

SUN VALLEY

VILLAGE MASTER PLAN

07.03.2024

HART HOWERTON
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1

INTRODUCTION

1 INTRODUCTION

PURPOSE OF THIS MASTER PLAN DEVELOPMENT

The Sun Valley Village Core occupies approximately 61 acres at the heart of Sun Valley Resort and is designated a Specific Plan Area (SPA) by the City of Sun Valley 2015 Comprehensive Plan (Comprehensive Plan). The Comprehensive Plan recognizes the Sun Valley Village as the primary center of commerce and community vitality in the City and requires that before significant development takes place within the SPA, a Village Core SPA master plan be approved by the City. This document is intended to fulfill that requirement while establishing a guiding vision for future improvements.

As a significant and prominent SPA, the Sun Valley Resort Village Core requires detailed master planning and is subject to compliance with the City of Sun Valley Code regulations and guidelines to ensure the Goals and Objectives of the Comprehensive Plan are achieved. This MPD seeks to guide development to address topics including conceptual land use, building mass and character, view protection, an integrated transportation and parking system, and workforce housing. The plans and renderings shown throughout this document are conceptual only and specific details for all concepts expressed will be refined through the City's Design Review process.

The concepts presented here have been informed by discussions with the Holding Family, resort leadership, architectural and planning consultants, and the City of Sun Valley Community Development professionals. This document identifies specific near-term improvements (village commercial core buildings, village parking, Olympic Pool area) and longer-term items (hotel/lodging, conference facilities, back of house, road reconfiguration) where land use is assigned to specific locations, but for practical reasons, less detail exists.

Continuous improvement is essential for Sun Valley Resort to maintain its premier status. Many thoughtful Village improvements have been completed in recent years including renovation of the Sun Valley Lodge and Sun Valley Inn, and creation of the Pavilion. Many older facilities, including the former Moritz Hospital, have been cleared from the SPA. We believe the concepts in this plan identify needed improvements which will invigorate the existing Village, confirm areas for long-term expansion of our core businesses while honoring the unspoiled character and natural beauty that have long been the most cherished aspects of Sun Valley Village.

PROJECT LOCATION AND CONTEXT

Setting

The Sun Valley Village Core SPA (Plan Area) is located in the City of Sun Valley within Blaine County in Idaho. The Plan Area is located approximately 154 miles northeast of Boise, Idaho, 152 miles northwest of Idaho Falls, Idaho and 297 miles northwest of Salt Lake City, Utah. The Plan Area is accessed by U.S. Highway 75 from Twin Falls, Idaho, 82 miles away. The nearest airport (Friedman Memorial Airport) is located in Hailey, 13 miles to the south on U.S. Highway 75.

The Plan Area is located a short distance from Dollar Mountain Ski Area, with its popular children's teaching facility and terrain parks. Bald Mountain is a 10 minute drive away (approximately 2 miles to the west) in the City of Ketchum, with the closest access to the mountain through the River Run Plaza and Day Lodge on the east side of the mountain. Bald Mountain caters mainly to intermediate through expert skiers.

At an elevation of 5,950 feet above sea level, the stunning backdrop of the Pioneer, Boulder and Smoky Mountains surround Sun Valley Village. The resort is situated along Trail Creek, which flows to the west and joins the Big Wood River at the River Run base of Bald Mountain.



Figure 1.1 Regional Context



Figure 1.2 Local Context



Figure 1.3 Site Context

SITE BACKGROUND

Union Pacific Ownership (1936-64)

The Sun Valley Resort was conceived by W. Averell Harriman, Chairman of the Union Pacific Railroad, as America's first winter destination resort. The founding of the resort occurred at a time when railroad travel made it possible to reach remote locations from major cities in relative comfort and speed and coincided with the burgeoning popularity of alpine skiing as a winter pastime in the United States. With the assistance of European associates familiar with the favorable environmental conditions required for a ski destination, Harriman and Union Pacific eventually settled on the Wood River Valley as an ideal location for the project.

In 1936 the Union Pacific Land Company purchased nearly 4,000 acres of what was then the Brass Ranch property as the site for the new project. Harriman's vision took shape as a luxurious, uniquely western mountain retreat that was loosely modeled on European ski resorts and smaller scale ski hotels in the eastern United States. Named the Sun Valley Lodge, the project set the standard for American destination hotels and attracted an exclusive clientele that made it instantly famous. In the years prior to WWII, additional structures were added, including the Challenger Inn (now the Sun Valley Inn), Opera House, Ice Rink, and three guest cottages that are still in use today. Alpine influences are evident in the appearance of these buildings, which were designed in the style of a 'Tyrolean village' and have an appealing, romantic character.

Sun Valley Resort was closed during WWII, and from July 1943 until the end of 1945, served as a Naval Convalescent and Special Hospital providing medical and rehabilitation services to over 6,500 returning Pacific veterans.



View of Sun Valley Resort from Penny Hill (1953)



View Looking North toward the Sun Valley Inn from the Baldy Bus Loop (1946)



View of the Village (1949)

Janss Corporation Ownership (1964-77)

Under the ownership of the Janss Corporation (1964-77), the village that Harriman started was expanded with additional amenities and buildings that gave the resort more year-round appeal for guests and locals alike. In addition to the 1930s 'Tyrolean' buildings, many of the Janss-era village buildings are still in use today. It was also during this time that the local community saw significant growth, including the first condominiums, major mountain expansion, golf course expansion, and other developments take form in the valley surrounding the resort village.

Holding Family Ownership (1977-Present)

Acquired by the Holding family in 1977, the resort has seen extensive facilities renovation, infrastructure investment and landscape enhancements, all with an emphasis on quality and permanence. Both Dollar and Bald Mountains have received extensive investment in state-of-the-art lifts, snowmaking and lodges. The Village has seen the addition of the Sun Valley Pavilion and a complete renovation of the historic Sun Valley Lodge and Sun Valley Inn. All of this has been accomplished by building on the tradition of reinvention, while maintaining focus on preserving the special character of Sun Valley. Additionally, the original employee dormitories have been removed from the Village SPA and replaced with modern facilities on the adjacent Gateway SPA. The original Moritz Hospital was also removed from the Village SPA and replaced with a modern facility south of Ketchum.



Sun Valley Inn Viewed from the Duck Pond (1936)



View of the Opera House and Sun Valley Inn from the Lodge (1946)

EXISTING CONDITIONS

The Plan Area is comprised of approximately 61 acres owned by the Sun Valley Company. The Area is bordered to the north by the Trail Creek Golf Course, to the east by the Wildflower condominium complex and West Lake Road, to the south by the Dollar Road and Cottonwood condominiums and to the west by the Trail Creek Road and the White Clouds Golf Course. Trail Creek Road bifurcates the Plan Area with development to the west and east, with major access points at the Lodge Entry Lane and the Inn Service Road, and Moritz Road. Dollar Road runs east/west along the southern edge of the Plan Area with an access point at West Lake Road. The Plan Area is accessed from the east side by Old Dollar Road.



View of the Opera House from across the Duck Pond



View of the Sun Valley Inn Looking West



View of the Sun Valley Lodge Looking South

Legend	
Building #	Building Name
1	Laundry
2	Upper Garage / Golf / Grounds
3	Sinclair
4	Sawtooth Room
5	Service Garage
6	Maintenance
7	Construction Office / Security
8	Cedar Dorm
9	Canada Building
10	Wyoming Building
11	Inn Kitchen / Upper 5 Housing
12	Conference Center
13	Playschool
14	Post Office
15	Signature Gifts/Sales/Marketing
16	The Place / Administration
17	Sun Valley Inn*
18	Tennis Center Pro Shop
19	Olympic Pool Lockers
20	Village Retail Building
21	Brass Ranch
22	Aspen Willow Building
23	Young Summer
24	Boiler Room
25	Preview Center
26	Guest Center
27	Opera House*
28	Pete Lane's
29	Sun Valley Lodge*
30	Guest Cottage
31	President's Cottage
32	Harriman Cottage
33	Pavilion
34	Skate Shop
35	Indoor Ice Rink
36	Outdoor Ice Rink*

* Special Site per Comprehensive Plan



Figure 1.4 Existing Conditions

Existing Zoning and Land Use

The Plan Area is currently zoned as Commercial Center with a Resort Commercial land use designation (see Figures 1-3 and 1-4). The Plan Area is largely composed of the historic resort campus and retail village, landscaped resort grounds, parking and back-of-house areas that support the operational requirements of the resort.

These include:

- Guest lodging facilities, notably the Sun Valley Lodge*, Sun Valley Inn*, Harriman Cottage, Presidents Cottage, and Guest Cottage;
- Food & Beverage facilities, including freestanding restaurant buildings and dining and bar facilities integrated within the Sun Valley Lodge and Inn;
- Retail facilities, located primarily within the resort village;
- Resort guest and public amenities, including swimming pools, tennis and pickleball court facilities, the Opera House*, the R.E. Holding Pavilion, indoor and Outdoor Ice Rinks*;
- Meeting facilities; including a mix of conference and ballrooms, as well as extensive lawn areas for outdoor events;
- Parking areas that serve resort guests, public village retail, public events, and resort employees,
- Employee facilities, including employee dormitories and dining facilities; and
- Back-of-House facilities, including storage, laundry, kitchen, maintenance, and administrative buildings.

* Identified as a Special Site in the 2015 Update.



Figure 1.3 Existing Zoning

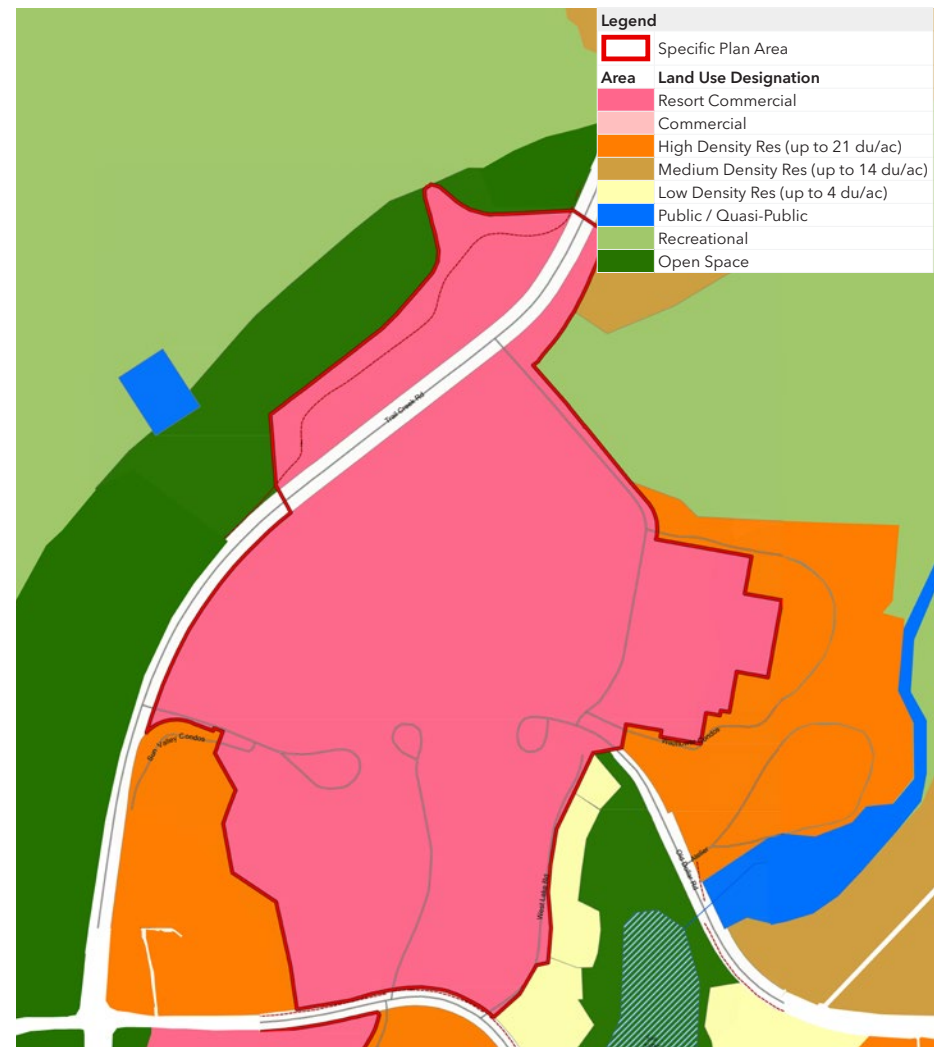


Figure 1.4 Existing Land Use

2

VISION

2 VISION

RELATIONSHIP TO THE COMPREHENSIVE PLAN

The vision and guiding principles of this master plan reinforce the Principles and Goals established by the Comprehensive Plan:

PRESERVE THE UNIQUE CHARACTER OF SUN VALLEY

Goal 1 - Preserve and Protect Natural and Scenic Resources, the Environment, and Open Spaces.

Goal 2 - Promote the Health of the Area's Resort Economy.

Goal 3 - Foster Social, Economic, and Educational Diversity and Protect the Vitality and Cultural Heritage of Sun Valley.

Goal 4 - Develop a Plan to Comprehensively Manage Water Resources.

ENCOURAGE GROWTH AND MANAGE DEVELOPMENT

Goal 5 - Promote Development That Honors Private Property Rights, is Sensitive and Complementary to Adjacent Properties, and Respects the Natural Scenic Setting and Views.

Goal 6 - Provide for Necessary and Appropriate Public Facilities, Services, and Educational Opportunities to Serve Existing Populations and New Growth.

Goal 7 - Support the Continued Development of an Integrated Transportation System That Promotes a Recreationally-Active Community, Encourages Non-Motorized Transportation, and Reduces Congestion and Air Pollution.

FOSTER REGIONAL COOPERATION

Goal 8 - Promote Partnerships with Neighboring Communities, Businesses, Agencies, and Organizations to Advance the City's and the Region's Social, Cultural, Economic, and Environmental Health.



View Looking Southwest towards the Opera House Illustrating Conceptual Improvements

VISION

The vision statement in the Comprehensive Plan offers the following guidance: **“sustain scenic beauty, a sense of community and a world renowned year round resort to make the City of Sun Valley a highly desirable place to live, work, play and visit. Its recreational amenities, pristine mountains and vistas, clean air and water are highly valued.”**

In conjunction with the Comprehensive Plan, this Master Plan establishes the following principles and objectives for future improvements and development of the Sun Valley Resort:

- **Preserve the Village’s “special sense of place”**- Draw inspiration from its natural setting and the extraordinary history of Sun Valley, and
- **Builds upon the Resort’s famous world-class amenities and experiences.**

As shown on Figure 2.1- Proposed Concept Plan*, improvements contemplated in this plan take the form of nearer-term priorities, which include:

- Village parking lot renovations,
- renovation or replacement of existing Village buildings,
- circulation enhancements,
- renovations to the Olympic Pool and Tennis Complex, and
- new food and beverage and retail offerings for resort guests and local residents.

As part of a longer-term vision, areas for future lodging and event space expansion are identified. Refer to Figure 2.2 Phasing for nearer-term and longer-term improvement areas.

* Note: All figures and illustrations shown are conceptual and illustrative only. Final locations of improvements will be refined through the City’s Design Review process.

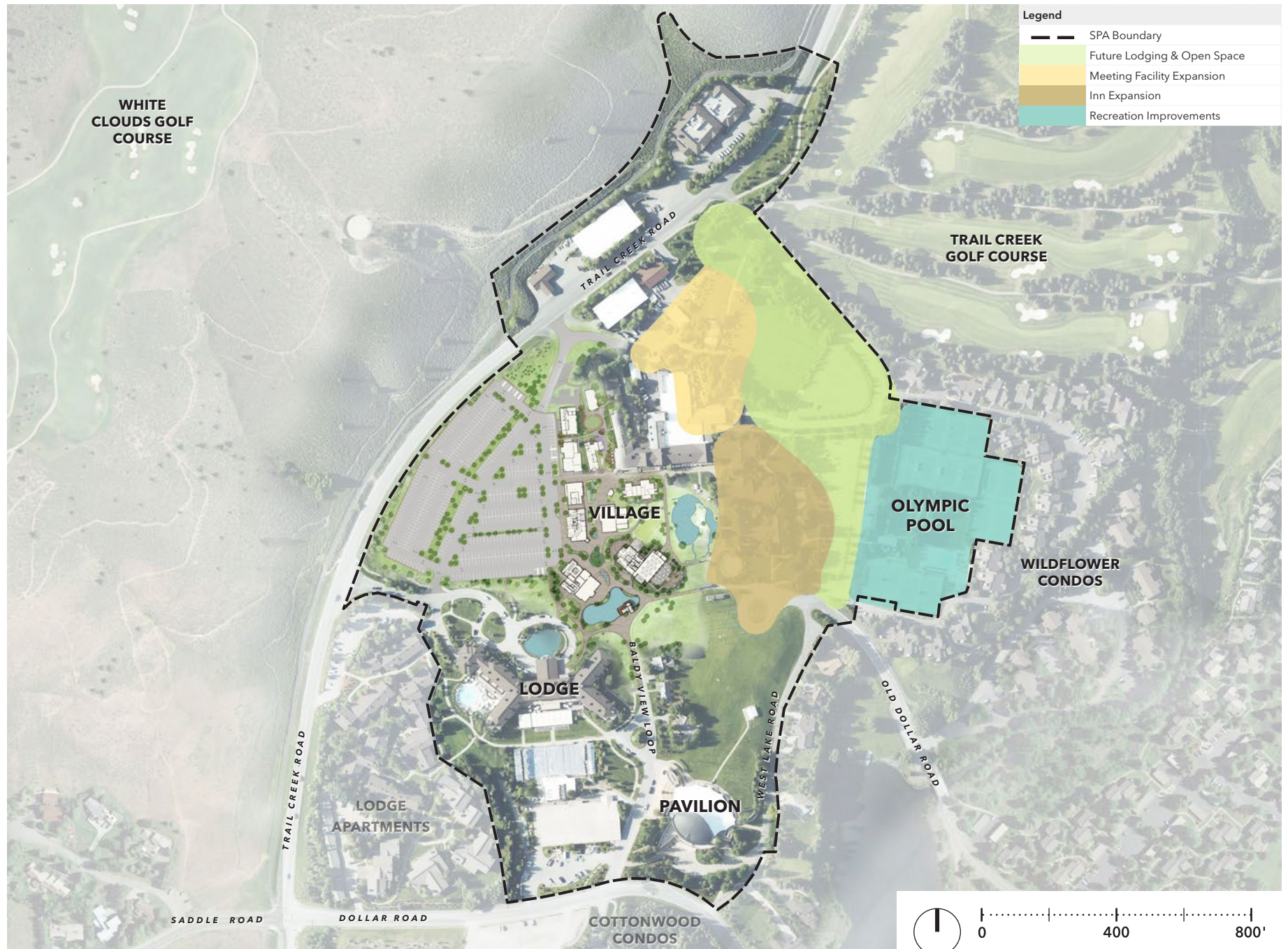


Figure 2.1 Proposed Concept Plan

MASTER PLAN GUIDING PRINCIPLES

The primary focus of this planning effort is to identify shorter term improvements and longer term land use priorities for the Sun Valley Village SPA and to fulfill the requirement for an approved SPA Master Plan.

A sense of openness and natural beauty is central to the village experience. The walkways, ponds and brooks combined with extensive landscaping create a relaxed, human-scale experience. Impressive views to Dollar and Bald Mountain add to the beauty and sense of openness. Stewardship of these attributes will remain important.

Quality facilities and attention to detail are hallmarks of Sun Valley Resort. The lodges, dining facilities, the Pavilion and resort grounds are among the amenities that exemplify a continuing passion for excellence.

The village will remain a friendly, welcoming place for the community, guests and team members and “the primary center of commerce and community vitality.”

MASTER PLAN OBJECTIVES

Objectives include:

- Enhance and expand the physical and environmental landscape qualities that make the resort special;
- Improve operational efficiencies;
- Reinforce connections and synergy between the key locations within the resort experience;
- Introduce/ revive resort offerings;
- Refresh lodging options for new and existing customers;
- Plan for the next generation of development to design and construct buildings that are complementary to the quality of existing legacy buildings including Special Sites as identified by the Comprehensive Plan.

PHASING

Phasing for future improvements may consist of a two-step sequence, focused to the northern portion of the Plan Area (Figure 7-1). A general description of improvements for each phase are listed below:

- **Phase I:** Architectural and landscape improvements to the Village, vehicular and pedestrian circulation, parking lot, back-of-house areas, and Olympic Pool area.
- **Phase II:** Moritz Road re-alignment, Sun Valley Inn expansion, meeting facilities expansion and other lodging offerings.

Existing open spaces in the south portion of the Plan Area are generally preserved, with general landscape enhancements envisioned for those areas.

It is assumed that all necessary supporting infrastructure improvements associated with the Phase I and Phase II plan areas would be implemented concurrently in each respective phase. Off-site improvements are not currently contemplated as a part of the master plan.

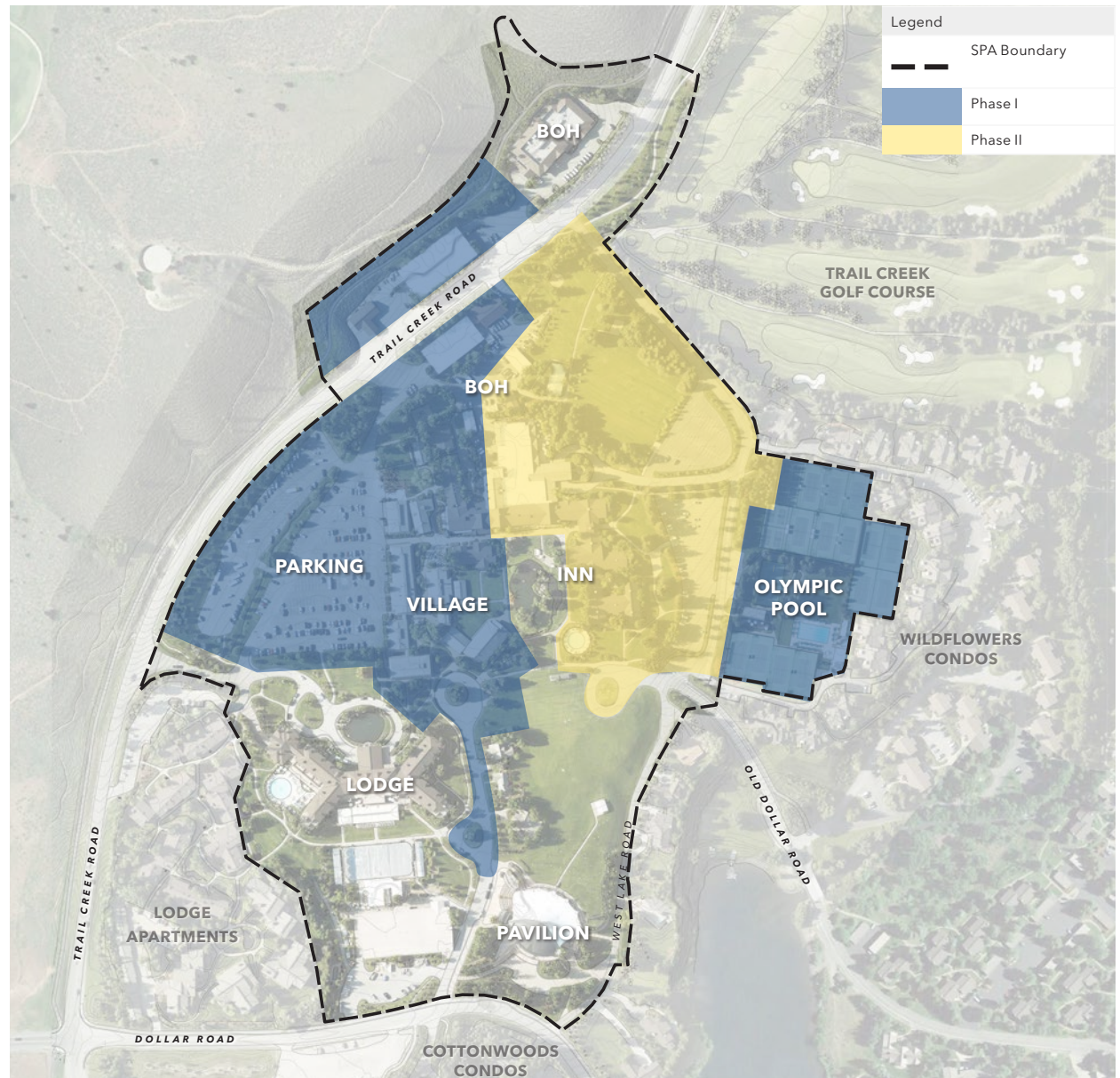


Figure 2.2 Phasing Concept

3

LAND USE

3 LAND USE

Per the Comprehensive Plan and the City of Sun Valley Zoning Code (City Code), the Plan Area is zoned as Commercial Center (CC) and has a land use designation of Resort Commercial. The proposed hotel and lodging program shall be consistent with the SPA densities established in the Comprehensive Plan (Refer to Table 3.1 Approved Zoning Summary). The Plan Area is envisioned to include a mix of uses including hotels, restaurants, resort amenities, convention/meeting facilities, indoor and outdoor recreation uses, and workforce housing and supporting facilities (Refer to Figure 3.1 Conceptual Use Diagram). These proposed uses are consistent with Table 9-2B-1- Allowed Uses in the Commercial Center Zoning District in the City Code.

Table 3.1 Approved Zoning Summary

Approved Zoning Summary	
Site Area	+/- 60 Acres
Uses	
Commercial (3% min. of total floor Area)	No. max.
Multi-Use Units	840 units max.
Workforce Housing	150 units max.

Hotel/Lodging

Per the Comprehensive Plan, the Plan Area has a maximum density of 840 Multi-Use Units plus an additional 150 workforce housing units. Currently, the Plan Area includes a total of 232 units (208 lodging units plus an additional 24 workforce housing units). Until 2020, 200 workforce housing units existed in the Resort/Village Core SPA. City approvals in 2017 allowed the demolition of 176 units in the Resort/Village Core SPA and allowed replacement units to be built in the adjacent Sun Valley Gateway SPA. Since the units were built in an adjacent SPA, the replacement units did not detract from the 840 multi-use unit allocation allowed in the Resort/Village Core SPA. Future development may include expanded lodging at the northeast portion of the Plan Area and at the existing Sun Valley Inn. Any new development will require future design review and if such new development requires new workforce housing units in accordance with Sun Valley Municipal Code the new units will count toward the allocation of 150 workforce housing units.

Convention Center

Meeting facilities are currently provided in conjunction with hotel uses and include a mix of conference rooms, ballrooms and outdoor lawn areas for gathering. Future expansion of meeting facilities may be accommodated in the northeastern portion of the site.

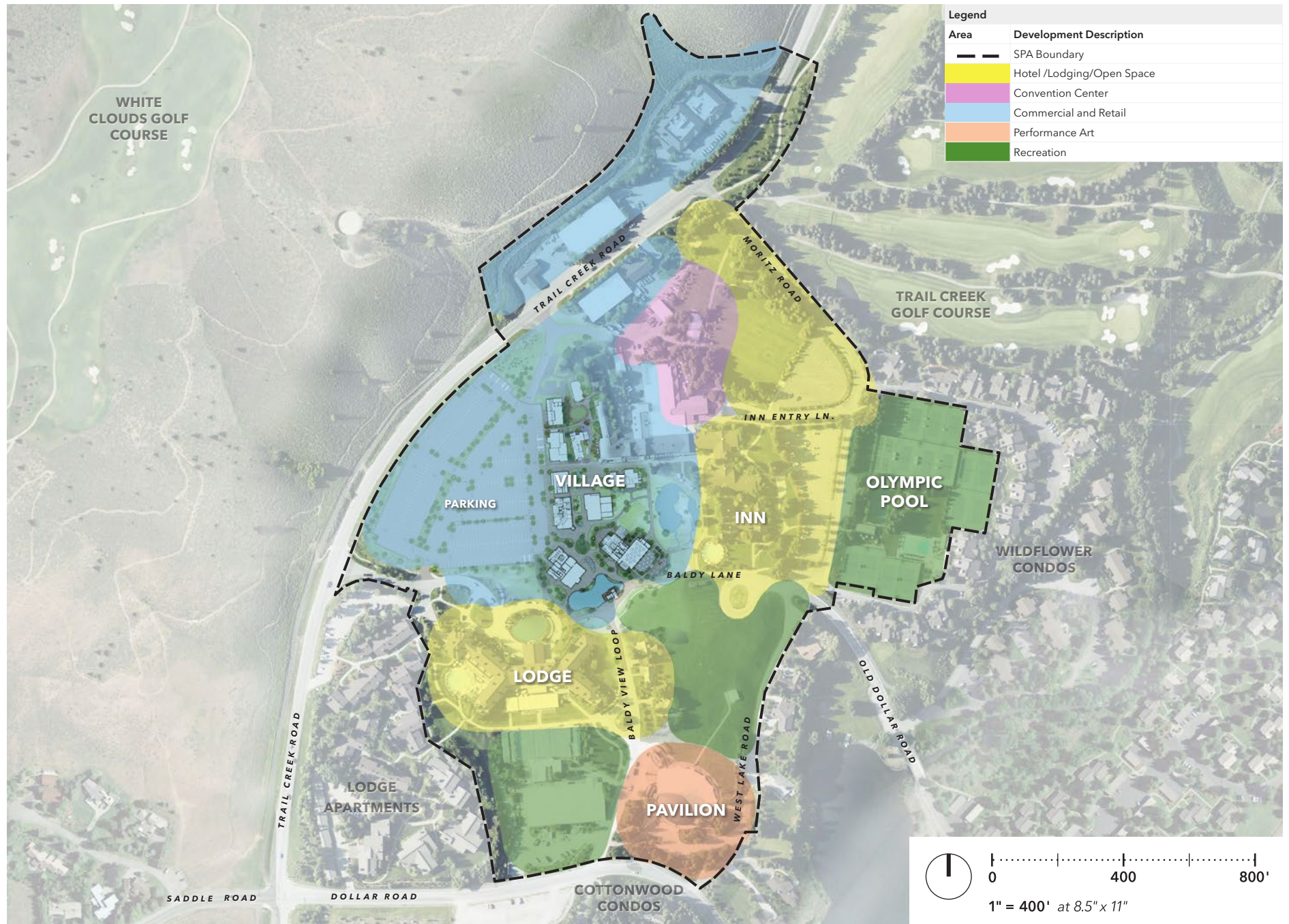


Figure 3.1 Conceptual Use Diagram
 Note: All boundaries shown are approximate.

Commercial and Retail

Per City Code 9-2B-3-C-1, the Commercial Center zoning requires that a minimum of three percent (3%) of the total floor area of net usable floor space be devoted to retail or service businesses. Currently, 230,000 SF of retail/service uses exist, exceeding the 3% minimum requirement (approximately 7,000 SF). The City Code does not establish a maximum square footage on commercial uses. Phase 1 improvements are estimated to result in a commercial retail & service area increase of approximately 10%.

Commercial uses within the SPA may include restaurants, retail, a post office, convenience retail, administrative offices, the Opera House multi-use space, and supporting retail for recreational uses.

Recreation

The Plan Area hosts a variety of both indoor and outdoor recreational uses throughout the site. This includes the indoor ice rink, outdoor ice rink (identified as a Special Site in the Comprehensive Plan), fitness facilities, swimming pools, a playground, tennis and pickleball courts. Access to the sport court facilities and Olympic Pool is available to resort guests and recreation membership holders.

Performing Arts

The Sun Valley Pavilion is an outdoor event and concert venue that hosts visitors in the summer season. More than 1,500 seats are accommodated inside the pavilion, and an adjacent two-acre lawn allows for additional seating and gathering.

DENSITY CHANGES TO PERIPHERY OF SPA

Consistent with the goals of the Comprehensive Plan (see Goal #5 on page 16), development is sensitive to the existing low density residential located just outside the SPA boundary along the eastern side of West Lake Road at the Cottonwood Condominiums (Refer to Figure 1.4 Existing Land Use). Both existing and future density and building massing are concentrated in the center of the Plan Area and will transition to lower density uses and open space at the eastern side of the Plan Area.

VIEWSHEDS

Bald Mountain and Dollar Mountain are a valuable natural and scenic resource visible from the Plan Area; both are iconic symbols of Sun Valley's skiing heritage and are identified in the Comprehensive Plan as a "Special Site." Dollar Mountain has a summit elevation of 6,638' and features ideal adult and children's teaching facilities, as well as extensive terrain park offerings. Bald Mountain has a summit elevation of 9,150' and has more than 2,000 skiable acres for a range of beginner to expert levels.

As Special Sites, key views to both mountains from within the Plan Area shall be preserved, particularly from central gathering spaces such as the Village core and the Pavilion lawn (refer to Figure 3.2). The views to the northeast up Trail Creek Canyon are also impressive and should be part of design considerations for the northeast portion of the SPA (Phase II).

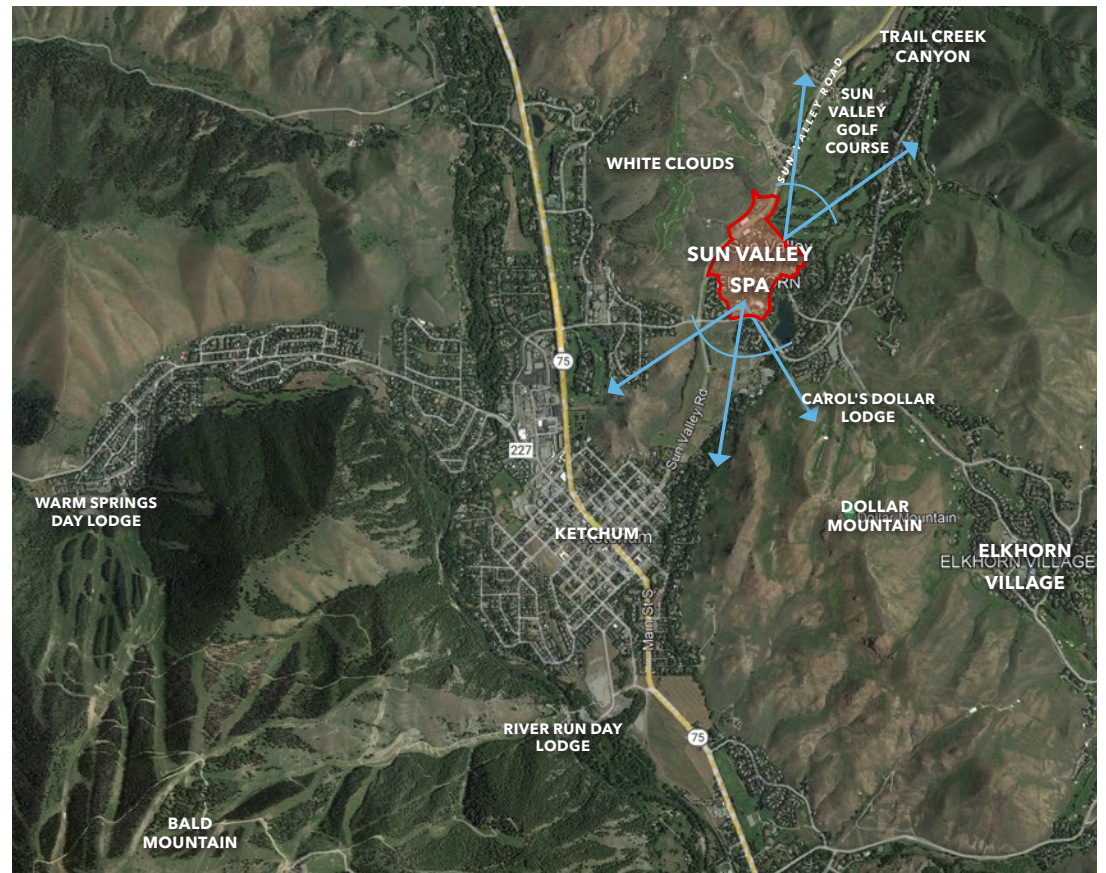


Figure 3.2 Views of Bald Mountain, Dollar Mountain and Trail Creek Canyon



Figure 3.3 Views of Bald Mountain and Dollar Mountain

OPEN SPACE

The Plan Area will be developed to preserve existing open spaces areas and enhance landscaped spaces within the Plan Area and reinforce existing view corridors through strategic placement of new improvements (Refer to Figure 3.3 Open Space Concept). Proposed improvements should reinforce the Comprehensive Plan statement that: “...the design of plazas and public areas should preserve the existing sense of openness and be reflective of the natural surroundings. Resort amenities such as the ice-skating rink, theater, golf courses, grounds, tennis courts, Nordic ski tracks, etc., should remain open and easily accessible to the general public.”

A series of open spaces are provided, including landscaped building entries, planting within the Village core, and active open spaces and passive recreational spaces such as the outdoor Ice Rink and Pavilion event lawn. Future development will also integrate open space areas (Refer to Figure 3.4 Open Space Concept).

Where feasible, parking areas are encouraged to be reduced and replaced with landscape or plazas, creating a more pedestrian-oriented open space experience within the Plan Area. A goal of this master plan is to reinforce the walkability and connectivity of existing and proposed amenities within the Village to each other and to larger outdoor gathering spaces and trail network beyond the limits of the Plan Area (refer to Chapter 5 Non-Vehicular Section).



Event Lawn at the Pavilion

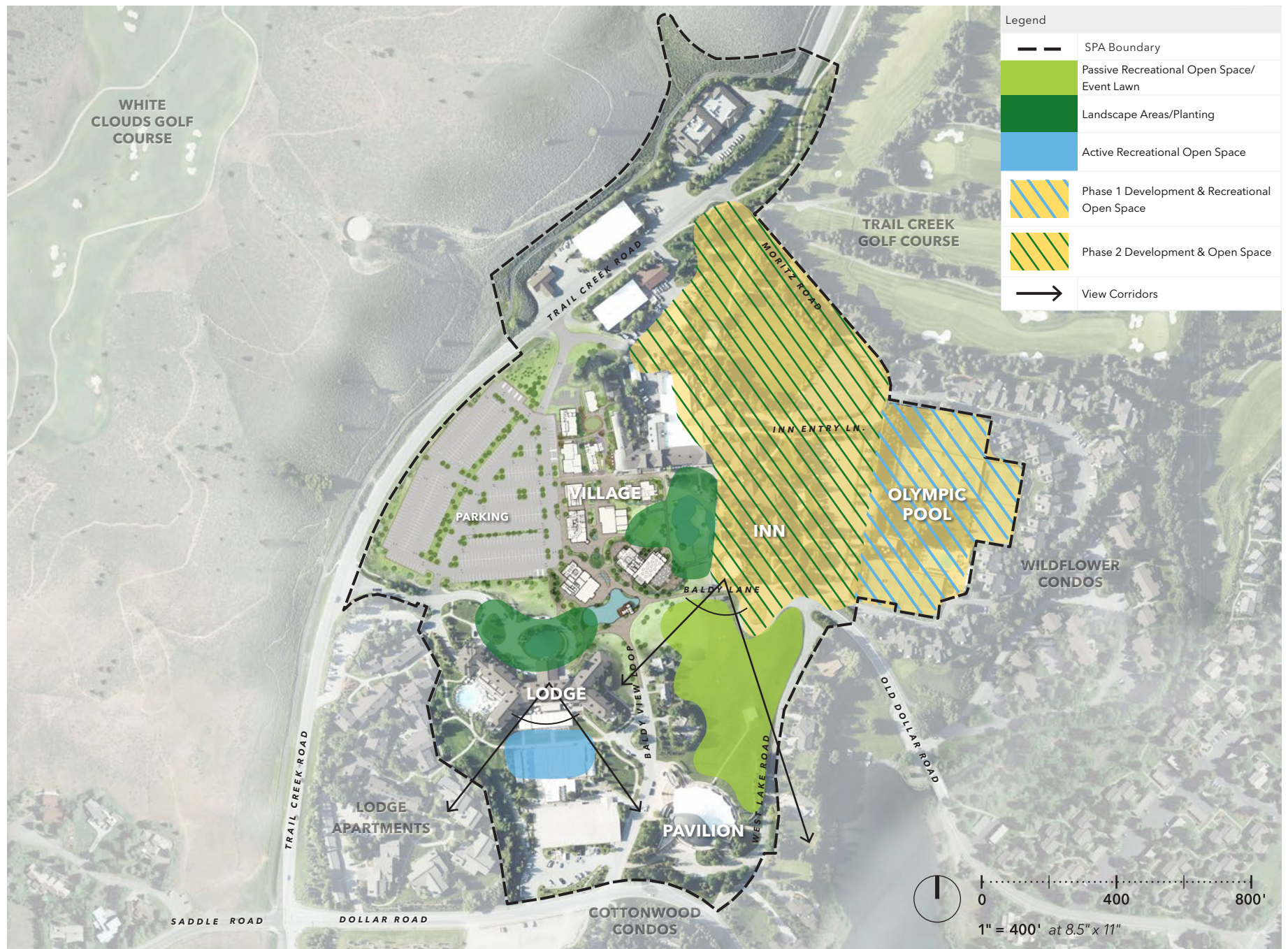


Figure 3.4 Open Space Concept

* Note: All figures and illustrations shown are conceptual and are for illustrative purposes only.

