12	9	21	19	40
4:45	5:00	8	10	6	11	14	21	35
5:00	5:15	14	12	8	6	22	18	40
5:15	5:30	7	8	7	5	14	13	27
5:30	5:45	9	8	5	8	14	16	30
5:45	6:00	9	9	8	6	17	15	32
6:00	6:15	8	8	6	7	14	15	29
6:15	6:30	11	11	3	2	14	13	27
6:30	6:45	8	7	3	5	11	12	23
6:45	7:00	8	10	4	5	12	15	27

Hourly Summary				
		In	Out	Total
3:00	4:00	64	60	124
3:15	4:15	73	69	142
3:30	4:30	79	78	157
3:45	4:45	78	79	157
4:00	5:00	75	79	154
4:15	5:15	75	80	155
4:30	5:30	71	71	142
4:45	5:45	64	68	132
5:00	6:00	67	62	129
5:15	6:15	59	59	118
5:30	6:30	59	59	118
5:45	6:45	56	55	111
6:00	7:00	51	55	106

Vehicle Composition					
	Psngr	RV	Cmrcl	Moto	Ped
PM East	138	0	9	1	7
PM West	76	0	18	0	9
PM Total	214	0	27	1	16
	82.9%	**0.0%**	**10.5%**	**0.4%**	**6.2%**

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APPENDIX F

Motor Fueling Station Pedestrian Analysis

MEMORANDUM

125 West Main Street
Bozeman, MT 59715
(406) 624-6117
www.altaplanning.com

To: Roy Bracken
North Town Partners Lot 5A Ketchum Idaho

From: Joe Gilpin, Principal

Date: June 29, 2016

Re: Motor Fueling Station Pedestrian Analysis

Introduction

This preliminary analysis of pedestrian access at the proposed Motor Fueling Station summarizes the site, pedestrian issues and design recommendations for the site as well as an approximately 3-block area study area.

To the Station Context and Recommendations

Located at the intersection of 10th Street and North Main Street, there are three major pedestrian catchment areas associated with the motor fueling station (illustrated in Figure 1). Pedestrians from these catchment areas will primarily access the site via North Main Street and 10th Street. Major pedestrian crossing points will include the intersections of:

- North Main Street and 9th Street
- North Main Street and 10th Street

Figure 1 illustrates catchment areas and major pedestrian access routes to the motor fueling station. The catchment areas and specific pedestrian issues and design recommendations areas are described below.

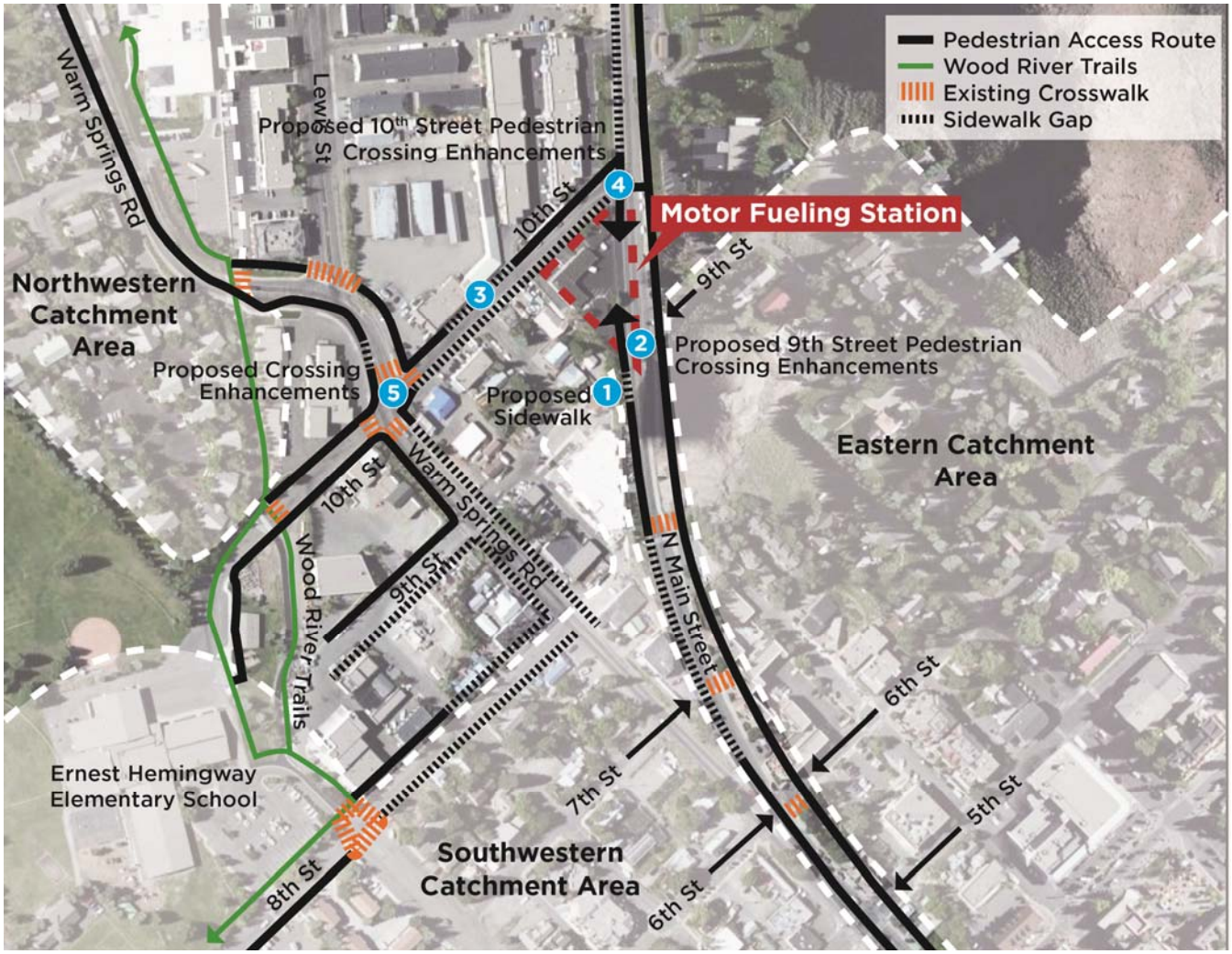


Figure 1: Pedestrian Catchment Areas and Circulation

Eastern Catchment Area Context and Recommendations

The eastern catchment area is comprised of a residential area and commercial district along North Main Street (State Highway 75). Pedestrians are likely to travel to the site along the eastern side of North Main Street and cross to the site at 9th Street. The sidewalk along the eastern side of North Main Street provides a connection from perpendicular streets to the site, with less g aps and driveway crossing than the western sidewalk. To address the existing gap in pedestrian facilities, a 5' concrete sidewalk (1) is proposed to connect pedestrians from Shum's Frenchman Place Condo to the motor fueling station.

A rectangular rapid flashing beacon (2), crosswalk and dedicated pedestrian ramps are proposed at the 9th Street crossing. The rectangular rapid flashing beacon (RRFB) would establish a high-visibility strobe-like warning to drivers when pedestrians are using the crosswalk, increasing motorist yielding compliance and pedestrian safety.

Southwestern Catchment Area Context and Recommendations

The southwestern catchment area is comprised of a residential area, commercial district along North Main Street, and the Ernest Hemingway Elementary School. Pedestrians are likely to travel to the motor fueling station along the western side of North Main Street or 10th Street. Driveways and parking along the length of 10th Street create large gaps in pedestrian facilities on both the north and south side of 10th Street. While the potential for pedestrian and vehicle conflicts are high along both sides of 10th, the north side is more desirable for pedestrian travel as only one large gap in sidewalk exists. There is no existing sidewalk on the south side of 10th, additionally long banks of front-in perpendicular parking exist on both sides of the street. This is the least compatible parking type with pedestrians as the driver does not have any view of street conditions behind before backing up.

Options for clearly defining a pedestrian zone through this gap (3) are recommended. Converting the pull-in parking to angle parking bays would create space to establish a sidewalk between the business front and parking. If existing parking through this area prohibits a dedicated sidewalk facilities signage, changes in pavement material or color could help to define and increase visibility of pedestrian through this area.

Pedestrian crosswalks are recommended at the intersection of North Main Street and 10th Street (4) and Warm Springs Road and 10th Street (5). A RRFB should also be considered to increase pedestrian safety.

Northwestern Catchment Area Context and Recommendations

The northwestern catchment area is comprised of a residential area connected to the southwestern catchment area and motor fueling station via the Wood River Trail and existing sidewalks. Traveling along the trail or sidewalks, pedestrians are likely to travel to the motor fueling station along 10th Street.

Sidewalk and crossing improvement enhancements reflect recommendations along 10th Street outlined for the Southwestern Catchment Area.

Major Pedestrian Access Routes

Pull-in parking exists along many of the major pedestrian access routes and creates gaps in connectivity. While establishing continuous pedestrian facilities along these routes is outside of the scope of the Motor Fueling Station project, future initiatives should engage property and business owners to discuss converting pull-in spaces to angled parking bays. This would create space for the establishment of clear pedestrian zones between the angled parking and front of business, enhancing building fronts and connections to the surrounding area.

Another strategy for establishing continuous pedestrian facilities could include narrowing travel lanes and/or replacing pull-in parking with parallel parking. This would also allow for the establishment buffer area between the sidewalk and travel lanes, enhancing pedestrian comfort. The buffer area could be landscaped and act as snow storage in the winter. This strategy would result in significant loss of parking.

Motor Fueling Station Issues and Recommendations

Proposed plans (figure 2) for the Motor Fueling Station include pedestrian connections to and through the site. Existing proposals illustrate crosswalks across 10th Street and North Main Street, as described in previous catchment area recommendations. Proposed improvements also include ADA ramps at crosswalk sites and a sidewalk along North Main Street. A pedestrian crossing (1) should be considered south of the site in a location that it can be straight and moved away from the lane taper. A second pedestrian crossing should be considered in the illustrated location (2) unless moving to the north where the roadway is narrower could align with Knob Hill Inn Access. The northern crossing location would also require a pedestrian landing/sidewalk area.

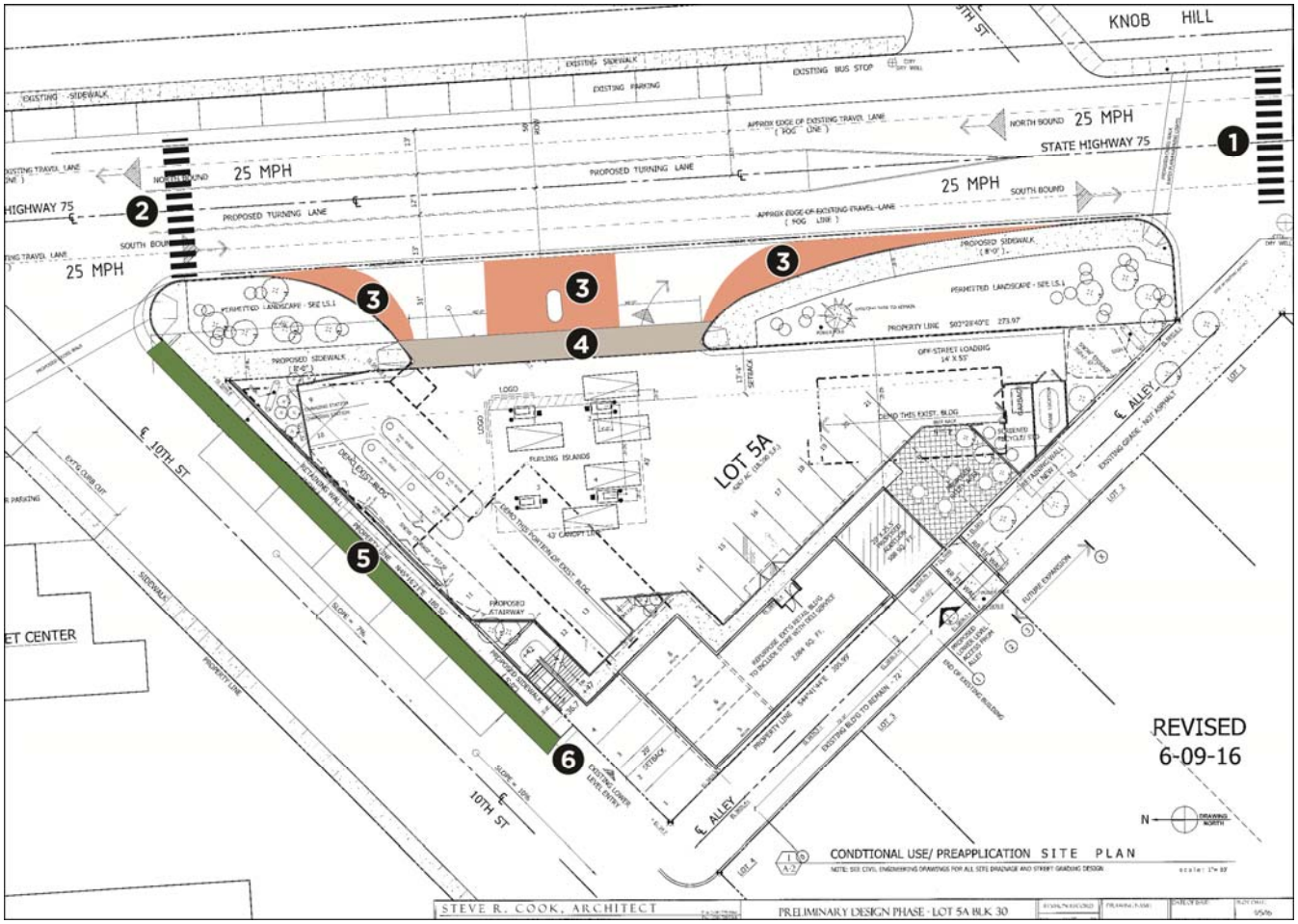


Figure 2: Proposed Site Plan

Pedestrian access to the site could be further enhanced by more clearly defining the pedestrian zone across the vehicle entrance through changes in the hardscape. One strategy is to better define the path for the most common vehicle to access the gas station (the passenger vehicle), while still allowing for the larger fueling trucks and other users to negotiate the entrance. The pictures below (figure 3) illustrate how the visibility of a pedestrian zone is enhanced through the use of colored/stamped pavement. Similar to the treatment below, the combination of rolled curbs and colored/stamped pavement (3) would maintain the wide turning radii required for large vehicles to access the site while lessening the gap in a dedicated pedestrian zone. Colored pedestrian areas (4) would also provide heightened awareness of walkers through primary vehicle access areas.

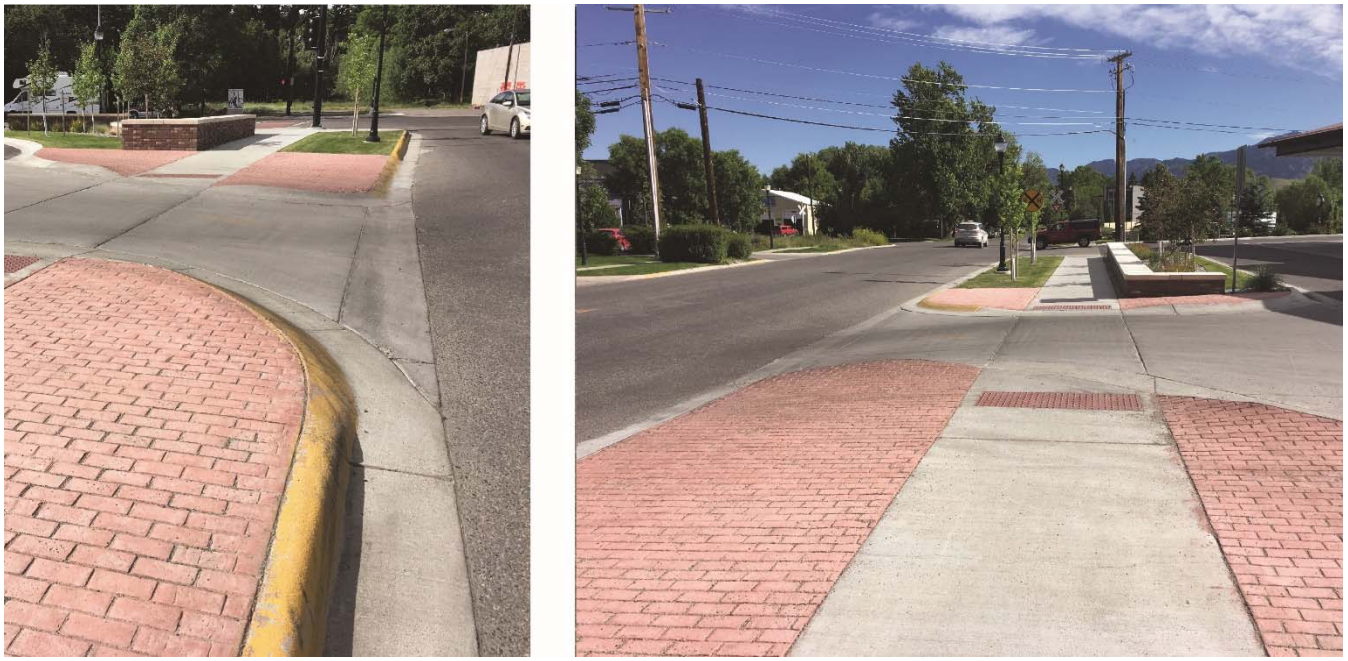


Figure 3: Stamped/colored pavement with rolled curb

Reducing the eastbound travel lane to 12' would allow for the addition of a 5' landscape area (5). The landscape area would serve as a year-round buffer between pedestrian and vehicle travel and in the winter serve as snow storage. West of this area (6), engineering solutions should be explored to continue the sidewalk beyond the retaining wall.

HALES ENGINEERING
innovative transportation solutions

APPENDIX G

Background Land Use Trip Generation

HALES ENGINEERING
innovative transportation solutions

MEMORANDUM

Subject: **Ketchum – Bracken Station TIS, Appendix G**

UT16-851

This memorandum discusses the trip generation characteristics of the Ketchum Community School, the Warm Springs Ranch Resort, and the Stock Lumberyard development.

Ketchum City Staff requested that traffic from these three projects be included in projected 2020 and 2026 traffic volumes that were used for the background conditions analyses.

Ketchum Community School

Trip generation characteristics for the community school were developed based on information provided by the school for a pedestrian and bicycle study completed in January of 2016. Based on the unique characteristics of the school (when compared to more traditional schools), it was determined that trip generation during the p.m. peak hour of the Bracken Station study would be minimal. Trip generation and assignment for the Community School are shown in Figure G-1.

Warm Springs Ranch Resort

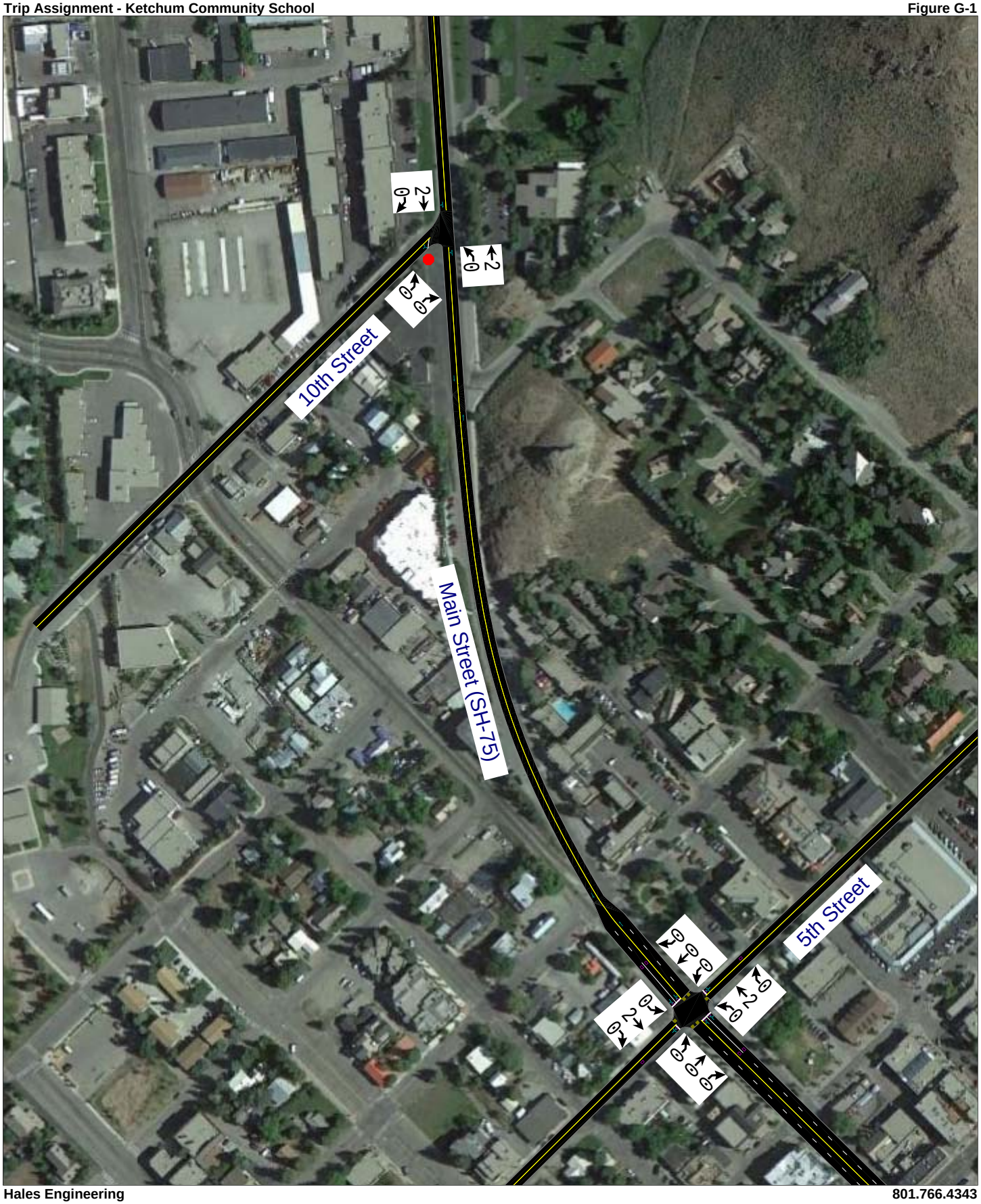
Trip generation for the Warm Springs Ranch Resort was taken from a traffic impact study (TIS) completed for the project in January of 2012. Trip generation and assignment for the Warm Springs Ranch Resort are shown in Figure G-2.

Stock Lumberyard Development

Plans for the redevelopment of the Stock Lumber yard in Ketchum were not readily available. Trip generation for the project were estimated using information from an article published in the Idaho Mountain Express on September 14, 2016. Trip generation and assignment for the Stock Lumberyard Development are shown in Figure G-3.

