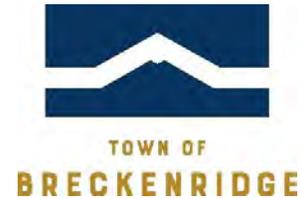


Town Council Special Meeting
Friday, October 6, 2023, 8:30 AM
Town Hall Council Chambers
150 Ski Hill Road
Breckenridge, Colorado

THE TOWN OF BRECKENRIDGE IS HOLDING HYBRID MEETINGS. This meeting will be held in person at Breckenridge Town Hall and will also be broadcast live over Zoom. Login information is available in the calendar section of our website: www.townofbreckenridge.com. If you will need special assistance in order to attend any of the Town's public meetings, please notify the Town Clerk's Office at (970) 547-3127, at least 72 hours in advance of the meeting.

- I. CALL TO ORDER, ROLL CALL**
- II. APPROVAL OF AGENDA**
- III. DISCUSSION ITEMS**
 - A. BGV Peak 8/Gold Rush Lot Development Discussion
- IV. OTHER**
- V. ADJOURNMENT**



Memo

To: Town Council
From: Planning Staff
Date: October 3, 2023, for the meeting of October 6, 2023
Subject: BGV Peak 8/ Gold Rush Lot Development Summary Analysis

During this worksession we will discuss issues related to Parcel 4 (East Peak Hotel Site) including: building size and programming, site layout, drainage and Cucumber Gulch impacts, Ski Hill Road traffic and Renewal Energy Mitigation Program (REMP) requirements. For context, staff will compare the proposal to the previously approved East Peak Hotel and the associated Lionheart Development Agreement.

Staff Analysis of the Proposed Development Concepts for Parcel 4.

Density and Programming

Overall, the proposed concept is a nominally smaller version of the previously approved East Peak Hotel. The building proposes 286,249 sq. ft. of density, which is 3.1% less than the previously approved 295,406 sq. ft. Under the current code the concept will require 219.4 SFEs. The previous building under the 2018 Code required 145.69 SFEs. The increase in SFEs is due to the revisions to the Density Policy. Previously, common areas such as hallways and amenities did not count as density and under the current Code they are counted as Density.

The proposed concept features 58 condominiums (147 units including lock-offs) to be used for fractional ownership, 20 whole ownership condominium units and 36 hotel rooms totaling an estimated 319 beds. This compares to the 49 whole ownership condominiums (77 units including lock-offs) and 137 hotel rooms approved with the East Peak 8 Hotel project totaling 315 beds.

13,736 sq. ft. of commercial space is proposed, including 4,346 sq. ft. of restaurant space. Overall, the amount of commercial space has increased by 3,076 sq. ft. and will need a greater allocation of commercial density than the current master plan and Lionheart Development Agreement allows (13.74 SFEs to 11 SFEs).

Guest Services per the master plan definition are uses related to the ski resort (ski school, tickets, ski rental, lockers, admin etc.) A total of 6,608 sq. ft. of guest service space is proposed with 5,084 sq. ft. being utilized by Vail Resorts and another 1,524 sq. ft. being occupied by the Breckenridge Outdoor Education Center (BOEC). Previously 7,200 sq. ft. of guest services were approved with 1,470 sq. ft. of that space reserved for the BOEC, with the remaining balance to Vail Resorts.

The concept proposes 22,037 sq. ft. of interior amenity space, an increase of 2,556 sq. ft. over the East Peak 8 Hotel. No space is proposed to be used as an amenity club.

Parking is proposed at 279 spaces, 54 fewer spaces than was previously approved.

Is the council comfortable with the proposed density and programming?

| Proposed Parcel 4 Development Summary | | | East Peak 8 Development Summary | | | |
|---------------------------------------|-------------------------|------------------|---------------------------------|--------------------------|--------------------------|--|
| General | Height (Stories) | (Unchanged) 5.5 | Height (Stories) | 5.5 | | |
| | Total SF | 417,807 | Total SF | 0 | | |
| | Total Beds (Estimated) | 319 | Total Beds | 315 | | |
| | Total Fractional Units | 147 | Total Fractional Units | 0 | | |
| | Total Hotel Units | 36 | Total Hotel Units | 137 | | |
| | Total Whole Ownership | 20 | Total Whole Ownership | 77 | | |
| | Total Parking Demand | 267 | Total Parking Demand | 263 | | |
| | Total Parking Provided | 279 | Total Parking Provided | 333 | | |
| | | Area (SF) | Residential Units | Area (SF) | Residential Units | |
| | Fractional Units | 108,761 | 58 units (147 Total Keys) | 0 | 0 | |
| Whole Ownership Units | 29,815 | 20 units | 104,971 | 49 units (77 Total Keys) | | |
| HOTEL | 12,413 | 36 units | 55,677 | 137 units | | |
| Amenity | 22,037 | | 19,481 | | | |
| Commercial | 13,736 | | 10,656 | | | |
| Guest Services | 6,608 | | 7,200 | | | |
| Common/Circulation | 58,228 | | 58,228 | | | |
| Support | 31,268 | | 2,904 | | | |
| PARKING | 134,941 | | 164,073 | | | |
| GROSS TOTAL | 417,807 | | 423,190 | | | |

Building Height

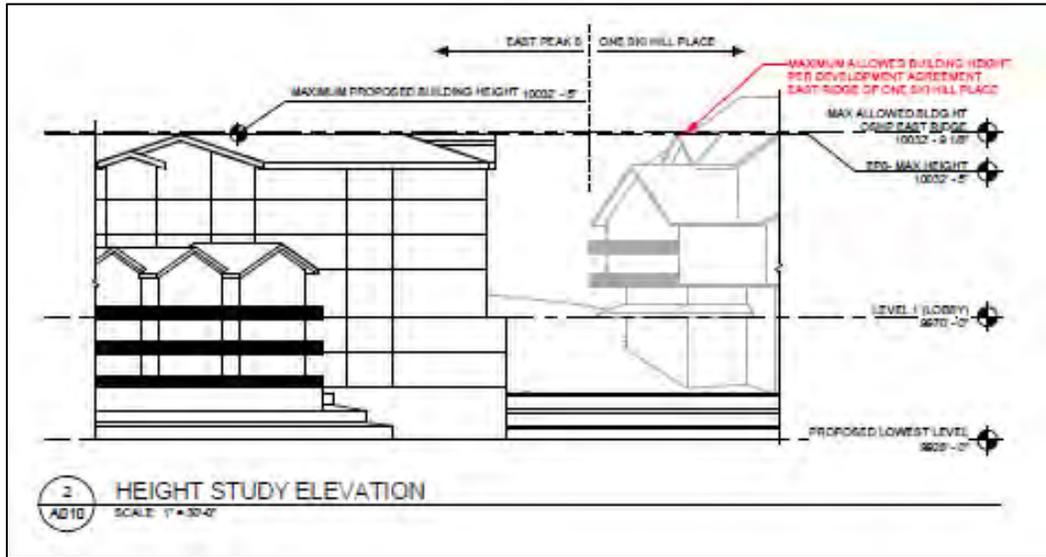
The maximum building height is 73'-8", as illustrated on the "Height Study Elevation", on sheet A010, measured from the mean to the finished grade below. This is unchanged from the East Peak 8 Hotel. The proposed building height exceeds the recommended building height in the land use guidelines that is referenced by the master plan by more than one-half (1/2) story but less than one story and will warrant negative (-10) ten points under Policy 6/R Building Height at a future site-specific review. Staff does not recommend waiving negative points for height but wants to note that negative points should be expected at the site-specific review. All previously approved large buildings at the base of Peak 7 and 8 received negative points for building height.

| | |
|------------|--|
| -10 points | <i>Buildings that are more than one-half (1/2) story over the land use guidelines recommendation, but are no more than one story over the land use guidelines recommendation.*</i> |
|------------|--|

Additionally, the proposed building height is subordinate to the east cross gable of One Ski Hill Place as required by the Peak 7 and Master Plan.

"7) Heights of Buildings:

E. In addition to the terms of the forgoing provisions and the provisions of Policy 6 (Relative) "Building Height" of the Town of Breckenridge Development Code, the maximum height of the buildings within Lot 4 shall not exceed the elevation of the existing east cross gable of One Ski Hill Place as shown on the Building Elevations exhibit attached to the Development Agreement recorded on the 28th day of September, 2018 at Reception No.1181305 of the Summit County, Colorado records."



Building Height

Overall, the building footprint has been reduced and the building setbacks have increased with this redesign. However, the reduction in building footprint has come at the expense of having the building step down towards the Four O'clock subdivision to the east. Previously the eastern façade adjacent to the Four O'clock Subdivision was designed at 2.5 stories before stepping up in height towards the center of the building.

The Peak 7 and 8 Master Plan notes, "Toward the ends of the Peak 8 Base area the buildings will be lesser in height and density as compared to the center or core of the Peak 8 Base."

Based on the direction in the current master plan, staff believes prior to a site-specific review, the building should be redesigned to step down in elevation along the eastern façade adjacent to the Four O'clock Subdivision to comply with the master plan.

Does the Council have any concerns with the conceptual building height?

Does the building need to step down along the eastern façade?

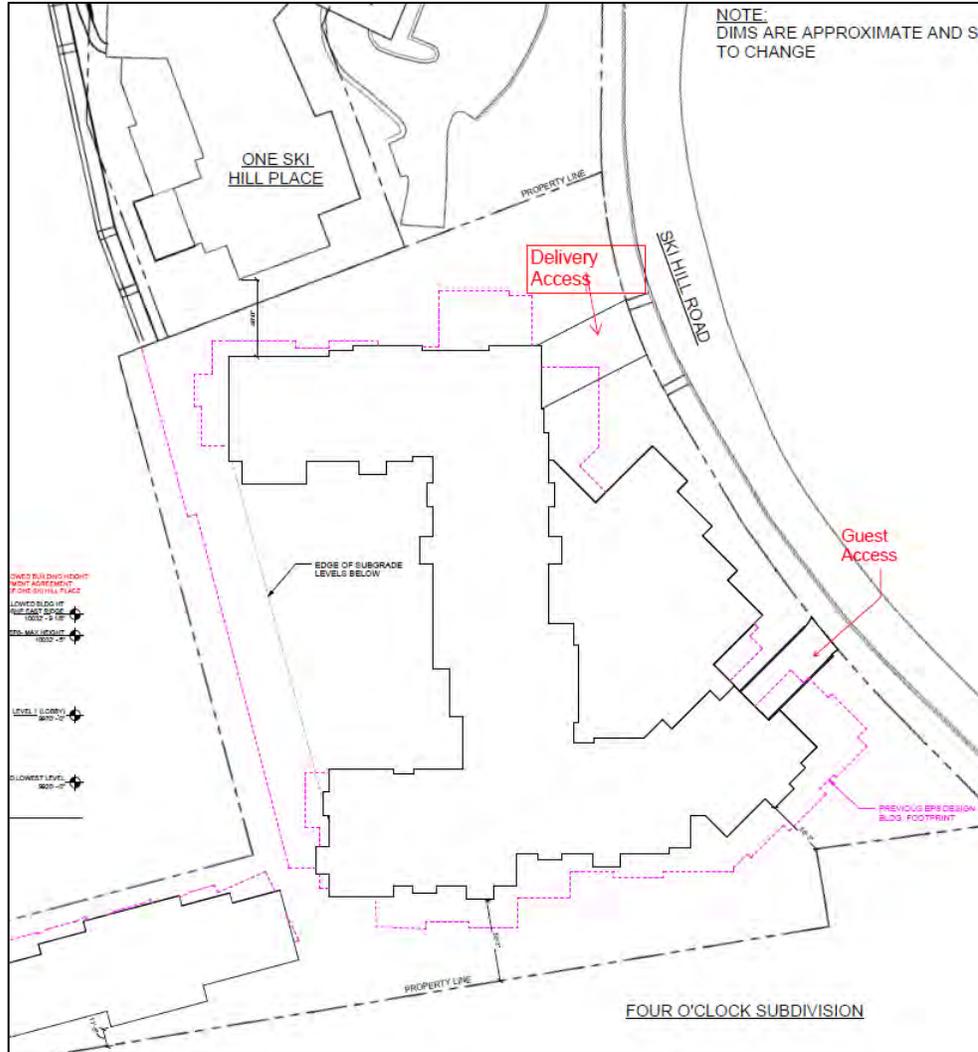
Site Layout

The general site layout is very similar to the previous East Peak Hotel. As noted above, the building footprint has shrunk with the view corridor and setbacks increasing between the concept building and One Ski Hill Place. On the eastern side, the distance from the main building to the property line has increased by 20' due to the elimination of the previous 2.5 story element. If the building were to be reconfigured to step down in height, the reduction in building footprint along the eastern façade may be lost.

The most significant change to the site layout with this concept plan is the relocation of the delivery access. The delivery access for the previous proposal was through an access easement on the neighboring One Ski Hill Place property, with the loading bay being 10' from the property line. The delivery

access proposed with this concept is via a driveway and loading bay that is 82' from the northern property line shared with One Ski Hill Place.

Guest access is still provided through an entrance on the eastern third of the property. The two access points will eliminate conflict between guests and delivery access but will need a waiver from the Town Engineer since there is more than one access point to the property. All access to the property from County Road 709 (Sawmill Run Road) will be eliminated once the site is developed. This will result in a significant reduction in vehicle trips per day on County Road 709 as compared to the existing conditions. Currently, access to the ski resort's administration facility is via County Road 709.



Site Layout

Is the Council comfortable with the conceptual site layout and does the Council support the waiver for a second curb cut/ access point?

Cucumber Gulch Impacts

The Cucumber Gulch Overlay Protection District was established with a Town ordinance in 2000 for the purpose of protecting and improving the bio-diversity, aesthetics and the sensitive natural resources within Cucumber Gulch. The ordinance required the Town to abide with the following:

- Establish a Preventive Management Area (PMA) around the important resources of the area, including wetlands, endangered wildlife habitat, and wildlife corridors.

- Have scientific studies conducted to identify resources of concern in the area.
- Prohibit certain potentially harmful activities within the PMA until the ordinance can be revised based on the studies.
- Require that development meets certain standards.
- Provide that Best Management Practices be applied through restrictive covenants to new development within or adjacent to the district.
- Require new roads have wildlife passageways if constructed within the district but outside the PMA.
- Provide that a recreation plan for the area be adopted by the Town in conjunction with other agencies, based on the result of scientific studies.
- Allow for relief from the ordinance under certain circumstances.

Water quality and detention facilities were always contemplated in the PMA for Peak 7 and 8 developments and were identified in the Master Plan and in the Peak 7 and 8 Subdivision by placing an easement over the area (Reception #730218). Both the master plan and subdivision were approved after the adoption of the PMA in 2000. Currently, there is an existing water quality detention facility on Tract A adjacent to the Peak 8 base as shown below. Additionally, there are two other existing water quality detention facilities on Tract A adjacent to the Peak 7 base area. All previous facilities on Tract A received PMA variances. With the previous East Peak 8 Hotel development, the Peak 8 water quality facility within the PMA on Tract A was approved to be expanded along with the addition of three new groundwater discharge outlets and a new water outlet.



The Cucumber Gulch Preserve (“Preserve”) is highly valued by the Town and citizens due to its valuable wetland complex and associated wildlife biodiversity. The Preserve has been identified as an Aquatic Resource of National Importance (ARNI) by the U.S. Environmental Protection Agency because the area contains rare peat-forming, groundwater-fed fen wetlands, as well as surface water-fed wetlands that support a rich biodiversity of animals, birds and plants. The Town and its citizens have committed significant resources to acquiring, protecting, and appropriately managing this sensitive wetland ecosystem.