WORKFORCE HOUSING

Beginning with the Resort's inception in 1936, workforce housing has always been a vital component of the exceptional guest experience provided in Sun Valley. From charming chalets for elite European ski instructors to the most recent employee housing campus projects, workforce housing has evolved and adapted over the years to maintain and elevate the guest experience for visitors and locals alike. Current national economic trends are reinforcing the need for workforce housing more than ever and Sun Valley Company has demonstrated a strong commitment to this critical component of resort operations as need and development occurs.

As the largest single employer and workforce housing provider in the Wood River Valley, Sun Valley Company welcomes employees from all walks of life, whether staying for a single season or becoming one of the company's many lifetime employees. To promote and sustain this employment, Sun Valley Company actively maintains an array of workforce housing units within the resort Village SPA and Gateway SPA properties.

Providing and maintaining a variety of safe, healthy, and sustainable workforce housing offerings is a critical component of the Resort's development.

Workforce Housing Code Requirements

According to the Zoning Code 9-2B-3.C.2, the minimum workforce housing requirement shall be "5% of the total floor area" of commercial and residential

uses within a given parcel or site. (Refer to the Zoning Code for the list of commercial and residential uses subject to the workforce housing requirement.)

The workforce housing currently maintained and operated by the Sun Valley Company exceeds the minimum workforce housing requirement by approximately 61%. Based on the existing village development, approximately 26,000 SF of workforce housing is required and approximately 42,000 square feet* (196 workforce housing units) are provided within the Village and Gateway SPA areas. The existing workforce housing accommodates not only workforce needs for the Village area, but also for other Sun Valley Resort areas and mountain operations.

When development projects occur, Sun Valley Company prioritizes local contractors and suppliers where possible to minimize temporal workforce housing pressures on the local community. For small scale projects, Sun Valley Company has the ability to house and feed construction workforce members within the Village and Gateway SPA areas. Group transport such as park & ride and van pool shuttles are used to minimize transportation needs during all construction projects. As future development occurs, workforce housing accommodations will be evaluated and appropriately provided in accordance with City of Sun Valley development regulations to meet operational needs and maintain the current high level guest experience of the resort Village area.

*Note: the total workforce housing area is calculated based on sleeping and bathroom areas; additional space provided for general circulation, common spaces, laundry, kitchens, exercise, ski storage, etc. are not included.

4

ARCHITECTURAL
CHARACTER

4 ARCHITECTURAL CHARACTER

ARCHITECTURAL CHARACTER

Inspired by European ski towns, much of the original Union Pacific-era architecture of the Village was conceived in an alpine—specifically ‘Tyrolean’—style. This vernacular suited Sun Valley’s climate, protecting from snow in winter and shading from sun in the summer, and created a unique sense of place in the American West. Buildings constructed during the Janss era attempted to emulate the original architecture with large overhanging mansard roof forms, stucco walls, and relatively small windows, but exhibit less romantic charm than the original buildings. The scale of these mid-century era buildings is less suited to a pedestrian-oriented village experience than the original 1930s Village and are not as suited to contemporary retail needs. More recent renovations and additions, such as Village Station, the Konditorei, and the Lodge Spa, have assimilated more successfully, as they take cues from the Lodge’s Mountain style, the Tyrolean style, and maintain the scale of the original Village buildings and Lodge.



Figure 4.1 Signature & Gifts Concept

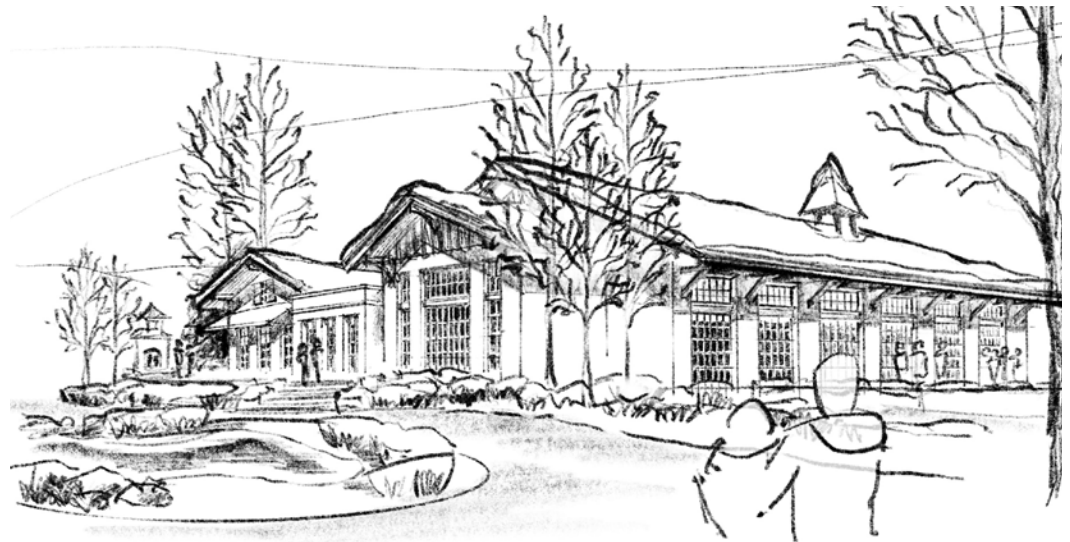


Figure 4.2 Opera House Concept

For future development of the Resort Village, the proposed architectural character takes its cues from the original ‘Tyrolean’ resort buildings. To preserve and enhance the evocative sense of place created by the Opera House, Inn, and other Union Pacific-era structures, new buildings will be designed with the following key characteristics:

Massing

Building design within the Village Area should incorporate techniques to create variety in massing, enhance view opportunities, and create visual interest. Architectural designs should employ a variation in materials, architectural ornament, vertical and horizontal articulation, wall plane setbacks, stepped building elements at the edges of the structure, and a combination of overhang elements to minimize uninterrupted wall planes.

Building design should, in general, exhibit a chalet-style architecture characterized by a symmetrical façade (or asymmetrical façade with locally symmetrical elements like the SV Inn) and gabled roofs. To maintain the existing scale of the Village, larger buildings should be articulated to appear as two or more smaller buildings. Façade projections and overhanging bays and balconies are encouraged to create visual interest and reduce the scale of larger wall surfaces.

Architectural design elements located on the façade and roof structures should respect the scale and importance of the current vertical features of the Opera House bell tower and the Konditorei clock tower. Overall, any building located within the Village Specific Plan Area should not exceed the overall height and should respect the general scale and massing of the Sun Valley Lodge.

Roofs

Main roof forms will generally be relatively low in pitch, with large overhanging eaves. Traditional roof members such as wood beams and joists with shaped ends should be expressed, even as applied non-structural elements. Rakes and fascia with decorative trim are encouraged. Roof materials may be shingle, tile, or metal roofing similar to the Inn, Lodge, and existing Village retail buildings. Smaller roof forms may be steeper in pitch and have complimentary materials and colors. Flat roof areas may be permitted if screened by pitched roofs or parapets. All mechanical equipment should be screened so it is not visible from eye level, other buildings, or from the road.

Walls

Walls should be articulated in traditional materials, including stucco, wood and natural stone. Wall materials shall comply with the City of Sun Valley design & development regulations.

Windows, Doors & Openings

Windows and doors should generally be aligned to stack vertically on a façade. Windows on upper floors should generally be sized and spaced in a traditional architectural manner with appropriately proportioned windows patterns. Ground floor doors and windows for retail buildings may have wider expanses of glass, with appropriately proportioned window patterns at any transom or side light fenestration. The heads of doors and windows are encouraged to be generally flat, with consideration for arched and angled openings for storefronts, main entrances, and specialty doors and windows. Window frames should generally be a dark natural color; however, lighter and more vibrant finishes may be permitted.

Architectural Accents

Traditional architectural accents such as projecting bays, wood balconies, shutters, decorative trim, and window boxes will be encouraged. Balconies should be supported by beams and columns of appropriate proportions. Guardrails of decorative metal, wood, and combinations of metal and wood are encouraged. Shutters should be wood, sized to fit the window they are paired with, and be mounted with traditional hinges and shutter dogs / holdbacks. Shutters may have some decorative elements, such as cross bracing or flatsawn motif. Window boxes are encouraged and should have simple decorative motifs. As noted above, decorative trim is encouraged at roof eaves, as well as balconies, shutters, and other wood elements.



Figure 4.3 Village Storefront Concept (View from Village Parking Area)



Figure 4.4 Pete Lane's Concept



Figure 4.5 Baldy View Pond and Village Concept



Figure 4.6 Opera House & Lawn Area Concept

EXTERIOR LIGHTING

The City of Sun Valley supports the Central Idaho Dark Sky Reserve through education and enforcement of exterior lighting regulations. The City of Sun Valley's exterior lighting regulations were first established in 2006 and have been updated since to provide an even greater level of nighttime restrictions to better match the updated regulations of neighboring municipalities and demonstrate a level of commitment of the initiative through action.

The purpose of the City's regulations is to protect and promote the public health, safety and welfare, the quality of life, and the ability to view the night sky, by establishing regulations and a process for review of exterior lighting. The City ordinance establishes standards for exterior lighting in order to achieve the following:

- Provide safe streets for motorists, cyclists, and pedestrians, and ensure that sufficient lighting can be provided where needed to promote safety and security.
- Minimize the effects of direct glare and excessive lighting, to protect the ability to view the night sky.
- Help preserve the quality of life and the tourist experience.
- Prevent light trespass in all areas of the city.
- Promote energy efficient and cost-effective lighting in all areas of the City.
- Allow for flexibility in the style of lighting fixtures.

Holiday lighting has traditionally played an important role in creating the magic of the holidays in Sun Valley. Sun Valley Resort installs a variety of seasonal holiday lighting across the resort each year in accordance with City of Sun Valley Exterior Lighting Regulations.

Sun Valley Resort also provides temporary lighting for special events such as concerts and professional conferences on an as needed basis after receiving approval from the City of Sun Valley.

New public exterior lighting should be complimentary to the architectural style of the Resort and the surrounding community. Future development projects will encourage carefully considered exterior lighting design in order to preserve the quality of the guest experience while providing safety and security in all appropriate areas of the Village.

5

CIRCULATION

5 CIRCULATION

INTEGRATED TRANSPORTATION AND CIRCULATION PLAN

A goal of the master plan is to reinforce the walkability, connectivity and accessibility of existing and future amenities within the Village. Where feasible, vehicular paving area reductions should be encouraged, replaced with landscape or plazas creating a more pedestrian-oriented open space experience within the Village Area. Future planning for the Village should consider a variety of options for convenient transit connections to surrounding trail networks, community amenities, and access to the base areas of Dollar Mountain, River Run and Warm Springs.

Special consideration should be given to the user experience for bicycle and pedestrian access to the resort. Enhancements for convenience, accessibility and safety should be considered in the form of potential dedicated and separated crossings at key entrance points to the resort and parking areas. Other considerations may include dedicated pedestrian and bicycle circulation paths that connect primary entrance points to the Village, designated bicycle parking areas and rental outlets. In addition, dedicated pedestrian and bicycle corridors through parking areas will improve efficiency and safety for guests accessing their vehicles or traversing the resort from trailheads and existing Village entrance points. Furthermore, separate walkways and pathways in

parking areas may help to reduce vehicular conflicts, congestion, and ensure appropriate emergency access/response during special events.

Public Transportation

Public transportation provider Mountain Rides partners with Sun Valley Resort to provide regular bus service on a year-round basis. Several routes serve River Run, Warm Springs, Ketchum, Dollar Mountain, and Elkhorn from the Baldy Bus Loop. Additional routes provide service to Hailey and Bellevue. The Resort and Mountain Rides also provide a number of daily employee vanpool shuttles from outlying communities.

The Resort provides guest transportation between Sun Valley and Friedman Airport for all scheduled flights. Guest shuttles are also utilized by many groups for transportation between various venues at the Resort.

Future improvement concepts for the Baldy Bus Loop area include relocating the bus stop farther south near the ice rink to move vehicle traffic away from the village core, as well as improvements to incorporate accessibility and universal design concepts to provide and enhance usability for all resort guests and staff.

The Resort anticipates the inclusion of designated pick-up/drop-off locations for ride share programs such as Uber and Lyft at appropriate destinations in the village as these services become more widely available in the Wood River Valley. Such improvements may be integrated as part of broader transportation and parking area improvements as they occur.

Modern transportation technologies currently not accommodated in the Resort Village; such as electric scooters, e-bikes, e-skate boards and aerial passenger/delivery drones will require additional consideration as a part of future development applications if these technologies become more prevalent in the Wood River Valley. Such integration should be carefully considered in conjunction with local and federal regulations to ensure that safety and usability for resort guests and pedestrians are prioritized.

PRELIMINARY TRAFFIC EVALUATION

A Preliminary Traffic Evaluation is provided to support development applications for proposed future improvements for additional lodging, conference and meeting space, retail and restaurant facilities, and services area improvements within the Resort Village area (see Appendix A). The purpose of the Preliminary Traffic Evaluation is to evaluate current transportation issues and recommend improvements to existing infrastructure to maintain adequate levels of service and safety on the local transportation network serving the Resort Village for the proposed development phasing outlined herein. The Preliminary Traffic Evaluation objectives include the following:

- Analyzing all surface transportation modes that will be affected by the proposed future developments including light and heavy motor vehicles, pedestrians, bicycles, and public transportation services.
- Determining whether transportation improvements to the Village area are necessary to accommodate traffic volumes generated by the proposed future developments. Please refer to Chapter 3 for more discussion of conceptual future development.
- Identify improvements to enhance the safety of drivers, bikers, transit users and pedestrians.

VEHICULAR CIRCULATION

With potential future developments to key areas of the Village, modifications and enhancements to the existing vehicular circulation are anticipated. Any future improvements may include associated pedestrian and bicycle circulation improvements as discussed elsewhere in this chapter.

Future improvements to the Village area vehicular circulation may include the following:

- Renovation of the primary Village parking area which leaves the general configuration and circulation essentially unchanged. Renovations would include improvements for public and mass transit drop-off near the Village retail and restaurant areas, fire and emergency access, overall grading and drainage, landscaping, lighting distribution, and electric vehicle charging.
- Improvements to north parking lot entry at the intersection of Trail Creek Road/Inn Service Road to improve safety, sightlines and conformance with City of Sun Valley street intersection design regulations.
- Relocation of Moritz Road to improve access to the Sun Valley Inn and meeting facilities, to provide open space for potential developments within the Village SPA along the Trail Creek Golf Course, as well as to provide intersection improvements at Moritz/Old Dollar Road intersection. A relocation of Moritz Road would include an improved access to the Wildflower Condominiums.
- Potential expansion of the Sun Valley Inn facilities and modification/removal of the Dollar Bus Loop.
- Renovation to the Village pedestrian core, which may require modification of the Baldy View Loop. Fire and emergency access will be maintained to required areas in the central core of the Village area.

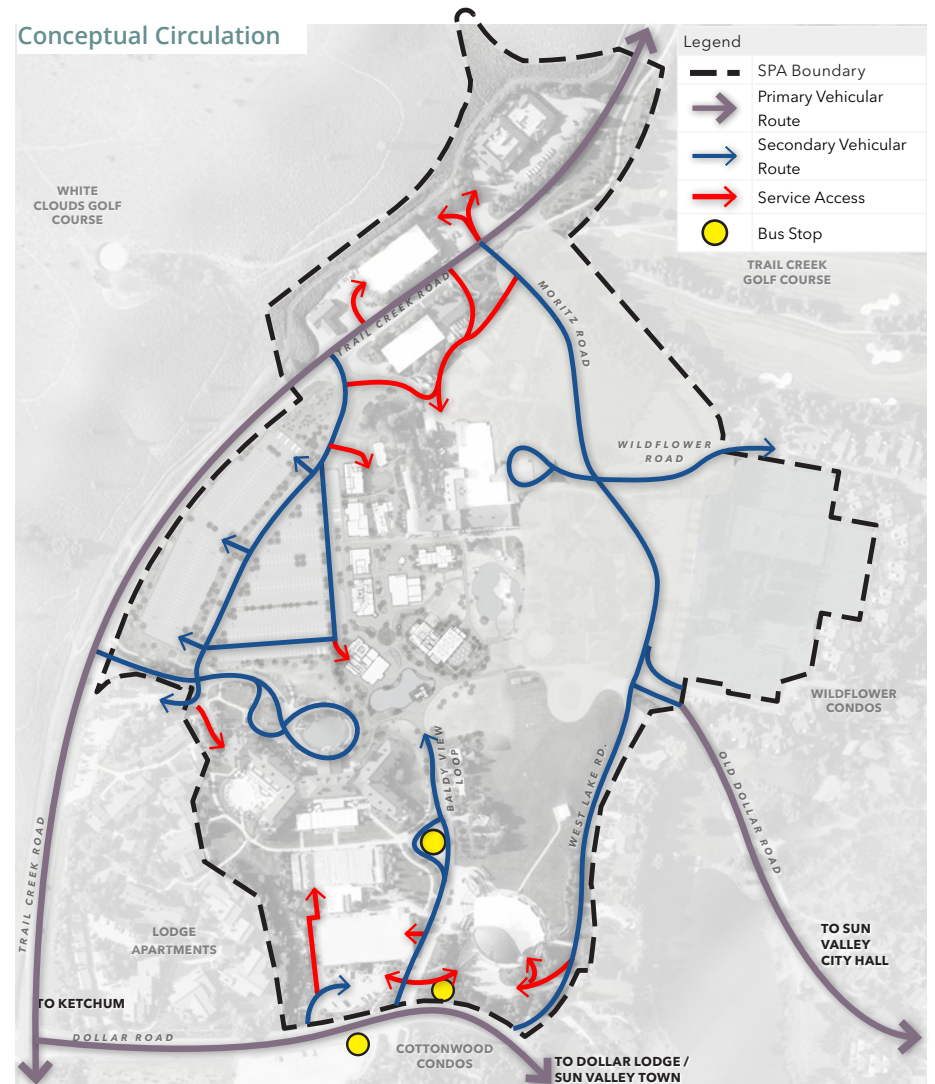
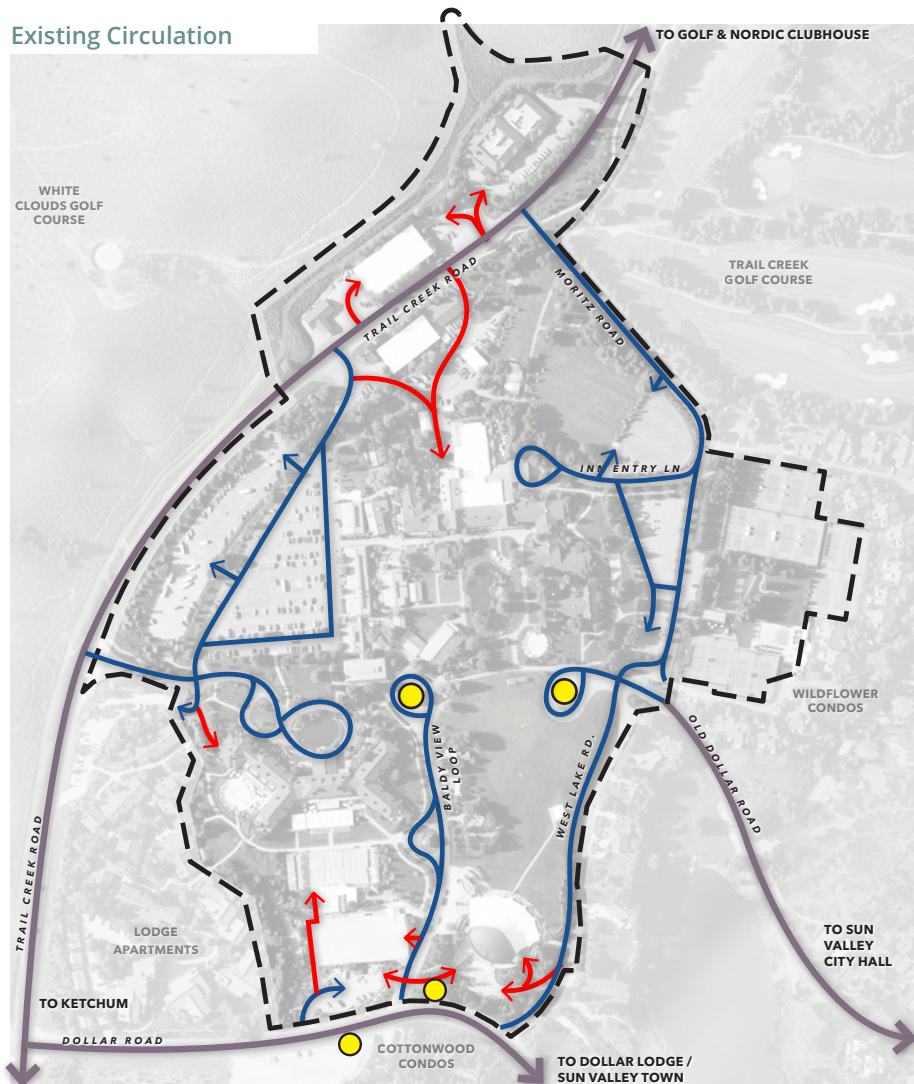
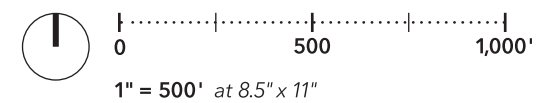


Figure 5.1 Existing Circulation & Conceptual Circulation



PARKING

Parking is a necessary component of successful commercial development. The need for well-designed, safe, and efficient parking areas is even more important in a resort setting, where unfamiliar visitors come and go frequently. Future parking and transportation needs should be thoughtfully distributed, designed, and appropriately sized to maintain both the natural landscape quality of the property and the exceptional guest experience that is expected in Sun Valley.

Sun Valley Resort currently maintains approximately 1,008 surface parking spaces within the Village SPA area, as well as an additional 970 spaces in the adjacent Gateway SPA area as overflow parking for special events.

Existing parking within the Village SPA is adequate to meet the day-to-day needs of the resort and local patrons. Overflow parking and traffic management are employed by the Resort for special events such as the Summer Concert Series and Sun Valley Music Festival.

Public and multi-modal transportation also plays a critical role in the management and scope of public parking within the Village SPA. Sun Valley Company operates and partners with several entities to ensure safe and consistent alternative transportation options such as Pete Lane's bike rentals, Mountain Rides buses, Sun Valley Express Shuttle services, and employee shuttle services.

Bicycle parking is also accommodated at the Resort with bike racks placed throughout the village SPA area to encourage non-vehicular travel during summer months. Additional bicycle parking facilities should be integrated into future development projects as may be appropriate to reinforce this concept.

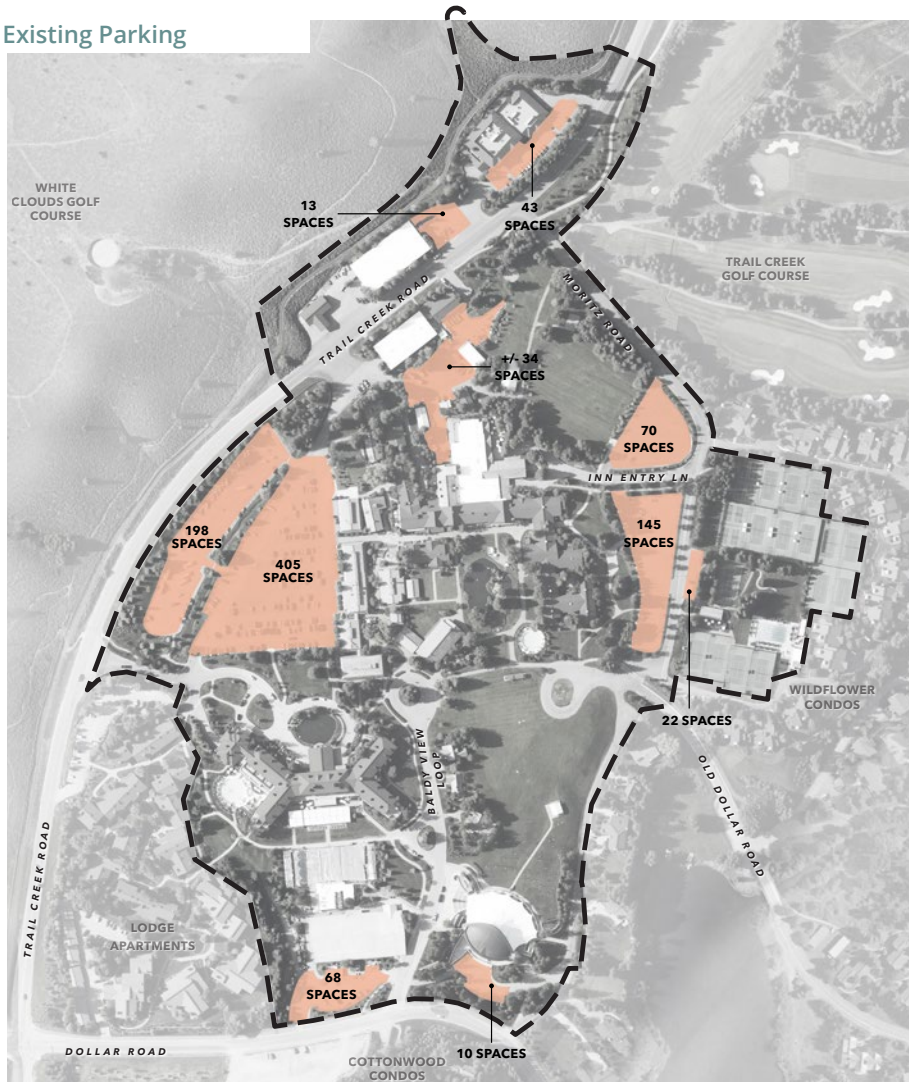
Future Projections

As future development at the resort is considered, the integration of well-designed parking will play an important role in promoting high quality experiences for all guests, local residents and visitors alike.

The master plan anticipates enhancements and improvements to several existing parking areas within the Village SPA boundary. Please refer to the "Vehicular Circulation" section for a more detailed discussion of future improvements considered. These improvements are intended to improve aesthetic appeal and visibility to the Village Retail entrances, increase efficiency, traffic flow, safety, and improve stormwater management.

Improvements to public and multimodal transportation options are also anticipated in the master plan. These improvements are intended to increase access, convenience, and use of alternate transport to minimize single-car visitor trips per day and ultimately reduce the overall parking needs for future development.

Existing Parking



Conceptual Parking

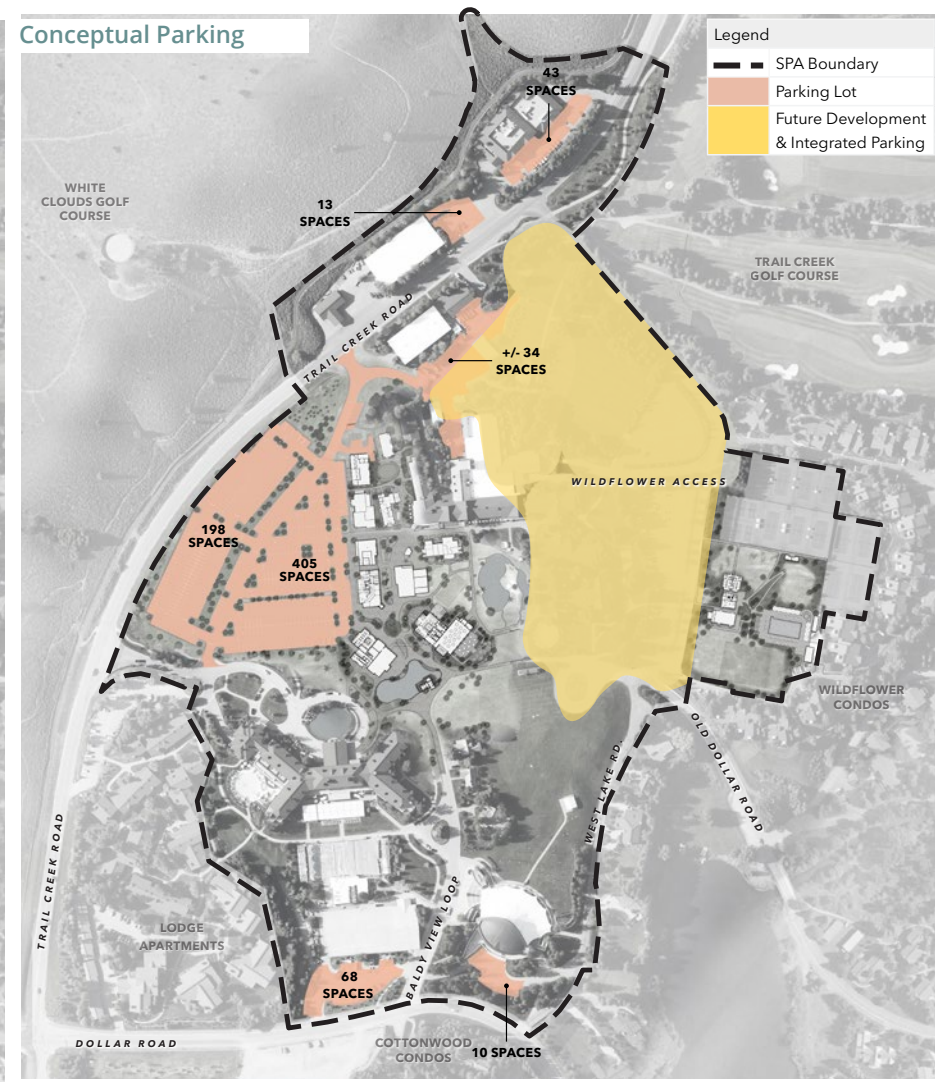
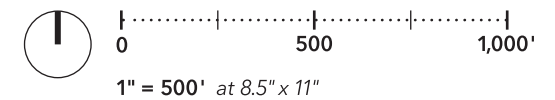


Figure 5.2 Existing Parking & Conceptual Parking Areas



This master plan anticipates the need for additional parking over the next 20 years. New parking should be located proximate to new development. Where feasible, new surface parking areas should be landscaped and may include clusters of smaller lots in order to avoid large impervious surfaces. Parking should be sensitively designed and may consist of a combination of surface parking, integrated underground parking below new buildings, and other structured parking solutions that blend into the existing topography and preserve open space within the Village. Parking reductions, allowable under City Ordinance 9-3E-5, will be considered and incorporated into future planning efforts.

NON-VEHICULAR CIRCULATION

A network of pedestrian and bicycle paths exist within the Village SPA, connecting at the periphery of the Plan Area to a broader trail network. Within the Village, these paths take the form of shared, paved walkways that circulate between the various amenities and open spaces accessible to resort guests and the public. The center of the retail village promotes a pedestrian-oriented, leisurely environment, with bicycle routes and connections provided at the perimeter of the retail village. The internal pedestrian and bicycle paths connect externally to the wider multi-use trail network externally at the following locations:

- North: Moritz Road at Trail Creek Road, connecting to the Trail Creek Golf Course and winter snowshoe and nordic ski trails via a multi-use path;
- East: West Lake Road at Old Dollar Road, connecting to residential areas via a pedestrian path;
- South: Baldy View Loop at Dollar Road, connecting to Ketchum and Bald Mountain via a multi-use path, and
- West: Carol's Trailhead (directly opposite Lodge Entry Lane) connects to Trail Creek Path, Sunrise Loop Trail, Valley View Trail and Saddle Road Connector Trail.



Figure 5.3 Existing Trails

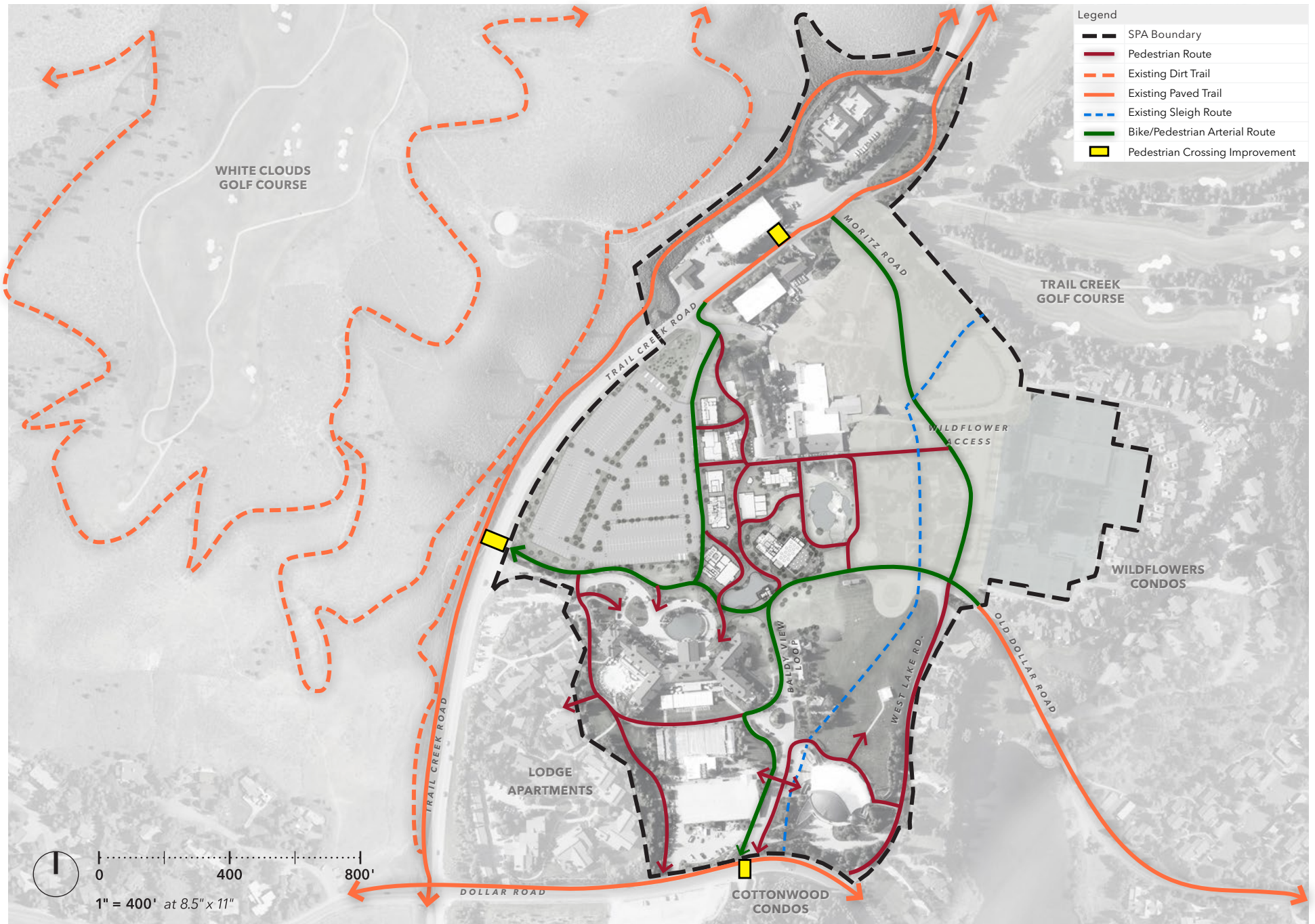


Figure 5.4 Pedestrian Circulation Concept

Sun Valley also offers equestrian wagon and sleigh rides from the Sun Valley Inn to Trail Creek Cabin in keeping with the history of the resort. These rides utilize roadways, pathways and open lawn areas to traverse the Village SPA from the Sun Valley Stables located to the south. Golf carts or other small vehicles are not allowed within the Village SPA area, aside from operation and maintenance purposes, to maintain pedestrian safety and the leisurely environment of the village core.

Special consideration should be given to the user experience for bicycle and pedestrian access to the resort. Enhancements for convenience, accessibility and safety should be considered in the form of potential dedicated and separated crossings at key entrance points to the resort and parking areas. New or extended pathways within the Village SPA should be paved in a manner consistent with the surrounding area to enhance accessibility for users of all age groups. Dirt, gravel, or other soft surface pathways should be utilized only for temporary events, service, and maintenance purposes.

Other considerations may include dedicated bicycle circulation paths that connect primary entrance points to the Village, designated bicycle parking areas and rental outlets. In addition, dedicated pedestrian and bicycle corridors through parking areas will improve efficiency and safety for guests accessing their vehicles or traversing the resort from trailheads and existing Village entrance points.

Furthermore, separate walkways and pathways in parking areas may help to reduce vehicular conflicts, congestion, and ensure appropriate emergency access/response during special events.

The proposed master plan further enhances the non-vehicular circulation within the resort through reinforcing existing connections and prioritizing pedestrian-friendly development and preserves the connection points to the external trail network.

6

PUBLIC FACILITIES

6 PUBLIC FACILITIES

SITE GRADING AND DRAINAGE

The Resort Village Area is located in the northwest segment of the City of Sun Valley, within the Trail Creek drainage. The Pioneer Mountains are generally to the northeast with the village area nestled between nearby adjacent hillsides of the White Clouds development area to the west and the Proctor Mountain, Ruud Mountain, and Prospector Hill areas the east. Site grading and drainage within the Village area generally runs downhill north to south, with an approximate drop in surface elevation of sixty feet from the northern portion of the SPA boundary near the Laundry Facility to the southern area of the property near the Sun Valley Pavilion.

Site grading associated with proposed future developments should be shaped to blend with the natural contours of the Village area and the existing structures and landscaped areas on site. Planning should minimize the necessity of padding or terracing of building sites. In addition, cut and fills should be shaped, rounded, minimized and nonuniform to simulate the natural contours.

The bulk of surface water drainage from the Trail Creek complex moves through the Trail Creek Golf Course north of the Village and continues along the eastern edge of the property into the Sun Valley Lake, which is located on the southeastern corner of the Village area.

Surface water from Trail Creek is diverted just below the Boundary Campground area to provide water for irrigation and aesthetic purposes through a series of ditches that meander through the Trail Creek Golf Course and Village areas. The irrigation system ultimately feeds into the pasture areas located to the south of the Village.

Stormwater in the Village area is managed in several ways. Impervious surfaces such as asphalt drives and parking areas are generally handled with a combination of drainage components including concrete curbs, catch basins, underground storm drain piping, and drywells. Paver walkways within the Village are snow melted for pedestrian safety and are generally sloped to drywells located in adjacent landscaped areas. Landscaped areas are also sloped to drywell locations throughout the Village. Roof surface stormwater is managed with either gutter and downspout systems for sloped roof surfaces or internal drains for flat roof surfaces. Most roof systems tie into underground drain piping that connects directly to drywell components in adjacent areas.

For the proposed future developments, stormwater will be managed in a similar manner. Best management practices for construction activities and water quality control should be identified for each specific application.

Subsurface groundwater exists throughout the Village area and is of particular concern during the annual spring run-off season. Subsurface groundwater issues should be carefully considered during future development planning and phasing as well as overall building design and system detailing.

WATER

Water needs for the Resort Village area are primarily provided by the Sun Valley Water and Sewer District (SVSWD). Prior to the 2015 Comprehensive Plan Update, a system wide Water Master Plan, with associated hydraulic modeling, had been completed in 2009. Since that time, several upgrades have been made to the water distribution system, and an updated Water Master Plan is scheduled for development in summer of 2024.

Currently, SVSWD maintains 11 groundwater supply wells that are capable of providing approximately 9,150,000 million gallons of domestic supply per day. Based on monitoring of the system, the average maximum day utilization is approximately 7,800,000 gallons per day. Available capacity within the system is approximately 15%. Sun Valley Company has senior water rights on Trail Creek, which are used to irrigate the White Clouds Nine, the Trail Creek Golf Course, and the majority of the Sun Valley Village. A series of ditches conveys surface water throughout the Resort Village property for irrigation and aesthetic purposes.

For planning purposes, forecasts on the system's ability to meet the needs of the potential development projects in the Village Area, as well as discussions for improved water conservation, sustainability, and other best practices will be led by the SVSWD and the District's engineer. The SVWSD and District engineer will also evaluate the need for relocation or modification of existing water

distribution infrastructure based on the final design of resort improvements. Will Serve Letters for domestic water supply for specific development projects are provided by SVSWD following engineering approval.

Water conservation and other sustainable design principles such as water recycling, ground-water recharge, and capture facilities may be considered in future development applications to reduce water use and promote groundwater recharge where appropriate and economically feasible.

WASTEWATER TREATMENT

Wastewater treatment needs for the Resort Village area are provided by the Sun Valley Water and Sewer District (SVSWD). The treatment plant, owned by the City of Ketchum and the SVSWD, is located along the Bigwood River, at the southern edge of the City of Ketchum and west of the City of Sun Valley. At the time of the 2015 Comprehensive Plan adoption, the treatment facility had capacity for the next 20 years (2035). An updated Wastewater Facility Planning Study was completed in September of 2022 by HDR, the District's system engineer. The updated Facility Planning Study includes current flows (2021) and future flows and loads for 2032 and 2042.

Sanitary sewer is conveyed to the treatment plant through a collection system owned by SVWSD. The collection system is capable of conveying approximately 1,850,000 million gallons of sewage to the treatment plant per day. Flows from

the SVWSD collection system are monitored at the influent of the treatment plant and peak month utilization is approximately 796,846 million gallons per day. Available capacity within the collection system is approximately 57% .