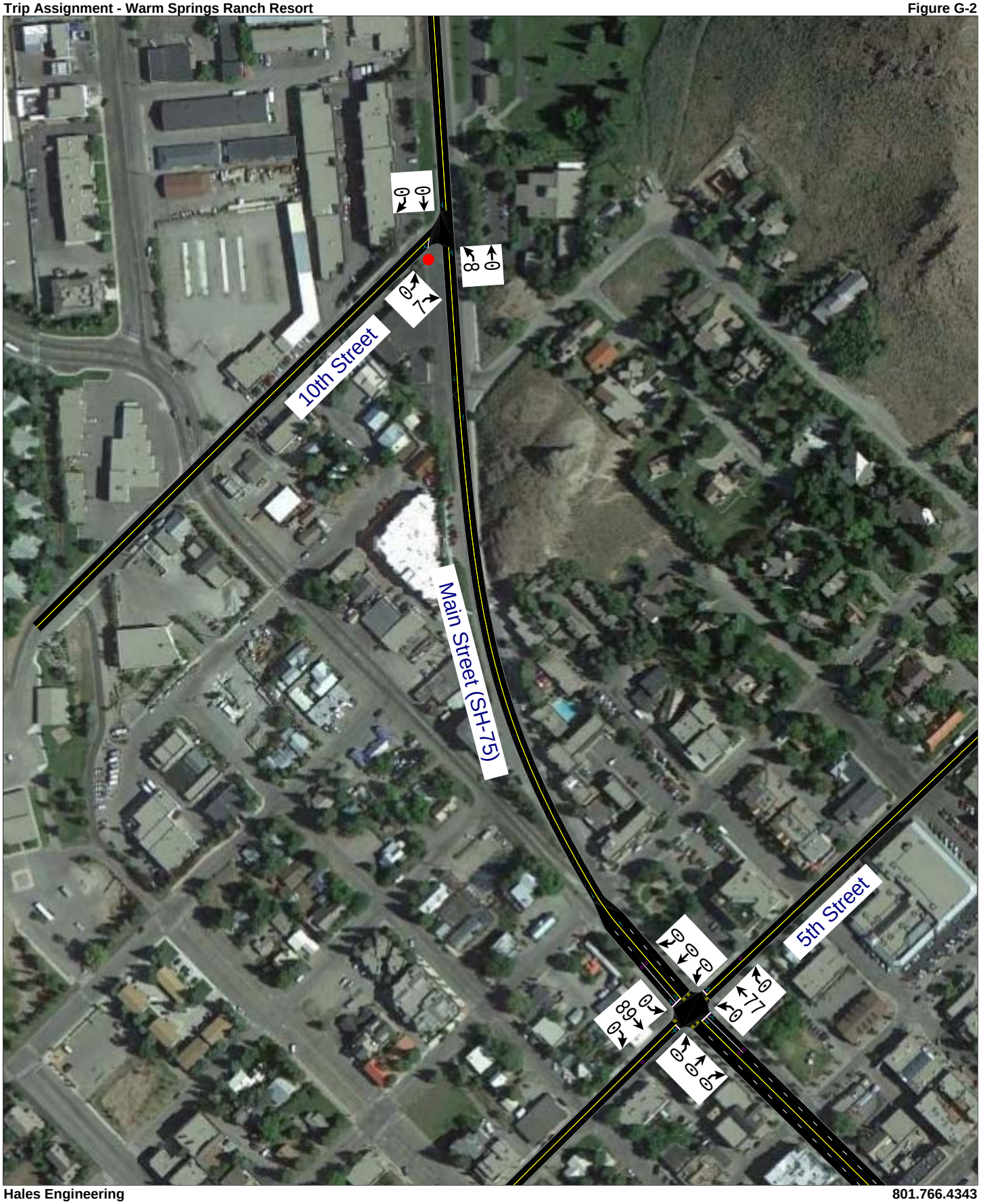
ID Ketchum - Bracken Station TIS
Trip Assignment - Ketchum Community School

p.m. Peak Hour
Figure G-1



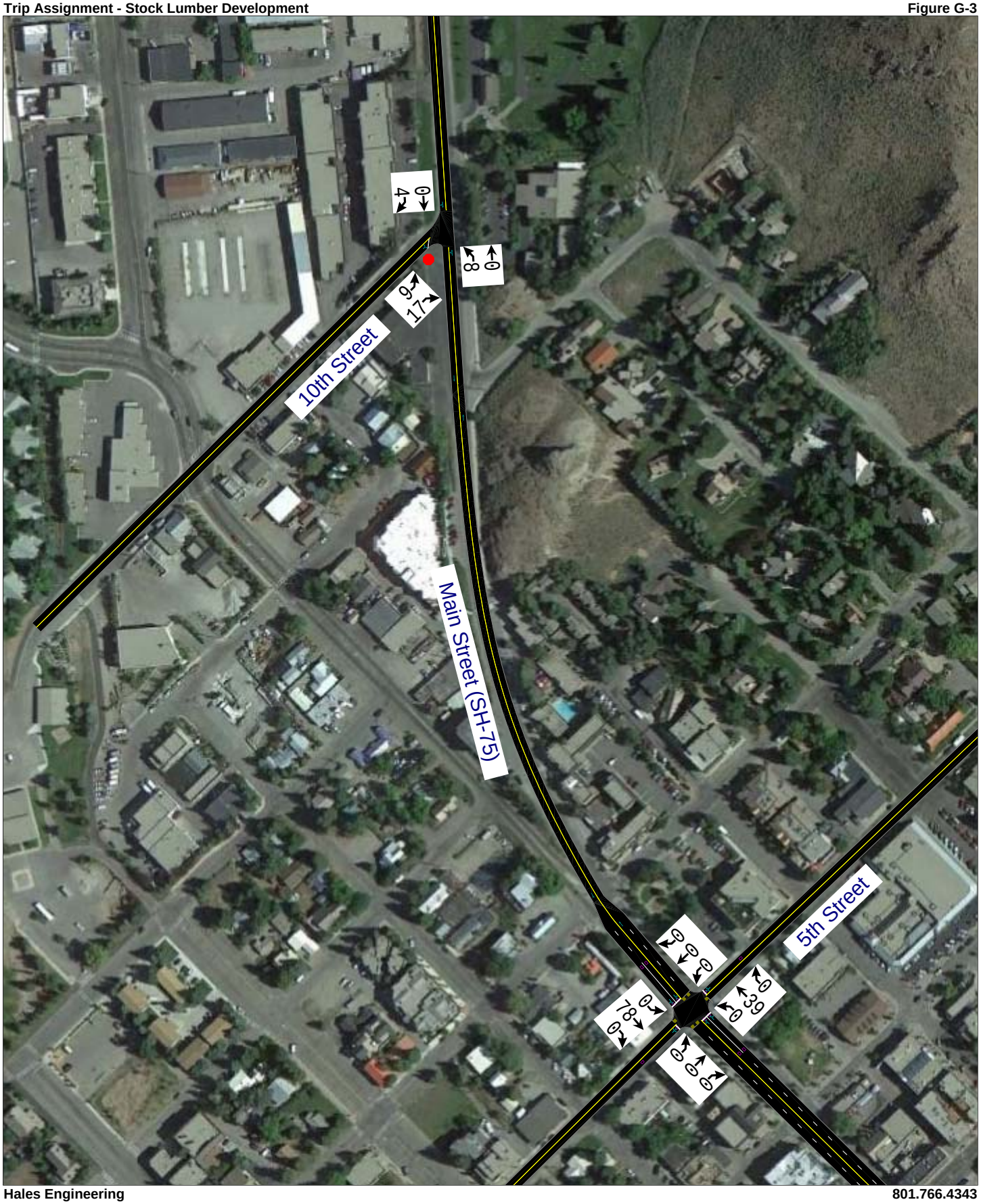
ID Ketchum - Bracken Station TIS
Trip Assignment - Warm Springs Ranch Resort

p.m. Peak Hour
Figure G-2



ID Ketchum - Bracken Station TIS
Trip Assignment - Stock Lumber Development

p.m. Peak Hour
Figure G-3



City of Ketchum
Planning & Building

October 24, 2016

Planning and Zoning Commission
City of Ketchum
Ketchum, Idaho

STAFF REPORT
KETCHUM PLANNING AND ZONING COMMISION
REGULAR MEETING OF OCTOBER 24, 2016

PROJECT: City-initiated Text Amendments to Title 17, Zoning Regulations amending Chapter 17.125, Off Street Parking and Loading

REPRESENTATIVE: City of Ketchum Planning and Building Department

DESCRIPTION: City-initiated text amendments to the City of Ketchum Municipal Code to amend Title 17 Zoning Code, Chapter 17.125 to align the parking ordinance with objectives of the Comprehensive Plan, to promote uses that contribute to the vitality of downtown, and to incentivize Community Housing.

PLANNER: Brittany Skelton, Senior Planner

ATTACHMENTS:

1. Table 1: Summary of Additional Research
2. Table 2: Parking Ratios Required by Existing and Proposed Parking Ordinances
3. Table 3: Summary of Amendments
4. Table 4: Summary of Compliance with Comprehensive Plan
5. Public Comment received as of 5:00 p.m. October 20, 2016
6. Proposed new Chapter 17.125, Off Street Parking and Loading
7. Amendments to existing Chapter 17.125, Off Street Parking and Loading
8. "Parking Analysis for Changes to the City of Ketchum Zoning Code" report and appendix, Kushlan and Associates
9. "Parking Code Amendments Recommendations" memo, Micah Austin, Planning and Building Director, June 14, 2016
10. "City of Ketchum Parking Code Amendments" presentation slides, Diane Kushlan, August 25, 2016
11. Parking Survey results, dated August 26, 2016

NOTICE: Public notice for the public hearing was published in the Idaho Mountain Express on August 31, 2016. Public notice was posted in three public locations and was sent to outside agencies on August 25, 2016. Continuation of the hearing to October 24, 2016 was announced at the September 26, 2016 meeting.

WORKSHOPS: Public Workshop, held June 30, 2016, City Hall
Public Workshop, held August 26, 2016, City Hall

PUBLIC HEARING: September 26, 2016, continued to October 24, 2016

INTRODUCTION

The Planning and Zoning Commission held a public hearing for the proposed amendments to Chapter 17.125, Off Street Parking and Loading, on September 26, 2016. The Commission did not make a recommendation on the proposed ordinance during the meeting but instead continued the hearing to October 24, 2016 and directed staff to consider addition revisions or actions regarding the following:

1. Consider a comprehensive downtown parking plan that addresses overnight, metered, and employee parking in addition to on site parking requirements;
2. Consider alternative parking requirements for developments in the Community Core that are entirely residential;
3. Consider allowing some of the residential parking requirements to be met with on-street parking credits for developments with high Floor Area Ratios (FAR), such as projects with FARs of 2.0 or above;
4. Reach out directly to stakeholders and request input on the proposed ordinance; and
5. Provide graphics illustrating the requirements of the proposed ordinance.

The results of these efforts are detailed in Table 1: Summary of Additional Research.

BACKGROUND

Phase II of the Zoning Code rewrite is underway and this portion of the project addresses amendments to the parking ordinance, Chapter 17.125 Off Street Parking and Loading. As noted in the "Parking Code Amendments Recommendations" memo from Micah Austin, Planning and Building Director, to Mayor Nina Jonas and City Council dated June 14, 2016, the current parking standards are in conflict with objectives in the Comprehensive Plan and principles for creating a multi-modal, livable community.

In January 2016 the City retained Kushlan and Associates to prepare an analysis of the following: the City's current policy direction for parking regulations compared to the current parking standards, best and emerging practices related to the relationship between parking standards and incentivizing desired land uses, and recommend options specific to Ketchum for changes to the existing parking code. Based on Diane Kushlan of Kushlan and Associates' recommendations, the attached "Parking Code Amendments Recommendations" memo outlines recommended changes to the parking ordinance.

Two public workshops on the recommended changes have been held to date, on June 30 and August 26, 2016, with both workshops held in City Hall. Notice of the second public workshop was mailed to all licensed businesses located in the City of Ketchum. During the second workshop staff and Diane Kushlan presented background research leading up to the recommended changes and discussed the recommended changes. Presentation slides prepared by Diane Kushlan for the workshop are attached. Additionally, prior to the second public workshop, on August 14, 2016 the city distributed an online public opinion survey regarding parking and travel behavior. There were 296 responses to the survey. Respondents answered questions about how many city blocks they would be willing to walk from a parking space to a restaurant, movie theater, and grocery store, and whether they felt one on-site parking space was adequate for studio and one bedroom dwelling units. Respondents also reported how many vehicles they own and whether they park vehicles in a garage or in a parking lot. The survey results are attached.

The first work session with the Commission was held on August 22, 2016. The Commission discussed the amendments proposed by staff and recommended by the consultant. The Commission directed staff to consider additional provisions to facilitate travel by bicycle, to include broader criteria for Transportation Demand Management, and to specify required components of Parking Demand Analysis plans.

A second work session with the Commission was held on September 12, 2016. The Commission generally supported the proposed changes to the ordinance, including proposed amendments to the commercial parking ratios and provisions for bicycle parking, shared parking, and transportation demand management. The Commission did not support proposed amendments to the residential parking ratios and directed staff to review recently constructed and recently approved projects and compare parking requirements under the existing and proposed codes and to consider alternative recommendations for residential parking ratios.

Staff reviewed recent projects and parking requirements as directed and revised the residential parking ratios to require 1 parking space per residential unit 1,000 gross square feet in size or less, and 2 parking spaces per residential unit 1,000 gross square feet in size or more. This differs from the initial parking ratio under consideration, which was 1 parking space per residential unit 750 gross square feet in size or less and the greater of either 2 parking spaces per unit 750 gross square feet in size or more, 1 parking space per bedroom, or 1 parking space per 1,500 gross square feet.

The Commission considered the proposed ordinance during a Public Hearing on September 26, 2016. The Commission did not make a recommendation at the meeting but instead continued the hearing to October 24, 2016 and directed staff to consider the revisions described in the previous section and detailed in Tables 1 and 2.

A summary of the proposed amendments are contained in Table 3 and alignment of the proposed amendments with the Comprehensive Plan is detailed in Table 4.

TABLE 1: Summary of Additional Research

Direction from the Commission indicated in rows with grey background; summary of staff's actions indicated in rows with no background color.
1. Consider a comprehensive downtown parking plan that addresses overnight, metered, and employee parking in addition to on-site parking requirements.
Staff has taken this suggestion under consideration and continues to recommend proceeding with the proposed Parking Ordinance at this time. The proposed amendments to the Parking Ordinance further goals and policies defined in the 2014 Comprehensive Plan related to enhancing bicycle facilities, promoting and encouraging multi-modal transportation, supporting a mixture of housing types in new development, and working to retain and help expand existing independent and small local businesses. Adoption of the new proposed ordinance, which pertains to on-site parking, should be viewed as the first step in addressing the multi-faceted issue of parking.
2. Consider alternative parking requirements for developments in the Community Core that are entirely residential.
Staff evaluated this alternative and continues to recommend the parking requirements as presented in the September 26, 2016 draft ordinance. The proposed ordinance permits submission of a Parking Demand Analysis, Shared Parking Plan, and Transportation Demand Management plan with any proposed development, including entirely residential developments. The Parking Demand Analysis and the Transportation Demand Management plans represent new options for developers to creatively and efficiently utilize alternative means, such as enhanced bicycle facilities, car sharing, employer sponsored transit passes, in order to reduce the number of on-site parking spaces required. Additionally, opportunities for developers to utilize Shared Parking have been enhanced. As such there are ample avenues for developers to propose and implement site specific strategies that will result in a decrease of required on-site parking. The Parking Demand Analysis, Transportation Demand Management plan and Shared Parking plans will receive administrative review and approval, which presents an abbreviated timeline for review and approval, in comparison to processes requiring review and approval from the Planning and Zoning Commission at bi-monthly meetings. The administrative review process and timeline will allow developers proposing Transportation Demand Management and Shared Parking plans to receive a swift direction, approval, and certainty.
3. Consider allowing some of the residential parking requirements to be met with on-street parking credits for developments with high Floor Area Ratios (FAR), such as projects with FARs of 2.0 or above.
Staff has taken this suggestion under consideration and continues to recommend proceeding with the proposed Parking Ordinance at this time for the same reasons described in #2, above.
4. Reach out directly to additional stakeholders and request input on the proposed ordinance.
Staff transmitted the proposed ordinance to Mountain Rides and the Wood River Bike Coalition and requested comment.
5. Provide graphics illustrating the requirements of the proposed ordinance.
A table indicating parking requirements under the existing and proposed Parking Ordinances is provided in Table 2 below.

TABLE 2: Parking Ratios Required by Existing and Proposed Parking Ordinances

Project & FAR	Zone	Parking Requirements – Existing Code				Parking Requirements – Proposed Code				
		C	R	Base Total	Required to Provide On Site	C	R	Base Total	Required to Provide On Site	Difference
Kneebone, 1.42 FAR	CC - C	6	2	8	5*	3	4	7	4*	-1
3 story mixed-use building under construction at 500 N. Washington Avenue. Project consists of 3,092 gross square feet of office/commercial space and two residential units, both over 1,000 gross square feet in size, totaling 3,582 gross square feet. This project contains office/commercial on both the first and second floors. The second floor residential unit is 1,504 net square feet and the third floor residential unit is 2,140 net square feet. Therefore the project has a greater balance of office/commercial and residential uses and smaller scale residential units than the other projects analyzed in this table.										
Franz, 2.06 FAR	CC - D	5	4	9	5*	2	6	8	6*	+1
3 story mixed-use building proposed in 2015 but on hold. Project consists of 2,493 gross square feet of office on the first floor and three residential units, each over 1,000 square feet, totaling 8,101 gross square feet, located on the second and third floors. The second floor residential units are approximately 2,000 square feet each and the third floor residential unit is approximately 3,714 square feet.										
Geneva Lofts, 1.45 FAR	CC - C	3	4	7	4*	1	6	7	6*	+2
3 story mixed use building proposed in 2015 but on hold. Project consists of 1,404 gross square feet of commercial and two residential units, each over 1,000 gross square feet, totaling 5,013 gross square feet. The second floor residential unit is 2,543 gross square feet and the third floor residential unit is 2,470 gross square feet.										
231 Sun Valley Rd, 1.9 FAR	CC - C	4	3	7	4*	0**	4	4	4*	0
3 story mixed-use building proposed in 2009 and proposed again in 2015 but on hold. Project consists of 2,030 gross square feet of retail space and two residential units, each over 1,000 square feet in size, totaling 5,641 net square feet of residential space. One residential unit is approximately 3,384 square foot and one residential unit is approximately 2,257 square feet.										
Strimple Townhomes, FAR 0.995	CC - C	0	4	4	4	0	4	4	4	0
3 story residential building constructed from 2014-2015. The project consists of two residential units, one unit being 2,817 gross square feet and the other unit 2,653 gross square feet, totaling 5,470 gross square feet.										

* Less on-street parking credit of 4 spaces after 4 spaces have been provided on site.
** Retail space is proposed; amendments to the parking ordinance propose exempting retail trade from on-site parking requirements.

TABLE 3: Summary of Amendments

SECTION	SUMMARY
17.125.010 PURPOSE	
17.125.010 (Purpose)	1. Amendments to this section include language related to meeting Comprehensive Plan goals, such as fostering multi-modal transportation, and reference to shared Travel Demand Management; other chapters of the municipal code are formatted similarly. 2. Title of the section changed to "Purpose and Intent."
17.12.20 GENERAL	
17.125.020 (General)	1. Only formatting changes were made to this section.
17.125.030 OFF STREET PARKING SPACE	
17.125.030 (Off Street Parking Space)	1. Change name of section to "Off Street Vehicle Parking Space" because a bicycle parking section has been added to the chapter. 2. A regulation prohibiting new surface parking lots in the CC has been added; "surface lot" will be defined as a parking lot with more than four (4) parking spaces. 3. Shared parking language was moved to the new shared parking section. 4. Buffering requirements were moved to subsection G., which has been renamed "Lighting and Screening."
17.125.040 OFF STREET LOADING AREAS	
17.125.040 (Off Street Loading Areas)	1. This section has been incorporated into the "Off Street Parking and Loading Calculations" section, which has been renamed "Off Street Vehicle Parking and Loading Requirements," and has been renumbered from 12.125.040 to 17.125.050.
17.125.050 (*now 17.125.040*): OFF STREET PARKING AND LOADING CALCULATIONS	
17.125.050, now 17.125.040 (Off Street Parking and Loading Calculations)	1. Section has been renamed to "Off Street Vehicle Parking and Loading Requirements," and will appear as 17.125.040 in the new ordinance because the regulations in the existing section 17.125.040 "Off Street Loading Areas" have been incorporated into this section. 2. The existing parking matrix has been condensed from a matrix with dozens of specific uses to a matrix with just three categories: Residential (multi-family and mixed use), Residential (one family) and non-residential. In the existing matrix parking ratios range from 1 spare per 250 gross square feet for office uses to 1 space per 100 square feet of assembly area in restaurants, bars, and eating/drinking establishments to 1 space per 300 square feet for retail trade, and so forth. The existing regulations pose challenges to redevelopment and development in the Community Core in particular due to the relatively small size of original townsite lots. A policy goal of the City of Ketchum is to facilitate a vibrant downtown and the proposed amendment of 1 parking space per 1,000 gross square feet of non-residential development is designed to do so. The existing parking ratios for residential development range from one space per bedroom in the Light Industrial districts to 1 space per 1,500 net square feet in the Community Core to 1.5 spaces for every 1,500 net square feet for multi-family dwellings to 1.5 spaces per dwelling unit for one family and townhouse developments. Initially staff proposed amendments that would require 1 parking space for units 750 gross square feet or less, and 2 parking spaces for units over 750

gross square feet or 1 space per bedroom or 2 spaces per 1,500 square feet, whichever was greater. The intent of the proposed amendments was to incentivize the development of smaller dwelling units in order to meet a need for affordable housing in the community.

After considering public feedback and direction from the Commission and reviewing required parking for recently constructed and recently approved projects under the existing requirements and the proposed requirements, staff proposes the following parking ratios:

Use Category	Parking Spaces Required
Residential (multiple-family)	Units 1,000 gross square feet or less: 1 parking space per dwelling unit Units over 1,000 gross square feet: 2 parking spaces per dwelling unit
Residential (one family)	2.0 parking spaces per dwelling unit
Non-residential	1 parking space per 1,000 gross square feet[1]

[1.] Refer to definition Floor Area, Gross and with the additional exclusion of common and public areas.

The size of the desired smaller units was increased to accommodate development of two-bedroom units and the required parking for larger units is now based on gross square feet only rather than number of bedrooms.

3. Currently, Community Housing is exempt from the requirement of providing on-site parking space. Parking exemptions for additional desired uses have been added:

a. The following uses meeting the definitions found in 17.08.020:
   i. Community Housing;
   ii. Food Service;
   iii. Retail Trade;
   iv. Assembly existing at the time the ordinance is passed [insert date].

b. All non-residential uses within ¼ mile of a structured parking facility, with the distance calculated by measuring the sidewalk connecting the from the lot line of the lot the structured parking facility is located on to the property line of the use;

c. Other uses may be exempted by the Administrator upon completion of a Parking Demand Analysis demonstrating the actual demands of the project are less than the minimum requirements of the code.

17.125.060 (*now 17.125.050*): COMMUNITY CORE DISTRICT OFF STREET PARKING REQUIREMENTS

17.125.060, now 17.125.050 (Community Core District Off Street Parking Requirements)	1. Formatting changes were made; no content changes were made.

***NEW* - 17.125.060: BICYCLE PARKING**

NEW: 17.125.060 (Bicycle Parking)	1. A new section 17.125.060 "Bicycle Parking" has been added. 2. Existing regulations from the Design Review standards are included in this section. 3. Location, design, and surface materials for the location of bicycle parking are addressed. 3. Bicycle parking is required for all uses other than one family dwellings are required at a ratio of one (1) rack containing two spaces for every four (4) required parking spaces. When measurements of required spaces result in a fraction any fraction equal or greater than ½ shall be rounded up. A minimum of one (1) bicycle rack shall be required per development.
NEW - 17.125.070: PARKING DEMAND ANALYSIS	
17.125.070 (Shared Parking Reduction)	1. This is a new section specifying the details of Parking Demand Analysis studies that may be submitted by an applicant, or may be required by the city, and the criteria which such analyses are evaluated and approved. 2. Any project in any district is eligible to submit a Parking Demand Analysis indicating that the requirements of this chapter regarding the number of off-street vehicle parking spaces required are not applicable to the proposed project because the project contains a unique mix of uses, the operational method is atypical, the use is not listed, or location or contextual factors affect the amount of off-street parking spaces required. 3. A Parking Demand Analysis is required for all projects requesting a Shared Parking Reduction or a parking reduction through Transportation Demand Management.
17.125.070 _(now 17.125.080)_ – SHARED PARKING REDUCTION	
17.125.070, now 17.125.080 (Shared Parking Reduction)	1. A purpose section stating why shared parking alternatives have been established, referencing Comprehensive Plan goals, was added. 2. This section was amended to apply to all projects in all districts. 3. Criteria for Shared Parking Plans submitted and the criteria under which such plans are evaluated was added. 4. Plans shall, at minimum, identify the parking demand generated by the proposed uses and existing uses, where applicable, the hours of peak parking demand for each use, all locations of parking spaces on private property utilized through Shared Parking, and all public parking that can be accessed within a 1,000 foot walk as measured along sidewalk connecting to the site of the subject uses. The plan shall include an agreement between property owners for sharing common parking on private property however in no case will the City manage shared parking agreements. 5. All Shared Parking shall be located no less than three hundred feet (300') from the uses utilizing the Shared Parking, as determined by measuring along existing sidewalk or sidewalk that shall be constructed as a condition of approving the shared parking reduction from the primary entrance of the use(s) to the location of Shared Parking spaces. 6. A reduction to parking requirements for individual uses may be made after considering the following standards and criteria: a. The hour(s) of peak parking demand, with peak demand being different; b. The operating hours of each use, with operating hours being staggered; and c. There is existing on-street parking available for public use. 7. Employee parking is required at the rate of ten percent (10%) of total required spaces after reductions are provided.

NEW - 17.125.090: PARKING REDUCTION THROUGH TRANSPORTATION DEMAND MANAGEMENT	
NEW: 17.125.090 (Parking Reduction Through Transportation Demand Management)	1. This is a new section specifying the standards for parking reduction through Transportation Demand Management. 2. This section was borrowed from the Warm Springs Base Area Overlay districts and expanded. 3. All projects with a FAR of 0.5 or greater are eligible to submit a Transportation Demand Management Plan and request a reduction in parking. A reduction of up to 25% of on-site vehicle parking requirements may be approved by the Administrator. A Parking Demand Analysis must be submitted as part of the TDM plan. 3. Transportation Demand Management plans shall consider the following strategies, including, but not limited to: 1. A Shared Parking Plan subject to the standards found in 17.125.070; 2. Covered bicycle parking; a. Covered bicycle parking can be provided inside buildings, under roof overhangs or awnings, in bicycle lockers, or within or under other structures. When not located within a building or a locker the cover must be permanent, designed to protect the bicycle from rainfall, and at least 7 feet above the floor or ground. b. Secure bicycle parking. 3. Secure bicycle parking can be in a locked room or area enclosed by a locked gate or fence, in an area that is monitored by a security camera, or in an area that is visible from employee work areas. 4. On-site locker room and shower facilities. 5. Provision of a public transit stop or demonstration of proximate access to an existing transit stop. 6. Demonstration of proximate access, within 1,000 feet, to the Wood River Trail. 7. Construction of a “spur” connecting the lot to the Wood River Trail. 8. Reserved preferential parking spaces for high occupancy vehicles. 9. Reserved preferential parking spaces for hybrid, electric, or alternative fuel vehicles. 10. Installation of on-site electric vehicle charging stations. 11. Publicly accessible permanent display area for information on TDM strategies and options for alternative transportation modes. 12. Shuttle service. 13. Contribution to public transit or alternative modes of transportation fund(s). 14. Employer programs such as: a. Car/van pool coordination and incentive programs; b. Shuttle program; c. Guaranteed emergency ride home program; and d. Public transit passes.