Like the East Peak 8 Hotel project, the Parcel 4 concept will need water quality facilities within the PMA and up-stream of wetlands containing principal water bodies (Beaver Ponds). During a site specific review, the Parcel 4 development will need to obtain a variance to add the aforementioned water quality and drainage improvements. The improvements must not have any impact on or to improve the existing site drainage and infrastructure to the wetlands utilizing the Development Standards and Best Management Practices provided for in Sections 11 and 12 of the PMA regulations.

The Cucumber Gulch Overlay Protection District is an amendment to the Land Use Guidelines. The ordinance also identifies a relief procedure (“variance”) in situations where there is no practical alternative, and when the actions will not result in significant degradation to natural or wildlife features of Cucumber Gulch. (Note: Only relevant sections of this ordinance are shown in this memo.)

8.4 Prohibitions Within the PMA. The following are prohibited within the PMA, unless specifically approved by the Town pursuant to Paragraph 14 of these Regulations:

- C. Placement of material such as soil or gravel.
- D. Removal or excavation of material such as soil, gravel or vegetation.
- K. Construction of any water quality facility, including, but not limited to detention ponds and monitoring stations, unless located on non-wetland areas of the PMA as approved by the Town. Town approval shall involve the consideration of an analysis of the least environmentally damaging practicable alternative, including alternative sites outside the PMA. Approval by applicable regulatory agencies must be obtained.

11. Development Standards: Development within the District shall be subject to the following standards:

- B. Modifications to the hydrology shall not result in detrimental effects to the resources of the District.
- C. Where vegetation is proposed to be disturbed, the applicant shall submit a plan to restore such areas in a manner that provides similar biological functions, based on percent cover and type of species. Revegetation shall consist of native plants that are found in the vicinity.
- F. Construction activities shall employ effective methods to minimize soil erosion and resulting sedimentation, including silt fences, temporary re-vegetation of long-term construction sites, avoidance of slopes greater than 30%, and management of storm water run-off, and other methods.

Following is the variance language from Ordinance 9, Series 2000, which adopted the PMA regulations:

14. Relief Procedures.

A. The Planning Commission or Town Council may grant a variance, exception or waiver of any requirement of these Regulations (collectively, “variance”) upon a written request by a developer or owner of property subject to these Regulations. A variance shall be granted only upon finding that (a) a strict application of these Regulations would, when regarded as a whole, result in compensable taking of the property; or (b) the purposes of these Regulations will be adequately served by an alternative proposal or requirement (including any required mitigation, which shall be within the District), and (i) the granting of the variance will not result in a substantial degradation of the natural and wildlife features of Cucumber Gulch, and (ii) there is no other practical alternative. No variance by itself or in combination with other variances shall have the effect of nullifying the intent and purpose of these Regulations. Section 9-1-11 of the Breckenridge Development Code is not applicable to the granting of a variance under these Regulations. (Emphasis added.)

The following mitigation efforts were proposed with the East Peak Hotel:

- Any runoff from the project will be captured in a series of drainage inlets and routed to the enlarged existing subdivision detention and water quality facility across from One Ski Hill Place and the project. Each inlet has a sediment catching sump to remove heavier material.
- All disturbed areas will be top-soiled, seeded with a mix suitable for Town of Breckenridge standards including any permissible fertilizer, or soil conditioners to ensure growth.
- During construction, silt fencing, sediment traps, and temporary mulch cover shall be employed. Other measures will be added at the direction of the applicant’s engineer or the Town Community Development and Engineering Departments.

Staff believes that similar water quality infrastructure will need to be designed to meet criteria (A) of the Relief Procedures section. Previously the Town Engineer found that expanding water quality infrastructure in Tract A is the most appropriate course of action for the protection of the wetlands in the upper Cucumber Gulch. Also, staff found that as required as required under subsection (i) *the granting of the variance will not result in substantial degradation of the natural and wildlife features and the granting of the variance will not nullify the intent and purpose of the Cucumber Gulch regulation.*

A granting of a variance from the prohibitions of Section 8.4 will in no way relieve the applicant from complying with all Development Standards and Best Management Practices provided for in Sections 11 and 12 of the PMA regulations. In addition, a Declaration of Restrictive Covenants for Boreal Toad Protection was recorded on June 17, 1999 at Reception No. 598534 and contains restrictions similar to, but not as broad as the Development Standards and Best Management Practices which the applicant must comply with.

Based on established past precedent for granting variances from the PMA standards, staff does believe that a waiver from the PMA standards is needed in the Development Agreement to accommodate water quality facilities. Does the Council support the strategy for mitigation efforts described above?

In the previous Lionheart Development Agreement, a commitment to establish an environmental improvement fund for Cucumber Gulch was offered as a community benefit. Language from that commitment is listed below.

“Establish with the Town an environmental improvement fund dedicated to drainage and similar improvements to protect the Town’s Cucumber Gulch property funded by a fee of \$2.00 per paid room night to be added to the amount paid for rentals of the hotel rooms in the Proposed Development, and only those hotel rooms, for a period of twenty (20) years from the date a certificate of occupancy is issued for the hotel component of the Proposed Development. Such funds shall be transferred to Town in accordance with a schedule to be established by the Finance Director of the Town, and may be spent by the Town in its sole discretion;”

Does the Council wish to retain this environmental improvement fund commitment in the new Development Agreement?

Ski Hill Road Traffic

In February 2020, a traffic impact study, produced by Kimley-Horn and Associates, was supplied by the East Peak 8 Hotel applicant and reviewed by the Town’s Engineering Staff and a third party traffic consultant, Charles Buck, of Felsburg, Holt and Ullevig. This traffic impact study, the corresponding third-party review and a memo from the Town Engineer are included in the packet. In general, the updated traffic study was consistent with a previous study completed in 2018, which was required for the approval of the Lionheart Development Agreement. Recommendations in both studies included: working with CDOT to improve the signal timing of the Ski Hill Road and Park Avenue intersection, coordinating the existing signalized intersections of Ski Hill Road/Park Avenue and Ski Hill Road/Main Street and increasing lane queuing lengths at the Ski Hill Road/ Park Avenue and Ski Hill Road/ Main Street intersections. The revised traffic impact study points out an access permit for the Ski Hill Road intersection along Park Avenue will likely be required by CDOT in association with development of Parcel 4.

Overall, the third-party consultant found *“the trip generation analysis to provide a reasonable estimate of the trip generation potential for the East Peak 8 development “and felt “the resultant trip generation for the additional parking seems reasonable, even conservative”*. In the Town engineer’s memo (see attached), roadway levels of service and forecasted conditions for peak travel times are further explained. Further roadway improvements are also identified in the memo to better enhance intersection levels of service.

Since the last traffic study was completed, the overall number of parking spaces proposed is reduced by 16% (54 parking spaces) on the Parcel 4 but up to an additional 22 large lot single-family homes and their associated traffic impacts have been added to Ski Hill Road. The developer acknowledges the development of Parcels 4, 5 and 6 will increase traffic as compared to the existing conditions but believes it will be less than the previously approved East Peak 8 Hotel project due to the reduction in parking spaces.

Based on concerns over increased traffic the previous Lionheart Development Agreement required the applicant provide annual trip reports to the Town.

“Enter into such agreement as the Town reasonably may require to provide for the following: At the end of the first year after issuance of a final certificate of occupancy for the Proposed Development and every year thereafter for the first 5 years after issuance of such final certificate of occupancy, the Developer will provide a trip report to the Town. Trips will be defined as the number of trips into the garage plus the number of trip out of the garage on a daily basis. If during any single calendar month of each of such 5 years the number of trips exceeds an average of 1,600 trips per day, for every 100 trips in excess of 1,600 the Developer will acquire and transfer 1 additional shuttle van to the Breckenridge Mountain Master Association (“BMMA”). Until such time as the threshold described in the preceding sentence has been reached the residents and guests of the Proposed Development shall have access to the transportation (van) system operated by the BMMA in the same manner as is provided to other properties located within the boundaries of the BMMA. Prior to the issuance of a certificate of occupancy for the Proposed Development a letter from the BMMA confirming the same shall be provided to the Town.”

Also, due to the likelihood that CDOT will require an access permit and require some associated intersection improvements, the East Peak 8 Hotel was approved with the added condition *“Prior to Issuance of a Building Permit, 41. Applicant shall obtain a Colorado Department of Transportation (CDOT) Access Permit. The applicant is responsible for any permit identified geometric roadway improvements, including but not limited to: turn lane extensions, curb & gutter realignment, and associated drainage infrastructure even if an Access Permit is not required by CDOT. All roadway improvements on Colorado State Highway 9 must be completed prior to the issuance of a Certificate of Occupancy.*

Does the Council support including the above provisions in the new Development Agreement?

Does the Council have additional comments on traffic or roadway improvements?

Renewable Energy Mitigation (REMP) and Policy 33R

The recently adopted Renewable Energy Mitigation Program (REMP) in the Town's Building Code requires that all new development that includes outdoor heated space (heated driveways, pools and hot tubs, etc.) must offset the energy used by installation of renewable energy on the property (onsite mitigation) or by payment of an in-lieu fee. Development Code policy 33R requires that negative points be assigned at the time of development permit once a project has exceeded a threshold of allowed square footage for outdoor heated space. Regarding Parcel 4, BGV is requesting to address the REMP requirements in a manner that differs from the Code and also requesting a waiver from negative points for outdoor heated space under Policy 33R.

The Parcel 4 site plan that has been provided by BGV indicates that about 20,800 square feet of outdoor space would be heated for walkways, outdoor spas and pools, etc. A portion of this square footage is associated with emergency egress walkways and has the potential to be waived for public safety concerns per provisions in REMP. However, it is likely that the project will have a minimum of 10,500 square feet of outdoor heated space that would be subject to REMP. BGV has indicated that the rooflines designed for the Parcel 4 building, along with mechanical equipment, are not conducive to mounting solar arrays. BGV has requested, that instead of providing onsite renewable energy offsets, they be allowed to offset outdoor energy use by the following means:

1. Utilize existing local BGV buildings (e.g., Grand Lodge at Peak 7) to place solar arrays on their roofs, maximizing the solar that can be placed on these buildings.
2. If there still is a need for additional offsets after the existing BGV buildings have been fully utilized for solar, then the remaining amount of offset would be acquired by purchase of power from solar (or wind) arrays located elsewhere in Colorado.
3. If acquisition of renewable energy is unable to be accomplished by the time of Certificate of Occupancy (CO) for the Parcel 4 building, that a payment in lieu would be made for the remaining required offset.

BGV has also indicated their commitment to acquiring renewable energy to offset all the energy use of the interior space of the new Parcel 4 building. This is not required by current Town Code.

Staff Analysis:

- Staff supports use of other BGV buildings within the Town to offset energy used at Parcel 4, because this approach is consistent with the intent of REMP to offset energy used to heat outdoor space.
- Staff applauds BGV's commitment to offset 100 percent of both the indoor and outdoor energy use for Parcel 4.
- It is staff's strong preference that renewable potential here in Breckenridge be a priority over use of solar or wind gardens outside the County. The Development Agreement language regarding this should be carefully written to ensure that an independent analysis is performed to identify solar potential on existing BGV buildings and that the resulting solar installations maximize rooftop solar potential.
- BGV is currently conducting an analysis to determine feasibility of also installing solar panels above parking spaces in the proposed parking garage on Parcel 2. This approach has been used extensively in other communities but not in Breckenridge.
- Once use of existing (or planned) buildings for solar in Breckenridge is exhausted, staff would be amenable to accepting acquisition of solar or wind power from locations outside the County, to make up the remainder of the required energy offset. There are a number of issues that would need to be addressed in order to ensure that the acquired renewable power is provided essentially into perpetuity. Solar panels and subscription to panels in solar gardens can be sold between parties. Development Agreement language would need to be crafted that ensures that panels purchased remain attributed to the Parcel 4 property throughout the life of that building's existence.
- In staff's experience working with solar garden providers, some of the proposed projects never materialize or they take many years to implement. As such, a backup approach of requiring payment of fee in lieu at the time of CO for the Parcel 4 building is suggested, in case delays result in BGV not being able to acquire the required renewable energy at the time of CO.
- Staff is supportive of waiving negative points under Policy 33R for outdoor heating, given the commitments to energy offset that BGV is making both for the required outdoor offset and the voluntary indoor energy offset. With a minimum of 10,500 square feet of proposed outdoor heated space (assuming another 10,000 square feet was exempted for safety reasons), eleven (11) negative points would be assigned for the outdoor heated space. If it was determined that the safety exemption was much smaller than 10,000 square feet, then the negative point assignment could escalate toward thirty (30) negative points. Even an eleven (11) negative point assignment would be difficult for the applicant to overcome in getting a passing point analysis at the time of development permit. Policy 33R exempts the first 5,000 square feet of outdoor heated space for commercial and residential projects of 10 units or more. For each 500 square feet of outdoor heated space above 5,000 square feet, one negative point is assigned.
- Older plans for the Parcel 4 building (i.e., East Peak 8 Hotel) showed 51,000 square feet of outdoor heated space. BGV's designers have gone through essentially a value engineering exercise to determine where unnecessary outdoor heated space could be eliminated or avoided to reduce this number down to about 21,000 square feet. From this perspective, the REMP program is already working in that new development is being designed to reduce outdoor energy use.

Other Energy Use Items

- BGV has also indicated that they desire credit for high-efficiency systems that they intend to employ to minimize energy consumption. Staff has indicated that we would be amenable to adjusting the

efficiency calculations in the REMP energy calculator per engineer's designs to recognize these systems. This adjustment would be noted in the Development Agreement.

- BGV has indicated they are willing to commit to the following additional energy conservation efforts with development of Parcel 4:
 - Provide for EV charging stations in an amount that is above the level currently projected for EV needs to match future growth projections.
 - Work with their elevator partner to source power regenerative elevators.
 - Reduce snowmelt to the safest extent possible, via strategic planning and covering of outdoor traffic areas.
 - For areas that must be snowmelted, install weather stations that will automatically control the snowmelt.
 - Increase the distance between snowmelt loops to use less energy.
 - Use more covered common and private outdoor spaces to reduce the need for snowmelt.
 - Use electric snowmelt where possible.
 - Groom and maintain certain paths, instead of melting them where possible.
 - Reduction in outdoor heated water, when compared to previous developments.
 - Ensure all heated water is covered when not in use.
 - Introduction of "living walls" within the property, creating green space.
 - Create sustainability "learning" space to showcase green initiatives in the Town and BGV projects.
 - Partner with heat pump manufacturer to prove viability at large scale, high altitude and cold temperatures, providing good PR for the manufacturer, BGV and the Town.

Is the Council generally supportive of approach suggested above, prioritizing renewable energy placed on existing BGV buildings in Town, then using out-of-County renewable energy, with a backstop of payment in lieu, in order to offset the outdoor energy use of Parcel 4?

Is the Council amenable to waiving negative points for outdoor energy use as required in Policy 33R?

Is Council amenable to adjusting efficiency calculations in the REMP energy calculator to recognize high-efficiency systems?

Are there other energy use issues the Council would like to discuss?