For planning purposes, forecasts on the system's ability to meet the needs of the potential development projects in the Village Area, as well as discussions for improved sustainability, and other best practices will be led by the SVSWD and the District's engineer. The SVWSD and District engineer will also evaluate the need for relocation or modification of existing wastewater distribution infrastructure based on the final design of resort improvements. Will Serve Letters addressing wastewater capacity needs for specific development projects are provided by SVSWD following engineering approval.

POWER

Power is provided to the Resort Village area by Idaho Power, however, all infrastructure and equipment located within the Village area is owned, operated, and maintained by Sun Valley Company. Depending on the phasing and size of proposed future development within the Village area, substation upgrades may be required. Although Idaho Power does not reserve future capacity for customers, there does not appear to be any near or long term concerns with providing service for the proposed future developments in the Village Area.

Certain buildings within the Village SPA area are equipped with emergency power generators to maintain life safety and guest services in the event of an outage. Such systems are required by development and building codes in certain uses, and may be enhanced or expanded if needed for any applicable future development applications.

The inclusion of solar power generation may be considered in service and maintenance areas of the resort where solar panels do not conflict with the traditional aesthetic of the resort architecture.

NATURAL GAS

Natural gas is provided to the Resort Village area by Intermountain Gas Company. The primary, high pressure main line comes into the service area at the south end of Ketchum near Serenade Lane. The new station at Serenade Lane and a recently completed Ketchum loop have significantly increased pressure capacity for the area. The Village area is serviced by an existing 8" distribution line that transitions to a 4" line past the Sun Valley Inn to service the White Clouds and Trail Creek area. Intermountain Gas updates an Integrated Resource Plan every two years and the Wood River Valley is an "area of interest" in terms of growth forecasting. Currently, there are no long-term concerns with capacity to service potential future developments in the Village Area. Will Serve Letters for natural gas service for specific development projects are provided by the utility company following engineering approval.

SOLID WASTE MANAGEMENT AND RECYCLING

Solid waste disposal and recycling collection are provided at the resort through a contract with Clear Creek Disposal. Blaine County provides both the region's solid waste transfer station and recycling center. The transfer station is maintained by Blaine County Solid Waste, part of the Southern Idaho Solid Waste (SISW) District. With future planning, waste and recycling facilities with central collection areas within the Resort Village will be carefully distributed for efficiency and convenience with safe access for service vehicles and appropriate screening to the resort guest and general public.

Future developments may consider the incorporation of food waste collection and recycling programs where appropriate if regional services exist to process such waste products.

INTERNET & COMMUNICATIONS

CenturyLink provides land line telephone and internet service to the valley. Cox Communications has a franchise to provide cable television, telephone, and broadband internet services to the area. Sun Valley Company utilizes local service providers for fiber, broadband, telephone and television services.

SNOW REMOVAL MANAGEMENT

Snow storage and removal are currently managed in several ways within the Resort Village area. The majority of paver pedestrian walkways and primary drives for guest circulation are provided with radiant snow melt systems for safety and convenience. Other vehicular and pedestrian circulation and parking surfaces are maintained in the winter by pushing snow into designated adjacent snow storage areas and the snow is subsequently hauled to offsite storage areas. Critical fire and emergency vehicle access drives and turnarounds are either snow melted or removed of snow as a priority during winter storms. The Public Safety and Fire Access Plan indicates reinforced turf access areas that are not snow melted and are required to be maintained free of snow during the winter months.

Proposed future developments will encourage provisions for additional snow melted pathways and access drives appropriate to the projects and the planning of new snow storage areas that are easily maintained and reduce hauling needs during winter months to promote ground water recharge and reduced maintenance.

PUBLIC SAFETY, FIRE PROTECTION AND EMERGENCY SERVICES

Existing fire and emergency service access routes are depicted in Figure 6.1. The majority of these routes are paved and maintained by radiant snow melt systems to ensure year-round access in accordance with local and national fire code requirements. In select areas, emergency access routes are constructed of reinforced turf and require maintenance in winter months to maintain access. These routes are prioritized during winter storms.

During special events, additional security and traffic control specialists are provided by the resort to assist with traffic circulation, parking, and guest services to ensure that public safety, fire protection and emergency service access routes are maintained and open.

Proposed future developments will encourage maintenance of currently designated fire and emergency circulation with access to fire protection hydrants and building fire department connections and well as the design of easily maintained code compliant access for new buildings in coordination with the Sun Valley Fire Department.

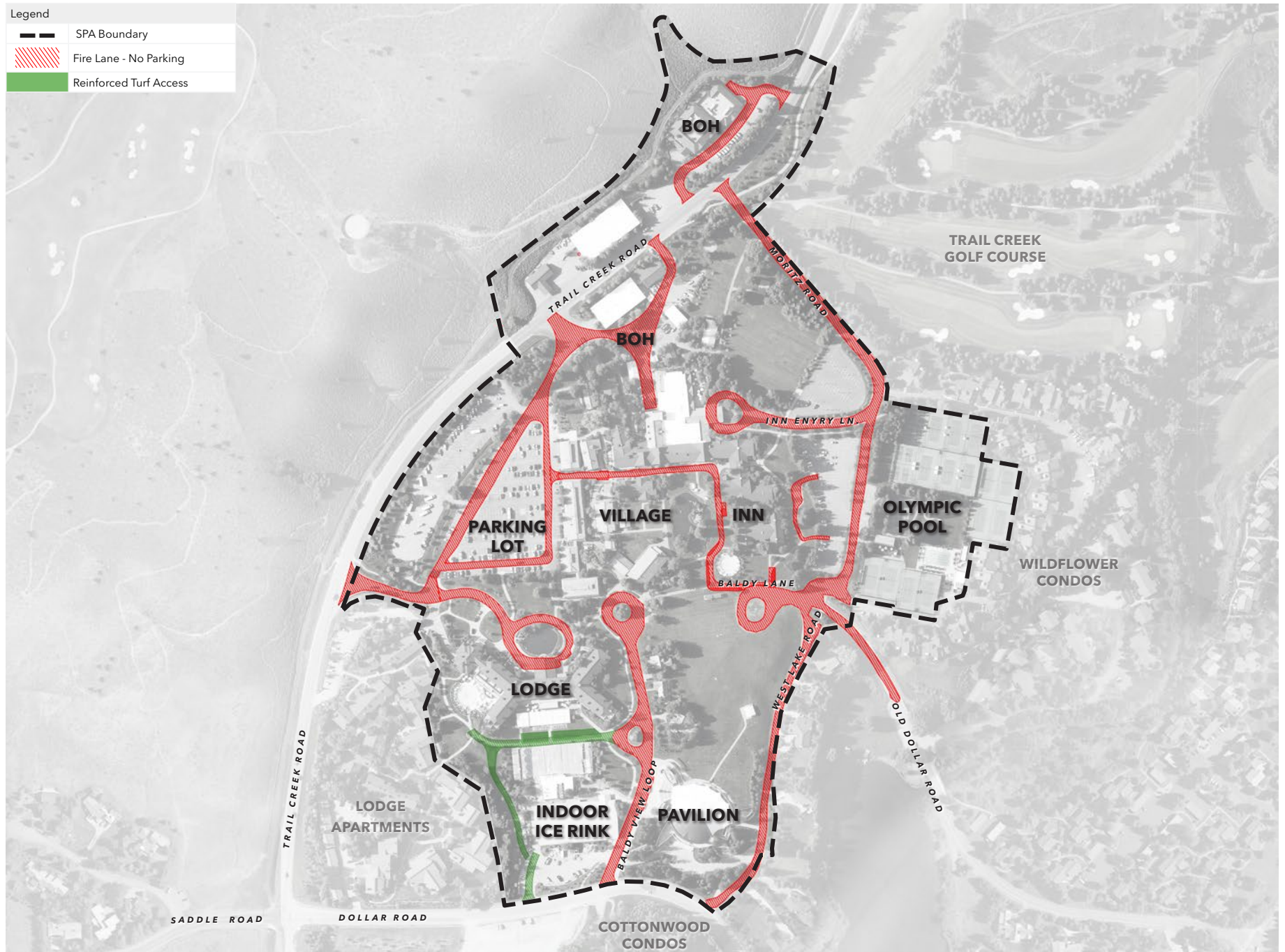


Figure 6.1 Existing Emergency Access Routes

7

CONCLUSION

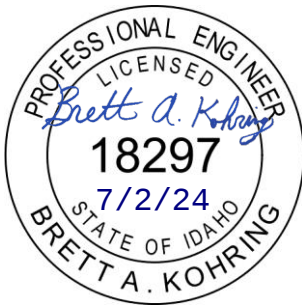
7 CONCLUSION

This document lays the groundwork for the continued thoughtful evolution of the Sun Valley Village.

In the nearer term, it identifies opportunities to improve the Village arrival experience and reinvigorate older facilities. The plan also identifies land use decisions related to longer term improvements. While guiding future improvements, the plan is conceptual in nature, and provides flexibility as needs arise. It is understood that details associated with specific improvements will be worked out through design review and development applications.

Upon finding the valley that would later become Sun Valley, Count Felix Schaffgotsch reported to Averell Harriman “It contains more delightful features than any other place I have seen in the U.S., Switzerland or Austria for a winter sports center.” Work began on Sun Valley shortly after that report in 1936 and from its earliest days, Sun Valley Village has served as the heart of an iconic and vibrant resort. A commitment to quality, authenticity and hospitality has guided the resort since then, and we look forward to maintaining the same level of quality for the next 100 years.





Preliminary Traffic Evaluation

Sun Valley Company

Sun Valley, ID
July 1, 2024



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Appendix D – ITE Trip Generation Reports
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Introduction

The Sun Valley Resort Company (SVCO) is developing a master plan development (MPD) for approval by the City of Sun Valley (City). The MPD seeks to guide development of the Sun Valley Resort Village and address topics including conceptual land use, building mass, character, view protection, an integrated transportation and parking system, and workforce housing. Phasing for future improvements may consist of a two-step sequence. Phase 1 concepts include architectural and landscape improvements to the village, vehicular and pedestrian circulation, parking lot, and the Olympic pool. Phase 2 concepts include realignment of Moritz Road, Sun Valley Inn expansion, meeting facilities expansion and other lodging offerings. The vision of the improvements and the description of the existing land use are found in Section 2 and Section 3 of the MPD.

The purpose of this preliminary traffic evaluation is to evaluate the current status of the transportation system and recommend improvements to existing infrastructure to maintain adequate levels of service and safety on the local transportation network serving the Resort Village for the proposed development phasing. The preliminary traffic evaluation's objectives include the following:

- Analyzing all surface transportation modes that will be affected by the proposed future developments including light and heavy motor vehicles, pedestrians, bicycles, and public transportation services.
- Determine if transportation improvements to the Village area are necessary to accommodate traffic volumes generated by proposed future developments.
- Identify improvements to enhance the safety of drivers, bikers, transit users and pedestrians.

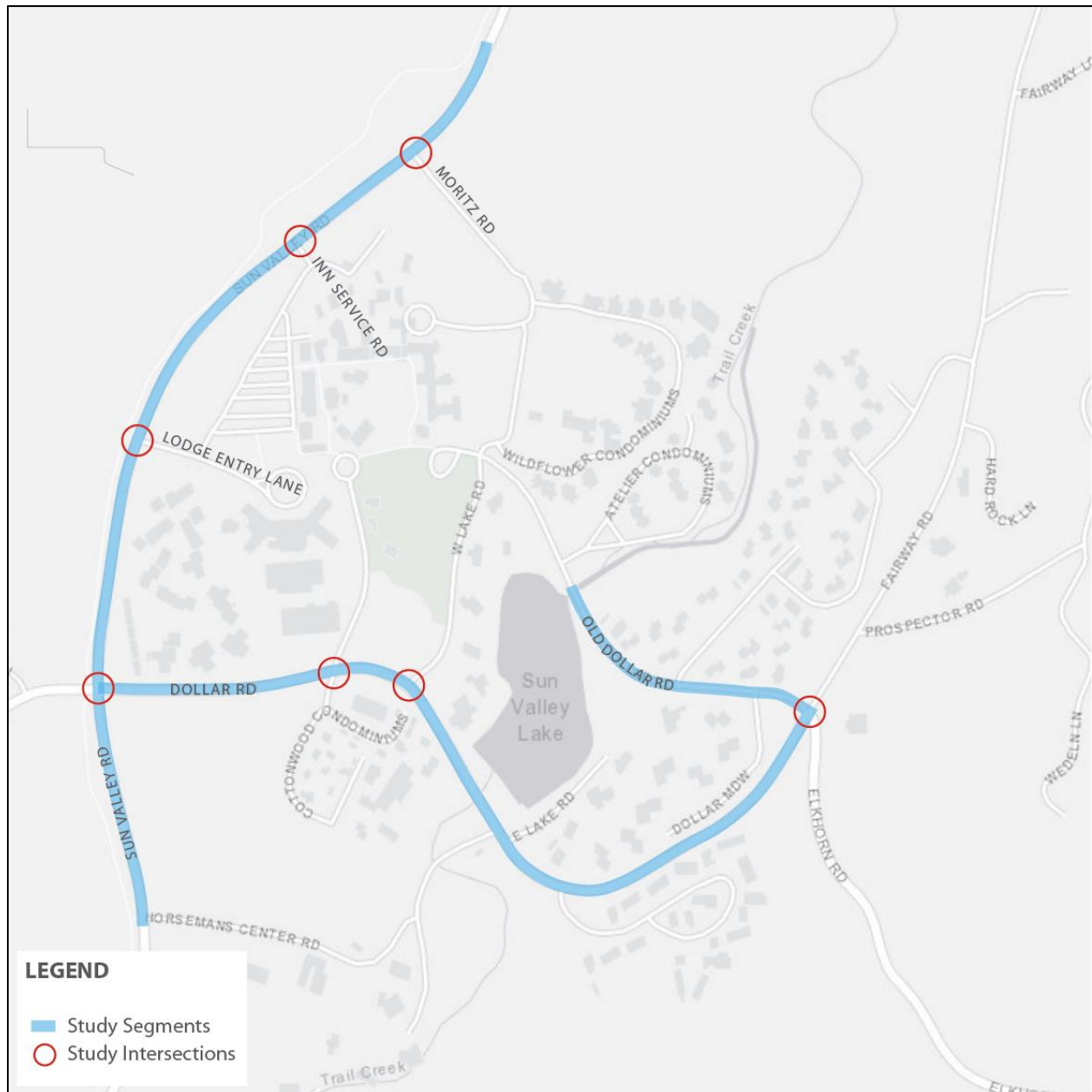
The findings of the preliminary traffic evaluation seek to support Goal 7 of the MPD: support the continued development of an integrated transportation system that promotes a recreationally active community, encourages non-motorized transportation, and reduces congestion and air pollution.

Study Area

The preliminary traffic evaluation study area includes the existing surface transportation network surrounding the Sun Valley Resort Village, as shown in Figure 1. The study area is bounded by Sun Valley Road on the west, Dollar Road on the South and East, and Moritz Road to the North. Old Dollar Road provides access to the interior of the resort from the Elkhorn Road and Dollar Road intersection. Internal circulation is not considered in this analysis apart from pedestrian and bike network gaps. The resort and its associated amenities are the major traffic generators in the area. Additional traffic generators include the Sun Valley Community School Campus, the Dollar Mountain Day Lodge and ski area, and City Hall. To the north is the Sun Valley Club golf course and to the south is the City of Ketchum.

For this Preliminary Traffic Evaluation, The Dollar Road and Community School Drive intersection was not included in the analysis as the Sun Valley Village's peak traffic demand occurs in July which is outside of the school year. The intersection also is not contiguous with the Sun Valley Village Specific Plan Area (SPA) and is not an entrance to the village, meaning changes to its existing vehicular travel patterns will have less impact on traffic performance of the Sun Valley Village than at the other study intersections shown in Figure 1. Since the intersection is an entrance to a school facility and may be used heavily by youths, additional analysis may be considered with appropriate future design review applications to improve pedestrian and bike accessibility and safety.

Figure 1. Preliminary Traffic Evaluation Study Area





In consultation with resort representatives and City staff, seven intersections were identified for analysis and are shown in Table 1. The traffic control type at each intersection is also shown in the table. After a signal malfunction in 2023, the Sun Valley Road and Dollar Road intersection is currently functioning as an all way stop control and the City plans on replacing the intersection with a single lane roundabout in the future. For the purposes of this study, existing conditions operate as all way stop control, and future analysis years assumed a single lane roundabout with yield control on the entry legs. In addition to the intersection capacity analysis, segments of Sun Valley Road, Dollar Road, and Old Dollar Road were analyzed using planning level methodology to evaluate roadway capacity.

Table 1. Study Intersections and Existing Traffic Control

No.	Major Street	Minor Street	Existing Traffic Control Type
1	Sun Valley Road	Moritz Road	Stop Control on Moritz Road
2	Sun Valley Road	Inn Service Road	Stop Control on Inn Service Road
3	Sun Valley Road	Lodge Entry Lane	Stop Control on Inn Service Road
4	Sun Valley Road	Dollar Road	All Way Stop Control*
5	Dollar Road	Baldy View Loop	Stop Control on Baldy View Loop
6	Dollar Road	West Lake Road	Stop Control on West Lake Road
7	Dollar Road	Old Dollar Road / Elkhorn Road	All Way Stop Control
* The City plans to convert this intersection into a roundabout in the near future			

Analysis Methodology

The volume development and traffic analysis followed the Methods and Assumptions Memorandum submitted to the City in March 2024 and provided in Appendix A.

Data Collection

Historic traffic counts from previously completed planning and design efforts were provided by the City (see Appendix B) for the following locations within the study area:

- **City of Sun Valley Transportation Plan**
 - Dollar Road east of Sun Valley Road Volume Count – September 2013 and December 2013.
 - Sun Valley Road south of Bitterroot Road Volume Count – September 2013 and December 2013.
- **Sun Valley Resort Employee Residences Traffic and Circulation Study**
 - Sun Valley Road & Horseman's Center Road Intersection Count – September 2018.
 - Dollar Road & Cottonwood Condo Drive Intersection Count – October 2018.
- **Sun Valley Road Intersection Alternatives Feasibility Study**
 - Sun Valley Road & Dollar Road Intersection Count – January 2023.
- **Sun Valley Community School Faculty and Housing Project Traffic Study**
 - Elkhorn Road & Dollar Road Intersection Count – July 2023.



In addition to the historic traffic counts provided by the City, publicly available traffic data from the Idaho Transportation Department's (ITD) annual average daily travel application (AADT App) and ITD's Automatic Traffic Recorder (ATR) reports were referenced for this study.

Data collection also included the proposed facility build-out schedule and square footage for site modifications provided by RLB Architectura (RLB), an architectural firm hired to assist SVCO in developing the master plan.

Analysis Years and Scenarios

SVCO is proposing a phased development for the Sun Valley Resort Village, with completion of Phase 1 within approximately 10 years, and completion of Phase 2 within approximately 20 years. To support the traffic operational analyses for the project, existing and forecasted volumes were prepared for both the AM and PM peak periods for:

- Existing Year = 2024
- Opening Year (Phase 1) = 2035
- Design Year (Phase 2) = 2045

The opening and design year scenarios that were analyzed for the project include site modifications for the following updated land uses:

- Opening Year 2035 (Phase 1)
 - Food and Beverage
 - Retail
 - Recreation
 - Back of House (BOH)
- Design Year 2045 (Phase 2)
 - Conference Center Addition (Meeting Rooms)
 - Additional Guest Lodging

For the opening and design year scenarios, the intersection of Sun Valley Road and Dollar Road included modification to a single lane roundabout, as previously noted.

Existing Volume Development

The historic traffic counts provided by the City were used to develop existing peak hour volumes at each of the study area intersections. Although the counts were collected in different months and years, they all shared a system wide representative AM peak hour of 8:00-9:00 AM and representative PM peak hour of 4:00-5:00 PM. To normalize the historic counts to a peak summer condition, seasonal adjustment factors were developed using the nearby Hailey ATR (#068) on SH-75 south of Ketchum. The ATR is located a fair distance from the Sun Valley Resort however, this is the best and closest available ATR to Sun Valley. Given the seasonal nature of the facility and the fact that most patrons would travel on SH-75, this ATR is representative of the travel demand trends of the area. Based on discussions with the City, and confirmed by the ITD ATR data, a summer peak month of July was selected for analysis.



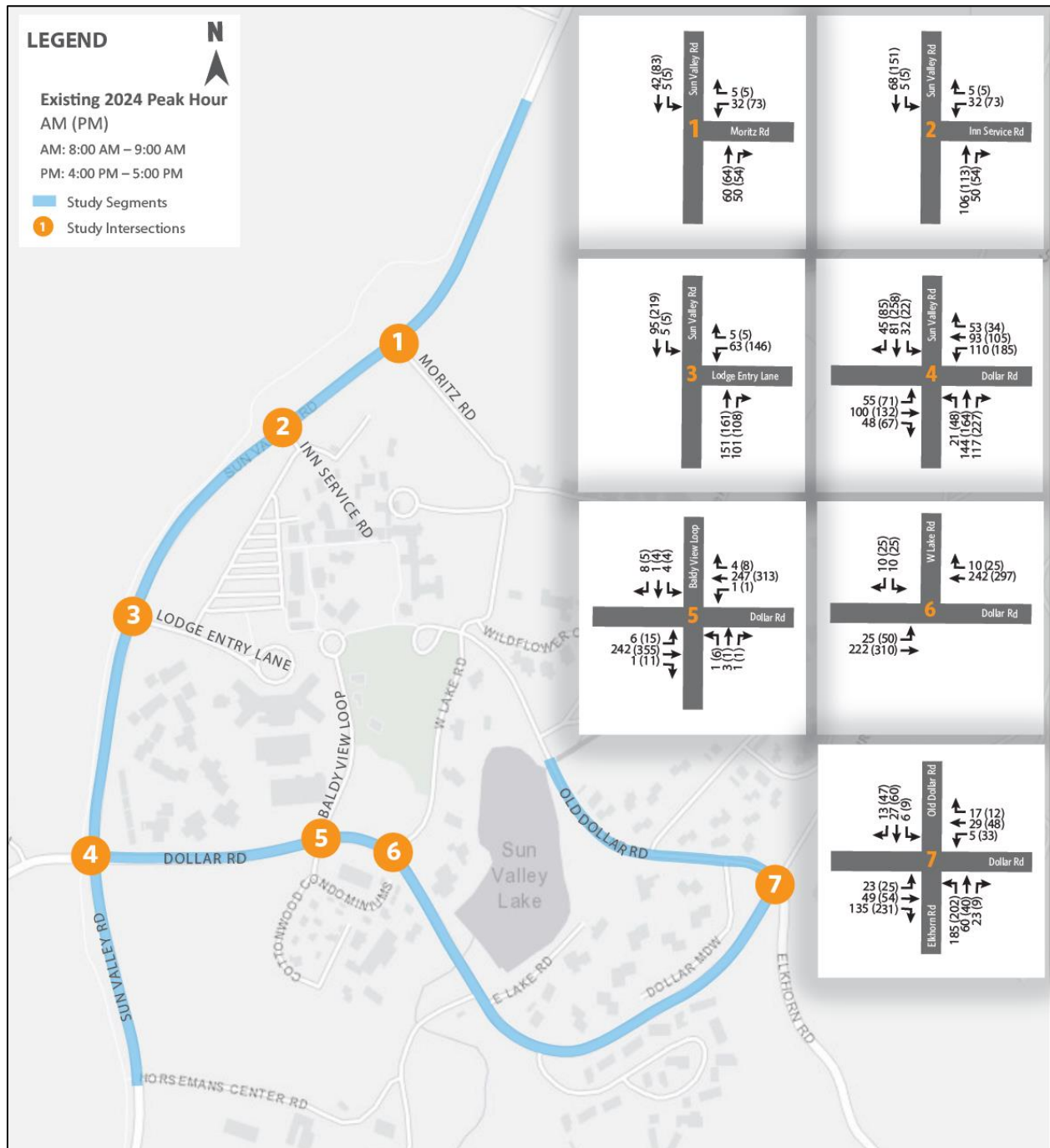
Seasonal adjustment factors for the months of October (1.22) and January (1.39) were calculated using historical data from 2012 to 2023 at the Hailey ATR (see Appendix C). 2020 data was not included in the calculation due to the traffic irregularities caused by the Covid-19 pandemic. The seasonal adjustment factors were applied to the historic counts and then adjusted to the existing year (2024) using a growth factor (see Travel Demand Forecasting section of this report).

With no historic counts available on Sun Valley Road north of the Dollar Road intersection, existing traffic volumes for the study area intersections at Moritz Road, Inn Service Road, and Lodge Entry Lane were estimated using assumed percentages of both inbound and outbound traffic at each location. In consultation with the City, it was assumed that 40 percent of traffic north of Dollar Road would use Lodge Entry Lane, while 20 percent of traffic would use Inn Service Road or Moritz Road. The remaining 20 percent of traffic was assumed to originate north of the resort.

The estimated AM and PM peak hour volumes were balanced along Dollar Road to further adjust for the different time periods of the historic counts. The Sun Valley Road intersection was taken in January 2023, the Baldy View Loop was taken in October 2018 and the Elkhorn Road/Old Dollar Road intersection was taken in July 2023. During the AM peak an imbalance of 200 vehicles was observed along Dollar Road in both directions likely due to traffic generated by the Sun Valley Community School located east of West Lake Road. The school population is around 425 students and 100 faculty, with drop-off times between 7:30 and 8:45 AM and pick-up times between 2:30 and 3:30 PM. The school employs flagger services to direct traffic at Dollar Road and Community School Drive during the morning and afternoon periods.

The latter half of student drop-off occurs during the AM peak hour being analyzed, which is likely contributing to the difference in volumes observed in January versus July. For analysis purposes, this study considers July as the analysis month meaning the additional 200 vehicles were removed from the Sun Valley Road and Dollar Road intersection to adjust for the peak summer season when school is not in session. An imbalance of 25 inbound and 25 outbound vehicles were assumed west of Old Dollar Road to account for East Lake Road and the Snow Creek Condominiums. The balanced existing year AM and PM peak hour volumes are provided in Figure 2.

Figure 2. 2024 Existing Peak Hour Intersection Volumes





Future Volume Development

Travel Demand Forecasting

Opening year and design year traffic forecasts for non-site (background) traffic were developed using a linear growth rate determined from the ITD ATRs on SH-75 as well as historic AADT estimates available on Sun Valley Road. Historic AADTs and calculated growth rates for five locations near the Sun Valley Resort are shown below in Table 2. It should be noted that AADTs fluctuated up and down at each location over the past 20 years, but for analysis purposes the long-term historic growth trend between 2002 and 2022 will be used for this study. Based on discussions with the City, a conservative historic linear growth rate of 0.50% per year was recommended for background traffic.

Table 2. Historical Growth Rates

Location	AADT (2002)	AADT (2022)	Growth Rate
ATR #68 (SH-75 north of Hailey)	13,008	14,081	0.38%
ATR #28 (SH-75 north of Ketchum)	1,396	1,472	0.26%
Sun Valley Road south of Horseman's Center Rd	6,100	6,700	0.49%
Sun Valley Road north of Dollar Rd	4,800	4,800	0.00%
SH-75 south of Sun Valley Road Junction	12,000	13,000	0.42%

Trip Generation and Distribution

The proposed phased facility build-out land use improvements of the Sun Valley Resort Village were used to identify the net increase in square footage or dwelling units for comparison to existing land uses. The phased build-out includes Food & Beverage, Retail, and Recreation land uses in Phase 1 (2035) and additional guest lodging in Phase 2 (2045). Phase 1 also includes back of house (BOH) improvements and Phase 2 includes additional meeting rooms, but for analysis purposes these were not included in the trip generation. BOH improvement concepts included in the Master Plan are primarily a replacement of existing BOH support facilities and are not likely to generate additional vehicle trips than existing.

In general, traffic related to conference activity (meeting rooms) happens outside of peak traffic volumes. During the summer and winter seasons, the conference center primarily hosts destination groups that are staying in the Village. Individuals attending these functions generally travel by air and in many cases do not have a car associated with their visit. During the quieter spring and fall shoulder seasons, regional groups with a higher percentage of attendees arriving by car are more common, but these groups also stay in the Village for most activities. Furthermore, when there are special evening fundraising and charity events, they are normally scheduled outside of peak traffic volumes (after 7pm), which indicates no need to increase traffic volumes.



Trip generation estimates for the site changes were developed using the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition*. A detailed breakdown of the ITE land use codes and approximate square footage used for trip generation is shown below in Table 3. Trip estimates for a typical AM and PM peak period are shown below in Table 4. The ITE trip generation reports are provided in Appendix D.

Table 3. ITE Trip Generation Land Use Codes and Square Footage

Category	ITE Land Use Code	Description	Increase in Square Footage (SQF) or Dwelling Units (DU)
Food & Beverage	932	High Turnover (sit-down) Restaurant	11,600 SQF
Retail	850	Supermarket	2,200 SQF
	876	Apparel Store	2,100 SQF
	880	Pharmacy (no drive-thru)	2,000 SQF
Recreation	492	Health/Fitness Club	4,570 SQF
Guest Lodging	310	Hotel	105 DU

Table 4. ITE Trip Generation for Sun Valley Resort Village Phased Build-Out

Land Use	AM Peak			PM Peak		
	In	Out	Total	In	Out	Total
	2035 Phase 1					
Food & Beverage	33	27	60	64	41	105
Retail	9	5	14	23	23	45
Recreation	3	3	6	9	7	16
Phase 1 Total	45	35	80	96	70	166
	2045 Phase 2					
	In	Out	Total	In	Out	Total
	2045 Phase 2					
Guest Lodging	27	21	48	32	30	62
Phase 2 Total	27	21	48	32	30	62

It should be noted that for the Food & Beverage category, an average of fine dining and sit-down restaurant ITE land use codes were used for the AM peak since it was assumed that not all restaurants might serve breakfast. Additionally, the hotel ITE land use code was used for Phase 2 as it represented the highest trip rate of all lodging options. It is also recognized that some sort of adjustment factor may be warranted for future land uses given the potential for higher employee-generated trips for a resort versus a standard hotel or other amenities. No adjustments were made for this preliminary traffic evaluation but should be considered as the individual resort improvements are further refined and specific development applications are submitted.

The additional trips identified for each phase were distributed to the roadway network based on the estimated turning movement ratios at the study area intersections. Peak hour trip generation and distribution estimates for Phase 1 and Phase 2 are provided in Figure 3 and Figure 4. The

peak hour trip estimates were added to the background traffic to develop opening year (2035) and design year (2045) traffic volumes for analysis (see Figure 5 and Figure 6).

Figure 3. 2035 Phase 1 Trips

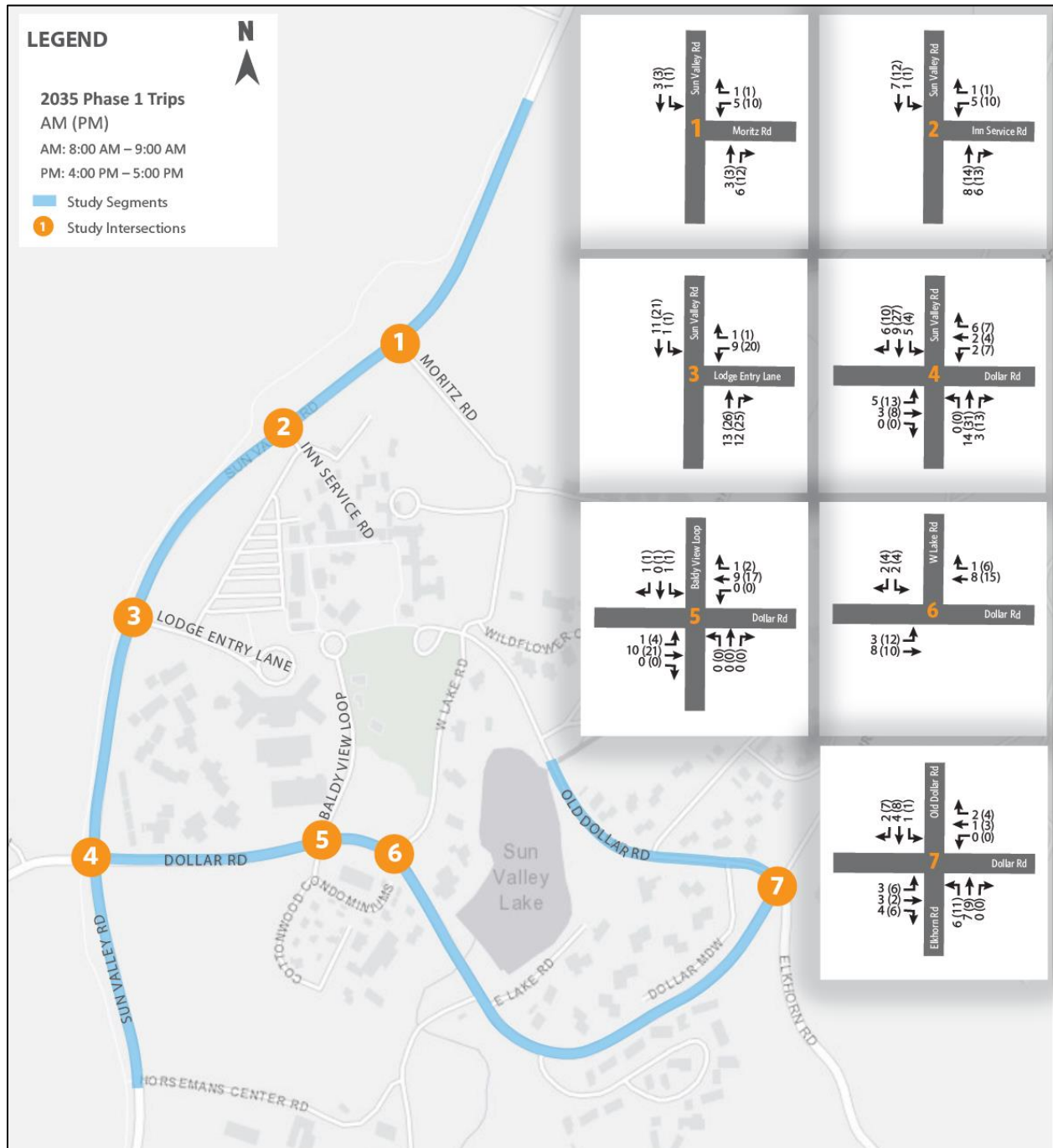


Figure 4. 2045 Phase 2 Trips

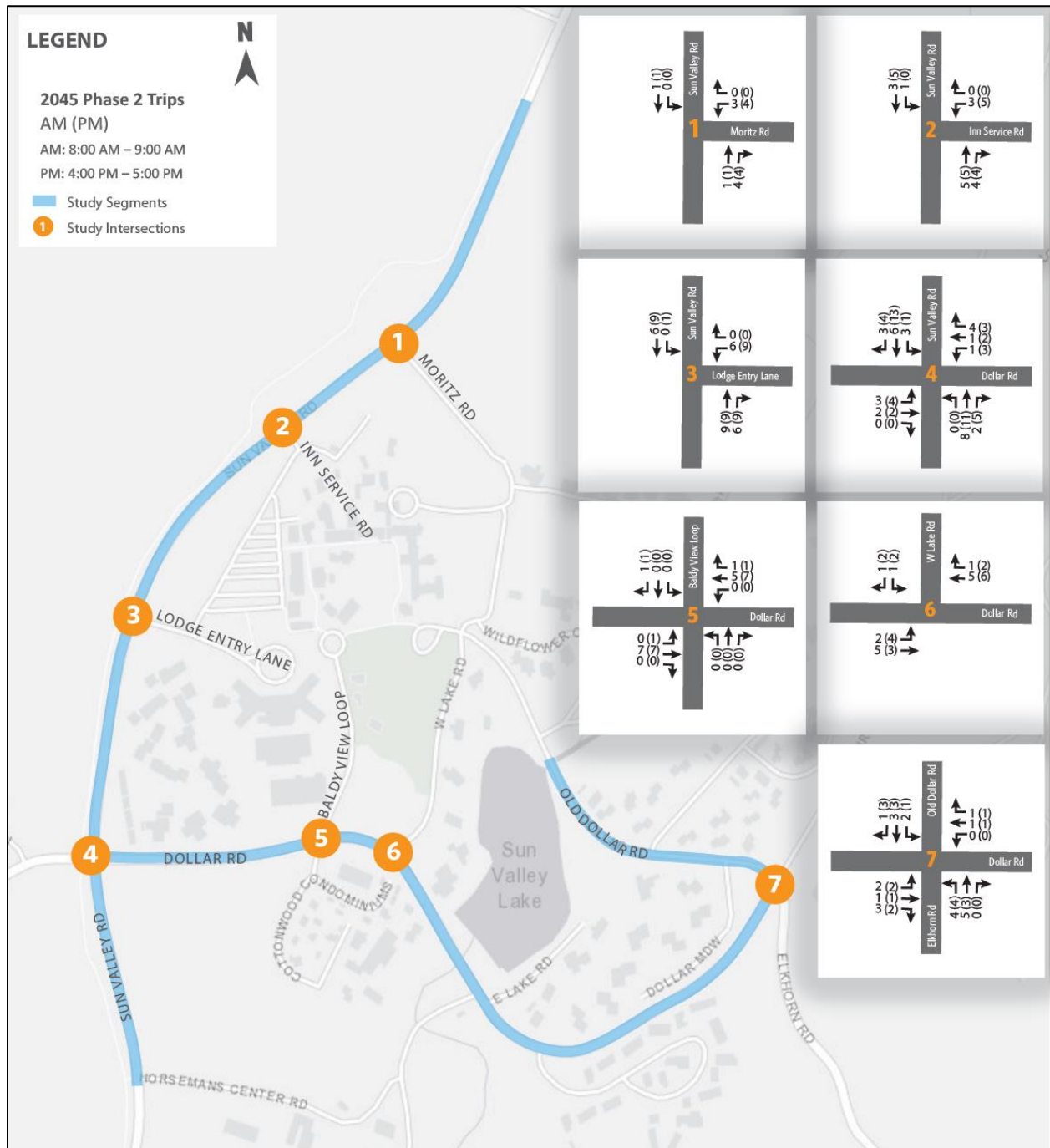


Figure 5. 2035 Phase 1 Peak Hour Intersection Volumes

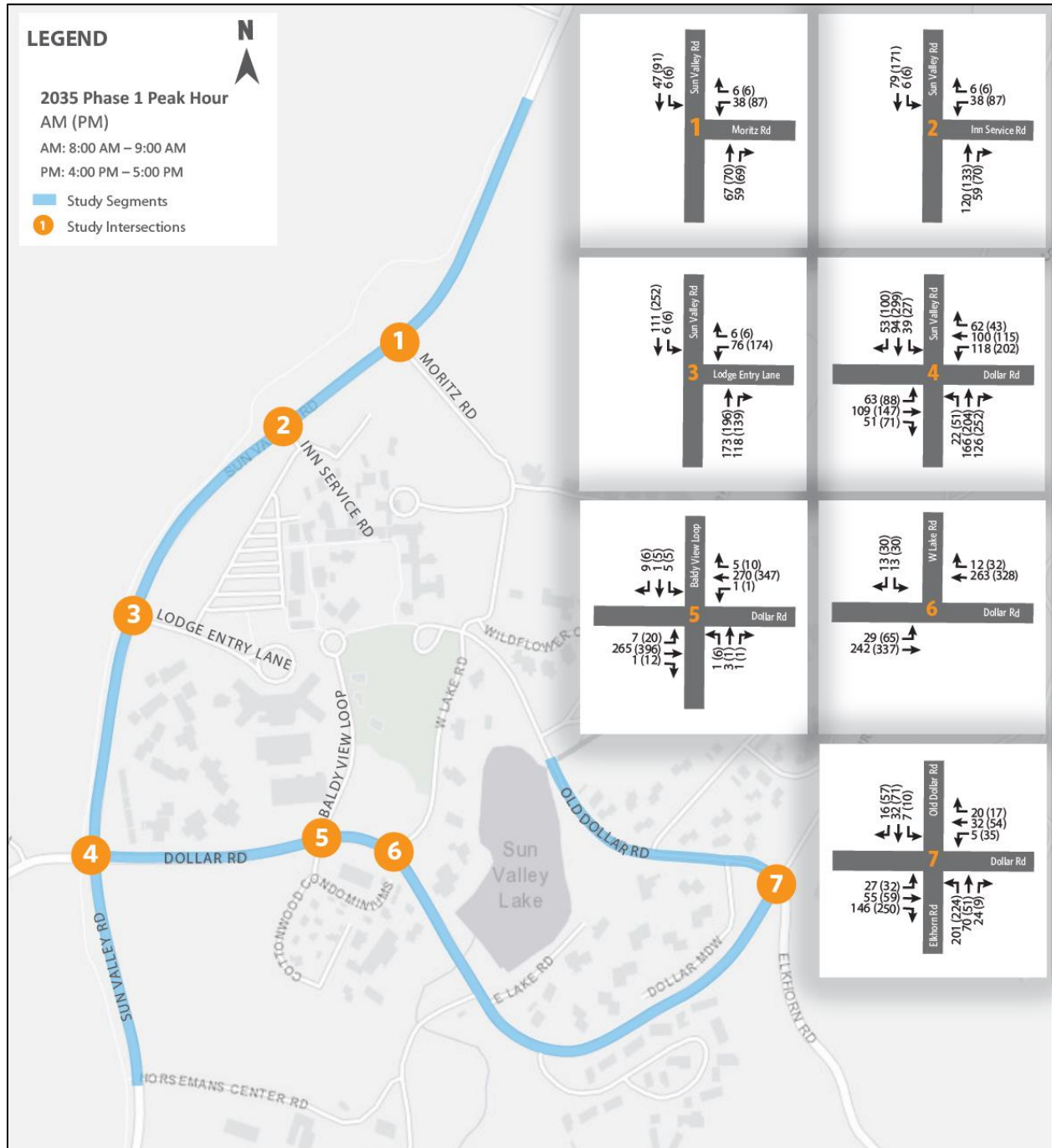
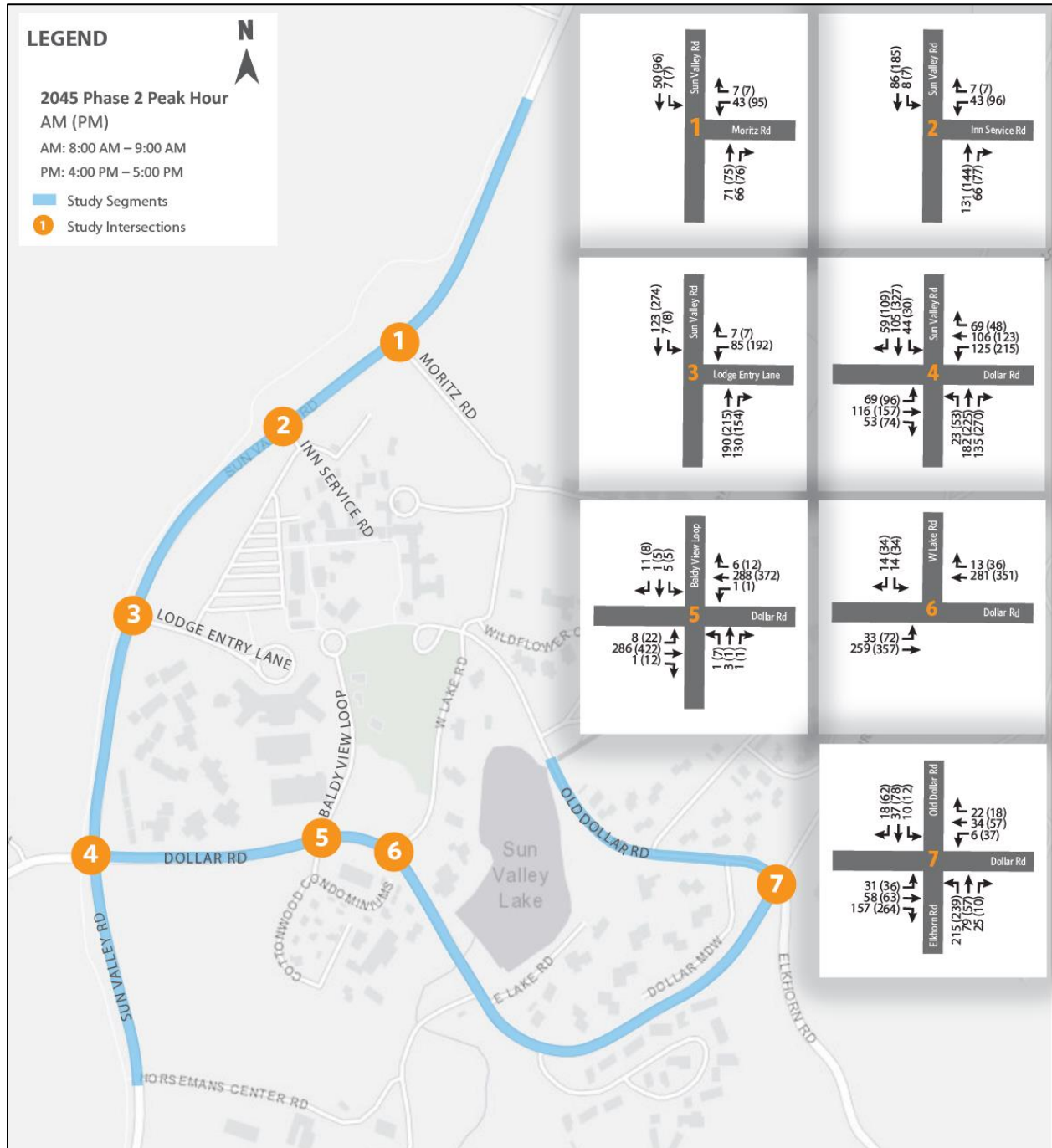


Figure 6. 2045 Phase 2 Peak Hour Intersection Volumes



Traffic Analysis

Capacity and Level of Service

Capacity is defined as the maximum rate at which vehicles can pass through a given point in an hour under prevailing conditions. *Highway Capacity Manual 6th Edition* (HCM6) procedures measure intersection capacity by evaluating the critical lane groups that require the adequate gaps in cross traffic for stop controlled and roundabout intersections and the most amount of green time for signalized intersections. A volume to capacity (v/c) ratio less than 0.85 generally indicates that adequate capacity is available, and vehicles are not expected to experience significant queues and delays. As the v/c ratio approaches 1.0, traffic flow may become unstable and significant delay and queuing conditions may occur. Once the demand exceeds capacity, defined as a v/c ratio greater than 1.0, traffic flow is unstable and excessive delay and queuing is expected. The concept of Level of Service (LOS) was developed to correlate numerical traffic operational data to subjective descriptions of traffic performance at intersections. LOS is defined as the system of six designated ranges, from “A” (highest) to “F” (lowest), used to evaluate performance. Table 5 presents the HCM6 LOS thresholds for unsignalized intersections.