TABLE 4: Compliance with Comprehensive Plan

SECTION	SUMMARY
17.125 OFF STREET PARKING AND LOADING	
17.125 – Off Street Parking and Loading	Four of the core values that drove the 2014 Comprehensive Plan are a strong and diverse economy, a vibrant downtown, a variety of housing options, and a well-connected community. These four values were enumerated into specific goals, policies, and implementation strategies. The city's zoning ordinance is the main tool for implementing policy and the parking ordinance has the opportunity to facilitate, or to hinder, implementation of the vision defined in the Comprehensive Plan. The proposed amendments to 17.125 Off Street Parking and Loading facilitate achieving the following goals and policies: **Goal E-1 - Ketchum will work to retain and help expand existing independent small local businesses and corporations.** Policy E-1(a) - Support for Local, Independent Businesses Policy E-1(b) - Downtown as a Major Community Asset and Tourism Attraction • The new commercial parking ratios facilitate redevelopment of existing properties and infill development because the parking requirements are less than required by the existing ordinance. The options for parking reductions through Shared Parking and Transportation Demand Management give further flexibility to local and independent business development and the ability of downtown to serve as a community asset and attract tourism. **Goal H-1 - Ketchum will increase its supply of homes, including rental and special-needs housing for low-, moderate and median-income** Policy H-1.2 - Local Solutions to Attainable Housing Policy H-3.1 - Mixture of Housing Types in New Development • The new residential parking ratios are one example of the city encouraging a mixture of housing types utilizing a regulatory framework to incentive community and affordable housing. **Goal M-2 - Promote and encourage an effective and efficient transit system that is competitive with the single occupant vehicle in service, affordability, convenience, and accessibility within Ketchum and as a link to other communities in the Wood River Valley.** Policy M-2.4 - Integrated Transit Stops Policy M-2.5 - Pedestrian and Bicycle Improvements Linked to Transit **Goal M-6 - Enhance bicycling connectivity and comfort.** Policy M-6.3 - Bicycle Parking Facilities **Goal M-8 The efficiency of the transportation system will be improved by using travel demand management (TDM) techniques.** Policy M-8.1 Incentives to Improve System Efficiency Policy M-8.2 - Support for Travel Demand Management Policy M-8.3 - Shared Parking • All of the above policies are met by provisions in the proposed ordinance such as required on-site bicycle parking, Shared Parking plans and Transportation Demand Management plans.

STAFF RECOMMENDATION

Staff recommends approval of the proposed text amendments to Chapter 17.125, Off Street Parking and Loading.

OPTIONAL MOTIONS

1. "I MOVE TO RECOMMEND APPROVAL OF THE PROPOSED AMENDMENTS TO CHAPTER 17.125, FINDING THE AMENDMENTS IN COMPLIANCE WITH THE COMPREHENSIVE PLAN, THE ZONING ORDINANCE, AND THE SUBDIVISION ORDINANCE."

2. "I MOVE TO RECOMMEND DENIAL OF THE PROPOSED AMENDMENTS TO CHAPTER 17.125, FINDING THE AMENDMENT _____"

Attention: P&Z Planners October 18, 2016

The Parking Core Meeting

I am a long term Ketchum resident living in the center of downtown Ketchum, who has been an active participant in following the city's actions and non actions of dealing with the basic growing parking concerns in the City of Ketchum for decades.

A survey was mailed to Ketchum residents earlier regarding a parking code change in the city core, with a disappointingly small response and survey results were translated into possible parking code change and discussed. Congratulations on the work you have done to put it all in perspective. As written it appeared to me that it is overly limited to a small business core of Ketchum when so many residents of Ketchum are increasingly affected by auto traffic and parking .

The hired consultant presented the several month research results of her survey , including how several other western ski resorts compared with Ketchum's management of parking spaces. Having visited the mentioned resorts in the past I question whether her comparisons with Ketchum's unique parking problems are totally accurate.

Employee parking has been a growing city problem, basically since so many employees (as well as entrepreneurs) do not live the city of Ketchum and are used to having their vehicles parked close to their work all day, thus using up otherwise available tourist parking spaces. Several times during the overall discussion attendees communicated the need for a large parking area to be developed near this core area being discussed .

A basic question arose as to where tourists will park as they enter Ketchum by auto on their arrival in town both winter **or** summer.

Conclusion

Regarding the current Ketchum discussion about city parking code changes: P & Z Commissioner Jeff Lamoureux was recently quoted in the Mountain Express as saying: **"[he] wanted to see a broader look at parking throughout downtown Ketchum that would consider employee parking, downtown residences and other restrictions."**

I I applaud Jeff Lamoureux on his forward thinking in being more inclusive in an effective parking study that the city has neglected for years… especially including pedestrians and accompanying safety problems.

Respectfully,

Mary Jane Griffith Conger

cc: Mayor Nina Jonas
Jeff Lamoureux

From: Cindy Forgeon <cforg@cox.net>
Date: September 12, 2016 at 1:11:19 PM MDT
To: Cindy Forgeon <cforg@cox.net>
Subject: In regards to downtown parking and P&Z meeting

Sept 12,2016

Dear Micah,City Planning staff,P&Z,City Council members,
I am sorry I have not been able to be at the parking workshops meetings as I seem to have had to be out of town when they have occurred ,such as today.
Being that we own and operate a downtown Ketchum property and business with the Best Western Plus Kentwood Lodge in the core,we know how much parking is a precious commodity in this area, first hand. When we built our business we were required to have 13 ft. sidewalks,and parking for each room. This has gone by the wayside these current years and for the new developments. We are able to accommodate our guests but our frustration is that many of the businesses or during City functions or festivals in town,there isn't enough parking for what is produced by participants or patrons of them.
Specifically in the dealing with Nex State Theatre and in their renting it out,and in the functions it is used for,many of their patrons,or participants will park in our parking area knowingly so trespassing. We will also have them running around at our business,car traffic area,loitering after a function to figure out where to next, as in a Community school prom evening,and loitering out below our guest rooms disturbing guests as well.
From what we are hearing ,they want to replace the building and develop a new one which is great, but we would also like to see some pro activity in their planning in this regard and to many other issues,such as noise they produce, in which we contend with,as being practically sharing the same wall between us.
There are those who come for an evening to the restaurants near us,Whiskey Jacques evenings,concerts,antique fairs who also park in our lot. We are not the publics parking lot,and it's stressed even more so during our heavier months of occupancies. These occurrences displace our guests,and it's frustrating to deal with! Especially during the winter season when there is no late night parking on the city streets. Many areas are not clearly marked,or they they don't see the signs coming in to Ketchum,especially if they are covered in snow,which many times they have been by the snow plows,for new guests to the area. If they have been displaced from our parking area because these others who are trespassing even stay after a function and go further for dinner,a night out,and don't come back till late and the guest is displaced and may obtain a parking ticket or be towed,its very upsetting to them and us. They feel it becomes our issue and we let them know every where we can if possible about it,and they are still they are upset.
It is an abrupt way to say welcome to Ketchum.
Parking on the street has become trying as well,with so many businesses trying to share the same curbside spaces. They may have been counted for a specific business timing but overflow from one business becomes another's challenge. Then you throw in the over abundant amount of construction employees and road closed areas on top of it,that we also are contending with in our area. The city parking close to our area behind Nourish Me, Sushi on 2nd area is small in comparison to the amount of business it's used for. It seems to be used by a lot of employees in the city, so where is the area for the patrons to park? Even at the 511 building area it seems like there becomes very few parking spots available.

In the developers balking, I am glad to see many new and fresh ideas with possible solutions coming about to deal with this issue. It is an issue and very frustrating for our business to contend with, as we have for quite a while been trespassed on by others who do not.
Thank you very much for your consideration of our concerns,
Cindy Forgeon
BWP Kentwood Lodge

From: Robert Crosby <sbrgad1@cox.net>
Date: September 9, 2016 at 4:44:16 PM MDT
To: <scook@ketchumidaho.org>, <bmizell@ketchumidaho.org>, <jlamoureux@ketchumidaho.org>, <esmith@ketchumidaho.org>
Cc: 'Micah Austin' <maustin@ketchumidaho.org>, <participate@ketchumidaho.org>
Subject: analysis of recommended parking code changes

P&Z Commissioners:
We believe the excessive allocation of a greater parking requirement (and therefore development cost) on already financially infeasible development scenarios in Ketchum is not only counter to the City's goal of reducing dependence on parking downtown, but will have the additional consequences of reduced construction of community housing, fewer jobs, lower investment in Ketchum, significant harm to our economy and reduced public revenue due to lower property taxes, since all of these benefits are directly linked to new development activity. Please find attached our analysis of the potential costs of the recommended changes on typical development scenarios in Ketchum's CC zone. We trust you will have time to discuss these additional costs and our concerns during Monday's workshop on this topic.

Thank you in advance for your consideration of our analysis and the negative consequences to our community that it highlights. I am available 24/7 any day including over the weekend to discuss this with you if you have any questions. Please feel free to call on 721-8353.
Sincerely,
Bob

Robert W. Crosby
Government Affairs Director
Sun Valley Board of REALTORS
208-721-8353
sbrgad1@cox.net

Existing Ketchum Parking Ordinance Compared to Staff Recommendations: CC Zone

Summary

Scenarios	Existing Parking Code				Proposed Parking Code			
	5,500 SF CC Zone Corner Lot		11,000 SF CC Zone Corner Lot		5,500 SF CC Zone Corner Lot		11,000 SF CC Zone Corner Lot	
	Mixed Use	All Residential	Mixed Use	All Residential	Mixed Use	All Residential	Mixed Use	All Residential
Cash in Lieu Payment Required	$190,000	$0	$76,000	$0	$304,000	$494,000	$304,000	$760,000
Additional Cash In Lieu Cost of Proposed Changes over Existing Code					$114,000	$494,000	$228,000	$760,000

NOTE: For units in excess of 750 gross SF the P&Z staff report states that "more parking will be required based on the size of the residential units". In the public workshop the Director of Planning and Building stated that for these units a minimum of 2 parking stalls or 1 per bedroom, whichever is greater, would be required. This statement is the basis for this analysis.

Concerns Regarding Proposed Parking Code Changes:

1. For developments with residential units larger than 750 GSF for which parking requirements have been hugely increased under the new proposals, it is physically impossible to reasonably fit the number of parking stalls required under the new proposals on a development site, making the proposed changes work more like a parking/development tax than good faith planning. This is especially true when considering that the City's stated goal is otherwise to reduce parking.
2. Many undeveloped and or underdeveloped sites within the CC zone, especially those sites along the north and west edges of the zone, are not suitable for restaurant or retail development since they are far from the established dining and entertainment core of the City. These sites are most suitable for residential development however and penalizing them through hugely increasing the required parking such that they will likely never be developed would seem to be counterproductive to the best interests of our community. There will be less community housing built, fewer jobs, lower investment in Ketchum, significant harm to our economy and reduced public revenue due to lower property taxes since all of these benefits are directly linked to new development activity.
3. The existing code provision allowing an on-street credit of 4 stalls for every 4 stalls provided on-site, per 5,500 SF of site area, would be removed for all residential space under staffs' proposal. This immediately adds $152,000 per 5,500 SF of site area of additional cash in lieu cost to every residential development (even those the City is trying to encourage) compared to the existing code.
4. Transportation Demand Measures only apply to commercial space, therefore providing no benefit to residential developments, and conversely the City receives none of the benefits of TDMs with residential development projects. In mixed use scenarios commercial space is either exempt from parking requirements or the on-street credits provide sufficient credit such that there is no need to use the TDM.
5. Submitting a Parking Demand Analysis to a planning staff that has clearly exhibited its preference to penalize development of residential units over 750 SF cannot be expected to result in reduced parking for that type of development, so its inclusion appears to be an obfuscation for residential or mixed use developers.

Existing Ketchum Parking Ordinance Compared to Staff Recommendations: CC Zone

Assumptions

Scenarios		5,500 SF CC Zone Corner Lot		11,000 SF CC Zone Corner Lot		Comments
		Mixed Use	All Residential	Mixed Use	All Residential	Ground Floor Assumptions
Ground Floor Commercial		yes	no	yes	no	5' setback to streets, 3' setback to alley
Underground Parking		no	no	yes	yes	for 5,500: 4 on site to obtain 4 off-site credit
FAR allowed	of right	1.00	1.00	1.00	1.00	162 SF (9'x18') per stall + 5' w for ADA
	with CH bonus	2.25	2.25	2.25	2.25	ramp = 20' x 45' = 900 SF
Site Area SF		5,500	5,500	11,000	11,000	no snow or loading allowance
Maximum Buildable SF		12,375	12,375	24,750	24,750	1/2 exempt commercial use under new rec's
Maximum Ground Floor Area SF		3,862	3,862			after set backs and on site parking @ 4/5,500 SF
				8,160	8,160	after set backs, lobby etc. and parking ramp (45 x 20)
Residential Area		8,513	12,375	16,590	24,750	
Residential Configuration	# units	4	6	8	12	
	SF/unit	2,128	2,063	2,074	2,063	
	bedrooms/unit	3	3	3	3	
	total bedrooms	12	17	24	36	subtract 1 bdrm from "all res" 5,500 option for grnd flr config
Capacity - 1 floor underground parking		n/a	n/a	16	16	average of 3 existing bldgs: Gail Severn Bldg: 14
						Mtn West Bank Bldg: 18
						Evergreen: 23/16,500 SF lot

Parking Code Requirements	Existing Code	Proposed	
Commercial Space	2/1,000 GSF	1/1,000 GSF	
Exempt (retail, restaurant)		0	
Residential Space	1/1,500 NSF	1/unit<750 GSF; 2 or 1/bdrm units > 750 GSF	
Off Site Credit per 4 stalls on site	4	4	per 5,500 SF lot: for commercial use only in Proposed
		0	none for for residential use in Proposed
In Lieu Parking Payment per stall	$38,000	$38,000	as designated by City of Ketchum

Required Stalls

	Existing Parking Code				Proposed Parking Code			
	5,500 SF CC Zone Corner Lot		11,000 SF CC Zone Corner Lot***		5,500 SF CC Zone Corner Lot		11,000 SF CC Zone Corner Lot***	
	Mixed Use	All Residential	Mixed Use	All Residential	Mixed Use	All Residential	Mixed Use	All Residential
Commercial*	7.72	0	16.32	0	1.93	0	4.08	0
Residential	4.82	7.01	9.40	14.03	12.00	17.00	24.00	36.00
Total Required	13	7	26	14	14	17	28	36
Less: Off-Site Credit**	-4	-4	-8	-8	-2	0	-4	0
Less: On site or garage capacity	-4	-4	-16	-16	-4	-4	-16	-16
Deficiency (Surplus) stalls	5	(1)	2	(10)	8	13	8	20
Cash in Lieu Payment Required	**$190,000**	**$0**	**$76,000**	**$0**	**$304,000**	**$494,000**	**$304,000**	**$760,000**

* assumes 1/2 exempt uses for Proposed Parking Code

** assumes on-site residential stalls will trigger off-site commercial credit for Proposed Parking Code

*** in these scenarios the additional cost to construct underground parking = approximately $38,500 / stall = $626,000 PLUS cash in lieu

Carol Klick Bookkeeping Services LLC
P.O. Box 1151
Ketchum, ID 83340

August 22, 2016

City of Ketchum
Planning and Building
P.O. Box 2315
Ketchum, ID 83340

RE: Parking Ordinance Workshop

Dear City of Ketchum:

I operate at 360 East Ave. I do not have a designated parking space, and therefore, need day long parking available near my office. Clients come to my business and require less than 2 hour parking and at times require longer than 2 hour parking.

Current parking available is not adequate for the needs of my small business. During the summer and winter high season, parking is not easy for me or them. I get lots of complaints for them, and I have difficulty finding parking for the day. Farmers Market days is one of the worst days.

I think it is important to provide more parking both under 2 hours and over 2 hours in the core of Ketchum. Parking near my office is essential to the operation of my business and essential for my clients to be able to park near my business.

Thank you for listening and I hope you decide to increase parking in the Ketchum core.

Sincerely,

Carol Klick

From: David Patrie [mailto:david.patrie@bcoha.org]
Sent: Thursday, June 30, 2016 3:36 PM
To: Micah Austin; Brittany Skelton
Cc: Jason Miller; Wendy Crosby
Subject: Parking Workshop

Hi Micah & Britany - I wanted to say thanks for hosting the parking workshop today. I think it was quite useful. I am sending the comments I made on behalf of MRTA in writing in an effort to make it easier for you to compile everything you heard today. In addition here is the link to the parking study I referenced in my comments. http://www.citylab.com/cityfixer/2015/05/how-parking-keeps-your-rent-too-damn-high-in-2-charts/392894/.

- We think the city should think about parking requirements in terms of maximums, not minimums. If a developer can make the case that they don't need any spots, so be it. This is the model that cities like Portland and Seattle are now following. The more we can limit spaces in downtown, whether on private property or in the city right of way, the better. The "build it and they will come" mantra is more true for parking than it is for anything else. We do not believe Ketchum can realize its goal of becoming more transit oriented if there is an oversupply of parking in the core.
- We believe the city should give credit for developer TDM efforts that include bus passes, development of bus stop infrastructure as part of a project, and subsidization of increased bus service (e.g. Sun Valley subsidizing Silver and Bronze Routes). These should be added to the list of items in the attached memo under item 5.
- We would like to see the bike parking standards in item 6 decoupled from the vehicle parking and based on the occupancy/usage estimate of the development. If the city still wants to make this linkage, we think a development should be required to provide bike parking at a higher rate than 25% of vehicle spaces. Maybe 50%?
- A developer who wants to do a joint development project with Mountain Rides for a downtown transportation center should be given some sort of extra incentive – not sure what this would look like, but if a developer was willing to give up land for Mountain Rides for a project like a transportation center, they might be able to ask for a complete exemption from the parking requirements.
- We think overnight, on-street parking needs to be part of the overall parking discussion and should not be left off the table. While we understand this adds costs and snow removal challenges, there are many cities in snow country that manage snow removal and overnight parking. The ability for people to leave a car in a designated area without fear of ticketing and towing will encourage greater use of public transportation.

While these comments are made on behalf of Mt. Rides, they also support the goals and mission of the Blaine County Housing Authority by setting up an environment that will produce more housing in and around the city core.

David Patrie
Board Chair
Mountain Rides

David Patrie
Executive Director
Blaine County Housing Authority

200 West River Street, Suite 103
P.O. Box 4045
Ketchum, ID 83340
ph: (208) 788-6102
fax: (208) 788-6136

Keep the Valley Vibrant by Housing Locally

Please consider the environment before printing this e-mail.

Brittany Skelton

From: Steve Kearns <steve@kmvbuilders.com>
Sent: Thursday, March 24, 2016 9:58 AM
To: Morgan Brim
Cc: John Montoya; Jack Smith; Jeff Williams; Michael Doty (external); Paul Conrad; Harry Griffith; robert crosby; Doug Brown
Subject: Parking

Follow Up Flag: Follow up
Flag Status: Flagged

Morgan,

I would like to comment on the ADA portion of the parking ordinance that is currently under review.

The current ordinance requires the development of a 5,500 sq ft lot to provide one on-site, ADA van-accessible parking space. This effectively takes up two normal spaces for a space that will very seldom be used. In our 15 years at the Camas Building in Ketchum, we have never had anyone make use of our handicap space. Developing under the current ordinance means two vehicles will be parked on the street instead of on-site, and that is just for one lot. If four lots per block were developed, you would have 4 ADA spots on private property and potentially 8 vehicles on the street. That is bad for the lot owners and bad for the city.

I think a better solution is provided by what the P&Z allowed for the Kith and Kin development on Washington Avenue - an on-street ADA van-accessible space. If you look at the number of ADA spaces prescribed in the Americans With Disabilities Act, Chapter 2, 208.2 Minimum Number, it specifies 1 per 25 total parking spaces. Granted, this specification is intended for parking facilities or parking lots, but I think it's fair to use this requirement and apply it in our case to a city block. In the example above, 4 developed city lots would contain 5-6 parking spaces, or 20-24 per block. Given the ADA ratio, 1 on-street, van-accessible space per block would be sufficient. Appropriate striping and curb ramps should be required.

Changing the ordinance like this would take 8 vehicles off public street parking and put them on private property per block and still provide sufficient ADA access. I am not suggesting this solution for a large development with a large parking lot or facility, but it makes sense for the many potentially developable small lots in Ketchum. While we are all in favor of providing appropriate ADA access, the current ordinance is too onerous for most developments of small lots.

Please forward this comment to the appropriate staff and commission members. Thank you to everyone for your consideration.

Steve Kearns

Kearns, McGinnis & Vandenberg, Inc.
PO Box 3233 | 200 West River Street
Ketchum, ID 83340
208-726-4843 Tel
208-726-5863 Fax
208-720-0843 Cell

Chapter 17.125

OFF STREET PARKING AND LOADING

17.125.010: PURPOSE AND INTENT:

Standards for off street parking and loading spaces are necessary to facilitate access to specific land uses and to ensure the efficient use of land. The standards are intended to support the goals of the Comprehensive Plan and in recognition of Ketchum as a geographically compact and historic mountain resort community sustained by both the full time resident population and the influx of seasonal residents, visitors, and workforce who travel within the community. The regulations of this chapter have been established to:

A. Ensure the public health, safety, and welfare;
B. Facilitate development and redevelopment by providing clearly defined minimum standards;
C. Encourage a range of transportation alternatives designed for residents, visitors, and the workforce to travel safely and easily to their destinations;
D. Promote Travel Demand Management techniques to improve the efficiency of the transportation system;
E. Maximize the efficient use of existing surface parking lots by permitting Shared Parking.
F. Provide safe, secure, and conveniently located bicycle parking facilities;
G. Enhance pedestrian connectivity and comfort by limiting surface parking;
H. Incentivize development and redevelopment, which will create more lively and activated commercial environments;
I. Facilitate community design supported by multi-modal transportation in order to lessen dependence on vehicular transportation alone.

17.125.020: GENERAL:

A. Applicability: Off-street vehicle and bicycle parking requirements of this Chapter apply to:

1. Any new development and to any new established uses.
2. When an existing structure or use is expanded or enlarged. Additional off street parking spaces shall be required only to serve the enlarged or expanded area, not the entire building or use.
3. Any change of use or change of operation that would result in a requirement for more parking than the existing use. Additional parking shall be required only in proportion to the extent of the change, not for the entire building or use.

B. Delivery and Loading:
Areas for deliveries and loading shall be required to ensure that loading and deliveries do not constrain fire access, street safety, or use public streets for deliveries.

17.125.030: OFF STREET VEHICLE PARKING SPACE:

A. Minimum Parking Space: The minimum parking space and aisle dimensional requirements are as follows:

Angle	Width (Feet)	Length (Feet)	Aisle Width (Feet)
90 degrees	9 .0	18	24
60 degrees	9 .0	21	18
45 degrees	9 .0	19 .8	15
Parallel	8 .0	23	-
ADA spaces shall meet the dimensional requirements as outlined in the current ADA standards for accessible design.			

B. Compact Vehicle Spaces:
    1. Commercial uses and lodging establishments with a minimum of ten (10) or more spaces on the property may have up to ten percent (10%) of the required spaces marked for compact vehicles.
    2. Compact vehicle spaces must be a minimum of eight feet (8') wide and sixteen feet (16') long with aisle widths in accordance with the table above.
    3. These spaces shall be designed, designated, marked and enforced as compact spaces.
C. Area Unobstructed: All area counted as off street parking space shall be unobstructed and kept clear of snow and free of other uses.
D. Access to Streets: Unobstructed access to and from a street shall be provided for all off street parking spaces.
E. Location: New surface parking lots are prohibited in the CC zone. In all other zones surface parking lots shall be located in the rear of a building or lot.
F. Surfacing Material: Surface parking spaces shall be constructed with asphalt or cement concrete. Compacted gravel or other dustless material may be used for surfacing only upon approval by the Administrator.
G. Lighting and Screening:
    1. Lighting used to illuminate off street parking areas shall be directed away from residential properties.
    2. Parking facilities and all off street and on-site parking spaces shall be effectively screened on any side adjoining a residential zone by a wall, fence or hedge to a height of six feet (6'), except for the front yard setback area of the adjoining residential property, in which case, the maximum height shall be three feet (3').

3. All parking and service areas that are adjacent to a street shall be buffered from public views by a combination of landscaping and fences/walls. Such improvements will be for the purpose of beautification and to limit light and glare from vehicle headlights to nearby properties. For safety purposes, views of the parking and service areas from the sidewalk and street shall not be obscured.

H. Street Frontage: A maximum of thirty five percent (35%) of the linear footage of any street frontage may be devoted to access off street parking. Corner lots that front two (2) or more streets may select either or both streets as access but shall still not devote more than thirty five percent (35%) of the total linear footage of street frontage to access off street parking.

I. Alley Access:
   1. Off street parking spaces may be located directly off the alley if the width of the alley can adequately accommodate ingress and egress to the parking spaces.
   2. No parking space shall project into an alley, sidewalk, or street.
   3. All alleys used as access to loading areas and/or to an off street parking space or spaces shall be surfaced with asphalt or cement concrete. Compacted gravel or other dustless material may be used for surfacing only upon approval by the Administrator.