Extended Vesting

Due to the multitude of parcels and the required phased approach associated with this Development Agreement, the applicant has requested 7 years extended vesting for the amended Peaks 7 and 8 Master Plan and 5 years extended vesting for the Gondola Lots Master Plan.

Does the applicant support the extended vesting requests?

Summary Table:

Staff has also included a summary table of outstanding questions for the Council associated with Parcel 4 and anticipated requests for Code relief from the applicant. Staff will be happy to receive any additional feedback or answer any questions.

| Summary of Considerations | | | |
|----------------------------------|---------------------------------------|--|---|
| Parcel Name | Questions for Council | Requested Code Relief | Deal Points |
| Parcel 4 (East Peak 8 Hotel) | • Is the council comfortable with the | • A request for 220 SFEs of density to | • Input will be collected at Oct. 6 th . |

| | | | |
|--|---|--|--|
| | <p>proposed density and programming?</p> <ul style="list-style-type: none"> • Does the Council have any concerns with the conceptual building height? • Is the Council comfortable with the conceptual site layout and support the waiver for a second curb cut? • Shall the applicant provide annual trip reports to the Town for the first 5 years after obtaining a certificate of occupancy. • Shall the applicant be responsible for any permit identified geometric roadway improvements, including but not limited to: turn lane extensions, curb & gutter realignment, and associated drainage infrastructure? • Does the Council have additional comments on traffic or roadway improvements? • A waiver from the PMA standards is not needed in the Development Agreement to accommodate water quality facilities. Does the Council Agree? • Does the Council wish to retain this environmental improvement fund commitment in the new Development Agreement? • Is the Council generally supportive of approach | <p>be allocated to the site.</p> <ul style="list-style-type: none"> • Waiver of on-site mitigation requirements of REMP and allowance to offset outdoor energy by installation of solar on other BGV buildings in Town, subscription to solar/wind gardens outside of the County, and if necessary payment in lieu. • Waiver of points associated outdoor heated paving, pools and hot tubs under Policy 33/R. • Request the ability to commence construction of infrastructure improvements i.e., demo existing building, relocate deep utilities, construct stormwater management and/or mass excavation prior to issuance of a building permit. • Waiver from Absolute Policy 24/Employee Housing for allowance to locate required on-site employee housing at Site #2? • Request approval for the ski areas critical operational staff to also be parked in this building equaling 75 more cars than what | |
|--|---|--|--|

| | | | |
|--|--|---------------------------------------|--|
| | <p>suggested above, prioritizing renewable energy placed on existing BGV buildings in Town, then using out-of-County renewable energy, with a backstop of payment in lieu, in order to offset the outdoor energy use of Parcel 4?</p> <ul style="list-style-type: none"> • Is Council amenable to adjusting efficiency calculations in the REMP energy calculator to recognize high-efficiency systems? • Is the Council amenable to waiving negative points for outdoor energy use as required in Policy 33R? • Are there other energy use issues the Council would like to discuss? | <p>Code require?</p> <p>would</p> | |
|--|--|---------------------------------------|--|

October 6, 2023

Mark Truckey
Director of Community Development
Town of Breckenridge

Mark –

In anticipation of our meeting with Town Council, I have drafted this memo highlighting certain critical aspects of our go forward plan for Parcel 4. Per your direction I have broken the discussion areas for Council into 5 segments: building specific matters, Cucumber Gulch, Traffic, Energy Conservation Policy 33 and REMP, and Extended Vesting.

I will have a presentation which will further explain the details noted below as we progress through each subject area.

1. The Building.

- a. **Smaller, Smaller, Smaller – BGVs proposed building vs. N. Gondola/EP8 Aggregated:**
BGV will deliver less total residential and commercial square footage of build to our community. We believe comparing our current proposal against “what could have been” clearly illustrates this reduction. We have taken square footage from our proposed North Gondola development and added it to what could still be built at the base of Peak 8 under current Code with 146 SFEs. Numbers shown in thousands of square feet.

| | <u>BGVs Proposed Building</u> |
|-----------------------|--------------------------------------|
| Building | 286 |
| Parking Garage | 135 |
| Total | 421 |

This chart shows our proposed (but suspended) buildings on North Gondola in the first column. The second column shows an extrapolation using square footage ratio’s from our proposed building but only uses the currently existing 146 SFEs to arrive at building size for a hypothetical building at EP8. The third column is the total of the two.

| | <u>North Gondola Buildings</u> | <u>EP8 Potential @ 146 SFEs</u> | <u>Total NG&EP8*</u> | <u>Comparison</u> |
|-----------------------|---------------------------------------|--|---------------------------------|--------------------------|
| Building | 224 | 191 | 415 | -31.0% |
| Parking Garage | 84 | 90 | 174 | -22.4% |
| Total | 308 | 281 | 589 | -28.5% |

This chart compares our proposed building versus what could have been built on North Gondola and East Peak 8 without our redeployment strategy. This chart shows how the community benefits by having approximately 129K less square feet of buildings in our community because of this strategy (415 – 286 = 129) or a 31% reduction. The first column shows our proposed building. The second column shows the total square feet of what could have been built at North Gondola and existing EP8. The comparison column shows the percent reduction in total building square feet throughout our Breck.

| | BGVs Proposed Building | Total NG&EP8* | Comparison |
|-----------------------|-------------------------------|--------------------------|-------------------|
| Building | 286 | 415 | -31.0% |
| Parking Garage | 135 | 174 | -22.4% |
| Total | 421 | 589 | -28.5% |

- b. **Smaller, Smaller, Smaller – BGVs proposed building vs. Previous Approval:** This chart below compares our proposed building size against the previous approval from 2019 by Lionheart. *Numbers shown in thousands of square feet – not parking spaces.*

| | BGVs Proposed Building | Previously Approved | Comparison |
|-----------------------|-------------------------------|----------------------------|-------------------|
| Building | 286 | 305 | -6.2% |
| Parking Garage | 135 | 155 | -12.9% |
| Total | 421 | 460 | -8.5% |

- c. **Smaller, Smaller, Smaller – BGVs Proposed Parking Spaces vs. Gondola/EP8**
Aggregated: BGV has downsized the parking count considerably to lessen future traffic issues on Ski Hill Road.

- i. **Inside the buildings:** (this chart shows parking spaces **NOT** square feet)

| Parking Space Count | | Comparison |
|----------------------------------|-----|-------------------|
| BGV Proposed Building | 279 | |
| Previously Approved EP8 | 333 | -16% |
| North Gondola Potential | 174 | |
| EP8 Potential* @ 146 SFEs | 186 | |
| Total NG + EP8* | 360 | -23% |

- ii. **Ski Resort Organic:** The ski resort currently parks 120 cars at the admin lot and has agreed to reduce this count to 75 contained within our proposed building or a cut of 38% from existing.

- d. **Parking Spaces:** BGV proposes to park per the Master Plan for residential, commercial, and Guest Services Facilities (including BOEC space), at the new building. Parking will be provided for the public spa per Code as previously required for the public spa at Peak 7. Additionally, we will need Development Agreement approval for the ski areas critical operational staff to also be parked in this building equaling a variance of 75 more cars than what Code would allow. In other words our proposed building has 279 spaces, 75 of which go to the ski area leaving 204 spaces per code for our building.
- e. **External Circulation:** BGV will need Development Agreement approval for Absolute Policy 17/External Circulation and Engineering Regulations for two (2) curb cuts onto the site to separate deliveries/loading from public/guests (previously allowed with Hotel); and for backing up onto Ski Hill Road from the delivery/loading area.
- f. **Employee Housing:** BGV will need Development Agreement approval regarding Absolute Policy 24/Employee Housing for allowance to locate required on-site employee housing at Site #2 to reduce vehicle trips on Ski Hill Road. Additionally, BGV will need TOB density transfer for workforce housing on Parcel 2 memorialized via development agreement.
- g. **Garage Density:** BGV will need Development Agreement confirmation that density is not needed for our sub-terranean parking garage in relation to Absolute and Relative Policy 3/Density. Per Ordinance 35, Series 2022, mass bonus eliminated and modified multi-family Density definitions so that “Common areas such as lobbies, hallways, and amenity areas shall be counted against the density.” Inadvertently, underground parking areas may fall into this new definition. We believe this was not the intent and seek clarity on this matter.
- h. **Height:** BGV is committed to a height limit on our proposed building which will guarantee that it is USGS lower roof line maximum than our neighbor at OSHP.
- i. **Uses & Intensity:** BGV believes that this redeployment plan will result in less net visitors to this building when compared to other alternatives.
- j. **Sawmill Run Road Abandonment:** BGV will abandon access to the site via Sawmill Run Road.
- k. **BOEC:** BGV will provide up to 1,500 square feet of interior space in the building for BOEC operations and parking spaces to accommodate staff and participants. BGV requests recognition of this public benefit and asks for appropriate positive points still be allowed at the Master Plan Amendment or site specific building approvals.
- l. **Shuttles:** BGV will agree to utilize Breckenridge Mountain Master Association (BMMA) shuttles and provide periodic trip reports to Town for five years. BGV will further agree to provide additional shuttles, if needed.
- m. **Building Permit:** BGV, remaining consistent with our previous projects, would seek via Development Agreement the ability to commence build of infrastructure improvements

i.e., demo existing building, relocate deep utilities, construct stormwater management and/or mass excavation prior to issuance of a building permit.

- n. **Buffers:** BGV would seek relief from Policy 7/R for lack of uphill/downhill buffers. We have increased the previously approved building setback from OSHP significantly. We have also eliminated the use of their shared drive as service access for our building. Furthermore, we would commit to significant revegetation if tree buffers are impacted on the east of the site.
2. **Cucumber Gulch.** Through the course of the existing BGV developments at the base of Peak 7 & 8, we have been a steadfast steward of the overall health and preservation of Cucumber Gulch. BGV would continue its historical commitment to the Gulch by:
- a. **Using Historical Variance Process:** The development of all existing buildings at the base of Peak 7 & 8 have worked cooperatively within existing Town processes to protect Cucumber Gulch. We will provide a drainage plan that meets or exceeds Town's Ater Quality and Sediment Control Standards for trap efficiency and mitigation measures will include best management practices, meeting the Development Standards of the Cucumber Gulch Overlay Protection District and restrictions of the Boreal Toad protective covenant terms.
 - b. **Cash Contribution:** BGV will make a \$125,000 contribution and \$2/night fee on occupied Hotel guest nights for Cucumber Gulch improvements/maintenance for 20 years.
3. **Traffic.**
- a. **Car Count will increase.** BGV agrees there will be nominal increases in car counts on Ski Hill Road year over year.
 - b. **The sum is greater than the parts:** Attached to this memo is the traffic study by Kimley-Horn which was published in July of '23. It demonstrates a net community wide traffic congestion improvement with BGVs redeployment plan.
 - c. **Organic Efforts.** BGV will offer a variety of small but meaningful internal efforts designed to reduce vehicular traffic even more than contemplated in the Kimley-Horn traffic study.
4. **Energy Conservation: Sustainability and Policy 33 and REMP.**

BGV commits to offsetting a minimum of 100% of ALL energy generated (not just outdoor) at all Parcel 4 building(s) by renewable energy sources, by using all viable BGV locations in Breckenridge first, then sourcing any remaining energy needs outside of the Town of Breckenridge. BGV will also commit to this Parcel 4 energy offset, in any form and any location, being tied to the Parcel 4 property for the lifetime of the project and the offsets cannot be allocated or reused for any other BGV project.

BGV's internal sustainability goals around greenhouse gas emissions, energy offsets, and energy reduction are in direct alignment with the Town's goals.

In order to build a viable, successful and sustainable project on Parcel 4 (aka East Peak 8, BSR Admin Site) that the community will be proud of for many years to come, BGV would like guidance on how to most effectively build within the new sustainable building code and discuss energy mitigation strategies that complement the Town's efforts at a larger scale, to ensure that BGV's new building, and other buildings that BGV may build (or have already built), are a model of sustainable development and operations in the Town.

Breckenridge Grand Vacations is aligned with the Town of Breckenridge's four goals for a healthy and thriving community: 1) develop a balanced year-round economy; 2) elevate and protect the hometown feel and authentic character; 3) more boots & bikes, less cars; and 4) lead environmental stewardship.

To support these tenets, BGV commits to developing a resort that prioritizes energy efficiency, authentic community, responsible tourism, and when a reduction in transportation needs cannot be met, providing alternative and innovative transportation. As part of this partnership with the Town and fellow community partners, BGV is committed to studying and implementing new concepts that allow for amenities that enrich the guest and visitor experience while providing long term sustainability for the project and the community.

- a. **Unlimited Negative Points**: The Town of Breckenridge's Development Code Policy 33/R Energy Conservation allows for unlimited negative points to any outdoor amenity using energy, posing a potential roadblock (via negative points) to developing a commercially viable product. We must address this matter in the Development Agreement as unlimited negative points is not an option.
- b. **Location of Energy Offsets**: The Town of Breckenridge's new Renewable Energy Mitigation Program allows for the Town to require the building developer to mitigate any of the outdoor energy use via renewable energy sources (solar, thermal) on site, or pay a fee in lieu, that is equal to or greater to any of the proposed outdoor energy usage. It also requires the energy sources to be in Breckenridge. With the support of staff, BGV commits to:
 - i. Source all solar to the greatest extent possible in Breckenridge on our existing or to be constructed buildings.
 - ii. To only use energy sources located outside of Breckenridge if above is not sufficient to fully comply with REMP.
 - iii. To agree to pay the fee in lieu per Code if total energy offset between i and ii above is not achieved within a certain agreed upon timeframe post C.O. of the building.
- c. **Exemption on Policy 33R**: BGV asks that all egress pathways deemed necessary by TOB staff for public safety be exempt from negative points in building specific approval process.