Synchro 11 software was used to analyze the capacity of the intersection for both the existing and future years. Per discussions with the City, an LOS threshold of C for the overall intersection and a v/c threshold of < 1.0 for individual movements were selected to identify operational deficiencies and needs.

Table 5. LOS Thresholds for Motor Vehicles at Unsignalized Intersections

Control Delay (s/veh)	LOS By Volume-to-Capacity Ratio	
	≤1.0	>1.0
≤10	A	F
>10-15	B	F
>15-25	C	F
>25-35	D	F
>35-50	E	F
>50	F	F

The Florida Department of Transportation (FDOT) has developed generalized service volume tables for peak hour directional traffic on various types of roadways. These thresholds are used to provide a planning level estimate of the LOS on roadways between intersections, also called “links”. FDOT developed these thresholds using Highway Capacity Software (HCS) which models traffic conditions using HCM methodology. Standard hourly, peak hour, and directional factors were used to model different roadway volumes and conditions between intersections to determine the LOS based on the HCS Streets Facilities Mode. By varying the number of vehicles on the roadway, different thresholds were developed that correspond to different LOS.



When the motorized vehicle volume exceeds a certain threshold shown for the number of lanes, the LOS will drop to the next letter grade.

As noted above, The FDOT generalized services volume tables are derived from the industry standard HCM. As such, they are commonly used for a variety of roadway conditions, including those found outside of Florida. For example, the Ada County Highway District (ACHD) located in Ada County, Idaho has adapted these thresholds and adopted them in their policy manual for development as the standard LOS planning thresholds. The FDOT methodology assists engineers, planners, and decision makers in the planning of roadways at high levels and creating generalized comprehensive plan analysis, such as initial problem identification and generating master planning documents.

The FDOT manual classifies roadways according to the roadway's context. There are six classifications ranging from natural roadways, which are lands surrounded by nature or wilderness that is in permanent preservation, to Urban core roadways with high densities, typically with a population of over one million. Dollar Road and Sun Valley Road are roadways with small concentrations of developed areas immediately surrounded by rural or natural areas. A rural area is defined for analysis purposes as an area with a population with less than 5,000 people and not immediately adjacent to core urbanized, urbanized, or transitioning areas. Based on these characteristics, the study roadways correspond to a C2T-Rural Town designation in the FDOT manual. The associated planning level LOS thresholds are shown below in Table 6. Like the intersection analysis, a LOS C threshold was selected to identify operational deficiencies.

Table 6. Rural Two-Lane Roadway LOS Thresholds

Number of Lanes	LOS Motorized Vehicle Volume Thresholds			
	B	C	D	E
1 Lane	*	720	940	**
2 Lane	*	1,140	1,640	**
3 Lane	*	2,120	2,510	**
Notes	*Cannot be achieved using FDOT value defaults ** Volumes greater than LOS D become LOS F because intersection capacities have been reached			



Intersection Results

A summary of overall intersection delay and LOS for the AM and PM peak hours is provided in Table 7 for existing conditions and Table 8 for opening year and design year scenarios. As shown below, all study area intersections are operating at LOS C or better except for the existing all way stop control at Sun Valley Road and Dollar Road, which is operating at LOS E in the PM peak hour. When replaced with a single lane roundabout, the intersection is operating at LOS B or better in both 2035 and 2045. All individual movements have a v/c ratio of < 1.0 in all scenarios. Detailed HCM6 reports are provided in Appendix E.

Table 7. Existing Peak Hour Intersection Operations

Intersection	Approach ²	2024 Existing	
		Delay (sec/veh)	LOS
AM Peak Hour			
1. Sun Valley Rd & Moritz Rd	Westbound	9.6	A
2. Sun Valley Rd & Inn Service Rd	Westbound	10.1	B
3. Sun Valley Rd & Lodge Entry Ln	Westbound	11.6	B
4. Sun Valley Rd & Dollar Rd ¹	Overall ¹	13.9	B
5. Dollar Rd & Baldy View Loop	Northbound	13.4	B
6. Dollar Rd & W Lake Rd	Southbound	12.0	B
7. Dollar Rd & Old Dollar Rd/Elkhorn Rd	Northbound	11.7	B
PM Peak Hour			
1. Sun Valley Rd & Moritz Rd	Westbound	10.2	B
2. Sun Valley Rd & Inn Service Rd	Westbound	11.3	B
3. Sun Valley Rd & Lodge Entry Ln	Westbound	15.0	C
4. Sun Valley Rd & Dollar Rd ¹	Overall ¹	31.6	D
5. Dollar Rd & Baldy View Loop	Northbound	16.9	C
6. Dollar Rd & W Lake Rd	Southbound	14.3	B
7. Dollar Rd & Old Dollar Rd/Elkhorn Rd	Northbound	12.7	B
¹ Sun Valley Rd & Dollar Rd intersection is all way stop condition under existing conditions. LOS is based on overall intersection results rather than worst approach.			
² Intersection delay/LOS results based on worst stop-controlled approach except where noted.			



Table 8. Future Peak Hour Intersection Operations

Intersection	Approach ²	2035 Phase 1		2045 Phase 2	
		Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
AM Peak Hour					
1. Sun Valley Rd & Moritz Rd	Westbound	9.6	A	9.8	A
2. Sun Valley Rd & Inn Service Rd	Westbound	10.2	B	10.5	B
3. Sun Valley Rd & Lodge Entry Ln	Westbound	11.9	B	12.5	B
4. Sun Valley Rd & Dollar Rd ¹	Overall ³	6.3	A	6.8	A
5. Dollar Rd & Baldy View Loop	Northbound	13.3	B	13.9	B
6. Dollar Rd & W Lake Rd	Southbound	12.0	B	12.4	B
7. Dollar Rd & Old Dollar Rd/Elkhorn Rd	Northbound	11.7	B	12.6	B
PM Peak Hour					
1. Sun Valley Rd & Moritz Rd	Westbound	10.5	B	10.7	B
2. Sun Valley Rd & Inn Service Rd	Westbound	12.0	B	12.5	B
3. Sun Valley Rd & Lodge Entry Ln	Westbound	18.0	C	21.3	C
4. Sun Valley Rd & Dollar Rd ¹	Overall ³	10.8	B	12.4	B
5. Dollar Rd & Baldy View Loop	Northbound	18.6	C	20.3	C
6. Dollar Rd & W Lake Rd	Southbound	15.8	C	17.4	C
7. Dollar Rd & Old Dollar Rd/Elkhorn Rd	Northbound	14.2	B	15.9	C
¹ Sun Valley Rd & Dollar Rd intersection is a single lane roundabout in all future scenarios.					
² Intersection delay/LOS results based on worst stop-controlled approach.					
³ Future year delay/LOS for proposed roundabout is based on overall intersection results rather than worst approach.					

Segment Results

A summary of existing and future directional segment volumes within the study area is provided in Table 9 for the AM peak hour and Table 10 for the PM peak hour. As shown below, all study area segments are below the FDOT LOS C threshold of 720 vehicles per hour based on the assumed traffic volumes developed for a peak summer condition. It is possible that segments of Dollar Road or Sun Valley Road may exceed the planning-level threshold during peak school drop-off or pick-up times, but the impacts are of relatively short duration and would likely not necessitate additional capacity improvements. Further, the peak seasonal traffic occurs in July, which is not within the school year.



Table 9. Directional Roadway Volumes – AM Peak Hour

Roadway	Segment	Direction	LOS C Threshold ¹	AM Peak Hour		
				2024 Existing	2035 Phase 1	2045 Phase 2
Sun Valley Road	South of Dollar Rd	Northbound	720	282	315	340
		Southbound	720	239	263	283
	Dollar Rd to Lodge Entry Ln	Northbound	720	252	291	320
		Southbound	720	158	187	208
	Lodge Entry Ln to Inn Service Rd	Northbound	720	156	179	197
		Southbound	720	100	117	129
	Inn Service Rd to Moritz Rd	Northbound	720	111	126	137
		Southbound	720	73	85	93
	North of Moritz Rd	Northbound	720	65	73	78
		Southbound	720	47	53	57
Dollar Road	Sun Valley Road to Baldy View Loop	Eastbound	720	249	274	294
		Westbound	720	256	280	300
	Baldy View Loop to W Lake Rd	Eastbound	720	247	272	292
		Westbound	720	252	276	296
	W Lake Rd to Old Dollar Rd/Elkhorn Rd	Eastbound	720	232	275	273
		Westbound	720	252	255	295
Old Dollar Road	North of Dollar Road	Northbound	720	100	118	131
		Southbound	720	46	56	64

¹LOS C threshold based on FDOT Generalize Service Volume Tables for peak hour directional traffic on a C2T Rural Town roadway context classification.



Table 10. Directional Roadway Volumes – PM Peak Hour

Roadway	Segment	Direction	LOS C Threshold ¹	PM Peak Hour		
				2024 Existing	2035 Phase 1	2045 Phase 2
Sun Valley Road	South of Dollar Rd	Northbound	720	439	507	549
		Southbound	720	510	572	617
	Dollar Rd to Lodge Entry Ln	Northbound	720	269	335	370
		Southbound	720	365	426	465
	Lodge Entry Ln to Inn Service Rd	Northbound	720	166	203	222
		Southbound	720	224	258	281
	Inn Service Rd to Moritz Rd	Northbound	720	118	139	151
		Southbound	720	156	178	191
Dollar Road	North of Moritz Rd	Northbound	720	69	77	81
		Southbound	720	88	97	103
	Sun Valley Road to Baldy View Loop	Eastbound	720	381	427	456
		Westbound	720	324	360	386
	Baldy View Loop to W Lake Rd	Eastbound	720	360	402	429
		Westbound	720	322	359	385
Old Dollar Road	W Lake Rd to Old Dollar Rd/Elkhorn Rd	Eastbound	720	335	367	391
		Westbound	720	322	361	387
Old Dollar Road	North of Dollar Road	Northbound	720	77	100	111
		Southbound	720	116	138	152

¹LOS C threshold based on FDOT Generalize Service Volume Tables for peak hour directional traffic on a C2T Rural Town roadway context classification.



Pedestrians and Bicycles

A high-level evaluation of the pedestrian and bike connections to the resort facilities was performed to identify potential areas for improvement. Pedestrian or bike measures of effectiveness were not analyzed as part of this plan as no nationally recognized methodology for pedestrian and bike trip generation is known to exist and the City has not adopted standards for measures of effectiveness for these modes. Broad opportunities for enhancement consistent with MPD Goal 7 were instead considered. Goal 7 encourages growth and manages development by supporting the continued development of an integrated transportation system that promotes a recreationally-active community, encourages non-motorized transportation, and reduces congestion and air pollution.

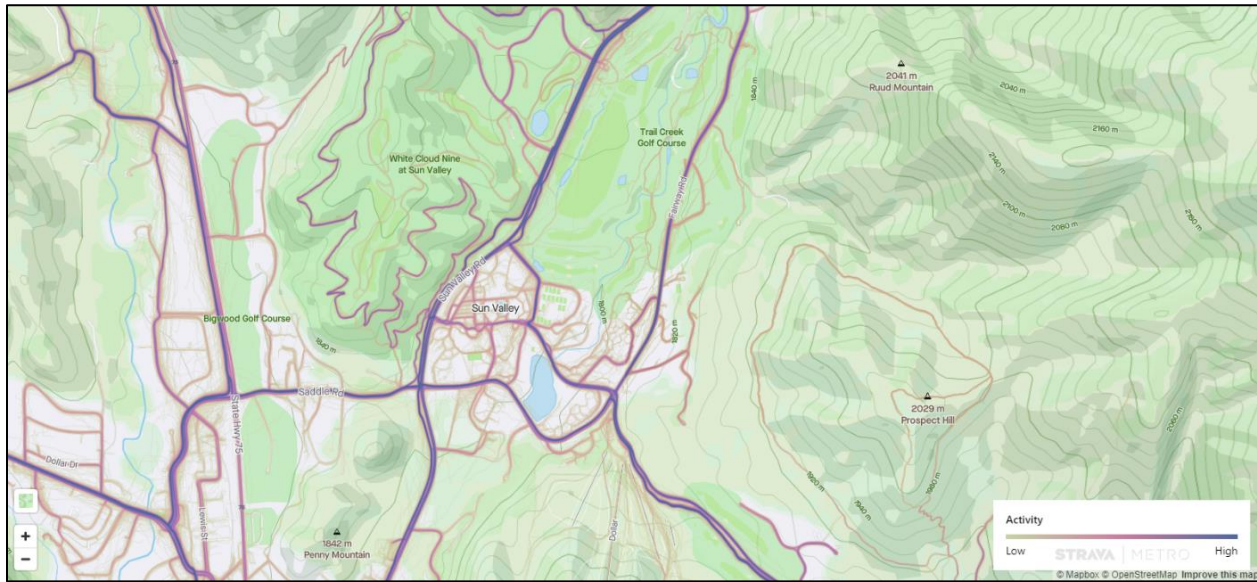
Existing Conditions

The internal pedestrian and bike paths connect to the wider multi-use trail network externally at the following locations:

- North: Moritz Road at Sun Valley Road connecting to the Trail Creek Golf Course and winter snowshoe and Nordic ski trails via a multi-use path.
- East: West Lake Road at Old Dollar Road, connecting to residential areas via a pedestrian pathway.
- South: Baldy View Loop at Dollar Road, connecting Ketchum and Bald Mountain via a multi-use path, and
- West: Carol's trailhead (directly opposite Lodge Entry Lane) connects to Trail Creek Path, Sunrise Loop Trail, Valley View Trail, and Saddle Road Connector Trail.

The City has an agreement with Strava Metro to provide insight into the pedestrian and bike usage within Sun valley. Strava is a global company that tracks users' locations while they are walking, biking or hiking and aggregates the location data for use by city governments to assist in planning. The heatmap provided by the City, shown in Figure 7, highlights which routes are used most heavily by pedestrians and bicyclists to access the resort.

Figure 7. Strava Pedestrian and Bicycle Heat Map



Most pedestrians and bicyclists tend to use Old Dollar Road, Moritz Road, West Lake Road and Baldy View Loop to access the resort. It also appears that users heavily cross Sun Valley Road at the Carol's trailhead crossing. This is consistent with the external access points listed above. Even though the West Lake Road and Baldy View loop lack separated bike and pedestrian facilities, vehicular traffic volumes and speeds may be low enough that pedestrian and bicyclists feel comfortable using these facilities to access the resort.

Based on Google Earth imagery, the following locations have marked pedestrian crossings across the adjacent roadways that connect to resort facilities:

- Inn Service Road
- Lodge Entry Lane
- Across from the Pavilion Lot and the dirt Event Parking Lot
- Baldy View Loop
- Old Dollar Road, east of the bridge

Recommendations

These facilities lack detectable warning devices, such as yellow truncated domes, to provide ADA accessibility and some of the crossings are skewed thereby increasing the pedestrian crossing times. Wide approaches at Inn Service Road and Lodge Entry lane decrease the attractiveness for pedestrians or bikes to cross at these locations. Crossings should be improved to meet current ADA, state, and city requirements.

The crossing at Baldy View Loop is enhanced with flashing beacons to assist employees walking to work from the Employee Residences located off Horseman's Center Road. This enhanced crossing should be maintained for pedestrian and bike safety.



Impacts to Transit

Existing Conditions

The Sun Valley Resort Village is currently serviced by several Mountain Ride bus routes. The Blue Route operates year-round with a transfer stop located at the terminus of Baldy View Loop. Additional nearby stops include the pavilion parking lot and the ice rink. The Valley Route's northern terminal is in Dollar Circle on Dollar road. The Gold, Silver and Bronze routes connect the Sun Valley Resort Village with Dollar and Bald Mountain ski areas and the City of Ketchum. Each of these three routes has a transfer point at the terminus of Baldy View Loop. On each route, busses travel in the same lane as vehicle traffic and no separate bus facilities exist.

The current network provides access to the center of the Sun Valley Resort Village with 30-minute headways on the Blue Route and hourly headways on the Valley Route. The transit connections near the Village's interior and predictable headways provide an important connection to the surrounding area.

Based on the traffic intersection and link capacity analysis shown above, the roadway network will be operating at acceptable LOS in the future analysis years. Traffic flows are expected to be relatively stable and predictable and therefore likely the Mountain Rides bus system will be able to achieve consistent and reliable headways well into the future.

The Sun Valley Company is coordinating with Mountain Rides to consolidate the two bus stops on the interior of the Sun Valley Village into one bus stop on Baldy View Loop, as shown in Figure 8. The conceptual improvements in the master plan that include relocations and consolidation of the existing stop locations are unlikely to negatively impact Mountain Rides operations in the area.

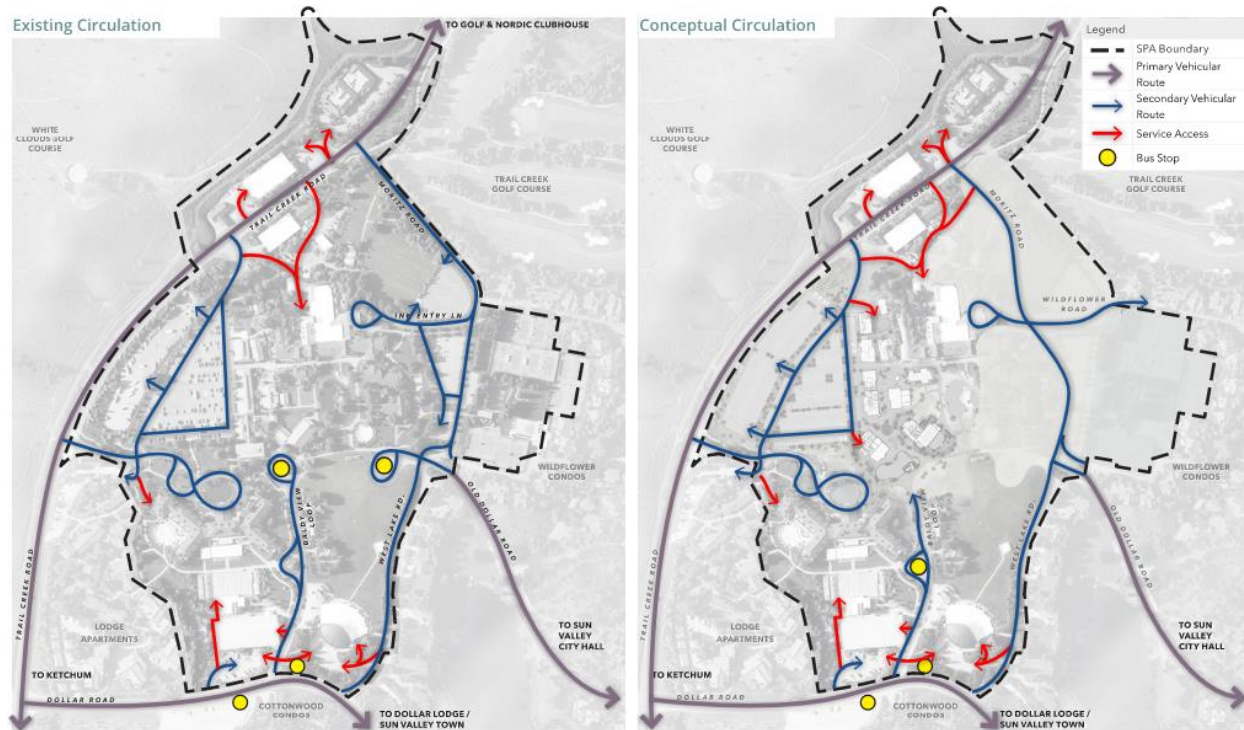


Figure 8. Existing and Proposed Vehicle Circulation and Bus Stops

Recommendations

Roadways and Intersections

Through this analysis HDR does not recommend capacity improvements to the roadways or intersections surrounding the Sun Valley Resort Village. Based on the projected volumes the roadways surrounding the Resort are all estimated to operate at LOS C or better in the 2035 and 2045 analysis years, respectively. The intersections will see an increase in traffic from the potential future developments; however, all intersections meet the City of Sun Valley LOS C threshold with future projections considered. While HDR does not recommend capacity modifications at this time, further traffic analysis should be completed as the individual resort improvements are further refined and specific development applications are submitted based on actual land uses at the time of development.

Sun Valley Company should consider narrowing approaches and decreasing the corner radii at the resort entrances while maintaining required fire and emergency service vehicle requirements. Narrowing corner radii reduces vehicle turning speeds and shortens pedestrian crossing distances which enhances safety of the facilities.

Pedestrian and Bike Facilities

The proposed master plan encourages future improvements to non-vehicular circulation within and to the resort by reinforcing existing connections, prioritizing pedestrian and bike friendly development, and by preserving connection points to the external trail network. Enhancements for convenience, accessibility and safety should be considered. In coordination with the City, the resort should consider:

- Improving all pedestrian and bike connection points to current ADA/PROWAG and City standards at the time of development.
- Narrowing approaches and removing skew from crossings to reduce pedestrian crossing duration.
- Provide separated pedestrian facilities along the pedestrian routes identified in the Pedestrian Circulation Concept of the MPD.
- Connect primary entrance points to designated bicycle parking area and rental outlets.
- Provide dedicated pedestrian and bicycle corridors through parking areas to increase safety.
- Further study of bicycle and pedestrian circulation volumes in the Village SPA area

Figure 9 below shows the proposed pedestrian circulation concept, and the yellow areas represent areas identified for pedestrian crossing improvements.

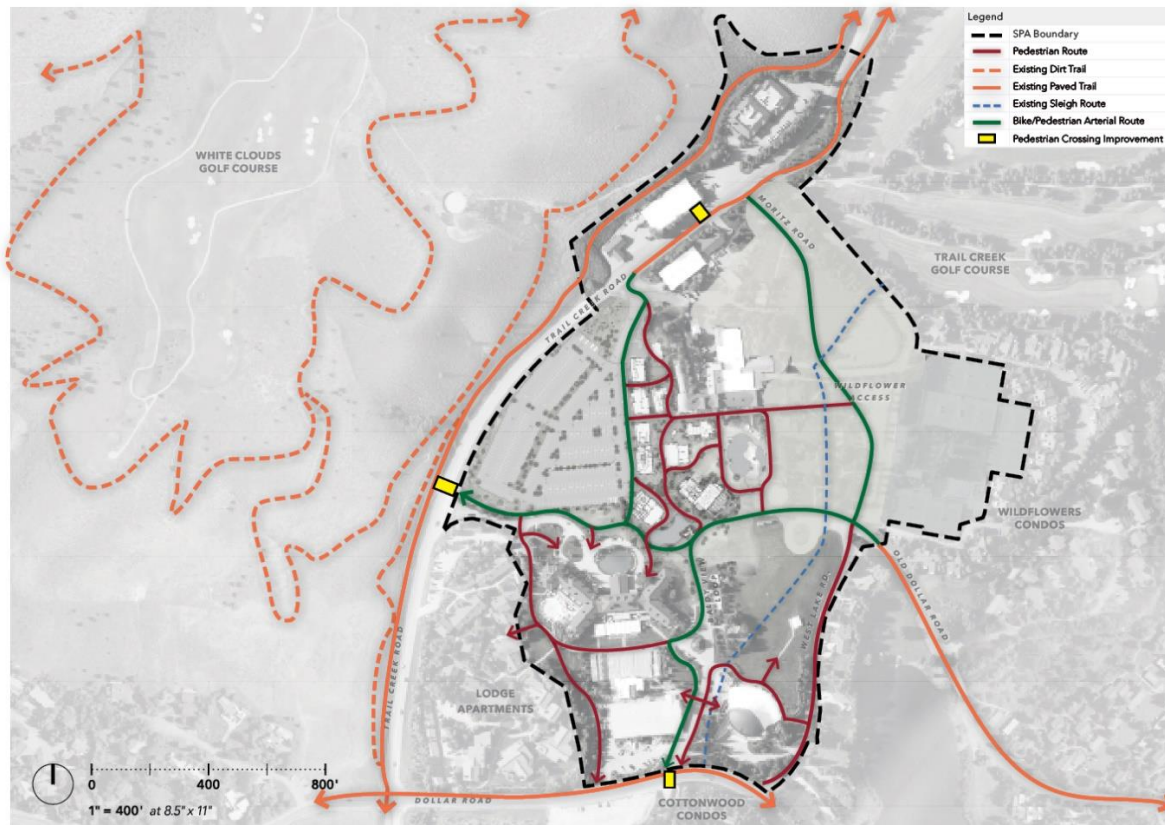


Figure 9. Proposed Pedestrian Circulation Concept and Pedestrian Crossing Improvements



Based on the Strava heat map, Moritz Road and Old Dollar Lane are two highly utilized routes to access the resort by pedestrians and bicyclists. As Moritz Road is realigned, consideration should be given to providing a pedestrian and bike route to facilitate a connection between the two locations. A continuous connection between the two roadways for non-motorized traffic would enhance connectivity and circulation of the resort.

Transit Facilities

Sun Valley Company should coordinate with Mountain Rides to maintain and enhance transit connections to the Village. Renovations should include improvements for public and mass transit drop-off sites and should be flexible in nature to consider future public and mass-transit technologies not currently in common use. The Company should coordinate with Mountain Rides to maintain the connections to the Dollar and Bald Mountain ski areas as these provide an opportunity to travel to the surrounding areas without using personal vehicles thereby reducing the number of vehicles on the roadway. Finally, the Company should coordinate with Mountain Rides during renovations to update the bus stops with enhancements such as increased signage, benches and/or shelters. Improvements should fit the character of the Village while also meeting the needs of Mountain Rides.

Next Steps

The Sun Valley Company should include this preliminary traffic evaluation into the Master Planning Document and submit it to the City with the application for approval. As details are finalized for specific improvements to the Sun Valley Resort Village, Sun Valley Company should consider further traffic analysis for development projects of appropriate scale to confirm the results of the preliminary traffic evaluation. Those results should be included in future specific development applications at the time of development.



Appendix A – Methods and Assumptions Memo



Memo

Date: Wednesday, March 27, 2024

Project: Traffic and Circulation Study for Sun Valley Resort Improvements

To: Brittany Skelton (City of Sun Valley)
Heidi Goedhart (City of Sun Valley)
Michael Bulls (RLB)

From: Brett Kohring, PE (HDR)
Jeremy Jackson, PE (HDR)

Subject: Traffic Analysis Methodology and Assumptions

Introduction

The Sun Valley Company (SVCO) has requested a preliminary traffic and circulation study for the Master Plan Development (MPD) application for the Sun Valley Resort Village Specific Plan Area (SPA) in Sun Valley, Idaho. SVCO is seeking to add additional meeting, retail, and lodging space throughout the resort and the traffic study will be used to support the development application. The purpose of this memo is for the City of Sun Valley to confirm and approve the trip generation, travel demand forecasting, and operational analysis methodology before HDR proceeds with the preliminary traffic study.

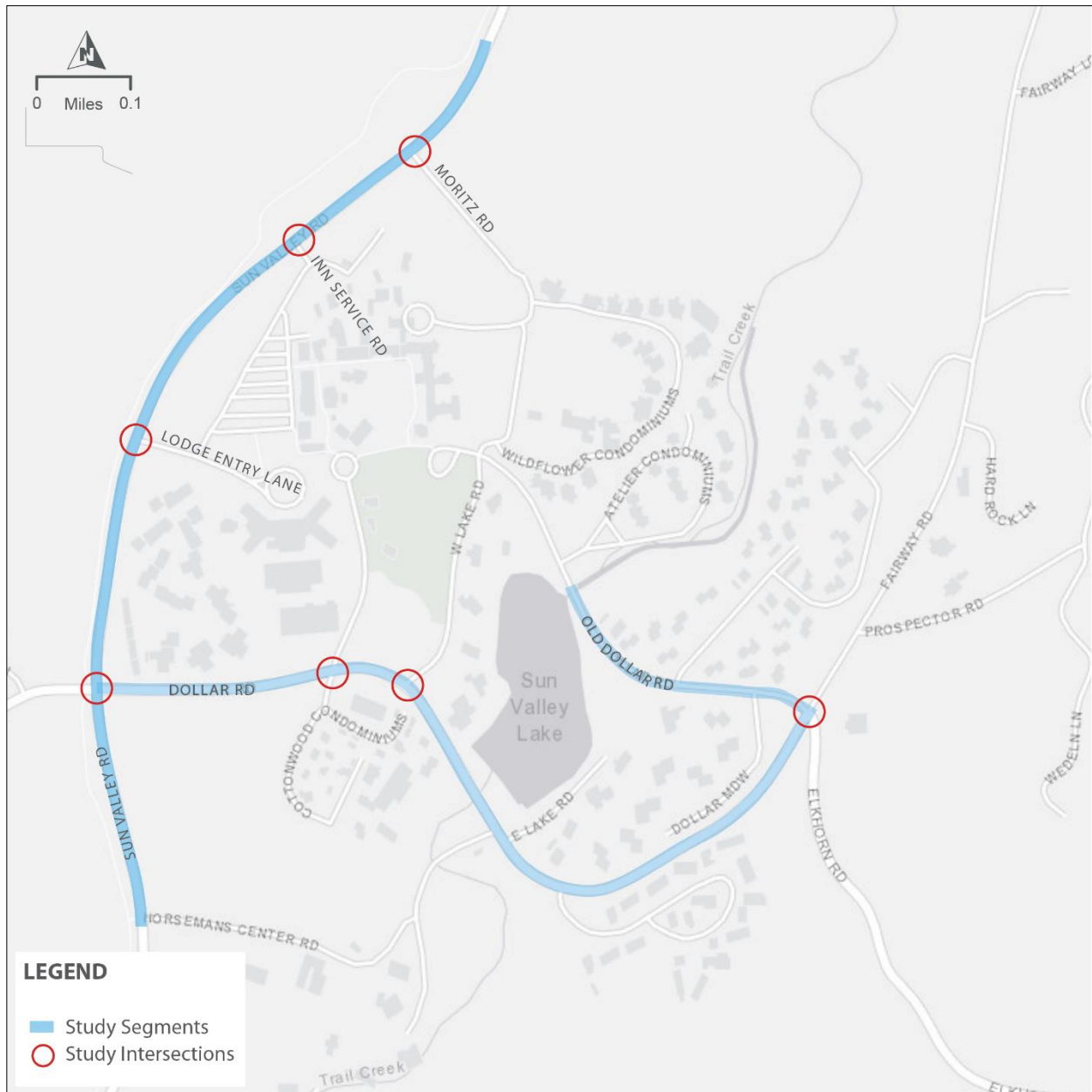
Study Area

The Sun Valley Resort Village is located in Sun Valley, Idaho, and is accessed primarily via Sun Valley Road, Dollar Road, and Old Dollar Road. Based on discussions with SVCO and the City of Sun Valley, the traffic and circulation study will include the following intersections:

- Sun Valley Road and Dollar Road
- Sun Valley Road and Lodge Entry Lane
- Sun Valley Road and Inn Service Road
- Sun Valley Road and Moritz Road
- Dollar Road and Cottonwood Condo Drive / Baldy View Loop
- Dollar Road and W. Lake Road
- Dollar Road and Old Dollar Road / Elkhorn Road

Figure 1 presents the study area intersections and roadway segments.

Figure 1. Vicinity Map and Study Area





Data Collection

The traffic and circulation study will utilize the following data provided by Ruscitto Latham Blanton (RLB) and the City of Sun Valley:

- **Data provided by RLB:**
 - CADD layout of the proposed development, parking areas, pathways, and connections to public roads.
 - Proposed facility build-out schedule and square footage for site modifications.
- **Data provided by City of Sun Valley:**
 - Committed and planned improvements in the area.
 - Current and planned lane use zoning.
 - Historic traffic counts from previously completed planning and design efforts.
 - Strava bike and pedestrian data.

No new traffic counts are anticipated for this study. Historic volume (72-hour) and intersection turning movement counts have been provided for the following locations within the Sun Valley Resort Village SPA:

- **City of Sun Valley Transportation Plan**
 - Dollar Road east of Sun Valley Road Volume Count – September 2013 and December 2013.
 - Sun Valley Road south of Bitterroot Road Volume Count – September 2013 and December 2013.
- **Sun Valley Resort Employee Residences Traffic and Circulation Study**
 - Sun Valley Road & Horseman's Center Road Intersection Count – September 2018.
 - Dollar Road & Cottonwood Condo Drive Intersection Count – October 2018.
- **Sun Valley Road Intersection Alternatives Feasibility Study**
 - Sun Valley Road & Dollar Road Intersection Count – January 2023.
- **Sun Valley Community School Faculty and Housing Project Traffic Study**
 - Elkhorn Road & Dollar Road Intersection Count – July 2023.

In addition to the historic traffic counts provided by the City, publicly available traffic data from the Idaho Transportation Department's (ITD) annual average daily travel application (AADT App) and ITD's Automatic Traffic Recorder (ATR) reports will be referenced for this study.

Analysis Years and Scenarios

SVCO is proposing a phased development for the Sun Valley Resort Village SPA, with completion of Phase 1 within approximately 10 years, and completion of Phase 2 within approximately 20 years. To support the traffic operational analyses for the project, existing and forecasted volumes will be prepared for both the AM and PM peak periods for:

- Existing Year = 2024
- Opening Year (Phase 1) = 2035
- Design Year (Phase 2) = 2045



The opening and design year scenarios that will be analyzed for the project include site modifications for the following updated land uses:

- Opening Year 2035 (Phase 1)
 - Food and Beverage
 - Retail
 - Recreation
- Design Year 2045 (Phase 2)
 - Back of House (BOH)
 - Meeting Rooms
 - Guest Rooms

For the opening and design year scenarios, the intersection of Sun Valley Road and Dollar Road will include modification to a single lane roundabout, as documented in the *Sun Valley Road Intersection Alternatives Feasibility Study* prepared by Jacobs in March 2023.

Base Year Traffic Data and Traffic Factors

Using data from the historic counts, the ITD AADT App, and ITD's ATRs, HDR will determine adjustment factors to apply to existing and future demand forecasts, including:

- Monthly seasonal factor (MSF) = monthly average daily traffic / average annual daily traffic (AADT).
- K-factors = proportion of AADT occurring in AM and PM peak hours, respectively.
- D-factors = percentage of two-way peak hour traffic that occurs in each direction in the AM and PM peak hours, respectively.
- Growth factor = future AADT / existing AADT (see Travel Demand Forecasting section of this memo).

These factors will be used to normalize the historic counts to an existing year (2024) peak summer condition, verify and adjust the counts to estimate AADT, and estimate peak hour volumes from daily travel demand forecasts. There are two ATRs on SH-75 that may be used to determine traffic factors; ATR #68 (Hailey) on SH-75 at MP 119.4 (2.9 miles north of Bullion Street in Hailey, ID) and ATR #28 (Ketchum) on SH-75 at MP 135.95 (7.6 miles north of the Sun Valley Road junction). These two ATRs are located a fair distance from the Sun Valley Resort, however given the seasonal nature of the facility and the fact that most patrons would travel on SH-75, it's likely that these ATR's represent travel demand trends relatively accurately.

With no historic counts available on Sun Valley Road north of the Dollar Road intersection, existing traffic volumes for the study area intersections at Moritz Road, Inn Service Road, and Lodge Entry Lane will be estimated using other sources. A K-factor determined for the study area will be applied to the AADT data from the ITD AADT App to calculate peak hour volumes on Sun Valley Road. In order to estimate intersection turning movement volumes, trip generation data (see Trip Generation and Distribution section of this memo) for the existing land uses in the vicinity of these access points will be used along with an assumed trip distribution. Estimated traffic volumes for the Dollar Road and West Lake Road intersection will follow a

similar process using the available traffic data on Dollar Road as well as estimated trip generation data.