J. Condition of Parking Lots: The owner or manager of the property shall maintain parking facilities and all off street and on-site parking spaces so that they are in good, safe and usable condition and free of public nuisances such as trash and weeds.

K. On Site Drainage Facilities: All parking lots shall be designed with adequate on site drainage facilities to prevent the drainage of water onto adjacent properties or walkways or into the public right of way.

L. Snow: All surface parking lots shall be designed with either an underground heating system to facilitate the removal of snow or a storage area for plowed snow. The storage area shall be one hundred fifty (150) square feet for every fifty five feet (55') of linear lot width of the surface parking lot. (Ord. 1135, 2015)

17.125.040: OFF STREET VEHICLE PARKING AND LOADINGREQUIREMENTS:

A. The following rules apply when computing off street parking and loading requirements:

   1. Multiple Uses: Lots containing more than one use shall provide parking and loading in an amount equal to the total of the requirements for all uses, unless a reduction is approved through a shared parking plan in compliance with section 17.125.080 of this chapter.
   2. Fractions: When measurements of the number of required spaces result in fractions, any fraction of one-half (1/2) or less shall be disregarded and any fraction of more than one-half (1/2) shall be rounded upward to the next highest whole number.
   3. Area Measurements: Unless otherwise specifically noted, all square footage based parking and loading standards are to be computed on the basis of gross floor area (GFA).
   4. Employee Based Standards: For the purpose of computing parking requirements based on employees the calculation shall be based on the largest number of persons working on any single shift.
   5. Nonconforming Due To Lack of Parking and Loading: No lawfully existing building shall be deemed to be a nonconforming building solely because of lack of parking and loading spaces; provided, that space being used for off street parking or loading in connection with any such building at the effective date of this ordinance shall not be further reduced in area or capacity.

6. Off Street Parking Requirements: Off street parking requirements apply to uses in all districts, unless otherwise specified.

B. Off Street Parking Matrix

Use Category	**Parking Spaces Required**
Residential (multiple-family)	Units 1,000 gross square feet or less: 1 parking space per dwelling unit Units over 1,000 gross square feet: 2 parking spaces per dwelling unit
Residential (one family)	2.0 parking spaces per dwelling unit
Non-residential	1 parking space per 1,000 gross square feet[1]

[1.] Refer to definition Floor Area, Gross and with the additional exclusion of common and public areas.

C. Exemptions:
   1. The following uses meeting the definitions found in 17.08.020 are exempt from providing off street parking:
      a. Community Housing;
      b. Food Service;
      c. Retail Trade; and
      d. Assembly existing at the time the ordinance is passed [insert date].
   2. All non-residential uses within 1,000 feet of a structured parking facility, with the distance calculated by measuring the sidewalk from the primary entrance of the use(s) to the location of the structured parking facility.
   3. Other uses may be exempted by the Administrator upon completion of a Parking Demand Analysis demonstrating the actual demands of the project are less than the minimum requirements of the code.

D. Off Street Vehicle Loading Areas:
   In the LI-1, LI-2, and LI-3 districts, off street loading areas shall be required as an accessory use for new construction or additions involving an increase in gross floor area as follows:
   1. Number of Spaces:
      a. One (1) off street loading space is required for gross floor area in excess of two thousand (2,000) square feet.
      b. No loading space shall occupy any part of a public street, alley, driveway, or sidewalk. Where practicable to do so, an alley may be used in lieu of the requirement for off street loading space(s) if permission is granted by the Administrator.
   2. Dimensions: An off street loading space shall be a minimum of 180 square feet with no length of the space being less than ten feet (10').

17.125.050: COMMUNITY CORE DISTRICT OFF STREET PARKING REQUIREMENTS:

A. Purpose: The parking requirements listed in this section are specific to the Community Core district and are in addition to requirements listed in this Chapter and the off street parking matrix, section 17.125.040.B. of this chapter.
B. Minimum Requirements: The minimum number of parking spaces provided on site shall be four (4) spaces per five thousand five hundred (5,500) square feet of lot area, unless fewer spaces are required by the off street parking matrix, section 17.125.050 of this Chapter.

C. On Street Parking: In a circumstance where the off street parking matrix results in a requirement of more than four (4) parking spaces, four (4) on street parking spaces per five thousand five hundred (5,500) square feet of lot area may be credited toward the required parking demand after the required four (4) space minimum on site is satisfied.
D. Shared Parking Plan: A reduction in off street parking may be obtained through the provision of an approved Shared Parking Plan in compliance with subsection 17.125.080 of this chapter.
E. Accessible Parking: For all commercial and mixed use projects, and for any residential projects with more than four (4) units, at least one accessible parking space shall be provided on site. All accessible parking space requirements of the current building code as adopted by the city shall be met.
F. In Lieu Parking Fees: Except as provided in sections 17.125.080 and 17.125.090 of this chapter, one hundred percent (100%) of the parking demand unmet by off street parking spaces may be met with a payment in lieu. The in lieu fee amount shall be determined annually by the city council based on the cost of land, the construction cost of structured parking above, on or below ground, the amount of land needed for each parking space and access, landscape areas and other amenities, the cost of physical improvements to the property including grading, compaction, drainage, asphalt, concrete, landscaping, lighting, striping and other amenities as may be considered appropriate.
    1. Payment of in lieu fees must be made to the city at the time of issuance of a building permit.
    2. All in lieu funds received under subsection D of this section shall be placed into a special and separate transportation improvement and acquisition fund to be used primarily for transit improvements and parking management programs, such as paid parking, that address the demand for physical parking on site in the CC district and secondarily for the purchase, construction and improvement of public parking facilities.

17.125.060: BICYCLE PARKING:

A. Purpose: To further the intent of this chapter, including the purposes of encouraging a range of transportation alternatives, facilitating community design supported by multi-modal transportation, promoting Travel Demand Management techniques and providing safe, secure and conveniently located bicycle parking facilities, the following bicycle parking requirements have been established.
B. Spaces Required: All uses, other than one family dwellings, are required to provide one (1) bicycle rack, able to accommodate at least two (2) bicycles, for every four (4) parking spaces required by the proposed use. At a minimum, one (1) bicycle parking rack shall be required per development.
C. Fractions: When measurements of the number of required spaces result in fractions, any fraction equal to or greater than (1/2) shall be rounded up to the next highest whole number.
D. Location: Bicycle parking space(s) shall be clearly visible from the building entrance they serve and located no more than fifty feet (50') from the entrance or as close as the nearest non-ADA parking space, whichever is closest. Bicycle racks shall be located to achieve unobstructed access from the public right-of-way and not in areas requiring access via stairways or other major obstacles. In cases where bicycle parking spaces are not visible from the primary street, signage shall be used to direct cyclists safely to bicycle parking areas.
E. ADA: Bicycle parking space facilities shall not interfere with pedestrian circulation, accessible paths of travel or accessible parking as required by the Americans with Disabilities Act of 1990.
F. Design: Bicycle parking spaces must contain a stationary device or devices, secured to the ground, to which bicycles can be locked. Each bicycle parking space must be accessible without moving another bicycle.

G. Surfaces: Bicycle racks must be located on paved or pervious, dust free surface. Surfaces cannot be gravel, landscape stone or wood chips.

17.125.070: PARKING DEMAND ANALYSIS:

A. Purpose: A Parking Demand Analysis is a study indicating that the requirements of this chapter regarding the number of off-street vehicle parking spaces required are not applicable to the proposed project because the project contains a unique mix of uses, the operational method is atypical, the use is not listed, or location or contextual factors affect the amount of off-street parking spaces required.
B. Eligibility: A Parking Demand Analysis may be submitted by an applicant for any project in any zone.
C. Analysis required: A Parking Demand Analysis is required for any project requesting a reduction in parking through a Shared Parking Plan or a Transportation Demand Management Plan. A Parking Demand Analysis may otherwise be required by the Administrator.
D. Contents:
A Parking Demand Analysis shall be prepared in the following manner to demonstrate that the requirements of section 17.125.040.B, Off Street Parking Matrix, are not applicable:
    1. Preparation: The Parking Demand Analysis shall be prepared by a registered professional engineer licensed in the State of Idaho.
    2. Project Description: A project description shall be included. The project description shall include, but is not limited to:
        a. Project location context map;
        b. Gross and net square footage of existing and proposed uses that will be part of the new development under review; and
        c. Table containing off-street parking and loading requirements for each use as required by this Chapter;
    3. Project Analysis: A narrative analysis considering the following minimum factors shall be submitted:
        a. Discussion of the project's mix of uses, operational method, unique nature of uses, and location, contextual, or other factors affecting the amount of off-street parking and loading spaces required;
        b. Existing site plan; and
        c. Proposed site plan;
        d. Discussion of site specific parking needs.
    4. Remedy: A narrative describing proposed measures to be taken to reconcile the project's parking demand with off-street parking and loading required for the project.
        a. A Shared Parking Plan and/or a Transportation Demand Management Plan may serve as the remedy in part or in full.
    5. Additional Considerations: The city may require additional information as part of the Parking Demand Analysis.
E. Method of Approval: The Administrator shall review the Parking Demand Analysis and/or Transportation Demand Management Plan and upon finding that the analysis uses the appropriate methodology and includes an acceptable and reasonable remedy which can be implemented the Analysis shall be approved or approved with conditions. Remedies contained in the Analysis are binding and may only be modified through a written finding made by the Administrator.

17.125.080: SHARED PARKING REDUCTION:

A. Purpose: Dedicated parking areas for individual uses, especially when provided in new developments, can result in less efficient land usage, lower floor area ratios, and more significant impacts and implications for multi-modal transportation and the quality of the pedestrian environment. Shared Parking is a strategy that can reduce the amount of land devoted to parking while providing a sufficient number of spaces and encouraging development that is compact, walkable, bikeable, and conducive to transit.

B. Shared Parking Reduction: A shared parking reduction may be allowed by conditional use permit in all zoning districts as follows:

1. A Shared Parking Plan shall be submitted for review and is subject to approval by the Administrator.
2. The Plan shall, at minimum, identify or contain:
    a. A Parking Demand Analysis in accordance with 17.125.070;
    b.The hours of peak parking demand for each use;
    c. All locations of parking spaces on private property utilized through Shared Parking and identified on a location context map;
    d. All public parking that can be accessed within a 1,000 foot walk as measured along sidewalk connecting to the site of the subject uses.
    e. The plan shall include an agreement between property owners for sharing common parking on private property. However, in no case will the City manage shared parking agreements.
3. Shared parking spaces may be provided in areas designed to serve jointly two (2) or more buildings or users.
4. All Shared Parking shall be located no less than three hundred feet (300') from the uses utilizing the Shared Parking, as determined by measuring along existing sidewalk or sidewalk that shall be constructed as a condition of approving the shared parking reduction from the primary entrance of the use(s) to the location of Shared Parking spaces.
5. The total number of off-street parking spaces shall not be less than that required by this chapter for the total combined number of buildings or uses, unless a reduction is approved through a Shared Parking Plan, or otherwise specified.
6. A reduction to parking requirements for individual uses may be made after considering the following standards and criteria:
    a. The hour(s) of peak parking demand, with peak demand being different;
    b. The operating hours of each use, with operating hours being staggered; and
    c. There is existing on-street parking available for public use.
7. Employee parking is required at the rate of ten percent (10%) of total required spaces after reductions are provided.

17.125.090: PARKING REDUCTION THROUGH TRANSPORTATION DEMAND MANAGEMENT:

A. Purpose: For projects with a FAR greater than 0.5 a Transportation Demand Management plan may be provided in order to demonstrate that alternative strategies will be utilized to offset the demand for parking. A reduction of up to 25% of on-site vehicle parking requirements may be approved by the Administrator. A Parking Demand Analysis must be submitted as part of the TDM plan.
B. Transportation Demand Management plans shall consider the following strategies, including, but not limited to:
    1. A Shared Parking Plan subject to the standards found in 17.125.070;
    2. Covered bicycle parking;
        a. Covered bicycle parking can be provided inside buildings, under roof overhangs or awnings, in bicycle lockers, or within or under other structures. When not located within a building or a locker the cover must be permanent, designed to protect the bicycle from rainfall, and at least 7 feet above the floor or ground.
        b. Secure bicycle parking.
    3. Secure bicycle parking can be in a locked room or area enclosed by a locked gate or fence, in an area that is monitored by a security camera, or in an area that is visible from employee work areas.
    4. On-site locker room and shower facilities.
    5. Provision of a public transit stop or demonstration of proximate access to an existing transit stop.
    6. Demonstration of proximate access, within 1,000 feet, to the Wood River Trail.
    7. Construction of a “spur” connecting the lot to the Wood River Trail.
    8. Reserved preferential parking spaces for high occupancy vehicles.
    9. Reserved preferential parking spaces for hybrid, electric, or alternative fuel vehicles.
    10. Installation of on-site electric vehicle charging stations.
    11. Publicly accessible permanent display area for information on TDM strategies and options for alternative transportation modes.
    12. Shuttle service.
    13. Contribution to public transit or alternative modes of transportation fund(s).
    14. Employer programs such as:
        a. Car/van pool coordination and incentive programs;
        b. Shuttle program;
        c. Guaranteed emergency ride home program; and
        d. Public transit passes.

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Chapter 17.125

OFF STREET PARKING AND LOADING

17.125.010: PURPOSE AND INTENT:

Standards for off street parking and loading spaces are necessary to facilitate access to specific land uses and to ensure the efficient use of land. The standards are intended to support the goals of the Comprehensive Plan and in recognition of Ketchum as a geographically compact and historic mountain resort community sustained by both the full time resident population and the influx of seasonal residents, visitors, and workforce who travel within the community. The regulations of this chapter have been established to:
~~The regulations of this chapter are intended to promote the efficient use of land by establishing minimum parking and loading requirements for specific land use categories. (Ord. 1135, 2015)~~

A. Ensure the public health, safety, and welfare;
B. Facilitate development and redevelopment by providing clearly defined minimum standards;
C. Encourage a range of transportation alternatives designed for residents, visitors, and the workforce to travel safely and easily to their destinations;
D. Promote Travel Demand Management techniques to improve the efficiency of the transportation system;
E. Maximize the efficient use of existing surface parking lots by permitting Shared Parking.
F. Provide safe, secure, and conveniently located bicycle parking facilities;
G. Enhance pedestrian connectivity and comfort by limiting surface parking;
H. Incentivize development and redevelopment, which will create more lively and activated commercial environments;
I. Facilitate community design supported by multi-modal transportation in order to lessen dependence on vehicular transportation alone.

17.125.020: GENERAL:

A. Applicability: Off-street vehicle and bicycle parking requirements of this Chapter apply to:

1. ~~Off street parking standards of this chapter apply to~~ Any~~any~~ new development and to any new established uses.

2. ~~The off street parking standards of this chapter apply when~~ When an existing structure or use is expanded or enlarged. Additional off street parking spaces shall be required only to serve the enlarged or expanded area, not the entire building or use.
3. ~~Off street parking shall be required for any~~ Any change of use or change of operation that would result in a requirement for more parking than the existing use. Additional parking shall be required only in proportion to the extent of the change, not for the entire building or use.

B. Delivery and Loading:

Areas for deliveries and loading shall be required to ensure that loading and deliveries do not constrain fire access, street safety, or use public streets for deliveries. ~~(Ord. 1135, 2015)~~

17.125.030: OFF STREET VEHICLE PARKING SPACE:

A. Minimum Parking Space: ~~Every use shall provide at least the minimum number of parking spaces required for that use based on the formulas listed in section 17.125.050 of this chapter, unless otherwise provided for in this title. Further, the~~ The minimum parking space and aisle dimensional requirements ~~dimensions~~ are as follows:

Angle	Width (Feet)	Length (Feet)	Aisle Width (Feet)
90 degrees	9 .0	18	24
60 degrees	9 .0	21	18
45 degrees	9 .0	19 .8	15
Parallel	8 .0	23	-
ADA spaces shall meet the dimensional requirements as outlined in the current ADA standards for accessible design.			

B. Compact Vehicle Spaces:
1. Commercial uses and lodging establishments~~, hotels and lodges~~ with a minimum of ten (10) or more spaces on the property may have up to ten percent (10%) of the required spaces marked for compact vehicles.
2. Compact vehicle spaces must be a minimum of eight feet (8') wide and sixteen feet (16') long with aisle widths in accordance with the table above.
~~1.~~3. These spaces shall be designed, designated, marked and enforced as compact spaces.

~~B.~~C. Area Unobstructed: All area counted as off street parking space shall be unobstructed and kept clear of snow and free of other uses.

D. Access ~~To~~to Streets: Unobstructed access to and from a street shall be provided for all off street parking spaces.

~~C.~~E. Location: New surface parking lots are prohibited in the CC zone. In all other zones surface parking lots shall be located in the rear of a building or lot.

~~D.~~F. Surfacing Material: ~~All open off street~~ Surface parking spaces shall be constructed~~surfaced~~ with asphalt or cement concrete. Compacted gravel or other dustless material may be used for surfacing only upon approval by the ~~commission~~Administrator.

~~E. Shared Parking: Off street parking spaces may be provided in areas designed to serve jointly two (2) or more buildings or users; provided, that the total number of off street parking spaces shall not be less than that required by this title for the total combined number of buildings or uses, unless a reduction is approved through a shared parking plan in compliance with section 17.125.070 of this chapter, or otherwise specified.~~

G. Lighting and Screening:

1. Lighting used to illuminate off street parking areas shall be directed away from residential properties.~~,~~

2. Parking~~and such parking~~ ~~areas~~ facilities and all off street and on-site parking spaces shall be effectively screened on any side adjoining a residential zone by a wall, fence or hedge to a height of six feet (6'), except for the front yard setback area of the adjoining residential property, in which case, the maximum height shall be three feet (3').

~~1.~~3. All parking and service areas that are adjacent to a street shall be buffered from public views by a combination of landscaping and fences/walls. Such improvements will be for the purpose of beautification and to limit light and glare from vehicle headlights to nearby properties. For safety purposes, views of the parking and service areas from the sidewalk and street shall not be obscured.

~~F.~~H. Street Frontage: A maximum of thirty five percent (35%) of the linear footage of any street frontage may~~can~~ be devoted to access off street parking. Corner lots that front two (2) or more streets may select either or both streets as access but shall still not devote more than thirty five percent (35%) of the total linear footage of street frontage to access off street parking.

I. Alley Access:

1. Off street parking spaces may be located directly off the alley if the width of the alley can adequately accommodate ingress and egress to the parking spaces.

2. No parking space~~stall~~ shall project into an alley, sidewalk, or street.

~~1.~~3. All alleys used as access to loading areas and/or to an off street parking space or spaces shall be surfaced with asphalt or cement concrete. Compacted gravel or other dustless material may be used for surfacing only upon approval by ~~the~~ the Administrator~~commission~~.

~~G.~~J. Condition of~~Of~~ Parking Lots: The owner or manager of the property shall maintain parking facilities and all off street and on-site parking spaces ~~lots~~ so that they are in good, safe and usable condition and free of public nuisances such as trash and weeds.

~~H.~~K. On Site Drainage Facilities: All parking lots shall be designed with adequate on site drainage facilities to prevent the drainage of water onto adjacent properties or walkways or into the public right of way.

~~I. Buffers: All parking and service areas that are adjacent to a street shall be buffered from public views by a combination of landscaping and fences/walls. Such improvements will be for the purpose of beautification. For safety purposes, views of the parking and services areas from the sidewalk and street should not be obscured.~~

~~J.~~L. Snow: All surface parking lots shall be designed with either an underground heating system to facilitate the removal of snow or a storage area for plowed snow. The storage area shall be one hundred fifty (150) square feet for every fifty five feet (55') of linear lot width of the surface parking lot. (Ord. 1135, 2015)

~~**17.125.040: OFF STREET LOADING AREAS:**~~

~~In the LI-1, LI-2 and LI-3 districts, off street loading areas~~

Comment [BMS1]: Moved to Shared Parking section

Comment [BMS2]: Combined with next section – "Off Street Vehicle Parking and Loading Requirements"

~~A. (containing 180 square feet with no 1 dimension less than 10 feet) shall be required as an accessory use for new construction or major additions involving an increase in floor area, as follows: One off street loading space for floor area in excess of two thousand (2,000) square feet, provided no loading space occupies any part of a public street, alley, driveway or sidewalk; except, that where practicable to do so, an alley may be used in lieu of the requirement of this section if prior permission is granted by the commission. (Ord. 1135, 2015)~~

17.125.0~~45~~0: OFF STREET VEHICLE PARKING AND LOADING-REQUIREMENTS~~CALCULATIONS~~:

A. The following rules apply when computing off street parking and loading requirements:

1. Multiple Uses: Lots containing more than one use shall provide parking and loading in an amount equal to the total of the requirements for all uses, unless a reduction is approved through a shared parking plan in compliance with section 17.125.0~~8~~7~~0~~0 of this chapter.~~, or otherwise specified.~~
2. Fractions: When measurements of the number of required spaces result in fractions, any fraction of one-half (1/2) or less shall~~will~~ be disregarded and any fraction of more than one-half (1/2) shall~~will~~ be rounded upward to the next highest whole number.
3. Area Measurements: Unless otherwise specifically noted, all square footage based parking and loading standards are to be computed on the basis of gross floor area (GFA).
4. Employee Based Standards: For the purpose of computing parking requirements based on employees the calculation shall be based on the largest number of persons working on any single shift.

~~5. Unlisted Uses: Upon receiving a development application for a use not specifically listed in the off street parking matrix, the administrator shall apply the off street parking standard specified for the listed use that is deemed most similar to the proposed use or require a parking study in accordance with this chapter.~~

~~6.~~5. Nonconforming Due To Lack o~~O~~f Parking and Loading: No lawfully existing building shall be deemed to be a nonconforming building solely because of lack of parking and loading spaces; provided, that space being used for off street parking or loading in connection with any such building at the effective date of this ordinance ~~hereof~~ shall not be further reduced in area or capacity.

6. Off Street Parking Requirements: Off street parking requirements apply to uses in all districts, unless otherwise specified.

B. Off Street Parking Matrix

Use Category	**Parking Spaces Required**
Residential (multiple-family)	Units 1,000 gross square feet or less: 1 parking space per dwelling unit Units over 1,000 gross square feet: 2 parking spaces per dwelling unit
Residential (one family)	2.0 parking spaces per dwelling unit
Non-residential	1 parking space per 1,000 gross square feet[1]

[1.] Refer to definition Floor Area, Gross and with the additional exclusion of common and public areas.

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C. Exemptions:

1. The following uses meeting the definitions found in 17.08.020 are exempt from providing off street parking:
   a. Community Housing;
   b. Food Service;
   c. Retail Trade; and
   d. Assembly existing at the time the ordinance is passed [insert date].
2. All non-residential uses within 1,000 feet of a structured parking facility, with the distance calculated by measuring the sidewalk from the primary entrance of the use(s) to the location of the structured parking facility.
3. Other uses may be exempted by the Administrator upon completion of a Parking Demand Analysis demonstrating the actual demands of the project are less than the minimum requirements of the code.

D. Off Street Vehicle Loading Areas:

In the LI-1, LI-2, and LI-3 districts, off street loading areas shall be required as an accessory use for new construction or additions involving an increase in gross floor area as follows:

1. Number of Spaces:
   a. One (1) off street loading space is required for gross floor area in excess of two thousand (2,000) square feet.
   b. No loading space shall occupy any part of a public street, alley, driveway, or sidewalk. Where practicable to do so, an alley may be used in lieu of the requirement for off street loading space(s) if permission is granted by the Administrator.
2. Dimensions: An off street loading space shall be a minimum of 180 square feet with no length of the space being less than ten feet (10').