- d. **Additional “organic” commitments to sustainability:** BGV will help establish Breckenridge at the leading edge in mountain environmental stewardship and sustainable practices will also commit to the following:
- i. Provide for EV charging stations in an amount that is above the level currently projected for EV needs to match future growth projections
 - ii. Work with our elevator partner to source power regenerative elevators
 - iii. Reduce snowmelt to the safest extent possible, via strategic planning and covering of outdoor traffic areas
 - iv. For areas that must be snow melted, install weather stations that will automatically control the snowmelt
 - v. Increase the distance between snowmelt loops to use less energy
 - vi. Use more covered common and private outdoor spaces to reduce the need for snowmelt
 - vii. Use electric snowmelt where possible
 - viii. A reduction in outdoor heated water, when compared to previous developments
 - ix. Ensure all heated water is covered when not in use
 - x. Introduction of “living walls” within the property, creating green space
 - xi. Create sustainability “learning” space to showcase green initiatives in the Town and BGV projects
 - xii. Partner with heat pump manufacturer to prove viability at large scale, high altitude and cold temps, providing good PR for the manufacturer, BGV and the Town

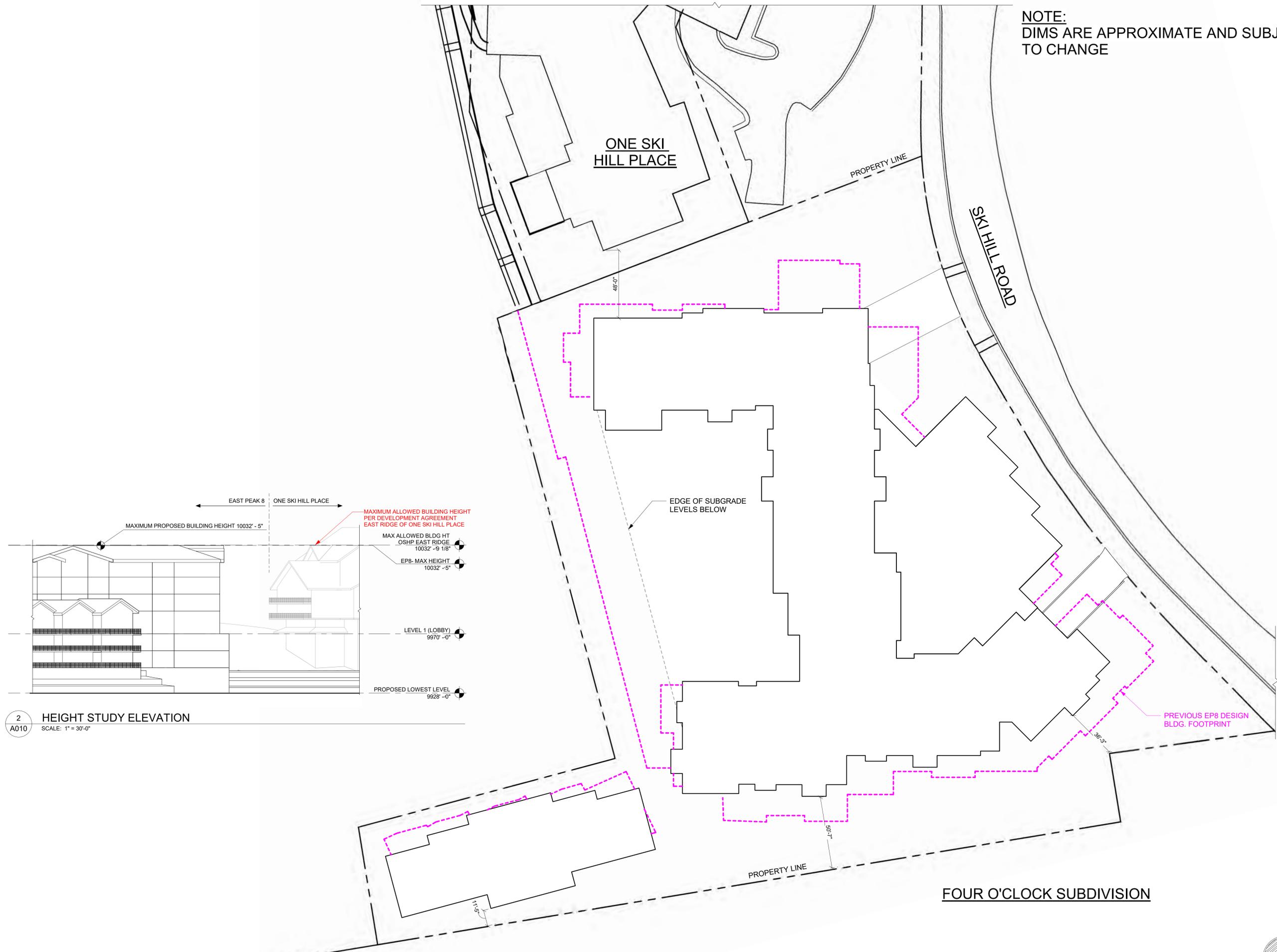
5: We need certainty of build – Extended Vesting.

The intent of this process is to consolidate density at the base of Peak 8 and thereby decrease total built square feet of residential tourist housing in Breck. We need extended vesting to fully deliver our value proposition.

- a. **Peak 7 & 8 Master Plan:** Currently expires Nov of '25. BGV is bound per its agreement with VR to deliver workforce housing (or provide economic guarantees which ensure its completion) prior to any vertical or horizontal efforts on parcels 3, 4, 5 & 6. This effectively means the Master Plan would expire before we could begin any development on Parcels 4, 5 or 6. BGV seeks via development agreement a seven-year extension of the Peak 7 & 8 Master Plan.
- b. **Gondola Lots:** BGV requests total vesting of five years on Parcels 2 & 3.

*Extrapolation methodology: BGVs proposed building total size of 286K sq. ft using 219 SFEs or 1,306 sq. ft net per SFE inside the building. Recall P7&8 MP does not charge for amenity density and our residential is a blend of hotel and condo SFE multipliers. 1,306 * the existing 146 SFEs on EP8 yields potential EP8 building of 191K sq. ft. Parking is roughly ½ of building size. This is for illustrative purposes only and not produced from hypothetical building plans.

NOTE:
DIMS ARE APPROXIMATE AND SUBJECT
TO CHANGE



2 HEIGHT STUDY ELEVATION
A010 SCALE: 1" = 30'-0"

1 SITE PLAN
A010 SCALE: 1" = 30'-0"



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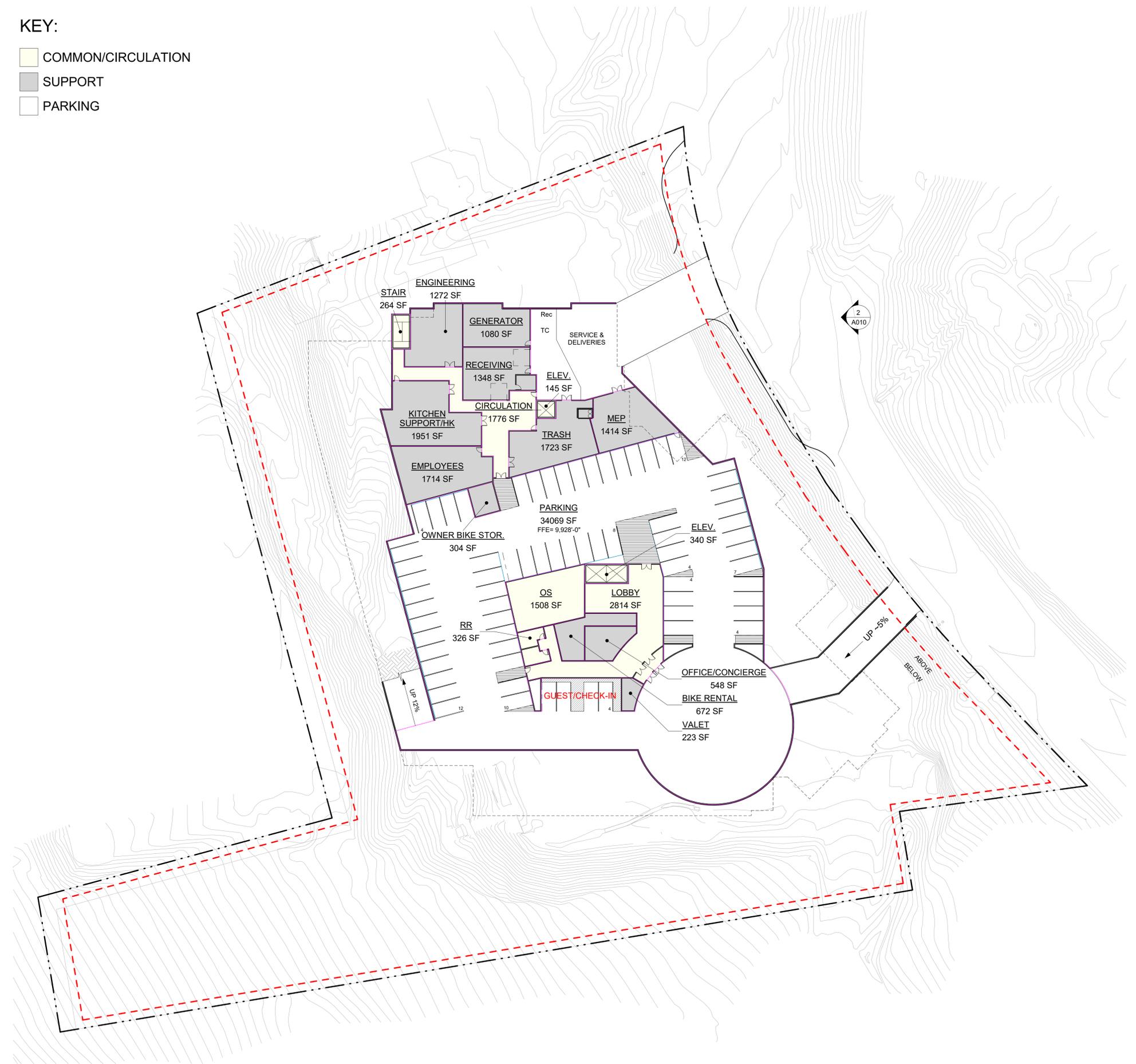
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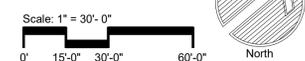
A010

KEY:

- COMMON/CIRCULATION
- SUPPORT
- PARKING



1 LEVEL P3
A100 SCALE: 1" = 30'-0"



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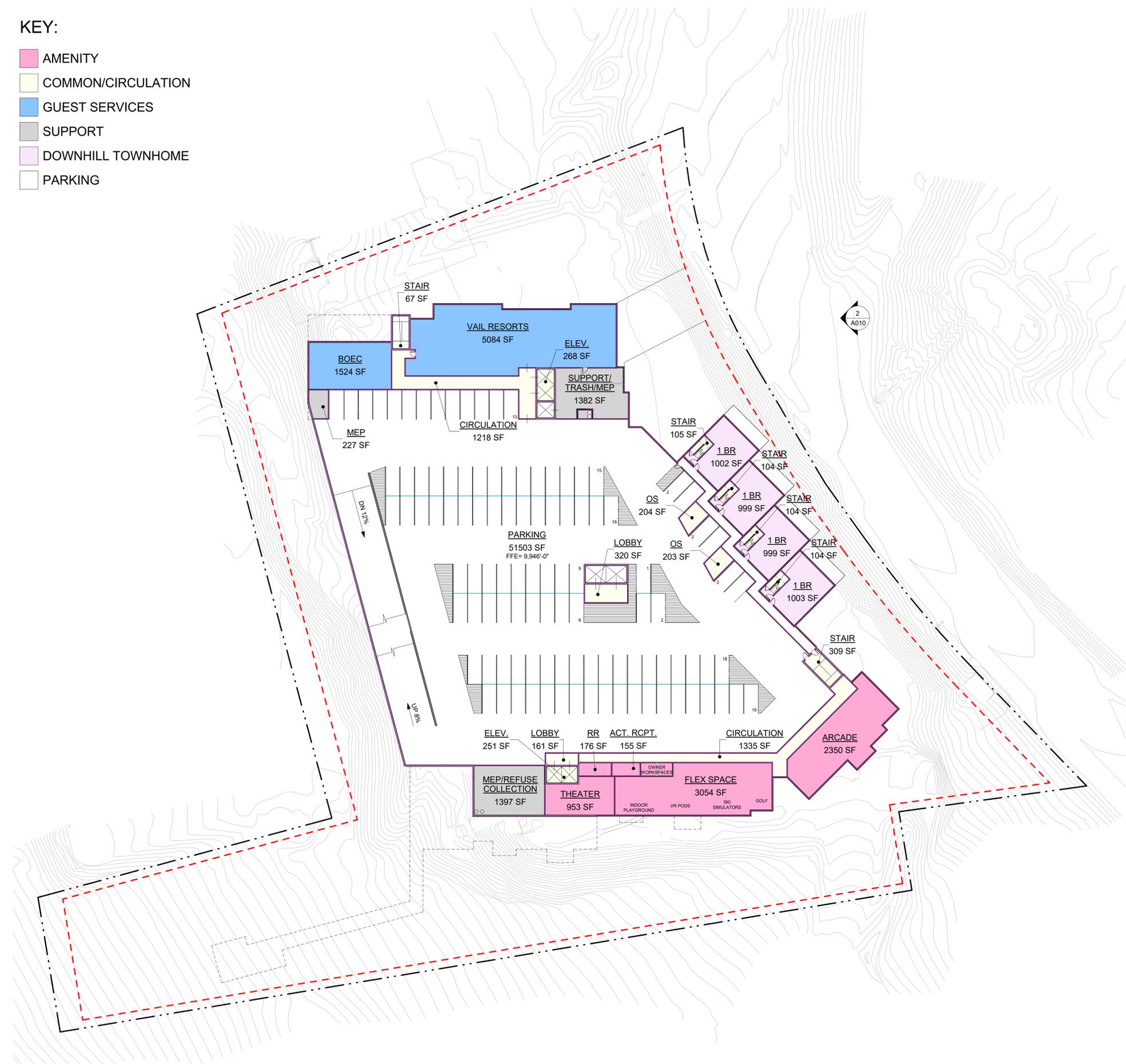
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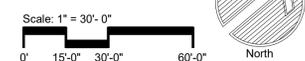
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KEY:

- AMENITY
- COMMON/CIRCULATION
- GUEST SERVICES
- SUPPORT
- DOWNHILL TOWNHOME
- PARKING



1 LEVEL P2
SCALE: 1" = 30'-0"



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P2 FLOOR PLAN

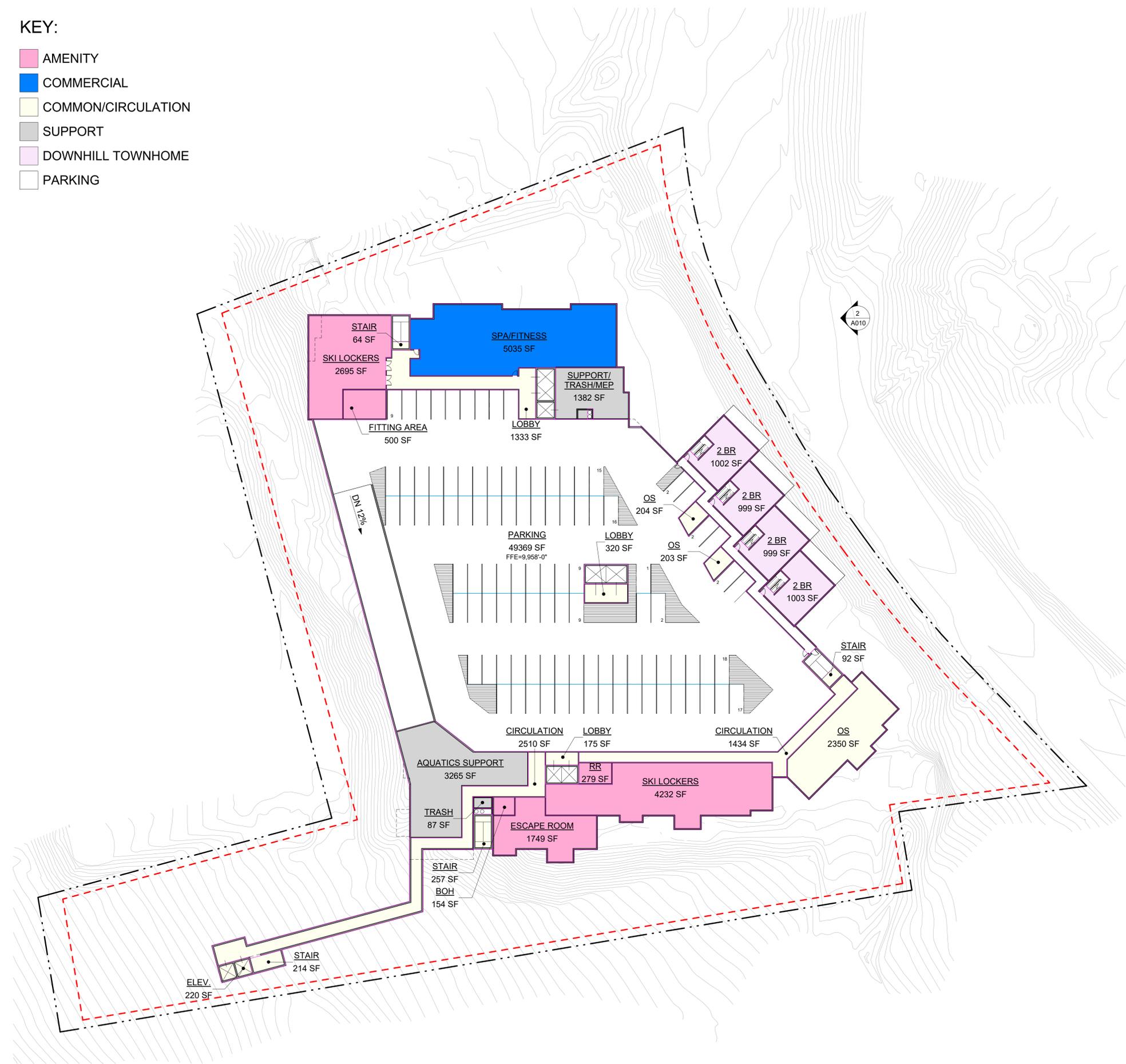
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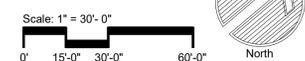
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KEY:

- AMENITY
- COMMERCIAL
- COMMON/CIRCULATION
- SUPPORT
- DOWNHILL TOWNHOME
- PARKING



1 LEVEL P1
SCALE: 1" = 30'-0"



EAST PEAK 8
BRECKENRIDGE GRAND VACATIONS

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| EP8 AREA SCHEDULE | |
|-------------------------------|-------------------|
| NAME | AREA |
| 1 BR BRECK | |
| BRECK | 9,162 SF |
| 10 | 9,162 SF |
| 2 BR BRECK | |
| 2 BR BRECK | 17,663 SF |
| 13 | 17,663 SF |
| 2 BR COLORADO | |
| 2 BR COLORADO | 17,269 SF |
| 10 | 17,269 SF |
| 3 BR COLORADO | |
| 3 BR | 20,160 SF |
| 9 | 20,160 SF |
| 4 BR COLORADO | |
| 4 BR | 44,507 SF |
| 16 | 44,507 SF |
| TOTAL FRACTIONAL UNITS | 108,761 SF |
| AMENITY | |
| ACT. RCPT. | 155 SF |
| AQUATICS | 6,196 SF |
| ARCADE | 2,350 SF |
| BOH | 154 SF |
| ESCAPE ROOM | 1,749 SF |
| FITTING AREA | 500 SF |
| FLEX SPACE | 3,054 SF |
| ROOF DECK | 629 SF |
| ROOF DECK/ROOF TOP BAR | 2,506 SF |
| RR | 455 SF |
| SKI LOCKERS | 6,926 SF |
| THEATER | 953 SF |
| | 25,626 SF |
| COMMERCIAL | |
| BAR | 279 SF |
| CHECK-IN/ CONCIERGE | 651 SF |
| KITCHEN | 1,577 SF |
| MARKET/F&B | 1,848 SF |
| RESTAURANT | 4,346 SF |
| SPA/FITNESS | 5,035 SF |
| | 13,734 SF |
| COMMON/CIRCULATION | |
| CIRCULATION | 42,187 SF |
| ELEV. | 1,223 SF |
| LOBBY | 5,123 SF |
| OS | 5,633 SF |
| RR | 326 SF |
| STAIR | 3,736 SF |
| | 58,228 SF |
| DOWNHILL TOWNHOME | |
| 1 BR | 4,004 SF |
| 2 BR | 8,007 SF |
| 8 | 12,011 SF |
| GUEST SERVICES | |
| BOEC | 1,524 SF |
| VAIL RESORTS | 5,084 SF |
| | 6,608 SF |
| HOTEL | |
| HOTEL | 12,413 SF |
| 36 | 12,413 SF |
| PARKING | |
| PARKING | 134,941 SF |
| | 134,941 SF |
| SUPPORT | |
| AQUATICS SUPPORT | 3,265 SF |
| BIKE RENTAL | 672 SF |
| BOH | 1,163 SF |
| BOH/HK/MECH | 4,409 SF |
| EMPLOYEES | 1,714 SF |
| ENGINEERING | 1,272 SF |
| GENERATOR | 1,080 SF |
| KITCHEN SUPPORT/HK | 1,951 SF |
| LOBBY SUPPORT | 2,165 SF |
| MENS | 215 SF |
| MEP | 1,641 SF |
| MEP/REFUSE COLLECTION | 1,397 SF |
| OFFICE/CONCIERGE | 548 SF |
| OWNER BIKE STOR. | 304 SF |
| RECEIVING | 1,348 SF |
| STOR. | 102 SF |
| SUPPORT | 2,492 SF |
| SUPPORT/ TRASH/MEP | 2,764 SF |
| TRASH | 2,264 SF |
| VALET | 223 SF |
| WOMENS | 279 SF |
| | 31,270 SF |
| UPHILL TOWNHOME | |
| 1 BR | 5,950 SF |
| 2 BR | 11,854 SF |
| 12 | 17,804 SF |
| GRAND TOTAL | 421,395 SF |

KEY:

- HOTEL
- 1 BR BRECK
- 2 BR BRECK
- 2 BR COLORADO
- 3 BR COLORADO
- 4 BR COLORADO
- AMENITY
- COMMERCIAL
- COMMON/CIRCULATION
- SUPPORT
- DOWNHILL TOWNHOME

PARKING REQUIREMENTS

AMENITY = 0 (PER MASTER PLAN)
HOTEL (36 TOTAL) = 31 SPACES (.85 PER UNIT)
FRACTIONAL UNITS (147 TOTAL) = 125 SPACES (.85 PER UNIT)
RESTAURANT/BAR/F&B = 0 SPACES (PER MASTER PLAN)
SPA = 13 SPACES (1 PER 400SF)
THs(20 TOTAL) = 17 SPACES (.85 PER UNIT)
BOEC = 6 SPACES (PER DEV. AGREEMENT)
VAIL RESORTS = 75 SPACES (PER DEV. AGREEMENT)
TOTAL PARKING = 267 SPACES REQUIRED

PARKING PROVIDED

P1 = 102 PARKING SPACES
P2 = 108 PARKING SPACES
P3 = 69 PARKING SPACES

TOTAL PARKING = 279 SPACES PROVIDED

WORKING DENSITY MULTIPLIERS

HOTEL - 1,380 PER
WHOLE OWNERSHIP CONDOS (FRACTIONAL)- 1,200 PER
GUEST SERVICES - 1,000 PER
COMMERCIAL - 1,000 PER
COMMON/CIRC. - 1,200 PER
AMENITY - 0
FRACTIONAL CONDO - 1,200 PER
FRACTIONAL TOWNHOMES - 1,200 PER
SUPPORT - 1,200 PER
PARKING - 0



1 LEVEL 1
A103 SCALE: 1" = 30'-0"

Scale: 1" = 30'-0"
0' 15'-0" 30'-0" 60'-0" North

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LEVEL 1 FLOOR PLAN

SHEET NUMBER:

A103

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KEY:

- HOTEL
- 1 BR BRECK
- 2 BR BRECK
- 2 BR COLORADO
- 3 BR COLORADO
- 4 BR COLORADO
- COMMON/CIRCULATION
- SUPPORT
- UPHILL TOWNHOME



EAST PEAK 8
BRECKENRIDGE GRAND VACATIONS

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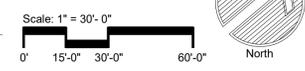
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LEVEL 2 FLOOR PLAN

SHEET NUMBER:

A104

1 LEVEL 2
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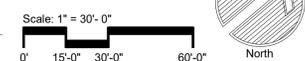


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- KEY:**
- HOTEL
 - 1 BR BRECK
 - 2 BR BRECK
 - 2 BR COLORADO
 - 3 BR COLORADO
 - 4 BR COLORADO
 - AMENITY
 - COMMON/CIRCULATION
 - SUPPORT
 - UPHILL TOWNHOME



1 LEVEL 3
A105 SCALE: 1" = 30'-0"



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LEVEL 3 FLOOR PLAN

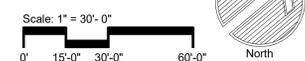
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- KEY:
- HOTEL
 - 1 BR BRECK
 - 2 BR BRECK
 - 2 BR COLORADO
 - 3 BR COLORADO
 - 4 BR COLORADO
 - AMENITY
 - COMMON/CIRCULATION
 - SUPPORT
 - UPHILL TOWNHOME



1 LEVEL 4
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LEVEL 4 FLOOR PLAN

A106

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SHEET TITLE:

SITE PLAN

SHEET NUMBER:

L101



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SHEET TITLE:
EXTERIOR
ENERGY USE
DIAGRAM

SHEET NUMBER:

L102

| EXTERIOR ENERGY USE SUMMARY | | AREA (SQ.FT) |
|--|-------|--------------|
| COMMON SPACE SNOW-MELTED PAVEMENT | 2550 | |
| SPA DECK SNOW-MELTED PAVEMENT | 4507 | |
| OUTDOOR SPA SURFACE | 330 | |
| OUTDOOR SPA/HOT TUB SURFACE | 710 | |
| PRIVATE TOWN HOME SPA/HOT TUB SURFACE | 745 | |
| ENTRY/LOADING DRIVE SNOW-MELTED PAVING | 1674 | |
| EXEMPTED PUBLIC SAFETY SNOW-MELTED PAVING | 10304 | |
| USAGE TYPE | | EACH |
| OUTDOOR FIRE-PITS | 0 | |
| COMMON-SPACE GAS GRILLS | 6 | |



| EXTERIOR ENERGY USE SUMMARY | |
|--|--------------|
| USAGE TYPE | AREA (SQ.FT) |
| COMMON SPACE SNOW-MELTED PAVEMENT | 28444 |
| PRIVATE PATIO SNOW-MELTED PAVEMENT | 1927 |
| SPA DECK SNOW-MELTED PAVEMENT | 3657 |
| OUTDOOR SPA SURFACE | 933 |
| OUTDOOR SPA/HOT TUB SURFACE | 608 |
| PRIVATE OWNER SPA/HOT TUB SURFACE | 828 |
| ENTRY/LOADING DRIVE SNOW-MELTED PAVING | 10756 |
| USAGE TYPE | |
| OUTDOOR FIRE-PITS | 3 |
| COMMON-SPACE GAS GRILLS | 0 |



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 CHECKED BY: DTJ
 PROJECT NO.: 2023024.40
 ISSUE DATE: 09/26/2023
 REVISIONS:

SHEET TITLE:
EXTERIOR ENERGY USE DIAGRAM- PREV. DESIGN

SHEET NUMBER:



| EP8 AREA SCHEDULE | | |
|----------------------------------|------------|--|
| NAME | AREA | |
| AMENITY | 6,581 SF | |
| AMENITY | 6,581 SF | |
| BELOW GRADE SUPPORT | 66 SF | |
| SUPPORT | 66 SF | |
| BELOW GRADE AMENITY | 2,102 SF | |
| AMENITY | 2,102 SF | |
| BELOW GRADE COMMERCIAL | 3,420 SF | |
| SPA | 3,420 SF | |
| BELOW GRADE COMMON/CIRCULATION | 4,573 SF | |
| CIRCULATION | 4,573 SF | |
| ELEV. | 2,852 SF | |
| LOBBY | 2,886 SF | |
| LOBBY/VALET | 1,736 SF | |
| OWNERS STOR. | 7,427 SF | |
| RR | 213 SF | |
| SKI LOCKERS | 2,124 SF | |
| STAIR | 2,311 SF | |
| 41 | 24,123 SF | |
| BELOW GRADE FRACTIONAL TOWNHOMES | 4,546 SF | |
| TOWNHOME | 4,546 SF | |
| BELOW GRADE GUEST SERVICES | 4,743 SF | |
| GUEST SERVICES | 4,743 SF | |
| BELOW GRADE SUPPORT | 2,747 SF | |
| EMPLOYEES | 1,039 SF | |
| GENERATOR | 2,861 SF | |
| HK/KITCHEN/ENGINEERING | 1,391 SF | |
| MEP | 1,622 SF | |
| RECEIVING | 2,393 SF | |
| TRASH | 12,053 SF | |
| 6 | | |
| COMMERCIAL | | |
| BAR | 299 SF | |
| KITCHEN | 1,427 SF | |
| RESTAURANT | 3,500 SF | |
| SPA | 2,307 SF | |
| 4 | 7,533 SF | |
| COMMON/CIRCULATION | | |
| CIRCULATION | 22,596 SF | |
| ELEV. | 4,221 SF | |
| LOBBY | 6,582 SF | |
| LOBBY SUPPORT | 1,000 SF | |
| SKI LOCKERS | 151 SF | |
| STAIR | 4,708 SF | |
| 48 | 39,269 SF | |
| FRACTIONAL CONDO | | |
| TH | 11,906 SF | |
| 12 | 11,906 SF | |
| FRACTIONAL TOWNHOMES | | |
| TOWNHOME | 15,048 SF | |
| 16 | 15,048 SF | |
| GUEST SERVICES | | |
| GUEST SERVICES | 2,427 SF | |
| 2 | 2,427 SF | |
| HOTEL | | |
| HOTEL | 6,178 SF | |
| 14 | 6,178 SF | |
| PARKING | | |
| PARKING | 154,478 SF | |
| 3 | 154,478 SF | |
| SUPPORT | | |
| MEP | 763 SF | |
| SUPPORT | 8,372 SF | |
| SUPPORT/TRASH | 1,331 SF | |
| TRASH | 471 SF | |
| 21 | 10,938 SF | |
| WHOLE OWNERSHIP CONDO | | |
| 2 BR | 36,394 SF | |
| 3 BR | 45,364 SF | |
| 4 BR | 32,061 SF | |
| 56 | 113,819 SF | |
| WORKFORCE HOUSING | | |
| WORKFORCE HOUSING | 6,741 SF | |
| 1 | 6,741 SF | |
| GRAND TOTAL | 425,971 SF | |

Avon = 8,390SF

PARKING REQUIREMENTS
HOTEL = 14 SPACES (1 PER UNIT)
CONDO + DIVISIBLE UNITS = 109 SPACES (1.5 PER CONDO + 5 PER DIVISIBLE UNIT)
RESTAURANT = 0 SPACE (PER MASTER PLAN)
SPA = 15 SPACES (1 PER 400SF)
THs = 15 SPACES (1.5 PER UNIT - 10 TOTAL)
WFH = *15 SPACES (1.5 PER UNIT- ASSUMING 10 UNI.)
GUEST SERVICES = 19 SPACE (1 PER 400SF)
VAIL RESORTS = 75 SPACES
BOEC = 6 SPACES
TOTAL PARKING = 268 SPACES REQUIRED

PARKING PROVIDED
P1 = 74 PARKING SPACES
P2 = 133 PARKING SPACES
P3 = 92 PARKING SPACES

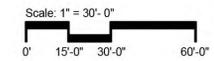
TOTAL PARKING = 299 SPACES

WORKING DENSITY MULTIPLIERS
HOTEL - 1,380 PER
WHOLE OWNERSHIP CONDOS - 1,200 PER
GUEST SERVICES - 1,000 PER
COMMERCIAL - 1,000 PER
COMMON/CIRC. - 1,200 PER
AMENITY - 0
FRACTIONAL CONDO - 1,200 PER
FRACTIONAL TOWNHOMES - 1,200 PER
SUPPORT - 1,200 PER
PARKING - 0
WORKFORCE HOUSING - 1,200

WHOLE OWNERSHIP CONDO
2 BR
21 TOTAL = 1,733SF AVG.
3BR
23 TOTAL = 1,972SF AVG.
4 BR
12 TOTAL = 2,672SF AVG.