Following submittal of the Methods and Assumptions Memorandum, subsequent discussions with the City of Sun Valley resulted in a different approach to developing volumes on Sun Valley Road north of Dollar Road. Instead of relying on ITE trip generation, an assumed percentage of inbound and outbound trips at each location will be used to estimate turning movement volumes and will be documented in the traffic report.

Travel Demand Forecasting

Opening and design year traffic forecasts for non-site (background) traffic will be developed using a linear growth rate determined from the ITD ATRs on SH-75 as well as historic AADT estimates available on Sun Valley Road. Historic AADTs and calculated growth rates for five locations near the Sun Valley Resort are shown below in **Table 1**. It should be noted that AADTs fluctuated up and down at each location over the past 20 years, but for analysis purposes the long-term growth trend between 2002 and 2022 will be used for this study. Based on the locations identified below, a conservative historic linear growth rate of 0.50% per year is recommended for background traffic.

Table 1. Historical Growth Rates

Location	AADT (2002)	AADT (2022)	Growth Rate
ATR #68 (SH-75 north of Hailey)	13,008	14,081	0.38%
ATR #28 (SH-75 north of Ketchum)	1,396	1,472	0.26%
Sun Valley Road south of Horseman's Center Rd	6,100	6,700	0.49%
Sun Valley Road north of Dollar Rd	4,800	4,800	0.00%
SH-75 south of Sun Valley Road Junction	12,000	13,000	0.42%

Trip Generation and Distribution

The proposed phased facility build-out of the Sun Valley Resort Village SPA will be used to identify the net increase in square footage for existing land uses. Trip generation estimates for the site changes for a typical AM and PM peak period will be developed using the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition*, or the ITE *Parking Generation Manual, 6th Edition*, as necessary. The estimated additional trips identified for each phase will be distributed to the roadway network based on existing turning movement counts and/or estimated distributions at the study area intersections.

Trip generation and distribution estimates from the proposed developments will be added to the background traffic to develop opening year and design year travel demand forecasts for analysis.

Analysis Methodology

The operational performance of the impacted roadways and intersections for the opening year and design year conditions will be analyzed according to methodologies provided in the *Highway Capacity Manual 6th Edition* (HCM 6). The primary measures of effectiveness (MOEs) for this traffic analysis will be level of service (LOS) and volume-to-capacity (v/c) ratios. Acceptable thresholds for this analysis are assumed to be LOS D for intersections and roadway segments, and no movements having a v/c ratio greater than 1.0. The operational analysis will identify deficient facilities and potential improvements to reach acceptable LOS thresholds.

Synchro software (version 11) will be used for the unsignalized intersection operational analysis, while Sidra (version 9) will be used for the proposed roundabout at the Sun Valley Road and Dollar Road intersection. Forecasted roadway link volumes will be compared to generalized service volume tables in the *2023 Multimodal Quality/Level of Service Handbook* developed by the Florida Department of Transportation (FDOT). The FDOT generalized service volume tables were developed based on HCM 6 methodology and are used to evaluate roadway LOS at a planning level.

In addition to the traffic capacity analysis, a qualitative analysis of multimodal connectivity of the roadways and intersections bordering the Sun Valley Resort Village will be performed. Using Strava data provided by the City, HDR will analyze existing connectivity and identify potential improvements for deficient bike and pedestrian facilities. Compliance with the Americans with Disability Act or the Public Right-of-Way Accessibility Guidelines will not be included in this analysis.

Internal circulation (vehicular and multimodal) and parking within the resort area will be evaluated separately by others as part of the SVCO Master Plan and will not be included in this traffic study.



Appendix B – Historic Traffic Counts

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: JACO0002

Intersection: Sun Valley Rd / Dollor Rd

City, State: Sun Valley, Idaho

Control: Signalized

File Name : Sun Valley Rd & & Dollar Rd-WkDay

Site Code : 00000000

Start Date : 1/12/2023

Page No : 1

Groups Printed- General Traffic

Start Time	Sun Valley Road From North					Dollar Road From East					Sun Valley Road From South					Saddle Road From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	4	5	0	0	9	2	9	14	0	25	6	20	1	0	27	1	4	1	0	6	67
07:15 AM	0	3	1	0	4	1	11	8	0	20	14	27	3	0	44	2	3	5	0	10	78
07:30 AM	1	11	1	0	13	0	11	11	0	22	12	28	2	0	42	3	15	5	0	23	100
07:45 AM	5	6	3	0	14	0	10	24	0	34	46	23	4	0	73	3	19	11	0	33	154
Total	10	25	5	0	40	3	41	57	0	101	78	98	10	0	186	9	41	22	0	72	399
08:00 AM	5	11	3	0	19	11	32	36	0	79	67	22	4	1	94	3	50	8	0	61	253
08:15 AM	7	17	10	0	34	8	41	52	0	101	63	28	4	0	95	6	45	6	1	58	288
08:30 AM	8	12	5	0	25	12	41	35	0	88	23	28	2	0	53	9	19	13	0	41	207
08:45 AM	12	18	5	0	35	7	24	27	0	58	20	25	5	0	50	16	11	12	0	39	182
Total	32	58	23	0	113	38	138	150	0	326	173	103	15	1	292	34	125	39	1	199	930

04:00 PM	22	59	2	0	83	7	25	33	0	65	46	36	8	0	90	9	27	12	3	51	289
04:15 PM	17	41	4	1	63	2	22	33	0	57	49	22	10	0	81	12	22	17	3	54	255
04:30 PM	12	43	3	1	59	9	17	34	0	60	30	29	5	0	64	14	20	10	3	47	230
04:45 PM	10	41	7	1	59	6	11	32	0	49	37	30	11	0	78	13	25	12	1	51	237
Total	61	184	16	3	264	24	75	132	0	231	162	117	34	0	313	48	94	51	10	203	1011
05:00 PM	11	25	4	1	41	6	23	20	0	49	38	22	11	0	71	10	17	15	4	46	207
05:15 PM	11	28	3	3	45	6	16	28	0	50	38	20	9	0	67	10	26	11	4	51	213
05:30 PM	13	19	1	1	34	7	12	22	0	41	30	19	5	0	54	9	23	6	1	39	168
05:45 PM	8	23	1	1	33	5	9	20	0	34	21	21	4	0	46	11	11	10	1	33	146
Total	43	95	9	6	153	24	60	90	0	174	127	82	29	0	238	40	77	42	10	169	734
Grand Total	146	362	53	9	570	89	314	429	0	832	540	400	88	1	1029	131	337	154	21	643	3074
Apprch %	25.6	63.5	9.3	1.6		10.7	37.7	51.6	0		52.5	38.9	8.6	0.1		20.4	52.4	24	3.3		
Total %	4.7	11.8	1.7	0.3	18.5	2.9	10.2	14	0	27.1	17.6	13	2.9	0	33.5	4.3	11	5	0.7	20.9	

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: JACO0002

Intersection: Sun Valley Rd / Dollor Rd

City, State: Sun Valley, Idaho

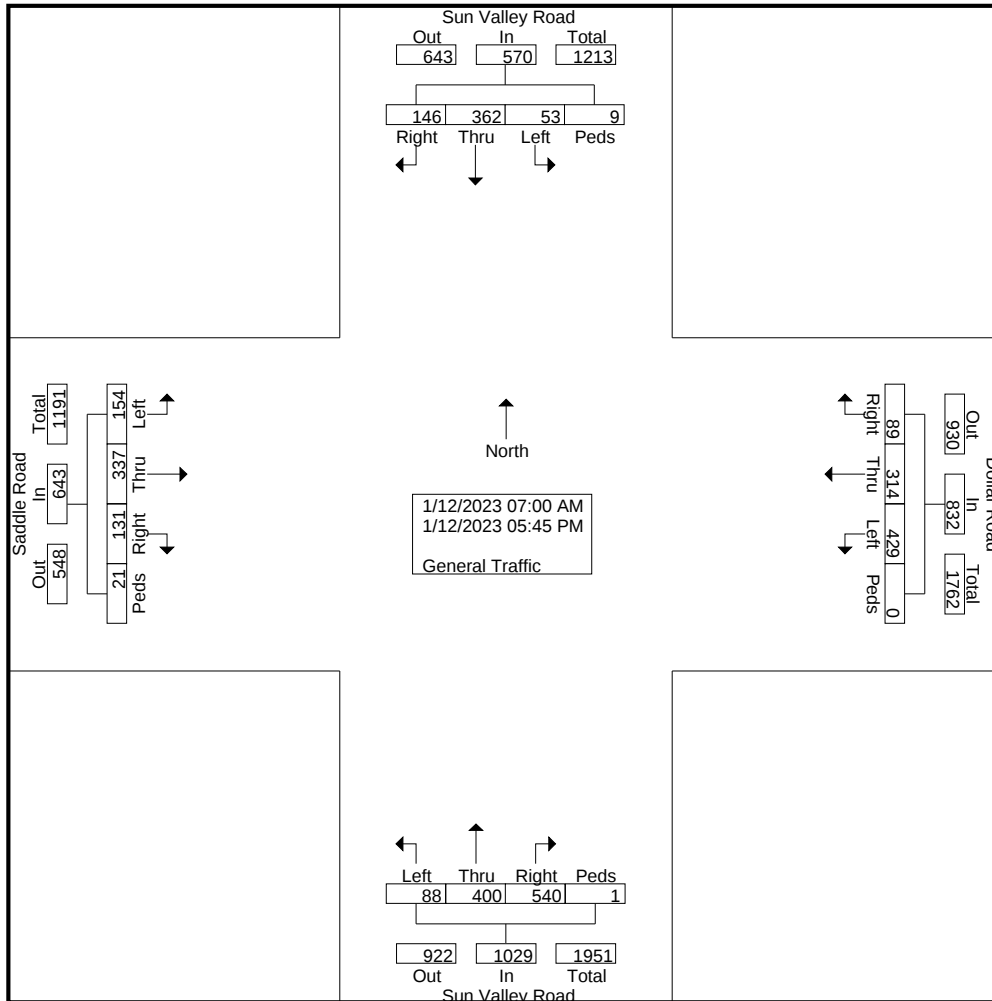
Control: Signalized

File Name : Sun Valley Rd & & Dollar Rd-WkDay

Site Code : 00000000

Start Date : 1/12/2023

Page No : 2



L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: JACO0002

Intersection: Sun Valley Rd / Dollor Rd

City, State: Sun Valley, Idaho

Control: Signalized

File Name : Sun Valley Rd & & Dollar Rd-WkDay

Site Code : 00000000

Start Date : 1/12/2023

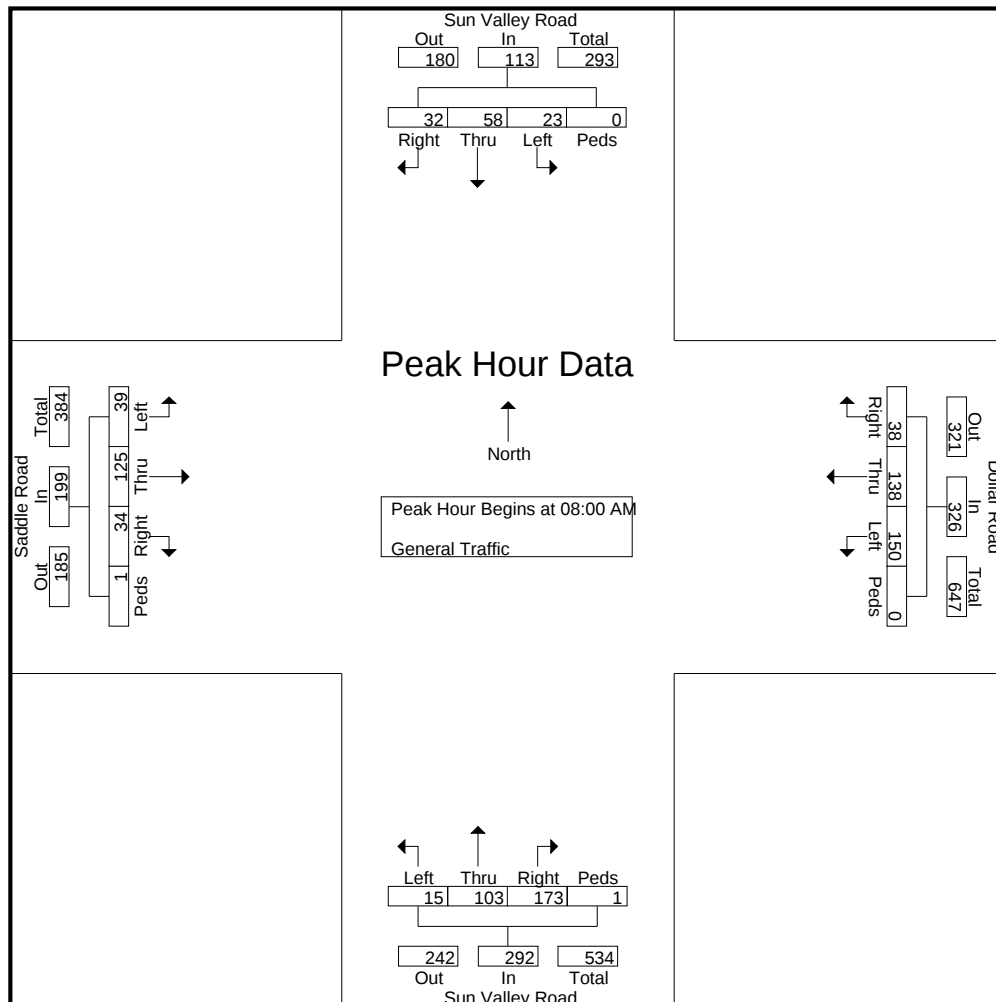
Page No : 3

	Sun Valley Road From North					Dollar Road From East					Sun Valley Road From South					Saddle Road From West					
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 08:00 AM

08:00 AM	5	11	3	0	19	11	32	36	0	79	67	22	4	1	94	3	50	8	0	61	253
08:15 AM	7	17	10	0	34	8	41	52	0	101	63	28	4	0	95	6	45	6	1	58	288
08:30 AM	8	12	5	0	25	12	41	35	0	88	23	28	2	0	53	9	19	13	0	41	207
08:45 AM	12	18	5	0	35	7	24	27	0	58	20	25	5	0	50	16	11	12	0	39	182
Total Volume	32	58	23	0	113	38	138	150	0	326	173	103	15	1	292	34	125	39	1	199	930
% App. Total	28.3	51.3	20.4	0		11.7	42.3	46	0		59.2	35.3	5.1	0.3		17.1	62.8	19.6	0.5		
PHF	.667	.806	.575	.000	.807	.792	.841	.721	.000	.807	.646	.920	.750	.250	.768	.531	.625	.750	.250	.816	.807



L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: JACO0002

Intersection: Sun Valley Rd / Dollor Rd

City, State: Sun Valley, Idaho

Control: Signalized

File Name : Sun Valley Rd & & Dollar Rd-WkDay

Site Code : 00000000

Start Date : 1/12/2023

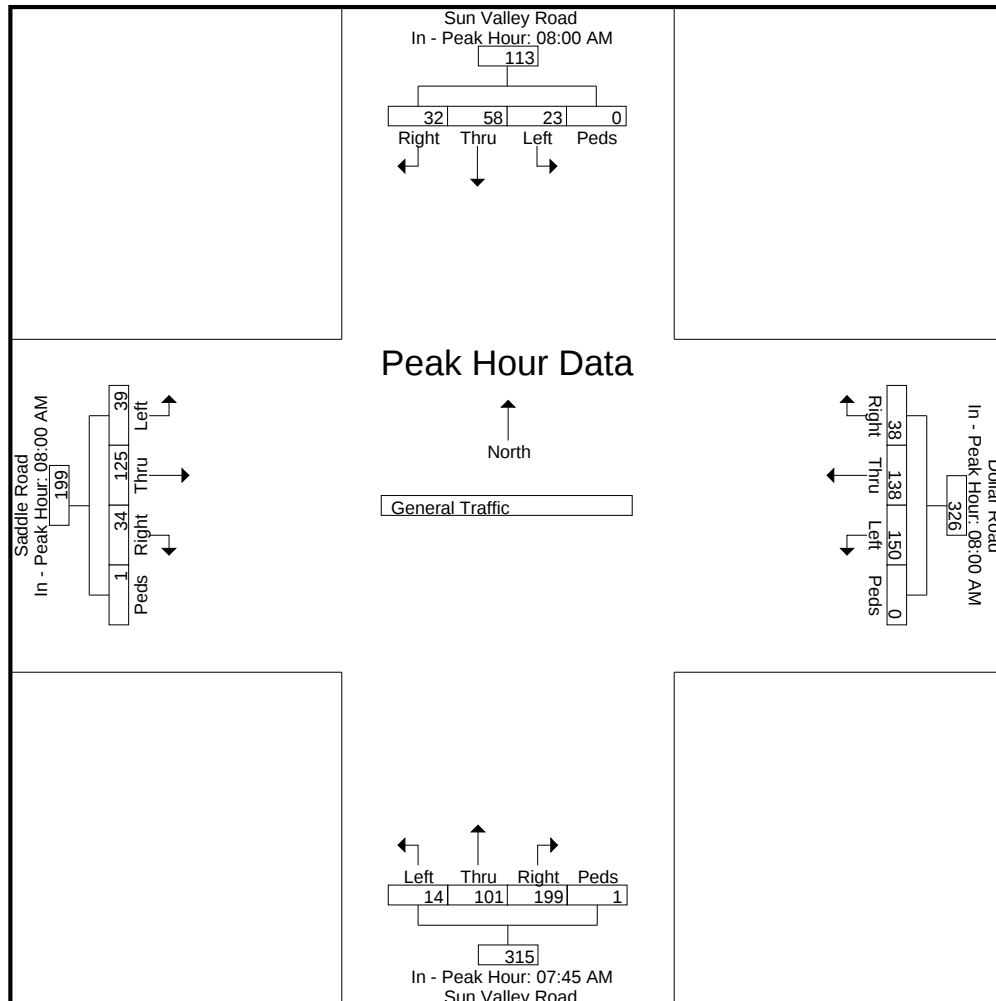
Page No : 4

	Sun Valley Road From North					Dollar Road From East					Sun Valley Road From South					Saddle Road From West					
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:

	08:00 AM					08:00 AM					07:45 AM					08:00 AM				
+0 mins.	5	11	3	0	19	11	32	36	0	79	46	23	4	0	73	3	50	8	0	61
+15 mins.	7	17	10	0	34	8	41	52	0	101	67	22	4	1	94	6	45	6	1	58
+30 mins.	8	12	5	0	25	12	41	35	0	88	63	28	4	0	95	9	19	13	0	41
+45 mins.	12	18	5	0	35	7	24	27	0	58	23	28	2	0	53	16	11	12	0	39
Total Volume	32	58	23	0	113	38	138	150	0	326	199	101	14	1	315	34	125	39	1	199
% App. Total	28.3	51.3	20.4	0		11.7	42.3	46	0		63.2	32.1	4.4	0.3		17.1	62.8	19.6	0.5	
PHF	.667	.806	.575	.000	.807	.792	.841	.721	.000	.807	.743	.902	.875	.250	.829	.531	.625	.750	.250	.816



L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: JACO0002

Intersection: Sun Valley Rd / Dollor Rd

City, State: Sun Valley, Idaho

Control: Signalized

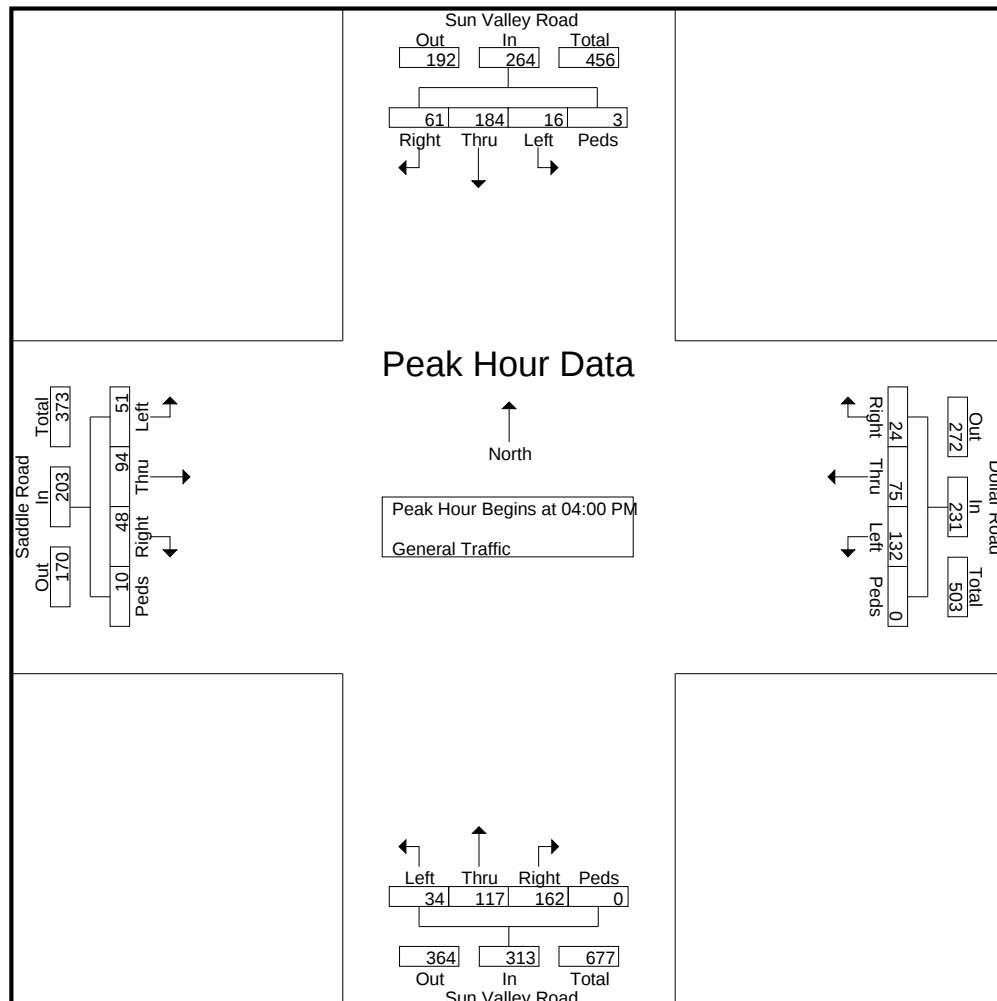
File Name : Sun Valley Rd & & Dollar Rd-WkDay

Site Code : 00000000

Start Date : 1/12/2023

Page No : 5

	Sun Valley Road From North					Dollar Road From East					Sun Valley Road From South					Saddle Road From West					
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 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	22	59	2	0	83	7	25	33	0	65	46	36	8	0	90	9	27	12	3	51	289
04:15 PM	17	41	4	1	63	2	22	33	0	57	49	22	10	0	81	12	22	17	3	54	255
04:30 PM	12	43	3	1	59	9	17	34	0	60	30	29	5	0	64	14	20	10	3	47	230
04:45 PM	10	41	7	1	59	6	11	32	0	49	37	30	11	0	78	13	25	12	1	51	237
Total Volume	61	184	16	3	264	24	75	132	0	231	162	117	34	0	313	48	94	51	10	203	1011
% App. Total	23.1	69.7	6.1	1.1		10.4	32.5	57.1	0		51.8	37.4	10.9	0		23.6	46.3	25.1	4.9		
PHF	.693	.780	.571	.750	.795	.667	.750	.971	.000	.888	.827	.813	.773	.000	.869	.857	.870	.750	.833	.940	.875



L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: JACO0002

Intersection: Sun Valley Rd / Dollor Rd

City, State: Sun Valley, Idaho

Control: Signalized

File Name : Sun Valley Rd & & Dollar Rd-WkDay

Site Code : 00000000

Start Date : 1/12/2023

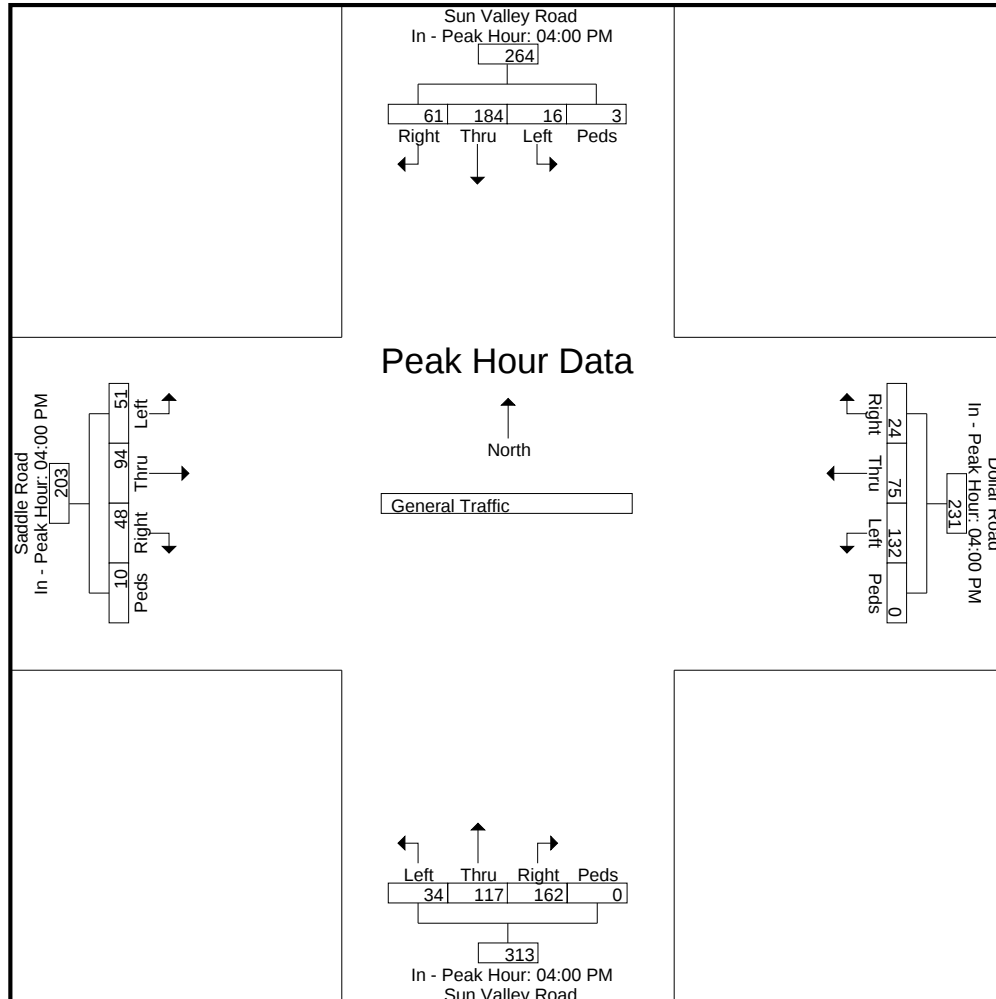
Page No : 6

	Sun Valley Road From North					Dollar Road From East					Sun Valley Road From South					Saddle Road From West					
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 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:00 PM					04:00 PM					04:00 PM					04:00 PM				
+0 mins.	22	59	2	0	83	7	25	33	0	65	46	36	8	0	90	9	27	12	3	51
+15 mins.	17	41	4	1	63	2	22	33	0	57	49	22	10	0	81	12	22	17	3	54
+30 mins.	12	43	3	1	59	9	17	34	0	60	30	29	5	0	64	14	20	10	3	47
+45 mins.	10	41	7	1	59	6	11	32	0	49	37	30	11	0	78	13	25	12	1	51
Total Volume	61	184	16	3	264	24	75	132	0	231	162	117	34	0	313	48	94	51	10	203
% App. Total	23.1	69.7	6.1	1.1		10.4	32.5	57.1	0		51.8	37.4	10.9	0		23.6	46.3	25.1	4.9	
PHF	.693	.780	.571	.750	.795	.667	.750	.971	.000	.888	.827	.813	.773	.000	.869	.857	.870	.750	.833	.940



L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: JACO0002

Intersection: Sun Valley Rd / Dollor Rd

City, State: Sun Valley, Idaho

Control: Signalized

File Name : Sun Valley Rd & & Dollar Rd-WkDay

Site Code : 00000000

Start Date : 1/12/2023

Page No : 7

Image 1



Legend

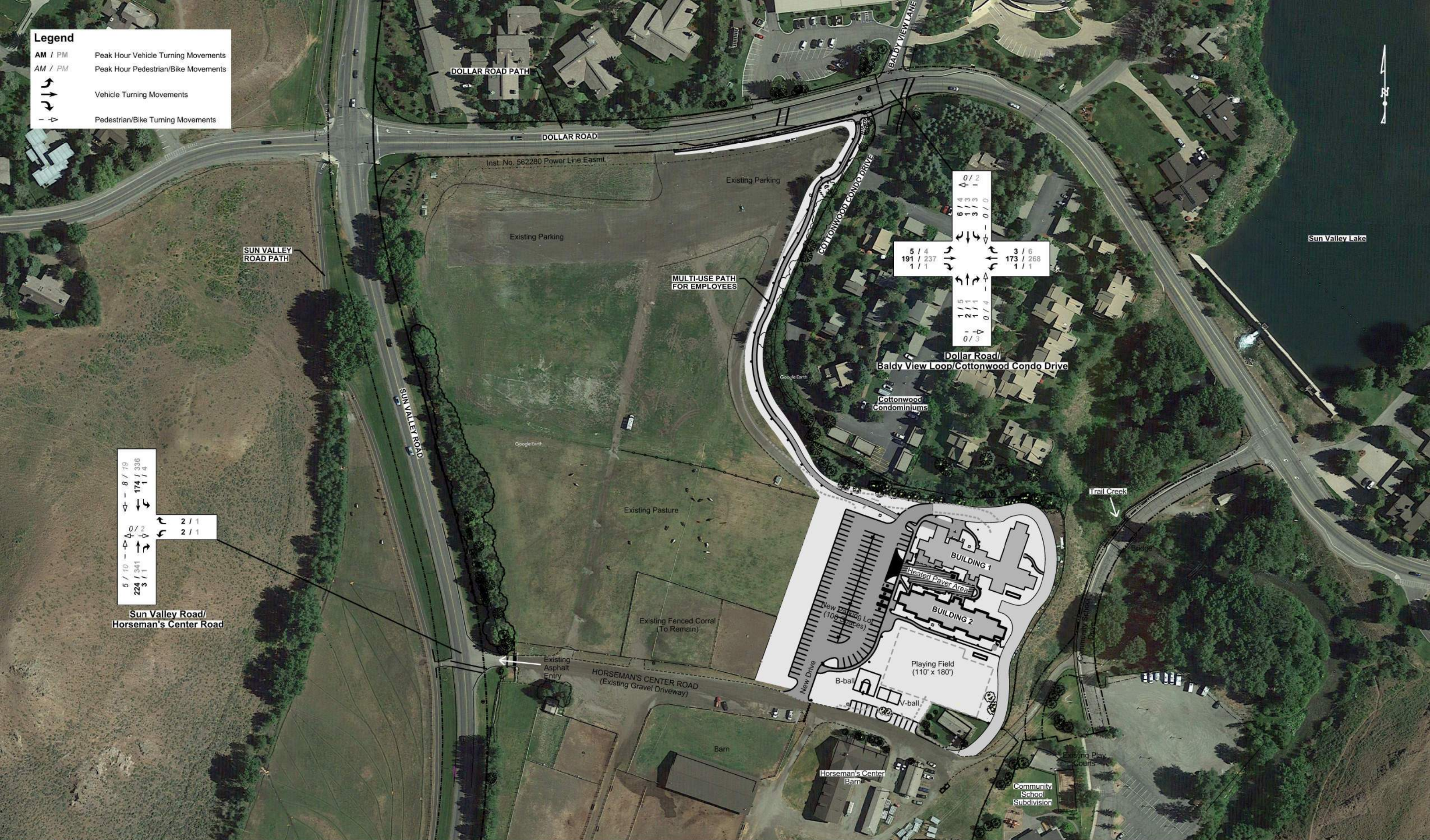
AM / PM Peak Hour Vehicle Turning Movements
 AM / PM Peak Hour Pedestrian/Bike Movements

Vehicle Turning Movements

Pedestrian/Bike Turning Movements

5 / 10	8 / 19	174 / 336	2 / 1
224 / 341	0 / 2	174 / 336	2 / 1
3 / 1	0 / 2	174 / 336	2 / 1

5 / 4	191 / 237	1 / 1	3 / 6	173 / 268	1 / 1
1 / 5	2 / 1	1 / 1	0 / 4	0 / 3	0 / 2
1 / 5	2 / 1	1 / 1	0 / 4	0 / 3	0 / 2



L2 Data Collection

L2DataCollection.com

Idaho (208) 860-7554 Utah (801) 413-2993

Study: TRAN0025

Intersection: Elkhorn Rd / Saddle Rd

City, State: Sun Valley, Idaho

Control: All Stop

File Name : Elkhorn Rd & Saddle Rd

Site Code : 00000000

Start Date : 7/18/2023

Page No : 1

Groups Printed- General Traffic

	Saddle Road From Northeast					Elkhorn Road From South					Saddle Road From Southwest					Old Dollar Road From West					
Start Time	Bear Right	Thru	Bear Left	Peds	App. Total	Bear Right	Left	Hard Left	Peds	App. Total	Hard Right	Thru	Hard Left	Peds	App. Total	Hard Right	Right	Bear Left	Peds	App. Total	Int. Total
07:00 AM	0	2	1	0	3	4	7	16	0	27	5	0	1	1	7	2	0	3	0	5	42
07:15 AM	3	2	5	1	11	4	4	8	0	16	14	0	3	4	21	2	1	1	1	5	53
07:30 AM	0	2	2	0	4	4	10	17	0	31	8	7	0	2	17	3	3	0	0	6	58
07:45 AM	1	5	4	0	10	9	11	18	0	38	24	6	3	6	39	1	2	0	3	6	93
Total	4	11	12	1	28	21	32	59	0	112	51	13	7	13	84	8	6	4	4	22	246
08:00 AM	3	4	1	1	9	6	8	42	0	56	20	7	2	2	31	2	5	0	1	8	104
08:15 AM	3	6	1	0	10	5	14	45	0	64	30	11	1	8	50	3	3	1	3	10	134
08:30 AM	4	4	2	1	11	2	23	35	1	61	23	7	4	4	38	1	8	3	1	13	123
08:45 AM	7	5	1	0	13	10	15	59	0	84	25	4	6	5	40	2	11	2	0	15	152
Total	17	19	5	2	43	23	60	181	1	265	98	29	13	19	159	8	27	6	5	46	513

11:00 AM	1	12	3	2	18	7	7	39	2	55	34	5	3	9	51	7	8	1	2	18	142
11:15 AM	2	12	2	1	17	5	10	45	0	60	40	7	3	6	56	3	8	3	0	14	147
11:30 AM	3	10	0	3	16	3	14	40	0	57	29	10	5	56	100	7	10	1	3	21	194
11:45 AM	4	8	2	2	16	0	21	39	0	60	36	8	3	7	54	7	12	3	2	24	154
Total	10	42	7	8	67	15	52	163	2	232	139	30	14	78	261	24	38	8	7	77	637
12:00 PM	1	10	0	2	13	4	18	53	0	75	42	8	3	15	68	5	14	4	2	25	181
12:15 PM	2	8	5	1	16	3	13	40	0	56	40	11	6	2	59	4	11	0	1	16	147
12:30 PM	3	10	1	0	14	0	14	36	0	50	41	3	3	4	51	4	17	2	1	24	139
12:45 PM	3	12	1	10	26	5	13	40	5	63	45	9	6	5	65	2	21	5	8	36	190
Total	9	40	7	13	69	12	58	169	5	244	168	31	18	26	243	15	63	11	12	101	657

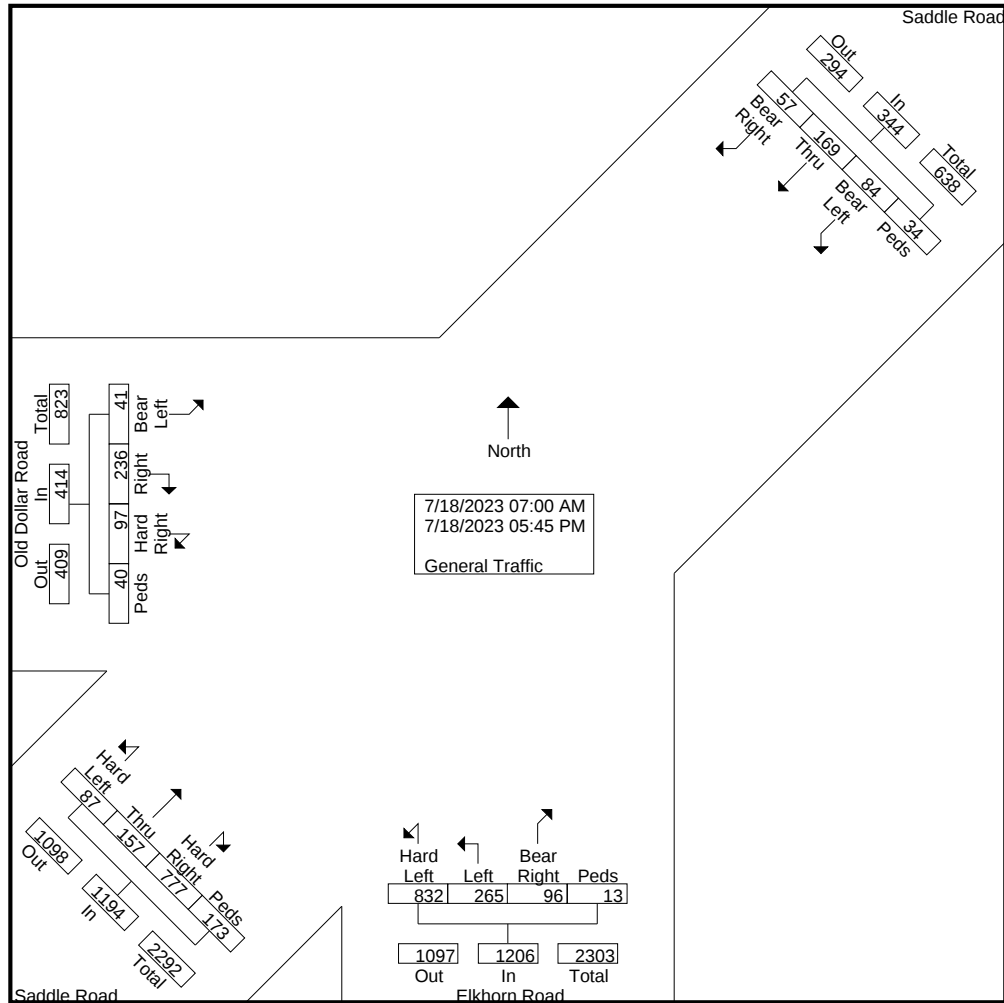
04:00 PM	4	2	9	1	16	2	11	41	0	54	44	8	7	5	64	8	18	4	0	30	164
04:15 PM	2	7	8	1	18	5	17	29	2	53	48	6	3	4	61	5	16	4	0	25	157
04:30 PM	2	13	13	3	31	2	8	39	1	50	47	9	4	5	65	5	18	0	1	24	170
04:45 PM	4	11	3	0	18	0	4	28	0	32	49	6	1	2	58	4	8	1	0	13	121
Total	12	33	33	5	83	9	40	137	3	189	188	29	15	16	248	22	60	9	1	92	612
05:00 PM	1	9	10	2	22	1	7	27	0	35	40	5	4	3	52	3	12	0	3	18	127
05:15 PM	1	5	2	0	8	3	5	28	1	37	30	5	5	8	48	6	15	1	2	24	117
05:30 PM	2	5	3	1	11	3	6	27	1	37	33	9	4	7	53	4	10	1	4	19	120
05:45 PM	1	5	5	2	13	9	5	41	0	55	30	6	7	3	46	7	5	1	2	15	129
Total	5	24	20	5	54	16	23	123	2	164	133	25	20	21	199	20	42	3	11	76	493
Grand Total	57	169	84	34	344	96	265	832	13	1206	777	157	87	173	1194	97	236	41	40	414	3158
Apprch %	16.6	49.1	24.4	9.9		8	22	69	1.1		65.1	13.1	7.3	14.5		23.4	57	9.9	9.7		
Total %	1.8	5.4	2.7	1.1	10.9	3	8.4	26.3	0.4	38.2	24.6	5	2.8	5.5	37.8	3.1	7.5	1.3	1.3	13.1	

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: TRAN0025
Intersection: Elkhorn Rd / Saddle Rd
City, State: Sun Valley, Idaho
Control: All Stop

File Name : Elkhorn Rd & Saddle Rd
Site Code : 00000000
Start Date : 7/18/2023
Page No : 2