~~7. OFF STREET PARKING MATRIX~~

~~Specific Uses~~	~~Parking Spaces Required~~
~~Residential:~~	
~~Assisted living facility~~	~~1 space per 4 beds + 1 space per full time doctor and 2 spaces per each 3 other employees~~
~~Community housing units, CC district~~	~~No parking is required~~
~~Dwelling, multi-family~~	~~1.5 spaces for every 1,500 net square feet of residential space~~
~~Dwelling, one-family/2 attached townhouse units~~	~~1.5 spaces per dwelling unit~~
~~Residential, CC district~~	~~1 space per 1,500 net square feet~~
~~Residential project, 4 or more dwelling units~~	~~1.5 spaces per dwelling unit + 1 guest space per 4 dwelling units~~

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~~Residential units, industrial districts~~	~~1 space per bedroom~~
~~Commercial:~~	
~~Bowling alley~~	~~3 spaces per lane~~
~~Building maintenance~~	~~1 space per 800 gross square feet, + adequate loading area for trucks~~
~~Car wash~~	~~2 short term holding spaces per service bay, + 1 per employee~~
~~Clinic/medical care facility~~	~~1 space per 300 gross square feet~~
~~Daycare[1]~~	~~1 space per full time nonresident staff member~~
	~~Requirements for drop off/pick up spaces:~~
	~~Daycare home: 1 drop off/pick up space~~
	~~Daycare facility: 2 drop off/pick up spaces~~
	~~Daycare center: 1 drop off/pick up space per 8 children, or fraction thereof, which may be legally cared for within the center~~
~~Daycare, industrial districts[1]~~	~~1 space per 250 square feet~~
~~Drive-in restaurant~~	~~1 space per 60 square feet of floor area~~
~~Firewood operation~~	~~1 space per 800 gross square feet, + adequate loading area for trucks~~
~~Gas station~~	~~2 short term holding spaces per fuel pump, + 3 spaces per service bay~~
~~Grocery store~~	~~1 space per 200 square feet of floor area~~
~~Health and fitness facility~~	~~1 space per every 6 seats or 1 space per 60 square feet of floor area, whichever is greater~~
~~Health and fitness facility, industrial districts~~	~~1 space per 250 gross square feet~~
~~Hospital~~	~~1 space per 1,000 square feet of floor area + 1 space per 4 regular employees~~
~~Hotel, lodging accommodation, tourist homes~~	~~0.75 space per room~~
~~Instructional service~~	~~1 space per 75 square feet usable dance floor area~~
~~Laundromats and dry cleaners~~	~~1 space per 250 square feet~~

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~~Laundry facility, bulk industrial~~	~~1 space per 500 gross square feet, + adequate loading area for trucks~~
~~Manufacturing, industrial district~~	~~1 space per 500 gross square feet, + adequate loading area for trucks~~
~~Manufacturing or assembly establishment~~	~~1 space per employee, based on the greatest number of employees at any 1 time~~
~~Motor vehicle service~~	~~1 space per 250 gross square feet, plus 5 storage spaces per service bay~~
~~Office~~	~~1 space per 300 gross square feet~~
~~Office, industrial districts~~	~~1 space per 250 gross square feet~~
~~Places of assembly, including schools and religious institutions and similar uses~~	~~1 space per every 6 seats or 1 space per 60 square feet of floor area, whichever is greater~~
~~Printing and publishing services~~	~~1 space per 250 square feet~~
~~Professional service, CC district~~	~~2 spaces per 1,000 gross square feet~~
~~Public use~~	~~1 space per 1,000 gross square feet~~
~~Public utility facility~~	~~1 space per 500 gross square feet, + adequate loading area for trucks~~
~~Recording studio~~	~~1 space per 500 gross square feet, + adequate loading area for trucks~~
~~Recycling facility~~	~~1 space per 500 gross square feet, + adequate loading area for trucks~~
~~Research development and high technology industries~~	~~1 space per 250 square feet~~
~~Restaurant, bars and eating/drinking establishments~~	~~1 space per 100 square feet of assembly area~~
~~Restaurant, industrial districts~~	~~1 space per 250 square feet~~
~~Retail trade~~	~~1 space per 300 square feet~~
~~Retail trade, CC district~~	~~2 spaces per 1,000 gross square feet~~
~~Retail trade, industrial districts~~	~~1 space per 250 square feet~~
~~Self-storage and warehouse~~	~~1 space per employee~~
~~TV and radio broadcast stations~~	~~1 space per 500 gross square feet, + adequate loading area for trucks~~

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~~Veterinarian and pet grooming service~~	~~1 space per 250 square feet~~
~~Wholesale~~	~~1 space per 500 gross square feet, + adequate loading area for trucks~~

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~~Note: 1.For daycare businesses which require more than 1 drop off/pick up space, the additional spaces over 1 may be on the street; provided, that for each drop off/pick up space required, there are 3 legal spaces located within 50 feet of the property which can be reached without crossing a street. (Ord. 1135, 2015)~~

17.125.0~~5~~60: COMMUNITY CORE DISTRICT OFF STREET PARKING REQUIREMENTS:

~~The parking requirements listed in this section are specific to the community core district and are in addition to requirements listed in this chapter and the off street parking matrix, section 17.125.050 of this chapter.~~

A. Purpose: The parking requirements listed in this section are specific to the Community Core district and are in addition to requirements listed in this Chapter and the off street parking matrix, section 17.125.040.B. of this chapter.

~~A.~~B. Minimum Requirements: The minimum number of parking spaces provided on site shall be four (4) spaces per five thousand five hundred (5,500) square feet of lot area, unless fewer spaces are required by the off street parking matrix, section 17.125.050 of this C~~c~~hapter. ~~Required parking shall be located on site prior to utilization of on street parking credit. A reduction in off street parking may be obtained through the provision of an approved shared parking plan in compliance with subsection 17.125.070B of this chapter, or otherwise specified.~~

~~B.~~C. On Street Parking: In a circumstance where the off street parking matrix results in a requirement of more than four (4) parking spaces, four (4) on street parking spaces per five thousand five hundred (5,500) square feet of lot area may be credited toward the required parking demand after the required four (4) space minimum on site is satisfied.

D. Shared Parking Plan: A reduction in off street parking may be obtained through the provision of an approved Shared Parking Plan in compliance with subsection 17.125.080 of this chapter.

~~C.~~E. Accessible Parking: For all commercial and mixed use projects, and for any residential projects with more than four (4) units, at least one accessible parking space shall be provided on site. All accessible parking space requirements of the current building code as adopted by the city shall be met.

~~D.~~F. In Lieu Parking Fees: Except as provided in sections 17.125.0~~87~~0 and 17.125.090 of this chapter, one hundred percent (100%) of the parking demand unmet by off street parking spaces may be met with a payment in lieu. The in lieu fee amount shall be determined annually by the city council based on the cost of land, the construction cost of structured parking above, on or below ground, the amount of land needed for each parking space and access, landscape areas and other amenities, the cost of physical improvements to the property including grading, compaction, drainage, asphalt, concrete, landscaping, lighting, striping and other amenities as may be considered appropriate.

1. Payment of in lieu fees must be made to the city at the time of issuance of a building permit.
2. All in lieu funds received under subsection D of this section shall be placed into a special and separate transportation improvement and acquisition fund to be used primarily for transit improvements and parking management programs, such as paid parking, that address the demand for physical parking on site in the CC district and secondarily for the purchase, construction and improvement of public parking facilities. ~~(Ord. 1135, 2015)~~

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17.125.060: BICYCLE PARKING:

A. Purpose: To further the intent of this chapter, including the purposes of encouraging a range of transportation alternatives, facilitating community design supported by multi-modal transportation, promoting Travel Demand Management techniques and providing safe, secure and conveniently located bicycle parking facilities, the following bicycle parking requirements have been established.
B. Spaces Required: All uses, other than one family dwellings, are required to provide one (1) bicycle rack, able to accommodate at least two (2) bicycles, for every four (4) parking spaces required by the proposed use. At a minimum, one (1) bicycle parking rack shall be required per development.
C. Fractions: When measurements of the number of required spaces result in fractions, any fraction equal to or greater than (1/2) shall be rounded up to the next highest whole number.
D. Location: Bicycle parking space(s) shall be clearly visible from the building entrance they serve and located no more than fifty feet (50') from the entrance or as close as the nearest non-ADA parking space, whichever is closest. Bicycle racks shall be located to achieve unobstructed access from the public right-of-way and not in areas requiring access via stairways or other major obstacles. In cases where bicycle parking spaces are not visible from the primary street, signage shall be used to direct cyclists safely to bicycle parking areas.
E. ADA: Bicycle parking space facilities shall not interfere with pedestrian circulation, accessible paths of travel or accessible parking as required by the Americans with Disabilities Act of 1990.
F. Design: Bicycle parking spaces must contain a stationary device or devices, secured to the ground, to which bicycles can be locked. Each bicycle parking space must be accessible without moving another bicycle.
G. Surfaces: Bicycle racks must be located on paved or pervious, dust free surface. Surfaces cannot be gravel, landscape stone or wood chips.

17.125.070: PARKING DEMAND ANALYSIS:

A. Purpose: A Parking Demand Analysis is a study indicating that the requirements of this chapter regarding the number of off-street vehicle parking spaces required are not applicable to the proposed project because the project contains a unique mix of uses, the operational method is atypical, the use is not listed, or location or contextual factors affect the amount of off-street parking spaces required.
B. Eligibility: A Parking Demand Analysis may be submitted by an applicant for any project in any zone.
C. Analysis required: A Parking Demand Analysis is required for any project requesting a reduction in parking through a Shared Parking Plan or a Transportation Demand Management Plan. A Parking Demand Analysis may otherwise be required by the Administrator.
D. Contents:
   A Parking Demand Analysis shall be prepared in the following manner to demonstrate that the requirements of section 17.125.040.B, Off Street Parking Matrix, are not applicable:
   1. Preparation: The Parking Demand Analysis shall be prepared by a registered professional engineer licensed in the State of Idaho.
   2. Project Description: A project description shall be included. The project description shall include, but is not limited to:
      a. Project location context map;
      b. Gross and net square footage of existing and proposed uses that will be part of the new development under review; and

c. Table containing off-street parking and loading requirements for each use as required by this Chapter;

3. Project Analysis: A narrative analysis considering the following minimum factors shall be submitted:
   a. Discussion of the project's mix of uses, operational method, unique nature of uses, and location, contextual, or other factors affecting the amount of off-street parking and loading spaces required;
   b. Existing site plan; and
   c. Proposed site plan;
   d. Discussion of site specific parking needs.
4. Remedy: A narrative describing proposed measures to be taken to reconcile the project's parking demand with off-street parking and loading required for the project.
   a. A Shared Parking Plan and/or a Transportation Demand Management Plan may serve as the remedy in part or in full.
5. Additional Considerations: The city may require additional information as part of the Parking Demand Analysis.

E. Method of Approval: The Administrator shall review the Parking Demand Analysis and/or Transportation Demand Management Plan and upon finding that the analysis uses the appropriate methodology and includes an acceptable and reasonable remedy which can be implemented the Analysis shall be approved or approved with conditions. Remedies contained in the Analysis are binding and may only be modified through a written finding made by the Administrator.

17.125.08~~7~~0: SHARED PARKING REDUCTION:

A. Purpose: Dedicated parking areas for individual uses, especially when provided in new developments, can result in less efficient land usage, lower floor area ratios, and more significant impacts and implications for multi-modal transportation and the quality of the pedestrian environment. Shared Parking is a strategy that can reduce the amount of land devoted to parking while providing a sufficient number of spaces and encouraging development that is compact, walkable, bikeable, and conducive to transit.

~~A.~~B. Shared Parking Reduction ~~In Tourist Districts~~: A shared parking reduction may be allowed by conditional use permit in all ~~tourist~~ zoning districts ~~may be allowed~~ as follows:

1. A Shared Parking Plan shall be submitted for review and is subject to approval by the Administrator.
2. The Plan shall, at minimum, identify or contain:
   a. A Parking Demand Analysis in accordance with 17.125.070;
   b. The hours of peak parking demand for each use;
   c. All locations of parking spaces on private property utilized through Shared Parking and identified on a location context map;
   d. All public parking that can be accessed within a 1,000 foot walk as measured along sidewalk connecting to the site of the subject uses.
   e. The plan shall include an agreement between property owners for sharing common parking on private property. However, in no case will the City manage shared parking agreements.

3. Shared parking spaces may be provided in areas designed to serve jointly two (2) or more buildings or users.
4. All Shared Parking shall be located no less than three hundred feet (300') from the uses utilizing the Shared Parking, as determined by measuring along existing sidewalk or sidewalk that shall be constructed as a condition of approving the shared parking reduction from the primary entrance of the use(s) to the location of Shared Parking spaces.
5. The total number of off-street parking spaces shall not be less than that required by this chapter for the total combined number of buildings or uses, unless a reduction is approved through a Shared Parking Plan, or otherwise specified.
6. A reduction to parking requirements for individual uses may be made after considering the following standards and criteria:
    a. The hour(s) of peak parking demand, with peak demand being different;
    b. The operating hours of each use, with operating hours being staggered; and
    c. There is existing on-street parking available for public use.

~~1. A reduction to parking requirements for individual accessory uses within a mixed use development in which lodging is the primary use may be made upon the granting of a conditional use permit according to the following schedule:~~
    ~~a. Restaurant and bar: Minimum one space per two hundred (200) square feet of seating area.~~
    ~~b.Conference facilities: Minimum one space per two hundred (200) square feet of seating area.~~
    ~~c.Retail and repair shops: Minimum one space per six hundred (600) square feet of net floor area.~~
~~2. The commission may grant the reduction or a partial reduction after considering the following standards and criteria:~~
    ~~a.The accessory use(s) commonly provides a service to patrons of the primary use.~~
    ~~b.The capacity of the accessory use(s) is not in excess of the capacity of the primary use.~~
    ~~c.The operating of the accessory use(s) is staggered.~~
    ~~d.The hour(s) of peak parking demand for each use is different.~~
    ~~e.Existing on street parking is available for public use.~~
~~3. A reduction to parking requirements for lodge units within a mixed use development may be made upon the granting of a conditional use permit according to the following schedule: Hotels and lodges, a minimum 0.66 space per room.~~
~~4. The commission may grant the reduction or a partial reduction after considering the following standards and criteria:~~
    ~~a. Public, recreation facilities and adjoining complementary uses are within walking distance.~~
    ~~b. Existing tourist housing accommodations are within walking distance.~~
    ~~c. Public transit is available and within walking distance.~~
    ~~d. Pedestrian facilities and amenities are existing within the neighborhood.~~
~~5.~~7. Employee parking is required at the rate of ten percent (10%) of total required spaces after reductions are provided.
    ~~The total parking required shall not be less than one space per room.~~

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~~B. Shared Parking Reduction In The CC District: A shared parking reduction in the CC district may be proposed by an applicant through a project specific parking solution to address parking demand unmet by on site parking spaces for approval by the city. The applicant shall submit a parking analysis and plan that demonstrates how parking demand is addressed. (Ord. 1135, 2015)~~

17.125.090: PARKING REDUCTION THROUGH TRANSPORTATION DEMAND MANAGEMENT:

A. Purpose: For projects with a FAR greater than 0.5 a Transportation Demand Management plan may be provided in order to demonstrate that alternative strategies will be utilized to offset the demand for parking. A reduction of up to 25% of on-site vehicle parking requirements may be approved by the Administrator. A Parking Demand Analysis must be submitted as part of the TDM plan.

B. Transportation Demand Management plans shall consider the following strategies, including, but not limited to:

1. A Shared Parking Plan subject to the standards found in 17.125.070;
2. Covered bicycle parking;
    a. Covered bicycle parking can be provided inside buildings, under roof overhangs or awnings, in bicycle lockers, or within or under other structures. When not located within a building or a locker the cover must be permanent, designed to protect the bicycle from rainfall, and at least 7 feet above the floor or ground.
    b. Secure bicycle parking.
3. Secure bicycle parking can be in a locked room or area enclosed by a locked gate or fence, in an area that is monitored by a security camera, or in an area that is visible from employee work areas.
4. On-site locker room and shower facilities.
5. Provision of a public transit stop or demonstration of proximate access to an existing transit stop.
6. Demonstration of proximate access, within 1,000 feet, to the Wood River Trail.
7. Construction of a “spur” connecting the lot to the Wood River Trail.
8. Reserved preferential parking spaces for high occupancy vehicles.
9. Reserved preferential parking spaces for hybrid, electric, or alternative fuel vehicles.
10. Installation of on-site electric vehicle charging stations.
11. Publicly accessible permanent display area for information on TDM strategies and options for alternative transportation modes.
12. Shuttle service.
13. Contribution to public transit or alternative modes of transportation fund(s).
14. Employer programs such as:
    a. Car/van pool coordination and incentive programs;
    b. Shuttle program;
    c. Guaranteed emergency ride home program; and
    d. Public transit passes.

Parking Analysis for Changes to the City of Ketchum Zoning Code

Task #1: Current Conditions. Synthesize the current policy direction for parking regulations based on the Comprehensive Plan and conversations with City Officials. Identify where there may exist gaps in the policy direction. Evaluate the current parking standards for consistency with the adopted policies and identify general areas for code reform. Provide a written analysis of these findings for the City's review.

Introduction

While we think of parking policies as having the most direct impact on mobility and land use, parking policies are also influential in the direction of other guiding principles for a community's future, as depicted in this graphic.

Community Core Values – Relationship to Parking

The City of Ketchum 2014 Comprehensive Plan sets forth ten core values, six of which are influenced by the direction the City takes on parking.

1. A Strong and Diverse Economy √
2. Vibrant Downtown √
3. Community Character Preservation √
4. A Variety of Housing Options √
5. Environmental Quality and Scenic Beauty
6. Exceptional Recreational Opportunities
7. Well-Connected Community √
8. Arts and Cultural Activities that Enliven the Community
9. Regional Cooperation
10. A "Greener" Community √

The following is an analysis of the goals identified for the Comprehensive Plan's Core Values related to parking and the consistency of the current parking code with those goals. In addition, the Plan includes three direct and explicit policies for parking code reform. These follow in Table 1.

1. A strong and diverse economy The Comprehensive Plan goals for a strong and diverse economy include *expanding existing independent, small local businesses; diversification; support for tourism; and balancing the needs of both locals and tourists.*

   Parking requirements directly impact the cost of construction, can impact new business formation and impact business operations. Parking is not free, and the costs of parking requirements are passed on to consumers and building tenants. It is estimated that current parking practices are comparable to about a 10% tax on development. In an environment of high land prices, parking requirements can be an impediment to small and local businesses. Currently, the highest valued land, the CC district, requires a minimum parking requirement of 4 spaces per 5,500 sf of lot area, regardless of the type of business (unless fewer spaces are required by the parking standards). This may be a disincentive to the goal of supporting independent, small local businesses.

   The other challenge of parking requirements in meeting the goals of a strong and vibrant economy are the current standards, which have no basis in empirical data. These standards, like most city codes, were either borrowed from somewhere else or are based on some national average driven by suburban conditions that may or may not be the reality in the City of Ketchum. Who knows for certain if a medical clinic in Ketchum requires one parking space for every 300 square feet of gross

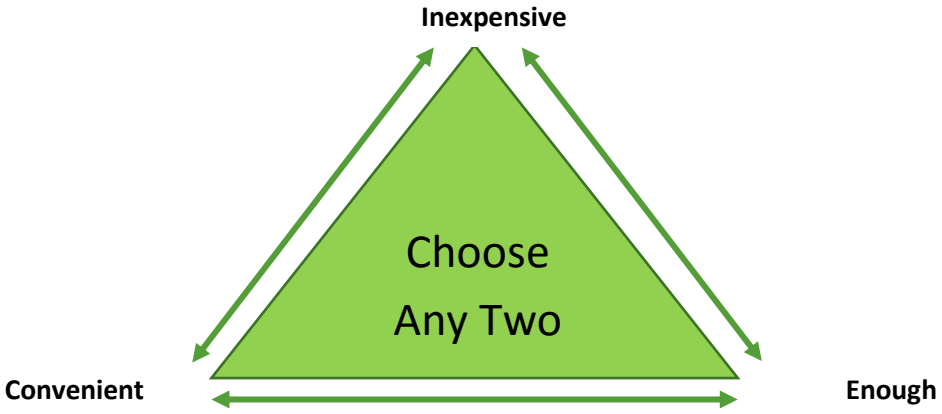
space? Most parking codes overestimate the actual parking need and in doing so contribute to the costs of development, and the costs of doing business. Nation-wide it is estimated that there are 3.4 parking spaces for every vehicle.

The new economies are looking for the type of quality of life infrastructure (sidewalks, public transit and trails) that is suggested in Policy E2-b. Realization of this type of infrastructure supports the inclusion of Transportation Demand Management (TDM) tools in parking requirements. If this type of infrastructure is in place, there are greater opportunities to allow for TDM measures to substitute for parking requirements. See Table 1 for more details on TDM measures.

2. A vibrant downtown – The goals for the Downtown are *as a place that people can reach easily by foot, bike, and transit, and as the City's primary business district, retail core, and key gathering place.*

Through the policies decisions made on the requirements for off-street parking, incentives are created for the choice of one mode of transportation over another. Parking serves only one mode of mobility and by overly accommodating parking, a competitive advantage is created for vehicles over other travel modes, such as transit. If parking is over supplied and inexpensive, there is little incentive for using other forms of transportation, and this goal for creating a vibrant downtown (that it be "people based") will be impeded.

However, parking is essential to a vibrant downtown. The question is how is parking provided and managed? Kimley Horn in the draft "Strategic Parking Plan for Downtown Boise", notes that there are three attributes typically desired in downtowns: convenient parking, enough parking and inexpensive parking. Only two of these three can be provided and cities must make a policy decision on which of the two out of three will be their goal.



- If you have inexpensive and convenient parking, you will not likely have enough. This choice will drive the need for other viable mobility options.
- If you have inexpensive and enough parking, it may not be convenient. This requires remote or off-site parking with connections by walking or shuttle operations.

- If you have convenient and enough parking, it will not be inexpensive. This would drive a decision toward structured parking to meet parking needs.

The question of "enough parking" was recently addressed by the parking counts undertaken by staff during the shoulder and peak periods. Parking is generally considered at capacity when 85 percent of the spaces are utilized. In the counts that were taken during the slack time, except for the parking lot at 6th and Leadville and three of the five counts taken at 2nd and Washington, all areas were below that percentile. During the peak period, half of the counts were above 85 percent. Should the determination of what is "enough parking" be based on the peak or the shoulder season? This is a policy question fundamental to addressing parking management in the downtown.

Key to the goals of a vibrant downtown is a mix of land uses, and many times the off-street parking requirements based on land use alone can be an impediment to certain types of desired outcomes. Some communities have moved toward a "blended rate" parking standards that apply the same rate in the same area, regardless of the land use. This approach would benefit uses such as restaurants that typically have a higher parking generation rate, but in a downtown setting can take advantage of parking that is underutilized during the restaurant's peak evening time.

3. Community character preservation – The goals are to *maintain the community's small town and unique identity. Maintaining the scale of the community and protecting historic significant buildings are elements of this goal.*

Parking is a prodigious and inefficient use of land. Parking shapes the built environment through site design, lowering intensity/density and through accommodation of vehicles, contributing to sprawl. Surface lots break up the fabric of the pedestrian environment and screening is challenged by the equally important objective of safety. The potential for larger scale parking garages to meet community needs will be a challenge to ensuring that the small town character is maintained.

The current code provides design direction for landscaping of buildings and surface lots to mitigate the impact on the small scale character. Surface lots require a conditional use and maybe in some area should be prohibited altogether to maintain the small town identity. Consideration should also be given to changing the allowance for up to 35% of the street frontage in parking access. In smaller lot frontages this is a reasonable standard, but for property with longer frontage it seems excessive for ensuring pedestrian safety and comfort.

The current code requirement for a review of the off street parking whenever there is change in use influences the market's interest in the re-use of existing, older and possibly significant historical, buildings. Older buildings may be passed by because of the burden of the additional parking requirements that cannot be accommodated on a built-up site. The result can be vacant and deteriorating buildings that not only have an impact on the vibrancy of the area, but in the

long term can result in the elimination of important structures to the historic fabric of the community.

4. A variety of housing options – The goals for housing are to *increase the supply of housing, including rental, special needs housing and to provide a mix of housing types and style. Policy H3.1 explicitly Identifies parking as an incentive to be used to encourage greater housing diversity.*

   Based on typical affordable housing development costs, one parking space per unit increases costs approximately 12.5%, and two parking spaces can increase costs by up to 25%. Since parking costs increase as a percentage of rent, for lower priced housing, minimum parking requirements are regressive. Smaller affordable housing costs less than a larger luxury unit, but the parking space costs the same. Table 1 that follows provides some additional direction for bringing the current code into consistency with the goals for a variety of housing options.

5. A well connected community- The goals of a well-connected community are the most relevant section of the Plan to the parking code. They include goals for *promoting safe and efficient mobility through land use, effective and efficient transit system that is competitive with the single-occupant vehicle and by using travel demand management (TDM) techniques. Also are goals for providing key multi-modal transportation connections to the Core Area; and enhancing pedestrian and bicycling connectivity and comfort.*

   Parking provisions that require each development to build the parking necessary for the individual development is an inefficient way to ensure adequate parking in the community. The current shared and in lieu parking provisions are positive ways in which under the current regulations, greater efficiencies can be achieved, and should be broadened and expanded.

   Transportation Demand Techniques (TDM) that support a more competitive transit system are outlined in Table 1. A transit hub and jitney service (Policy M2.2) provide an opportunity to refine the parking code to eliminate or reduce parking requirements in conjunction with the hub location and services.

6. A greener community- most relevant goals are to *protect surface water quality and promote energy conservation and the reduction of greenhouse gases.*

   Off-street parking requirements do not promote a sustainable community; the requirements promote a drivable and unsustainable community, and stand in the way of Ketchum being truly sustainable. Parking requirements that favor vehicle use over transit and active transportation result in increases in greenhouse gas emissions, contributing to global warming and reducing air quality. To meet its goals to be a good steward to the environment and promote a greener community as directed in the Comprehensive Plan, parking requirements need to be addressed in parallel with efforts to accommodate and support alternative modes of access and transportation.