KEY:

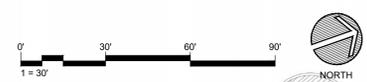
- COMMON/CIRCULATION
- BELOW GRADE COMMON/CIRCULATION
- FRACTIONAL TOWNHOMES
- BELOW GRADE FRACTIONAL TOWNHOMES
- SUPPORT
- WHOLE OWNERSHIP CONDO
- CONVERSION UNIT LOCATION



| EXTERIOR ENERGY USE SUMMARY | |
|--|--------------|
| USAGE TYPE | AREA (SQ.FT) |
| COMMON SPACE SNOW-MELTED PAVEMENT | 25162 |
| PRIVATE PATIO SNOW-MELTED PAVEMENT | 8520 |
| POOL DECK SNOW-MELTED PAVEMENT | 3899 |
| OUTDOOR POOL SURFACE | 1261 |
| OUTDOOR SPA/HOT TUB SURFACE | 465 |
| PRIVATE OWNER SPA/HOT TUB SURFACE | 828 |
| ENTRY/LOADING DRIVE SNOW-MELTED PAVING | 5030 |
| USAGE TYPE EACH | |
| OUTDOOR FIRE-PITS | 0 |
| COMMON-SPACE GAS GRILLS | 3 |

- KEY:**
- COMMON/CIRCULATION
 - BELOW GRADE COMMON/CIRCULATION
 - FRACTIONAL TOWNHOMES
 - BELOW GRADE FRACTIONAL TOWNHOMES
 - SUPPORT
 - WHOLE OWNERSHIP CONDO
 - CONVERSION UNIT LOCATION

S (1.5 PER PLAN)
 (AL) MING 10 UNIT, (OSF)
 ED
 ER

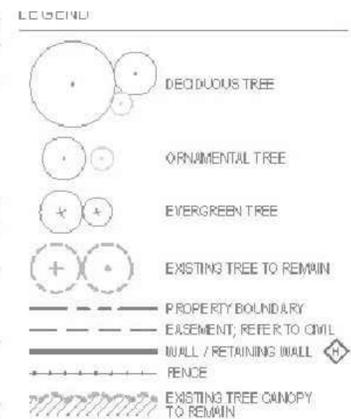


| EXTERIOR ENERGY USE SUMMARY | |
|--|--------------|
| USAGE TYPE | AREA (SQ.FT) |
| COMMON SPACE SNOW-MELTED PAVEMENT | 25162 |
| PRIVATE PATIO SNOW-MELTED PAVEMENT | 8520 |
| POOL DECK SNOW-MELTED PAVEMENT | 3899 |
| OUTDOOR POOL SURFACE | 1261 |
| OUTDOOR SPA/HOT TUB SURFACE | 465 |
| PRIVATE OWNER SPA/HOT TUB SURFACE | 828 |
| ENTRY/LOADING DRIVE SNOW-MELTED PAVING | 5030 |
| USAGE TYPE EACH | |
| OUTDOOR FIRE-PITS | 0 |
| COMMON-SPACE GAS GRILLS | 3 |

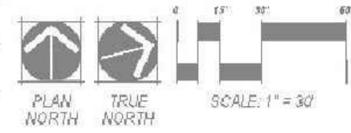
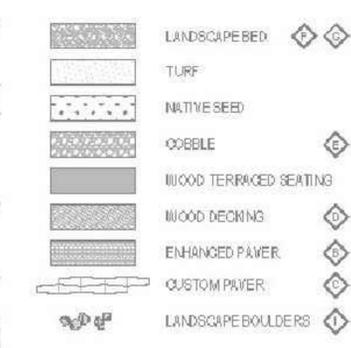
- KEY:**
- COMMON/CIRCULATION
 - BELOW GRADE COMMON/CIRCULATION
 - FRACTIONAL TOWNHOMES
 - BELOW GRADE FRACTIONAL TOWNHOMES
 - SUPPORT
 - WHOLE OWNERSHIP CONDO
 - CONVERSION UNIT LOCATION

S (1.5 PER PLAN)
 (AL) MING 10 UNIT, 0SF)
 ED
 ER





| EXTERIOR ENERGY USE SUMMARY | |
|--|--------------|
| USAGE TYPE | AREA (SQ.FT) |
| COMMON SPACE SNOW-MELTED PAVEMENT | 28444 |
| PRIVATE PATIO SNOW-MELTED PAVEMENT | 1927 |
| POOL DECK SNOW-MELTED PAVEMENT | 3657 |
| OUTDOOR POOL SURFACE | 933 |
| OUTDOOR SPA/HOT TUB SURFACE | 608 |
| PRIVATE OWNER SPA/HOT TUB SURFACE | 828 |
| ENTRY/LOADING DRIVE SNOW-MELTED PAVING | 10756 |
| USAGE TYPE | |
| EACH | |
| OUTDOOR FIRE-PITS | 3 |
| COMMON-SPACE GAS GRILLS | 0 |





SUSTAINABILITY DISCUSSION MEMO

The approved Master Plan for the Breckenridge Grand Vacation's proposed Gondola Lot project (including North Gold Rush and South Gold Rush lots) allows for buildings on that site to be built under an earlier version of the development code. It is BGV's understanding that the Town and the community wishes to reduce development in the core of Town and as such, BGV is proposing moving density and development to the base of the ski area. However, any new development will be subject to new code changes and policies.

The Town of Breckenridge's **Sustainable Development Code** allows for unlimited negative points to any outdoor amenity using energy, posing a potential roadblock (via negative points) to developing a commercially viable product.

The Town of Breckenridge's new **Renewable Energy Mitigation Program** allows for the Town to require the building developer to mitigate any of the outdoor energy (once approved through the planning process, as above) by requiring renewable energy sources (solar, thermal) on site, or a fee in lieu, that is equal to or greater to any of the proposed outdoor energy usage.

BGV's internal sustainability goals around greenhouse gas emissions, energy offsets, and energy reduction **align** with the Town's goals.

In order to build a viable, successful and sustainable project on Parcel 4 (aka East Peak 8, BSR Admin Site) that the community will be proud of for many years to come, BGV would like guidance on how to build within the new sustainable building code and discuss energy mitigation strategies that complement the Town's efforts at a larger scale, to ensure that BGV's new building, and other buildings that BGV may build (or have already built), are a model of sustainable development and operations in the Town.

Breckenridge Grand Vacations is aligned with the Town of Breckenridge's four goals for a healthy and thriving community: develop a balanced year-round economy; elevate and protect the hometown feel and authentic character; more boots & bikes, less cars; and lead environmental stewardship. To support these tenets, BGV commits to developing a resort that prioritizes energy efficiency, authentic community, responsible tourism, and when a reduction in transportation needs cannot be met, providing alternative and innovative transportation. As part of this partnership with the Town and fellow community partners, BGV is committed to studying and implementing new concepts that allow for amenities that enrich the guest and visitor experience while providing long term sustainability for the project and the community.

Based on the four Council and community goals set by the Town of Breckenridge, BGV and BGV partners are working on ideas for sustainable development, mostly in the context of the East Peak 8 Development, but with implications and ideas beyond this single site. In the spirit of moving forward together, BGV would like to share some of these considerations, and the TOB Goals that they align with, below:



BRECKENRIDGE

GRAND VACATIONS

TOB Goal 1:

- Develop a Balanced Year-Round Economy Driven by Destination Tourism

BGV Alignment:

- Provide eco-friendly amenities and activities suitable for all seasons, driving balanced tourism in all seasons, out of the core of town
- Sustainability focused activities for guests, such as eco scavenger hunts and bike tours
- Use local businesses as vendors in the resort/hotel
- Source materials and goods from local businesses to the furthest extent possible

TOB Goal 2:

- Elevate and fiercely protect Breckenridge's authentic character and brand — our hometown feel and friendly atmosphere

BGV Alignment:

- Build to the Town's character, buildings that match the environment and area
- Commit to dedicated spot for the BOEC with easy and direct access to the snow
- Provide our guests and owners with a 'piece of Breckenridge' to call 'home' - building connections beyond being just a visitor
- Create a rewards program for guests and owners to "own a local tree" (donation to Cucumber Gulch)
- Provide workforce housing that creates a local community
- Investigate the possibility of childcare in the workforce housing project

TOB Goal 3:

- More Boots and Bikes, Less Cars

BGV Alignment:

- Provide an e-bike program at properties along with information on human-powered activities
- Provide EV shuttle transportation (get cars off ski hill road in a sustainable manner) [This development will likely be a BMMA member, so we will need to work with the BMMA]
- Work with BSR to explore the feasibility of running the gondola longer (get cars off Ski Hill Road)
- Expanded products and services at a "market on the mountain" (get cars off Ski Hill Road by alleviating a trip to City Market)
- Create a rewards program to incentivize guests and owners to leave their cars on property, once parked



TOB Goal 4:

- Establish Breckenridge at the leading edge in mountain environmental stewardship and sustainable practices

BGV Alignment:

- Provide for EV charging stations in an amount that is above the level currently projected for EV needs to match future growth projections
- Work with our elevator partner to source power regenerative elevators
- Reduce snowmelt to the safest extent possible, via strategic planning and covering of outdoor traffic areas
 - For areas that must be snowmelted, install weather stations that will automatically control the snowmelt
 - Increase the distance between snowmelt loops to use less energy
 - Use more covered common and private outdoor spaces to reduce the need for snowmelt
 - Use electric snowmelt where possible
 - Groom and maintain certain paths, instead of melting them
- Reduction in outdoor heated water, when compared to previous developments
 - Ensure all heated water is covered when not in use
- Introduction of “living walls” within the property, creating green space
- Create sustainability “learning” space to showcase green initiatives in the Town and BGV projects
- Partner with heat pump manufacturer to prove viability at large scale, high altitude and cold temps, providing good PR for the manufacturer, BGV and the Town
- Maximize the use of BGV projects for solar
 - Currently investigating solar decking on the top floor of the proposed parking deck
 - Max out on-site solar opportunities at all BGV properties (currently Connect Breck and Breck Inn are in process, and Grand Timber Lodge, Grand Lodge on Peak 7 are investigating)
 - Also, continue to use our considerable investment in off-site solar gardens to generate more efficient energy production to ensure all BGV electric usage will be net-zero



1217695

Kathleen Neel – Summit County Recorder

13 Pages
1/8/2020 8:23 AM
DF: \$0.00

APPROVAL OF THIS DEVELOPMENT AGREEMENT CONSTITUTES A VESTED PROPERTY RIGHT PURSUANT TO ARTICLE 68 OF TITLE 24, COLORADO REVISED STATUTES, AS AMENDED

AMENDED AND RESTATED DEVELOPMENT AGREEMENT

This Amended and Restated Development Agreement (“**Agreement**”) is made as of July 19, 2019 (the “**Effective Date**,” which shall be the date when the ordinance approving this Agreement becomes effective) and is between the TOWN OF BRECKENRIDGE, a Colorado municipal corporation (“**Town**”), and LH MOUNTAIN VENTURES, LLC, a Colorado limited liability company (“**Developer**”). This Agreement amends and restates that Development Agreement dated as of August 15, 2018 and recorded September 28, 2018 at Reception No. 1181305 of the records of the Clerk and Recorder of Summit County, Colorado (“**Original Development Agreement**”). In this Agreement Town and Developer are referred to individually as a “**Party**” and collectively as the “**Parties**.”

Recitals

A. Developer is the owner of the following real property located in the Town of Breckenridge, Summit County, Colorado:

LOT 4, PEAK 8 SUBDIVISION FILING NO. 1, ACCORDING TO THE PLAT OF THE FOURTH RESUBDIVISION, THE REMAINDER OF TRACT C, PEAK 8 SUBDIVISION FILING NO. 1 RECORDED ON DECEMBER 20, 2018 AT RECEPTION NO. 1187721, SUMMIT COUNTY, COLORADO

(“**Property**”).

B. Developer acquired the Property from Vail Summit Resorts, Inc., a Colorado corporation (“**VSRI**”), by that deed recorded April 12, 2019 at Reception No. 1195438 of the records of the Clerk and Recorder of Summit County, Colorado.

C. VSRI was not a party to the Original Development Agreement, but was an intended third party beneficiary of such agreement. VSRI is an intended beneficiary of this Agreement.

D. The Property is subject to the Amendment to Amended Peaks 7 & 8 Master Plan approved by Development Permit PL-2015-0444 on January 12, 2016, the Notice of Approval of Master Plan for which Amendment was recorded August 30, 2016 at Reception No. 1120265 of the Summit County, Colorado records (“**Master Plan**”). The Master Plan was further amended to contemplate Developer’s proposed development (as hereafter defined) in Development Permit No. PL-2018-0546, dated January 18, 2019 (“**2019 Master Plan Amendment**”).

E. Developer proposes to develop on the Property a hotel, condominiums, commercial facilities, and amenities (“**Proposed Development**”).

F. In connection with its Proposed Development Developer has requested Town to approve: (i) a density transfer to the Property by VRSI; (ii) development of the Property that exceeds the gross density for the Property recommended by the Town’s Land Use Guidelines (“**Guidelines**”) as provided for in Subsection 9-1-19-39A12 of the Breckenridge Town Code¹; (iii) agreements concerning such density in excess of that recommended by the Guidelines; and (iv) such other agreements as the Town and the Developer may agree are appropriate.

G. Pursuant to Chapter 9 of Title 9 of the Breckenridge Town Code the Town Council has the authority to enter into a development agreement. Further, in connection with a master plan amendment, there is no process in the Town’s Development Code for approval of density in excess of that recommended by the Guidelines and a transfer of density to support such excess density, and, therefore, a development agreement provides a means for such an approval and transfer.

H. In order for Developer to develop the Property in a manner that will include a four star, flagged, luxury hotel containing approximately 150 rooms and approximately 110,000 square feet of condominiums, with the amenities and commercial services required for such a project, up to the total of an additional 58 single family equivalents of density (each an “**SFE**” as defined in the Town’s Development Code), which may include up to 2.0 SFEs of commercial density, will be required and authorization to acquire and transfer such additional SFEs will be required.

I. Because there is no provision in the Breckenridge Town Code allowing site work to begin prior to issuance of a building permit, in order to facilitate the beginning of vertical construction of Developer’s Proposed Development in the spring of 2020, the Town is prepared to authorize its Department of Community Development (“**Department**”) to grant permission for the commencement of infrastructure improvements, including, but not limited to, demolition of VSRI’s administration office building and ski patrol locker building located on the Property (“**Administration Facilities**”), construction of storm water management facilities, relocation of utilities, and site excavation prior to issuance of a building permit, but subject to receipt of assurances of completion deemed satisfactory by the Department.