L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: TRAN0025

Intersection: Elkhorn Rd / Saddle Rd

City, State: Sun Valley, Idaho

Control: All Stop

File Name : Elkhorn Rd & Saddle Rd

Site Code : 00000000

Start Date : 7/18/2023

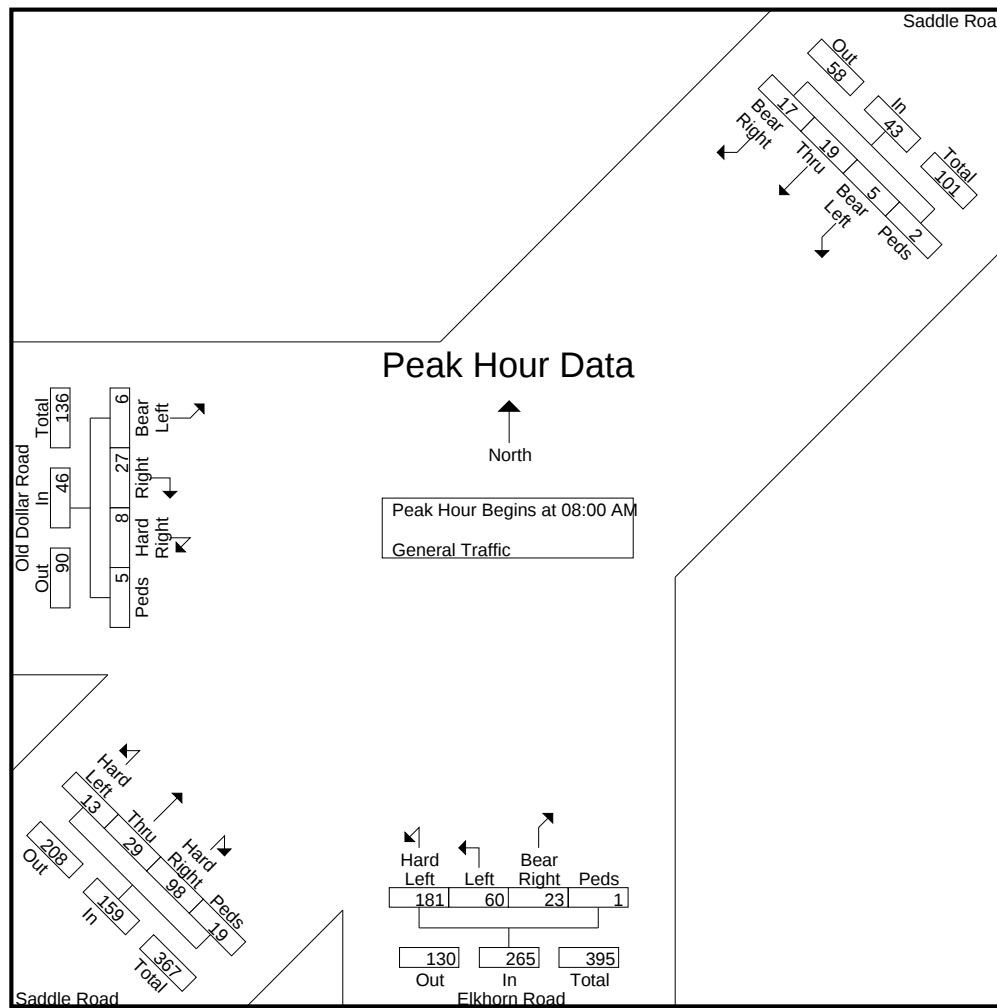
Page No : 3

	Saddle Road From Northeast					Elkhorn Road From South					Saddle Road From Southwest					Old Dollar Road From West					
Start Time	Bear Right	Thru	Bear Left	Peds	App. Total	Bear Right	Left	Hard Left	Peds	App. Total	Hard Right	Thru	Hard Left	Peds	App. Total	Hard Right	Right	Bear Left	Peds	App. Total	Int. Total

Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:00 AM

08:00 AM	3	4	1	1	9	6	8	42	0	56	20	7	2	2	31	2	5	0	1	8	104
08:15 AM	3	6	1	0	10	5	14	45	0	64	30	11	1	8	50	3	3	1	3	10	134
08:30 AM	4	4	2	1	11	2	23	35	1	61	23	7	4	4	38	1	8	3	1	13	123
08:45 AM	7	5	1	0	13	10	15	59	0	84	25	4	6	5	40	2	11	2	0	15	152
Total Volume	17	19	5	2	43	23	60	181	1	265	98	29	13	19	159	8	27	6	5	46	513
% App. Total	39.5	44.2	11.6	4.7		8.7	22.6	68.3	0.4		61.6	18.2	8.2	11.9		17.4	58.7	13	10.9		
PHF	.607	.792	.625	.500	.827	.575	.652	.767	.250	.789	.817	.659	.542	.594	.795	.667	.614	.500	.417	.767	.844



L2 Data Collection

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Study: TRAN0025
Intersection: Elkhorn Rd / Saddle Rd
City, State: Sun Valley, Idaho
Control: All Stop

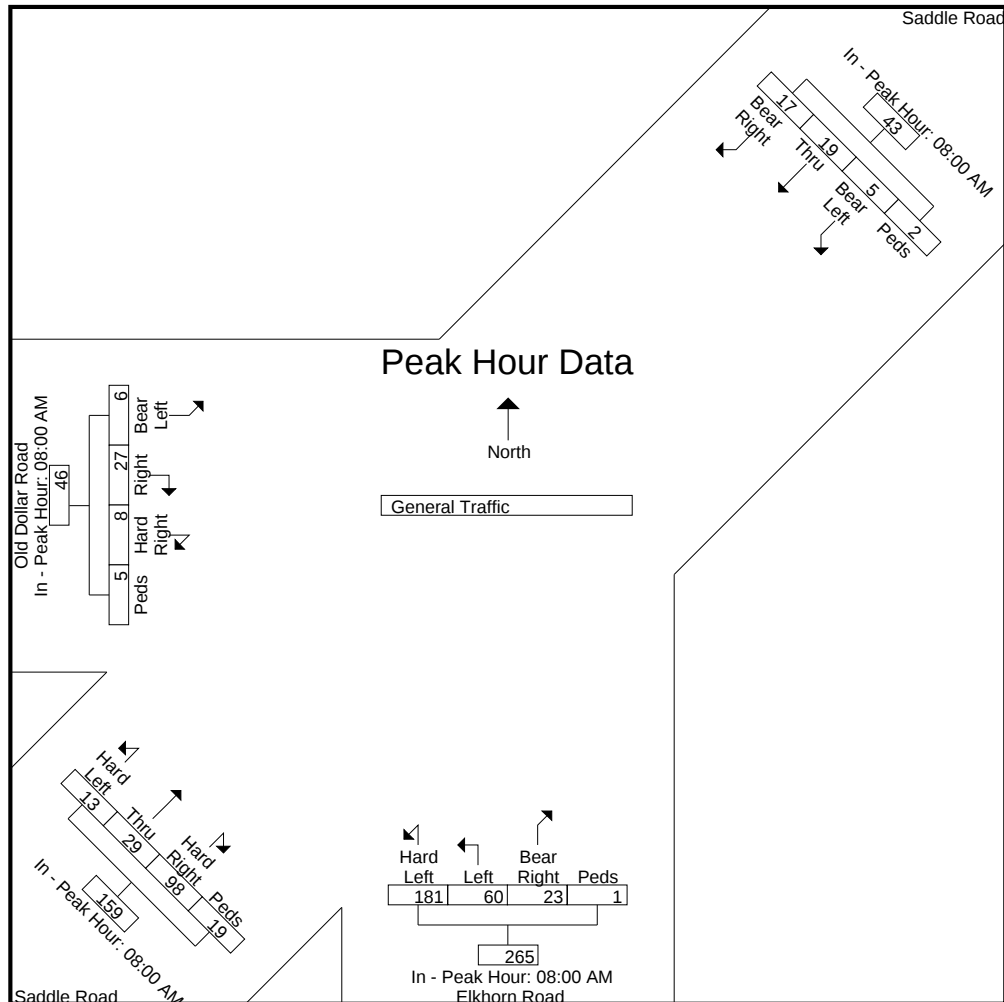
File Name : Elkhorn Rd & Saddle Rd
Site Code : 00000000
Start Date : 7/18/2023
Page No : 4

	Saddle Road From Northeast					Elkhorn Road From South					Saddle Road From Southwest					Old Dollar Road From West					
Start Time	Bear Right	Thru	Bear Left	Peds	App. Total	Bear Right	Left	Hard Left	Peds	App. Total	Hard Right	Thru	Hard Left	Peds	App. Total	Hard Right	Right	Bear Left	Peds	App. Total	Int. Total

Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM					08:00 AM					08:00 AM					08:00 AM				
+0 mins.	3	4	1	1	9	6	8	42	0	56	20	7	2	2	31	2	5	0	1	8
+15 mins.	3	6	1	0	10	5	14	45	0	64	30	11	1	8	50	3	3	1	3	10
+30 mins.	4	4	2	1	11	2	23	35	1	61	23	7	4	4	38	1	8	3	1	13
+45 mins.	7	5	1	0	13	10	15	59	0	84	25	4	6	5	40	2	11	2	0	15
Total Volume	17	19	5	2	43	23	60	181	1	265	98	29	13	19	159	8	27	6	5	46
% App. Total	39.5	44.2	11.6	4.7		8.7	22.6	68.3	0.4		61.6	18.2	8.2	11.9		17.4	58.7	13	10.9	
PHF	.607	.792	.625	.500	.827	.575	.652	.767	.250	.789	.817	.659	.542	.594	.795	.667	.614	.500	.417	.767



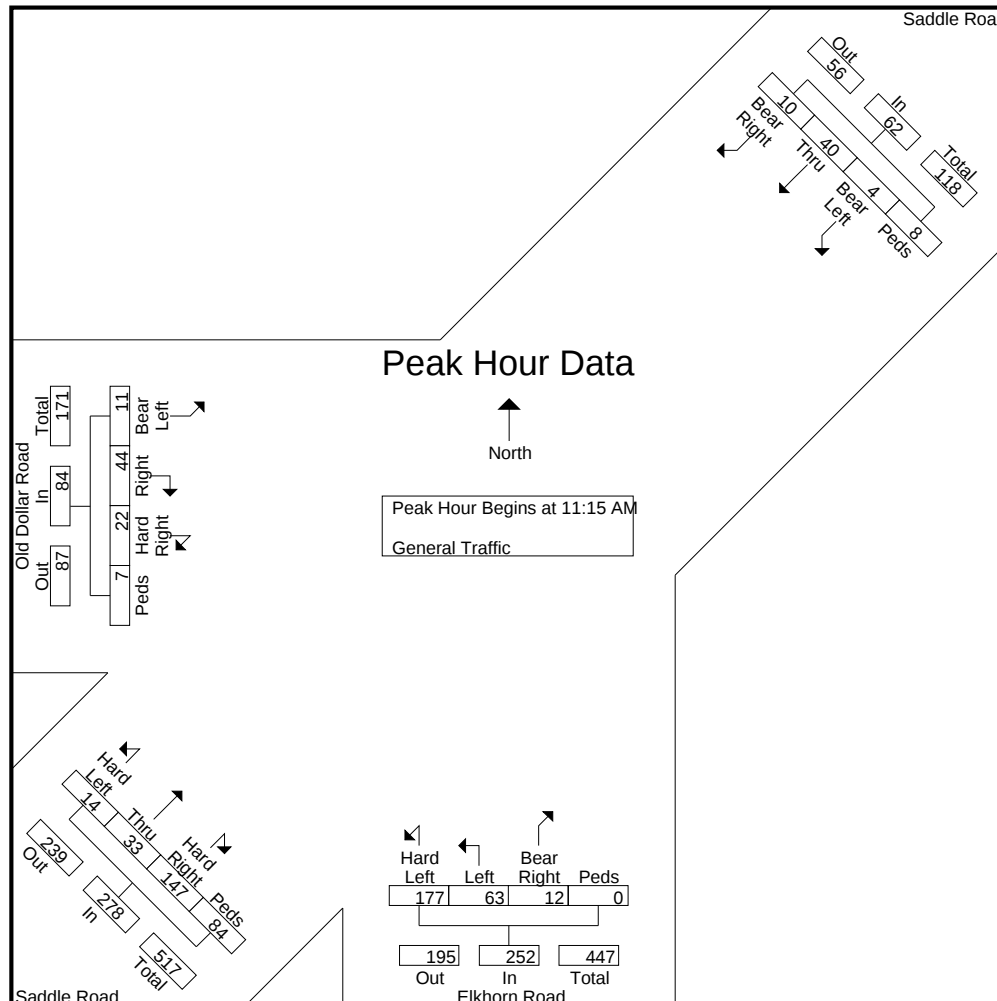
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: TRAN0025
Intersection: Elkhorn Rd / Saddle Rd
City, State: Sun Valley, Idaho
Control: All Stop

File Name : Elkhorn Rd & Saddle Rd
Site Code : 00000000
Start Date : 7/18/2023
Page No : 5

	Saddle Road From Northeast					Elkhorn Road From South					Saddle Road From Southwest					Old Dollar Road From West					
Start Time	Bear Right	Thru	Bear Left	Peds	App. Total	Bear Right	Left	Hard Left	Peds	App. Total	Hard Right	Thru	Hard Left	Peds	App. Total	Hard Right	Right	Bear Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:15 AM																					
11:15 AM	2	12	2	1	17	5	10	45	0	60	40	7	3	6	56	3	8	3	0	14	147
11:30 AM	3	10	0	3	16	3	14	40	0	57	29	10	5	56	100	7	10	1	3	21	194
11:45 AM	4	8	2	2	16	0	21	39	0	60	36	8	3	7	54	7	12	3	2	24	154
12:00 PM	1	10	0	2	13	4	18	53	0	75	42	8	3	15	68	5	14	4	2	25	181
Total Volume	10	40	4	8	62	12	63	177	0	252	147	33	14	84	278	22	44	11	7	84	676
% App. Total	16.1	64.5	6.5	12.9		4.8	25	70.2	0		52.9	11.9	5	30.2		26.2	52.4	13.1	8.3		
PHF	.625	.833	.500	.667	.912	.600	.750	.835	.000	.840	.875	.825	.700	.375	.695	.786	.786	.688	.583	.840	.871



L2 Data Collection

L2DataCollection.com
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Study: TRAN0025
Intersection: Elkhorn Rd / Saddle Rd
City, State: Sun Valley, Idaho
Control: All Stop

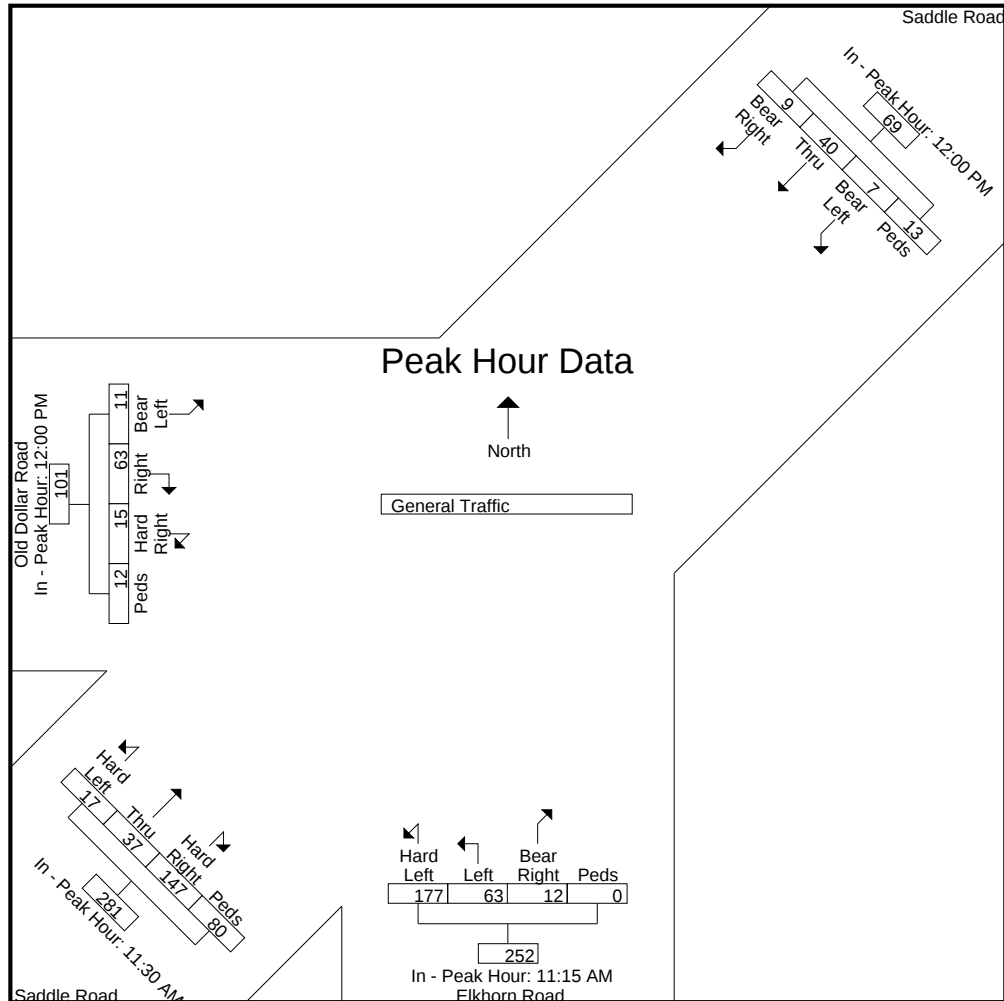
File Name : Elkhorn Rd & Saddle Rd
Site Code : 00000000
Start Date : 7/18/2023
Page No : 6

	Saddle Road From Northeast					Elkhorn Road From South					Saddle Road From Southwest					Old Dollar Road From West					
Start Time	Bear Right	Thru	Bear Left	Peds	App. Total	Bear Right	Left	Hard Left	Peds	App. Total	Hard Right	Thru	Hard Left	Peds	App. Total	Hard Right	Right	Bear Left	Peds	App. Total	Int. Total

Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	12:00 PM					11:15 AM					11:30 AM					12:00 PM				
+0 mins.	1	10	0	2	13	5	10	45	0	60	29	10	5	56	100	5	14	4	2	25
+15 mins.	2	8	5	1	16	3	14	40	0	57	36	8	3	7	54	4	11	0	1	16
+30 mins.	3	10	1	0	14	0	21	39	0	60	42	8	3	15	68	4	17	2	1	24
+45 mins.	3	12	1	10	26	4	18	53	0	75	40	11	6	2	59	2	21	5	8	36
Total Volume	9	40	7	13	69	12	63	177	0	252	147	37	17	80	281	15	63	11	12	101
% App. Total	13	58	10.1	18.8		4.8	25	70.2	0		52.3	13.2	6	28.5		14.9	62.4	10.9	11.9	
PHF	.750	.833	.350	.325	.663	.600	.750	.835	.000	.840	.875	.841	.708	.357	.703	.750	.750	.550	.375	.701



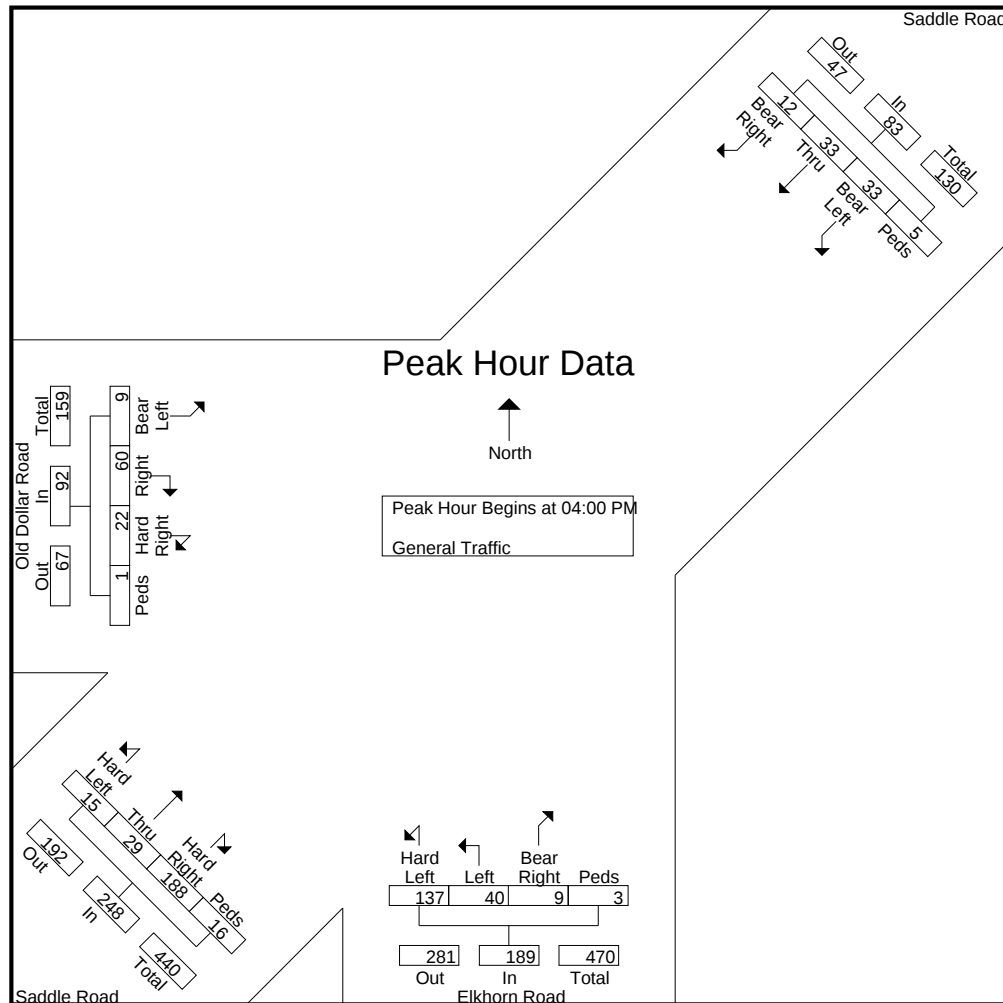
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: TRAN0025
Intersection: Elkhorn Rd / Saddle Rd
City, State: Sun Valley, Idaho
Control: All Stop

File Name : Elkhorn Rd & Saddle Rd
Site Code : 00000000
Start Date : 7/18/2023
Page No : 7

	Saddle Road From Northeast					Elkhorn Road From South					Saddle Road From Southwest					Old Dollar Road From West					
Start Time	Bear Right	Thru	Bear Left	Peds	App. Total	Bear Right	Left	Hard Left	Peds	App. Total	Hard Right	Thru	Hard Left	Peds	App. Total	Hard Right	Right	Bear Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	4	2	9	1	16	2	11	41	0	54	44	8	7	5	64	8	18	4	0	30	164
04:15 PM	2	7	8	1	18	5	17	29	2	53	48	6	3	4	61	5	16	4	0	25	157
04:30 PM	2	13	13	3	31	2	8	39	1	50	47	9	4	5	65	5	18	0	1	24	170
04:45 PM	4	11	3	0	18	0	4	28	0	32	49	6	1	2	58	4	8	1	0	13	121
Total Volume	12	33	33	5	83	9	40	137	3	189	188	29	15	16	248	22	60	9	1	92	612
% App. Total	14.5	39.8	39.8	6		4.8	21.2	72.5	1.6		75.8	11.7	6	6.5		23.9	65.2	9.8	1.1		
PHF	.750	.635	.635	.417	.669	.450	.588	.835	.375	.875	.959	.806	.536	.800	.954	.688	.833	.563	.250	.767	.900



L2 Data Collection

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Idaho (208) 860-7554 Utah (801) 413-2993

Study: TRAN0025
Intersection: Elkhorn Rd / Saddle Rd
City, State: Sun Valley, Idaho
Control: All Stop

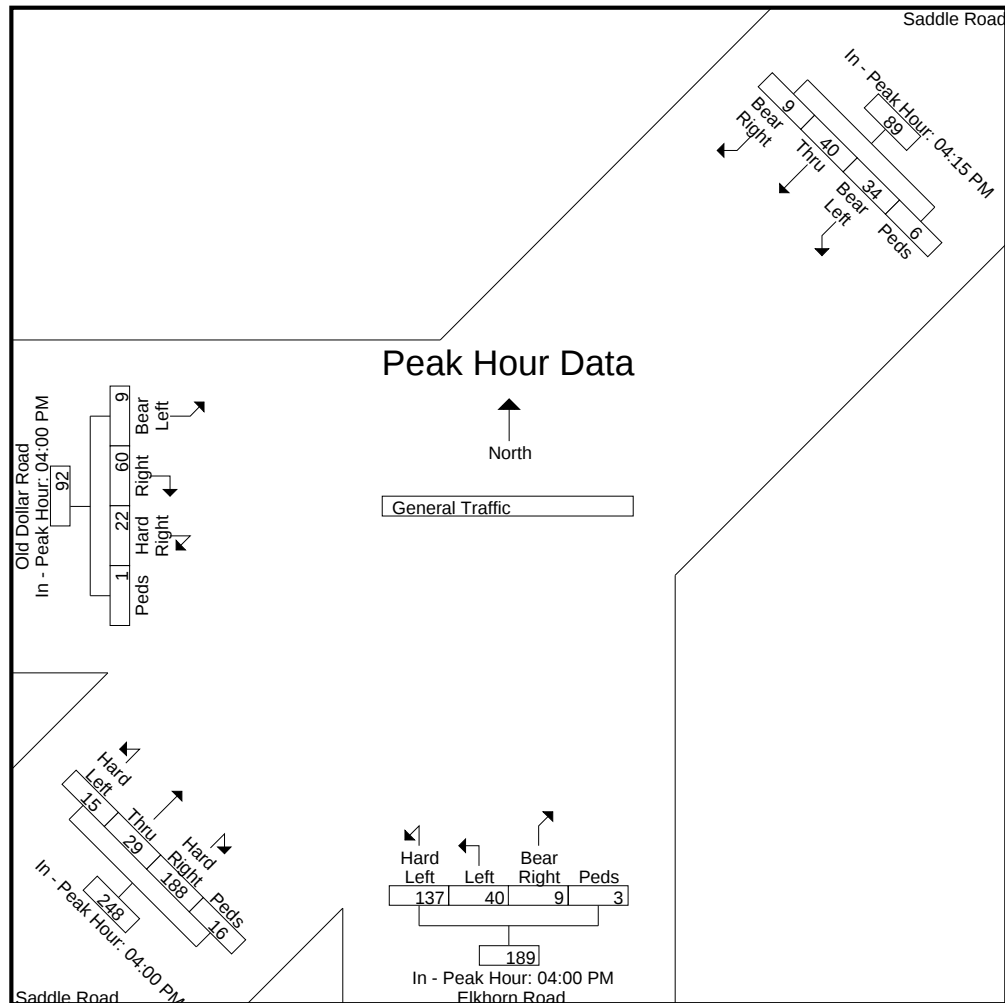
File Name : Elkhorn Rd & Saddle Rd
Site Code : 00000000
Start Date : 7/18/2023
Page No : 8

	Saddle Road From Northeast					Elkhorn Road From South					Saddle Road From Southwest					Old Dollar Road From West					
Start Time	Bear Right	Thru	Bear Left	Peds	App. Total	Bear Right	Left	Hard Left	Peds	App. Total	Hard Right	Thru	Hard Left	Peds	App. Total	Hard Right	Right	Bear Left	Peds	App. Total	Int. Total

Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:15 PM					04:00 PM					04:00 PM					04:00 PM				
+0 mins.	2	7	8	1	18	2	11	41	0	54	44	8	7	5	64	8	18	4	0	30
+15 mins.	2	13	13	3	31	5	17	29	2	53	48	6	3	4	61	5	16	4	0	25
+30 mins.	4	11	3	0	18	2	8	39	1	50	47	9	4	5	65	5	18	0	1	24
+45 mins.	1	9	10	2	22	0	4	28	0	32	49	6	1	2	58	4	8	1	0	13
Total Volume	9	40	34	6	89	9	40	137	3	189	188	29	15	16	248	22	60	9	1	92
% App. Total	10.1	44.9	38.2	6.7		4.8	21.2	72.5	1.6		75.8	11.7	6	6.5		23.9	65.2	9.8	1.1	
PHF	.563	.769	.654	.500	.718	.450	.588	.835	.375	.875	.959	.806	.536	.800	.954	.688	.833	.563	.250	.767



L2 Data Collection

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Idaho (208) 860-7554 Utah (801) 413-2993

Study: TRAN0025
Intersection: Elkhorn Rd / Saddle Rd
City, State: Sun Valley, Idaho
Control: All Stop

File Name : Elkhorn Rd & Saddle Rd
Site Code : 00000000
Start Date : 7/18/2023
Page No : 9

Image 1





Appendix C – ATR Seasonal Factors

Sun Valley Preliminary Traffic Evaluation
Monthly Seasonal Factors
SH-75 @ MP 119.4, 2.9 miles north of Bullion St.

Calc'ed by: JLI
Checked by: BAK

<http://apps.itd.idaho.gov/apps/roadwaydata/counters/068/index.html>

ATR #068 - Hailey (south of Ketchum)

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual 24-hr Avg.
2012	9,684	10,537	10,023	9,944	10,371	12,379	14,424	13,162	11,984	11,474	10,005	11,177	11,264
MSF	0.86	0.94	0.89	0.88	0.92	1.10	1.28	1.17	1.06	1.02	0.89	0.99	
2013	10,411	10,836	10,556	10,318	10,873	12,829	14,561	13,385	12,334	11,771	10,055	11,227	11,596
MSF	0.90	0.93	0.91	0.89	0.94	1.11	1.26	1.15	1.06	1.02	0.87	0.97	
2014	10,514	10,730	10,490	10,454	11,017	12,947	14,887	14,132	12,538	12,161	10,378	11,730	11,831
MSF	0.89	0.91	0.89	0.88	0.93	1.09	1.26	1.19	1.06	1.03	0.88	0.99	
2015	11,157	11,663	11,290	11,248	11,806	13,987	15,198	14,787	13,389	12,838	10,864	12,011	12,520
MSF	0.89	0.93	0.90	0.90	0.94	1.12	1.21	1.18	1.07	1.03	0.87	0.96	
2016	11,682	12,162	11,581	11,666	12,302	14,560	16,017	15,369	13,852	13,086	11,461	12,407	13,012
MSF	0.90	0.93	0.89	0.90	0.95	1.12	1.23	1.18	1.06	1.01	0.88	0.95	
2017	11,691	12,326	11,775	11,563	12,468	14,612	16,176	15,863	13,806	13,390	11,582	12,917	13,181
MSF	0.89	0.94	0.89	0.88	0.95	1.11	1.23	1.20	1.05	1.02	0.88	0.98	
2018	12,031	12,358	11,865	11,891	12,718	15,179	16,785	15,849	14,488	13,776	12,004	12,969	13,493
MSF	0.89	0.92	0.88	0.88	0.94	1.12	1.24	1.17	1.07	1.02	0.89	0.96	
2019	12,310	12,509	12,422	12,120	12,767	15,289	17,009	16,528	14,495	13,760	11,992	13,343	13,712
MSF	0.90	0.91	0.91	0.88	0.93	1.12	1.24	1.21	1.06	1.00	0.87	0.97	
2020	12,410	13,022	9,596	6,962	11,161	14,233	15,894	15,557	14,984	14,146	11,644	12,833	12,704
MSF	0.98	1.03	0.76	0.55	0.88	1.12	1.25	1.22	1.18	1.11	0.92	1.01	
2021	12,467	13,314	13,340	13,026	14,027	16,860	18,092	16,299	15,076	14,229	12,235	13,650	14,385
MSF	0.87	0.93	0.93	0.91	0.98	1.17	1.26	1.13	1.05	0.99	0.85	0.95	
2022	13,181	13,856	13,181	12,237	12,443	15,637	17,138	16,389	15,013	14,434	12,031	13,432	14,081
MSF	0.94	0.98	0.94	0.87	0.88	1.11	1.22	1.16	1.07	1.03	0.85	0.95	
2023	13,607	13,890	13,114	12,710	13,438	15,791	17,026	16,479	15,051	14,415	12,485		
MSF													
YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	July vs January
Average MSF	0.90	0.94	0.89	0.86	0.93	1.12	1.24	1.18	1.07	1.02	0.88	0.97	1.38
Ave w/o 2020	0.89	0.93	0.90	0.89	0.94	1.12	1.24	1.18	1.06	1.01	0.87	0.97	1.39

Note: 2020 Volumes removed in the "Average w/o 2020" calculation due to the 2020 Covid-19 Pandemic

July vs January	July vs October
1.38	1.21
1.39	1.22



Appendix D – ITE Trip Generation Reports

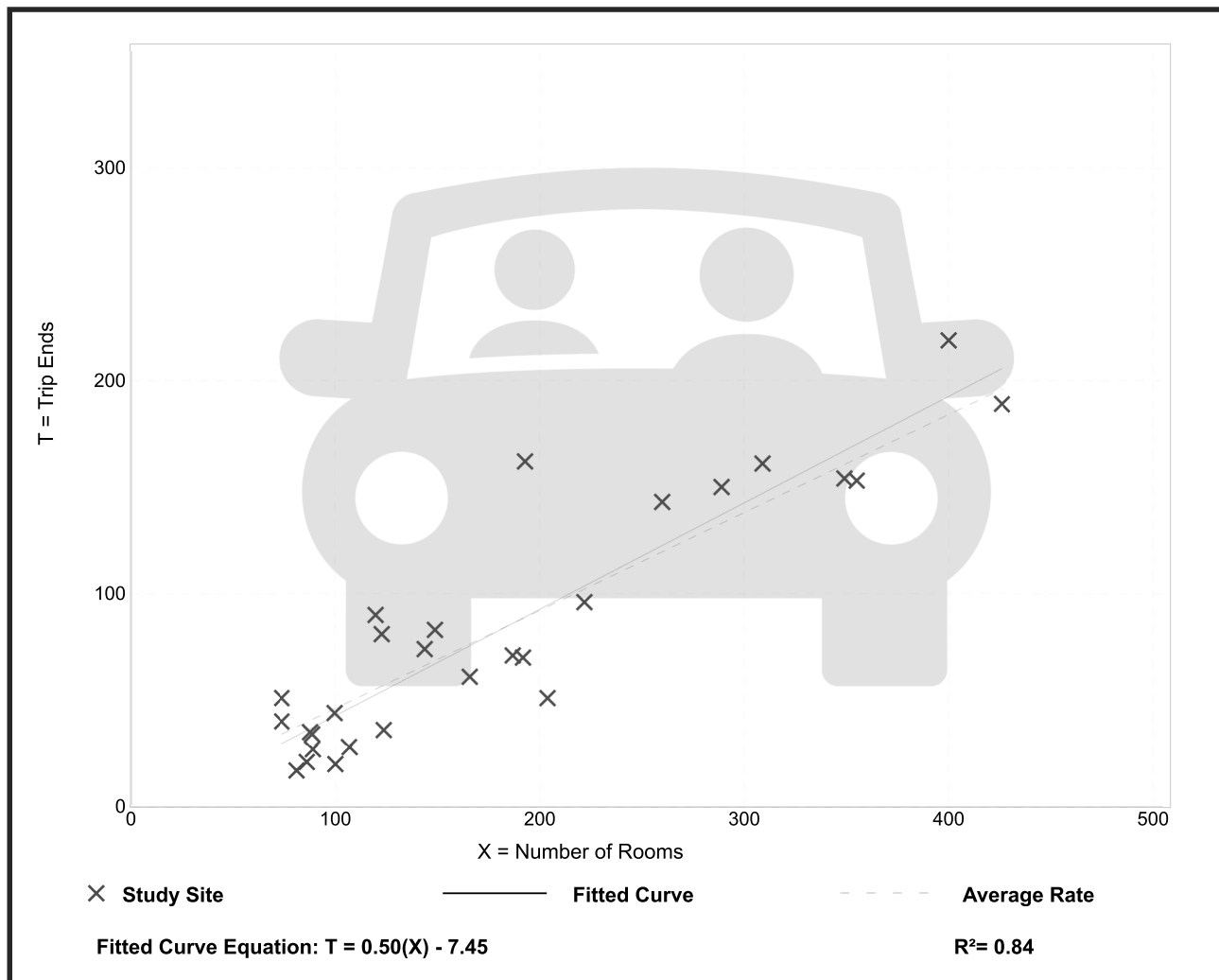
Hotel (310)

Vehicle Trip Ends vs: Rooms
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 28
 Avg. Num. of Rooms: 182
 Directional Distribution: 56% entering, 44% exiting

Vehicle Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
0.46	0.20 - 0.84	0.14

Data Plot and Equation



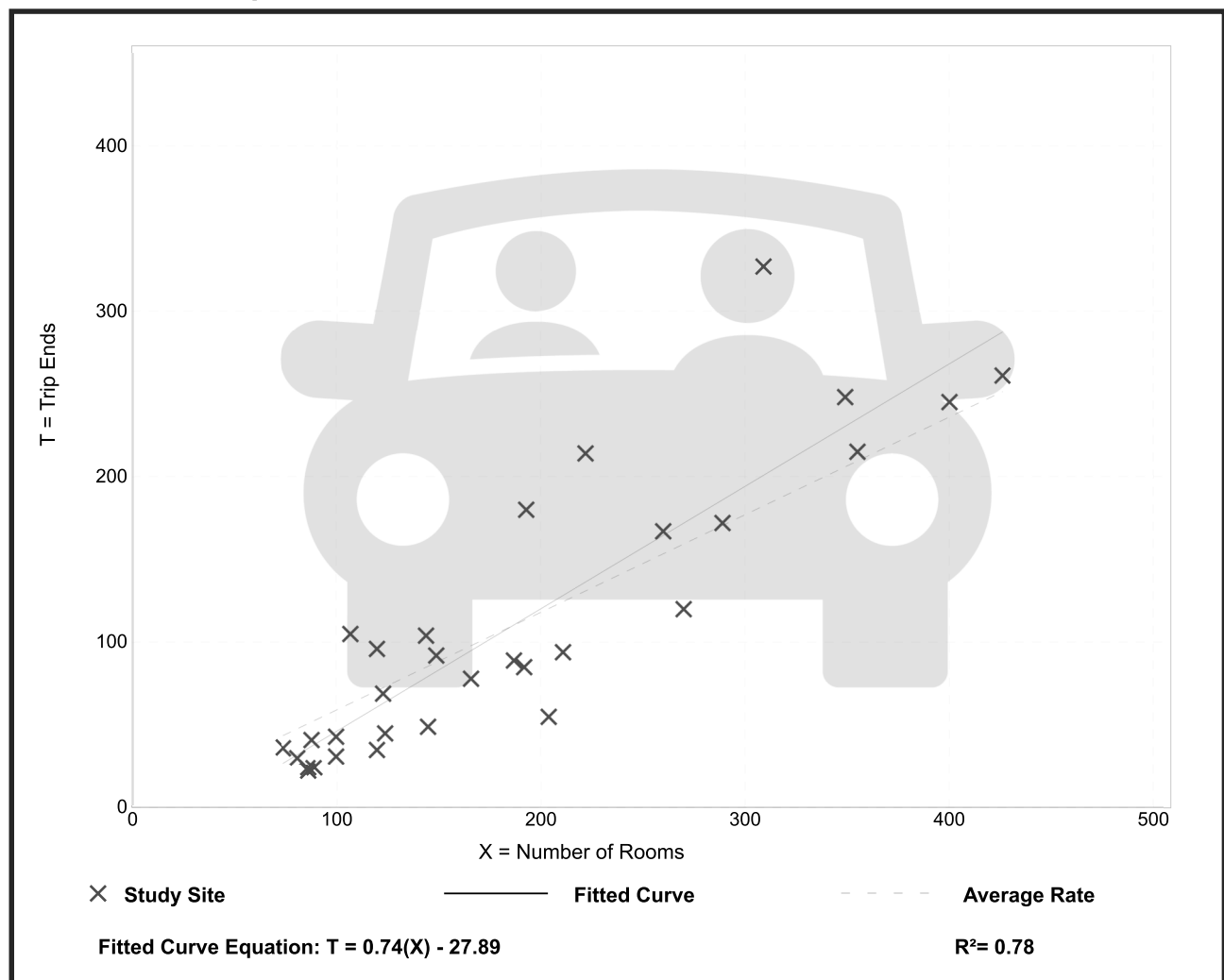
Hotel (310)

Vehicle Trip Ends vs: Rooms
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 31
 Avg. Num. of Rooms: 186
 Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
0.59	0.26 - 1.06	0.22