TABLE 1 EXPLICIT COMPREHENSIVE PLAN POLICY DIRECTION RELATED TO PARKING		
Plan Policy	Consistency of Current Parking Code	Direction for Change
Policy H-3.1 Mixture of Housing Types in New Development The City should encourage the private sector, through land-use regulations and incentive programs, to provide a mixture of housing types with varied price ranges and densities that meet a variety of needs. The City will evaluate the use of incentives, such as flexibility in height, density and parking requirements to achieve greater housing diversity.	• Other than shared parking reduction and no parking requirements for community housing in the CC district, there is no incentive provided in the current code for mixed housing products. • The current minimum standard is based on housing unit size of 1500 sf. which is a disincentive for smaller units, and greater diversity.	• Establish parking requirements based on the size of units; reduce the minimum size. • Exempt smaller size units from parking requirements in all mixed housing products. • Provide flexibility in parking requirements for mixed housing products. • Unbundle the parking requirements, so that residents have a choice to have parking or not will reduce the costs of housing and may lead to greater diversity.
Policy M-8.1 Incentives to Improve System Efficiency. The City will create incentives, such as reduced parking requirements or deferred development impact fees when a development implements specific travel demand management techniques.	Travel demand management (TDM) and the relationship to parking is not addressed in the current code.	Parking requirements determined by the number of TDM elements included in the development. Consideration include: subsidized bus passes, provision of commuter buses, transportation coordinator, priority parking for car sharing, bicycle space requirements, and facilities and storage, lockers and showers.
Policy M-8.3 Shared Parking The City will provide incentives for shared parking agreements to maximize the use of existing surface lots.	The current code provides provisions for shared parking through a conditional use permit for limited uses and locations.	Expand the application of shared parking. Consider an administrative process and re-think minimum parking requirements.

Conclusion

This first task has intended to be on overview of the direction set out in the Comprehensive Plan that relates to parking, a general review of the existing parking code consistency with that direction and some beginning ideas of areas of parking code reform. From the city review and comment on these findings, the next task will be to take a deeper dive into best and emerging practices that appear most appropriate to Ketchum. At this point, these appear to include:

1. Integrating Transportation Demand Management (TDM) into the parking requirements.
2. Expanding and/or changing the application of the shared and in lieu parking provisions.
3. Re-thinking the land based parking standards for greater flexibility.
4. Considering area based parking standards for the downtown.
5. Reviewing the various ways parking can be an incentive for the desired and mix of housing.
6. Examine ways to de-regulate parking for older or historic structures.

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Task #2: Review Best and Emerging Practices. Examine the relevance of best and emerging practices of parking regulations for Ketchum considering the land uses, transportation modes, population, resort setting, and the findings from Task #1. Review the relationship between parking and land use and the way in which parking is used to or not to incentivize certain desired land uses. Recommend some options for changes to the parking code prioritized by easiest to more difficult to implement; and changes that can occur overtime.

Summary:

There is a dearth of innovation in parking regulations for resort communities that would be considered a peer to the City of Ketchum. Attachment A highlights the notable features of twenty resort communities around the west that were researched for this report. Attachment B provides excerpts of relevant code provisions from some of these cities. Here is a bullet summary of the review of these twenty peer cities:

- While there are some good examples of bicycle parking standards and provisions for transit, these requirements are typically stand-alone provisions, and not well integrated with the parking requirements as would be desired in a Transportation Demand Management approach to parking as suggested in the Ketchum Comprehensive Plan.
- Most communities have provisions for in lieu and shared parking. Ketchum is one of the few cities that have taken this a step further by allowing a reduction in the overall parking requirements when there is shared use.
- Many resort communities have special parking provisions for downtowns, historic districts, or the community's core.
- There are few good examples of communities using parking as an incentive for certain types of land uses.
- There are many examples of simplified code provisions and parking standards.
- There are a variety of means used by the peer cities to exempt, or reduce the parking standards.

The Task #1 report for this project and the subsequent discussion with city officials, identified seven topical areas for further research and comparison with peer communities. What follows is the findings from this further research. Recommendations for amendments to the Ketchum parking code follows that discussion.

1. Integrating Transportation Demand Management (TDM) in the Parking Requirements.

It is not surprising that the peer resort cities have few TDM provisions in their parking regulations since the application of TDM is most common for employment based land uses. Most of the communities reviewed do not have large employment industries.

Standards for bicycle parking most frequently appeared in these codes, but in only one community was the provision of bike parking tied to a reduction in vehicular parking. Location to bus stops or provision of a transit facility were other TDM examples that provided a basis for parking reduction. Here is a menu of TDM provisions for the city to consider:

- Adopt the TDM strategies identified in the Warm Springs Base Area Overlay universally for all zones in the City.

- Provide for bike parking and storage as a requirement for all uses; or as a requirement for some uses that normally generate bicycle use such as health clubs, spas, parks and uses near trails; or as a substitute for vehicular parking.
- Provide for shower and lockers facilities for employment based uses of a certain size as a requirement, or as a substitute for vehicular parking.
- Provide for locational factors to be a basis for parking reduction, such as within ¼ mile of a bus stop or the Wood River Trail.
- Dedicate the in-lieu fund to alternative mobility only such as support for Mountain Rides, shuttle services for remote lots, trail improvements, and bike or car sharing. Under this scenario, consider incentivizing the in lieu fund as an alternative to on-site parking by changing the ratio of the number of in lieu spaces to on-site spaces or reducing the per space costs for in lieu.

2. Expanding the application of the shared and in lieu parking provisions.

Most of the peer cities have shared parking provisions, but fewer have parking reduction allowances in shared circumstances. The current Ketchum parking code provisions allow for shared parking reduction in the Tourists Districts and in the CC District by means of a conditional use permit or parking analysis. Recommendations for expanding the shared parking provisions include:

- Provide for clearer direction on what is the content of a parking analysis. Include information on the uses, peak hour parking, adjustments for uses that would not generate new trip (the noncaptive factor), location, connections and distances between uses and parking, and the opportunities for capture uses.
- With improved criteria for the content of the parking analysis, eliminate the need for a conditional use permit review.
- Allow for a shared parking reduction of 20% as a right for any mixed use project in any zone. Provide provisions for additional reduction through a parking analysis.
- Identify uses, because of their varying peak parking periods that can share parking. Develop standards for the location and connectivity of remote lots in relationship to the uses.
- Establish a standard agreement to be used between shared parking property owners that identify how conflicts will be resolved, responsibilities for maintenance, and liability requirements.
- Establish a standard cross-access agreement that can be used by adjacent properties for sharing parking facilities.
- See the provisions in #1 regarding in lieu parking requirements.

3. Re-think the land based parking standards for greater flexibility

In addition to shared parking and TDM provisions that move away from the land based parking standards, other tools for creating flexibility in parking requirements have been employed by the peer communities. Most have the standard laundry list of uses followed by provisions by which the requirements can be reduced or modified. These provisions include (1) a variance process; (2) conditional use permit; (3) other discretionary body decision; or (4) administrative decision.

The criteria for the basis for the decision to exempt or reduce parking standards also varies from none to a detailed parking analysis. Some decisions are based on the location and others on the nature of the specific use. A minority of communities also impose a layer of discretion if the applicant request is for more parking

than is required by the code. One community that has very minimal requirements also has provisions that allow the city to require more parking for a specific project than is identified by parking standards.

This recommendation to allow for greater flexibility is closely related to Finding #7 to simplify the Code standards. If the city's choice is to keep the current parking standards (the off-street parking matrix) with some minor consolidation of uses, then a process might be needed to allow for requests for parking reduction. The basis for approval of such a request could be a variety of reasons including the inclusion of TDM measures mentioned in #1, shared parking, or availability of on-street parking as is currently provided for in the CC District. The more detailed the criteria, the less need for a discretionary body to make the decision.

If the City is to move toward more reform of the chart of parking standards (the off-street parking matrix) and with minimal parking requirements, then imposing an additional process check to ensure adequate parking in all situations might be needed. Parking is very much market driven, and there are few instances when a developer or applicant will not provide the parking they feel is needed to support the project and satisfy their lending institutions. The role of the city is to ensure that amount of parking is appropriate for the circumstances of the use and location, and that there are no parking externalities on surrounding properties or on-street parking. As the city's efforts at creating more modal choices expand, there also may be a future requirement to set maximums on the number of parking provided, as in the case of one peer community.

Recommendations:

- Develop minimum parking standards (see #7 that follows) for all uses with a provision for requiring more parking through an administrative determination.
- Allow for parking reduction from the minimum standards through the provision of TDM measures (outlined in #1)
- Determine parking requirements on a case by case basis with adjustment factors that take into account the unique characteristics of the proposed development: size, location, density of employees or units, mix of land uses, access to transit, walking-bicycling connections, shared parking opportunities, and availability of both public and private parking in the vicinity.

4. Consider area based standards for the Downtown

A majority of the peer communities had different standards for their downtown or core, compared to standards for other zones in the city. None had adopted area based or one parking generation standard for all uses in the downtown. One community had no parking requirements in their downtown (except for gaming and lodging) and another had no parking requirements in urban renewal districts or areas within a building improvement district (BID). Two other cities required remote or in lieu parking only. Another community code provides that for their downtown, the minimum standards are the maximum, and prohibits the additional parking over what is allowed in the code.

Given the inherent mixed use character of the downtown, there seems to be a basis for a different set of standards, but determining what those standards should be, regardless if there is one standard for all uses or a reduced standard from the rest of the city, is a challenge. Ideally, setting such a standard should be based on some empirical evidence on the nature of uses, parking utilization rate, peak parking demand, and the

impacts of other modes of transportation to access the downtown. This consideration is further complicated by the direction to incentivize certain uses in the downtown through the parking standards.

Recommendations for changing standards in the downtown:

- Maintain the current code provision to exempt community housing from the parking requirement.
- Exempt from the parking requirements other uses the City would like to incentivize.
- Allow by right a parking reduction of 20% for all uses in the downtown from the standards contained on the parking matrix.
- Adopt simplified parking standards for the downtown with four categories: commercial, residential, lodging, and assembly.
- Adopt a one parking standard such as 2 spaces/1000 and eliminate the provision of on-street parking to be used in partial satisfaction of the parking requirement.
- In the long term, substitute parking requirements for investment in transit, pedestrian and bicycle improvements funded through in lieu fees, LID or other mechanisms.

5. Review the way in which parking can be an incentive for the desired uses and mix of housing.

The peer city review provides little direction on this issue: parking reductions are provided to restaurants in two communities that were reviewed. Ketchum's interest to incentivize certain uses is to create vibrancy, especially in the downtown. Vibrancy can be accomplished by adjusting the parking standards as described above in #4, which would create an incentive for uses such as retail and restaurants that generate higher parking needs.

Incentivizing for a mix of housing is more challenging. Standardizing the parking requirement, for example one space per unit regardless of size, or unbundling the parking requirement from housing altogether are two approaches to consider. While not necessarily incentivizing a mix of housing, both of these approaches would create a more level playing field for any type of housing. If the objective is to create smaller more affordable housing, then eliminating parking for housing below a certain size, for example 750 square feet may be an approach.

The current code parking standard is based on gross square feet. This may create a disincentive for common areas, such as courtyards or interior atriums that can contribute to vibrancy. Consideration should be given to basing the standard on net leasable are instead of gross square feet. Also surface lots, which are dead zones and require driveway cuts that interrupt pedestrian flow, are also a land use that negatively impacts vibrancy. Some consideration should be made to prohibiting or limited surface lots in the downtown.

Recommendations:

- Establish parking requirements based on the size of dwelling units; reduce the minimum size.
- Exempt smaller size dwelling units from parking requirements in all mixed housing developments.
- Provide flexibility in parking requirements for mixed housing products.

- Unbundle the parking requirements, so that residents have a choice to have parking or not. This approach reduces the costs of housing and may lead to greater diversity.
- Base parking requirements on leasable rather than gross floor area.
- Prohibit surface lots in the downtown.

6. Examine ways to de-regulate parking for older or historic structures.

Only Aspen had provisions which specifically addressed parking for historic structures. In that Code, the parking requirement is under the review the Historic Commission and specific criteria is outlined to direct their review of waiving or varying parking requirements.

Other ways to de-regulate parking for older structures would be to identify certain structures, locations or uses that would be exempt from additional parking requirements. Criteria for identifying such exemptions could be historic buildings, building that have been vacant for extended period of time, uses that City desires to incentivize, or locations where the provision of additional parking would be infeasible. The exemption could be provided outright or through a discretionary process.

7. Streamline and simplify the parking standards. Expand the on-street parking credit to other districts.

The peer cities provide several models for simplifying the parking standards. Among the best are Telluride and Cripple Creek. (Copies attached in Attachment B). Telluride has just seven land use categories and Cripple Creek has eight with the addition of different standards by district.

Several other cities allow for on-street credits to be applied to off-street parking requirement. These include: a one to one allowance or a 0.75 to 1 space. One example, restricts the allowance for residential uses that responds to Ketchum's concern about street clearance overnight for snow removal.

Recommendations for simplifying the parking standards:

- Reduce the number of land use categories
- Expand the current provisions that allow for on-street parking to satisfy the parking requirements, except for residential uses.

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Parking Analysis for Changes to the City of Ketchum Zoning Code

Attachment A

Peer City Review Summary

	City	In lieu	Shared Parking	Core Area Provisions	Notable features
1.	Aspen, CO	X	X		• Special provisions for historic structures
2.	Breckenridge, CO	X	X		• Relief from parking through variance process
3.	Carmel, CA	X	X	X	• No off-street parking is allowed in Core-must be in-lieu or shared
4.	Coeur d'Alene, ID	X	X	X	• Parking Commission • Tandem parking allowed • Reduction in core and in-fill overlay areas • Bike Parking standards
5.	Crested Butte, CO	X		X	• Grandfathers certain restaurant and residential uses • Allow for payments over time of in-lieu parking fees • Allows on-street parking credits in core
6.	Cripple Creek, CO		X	X	• No minimum standards, except for gaming and lodging in core area • Allows parking requirements to be satisfied on-street, off-street or combination in all zones
7.	Frisco, Co		X	X	• Reduced parking requirements in the core • On-street allowed for any "non-overnight" uses in the core and MU districts • Reduced parking for shared up to 25%
8.	Hood River, OR	X	X	X	• Bike parking standards • In lieu required in certain districts
9.	Jackson, WY	X	X	X	• On-street parking credits in core

	City	In lieu	Shared Parking	Core Area Provisions	Notable features
					• Independent assessment for some uses • Administrative adjust for reducing parking standards
10.	LaConner, WA	X	X		• Up to 50% of parking can be provided through in lieu. • 50% of parking must be provided on-site.
11.	Leavenworth, WA		X		• Simple joint use provisions • Electric vehicle (EV) charging station provisions
12.	McCall, ID	X			• Bike parking standards • Parking exemption in BID or Urban renewal district • Reduction in parking allowed by Commission action
13.	Park City, UT		X		• Allows for tandem parking • Reduction with conditional use or master plan • Bicycle Parking standards
14.	Sandpoint, ID	X	X	X	• In lieu only in downtown
15.	Santa Fe, NM	X	X	X	• Simple core area parking standards • Reduction for providing transit facilities • Reduction in shared parking circumstances • Reduction in core area by special use permit • Bike Parking requirements
16.	Steamboat Springs, CO				• Incentives for eliminating curb cuts • Maximum standards in core district
17.	Taos, NM				• Reduction in parking allowed by Commission action up to 20% • Bike parking requirements
18.	Telluride, CO	X			• Simple parking standards with PZ approval for some uses. • Tandem parking allowed
19.	Truckee, CA	X	X	X	• Use permits, specific plans, similar supersede zoning requirements • Minimum and maximum parking requirements

	City	In lieu	Shared Parking	Core Area Provisions	Notable features
					• Restaurant along Truckee River exempt from parking requirements up to 10 spaces • Bike Parking requirements • Good parking structure design requirements • On-street parking allowed in core at ration of 0.75/1 space requirement
20.	Vail, Co	X	X	X	• Parking standards for within core and outside core • City Council can create “exempt areas” based on criteria • PZ can reduce parking based on studies and criteria • In-lieu “zones”

Attachment B
Sample Code Provisions for Peer Cities

In lieu Provisions

9-3-13: USE OF IN LIEU FEES BY TOWN
4. The provision or operating expenses of transit facilities and equipment designed to reduce reliance on private automobiles; provided that such transit facilities or equipment shall, in the determination of the town council, provide a benefit to the service area. (Breckenridge)

Shared Use

17.44.225 B. For the purposes of this chapter, the following table provides examples of shared use parking that will be permitted between the uses or activities listed below as having primarily daytime or evening hours of operation:

TABLE A		
Uses With Daytime Hours		Uses With Evening Hours
Banks		Auditoriums
Business offices		Bars
Churches		Bowling alleys
Grade schools/high schools and daycare centers		Dance halls
Manufacture/wholesale (with limited hours)		Hotels/motels
Medical clinics		Meeting halls
Professional offices		Nightclubs
Retail stores (with limited hours)		Restaurants
Service stores		Theaters

(Coeur d'Alene)

Reduction in Standards

(I) Reduction Of Requirements: Where there is an adequate public transit system, or where, for any other reason parking demand is unusually low, such as where uses with differing operating hours or needs share parking under a formal, written agreement to which the city is a party, then the parking space provisions cited herein may be reduced proportionately by the commission. If the owner, whose parking

facility is under such an agreement which requires the facility to be available to the patrons of the other use(s), fails or refuses to make such parking available in accordance with the agreement, such failure or refusal is a violation of this title.

(J) Alternative Proposals: Where special conditions exist which make compliance with these standards impractical, the commission will consider alternative proposals presented according to the procedures and standards for a variance. (McCall)

16.20.040.2: SPACES REQUIRED

F. Commission Review**:** The commission may modify the provisions herein set forth establishing required parking areas so long as the public health, safety and welfare is not adversely affected. Modification of parking space quantity within twenty percent (20%) of requirements may be acceptable to the commission at their discretion under guidelines established by the code administrator and adopted by the commission. (Taos)

9-3-16: RELIEF PROCEDURES:

A. The planning commission, or the town council if the decision of the planning commission is called up, may grant a variance, exception or waiver of condition from any requirement of this chapter, upon written request by a developer or owner of property subject to this chapter, following a public hearing, and only upon finding that: 1) a strict application of such requirement would, when regarded as a whole, result in confiscation of the property or 2) that extraordinary hardships or practical difficulties may result from strict compliance with these regulations and/or the purposes of these regulations may be served to a greater extent by an alternative proposal or requirement. No variance, exception or waiver of condition shall have the effect of nullifying the intent and purpose of these regulations. The planning commission or town council shall not approve a variance, exception or waiver of condition unless it makes findings based upon the evidence presented to it in each specific case that:

1. The granting of the variance, exception or waiver of condition will not be detrimental to the public health, safety, or welfare or injurious to other property;
2. The conditions upon which the request is based are unique to the property for which the relief is sought and are not applicable generally to other property;
3. Because of the particular physical surroundings, shape or topographical conditions of the specific property involved, a particular hardship to the owner would result, distinguished from a mere inconvenience, if the strict letter of these regulations is carried out; and
4. The relief sought will not in any manner vary the provisions of the development code, town master plan or other town law, except that those documents may be amended in the manner prescribed by law. (Breckenridge)

Downtown Area Based Standards

17.38.030 Exceptions

A. On-Site Parking in the Central Commercial (CC) Land Use District. In contrast to the other districts within the City, on-site parking is prohibited in the central commercial (CC) land use district. This policy eliminates the need for curb cuts in sidewalks and the

interference with free pedestrian traffic flow that would result from an excessive number of driveways. This policy is also intended to enhance the opportunities for creating intra-block courts and walkways between properties and buildings…..
B. Use of Another Site. Parking requirements may be fulfilled by supplying the required parking on another site upon approval of a use permit.
C. Parking Adjustment In-Lieu Fees. The Planning Commission may authorize the satisfaction of parking requirements through the granting of a use permit and the payment of in-lieu fees when on-site parking is not practical or when on-site parking is prohibited by City policies. (Carmel)

7.05.725: BASIC DEVELOPMENT STANDARDS; PARKING STANDARDS:

A. Parking Ratios: Subject to the requirements of chapter 17.44 of this title, the parking ratios for uses in the DC district shall be as follows:

1. Retail/Restaurant Uses: Retail/restaurant uses in the DC district must provide at least two (2) but no more than four (4) parking stalls per one thousand (1,000) net square feet. However, retail/restaurant uses less than three thousand (3,000) square feet are exempt from this requirement.
2. Office Uses: Office uses in the DC district must provide at least two (2) but no more than four (4) parking stalls per one thousand (1,000) net square feet.
3. Residential And Hotel Uses: Residential/hotel uses in the DC district must provide at least 0.5 but no more than two (2) parking stalls per unit.
4. Senior Housing Uses: Senior housing uses in the DC district must provide at least 0.25 but no more than one parking stall per unit. (Coeur d'Alene)

4-8.6 OFF-STREET PARKING AND LOADING (C) Provisions for Specific Districts (2) BCD, C-2

(a) In the BCD district, there shall be provided the minimum number of *off-street parking* spaces as follows:

(i) For *residential* uses, one space for each *dwelling unit*;

(ii) For commercial uses: (1) One parking space for each five hundred (500) square feet of net leasable floor area for office uses; (2) One parking space for each three hundred fifty (350) square feet of net leasable floor area for other commercial uses, except that the requirements for *hotels* and *motels* shall be one parking space for each rental unit;

(iii) For all uses not classified as commercial or *residential*, the applicable standards set forth in Table 14-8.6-1 located in the appendix following Section 14-12 shall apply. (Santa Fe)

3-209.D.1.a. **Parking Requirements in the Accommodations One Zone District**	
Use Category	**Required Parking**
Residential Dwelling Units	1 space per unit
Short-term Dwelling Units	2 spaces for every 3 units
Hotel, Lodge, Roominghouse, Boardinghouse	2 spaces for every 3 units
High Intensity Use	One space per 500 square feet of floor area
Low Intensity Use	One space per 1,000 square feet of floor area
Assembly Areas	One space per 500 square feet of floor area

(Telluride)

Special Provision for Historic Structures

For properties listed on the Aspen Inventory of Historic Landmark Sites and Structures, fewer spaces may be provided and/or a waiver of cash-in-lieu fees may be approved, pursuant to Chapter 26.430, Special review and according to the review criteria set forth below.

26.515.040. Special review standards
A. A special review for establishing, varying or waiving off-street parking requirements may be approved, approved with conditions or denied based on conformance with the following criteria:
1. The parking needs of the residents, customers, guests and employees of the project have been met, taking into account potential uses of the parcel, the projected traffic generation of the project, any shared parking opportunities, expected schedule of parking demands, the projected impacts on the on-street parking of the neighborhood, the proximity to mass transit routes and City of Aspen Land Use Code Part 500 – Parking Page 5 the downtown area and any special services, such as vans, provided for residents, guests and employees.
2. An on-site parking solution meeting the requirement is practically difficult or results in an undesirable development scenario.
3. Existing or planned on-site or off-site parking facilities adequately serve the needs of the development, including the availability of street parking. (Aspen)

Incentivize Uses

Sec. 16-16-90. - Restaurant uses.
(a) Restaurant uses existing on May 14, 1994, shall be deemed to have satisfied all provisions of parking requirements for such uses and then-existing square footage.

(b) In the event a conditional use permit is sought for a restaurant use in the same location that is of the same footprint and general configuration and of the same square footage amount as a restaurant use existed on May 14, 1994, no additional parking shall be required for such restaurant use.
(c) In the event that a conditional use permit is sought for a restaurant use that is in the same location but not of the same footprint and general configuration as previously used on May 14, 1994, the provision of parking for such different space shall be required, and the parking requirement for such different space shall be calculated as an increment to the square footage of the original restaurant use.
(d) In the event a conditional use permit sought is for a restaurant use with a square footage amount greater than the restaurant use as it existed on May 14, 1994, the provision of additional parking shall be required for any such additional square footage, which shall be calculated as an increment to the square footage of the original restaurant use. (Crested Butte)

18.48.040 - Number of Parking Spaces Required Each use
Outdoor seating and dining areas for restaurants and cafes (except counter-service restaurants) adjacent to the Truckee River shall be exempt from complying with the parking requirements of this Chapter and paying in-lieu parking fees, up to a maximum of 10 parking spaces. (Truckee)

Simplified Parking Requirements

TABLE 3-4 PARKING REQUIREMENTS FOR USE CATEGORIES	
USE CATEGORIES	**PARKING REQUIRED**
All Residential Uses, including Accommodations Units with a kitchen	One space per unit
Short-term Dwelling Unit	Two spaces per three units
Hotel, Lodge, Roominghouse, Boardinghouse	Two spaces per three units
Low Intensity uses: Assembly areas - exhibit rooms; gymnasiums; and skating rinks. Retail stores and shops. Offices - professional (excluding medical and dental); general business offices; utility; telephone; telegraph; radio and broadcasting. Personal Services.	One space per 1,000 square feet of floor area
High Intensity Uses: Assembly areas - restaurant; bar; theater; auditorium; dance floor (including room or hall); church; chapel; assembly hall; bowling alley (assembly area only); stadium (bleacher area only); and swimming pool (including deck area); laundromat. Offices - medical and dental (including clinics); financial institutions, banks and loan companies; and public buildings for administration (including city and county offices).	One space per 500 square feet of floor area
Automotive Uses: Gas Stations and Vehicle Repair Auto Service, Car Rentals, Auto and Truck Sales	One space per gasoline pump; Two spaces per grease rack or wash rack; and One space per 200 square feet of area usable for repair work, exclusive of drives, equipment, storage, utilities, etc. One space for each vehicle, exclusive of service and repair area, which shall meet the requirements for gas stations and vehicle repair.
Hospitals and Schools	Set by review of P&Z

(Telluride)

Table 1-4 Required Parking Spaces					
For This Use:	The required minimum number of Parking Spaces in this Zoning District shall be:				The required parking spaces shall be located:
	B	BB	R3/4, R2	R1	
Residential	No minimum	1 space per dwelling unit		2 spaces per dwelling unit	Off-street
Lodging	.5 spaces per lodging bedroom	.75 spaces per lodging bedroom		N/A	Off-street
Office/Service or Retail	No minimum	2 spaces per 1,000 square feet of retail or office space		N/A	Off-street, on-street or a combination of off-street and on-street
Gaming	2 spaces per 1,000 square feet of gaming space	5 spaces per 1,000 square feet of gaming space		N/A	Off-street, on-street or a combination of off-street and on-street
Assembly	No minimum	1 space per each 5 seats		1 space per each 5 seats	Off-street, on-street or a combination of off-street and on-street
Civic Uses other than Assembly	No minimum	1 space per 1,000 square feet		1 space per 1,000 square feet	Off-street, on-street or a combination of off-street and on-street
Commercial Uses other than Lodging, Office/Service, Retail or Gaming	No minimum	2 spaces per 1,000 square feet		N/A	Off-street, on-street or a combination of off-street and on-street
Industrial	No minimum	1 space per 1,000 square feet		N/A	Off-street, on-street or a combination of off-street and on-street

(Cripple Creek)

Bicycle Parking Standards

7.44.100 Bicycle Parking Space: Where off street parking is required by this chapter, one bike rack capable of accommodating at least two (2) bikes is required for the first ten (10) required parking stalls. Additional bike racks will be installed on a ratio accommodating one bike for each additional ten (10) parking stalls. The required bike racks must be located on the same lot as, and within a reasonable distance of, the principal use or structure. The bike racks must be placed in a location that will not

interfere with pedestrian or vehicular traffic and the area where the rack is placed must meet the paving requirement contained in section 17.44.310 of this chapter. A reduction in the total number of off street parking spaces may be available for providing special accommodations for bicyclists as provided in section 17.44.200 of this chapter. (Coeur d'Alene)

3.8.063: BICYCLE PARKING: Uses shall provide long and short term bicycle parking spaces, as designated in table 3.8.063 of this section. Where two (2) options are provided (e.g., 2 spaces, or 1 per 8 bedrooms), the option resulting in more bicycle parking is used.