J. In order to accommodate VSRI’s administration functions necessary or appropriate for the operation of the Breckenridge Ski Resort, which currently occur in the Administration Facilities, the Town acknowledges and understands that one or more temporary structures will need to be placed on the Property in locations acceptable to VSRI, Developer, and the Town as determined by VSRI, Developer, and the Town, and maintained in such locations until the proposed Guest Services (as defined in the Master Plan) spaces to be included in Developer’s Proposed Development on the Property (the “**Guest Services Spaces**”) are completed and ready

¹ Chapter 1 of Title 9 of the Breckenridge Town Code is known and is referred to in this Agreement as the “Town’s Development Code.”

for occupancy by VSRI and a temporary permit will need to be issued. The permit referenced in this paragraph must be reviewed and approved by the Town's Planning Commission and Town Council as provided for in subparagraph 1C, below, and nothing in this Agreement requires the Planning Commission or Town Council to approve such a permit if the permit application does not meet the applicable requirements of the Town's Development Code.

K. The commitments encouraged to be made by Developer in connection with an application for a development agreement in accordance with Section 9-9-4 of the Breckenridge Town Code are as hereafter set forth in this Agreement.

L. The Town Council has received a completed application and all required submittals for a development agreement, had a preliminary discussion of the application and this Agreement, determined that it should commence proceedings for the approval of this Agreement and, in accordance with the procedures set forth in Subsection 9-9-10C of the Breckenridge Town Code, has approved this Agreement by non-emergency ordinance.

Agreement

1. The Developer's obligations under Paragraph 3 of this Agreement are subject to the final approval of all of the following by the Town²:
 - A. Such permits or approvals necessary for the transfer of density consisting of up to a total of 58 SFEs, including up to two (2) commercial SFEs, to the Property by VSRI from the density that was included under the expired Gondola Lots Master Plan³;
 - B. A Class A development permit acceptable to Developer consistent with the 2019 Master Plan Amendment and allowing for the development of the Property to accommodate: a four star, flagged, luxury hotel containing approximately 150 rooms; approximately 110,000 square feet of residential condominiums; approximately 11,000 square feet of commercial; and approximately 10,300 square feet of Guest Services and Support Facilities (as defined in the Master Plan) space for acquisition and use by VSRI (the "**Permit**"); and
 - C. Such permit as may be required by the Town to allow one or more temporary structures accommodating VSRI's administration functions necessary or appropriate for the operation of the Breckenridge Ski Resort to be placed on the Property in locations acceptable to VSRI, Developer, and Town as determined by VSRI, Developer, and Town and maintained in such locations until the proposed Guest Services Spaces are completed and ready for occupancy by VSRI; provided, however,

² "Final approval" includes and the passage of any time periods within which any referendums, appeals, or other challenges to the enumerated approvals must be brought, without any such referendums, appeals or other challenges having been filed, commenced or asserted, or, if filed, commenced or asserted, after any such appeal, referendum or challenge is resolved with affirmation that this Agreement is effective.

³The Gondola Lots Master Plan was described in that Notice of Approval of Master Plan dated July 12, 2010 and recorded at Reception No. 942513 of the records of the Clerk of Recorder of Summit County, Colorado.

that all approved temporary structures shall be removed not later than the first to occur of: (i) the end of 60 days after the issuance of any final certificate of occupancy for the Proposed Development, or (ii) 7 years after the date of demolition of VSRI's administration building. The deadline shall not be extended.

2. Notwithstanding anything in the Town's Development Code to the contrary, the Permit shall provide that the building height of the Developer's Proposed Development shall be measured as follows:

- A. The maximum height of the buildings within the Proposed Development shall not exceed the elevation of the existing east cross gable of One Ski Hill Place, as shown on the Building Elevations exhibit attached hereto. This maximum height will serve as an "Absolute" policy under the Town's Development Code.
- B. Policy 6 (Relative) "Building Height" of the Town's Development Code shall apply to the Town's review of the Permit application. Pursuant to the Master Plan, for the purpose of assessing or awarding points under Policy 6 (Relative) the heights of the buildings to be constructed within the Proposed Development shall be evaluated against the height requirements of the Town's Development Code and the recommended heights for Land Use District 39 as they were in effect at the time the amendment to the Master Plan that was approved on February 26, 2013;
- C. Pursuant to the Master Plan, the height of buildings at the Peak 8 Base area only (including the site of the Proposed Development) are to be measured "to the proposed finished grade elevation at the exterior wall below," and not to natural grade, which generally does not exist in the area, provided that such proposed finished grades shall not include artificial appearing berming or fill. Artificial appearing berming or fill is characterized by excessive rise and steep grades in the vicinity of building foundations. (emphasis added). The height of the buildings within the Proposed Development shall be established in accordance with the Town's Development Code and District 39 of the Guidelines, as they are in effect at the time of the execution of this Agreement; provided, however, that the Town and Developer shall establish a method for determining the finished grades above which heights shall be measured in order to account for the lack of natural grades and the anticipated filling of the lowered and generally flat grades currently existing at the Peak 8 base area.

3. When all of the approvals set forth in Paragraph 1 have been satisfied then Developer shall do the following:

Prior to Issuance of a Building Permit for the Proposed Development

- A. Cause VSRI to enter into a density transfer covenant with the Town, in a form substantially similar to the previous density transfer covenant between VSRI and the Town executed and recorded in connection with the expired Gondola Lots Master Plan, to transfer from the property that was the subject of the expired Gondola Lots

Master Plan the density required to support the total residential and commercial density authorized by the Permit minus the residential density of 71.6 SFEs and the commercial density of 9.0 SFEs remaining available for the Property under the Master Plan.

Prior to Issuance of a Certificate of Occupancy for the Proposed Development

- A. Pay \$125,000 to the Town to be applied to the improvement and maintenance of the Town's Cucumber Gulch property or as otherwise directed by the Town Council.
- B. Execute standard form Town employee housing covenants restricting previously unrestricted residential housing units as employee housing in an amount equal to the difference between 20,000 square feet (the total square footage of employee housing Developer has committed to restrict) and that square footage of employee housing applied by Developer to obtain an allocation of up to 10 positive points under Subsection 9-1-19-24R of the Town's Development Code. The difference between 20,000 square feet of employee housing and that square footage of employee housing applied by Developer to obtain an allocation of up to 10 positive points under Subsection 9-1-19-24R of the Town's Development Code shall be treated as a commitment to the Town under Section 9-9-4 of the Breckenridge Town Code.
- C. Provide "newly constructed" rental housing units that contain not less than twenty four (24) bedrooms, all of which are located in the Upper Blue River Basin. A unit is not "**Newly Constructed**" for purposes of this Agreement if, prior to July 19, 2019, the Town has either: (a) issued a certificate of occupancy allowing occupancy of such bedroom; or (b) issued a development permit for the construction of such bedroom. "**Upper Blue River Basin**" means the geographic area bounded by Farmers Korner to the north; Hoosier Pass to the south; the Continental Divide to the East; and the top of the Ten Mile Range to the west. The average size of each newly constructed bedroom shall be a minimum of one hundred fifty (150) square feet. The units shall be a mixture of one (1), two (2), and (3) bedroom units as determined by Developer.
 - (i) Execute, acknowledge, and deliver to the Town, in a form acceptable to the Town Attorney:
 - (a) a restrictive housing covenant encumbering the required twenty four (24) bedrooms described above in favor of the Town. The term of the covenant shall be perpetual, and the covenant shall provide that the encumbered bedrooms shall only be rented to qualified tenants at a monthly rental rate not greater than an average⁴ of eighty percent (80%) of the Area Median Income (AMI) for Breckenridge, Colorado (or if not available, for the Area Median Income for Summit County, Colorado) most recently

⁴The average shall be calculated based on the AMI of all 24 bedrooms.

available immediately prior to such bedroom being rented.⁵ A “**qualified tenant**” is a person not less than eighteen (18) years of age who is actually employed in Summit County, Colorado at least thirty (30) hours per week on an annual basis during the entirety of the period of his or her occupancy of the apartment; and

- (b) a second restrictive covenant prohibiting any of the required twenty four (24) bedrooms from being rented, leased, or otherwise occupied for a term of less than three (3) consecutive months (i.e., there shall be no “short term rental” of any of the required bedrooms). The term of this covenant shall also be perpetual.
 - (c) At the time of their signing both of the required restrictive covenants shall not be subordinate to any prior lien or encumbrance of any kind, except the lien of the general property taxes for the year in which the covenants are executed.
- D. Enter into a lease with the Breckenridge Outdoor Education Center, a Colorado nonprofit corporation (“**BOEC**”) for approximately 1,500 square feet of space in the Proposed Development. The term of such lease shall be at least fifty (50) years, and the rent for such space shall be \$1.00 per year. The lease shall otherwise contain terms that are mutually acceptable to Developer and the BOEC.
 - E. Establish with the Town an environmental improvement fund dedicated to drainage and similar improvements to protect the Town’s Cucumber Gulch property funded by a fee of \$2.00 per paid room night to be added to the amount paid for rentals of the hotel rooms in the Proposed Development, and only those hotel rooms, for a period of twenty (20) years from the date a certificate of occupancy is issued for the hotel component of the Proposed Development. Such funds shall be transferred to Town in accordance with a schedule to be established by the Finance Director of the Town, and may be spent by the Town in its sole discretion;
 - F. Provide such document as is reasonably acceptable to the Town to provide for the abandonment of any right of access to the Property from Saw Mill Run Road. The Parties understand and acknowledge that to completely eliminate any potential public right of access to the Property from Saw Mill Run Road (and the extension thereof across what has been denominated as “County Road 709”) it will be necessary for the Town to vacate County Road 709 in the manner provided by law. The Town agrees to consider a request to vacate County Road 709 pursuant to Chapter 4 of Title 11 of the Breckenridge Town Code.
 - G. Enter into such agreement as the Town reasonably may require to provide for the following: At the end of the first year after issuance of a final certificate of

⁵The Summit Combined Housing Authority pricing formula will be used to calculate the maximum affordable rent.

occupancy for the Proposed Development and every year thereafter for the first 5 years after issuance of such final certificate of occupancy, the Developer will provide a trip report to the Town. Trips will be defined as the number of trips into the garage plus the number of trip out of the garage on a daily basis. If during any single calendar month of each of such 5 years the number of trips exceeds an average of 1,600 trips per day, for every 100 trips in excess of 1,600 the Developer will acquire and transfer 1 additional shuttle van to the Breckenridge Mountain Master Association (“BMMA”). Until such time as the threshold described in the preceding sentence has been reached the residents and guests of the Proposed Development shall have access to the transportation (van) system operated by the BMMA in the same manner as is provided to other properties located within the boundaries of the BMMA. Prior to the issuance of a certificate of occupancy for the Proposed Development a letter from the BMMA confirming the same shall be provided to the Town.

4. In addition to those restrictive covenants required in Paragraph 3 all of the Developer’s obligations set forth in this Agreement that will extend beyond completion of the Proposed Development shall be set forth in one or more restrictive covenants to be executed by the Developer and the Town and recorded in the real property records of the Clerk and Recorder of Summit County, Colorado. The form of the restrictive covenants shall be acceptable to the Developer’s counsel and the Town Attorney, and the covenants shall not be subordinate to any prior lien or encumbrance of any kind, except the lien of the general property taxes for the year in which the covenants are executed.

5. Pursuant to Subsection 9-1-19-39I2 of the Town’s Development Code, the Town’s Planning Commission is hereby authorized to review and approve, by February 15, 2020 and subject to compliance with all other applicable development policies of the Town, an application for the Permit allowing for the additional density and other terms and conditions provided for in this Agreement. If such approval is not obtained by February 15, 2020 this Agreement shall be null and void.

6. Subject to the Department’s receipt of adequate assurances of or security for completion of the authorized infrastructure improvements or return of the Property generally to the condition it was in before the commencement of any work, the Department, after final approval of the Permit, is hereby authorized to permit the demolition of Administration Facilities and the excavation for and construction of infrastructure improvements, including, but not limited to, construction of storm water management facilities, relocation of utilities, and site excavation, after issuance of the Permit but before issuance of a building permit.

7. Except as provided in Section 24-68-105, C.R.S., and except as specifically provided for herein, the execution of this Agreement shall not preclude the current or future application of municipal, state or federal ordinances, laws, rules or regulations to the Property (collectively, “laws”), including, but not limited to, building, fire, plumbing, engineering, electrical and mechanical codes, and the Town’s Development Code, Subdivision Standards and other land use laws, as the same may be in effect from time to time throughout the term of this Agreement.

Except to the extent the Town otherwise specifically agrees, any development of the Property shall be done in compliance with the then-current laws of the Town.

8. Nothing in this Agreement shall preclude or otherwise limit the lawful authority of the Town to adopt or amend any Town law, including, but not limited to the Town's: (i) Development Code, (ii) Master Plan, (iii) Land Use Guidelines and (iv) Subdivision Standards.

9. Prior to any action against the Town for breach of this Agreement, Developer shall give the Town a sixty (60) day written notice of any claim by the Developer of a breach or default by the Town, and the Town shall have the opportunity to cure such alleged default within such time period.

10. The Town shall not be responsible for and the Developer shall have no remedy against the Town if the development of the Property is prevented or delayed for reasons beyond the control of the Town.

11. Actual development of the Property shall require the issuance of such other and further permits and approvals by the Town as may be required from time to time by applicable Town ordinances.

12. No official or employee of the Town shall be personally responsible for any actual or alleged breach of this Agreement by the Town.

13. Developer agrees to indemnify and hold the Town, its officers, employees, insurers, and self-insurance pool, harmless from and against all liability, claims, and demands, on account of injury, loss, or damage, including without limitation claims arising from bodily injury, personal injury, sickness, disease, death, property loss or damage, or any other loss of any kind whatsoever, which arise out of or are in any manner connected with such benefits under this Agreement, if such injury, loss, or damage is caused in whole or in part by, or is claimed to be caused in whole or in part by, the negligence or wrongful intentional act or omission of Developer; any subcontractor of Developer, or any officer, employee, representative, or agent of Developer or of any subcontractor of Developer, or which arise out of any worker's compensation claim of any employee of Developer, or of any employee of any subcontractor of Developer; except to the extent such liability, claim or demand arises through the negligence or intentional act or omission of Town, its officers, employees, or agents. Developer agrees to investigate, handle, respond to, and to provide defense for and defend against, any such liability, claims, or demands at the sole expense of the Developer. Developer also agrees to bear all other costs and expenses related thereto, including court costs and attorney's fees.

14. If any provision of this Agreement shall be invalid, illegal or unenforceable, it shall not affect or impair the validity, legality or enforceability of the remaining provisions of the Agreement.

15. This Agreement constitutes a vested property right pursuant to Article 68 of Title 24, Colorado Revised Statutes, as amended.

16. No waiver of any provision of this Agreement shall be deemed or constitute a waiver of any other provision, nor shall it be deemed to constitute a continuing waiver unless expressly provided for by a written amendment to this Agreement signed by both Town and Developer; nor shall the waiver of any default under this Agreement be deemed a waiver of any subsequent default or defaults of the same type. The Town's failure to exercise any right under this Agreement shall not constitute the approval of any wrongful act by the Developer or the acceptance of any improvements.

17. This Agreement shall be binding upon and inure to the benefit of Town and Developer, and their successors and assigns.

18. This Agreement shall be recorded in the office of the Clerk and Recorder of Summit County, Colorado and shall run with title to the Property.

19. Nothing contained in this Agreement shall constitute a waiver of the Town's sovereign immunity under any applicable state or federal law.