Data Plot and Equation



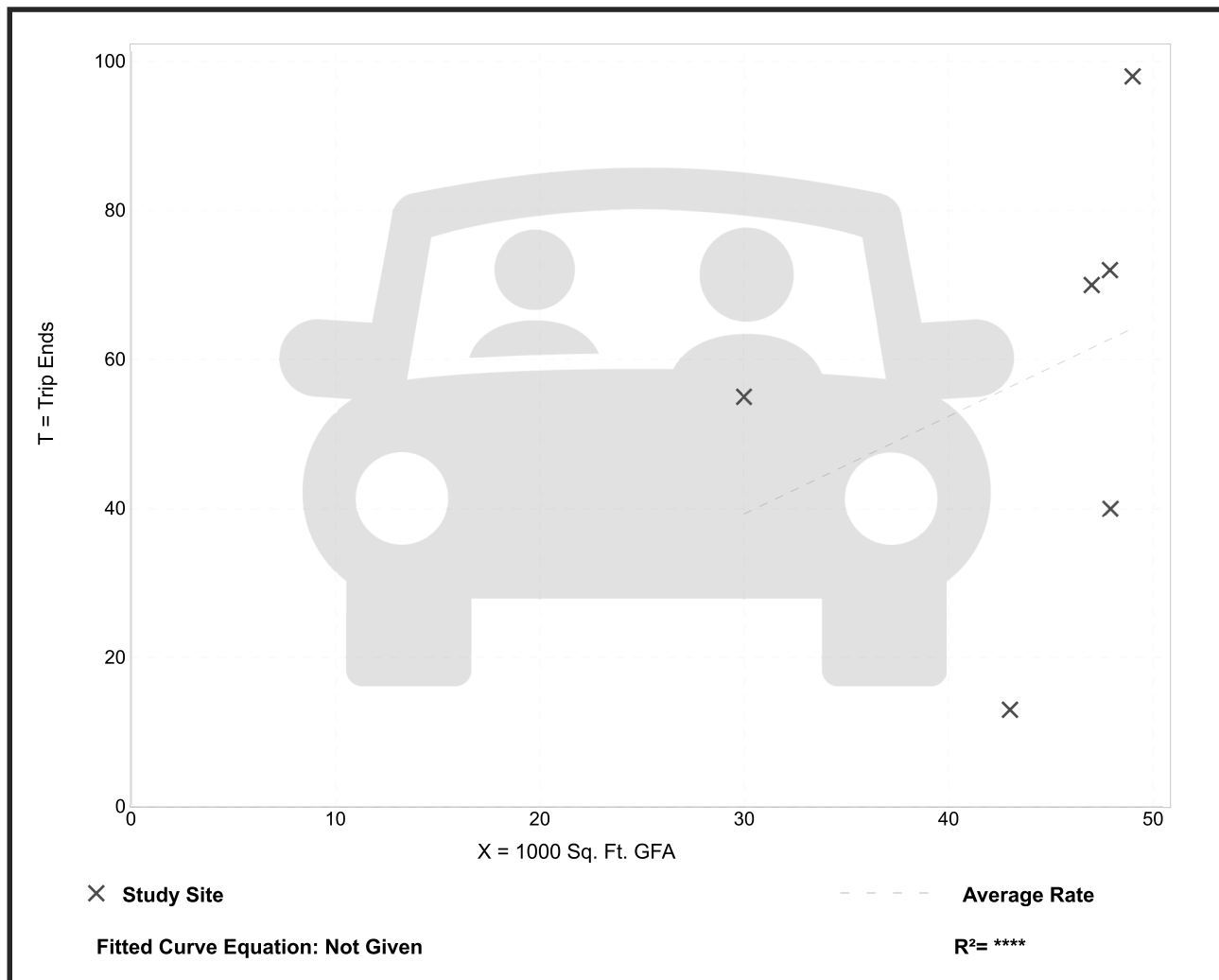
Health/Fitness Club (492)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 6
 Avg. 1000 Sq. Ft. GFA: 44
 Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.31	0.30 - 2.00	0.64

Data Plot and Equation



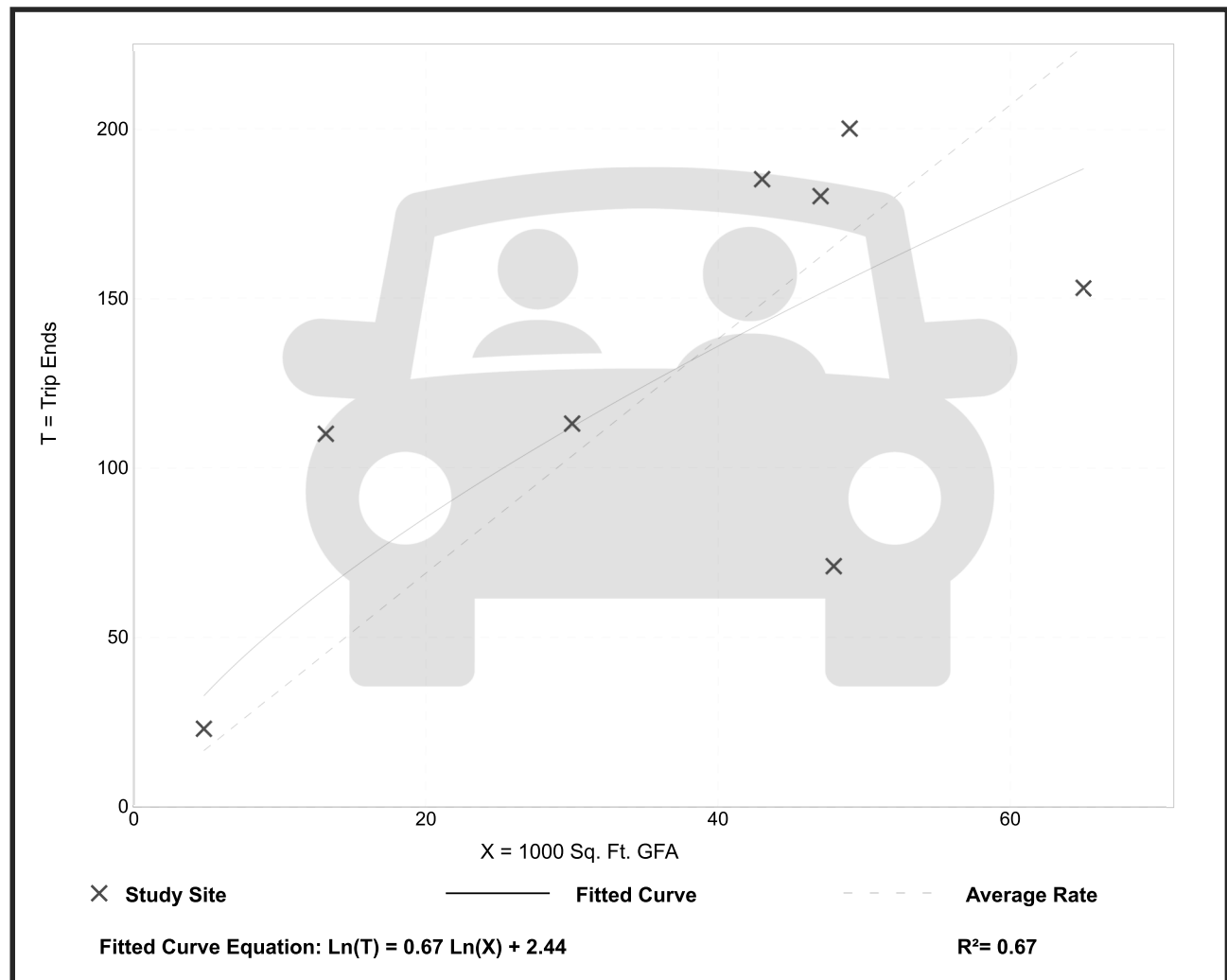
Health/Fitness Club (492)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 8
 Avg. 1000 Sq. Ft. GFA: 37
 Directional Distribution: 57% entering, 43% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.45	1.48 - 8.37	1.57

Data Plot and Equation



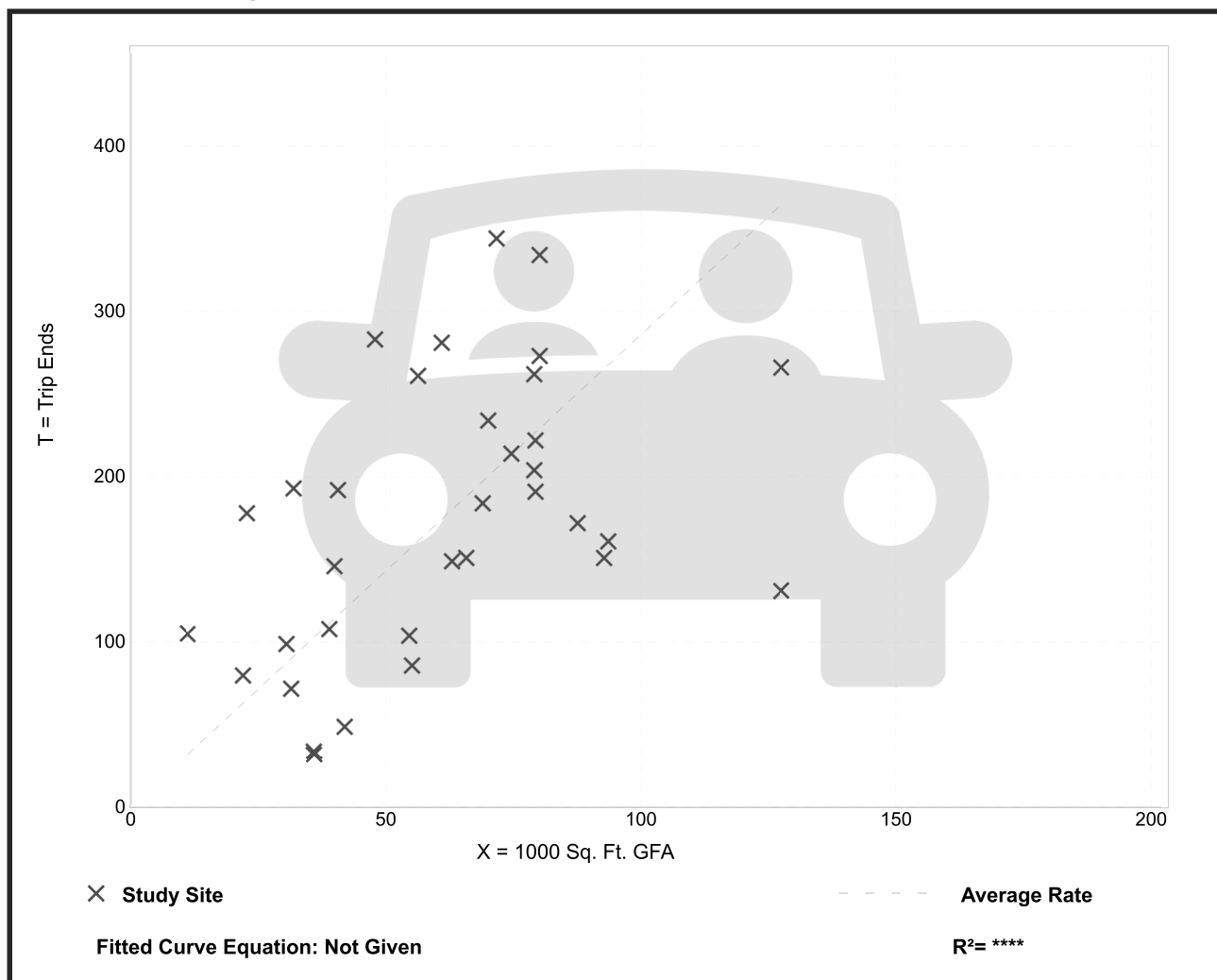
Supermarket (850)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 34
 Avg. 1000 Sq. Ft. GFA: 61
 Directional Distribution: 59% entering, 41% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.86	0.89 - 9.35	1.45

Data Plot and Equation



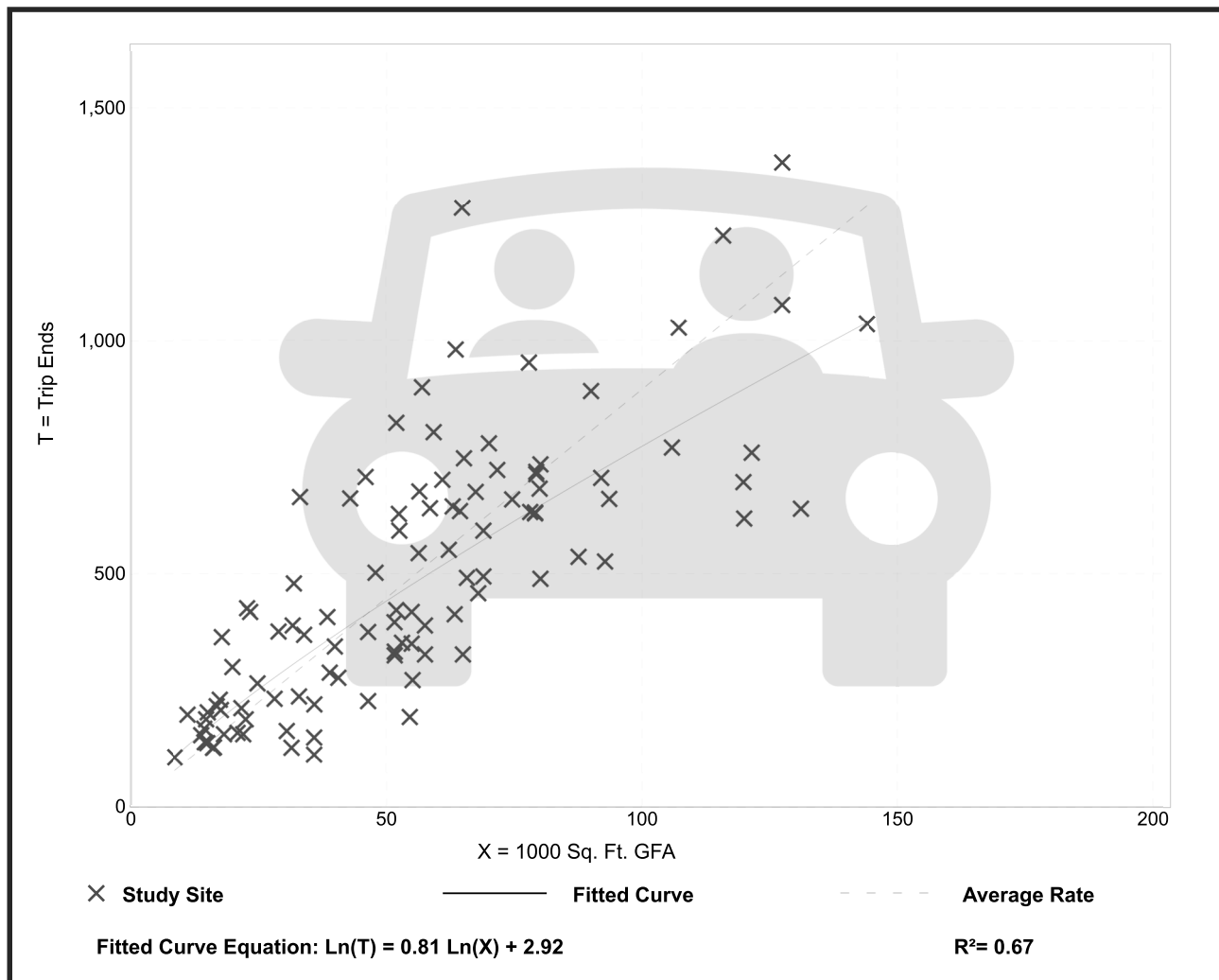
Supermarket (850)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 104
 Avg. 1000 Sq. Ft. GFA: 55
 Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
8.95	3.11 - 20.30	3.32

Data Plot and Equation



Apparel Store (876)

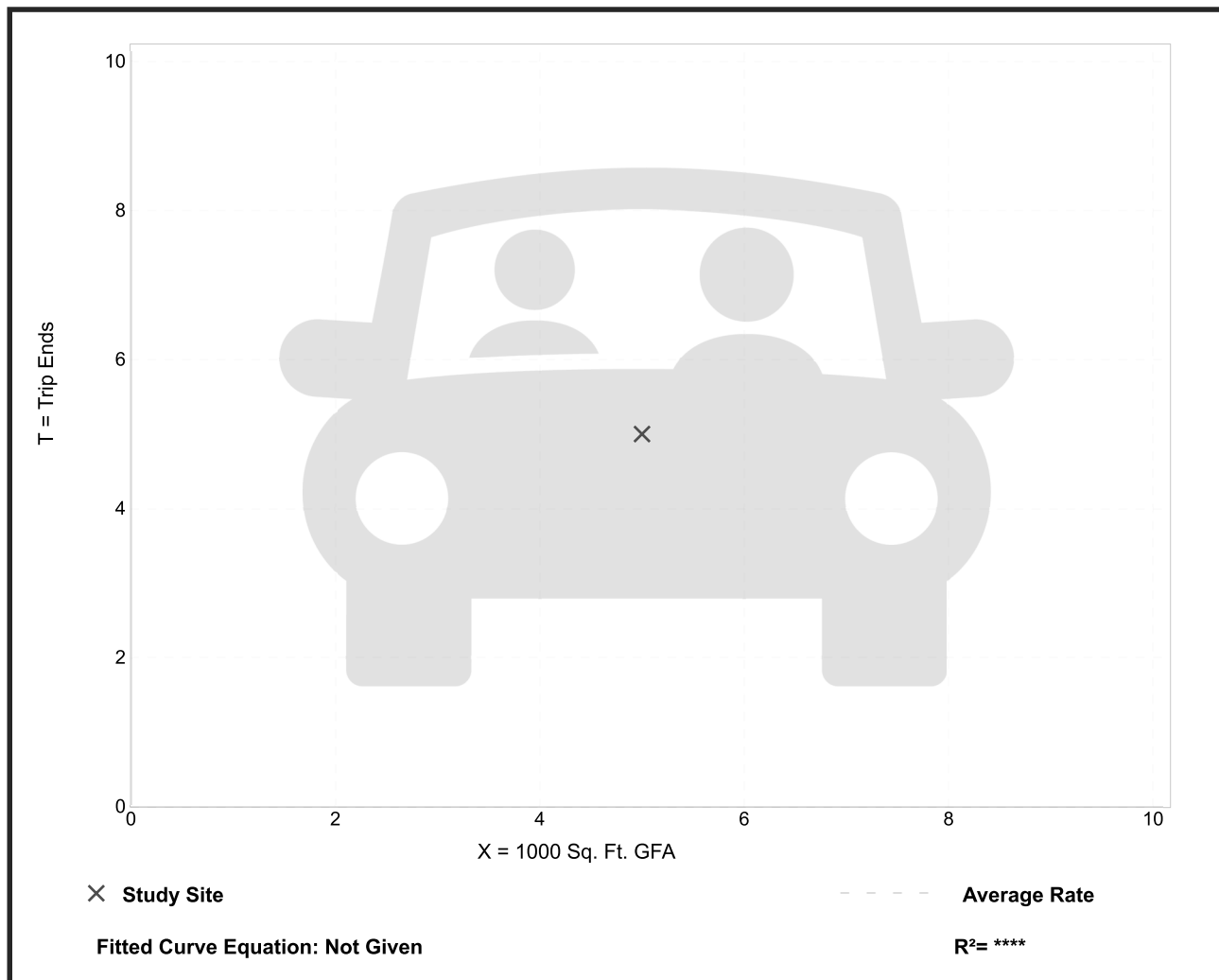
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 1
 Avg. 1000 Sq. Ft. GFA: 5
 Directional Distribution: 80% entering, 20% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.00	1.00 - 1.00	*

Data Plot and Equation

Caution – Small Sample Size



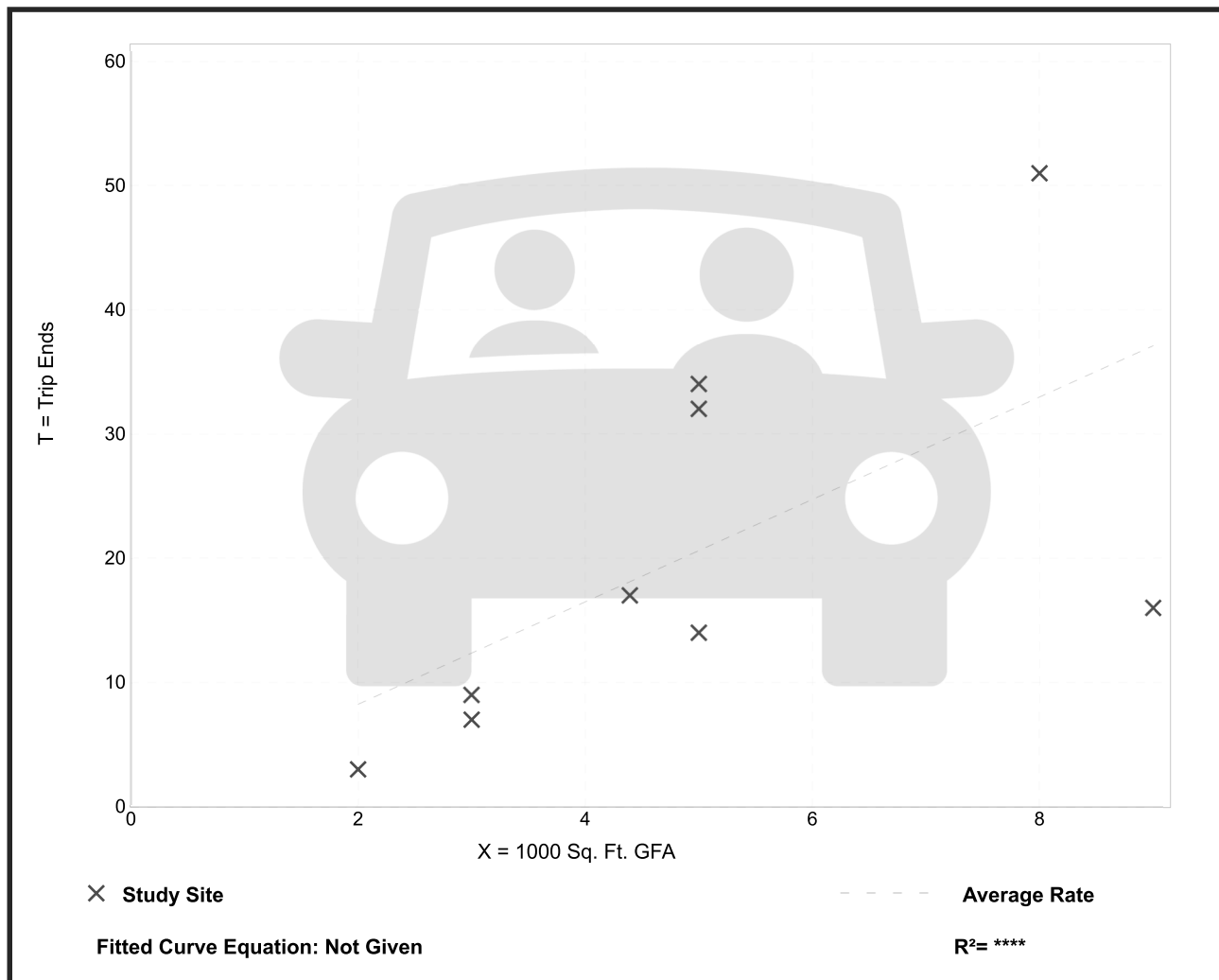
Apparel Store (876)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 9
 Avg. 1000 Sq. Ft. GFA: 5
 Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
4.12	1.50 - 6.80	2.18

Data Plot and Equation



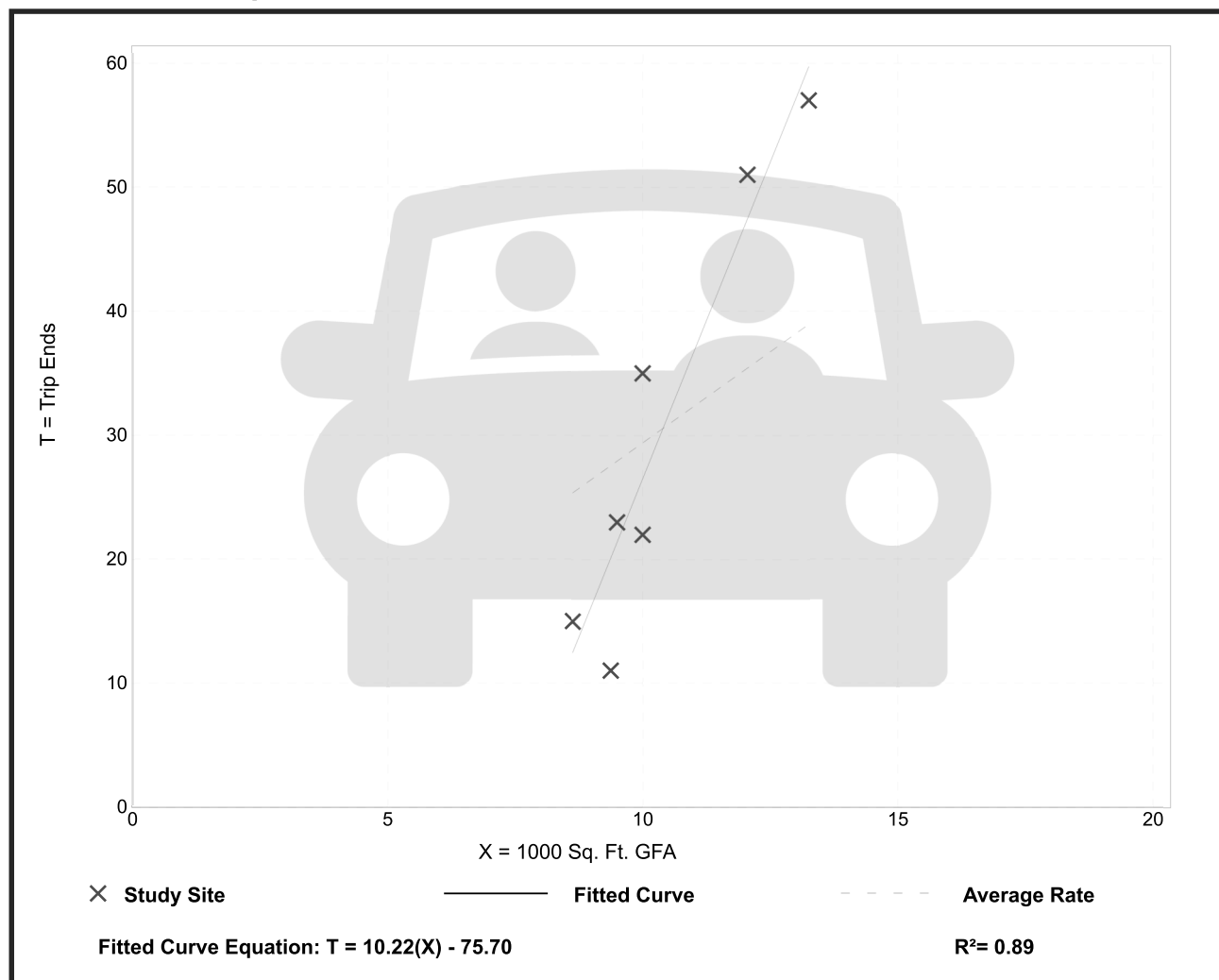
Pharmacy/Drugstore without Drive-Through Window (880)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 7
 Avg. 1000 Sq. Ft. GFA: 10
 Directional Distribution: 65% entering, 35% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.94	1.17 - 4.30	1.25

Data Plot and Equation



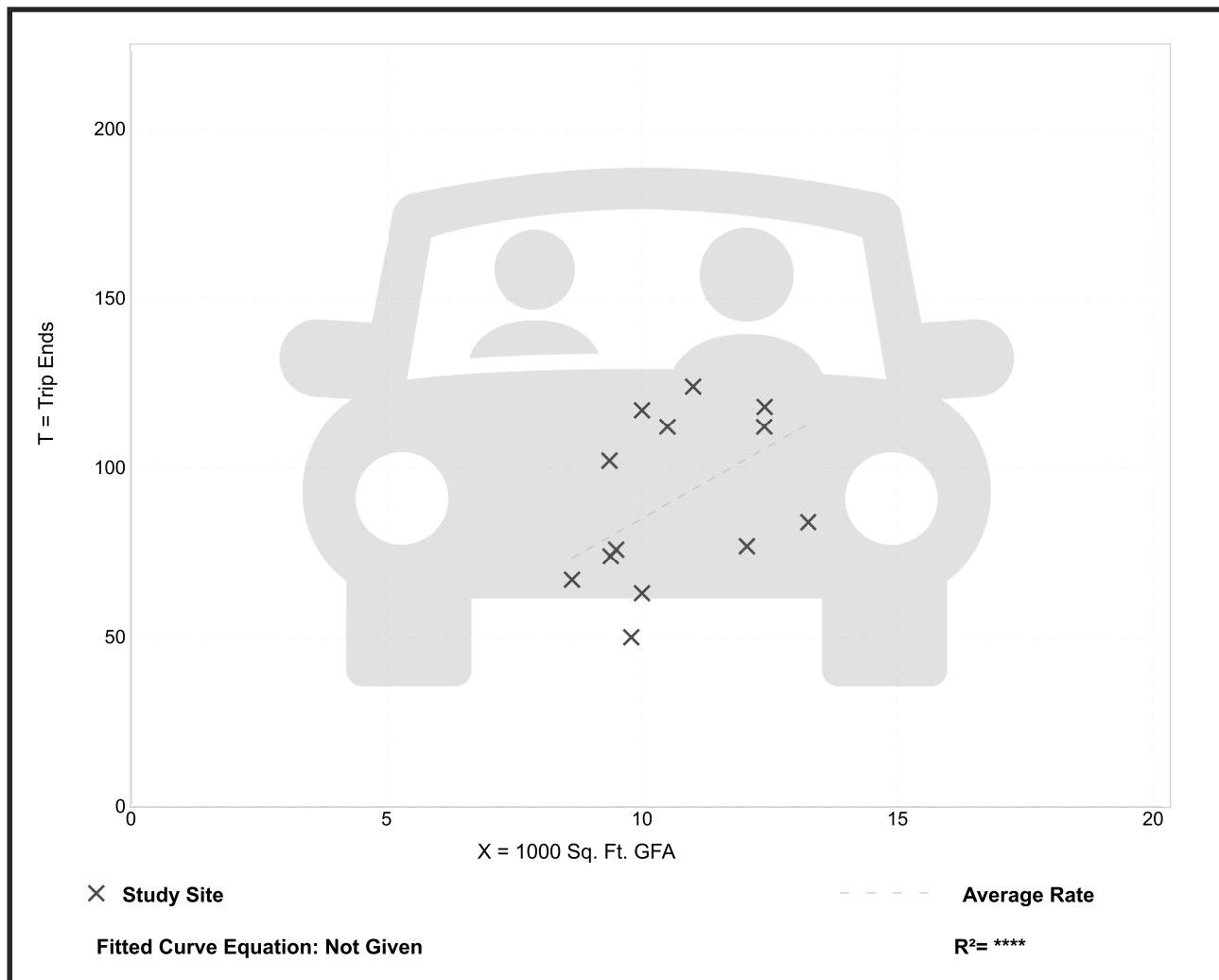
Pharmacy/Drugstore without Drive-Through Window (880)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 13
 Avg. 1000 Sq. Ft. GFA: 11
 Directional Distribution: 49% entering, 51% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
8.51	5.11 - 11.70	2.16

Data Plot and Equation



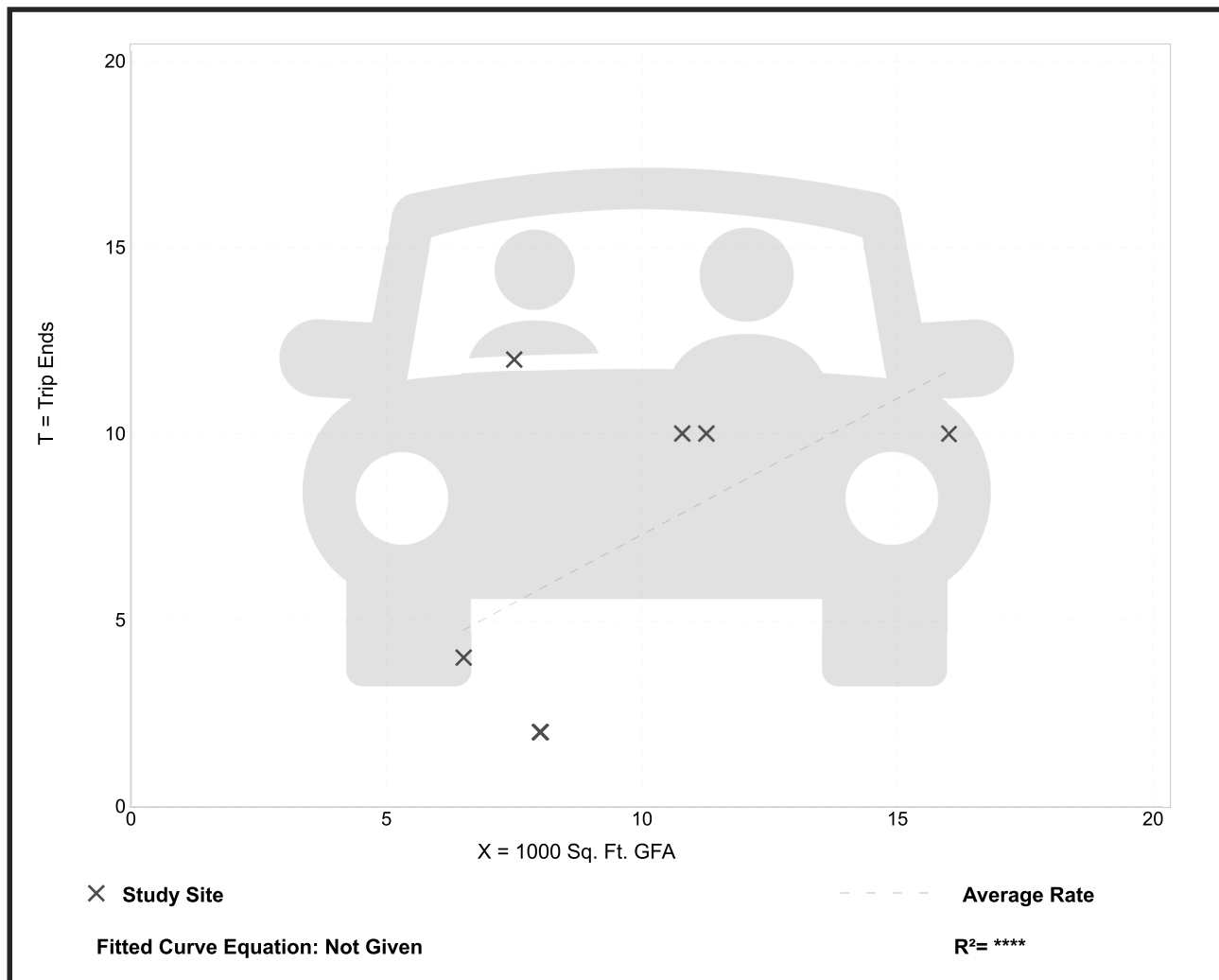
Fine Dining Restaurant (931)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 7
 Avg. 1000 Sq. Ft. GFA: 10
 Directional Distribution: Not Available

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.73	0.25 - 1.60	0.42

Data Plot and Equation



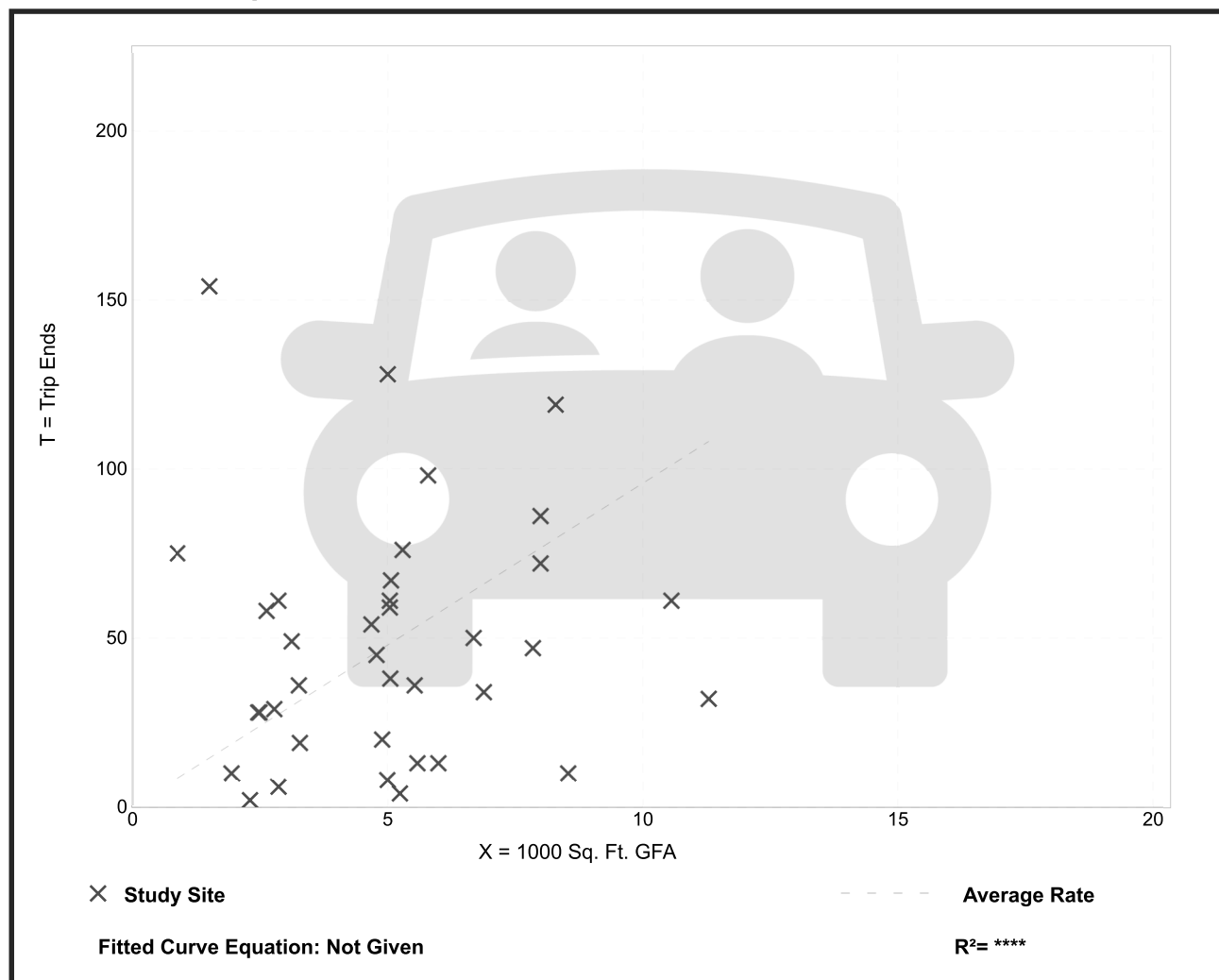
High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 37
 Avg. 1000 Sq. Ft. GFA: 5
 Directional Distribution: 55% entering, 45% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.57	0.76 - 102.39	11.61

Data Plot and Equation



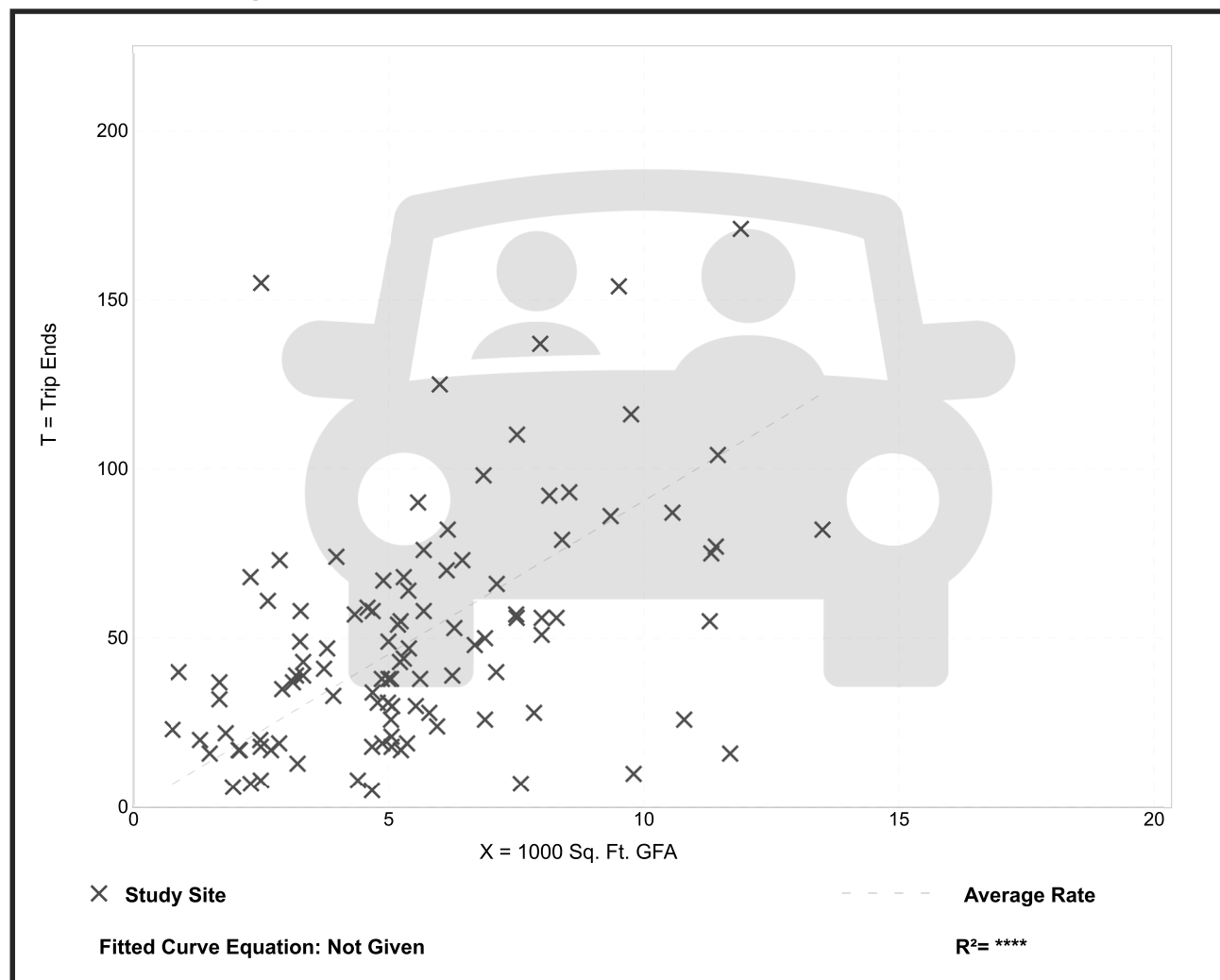
High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 104
 Avg. 1000 Sq. Ft. GFA: 6
 Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.05	0.92 - 62.00	6.18