TABLE 3.8.063
MINIMUM REQUIRED BICYCLE PARKING SPACES

Uses	Long Term Spaces (Covered Or Enclosed)	Short Term Spaces (Near Building Entry)
Boarding houses, rooming houses, dormitories	1 per 8 bedrooms	None
Churches and places of worship	2, or 1 per 4,000 square feet of net building area	2, or 1 per 2,000 square feet of net building area
Daycare	2, or 1 per 10,000 square feet of net building area	None
Hotels, motels	2, or 1 per 20 rentable rooms	2, or 1 per 20 rentable rooms
Manufacturing and production	2, or 1 per 15,000 square feet of floor area	None
Multi-family	1 per 4 units	2, or 1 per 20 units
Office, banks, and similar uses	2, or 1 per 10,000 square feet of floor area	2, or 1 per 40,000 square feet of floor area
Retail sales and service	2, or 1 per 12,000 square feet of floor area	2, or 1 per 5,000 square feet of floor area
Schools - grades 2-5	1 per classroom, or per CU review	1 per classroom, or per CU review
Schools - grades 6-12	2 per classroom, or per CU review	4 per school, or per CU review

Other categories	Determined through conditional use (CU) and design review

(A) Location And Design: Bicycle parking should be no farther from the main building entrance than the distance to the closest vehicle space, or fifty feet (50'), whichever is less. Long term (i.e., covered) bicycle parking should be incorporated whenever possible into building design. Short term bicycle parking, when allowed within a public right of way, should be coordinated with the design of street furniture, as applicable.
(B) Visibility And Security: Bicycle parking for customers and visitors of a use shall be visible from street sidewalks or building entrances, so that it provides sufficient security from theft and damage.
(C) Options For Storage: Long term bicycle parking requirements for multiple-family uses and employee parking can be met by providing a bicycle storage room, bicycle lockers, racks, or other secure storage space inside or outside of the building.
(D) Lighting: For security, bicycle parking shall be at least as well lit as vehicle parking.
(E) Reserved Areas: Areas set aside for bicycle parking shall be clearly marked and reserved for bicycle parking only.
(F) Hazards: Bicycle parking shall not impede or create a hazard to pedestrians. Parking areas shall be located so as to not conflict with vision clearance standards. (McCall)

16.20.040.2: SPACES REQUIRED: B. Parking Requirements For Bicycles:

1. Any commercial and industrial development shall include adequate bicycle parking spaces equal to five percent (5%) of automobile parking spaces.
2. All bicycle parking spaces shall be located within fifty feet (50') of the building entrance. Bicycle parking may be located in a building as long as the area is easily accessible to the bicycle.
3. Bicycle parking shall be provided in a well lighted and secure location that is in convenient proximity to the building or employee entrance. The location should be visible from employee work areas and shall not be farther than the nearest employee automobile parking space (excluding disabled parking).
4. Bicycle parking stalls shall be six feet (6') long and two feet (2') wide with an overhead clearance of seven feet (7'). All stalls shall have a five foot (5') accessible aisle.
5. The town of Taos may reduce or eliminate the number of bicycle spaces required when it is demonstrated that bicycle activity will not occur at the location. Such uses include, but are not limited to:
   a. Motor vehicle service and repair establishments;
   b. Personal storage; and
   c. Agricultural uses.

6. If a use is determined to generate an increased volume of bicycle parking, the town of Taos may require additional bicycle parking spaces. Such uses include, but are not limited to:
   a. Park;
   b. Library;
   c. Museum;
   d. Health spa or fitness club; and
   e. Commercial uses located along bike lanes or trails. (Taos)

Bicycle Parking Tied to a Reduction in Vehicular Standards

14.44.200 Bicyclist Accommodations: The planning director may authorize a fifteen percent (15%) reduction in the number of required off street parking spaces for developments or uses that make special provision to accommodate bicyclists. Examples of accommodations include enclosed bicycle lockers, employee shower facilities and dressing areas for employees. A reduction in parking may not be granted merely for providing outdoor bicycle parking spaces. (Coeur d'Alene)

City of Ketchum
Planning & Building

Date: June 14, 2016
To: Mayor Jonas and City Council
From: Micah Austin, Planning and Building Director
Subject: Parking Code Amendments Recommendations

Objective for Parking Code Amendments

The current parking standards are in conflict with the objectives of the Comprehensive Plan and modern principals for creating a livable and multi-modal community. While the city invests in transit services, pedestrian and bicycle infrastructure, and other improvements to create a more walkable and accessible community, the current parking standards promote a car oriented culture by prioritizing the convenience of drivers above the goals of a healthy community. Further, the current standards discourage the mix of retail, restaurant and entertainment uses that create a vibrant, successful community. The old methodologies and approach towards parking are out dated and revisions are long overdue.

The Planning and Building Department conducted research and analysis on the City of Ketchum's current parking regulations and has prepared a list of recommendations for changes. The objective is to accomplish the following:

1. Align the parking regulations with the community's values and the 2014 Comprehensive Plan that requires the community to become less dependent on the automobile and encourages public transit and active modes of transportation
2. Promote uses, such as retail establishments, restaurants, and theaters, that contribute to vitality of Ketchum's downtown.
3. Incentivize community housing.

The proposed revisions are targeted to accomplish one or more of these objectives. The revisions are provided to Council for information only, the next step will be engaging the public in this discussion and seeking input from all community members that are interested in these changes. Following an active public process, staff will present to Council the results of the community outreach and recommendations for changes prior to proceeding to the Planning Commission with amendments to the Zoning Ordinance.

Proposed Revisions to the Parking Code

1. **Off-Street Parking Matrix.** The current parking matrix is outdated and does not reflect current community values or actual parking demands for projects. Staff proposes to simplify the matrix to include three categories: 1) Residential; 2) Commercial; and 3) Exempt Uses. Based on staff's analysis these three categories are adequate to accommodate on-site parking requirements. Generally, staff proposes a minimum standard of 1 space per 1000 square feet of commercial

gross floor area and 1 space per residential unit up to 750 gross square feet. For larger units, more parking space would be required based on the size of the residential units. The exempt uses would be those business activities that are highly desired in Ketchum and disproportionately impacted by current parking regulations.

2. **Parking Demand Analysis**. Staff proposes allowing any development to submit a Parking Demand Analysis if the parking code requirements do not reflect the actual demands of a development. In these cases, a parking demand analysis may be submitted to the Administrator to show the actual parking demands of a particular project. After considering the Parking Demand Analysis, the Administrator may waive any portion of parking requirements. Application requirements for the Analysis will be specific and must quantify actual parking demand and assess availability of on-street or shared parking resources.

3. **On-Site Requirement for All Residential.** During winter, overnight parking is prohibited on streets to allow for snow removal. There is no opportunity for residents to use on-street parking to meet their parking demand. Staff proposes requiring all residential parking to be located on-site and fully accounted for because of parking prohibitions in the winter. The standards would clarify that in no situations will residential parking demands be allowed on-street or off-site.

4. **Exemptions.** Certain uses are beneficial and necessary to maintain the vibrancy and economic vitality of Ketchum's downtown. For that reason, staff proposes exempting the following uses from the parking requirements:
    a. Community housing units (already exempted by code)
    b. Desired uses (incentivized): restaurants, retail and existing assembly.
    c. Any use, except residential, that is within ¼ mile of a structured parking facility**.** At the moment, Ketchum does not have a structured parking facility but this exemption would provide a market incentive for building a structure parking facility.
    d. Other exemptions may be allowed by the Administrator when a Parking Demand Analysis is submitted to show the actual demands of a project are less than required by code.

5. **Parking Reduction through TDM.** The community is moving towards using more public transit and the Comprehensive Plan requires in numerous places that we incorporate transit into zoning decisions and regulations. In response, staff proposes for commercial development allowing for a 25% parking reduction from the minimum standards through the provision of Transportation Demand Measures (TDM) including:
    e. TDM strategies identified in the Warm Springs Base Area Overlay universally for all zones in the City.
    f. Locational factors, such as within ¼ mile of a bus stop or the Wood River Trail.
    g. Provision of shower and lockers facilities.
    h. Provision of bike storage or sheltered bicycle parking.

6. **Bicycle Standards.** The current parking regulations do not recognize bicycle parking infrastructure as an appropriate mode of satisfying parking demands. Staff proposes requiring all uses to provide onsite bike parking spaces equal to 25% of the minimum number of required onsite parking spaces. For example, if four (4) vehicle spaces are required, one (1) bike parking space is required. This would not relieve any vehicular parking requirements but require additional bike parking spaces.

7. **Shared Parking.** While the code currently allows for a Shared Parking Plan, staff proposes expanding on this tool so that it can be used more frequently. A Shared Parking Plan could be submitted as part of the Parking Demand Analysis to accommodate parking requirements. The shared parking plan should also include an agreement between property owners for sharing common parking on private property and would be reviewed by staff. In all cases, staff proposes that all shared parking must be located no less than 300 feet from the project. In no case would the City manage shared parking agreements.

8. **Calculation of Gross Floor Area**. For calculation of parking requirement, staff proposes using Gross Floor Area, as defined by 17.08.020 for calculation parking requirements. This has been an area of confusion for several years and can be easily corrected. In addition to this, staff proposes deducting common area spaces from the calculation to avoid artificially inflated parking requirements.

9. **Surface Lot Restrictions.** As a way to maximize the limited space in Ketchum's downtown, staff proposes prohibiting new surface lots in the CC. For all other zones, new surface lots should be located only in the rear of a building or lot.

Background on Ketchum's Parking Ordinance

Our authority to regulate parking is derived from Idaho State code which permits municipalities to establish a zoning ordinance to manage land use. The purpose of the zoning ordinance is to "promote the health, safety and general welfare" of the public. The scope of most parking regulations is to ensure efficient use of land by requiring property owners to provide onsite parking commensurate with the use of their property. Parking requirements are typically connected to land use categories related to commercial, residential, public and industrial uses and are generally calculated on a square footage or per business/use basis

Ketchum began regulating parking in 1961 when it adopted the city's first zoning ordinance. Over the course of five decades the zoning ordinance was amending 273 times causing regulations to become disjointed, internally conflicted and difficult to navigate. In July of 2015 the city approved major amendments to the zoning ordinance which included consolidating all parking regulations into Chapter 17.125 "Off-Street Parking and Loading." Chapter 17.125 regulates the dimensions for parking spaces, establishes minimum parking requirements for individual land uses, addresses on-street parking credit and provides allowance for shared parking between multiple users. The recommendations for amendments are entirely focused on Chapter 17.125 of the Zoning Ordinance.

Scope of Work

① Review current City policy and code provisions related to parking
② Explore best practices in other communities like Ketchum
③ Recommend options for changes to the parking code.

Peer Review of Best Practices

Aspen, CO
Breckenridge, CO
Carmel, CA
Coeur d'Alene, ID
Crested Butte, CO
Cripple Creek, CO
Frisco, Co
Hood River, OR
Jackson, WY
La Conner, WA
Leavenworth, WA
McCall, ID
Park City, UT
Sandpoint, ID
Santa Fe, NM
Steamboat Springs, CO
Taos, NM
Telluride, CO
Truckee, CA
Vail, Co

Preliminary Recommendations

1. Integrating Transportation Demand Management (TDM)
2. Expanding the application of the shared and in lieu parking provisions.
3. Re-think the land based parking standards for greater flexibility
4. Consider area based standards for the Downtown
5. Review ways parking can be an incentive for the desired uses and mix of housing.
6. Examine ways to de-regulate parking for older or historic structures.
7. Streamline and simplify the parking standards.

TDM Provisions

Coeur d'Alene
- 1 bicycle rack/10 parking spaces
- Rack location requirements
- 15% reduction in vehicular parking for bicycle facilities (lockers, showers, etc.)

McCall
- Bicycle space requirement by land use
- Location and design requirements

Taos
- 5% of required vehicular for parking
- Location, lighting, site requirements
- Flexibility to decrease or increase required bicycle spaces

Santa Fe
- Parking reduction allowed for transit facilities

In Lieu Fee Provisions

Breckenridge
- Fees are dedicated to transit facilities and equipment

Carmel
- Prohibits on-site parking in core. Requires in lieu.
- Fees are dedicated to parking lots outside the Core

Crested Butte
- Allows for in lieu payment over time

La Conner
- 50% of parking can be provided through in lieu

Hood River
- Requires in lieu in certain districts

Sandpoint
- In lieu only allowed in downtown

Shared Parking

- With few exceptions, all surveyed communities allow for shared parking.
- Ketchum is one of the few that allow for a reduction in parking when parking is shared.
- Coeur d'Alene specifies uses for shared parking by hours of operation:

Uses With Daytime Hours	Uses With Evening Hours
Banks	Auditoriums
Business offices	Bars
Churches	Bowling alleys
Grade schools/high schools/daycare centers	Dance halls
Manufacture/wholesale (with limited hours)	Hotels/motels
Medical clinics	Meeting halls
Professional offices	Nightclubs
Retail stores (with limited hours)	Restaurants
Service stores	Theaters

Special Provisions for Certain Districts

Aspen

- Reduction or waiving parking for historic

McCall/Santa Fe

- Parking reductions allowed for downtown

Crested Butte/Jackson

- Allows for on-street credit in core

Coeur d'Alene

- Parking reduction allowed in core and in-fill areas

Frisco

- Allows on-street credit in core for non-overnight uses
- Parking reduction in core

Truckee

- On site parking reduction in core at 0.75/1 space
- No parking for restaurants along river up to 10 spaces

Simplified Parking Matrix

Telluride	
Use Categories	**Parking Required**
Residential	One space/per dwelling
Short term residential	Two spaces/three units
Hotel, motel lodging	Two spaces/three units
Low intensity uses	One space/1000 square feet
High intensity uses	One space/500 square feet
Automotive uses gas stations	One space/pump, two space/rack, one space/repair area
Auto service, car rentals, sales	One space/each vehicle
Hospitals and schools	Set by the P & Z

Exemptions and Reductions

McCall

- Exemption for adequate public transportation
- Exemption in BID and Urban renewal district

Crested Butte

- Grandfathers restaurant and residential uses

Taos

- 20% reduction by approval of the Planning Commission

Breckenridge

- Waiver/ variance granted by Planning Commission

Exemptions and Reductions

Jackson	Park City	Santa Fe	Truckee	Vail
• Independent assessment for some uses	• Reduction through conditional use or master plan	• Reduction by provision of transit • Reduction in core area by special use permit	• Reduction through specific plans, use permits	• Reduction based on studies and criteria • Through creation of "exempt zones"

Summary of Findings

- Many communities have adopted bicycle parking standards and provisions for transit. Few have the standards integrated with parking requirements - a TDM approach.
- Most communities have provisions for in lieu and shared parking.
- Many resort communities have special parking provisions for downtowns, historic districts, or the community's core.
- There are few good examples of communities using parking as an incentive for certain types of land uses.
- There are many examples of simplified code provisions and parking standards.
- There are a variety of means used by the peer cities to exempt, or reduce the parking standards

Recommended Code Provisions

- **Reduce the number of land use categories in the parking matrix.**
  - Develop minimum parking standards with a provision for requiring more parking through an administrative determination.
  - Develop separate, lower parking standards for uses in the downtown.
  - Base parking requirements for housing on size and reduce the minimum requirements to incentivize smaller units.
- **Exempt certain uses from the parking requirements**
- **Allow for parking reduction through TDM**
- **Adopt bicycle parking standards for all uses**
- **Expand shared parking requirements**
- **Improve administrative practices**
- **Surface lot restrictions**

Questions?

Constant Contact Survey Results

Survey Name: 2016_08_12 Survey Parking

Response Status: Partial & Completed

Filter: None

8/26/2016 10:47 AM MDT

How far are you willing to walk to go to the following:

1 = 0 Blocks, 2 = 1-2 Blocks, 3 = 3-4 Blocks, 4 = More

Answer	1	2	3	4	Number of Response(s)	Rating Score*
Grocery Store					295	2.1
Restaurant					288	2.9
Movies					283	2.8

*The Rating Score is the weighted average calculated by dividing the sum of all weighted ratings by the number of total responses.

Would you be willing to pay to park in the following locations:

1 = Yes, 2 = No, 3 = Maybe

Answer	1	2	3	Number of Response(s)	Rating Score*
Parking Garage				293	1.8
Parking Meter				292	2.0

*The Rating Score is the weighted average calculated by dividing the sum of all weighted ratings by the number of total responses.

How many cars/trucks do you own?

Answer	0%	100%	Number of Response(s)	Response Ratio
0			1	<1 %
1			92	31.0 %
2			133	44.9 %
3			40	13.5 %
More than 3			27	9.1 %
No Response(s)			3	1.0 %
		Totals	**296**	**100%**

How many of your cars/trucks do you park in a garage?

Answer	0%	100%	Number of Response(s)	Response Ratio
0			48	16.2 %
1			90	30.4 %
2			109	36.8 %
3			16	5.4 %
More than 3			5	1.6 %
I don't have a garage.			27	9.1 %
No Response(s)			1	<1 %
		Totals	**296**	**100%**

How far are you willing to walk to go to the following:

1 = 0 Blocks, 2 = 1-2 Blocks, 3 = 3-4 Blocks, 4 = More

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0			48	16.2 %
1			90	30.4 %
2			109	36.8 %
3			16	5.4 %
More than 3			5	1.6 %
I don't have a garage.			27	9.1 %
No Response(s)			1	<1 %
		Totals	**296**	**100%**

Do you think there is adequate bicycle parking in the downtown?

Answer	0% 100%	Number of Response(s)	Response Ratio
Yes		182	61.4 %
No		103	34.7 %
No Response(s)		11	3.7 %
	Totals	**296**	**100%**

If no, is it because of the following reasons:

1 = Yes, 2 = No, 3 = No opinion on this question., 4 = I don't ride a bike.

Answer	1 2 3 4	Number of Response(s)	Rating Score*
Lack of Security		135	2.4
Lack of Shelter		135	2.4
Not Enough Locations		148	1.9

*The Rating Score is the weighted average calculated by dividing the sum of all weighted ratings by the number of total responses.

How many days per week do you use the following forms of transportation to reach downtown?

1 = Never, 2 = 1-2 Times a Week, 3 = 3-4 Times a Week, 4 = More than 4 Times a Week, 5 = Every Day

Answer	1 2 3 4 5	Number of Response(s)	Rating Score*
Bus		256	1.3
Bicycle		272	2.1
Walk		276	2.3

*The Rating Score is the weighted average calculated by dividing the sum of all weighted ratings by the number of total responses.

Do you think it is okay for studios and 1-bedroom units to have only 1 parking space?

Answer	0% 100%	Number of Response(s)	Response Ratio
Yes		193	65.2 %
No		47	15.8 %
Neutral		34	11.4 %
No opinion on this question.		18	6.0 %
No Response(s)		4	1.3 %
	Totals	**296**	**100%**

Do you think it is okay for studios and 1-bedroom units to have no requirement for parking spaces if their cars are parked in a private garage?

Answer	0% 100%	Number of Response(s)	Response Ratio
Yes		162	54.7 %
No		61	20.6 %
Neutral		31	10.4 %
No opinion on this question.		38	12.8 %
No Response(s)		4	1.3 %
	Totals	**296**	**100%**

Do you think the following uses should be required to have on-site parking spaces?

1 = Yes, 2 = No, 3 = Neutral, 4 = No opinion on this question..

Answer	1 2 3 4	Number of Response(s)	Rating Score*
Community Housing		290	1.4
Retail Establishments		286	2.0
Places of Assembly		290	1.6
Restaurants		289	2.0

*The Rating Score is the weighted average calculated by dividing the sum of all weighted ratings by the number of total responses.

Do you have any comments you would like to share with us on parking in Ketchum?

147 Response(s)

City of Ketchum
Planning & Building

IN RE:	)	
	)	
Belling Driveway/Landscaping	)	**KETCHUM PLANNING AND ZONING COMMISSION**
Waterways Design Review and	)	**FINDINGS OF FACT, CONCLUSIONS OF LAW AND**
Floodplain Development Permit	)	**DECISION**
	)	
	)	

File Number: #16-070

OWNERS: Phillip Belling, Trustee and Belling Family Trust

REQUEST: Waterways Design Review and Floodplain Development Permit for a driveway reconstruction and a landscaping remodel

LOCATION: 530 Wood River Drive (Ketchum FR SW SE TL 7527 SEC 13 4N 17E)

ZONING: Limited Residential (LR)

OVERLAYS: Floodplain Management Overlay with Floodplain and Floodway subdistricts and Waterways Design Review subdistrict

NOTICE: The following notice was mailed to adjacent property owners on September 27, 2016 and posted in three locations within the City of Ketchum (City Hall, Community Library, Town Square Kiosk):

NOTICE OF SITE VISIT AND CONSIDERATION BEFORE THE PLANNING AND ZONING COMMISSION

Site Visit Date:	October 10, 2016
Site Visit Location:	530 Wood River Drive, Ketchum, Idaho 83340
Site Visit Time:	5:00 PM
Meeting Date:	October 10, 2016
Meeting Time:	5:30 PM, or thereafter as the matter can be heard.
Meeting Location:	City Hall Council Chambers, 480 East Avenue North, Ketchum, Idaho
Project Name:	Wood River Drive Landscape Remodel Waterways Design Review
Project Location:	530 Wood River Drive, Ketchum, Idaho 83340 (Ketchum FR SW SE TL 7527)
Applicant:	Phillip A. Belling
Representative:	Ben Young Landscape Architect
Application Type:	Waterways Design Review/Floodplain Development Permit Update
Project Description:	The applicant is proposing to do a landscape remodel at their existing residence. The landscape remodel is within the floodplain, but there are no proposed structures or work to be executed within the riparian setback. The property is 0.504 acres in size and zoned Limited ResidentiaL (LR).

COMMISSION CONCLUSIONS

1. The applicant requested a Flood Plain Development Permit and a Waterways Design Review for reconstruction of a driveway and a landscaping remodel. The subject property is located at 530 Wood River Drive and contains an existing single family residence, an accessory dwelling unit, patios, decks, a bocce court, landscaping, and natural vegetation. The property is adjacent to the Big Wood River, is located entirely within the 1% annual floodplain, contains riparian area, and contains floodway. Chapter 17.88, Floodplain Management Overlay District (FP) requires that this project received a Floodplain Development Permit and Waterways Design Review approval.

2. In 2002 a Floodplain Development Review permit application was submitted for the property (FP02-011) for the construction of a new single family home, relocation of an existing cabin on the property and use of the existing cabin as an accessory dwelling unit, and removal of several trees in the riparian zone. The Planning and Zoning Commission approved FP02-011 and adopted the Findings of Fact on August 25, 2003. The findings included approval to remove one double-stem cottonwood tree from the riparian area.

The approval for FP02-011 expired prior to a building permit being issued and the Commission reevaluated the application and adopted Findings of Fact approving the project on March 22, 2004. The March 22, 2004 Findings noted that the double-stem cottonwood tree was removed and that while no other trees had been removed from the riparian zone, willows were trimmed to ground level and vegetation in the riparian zone was managed.