Data Plot and Equation





Appendix E – HCM6 Reports

HCM 6th TWSC
1: Sun Valley Rd & Moritz Rd

05/28/2024

Intersection						
Int Delay, s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	32	5	60	50	5	42
Future Vol, veh/h	32	5	60	50	5	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	6	74	62	6	52
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	169	105	0	0	136	0
Stage 1	105	-	-	-	-	-
Stage 2	64	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	821	949	-	-	1448	-
Stage 1	919	-	-	-	-	-
Stage 2	959	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	818	949	-	-	1448	-
Mov Cap-2 Maneuver	818	-	-	-	-	-
Stage 1	919	-	-	-	-	-
Stage 2	955	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.6	0		0.8		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-		834	1448	
HCM Lane V/C Ratio	-	-		0.055	0.004	
HCM Control Delay (s)	-	-		9.6	7.5	
HCM Lane LOS	-	-		A	A	
HCM 95th %tile Q(veh)	-	-		0.2	0	

HCM 6th TWSC
2: Sun Valley Rd & Inn Service Rd

05/28/2024

Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	32	5	106	50	5	68
Future Vol, veh/h	32	5	106	50	5	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	6	131	62	6	84
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	258	162	0	0	193	0
Stage 1	162	-	-	-	-	-
Stage 2	96	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	731	883	-	-	1380	-
Stage 1	867	-	-	-	-	-
Stage 2	928	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	727	883	-	-	1380	-
Mov Cap-2 Maneuver	727	-	-	-	-	-
Stage 1	867	-	-	-	-	-
Stage 2	923	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	10.1	0		0.5		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 745		1380	-	
HCM Lane V/C Ratio	-	- 0.061		0.004	-	
HCM Control Delay (s)	-	- 10.1		7.6	0	
HCM Lane LOS	-	- B		A	A	
HCM 95th %tile Q(veh)	-	- 0.2		0	-	

HCM 6th TWSC
3: Sun Valley Rd & Lodge Entry Ln

05/28/2024

Intersection

Int Delay, s/veh 2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	63	5	151	101	5	95
Future Vol, veh/h	63	5	151	101	5	95
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	78	6	186	125	6	117

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	378	249	0
Stage 1	249	-	-
Stage 2	129	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	624	790	-
Stage 1	792	-	-
Stage 2	897	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	621	790	-
Mov Cap-2 Maneuver	621	-	-
Stage 1	792	-	-
Stage 2	893	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	631	1249
HCM Lane V/C Ratio	-	-	0.133	0.005
HCM Control Delay (s)	-	-	11.6	7.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.5	0

HCM 6th AWSC
4: Dollar Rd & Sun Valley Rd

05/28/2024

Intersection	
Intersection Delay, s/veh	13.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	55	100	48	110	93	53	21	144	117	32	81	45
Future Vol, veh/h	55	100	48	110	93	53	21	144	117	32	81	45
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	68	123	59	136	115	65	26	178	144	40	100	56
Number of Lanes	0	1	0	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	15.8	14.9	12.7	11.9
HCM LOS	C	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	13%	0%	27%	54%	0%	28%	0%
Vol Thru, %	87%	0%	49%	46%	0%	72%	0%
Vol Right, %	0%	100%	24%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	165	117	203	203	53	113	45
LT Vol	21	0	55	110	0	32	0
Through Vol	144	0	100	93	0	81	0
RT Vol	0	117	48	0	53	0	45
Lane Flow Rate	204	144	251	251	65	140	56
Geometry Grp	5	5	4b	5	5	5	5
Degree of Util (X)	0.39	0.245	0.473	0.488	0.11	0.281	0.098
Departure Headway (Hd)	6.896	6.115	6.793	7.015	6.026	7.242	6.379
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	524	588	531	516	596	497	562
Service Time	4.625	3.844	4.818	4.74	3.751	4.984	4.12
HCM Lane V/C Ratio	0.389	0.245	0.473	0.486	0.109	0.282	0.1
HCM Control Delay	14	10.8	15.8	16.3	9.5	12.8	9.8
HCM Lane LOS	B	B	C	C	A	B	A
HCM 95th-tile Q	1.8	1	2.5	2.6	0.4	1.1	0.3

HCM 6th TWSC
5: Dollar Rd & Baldy View Loop

05/28/2024

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	242	1	1	247	4	1	3	1	4	1	8
Future Vol, veh/h	6	242	1	1	247	4	1	3	1	4	1	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	299	1	1	305	5	1	4	1	5	1	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	310	0	0	300	0	0	629	626	300	626	624	308
Stage 1	-	-	-	-	-	-	314	314	-	310	310	-
Stage 2	-	-	-	-	-	-	315	312	-	316	314	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1250	-	-	1261	-	-	395	401	740	397	402	732
Stage 1	-	-	-	-	-	-	697	656	-	700	659	-
Stage 2	-	-	-	-	-	-	696	658	-	695	656	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1250	-	-	1261	-	-	386	398	740	391	399	732
Mov Cap-2 Maneuver	-	-	-	-	-	-	386	398	-	391	399	-
Stage 1	-	-	-	-	-	-	692	651	-	695	658	-
Stage 2	-	-	-	-	-	-	685	657	-	685	651	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	13.4	11.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	436	1250	-	-	1261	-	-	549
HCM Lane V/C Ratio	0.014	0.006	-	-	0.001	-	-	0.029
HCM Control Delay (s)	13.4	7.9	0	-	7.9	0	-	11.8
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

HCM 6th TWSC
6: Dollar Rd & W Lake Rd

05/28/2024

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	222	242	10	10	10
Future Vol, veh/h	25	222	242	10	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	274	299	12	12	12
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	311	0	-	0	641	305
Stage 1	-	-	-	-	305	-
Stage 2	-	-	-	-	336	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1249	-	-	-	439	735
Stage 1	-	-	-	-	748	-
Stage 2	-	-	-	-	724	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1249	-	-	-	426	735
Mov Cap-2 Maneuver	-	-	-	-	426	-
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	724	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.8	0		12		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1249	-	-	-	539	
HCM Lane V/C Ratio	0.025	-	-	-	0.046	
HCM Control Delay (s)	8	0	-	-	12	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	

HCM 6th AWSC
7: Elkhorn Rd/Old Dollar Rd & Dollar Rd

05/28/2024

Intersection												
Intersection Delay, s/veh	10.5											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	49	135	5	29	17	185	60	23	6	27	13
Future Vol, veh/h	23	49	135	5	29	17	185	60	23	6	27	13
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	60	167	6	36	21	228	74	28	7	33	16
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.9	8.6	11.7	8.5
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	69%	11%	10%	13%
Vol Thru, %	22%	24%	57%	59%
Vol Right, %	9%	65%	33%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	268	207	51	46
LT Vol	185	23	5	6
Through Vol	60	49	29	27
RT Vol	23	135	17	13
Lane Flow Rate	331	256	63	57
Geometry Grp	1	1	1	1
Degree of Util (X)	0.444	0.327	0.088	0.078
Departure Headway (Hd)	4.834	4.602	5.033	4.961
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	741	777	706	714
Service Time	2.896	2.657	3.109	3.045
HCM Lane V/C Ratio	0.447	0.329	0.089	0.08
HCM Control Delay	11.7	9.9	8.6	8.5
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	2.3	1.4	0.3	0.3

HCM 6th TWSC
1: Sun Valley Rd & Moritz Rd

05/29/2024

Intersection

Int Delay, s/veh 2.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	73	5	64	54	5	83
Future Vol, veh/h	73	5	64	54	5	83
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	83	6	73	61	6	94

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	210	104	0
Stage 1	104	-	-
Stage 2	106	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	778	951	-
Stage 1	920	-	-
Stage 2	918	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	775	951	-
Mov Cap-2 Maneuver	775	-	-
Stage 1	920	-	-
Stage 2	914	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	784	1451
HCM Lane V/C Ratio	-	-	0.113	0.004
HCM Control Delay (s)	-	-	10.2	7.5
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.4	0

HCM 6th TWSC
2: Sun Valley Rd & Inn Service Rd

05/29/2024

Intersection

Int Delay, s/veh 2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	73	5	113	54	5	151
Future Vol, veh/h	73	5	113	54	5	151
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	83	6	128	61	6	172

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	343	159	0
Stage 1	159	-	-
Stage 2	184	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	653	886	-
Stage 1	870	-	-
Stage 2	848	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	650	886	-
Mov Cap-2 Maneuver	650	-	-
Stage 1	870	-	-
Stage 2	844	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	661	1385
HCM Lane V/C Ratio	-	-	0.134	0.004
HCM Control Delay (s)	-	-	11.3	7.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.5	0

HCM 6th TWSC
3: Sun Valley Rd & Lodge Entry Ln

05/29/2024

Intersection						
Int Delay, s/veh	3.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	146	5	161	108	5	219
Future Vol, veh/h	146	5	161	108	5	219
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	166	6	183	123	6	249
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	506	245	0	0	306	0
Stage 1	245	-	-	-	-	-
Stage 2	261	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	526	794	-	-	1255	-
Stage 1	796	-	-	-	-	-
Stage 2	783	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	523	794	-	-	1255	-
Mov Cap-2 Maneuver	523	-	-	-	-	-
Stage 1	796	-	-	-	-	-
Stage 2	778	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	15	0		0.2		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	529	1255	-	
HCM Lane V/C Ratio	-	-	0.324	0.005	-	
HCM Control Delay (s)	-	-	15	7.9	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	1.4	0	-	

HCM 6th AWSC

4: Dollar Rd & Sun Valley Rd

05/29/2024

Intersection	
Intersection Delay, s/veh	31.6
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	71	132	67	185	105	34	48	164	227	22	258	85
Future Vol, veh/h	71	132	67	185	105	34	48	164	227	22	258	85
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	81	150	76	210	119	39	55	186	258	25	293	97
Number of Lanes	0	1	0	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	36.5	40.4	22.5	31.3
HCM LOS	E	E	C	D

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	23%	0%	26%	64%	0%	8%	0%
Vol Thru, %	77%	0%	49%	36%	0%	92%	0%
Vol Right, %	0%	100%	25%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	212	227	270	290	34	280	85
LT Vol	48	0	71	185	0	22	0
Through Vol	164	0	132	105	0	258	0
RT Vol	0	227	67	0	34	0	85
Lane Flow Rate	241	258	307	330	39	318	97
Geometry Grp	5	5	4b	5	5	5	5
Degree of Util (X)	0.594	0.575	0.768	0.832	0.086	0.78	0.216
Departure Headway (Hd)	8.87	8.022	9.01	9.085	8.027	8.822	8.05
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	405	449	399	399	445	410	444
Service Time	6.659	5.809	7.099	6.865	5.805	6.605	5.833
HCM Lane V/C Ratio	0.595	0.575	0.769	0.827	0.088	0.776	0.218
HCM Control Delay	23.9	21.2	36.5	43.8	11.6	36.8	13.1
HCM Lane LOS	C	C	E	E	B	E	B
HCM 95th-tile Q	3.7	3.5	6.4	7.7	0.3	6.7	0.8

HCM 6th TWSC
5: Dollar Rd & Baldy View Loop

05/29/2024

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	355	11	1	313	8	6	1	1	4	4	5
Future Vol, veh/h	15	355	11	1	313	8	6	1	1	4	4	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	403	13	1	356	9	7	1	1	5	5	6
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	365	0	0	416	0	0	812	811	410	808	813	361
Stage 1	-	-	-	-	-	-	444	444	-	363	363	-
Stage 2	-	-	-	-	-	-	368	367	-	445	450	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1194	-	-	1143	-	-	298	313	642	299	313	684
Stage 1	-	-	-	-	-	-	593	575	-	656	625	-
Stage 2	-	-	-	-	-	-	652	622	-	592	572	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1194	-	-	1143	-	-	288	307	642	293	307	684
Mov Cap-2 Maneuver	-	-	-	-	-	-	288	307	-	293	307	-
Stage 1	-	-	-	-	-	-	582	564	-	644	624	-
Stage 2	-	-	-	-	-	-	641	621	-	579	561	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0			16.9			14.8		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	312	1194	-	-	1143	-	-	382				
HCM Lane V/C Ratio	0.029	0.014	-	-	0.001	-	-	0.039				
HCM Control Delay (s)	16.9	8.1	0	-	8.2	0	-	14.8				
HCM Lane LOS	C	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

HCM 6th TWSC
6: Dollar Rd & W Lake Rd

05/29/2024

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	50	310	297	25	25	25
Future Vol, veh/h	50	310	297	25	25	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	352	338	28	28	28
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	366	0	-	0	818	352
Stage 1	-	-	-	-	352	-
Stage 2	-	-	-	-	466	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1193	-	-	-	346	692
Stage 1	-	-	-	-	712	-
Stage 2	-	-	-	-	632	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1193	-	-	-	326	692
Mov Cap-2 Maneuver	-	-	-	-	326	-
Stage 1	-	-	-	-	670	-
Stage 2	-	-	-	-	632	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.1	0		14.3		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1193	-	-	-	443	
HCM Lane V/C Ratio	0.048	-	-	-	0.128	
HCM Control Delay (s)	8.2	0	-	-	14.3	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4	

HCM 6th AWSC
7: Elkhorn Rd/Old Dollar Rd & Dollar Rd

05/29/2024

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	25	54	231	33	48	12	202	40	9	9	60	47
Future Vol, veh/h	25	54	231	33	48	12	202	40	9	9	60	47
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	61	263	38	55	14	230	45	10	10	68	53
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.2	9.8	12.7	9.7
HCM LOS	B	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	80%	8%	35%	8%
Vol Thru, %	16%	17%	52%	52%
Vol Right, %	4%	75%	13%	41%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	251	310	93	116
LT Vol	202	25	33	9
Through Vol	40	54	48	60
RT Vol	9	231	12	47
Lane Flow Rate	285	352	106	132
Geometry Grp	1	1	1	1
Degree of Util (X)	0.434	0.473	0.165	0.197
Departure Headway (Hd)	5.472	4.835	5.621	5.373
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	659	743	636	667
Service Time	3.506	2.872	3.669	3.415
HCM Lane V/C Ratio	0.432	0.474	0.167	0.198
HCM Control Delay	12.7	12.2	9.8	9.7
HCM Lane LOS	B	B	A	A
HCM 95th-tile Q	2.2	2.6	0.6	0.7

HCM 6th TWSC
1: Sun Valley Rd & Moritz Rd

05/29/2024

Intersection

Int Delay, s/veh 2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	38	6	67	59	6	47
Future Vol, veh/h	38	6	67	59	6	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	7	74	66	7	52

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	173	107	0
Stage 1	107	-	-
Stage 2	66	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	817	947	-
Stage 1	917	-	-
Stage 2	957	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	813	947	-
Mov Cap-2 Maneuver	813	-	-
Stage 1	917	-	-
Stage 2	952	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	0.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	829	1443
HCM Lane V/C Ratio	-	-	0.059	0.005
HCM Control Delay (s)	-	-	9.6	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0

HCM 6th TWSC
2: Sun Valley Rd & Inn Service Rd

05/29/2024

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	38	6	120	59	6	79
Future Vol, veh/h	38	6	120	59	6	79
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	7	133	66	7	88
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	268	166	0	0	199	0
Stage 1	166	-	-	-	-	-
Stage 2	102	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	721	878	-	-	1373	-
Stage 1	863	-	-	-	-	-
Stage 2	922	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	717	878	-	-	1373	-
Mov Cap-2 Maneuver	717	-	-	-	-	-
Stage 1	863	-	-	-	-	-
Stage 2	917	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	10.2	0		0.5		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	735	1373	-	
HCM Lane V/C Ratio	-	-	0.067	0.005	-	
HCM Control Delay (s)	-	-	10.2	7.6	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	

HCM 6th TWSC
3: Sun Valley Rd & Lodge Entry Ln

05/29/2024

Intersection						
Int Delay, s/veh	2.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	76	6	173	118	6	111
Future Vol, veh/h	76	6	173	118	6	111
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	84	7	192	131	7	123
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	395	258	0	0	323	0
Stage 1	258	-	-	-	-	-
Stage 2	137	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	610	781	-	-	1237	-
Stage 1	785	-	-	-	-	-
Stage 2	890	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	606	781	-	-	1237	-
Mov Cap-2 Maneuver	606	-	-	-	-	-
Stage 1	785	-	-	-	-	-
Stage 2	885	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	11.9	0		0.4		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-		616	1237	
HCM Lane V/C Ratio	-	-		0.148	0.005	
HCM Control Delay (s)	-	-		11.9	7.9	
HCM Lane LOS	-	-		B	A	
HCM 95th %tile Q(veh)	-	-		0.5	0	

HCM 6th Roundabout
4: Dollar Rd & Sun Valley Rd

05/29/2024

Intersection				
Intersection Delay, s/veh	6.3			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	248	311	348	206
Demand Flow Rate, veh/h	252	317	355	210
Vehicles Circulating, veh/h	284	283	238	271
Vehicles Exiting, veh/h	197	310	298	329
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.9	6.6	6.7	5.4
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	252	317	355	210
Cap Entry Lane, veh/h	1033	1034	1082	1047
Entry HV Adj Factor	0.982	0.980	0.981	0.981
Flow Entry, veh/h	248	311	348	206
Cap Entry, veh/h	1015	1014	1062	1026
V/C Ratio	0.244	0.307	0.328	0.201
Control Delay, s/veh	5.9	6.6	6.7	5.4
LOS	A	A	A	A
95th %tile Queue, veh	1	1	1	1

HCM 6th TWSC
5: Dollar Rd & Baldy View Loop

05/29/2024

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	265	1	1	270	5	1	3	1	5	1	9
Future Vol, veh/h	7	265	1	1	270	5	1	3	1	5	1	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	294	1	1	300	6	1	3	1	6	1	10
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	306	0	0	295	0	0	622	619	295	618	616	303
Stage 1	-	-	-	-	-	-	311	311	-	305	305	-
Stage 2	-	-	-	-	-	-	311	308	-	313	311	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1255	-	-	1266	-	-	399	404	744	402	406	737
Stage 1	-	-	-	-	-	-	699	658	-	705	662	-
Stage 2	-	-	-	-	-	-	699	660	-	698	658	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1255	-	-	1266	-	-	390	400	744	396	402	737
Mov Cap-2 Maneuver	-	-	-	-	-	-	390	400	-	396	402	-
Stage 1	-	-	-	-	-	-	693	653	-	699	661	-
Stage 2	-	-	-	-	-	-	688	659	-	688	653	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0			13.3			11.8		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	438	1255	-	-	1266	-	-	549				
HCM Lane V/C Ratio	0.013	0.006	-	-	0.001	-	-	0.03				
HCM Control Delay (s)	13.3	7.9	0	-	7.8	0	-	11.8				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1				

HCM 6th TWSC
6: Dollar Rd & W Lake Rd

05/29/2024

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	29	242	263	12	13	13
Future Vol, veh/h	29	242	263	12	13	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	269	292	13	14	14
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	305	0	-	0	632	299
Stage 1	-	-	-	-	299	-
Stage 2	-	-	-	-	333	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1256	-	-	-	444	741
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	726	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1256	-	-	-	431	741
Mov Cap-2 Maneuver	-	-	-	-	431	-
Stage 1	-	-	-	-	729	-
Stage 2	-	-	-	-	726	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.8	0		12		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1256	-	-	-	545	
HCM Lane V/C Ratio	0.026	-	-	-	0.053	
HCM Control Delay (s)	7.9	0	-	-	12	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2	

HCM 6th AWSC
7: Elkhorn Rd/Old Dollar Rd & Dollar Rd

05/29/2024

Intersection												
Intersection Delay, s/veh	10.5											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	27	55	146	5	32	20	201	70	24	7	32	16
Future Vol, veh/h	27	55	146	5	32	20	201	70	24	7	32	16
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	61	162	6	36	22	223	78	27	8	36	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.9	8.6	11.7	8.5
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	68%	12%	9%	13%
Vol Thru, %	24%	24%	56%	58%
Vol Right, %	8%	64%	35%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	295	228	57	55
LT Vol	201	27	5	7
Through Vol	70	55	32	32
RT Vol	24	146	20	16
Lane Flow Rate	328	253	63	61
Geometry Grp	1	1	1	1
Degree of Util (X)	0.44	0.324	0.088	0.084
Departure Headway (Hd)	4.836	4.611	5.019	4.947
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	741	775	707	717
Service Time	2.898	2.668	3.096	3.029
HCM Lane V/C Ratio	0.443	0.326	0.089	0.085
HCM Control Delay	11.7	9.9	8.6	8.5
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	2.3	1.4	0.3	0.3

HCM 6th TWSC
1: Sun Valley Rd & Moritz Rd

05/28/2024

Intersection

Int Delay, s/veh 3.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	87	6	70	69	6	91
Future Vol, veh/h	87	6	70	69	6	91
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	97	7	78	77	7	101

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	232	117	0
Stage 1	117	-	-
Stage 2	115	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	756	935	-
Stage 1	908	-	-
Stage 2	910	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	752	935	-
Mov Cap-2 Maneuver	752	-	-
Stage 1	908	-	-
Stage 2	905	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	762	1425
HCM Lane V/C Ratio	-	-	0.136	0.005
HCM Control Delay (s)	-	-	10.5	7.5
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.5	0

HCM 6th TWSC
2: Sun Valley Rd & Inn Service Rd

05/28/2024

Intersection

Int Delay, s/veh 2.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	87	6	133	70	6	171
Future Vol, veh/h	87	6	133	70	6	171
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	97	7	148	78	7	190

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	391	187	0
Stage 1	187	-	-
Stage 2	204	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	613	855	-
Stage 1	845	-	-
Stage 2	830	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	609	855	-
Mov Cap-2 Maneuver	609	-	-
Stage 1	845	-	-
Stage 2	825	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	621	1342
HCM Lane V/C Ratio	-	-	0.166	0.005
HCM Control Delay (s)	-	-	12	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.6	0

HCM 6th TWSC
3: Sun Valley Rd & Lodge Entry Ln

05/28/2024

Intersection						
Int Delay, s/veh	4.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	174	6	196	139	6	252
Future Vol, veh/h	174	6	196	139	6	252
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	193	7	218	154	7	280
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	589	295	0	0	372	0
Stage 1	295	-	-	-	-	-
Stage 2	294	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	471	744	-	-	1186	-
Stage 1	755	-	-	-	-	-
Stage 2	756	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	468	744	-	-	1186	-
Mov Cap-2 Maneuver	468	-	-	-	-	-
Stage 1	755	-	-	-	-	-
Stage 2	751	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	18	0		0.2		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	474	1186	-	
HCM Lane V/C Ratio	-	-	0.422	0.006	-	
HCM Control Delay (s)	-	-	18	8.1	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	2.1	0	-	

HCM 6th Roundabout
4: Dollar Rd & Sun Valley Rd

05/28/2024

Intersection				
Intersection Delay, s/veh	10.8			
Intersection LOS	B			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	340	400	564	473
Demand Flow Rate, veh/h	347	408	576	483
Vehicles Circulating, veh/h	598	390	297	417
Vehicles Exiting, veh/h	302	483	648	381
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	11.4	9.2	11.0	11.3
Approach LOS	B	A	B	B
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	347	408	576	483
Cap Entry Lane, veh/h	750	927	1019	902
Entry HV Adj Factor	0.979	0.981	0.980	0.980
Flow Entry, veh/h	340	400	564	473
Cap Entry, veh/h	734	910	999	884
V/C Ratio	0.463	0.440	0.565	0.536
Control Delay, s/veh	11.4	9.2	11.0	11.3
LOS	B	A	B	B
95th %tile Queue, veh	2	2	4	3

HCM 6th TWSC
5: Dollar Rd & Baldy View Loop

05/28/2024

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	396	12	1	347	10	6	1	1	5	5	6
Future Vol, veh/h	20	396	12	1	347	10	6	1	1	5	5	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	440	13	1	386	11	7	1	1	6	6	7
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	397	0	0	453	0	0	891	890	447	886	891	392
Stage 1	-	-	-	-	-	-	491	491	-	394	394	-
Stage 2	-	-	-	-	-	-	400	399	-	492	497	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1162	-	-	1108	-	-	263	282	612	265	282	657
Stage 1	-	-	-	-	-	-	559	548	-	631	605	-
Stage 2	-	-	-	-	-	-	626	602	-	558	545	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1162	-	-	1108	-	-	251	275	612	258	275	657
Mov Cap-2 Maneuver	-	-	-	-	-	-	251	275	-	258	275	-
Stage 1	-	-	-	-	-	-	545	534	-	615	604	-
Stage 2	-	-	-	-	-	-	613	601	-	542	531	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0			18.6			16.1		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	274	1162	-	-	1108	-	-	343				
HCM Lane V/C Ratio	0.032	0.019	-	-	0.001	-	-	0.052				
HCM Control Delay (s)	18.6	8.2	0	-	8.3	0	-	16.1				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.2				

HCM 6th TWSC
6: Dollar Rd & W Lake Rd

05/28/2024

Intersection

Int Delay, s/veh 1.8

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations 

Traffic Vol, veh/h 65 337 328 32 30 30

Future Vol, veh/h 65 337 328 32 30 30

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Free Free Free Free Stop Stop

RT Channelized - None - None - None

Storage Length - - - - 0 -

Veh in Median Storage, # - 0 0 - 0 -

Grade, % - 0 0 - 0 -

Peak Hour Factor 90 90 90 90 90 90

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 72 374 364 36 33 33

Major/Minor Major1 Major2 Minor2

Conflicting Flow All 400 0 - 0 900 382

Stage 1 - - - - 382 -

Stage 2 - - - - 518 -

Critical Hdwy 4.12 - - - 6.42 6.22

Critical Hdwy Stg 1 - - - - 5.42 -

Critical Hdwy Stg 2 - - - - 5.42 -

Follow-up Hdwy 2.218 - - - 3.518 3.318

Pot Cap-1 Maneuver 1159 - - - 309 665

Stage 1 - - - - 690 -

Stage 2 - - - - 598 -

Platoon blocked, % - - - -

Mov Cap-1 Maneuver 1159 - - - 285 665

Mov Cap-2 Maneuver - - - - 285 -

Stage 1 - - - - 636 -

Stage 2 - - - - 598 -

Approach EB WB SB

HCM Control Delay, s 1.3 0 15.8

HCM LOS C

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h) 1159 - - - 399

HCM Lane V/C Ratio 0.062 - - - 0.167

HCM Control Delay (s) 8.3 0 - - 15.8

HCM Lane LOS A A - - C

HCM 95th %tile Q(veh) 0.2 - - - 0.6

HCM 6th AWSC
7: Elkhorn Rd/Old Dollar Rd & Dollar Rd

05/28/2024

Intersection												
Intersection Delay, s/veh	13											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	32	59	250	35	54	17	224	51	9	10	71	57
Future Vol, veh/h	32	59	250	35	54	17	224	51	9	10	71	57
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	66	278	39	60	19	249	57	10	11	79	63
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.8	10.3	14.2	10.4
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	79%	9%	33%	7%
Vol Thru, %	18%	17%	51%	51%
Vol Right, %	3%	73%	16%	41%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	284	341	106	138
LT Vol	224	32	35	10
Through Vol	51	59	54	71
RT Vol	9	250	17	57
Lane Flow Rate	316	379	118	153
Geometry Grp	1	1	1	1
Degree of Util (X)	0.497	0.532	0.192	0.239
Departure Headway (Hd)	5.67	5.059	5.869	5.602
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	634	709	608	638
Service Time	3.722	3.111	3.939	3.665
HCM Lane V/C Ratio	0.498	0.535	0.194	0.24
HCM Control Delay	14.2	13.8	10.3	10.4
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	2.8	3.2	0.7	0.9

HCM 6th TWSC
1: Sun Valley Rd & Moritz Rd

05/28/2024

Intersection

Int Delay, s/veh 2.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	43	7	71	66	7	50
Future Vol, veh/h	43	7	71	66	7	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	8	79	73	8	56

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	188	116	0
Stage 1	116	-	-
Stage 2	72	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	801	936	-
Stage 1	909	-	-
Stage 2	951	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	796	936	-
Mov Cap-2 Maneuver	796	-	-
Stage 1	909	-	-
Stage 2	945	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	813	1429
HCM Lane V/C Ratio	-	-	0.068	0.005
HCM Control Delay (s)	-	-	9.8	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0

HCM 6th TWSC
2: Sun Valley Rd & Inn Service Rd

05/28/2024

Intersection

Int Delay, s/veh 1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	43	7	131	66	8	86
Future Vol, veh/h	43	7	131	66	8	86
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	8	146	73	9	96

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	297	183	0
Stage 1	183	-	-
Stage 2	114	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	694	859	-
Stage 1	848	-	-
Stage 2	911	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	689	859	-
Mov Cap-2 Maneuver	689	-	-
Stage 1	848	-	-
Stage 2	905	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	709	1350
HCM Lane V/C Ratio	-	-	0.078	0.007
HCM Control Delay (s)	-	-	10.5	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0

HCM 6th TWSC
3: Sun Valley Rd & Lodge Entry Ln

05/28/2024

Intersection

Int Delay, s/veh 2.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	85	7	190	130	7	123
Future Vol, veh/h	85	7	190	130	7	123
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	94	8	211	144	8	137

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	436	283	0
Stage 1	283	-	-
Stage 2	153	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	578	756	-
Stage 1	765	-	-
Stage 2	875	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	574	756	-
Mov Cap-2 Maneuver	574	-	-
Stage 1	765	-	-
Stage 2	869	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.5	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	585	1204
HCM Lane V/C Ratio	-	-	0.175	0.006
HCM Control Delay (s)	-	-	12.5	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.6	0

HCM 6th Roundabout
4: Dollar Rd & Sun Valley Rd

05/28/2024

Intersection				
Intersection Delay, s/veh	6.8			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	265	334	378	232
Demand Flow Rate, veh/h	271	341	386	236
Vehicles Circulating, veh/h	311	312	261	289
Vehicles Exiting, veh/h	214	335	321	364
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.4	7.2	7.3	5.8
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	271	341	386	236
Cap Entry Lane, veh/h	1005	1004	1057	1028
Entry HV Adj Factor	0.979	0.978	0.979	0.982
Flow Entry, veh/h	265	334	378	232
Cap Entry, veh/h	984	982	1035	1009
V/C Ratio	0.270	0.340	0.365	0.230
Control Delay, s/veh	6.4	7.2	7.3	5.8
LOS	A	A	A	A
95th %tile Queue, veh	1	2	2	1

HCM 6th TWSC
5: Dollar Rd & Baldy View Loop

05/28/2024

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	286	1	1	288	6	1	3	1	5	1	11
Future Vol, veh/h	8	286	1	1	288	6	1	3	1	5	1	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	318	1	1	320	7	1	3	1	6	1	12
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	327	0	0	319	0	0	669	666	319	665	663	324
Stage 1	-	-	-	-	-	-	337	337	-	326	326	-
Stage 2	-	-	-	-	-	-	332	329	-	339	337	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1233	-	-	1241	-	-	371	380	722	374	382	717
Stage 1	-	-	-	-	-	-	677	641	-	687	648	-
Stage 2	-	-	-	-	-	-	681	646	-	676	641	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1233	-	-	1241	-	-	361	376	722	368	378	717
Mov Cap-2 Maneuver	-	-	-	-	-	-	361	376	-	368	378	-
Stage 1	-	-	-	-	-	-	671	635	-	681	647	-
Stage 2	-	-	-	-	-	-	668	645	-	665	635	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0			13.9			11.9		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	412	1233	-	-	1241	-	-	538				
HCM Lane V/C Ratio	0.013	0.007	-	-	0.001	-	-	0.035				
HCM Control Delay (s)	13.9	7.9	0	-	7.9	0	-	11.9				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1				

HCM 6th TWSC
6: Dollar Rd & W Lake Rd

05/28/2024

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	33	259	281	13	14	14
Future Vol, veh/h	33	259	281	13	14	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	288	312	14	16	16
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	326	0	-	0	681	319
Stage 1	-	-	-	-	319	-
Stage 2	-	-	-	-	362	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1234	-	-	-	416	722
Stage 1	-	-	-	-	737	-
Stage 2	-	-	-	-	704	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1234	-	-	-	401	722
Mov Cap-2 Maneuver	-	-	-	-	401	-
Stage 1	-	-	-	-	710	-
Stage 2	-	-	-	-	704	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.9	0		12.4		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1234	-	-	-	516	
HCM Lane V/C Ratio	0.03	-	-	-	0.06	
HCM Control Delay (s)	8	0	-	-	12.4	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2	

HCM 6th AWSC
7: Elkhorn Rd/Old Dollar Rd & Dollar Rd

05/28/2024

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	31	58	157	6	34	22	215	79	25	10	37	18
Future Vol, veh/h	31	58	157	6	34	22	215	79	25	10	37	18
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	34	64	174	7	38	24	239	88	28	11	41	20
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.5	8.9	12.6	8.8
HCM LOS	B	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	67%	13%	10%	15%
Vol Thru, %	25%	24%	55%	57%
Vol Right, %	8%	64%	35%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	319	246	62	65
LT Vol	215	31	6	10
Through Vol	79	58	34	37
RT Vol	25	157	22	18
Lane Flow Rate	354	273	69	72
Geometry Grp	1	1	1	1
Degree of Util (X)	0.485	0.359	0.101	0.104
Departure Headway (Hd)	4.926	4.729	5.266	5.188
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	723	752	685	695
Service Time	3.011	2.807	3.266	3.192
HCM Lane V/C Ratio	0.49	0.363	0.101	0.104
HCM Control Delay	12.6	10.5	8.9	8.8
HCM Lane LOS	B	B	A	A
HCM 95th-tile Q	2.7	1.6	0.3	0.3

HCM 6th TWSC
1: Sun Valley Rd & Moritz Rd

05/29/2024

Intersection

Int Delay, s/veh 3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	95	7	75	76	7	96
Future Vol, veh/h	95	7	75	76	7	96
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	106	8	83	84	8	107

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	248	125	0
Stage 1	125	-	-
Stage 2	123	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	740	926	-
Stage 1	901	-	-
Stage 2	902	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	736	926	-
Mov Cap-2 Maneuver	736	-	-
Stage 1	901	-	-
Stage 2	897	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	747	1411
HCM Lane V/C Ratio	-	-	0.152	0.006
HCM Control Delay (s)	-	-	10.7	7.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.5	0

HCM 6th TWSC
2: Sun Valley Rd & Inn Service Rd

05/29/2024

Intersection						
Int Delay, s/veh	2.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	96	7	144	77	7	185
Future Vol, veh/h	96	7	144	77	7	185
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	107	8	160	86	8	206
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	425	203	0	0	246	0
Stage 1	203	-	-	-	-	-
Stage 2	222	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	586	838	-	-	1320	-
Stage 1	831	-	-	-	-	-
Stage 2	815	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	582	838	-	-	1320	-
Mov Cap-2 Maneuver	582	-	-	-	-	-
Stage 1	831	-	-	-	-	-
Stage 2	809	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	12.5	0		0.3		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 594		1320	-	
HCM Lane V/C Ratio	-	- 0.193		0.006	-	
HCM Control Delay (s)	-	- 12.5		7.7	0	
HCM Lane LOS	-	- B		A	A	
HCM 95th %tile Q(veh)	-	- 0.7		0	-	

HCM 6th TWSC
3: Sun Valley Rd & Lodge Entry Ln

05/29/2024

Intersection						
Int Delay, s/veh	5.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	192	7	215	154	8	274
Future Vol, veh/h	192	7	215	154	8	274
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	213	8	239	171	9	304
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	647	325	0	0	410	0
Stage 1	325	-	-	-	-	-
Stage 2	322	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	436	716	-	-	1149	-
Stage 1	732	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	432	716	-	-	1149	-
Mov Cap-2 Maneuver	432	-	-	-	-	-
Stage 1	732	-	-	-	-	-
Stage 2	728	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	21.3	0		0.2		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	438	1149	-	
HCM Lane V/C Ratio	-	-	0.505	0.008	-	
HCM Control Delay (s)	-	-	21.3	8.2	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	2.8	0	-	

HCM 6th Roundabout
4: Dollar Rd & Sun Valley Rd

05/29/2024

Intersection				
Intersection Delay, s/veh	12.4			
Intersection LOS	B			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	363	429	609	517
Demand Flow Rate, veh/h	370	438	621	527
Vehicles Circulating, veh/h	648	424	320	444
Vehicles Exiting, veh/h	323	517	698	418
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	13.2	10.4	12.7	13.3
Approach LOS	B	B	B	B
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	370	438	621	527
Cap Entry Lane, veh/h	713	895	996	877
Entry HV Adj Factor	0.980	0.980	0.981	0.981
Flow Entry, veh/h	363	429	609	517
Cap Entry, veh/h	698	878	976	860
V/C Ratio	0.519	0.489	0.624	0.601
Control Delay, s/veh	13.2	10.4	12.7	13.3
LOS	B	B	B	B
95th %tile Queue, veh	3	3	5	4

HCM 6th TWSC
5: Dollar Rd & Baldy View Loop

05/29/2024

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	422	12	1	372	12	7	1	1	5	5	8
Future Vol, veh/h	22	422	12	1	372	12	7	1	1	5	5	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	469	13	1	413	13	8	1	1	6	6	9
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	426	0	0	482	0	0	953	952	476	947	952	420
Stage 1	-	-	-	-	-	-	524	524	-	422	422	-
Stage 2	-	-	-	-	-	-	429	428	-	525	530	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1133	-	-	1081	-	-	239	259	589	241	259	633
Stage 1	-	-	-	-	-	-	537	530	-	609	588	-
Stage 2	-	-	-	-	-	-	604	585	-	536	527	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1133	-	-	1081	-	-	226	251	589	234	251	633
Mov Cap-2 Maneuver	-	-	-	-	-	-	226	251	-	234	251	-
Stage 1	-	-	-	-	-	-	521	515	-	591	587	-
Stage 2	-	-	-	-	-	-	589	584	-	518	512	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0			20.3			16.5		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	246	1133	-	-	1081	-	-	334				
HCM Lane V/C Ratio	0.041	0.022	-	-	0.001	-	-	0.06				
HCM Control Delay (s)	20.3	8.2	0	-	8.3	0	-	16.5				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.2				

HCM 6th TWSC
6: Dollar Rd & W Lake Rd

05/29/2024

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	72	357	351	36	34	34
Future Vol, veh/h	72	357	351	36	34	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	80	397	390	40	38	38
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	430	0	-	0	967	410
Stage 1	-	-	-	-	410	-
Stage 2	-	-	-	-	557	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1129	-	-	-	282	642
Stage 1	-	-	-	-	670	-
Stage 2	-	-	-	-	574	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1129	-	-	-	256	642
Mov Cap-2 Maneuver	-	-	-	-	256	-
Stage 1	-	-	-	-	609	-
Stage 2	-	-	-	-	574	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.4	0		17.4		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1129	-	-	-	366	
HCM Lane V/C Ratio	0.071	-	-	-	0.206	
HCM Control Delay (s)	8.4	0	-	-	17.4	
HCM Lane LOS	A	A	-	-	C	
HCM 95th %tile Q(veh)	0.2	-	-	-	0.8	

HCM 6th AWSC
7: Elkhorn Rd/Old Dollar Rd & Dollar Rd

05/29/2024

Intersection	
Intersection Delay, s/veh	14.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	36	63	264	37	57	18	239	57	10	12	78	62
Future Vol, veh/h	36	63	264	37	57	18	239	57	10	12	78	62
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	40	70	293	41	63	20	266	63	11	13	87	69
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15.5	10.8	15.9	11.1
HCM LOS	C	B	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	78%	10%	33%	8%
Vol Thru, %	19%	17%	51%	51%
Vol Right, %	3%	73%	16%	41%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	306	363	112	152
LT Vol	239	36	37	12
Through Vol	57	63	57	78
RT Vol	10	264	18	62
Lane Flow Rate	340	403	124	169
Geometry Grp	1	1	1	1
Degree of Util (X)	0.551	0.586	0.211	0.272
Departure Headway (Hd)	5.835	5.233	6.104	5.808
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	615	686	582	613
Service Time	3.904	3.302	4.196	3.894
HCM Lane V/C Ratio	0.553	0.587	0.213	0.276
HCM Control Delay	15.9	15.5	10.8	11.1
HCM Lane LOS	C	C	B	B
HCM 95th-tile Q	3.4	3.8	0.8	1.1