3. The applicant proposed the following work as part of this application:

a. Remove the existing concrete paver driveway and replace it with a cobblestone two-track driveway surrounded by grass-pave pavers and a cobblestone driveway apron. The driveway apron will be bisected by a stone paved walkway connecting to a new stone paved patio abutting the guest house;
b. Remove two existing concrete and stone patios at the rear/west of the property, near but outside of the riparian setback, replace the southernmost patio with a sunken garden, replace the northern patio with a reduced-size sand set patio. Each patio will have stone steps leading to the lawn and an 18" or less stone wall on one side. Five (5) new 3-4" caliper Apsens and landscaping boulders will be placed adjacent to the southernmost patio;
c. Construct a rustic boardwalk on piers that will connect the reconstructed patio to an existing deck;
d. Construct gravel pathways connecting to the rear patios, bocce court, and driveway apron;
e. Remove the existing bocce court and construct a new bocce court with a smaller footprint, install two wood block benches adjacent to the new bocce court;
f. Plant three (3) 3-4" caliper Aspens to the northeast of the bocce court; and
g. Revegetate areas in the riparian zone that are not currently naturalized with native vegetation (fifteen (15) 5-gallon Serviceberry Shrubs, twenty-nine (29) 5-gallon Red Twig Dogwoods, eleven (11) 10-gallon Drummond's willows;
    a. Staff noted that there is a discrepancy between trees proposed for removal shown on landscape plan dated November 14, 2002 and included in the Riparian Area Tree Brief that was submitted with the FP02-011 application, removal of which the Commission denied, and the plans dated September 12, 2016, which reflected removal of the trees. The Riparian Area Tree Brief prepared by Bill Josey, Certified Arborist, dated December 30, 2002 and the landscape plan dated November 14, 2002 are attached.

4. There was new fill as part of this project; the applicant proposed to maintain or lower the grades of the driveway, patio, and bocce court, creating a net gain of floodplain volume. The scope of work resulted in 579.8 additional square feet of pervious surface on the property, equating to a 3% decrease in impervious surface on the property, as calculated on Landscape Plan sheet L4.0.

5. As of Monday, October 10, 2016, no written public comment regarding this project was received.

6. Due to the discrepancy between trees shown in the riparian zone on plans submitted with FP02-011 and trees shown to be on the property in the plans dated September 12, 2016 and the fact that the lawn has encroached into the riparian zone, staff recommended conditions stating the riparian setback shall be allowed to naturalize and that that inspections shall be conducted to ensure that condition has been met.

Floodplain Design Review Requirements				
1. EVALUATION STANDARDS: 17.88.050(E)				
Compliant			**Standards and Staff Comments**	
Yes	**No**	**N/A**	**Guideline**	**City Standards and *Staff Comments***
☒	☐	☐	**17.88.050(E)1 FLOODPLAIN DEVELOPMENT /WATERWAYS DESIGN REVIEW**	**Preservation or restoration of the inherent natural characteristics of the river and creeks and floodplain areas. Development does not alter river channel.**
			Staff Comments	*No development was proposed in the river channel or riparian area. Areas of lawn in the riparian setback will be revegetated with native species. Work in the floodplain consisted of upgrading an existing driveway, bocce ball court, and deck. The applicant proposed to maintain or lower the grades of these features, therefore, creating a net gain of floodplain volume.*
☒	☐	☐	**17.88.050(E)2**	**Preservation or enhancement of riparian vegetation and wildlife habitat, if any, along the stream bank and within the required minimum twenty-five (25) foot setback or riparian zone. No construction activities, encroachment or other disturbance into the twenty five foot (25') riparian zone shall be allowed at any time without written City approval per the terms of this ordinance.**
			Staff Comments	*No development was proposed in the riparian setback. Existing lawn will be revegetated with city approved native species.*
☒	☐	☐	**17.88.050(E)3**	**No development other than development by the City of Ketchum or development required for emergency access shall occur within the twenty-five (25) foot riparian zone with the exception of approved stream stabilization work. The Planning and Zoning Commission may approve access to property where no other primary access is available. Private pathways and staircases shall not lead into or through the riparian zone unless deemed necessary by the Planning and Zoning Commission.**
			Staff Comments	*No development was proposed in the riparian setback. Existing lawn will be revegetated with city approved native species.*
☒	☐	☐	**17.88.050(E)4**	**Plan and time frame are provided for restoration of riparian vegetation damaged as a result of the work done.**
			Staff Comments	*No development was proposed in the riparian setback.*
☒	☐	☐	**17.88.050(E)5**	**New or replacement planting and vegetation includes plantings that are low-growing and have dense root systems for the purpose of stabilizing stream banks and repairing damage previously done to riparian vegetation. Examples of such plantings include: red osier dogwood, common choke cherry, service berry, elder berry, river birch, skunk bush sumac, beb's willow, drummond's willow, little wild rose, gooseberry, and honeysuckle.**
			Staff Comments	*Existing lawn will be revegetated with city approved native species.*
☒	☐	☐	**17.88.050(E)6**	**Landscaping and driveway plans to accommodate the function of the floodplain to allow for sheet flooding. Flood water carrying capacity is not diminished by the proposal. Surface drainage is controlled and does not adversely impact adjacent properties including driveways drained away from paved roadways. Culvert(s) under driveways may be required. Landscaping berms are designed to not dam or otherwise obstruct floodwaters or divert same onto roads or other public pathways.**
			Staff Comments	*The applicant submitted a grading and drainage plan that showed the removal and replacement of an existing deck, driveway, and bocce ball court. These features will remain at the current grade or be lowered. This will increase the carrying capacity of the floodplain on this site. Prior to issuance of a building permit, the applicant shall provide civil engineered plans, for evaluation by city staff, showing the following:* • *Minimum % of slopes detailed in the ROW.*

				• *Driveway should follow ROW standards and shall not drain into the street.* • *Private property shall not dewater into the ROW, and the project will need to provide drainage in the ROW.*
☒	☐	☐	**17.88.050(E)7**	**Impacts of the development on aquatic life, recreation, or water quality upstream, downstream or across the stream are not adverse.**
			Staff Comments	*It appears there is no adverse impact from the development on aquatic life, recreation or water quality.*
☒	☐	☐	**17.88.050(E)8**	**Building setback in excess of minimum required along waterways is encouraged.**
			Staff Comments	*This project is a remodel and existing setbacks will be maintained*
☐	☐	☒	**17.88.050(E)9**	**The top of the lowest floor of a building located in the 1% annual chance floodplain shall be a minimum of twenty-four inches (24") above the base flood elevation of the subject property.**
			Staff Comments	*No building construction is proposed as part of this action.*
☐	☐	☒	**17.88.050(E)10**	**The back fill used around the foundation in the floodplain provides a reasonable transition to existing grade, but is not used to fill the parcel to any greater extent. Compensatory storage shall be required for any fill placed within the floodplain. A LOMA-F shall be obtained prior to placement of any additional fill in the floodplain.**
			Staff Comments	*No fill was placed as part of this project. The applicant proposed to maintain or lower the elevations of new landscape and hardscape features.*
☒	☐	☐	**17.88.050(E)11**	**All new buildings shall be constructed on foundations that are approved by a licensed professional engineer.**
			Staff Comments	*No new buildings are proposed.*
☒	☐	☐	**17.88.050(E)12**	**Driveways comply with effective Street Standards; access for emergency vehicles has been adequately provided for.**
			Staff Comments	*Street and Fire Departments commented on this application. As a condition of approval, the building permit application addressed all the Street and Fire Department comments as listed in the conditions below.*
☒	☐	☐	**17.88.050(E)13**	**Landscaping or revegetation conceals cuts and fills required for driveways and other elements of the development.**
			Staff Comments	*All disturbed areas shall be revegetated.*
☐	☐	☒	**17.88.050(E)14**	**(Stream Alteration) The proposal is shown to be a permanent solution and creates a stable situation.**
			Staff Comments	*N/A*
☐	☐	☒	**17.88.050(E)15**	**Stream Alteration) No increase to the 100-year floodplain upstream or downstream has been certified by a registered Idaho engineer.**
			Staff Comments	*N/A*
☐	☐	☒	**17.88.050(E)16**	**(Stream Alteration) The recreational use of the stream including access along any and all public pedestrian/fisherman's easements and the aesthetic beauty is not obstructed or interfered with by the proposed work.**
			Staff Comments	*N/A*
☐	☐	☒	**17.88.050(E)17**	**Where development is proposed that impacts any wetland, first priority shall be to move development from the wetland area. Mitigation strategies shall be proposed at time of application that replace the impacted wetland area with a comparable amount and/or quality of new wetland area or riparian habitat improvement.**
			Staff Comments	*N/A*
☐	☐	☒	**17.88.050(E)18**	**(Stream Alteration) Fish habitat is maintained or improved as a result of the work proposed.**
			Staff Comments	*N/A*

☐	☐	☒	**17.88.050(E)19**	**(Stream Alteration) The proposed work is not in conflict with the local public interest, including, but not limited to, property values, fish and wildlife habitat, aquatic life, recreation and access to public lands and waters, aesthetic beauty of the stream and water quality.**
			Staff Comments	*N/A*
☐	☐	☒	**17.88.050(E)20**	**(Stream Alteration) The work proposed is for the protection of the public health, safety and/or welfare such as public schools, sewage treatment plant, water and sewer distribution lines and bridges providing particularly limited or sole access to areas of habitation.**
			Staff Comments	*N/A*

CONCLUSIONS OF LAW

1. The City of Ketchum is a municipal corporation organized under Article XII of the Idaho Constitution and the laws of the State of Idaho, Title 50, Idaho Code.

2. Under Chapter 65, Title 67 of the Idaho Code, the City has passed a land use and zoning code, Title 17.

3. The Commission has authority to hear the applicant's Water Ways Design Review Application and Flood Plain Development Permit pursuant to Chapter 17.88 of Ketchum Code Title 17.

4. The City of Ketchum Planning Department provided adequate notice for the review of this application.

5. The project **does** meet the standards of approval under Chapter 17.88 of Zoning Code Title 17.

DECISION

THEREFORE, the Ketchum Planning and Zoning Commission **approves** this design review application this Monday, June 27th, subject to the following conditions:

1. Waterways Design Review/ Floodplain Development Permit approval shall expire one (1) year from the date of signing of approved Findings of Fact per the terms of KMC, Section 17.88.050.G, Terms of Approval;

2. This Waterways Design Review and Floodplain Development Permit approval is based on the plans, as dated in the list of attachments above, and information presented and approved at the meeting on the date noted herein. Any building or site discrepancies which do not conform to the approved plans will be subject to removal;

3. Pursuant to Chapter 17.88.050.C, no chemicals or soil sterilants are allowed within 100 feet of the mean high water mark. No pesticides, herbicides, or fertilizers are allowed within 25 feet of the mean high water mark unless approved by the City Arborist 5. All applications of herbicides and/or pesticides within one hundred feet (100') of the mean high water mark, but not within twenty-five feet (25') of the mean high water mark, must be done by a licensed applicator and applied at the minimum application rates. Application times for herbicides and/or pesticides will be limited to two (2) times a year; once in the spring and once in the fall unless otherwise approved by the city arborist. The application of dormant oil sprays and insecticidal soap within the riparian zone may be used throughout the growing season as needed;

4. Prior to commencement of any work in the riparian setback, a silt fence shall be installed to keep all silt and debris out of the Big Wood River. Said fence shall remain in place for the duration of the riparian landscaping work;

5. All excavated materials must be exported off site;

6. The riparian plantings shall conform to the application and Landscape Plan sheet L7.0, dated September 12, 2016, and shall be inspected for approval by the Planning and Building Department staff upon completion of the project;

7. No maintenance, including the mowing, trimming, and removal of vegetation, and no construction activities, encroachment, or disturbance within the riparian zone shall take place without written approval from the Planning and Building Department per the terms of Chapter 17.88, Floodplain Management Overlay Zoning District;";

8. A follow up inspection to confirm compliance with the conditions shall occur two (2) years after the adoption of the Findings of Fact. Planning and Building Department staff may schedule subsequent inspections to ensure that the riparian zone is not maintained and is allowed to naturalize;

9. A permit is required for any subsequent work in the riparian setback occurring after the duration of this approval.

10. Any irrigation system installed shall be a temporary installation and shall be removed within two years of completion of the landscaping installation;

11. The above project shall meet all 2012 International Fire Code requirements in addition to specific City Building and Fire Ordinances.

12. Approved address numbers shall be placed in such a position to be plainly visible and legible from the road fronting the property. Numbers and letters shall be a minimum of four (4) inches tall, contrast with their background and be positioned a minimum of forty-eight (48) inches above final grade. Vehicle parking and material storage during construction shall not restrict or obstruct public streets or access to any building. A minimum twenty-foot travel lane for emergency vehicle access shall be maintained clear and unobstructed at all times. All required Fire Lanes, including within 15 feet of fire hydrants, shall be maintained clear and unobstructed at all times.

13. An approved access roadway per 2012 International Fire Code Appendix D (www.ketchumfire.org) shall be installed prior to any combustible construction on the site. The road shall be a minimum of twenty (20) feet in width and capable of supporting an imposed load of at least 75,000 pounds. The road must be an all-weather driving surface maintained free, clear, and unobstructed at all times. Grades shall not exceed 7%. Dead end access roadways exceeding 150 feet in length shall be provided with an approved turnaround. Gates, if installed, are required to be siren activated for emergency vehicle access.

14. The right-of-way (ROW) should be brought up to the new ROW standards and the cable box or utility box at the south end of the ROW should be moved back to the property line by the utility company. Plans of the ROW work will need to be submitted with the building permit application and ROW plans will need to be approved by the city before any ROW work can take place;

15. If a curb stop is present in the construction area it will need to be protected with a street ring/valve box from snow plowing or traffic.

Findings of Fact **adopted** this 24th day of October, 2016.

Steve Cook
Planning and Zoning Commission Chairperson

Planning and Zoning

Regular Meeting

~ Minutes ~

480 East Avenue North
Ketchum, ID 83340
http://ketchumidaho.org/

Rachel Martin
(208) 726-7801

Monday, October 10, 2016 | **5:30 PM** | **Ketchum City Hall**

Commissioners Present:	Jeff Lamoureux, Commissioner Steve Cook, Commissioner Erin Smith, Commissioner Betsy Mizell, Commissioner
Commissioners Recused:	Steve Cook, Chairperson
Staff Present:	Micah Austin, Director of Planning & Building Brittany Skelton, Senior Planner Keshia Owens, Planning Technician
	Members of the Public

1. 5:00 PM SITE VIST: Belling Driveway/Landscape Remodel Waterways Design Review

2. 5:30 PM - CALL TO ORDER: City Hall, 480 East Avenue North, Ketchum, Idaho

Commissioner Lamoureux called the meeting to order at 5:37 PM.

3. PUBLIC COMMENT - Communications from the public for items not on the agenda.

4. COMMUNICATIONS FROM STAFF

a. The applicant is proposing to reconstruct a driveway and remodel landscaping at their existing residence. The property is entirely within the floodplain and contains floodway and riparian zone, but there are no proposed structures or work to be executed within the floodway or riparian setback. The property is 0.504 acres in size and zoned Limited Residential (LR).

Skelton said that there is an existing single family home and an existing accessory dwelling unit on the site and the entire property is in the floodplain. She also added that there is also flood way on the property. She explained that the proposal for the project is to remove the existing driveway and replace it with a two-track driveway, which would reduce the amount of pervious surface on the property. She then stated that a bocce court will be added in and an existing deck will be replaced and the entire riparian area will be revegetated. She then commented that because the property is in the floodplain, staff recommends that in 2 years a follow up site visit be conducted. She also added the condition that the right of way be maintained and brought up to current standards.

Ben Young, representing the applicant, said that the report is good and they will interface with the City Engineer before the project begins. He also stated that he thinks this is a good project for approval.

Commissioner Lamoureux said that there should be a condition that in two years, staff should check that temporary irrigation has be removed and that there are no chairs.

Commissioner Mizell moved to approved this project, Belling Driveway/Landscaping Waterways Design Review and Floodplain Development Permit, because does meet the standards for approval under Chapter 17.88 of Ketchum Code Title 17 with conditions one through fifteen.

b. Continued from Monday June 13, 2016, Monday June 27, 2016, Monday July 11, 2016 and Monday, July 25, 2016, Ketchum, ID (Ketchum AM Lot 5A Block 30 18,590 SF). The applicant is proposing to construct a motor vehicle fueling station with accessory food service. The property is 0.435 acres in size and zoned Light Industrial-1 (LI-1).

i. "Bracken Station Traffic Impact Study Updated" dated October 3, 2016

COMMENTS:

Commissioner Lamoureux said that this is to discuss the new information which was submitted by the applicant and is included in the report.

Applicants' comments:

- Ned Williamson, representative, said that the Commission was very candid in their deliberation and Bracken asked that new information on circulation and pedestrian safety will be considered.
- Steve Cook, representative, said that considering onsite and offsite traffic concerns, some corrections to the site plan have been made. He said that some parking was eliminated and made into snow storage, handicap parking was moved, and much of the outdoor dining and trellis was eliminated. He added that a place to hangout has been eliminated by no longer including the outdoor dining. He also said that they gave clarity to the different visitors to the site and the gas station has become more improved. He later stated that there will be no taco trucks onsite and added that no project that in all the years he has lived in Ketchum has been this scrutinized. He also explained that what was presented is the worst-case scenario and will not happen very often.
- Ryan Hales, Hales Engineering, gave an overview of previously submitted traffic impact studies and said that traffic was counted at two different time periods- one over a holiday weekend and the Thursday before. He said that different study years were also analyzed- 2016, 2020, and 2026 and data collection was finished in September. He then explained that the Chevron in Hailey was studied and said that vehicle classification was taken into consideration. He later commented that for the pedestrian analysis there were no pedestrians on the first observation and said that ITD was excited about adding a rectangular flashing beacon at the Ninth Street intersection.
- Sam Stahlnecker, Benchmark Associates, said that various vehicles were counted onsite and data was collected during a holiday weekend, which would have increased traffic rates and don't happen every weekend. She explained that all their exhibits take the most congestion into consideration and stated that the site functions without impacting the safety of the highway. She also said that they have a letter from Keller Strauss that guarantees delivery in the early morning. She then added that the applicant has proposed to use gas from Shell Oil, which can be sourced from Boise and Pocatello.
- Roy Bracken, applicant, said that the fuel brought by Base Camp is from Montana because that's the only place you can get 91% octane fuel. He explained said that even in snow if they send a truck from Burley fuel can be delivered before 4 AM and commented that his site will be 2,500 square feet and will have more storage space than Atkinsons. This will also allow delivery trucks to come less often than they would at any location in town. Bracken explained there are eight fueling positions and one pump would be able to fuel twelve cars in an hour and this means that the site can move 4 times than what is necessary.

Staff's comments:

- Skelton said that there seemed to be only one option for passenger vehicles towing an RV to circulate to circulate onto the site and queue. She then noted that this it depends on pump one and two being open at the same time. She also stated that there is only one way in and one way out for Bracken Station and twenty-six of the vehicles of the AM peak hour were commercial. She explained that if the Commission chooses to approve the project, staff recommends that it is done with conditions.

Public comments:

Support:

- Brian Emerick, son of current property owners, said that he is here to stick up for his parents' property rights. He said that the Commission will hear from a lot of NIMBYS, as Dusty doesn't want competition and Barbi doesn't want a gas station next to her mini-mansion. He also said that staff has done a hatchet job on this and if you look at the reality of life in Ketchum you will see how much of a mess Veltex is. He also stated that he spoke with Chief Kassner and Chief Elle and they both stated agreed that the site is completely safe.
- Richard Sharbedan, Ketchum resident, said that he has come to accept growth and the new hotels are for the City's prosperity. He added that being a citizen of this town for many years, he lives on Main Street for because he chooses too. He noted that he doesn't have a right to blast the City for growth and the future prosperity of the City, as he wants tourists to come in. He then said that we should let this person try and prosper and let them create a positive impact on this town. He also stated that there isn't one gas station that would jump through the needles that staff and the Commission has put them through.
- Ken Hills, Ketchum resident, said that the traffic going north at 7:00 pm is almost nonexistent, so comparing it to Hailey just isn't the same. He also commented that it would be nice to have a place to change a baby instead of a portable toilet. He then commented that the gas stations that we have now are small and you can barely get an SUV in there. He also said that he is not for gas stations, but if the code says it fits and the project has been scrutinized then the Commission should be careful in its decision.

Opposed:

- Dan Thompson, Thompson Engineers Garden City, ID, said he had been retained by residents of Frenchman's Place and Barbi Reed and Dusty Wendland. He started by pointing out that none of the plans were stamped by a license engineer so there's no way to tell if the plans were prepared by a professional engineer or not. He then said that this is an ITD right of way and they have the sole authority to grant access to it, but the City needs to be aware of the multiple exceptions to their access policy. He also noted that the arrival rate, service rate, and the number of service position need to be taken into consideration. He said that the service rate is five vehicles and the service rate is eight, but the problem is the arrival rate and the service rate are variable. He also pointed out that no vehicle is ever shown coming from the south and the right-turning vehicle will not be able to turn without entering into the other lane.

  Thompson provided the following notes for the Commission:

  There are exceptions to ITD Policy

  The site is poorly design and has a conflicting entrance

  The site is not pedestrian friendly

  There is constrained site that does not allow fluid motion

- Jim Laski, representing neighboring property owners, said that neighbors have property rights as well and the Commission has been given a through letter stating why this should be denied. He also said that despite receiving numerous review the applicant still has a "just trust me" attitude. He also stated that despite approval or denial, the project will be appealed to City Council.
- Ruth Lieder, Ketchum Resident, said that there was different measurement used for the project, with the primary one being the box truck at thirty feet. She added that today, these different types of trucks aren't staying at thirty feet. She added that these types of trucks are frightening and here to stay, but they will only continue to get longer.
- Joellen Collings, Ketchum, said that she has noticed that traffic is getting very heavy in front of Frenchmen's and she is also very worried about traffic backing up and people going too fast. She then stated that they have a right to make money with their property, but she also has a right to not feel danger and excessive noise.
- Richard Bottelcini, Ketchum resident, said that of course he is a NIMBY because he does not want their backyard be a gas station. He also stated that 1-4am deliveries with tractor trailers in tandem and constant delivers is another reason why he is a NIMBY. He then said that the proposed gas station is unwarranted, ugly, and dangerous and he is imploring the Commission to not upset the community any further.
- Jane Batey, Ketchum resident, said that we all have a point of view, which she respects. She noted that there has been no mention of garbage trucks going in or out to access the dumpster, safety access, propane tank areas, accessing the property through the alleyway, wheelchair access, and snow.
- Kurt Eggers, Ketchum resident, said that Mr. Thompson highlighted a few of the things that just don't work. He noted that they only have one exhibit with the car and trailer fueling at pumps one and two, but never actually showed it exiting from there and if they did it would show the trailer hitting the pump. He also noticed the fact that this project is jammed up in the right of way and this points out that the project is too big for such a small space. He also said that if ITD came through and widened the highway they would lose a lot of the space they have for queuing. He then stated that he has never used Tenth Street more than he has now and he didn't see any exhibits on how this proposal addresses the Tenth Street intersection. He then explained that the alley should be opened to the public and that he never gets gas in Ketchum because of the price.
- Kathy Gierky, Ketchum resident, said that she wrote a letter to the Commission and she is afraid of losing her property rights. She then commented that it surprises her to hear that people don't understand what Light Industrial means. She explained that Roy Bracken has done everything he can do to comply with the Zoning Ordinance, so it comes down to people's opinion and we should ask ourselves we if the project complies with the zoning code.

Applicants' comments:

- Ryan Hales, Hales Engineering, said the stamped plans will be given to the Commission
- Steve Cook, representative, said that the challenge is to look at the project from a city planning point of view and for the future. He said that we are not like Twin Falls or Boise with large boulevards, but we are a resort community and Chevron is looking to accommodate to this. He added that this will beautify the north entrance of town and it is the Commission's responsibility to think of the future.

- Ned Williamson said that this project will make a nonconforming property conforming and it will be state of the art.

Commissioner Smith motioned to close public comment and continued deliberation to a date certain of October 24, 2016.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Erin Smith, Commissioner
SECONDER:	Betsy Mizell, Commissioner
AYES:	Cook, Doty, Lamoureux, Smith, Mizell

ii. – "Ketchum Gas Station Traffic Impact Study Updated" dated May 2016

Commissioner Smith motioned to close public comment and continued deliberation to a date certain of October 24, 2016.

iii. – Public Comment Received June 25, 2016 through October 4, 2016

Commissioner Smith motioned to close public comment and continued deliberation to a date certain of October 24, 2016.

5. CONSENT CALENDAR

a. Lift Tower Lodge (#15-006) Findings

COMMENTS:

Page 8 of 8, Condition number six needs to be removed

Commissioner Lamoureux moved to approve findings and Commissioner Smith seconded.

b. September 26, 2016 Minutes

COMMENTS:

Commissioner Lamoureux motioned to approve minutes with revisions as noted and Commissioner Mizell seconded.

6. FUTURE PROJECTS AND NOTICING REQUIREMENTS

Bracken Station, Next Stage and the Parking Ordinance will be on the October 24, 2016 meeting.

7. STAFF REPORTS & CITY COUNCIL MEETING UPDATE

Austin said that the next City Council meeting will be the second reading of the Sign Ordinance. The parking ordinance and off site vendors will also be at this meeting.

8. Commission reports and ex parte discussion disclosure

9. ADJOURNMENT

Commissioner Mizell and Commissioner Smith seconded.

Steve Cook
Planning and Zoning Commission Chairperson