20. Personal jurisdiction and venue for any civil action commenced by either Party to this Agreement shall be deemed to be proper only if such action is commenced in District Court of Summit County, Colorado. Developer and Town expressly waive their right to bring such action in or to remove such action to any other court, whether state or federal. **BOTH PARTIES FURTHER WAIVE THE RIGHT TO A JURY TRIAL IN ACTION TO ENFORCE, INTERPRET OR CONSTRUE THIS AGREEMENT.**

21. Any notice required or permitted hereunder shall be in writing and shall be sufficient if personally delivered or mailed by certified mail, return receipt requested, addressed as follows:

If to the Town:

Rick G. Holman, Town Manager
Town of Breckenridge
P.O. Box 168
Breckenridge, CO 80424

With a copy (which shall not constitute notice to the Town) to:

Timothy H. Berry, Esq.
Town Attorney
P.O. Box 2
Leadville, CO 80461

If to the Developer:

Ricardo Dunin
 LH Mountain Ventures, LLC
 4218 NE 2nd Avenue, 2nd Floor
 Miami, FL 33137

With a copy (which
 shall not constitute
 notice) to:

Jessica Wasserstrom
 Lionheart Capital, LLC
 4218 NE 2nd Avenue, 2nd Floor
 Miami, FL 33137

John L. Palmquist, Esq.
 GC Legal Strategies
 2520 S. St. Paul Street
 Denver, CO 80210

Thomas J. Ragonetti, Esq.
 Otten Johnson Robinson Neff + Ragonetti PC
 Suite 1600
 950 17th Street
 Denver, CO 80202

Notices mailed in accordance with the provisions of this paragraph shall be deemed to have been given upon delivery. Notices personally delivered shall be deemed to have been given upon delivery. Nothing herein shall prohibit the giving of notice in the manner provided for in the Colorado Rules of Civil Procedure for service of civil process.

22. This Agreement constitutes the entire agreement and understanding between the Parties relating to the subject matter of this Agreement and supersedes any prior agreement or understanding relating to such subject matter.

23. This Agreement shall be interpreted in accordance with the laws of the State of Colorado without regard to principles of conflicts of laws.

IN WITNESS WHEREOF, the Town and the Developer have executed this Agreement as of the date first above set forth.

[SIGNATURE AND ACKNOWLEDGEMENT PAGES FOLLOW]

TOWN OF BRECKENRIDGE

By: Rick G. Holman
Rick G. Holman, Town Manager

ATTEST:

Helen Cospolich
Helen Cospolich, CMC,
Town Clerk

STATE OF COLORADO)
) ss.
COUNTY OF SUMMIT)

The foregoing was acknowledged before me this 27th day of December, 2019 by Rick G. Holman as Town Manager and Helen Cospolich, CMC, as Town Clerk of the Town of Breckenridge.

Witness my hand and official seal.

My commission expires: April 25, 2021
Angela S. Vanschoick
Notary Public



LH MOUNTAIN VENTURES, LLC
a Colorado limited liability company

By: LIONHEART MANAGEMENT, LLC,
a Florida limited liability company,
its Manager

By: FLAGLER HOLDING GROUP, INC.,
a Florida Corporation, its Manager

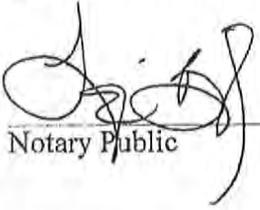
By: _____
Ricardo Dunin, President

STATE OF FLORIDA)
) ss.
COUNTY OF DADE)

The foregoing was acknowledged before me this 20th day of December, 2019 by Ricardo Dunin, as President of FLAGLER HOLDING GROUP, INC., a Florida corporation, as the Manager of Lionheart Management, LLC, a Florida limited liability company, as the Manager of LH MOUNTAIN Ventures, LLC, a Colorado limited liability company, who is personally known to me and produced a Florida Driver's License as identification.

Witness my hand and official seal.

My commission expires: 2/2/0222



Notary Public



ORDINANCE NO. 15

Series 2019

AN ORDINANCE APPROVING AN AMENDED AND RESTATED DEVELOPMENT AGREEMENT WITH LH MOUNTAIN VENTURES, LLC, A COLORADO LIMITED LIABILITY COMPANY

WHEREAS, the Town and Lionheart BGV Ventures, LLC, a Colorado limited liability company, entered into that Development Agreement dated as of August 15, 2018 and recorded September 28, 2018 at Reception No. 1181305 of the records of the Clerk and Recorder of Summit County, Colorado; and

WHEREAS, Lionheart BGV Ventures, LLC has changed its name to LH Mountain Ventures, LLC, a Colorado limited liability company ("LH Mountain Ventures"); and

WHEREAS, the Town and LH Mountain Ventures desire to amend and restate the development agreement; and

WHEREAS, a proposed Amended and Restated Development Agreement between the Town and LH Mountain Ventures has been prepared, a copy of which is marked Exhibit "A", attached hereto and incorporated herein by reference; and

WHEREAS, the Town Council has reviewed the proposed Amended and Restated Development Agreement, and finds and determines that it should be approved.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF BRECKENRIDGE, COLORADO:

Section 1. The Amended and Restated Development Agreement between the Town and LH Mountain Ventures, LLC, a Colorado limited liability company (Exhibit "A" hereto), is approved, and the Town Manager is authorized, empowered, and directed to execute such agreement for and on behalf of the Town of Breckenridge.

Section 2. The Amended and Restated Development Agreement must contain a notice in the form provided in Section 9-9-13 of the Breckenridge Town Code. In addition, a notice in compliance with the requirements of Section 9-9-13 of the Breckenridge Town Code must be published by the Town Clerk one time in a newspaper of general circulation in the Town within fourteen days after the adoption of this ordinance. Such notice shall satisfy the requirement of Section 24-68-103, C.R.S.

Section 3. The Town Council finds, determines, and declares that this ordinance is necessary and proper to provide for the safety, preserve the health, promote the prosperity, and improve the order, comfort and convenience of the Town of Breckenridge and the inhabitants thereof.

Section 4. The Town Council hereby finds, determines and declares that it has the power to adopt this ordinance pursuant to: (i) the Local Government Land Use Control Enabling Act, Article 20 of Title 29, C.R.S.; (ii) Part 3 of Article 23 of Title 31, C.R.S. (concerning municipal zoning powers); (iii) Section 31-15-103, C.R.S. (concerning municipal police powers); (iv) Section 31-15-401, C.R.S. (concerning municipal police powers); (v) Section 24-68-101, et seq., C.R.S.; (vi) the authority granted to home rule municipalities by Article XX of the Colorado Constitution; and (vii) the powers contained in the Breckenridge Town Charter.

Section 5. This ordinance shall be published and become effective as provided by Section 5.9 of the Breckenridge Town Charter.

INTRODUCED, READ ON FIRST READING, APPROVED AND ORDERED
PUBLISHED IN FULL this 28th day of May, 2019.

This ordinance was published in full on the Town of Breckenridge website on May 31, June 1, June 2, June 3 and June 4, 2019.

A public hearing on this ordinance was held on June 11, 2019.

APPROVED AS BENEFICIARY OF SECTIONS 1A, 1B, AND 1C. VSRI HAS NO RESPONSIBILITY, LIABILITY, OR OBLIGATION UNDER THIS AGREEMENT:

VAIL SUMMIT RESORTS, INC., a Colorado corporation

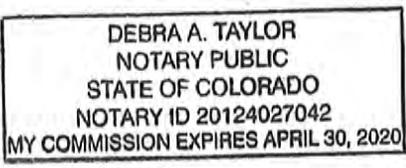
By: [Signature]
Name: John Buhler
Title: VP & COO

STATE OF COLORADO)
)
COUNTY OF Summit) ss.

The foregoing instrument was acknowledged before me this 7th day of January 2020, by John Buhler as VP & COO of Vail Summit Resorts, Inc., a Colorado corporation.

Witness my hand and official seal.

My commission expires: April 30, 2020
[Signature]
Notary Public



READ, ADOPTED ON SECOND READING AND ORDERED PUBLISHED IN FULL ON THE TOWN'S WEBSITE this 11th day of June, 2019. A copy of this Ordinance is available for inspection in the office of the Town Clerk.

ATTEST:

TOWN OF BRECKENRIDGE

Helen Cospolich, CMC, Town Clerk

Eric S. Mamula, Mayor

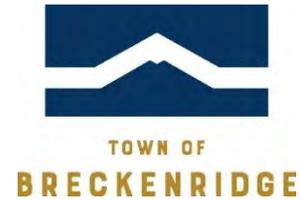
APPROVED IN FORM

Town Attorney

6/11/19
Date

This Ordinance was published on the Town of Breckenridge website on June 14, June 15, June 16, June 17 and June 18, 2019. This ordinance shall become effective on July 18, 2019.

Memo



To: Breckenridge Town Council Members
From: Shannon Smith, Town Engineer
Date: 2/19/2020
Subject: East Peak 8 Hotel - Traffic Impact Study Review

As requested, the East Peak 8 project team has submitted an updated traffic impact study (TIS) to analyze impacts the proposed club membership may have on traffic. Traffic counts were conducted on January 31, 2020 and February 1, 2020 with the PM Saturday having the peak traffic time observed. Vehicle and pedestrians were counted at Ski Hill Rd/Park Ave, Ski Hill Rd/Main St, and the Four O'clock roundabout. This memo offers a brief discussion of select areas of the TIS. The full traffic study and third party review summary are attached to the memo.

Felsburg Holt & Ullevig (FHU) was engaged by the Town to conduct an independent third-party review of the TIS. The study was reviewed for conformity with applicable agency standards and guidelines; technical accuracy of the estimates and calculations contained in the report; report completeness, including supporting documentation for the assumptions, calculations, and recommendations; and effectiveness and feasibility of the recommendations contained in the TIS. The review found the study to generally conform to engineering standards and that the trip generations calculated for the both the restaurant and club memberships to be conservative.

The TIS calculated vehicular delay, intersection, and individual roadway Level of Service (LOS) for existing and proposed conditions for all three intersections included in the study. Delay is defined by the Federal Highway Administration as "the additional travel time experienced by a driver, passenger, or pedestrian." This includes time spent decelerating, in queue, and accelerating. The delay is then translated to a Level of Service score, A-F, based on the length of the delay calculated.

Table 1. Motor vehicle LOS thresholds at signalized intersections

| LOS | Control Delay per vehicle (seconds per vehicle) |
|-----|---|
| A | ≤ 10 |
| B | > 10-20 |
| C | > 20-35 |
| D | > 35-55 |
| E | > 55-80 |
| F | > 80 |

Both current and proposed build-out conditions show Ski Hill Rd/Main Street intersection operating at LOS C and the Four O'clock roundabout moving from the current LOS B to LOS C in 2040 with the project traffic included.

Under current conditions the Ski Hill Rd/Park Ave intersection operates at a LOS D. However, it should be noted that the east and westbound movements on Ski Hill Rd at this intersection were observed to

operate at LOS F and LOS E respectively during the PM peak on February 1st. It is standard to have the averaged intersection LOS D be considered as the metric for traffic at a signalized intersection. Table 2, truncated from the TIS, compares the current LOS at Ski Hill Rd/Park Ave intersection and the roadway segments to future (2040) conditions if **no** intersection or signal changes are implemented. With no improvements to the intersection and signal timing, the intersection will drop to an LOS E and the southbound approach will degrade to LOS D. Level of Service thresholds are not currently addressed in current Town Code; however, LOS E and F are generally considered unacceptable design parameters. The CDOT Region 3 Access Engineer agrees LOS E is not satisfactory; however, LOS is only one metric considered in their approval process.

Table 2. Level of Service with No Change to Signal Timing

| | Saturday PM Peak Hour | |
|-------------------------------------|------------------------------|-----|
| | Vehicular Delay (sec/veh) | LOS |
| 2020 Existing | | |
| Ski Hill & Park Ave Intersection | 42.8 | D |
| Eastbound Approach | 81.9 | F |
| Westbound Approach | 65.2 | E |
| Northbound Approach | 20.5 | C |
| Southbound Approach | 21.4 | C |
| 2040 Background (No Project) | | |
| Ski Hill & Park Ave Intersection | 51.4 | D |
| Eastbound Approach | 91.9 | F |
| Westbound Approach | 69.6 | E |
| Northbound Approach | 27.6 | C |
| Southbound Approach | 29.9 | C |
| 2040 With Project | | |
| Ski Hill & Park Ave Intersection | 56.4 | E |
| Eastbound Approach | 96.3 | F |
| Westbound Approach | 64.3 | E |
| Northbound Approach | 32.1 | C |
| Southbound Approach | 35.9 | D |

The study recommends signal timing changes and optimization to improve both current and future intersection LOS. The TIS indicates that changes to the signal timing could bring the level of service of the intersection to LOS C under current conditions and LOS D for future developed conditions as shown in Table 3. Any change to signal timing on Park Ave. must be approved and implemented by CDOT. CDOT is currently studying signal timing on the SH9 corridor; however, Staff is unsure if the timing suggested in the TIS will be implemented. Coincidentally, a county-wide meeting is planned for February 27th to discuss signal timing with CDOT.

Table 3. Level of Service with Signal Timing and Optimization Changes

| | Saturday PM Peak Hour | |
|----------------------------------|---------------------------|-----|
| | Vehicular Delay (sec/veh) | LOS |
| 2020 Existing | | |
| Ski Hill & Park Ave Intersection | 30.4 | C |
| Eastbound Approach | 46.3 | D |
| Westbound Approach | 47.2 | D |
| Northbound Approach | 19.4 | B |
| Southbound Approach | 20.0 | B |
| 2040 With Project | | |
| Ski Hill & Park Ave Intersection | 38.7 | D |
| Eastbound Approach | 50.4 | D |
| Westbound Approach | 39.9 | D |
| Northbound Approach | 31.5 | C |
| Southbound Approach | 33.5 | C |

The updated TIS states that a CDOT Access Permit may be required for the project based on the projected increase in traffic. All improvements to Park Ave will be approved through CDOT, including the recommended turn lanes extension and signal changes. Without changes to the signal, the LOS for the Ski Hill Rd/Park Ave intersection is not acceptable. A condition of approval for the East Peak 8 Hotel project includes a requirement that the applicant makes roadway and intersection improvements to address the above LOS changes.

Staff will be present at the meeting to answer additional questions.



Traffic Impact Study Update

East Peak 8 Breckenridge, Colorado

Prepared for:

Lionheart Mountain Ventures LLC

Kimley»»Horn

East Peak 8

Breckenridge, Colorado

Prepared for
Lionheart Mountain Ventures LLC
4218 NE 2nd Avenue
2nd Floor
Miami, Florida 33137

Prepared by
Kimley-Horn and Associates, Inc.
4582 South Ulster Street
Suite 1500
Denver, Colorado 80237
(303) 228-2300



February 2020

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

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1.0 EXECUTIVE SUMMARY

East Peak 8 is a proposed residential and hotel project to be located along the south side of Ski Hill Road, immediately east of the One Ski Hill Place resort and the Peak 8 Gondola Station in Breckenridge, Colorado. The project is anticipated to include 49 condominiums, 137 hotel rooms plus 28 lock-offs (165 rooms total), approximately 4,008 square feet of restaurant and associated kitchen space, and 70 additional parking spaces above Town code required to be used by ski club members, BOEC, resort amenities, special events, and/or other functions. For reference, the ski club is proposed to include up to 150 members. It is expected that the project will be completed within the next couple of years; therefore, analysis was conducted for the 2022 short term horizon as well as the 2040 long-term horizon.

The purpose of this study is to identify project traffic generation characteristics and potential project traffic related impacts on the local street system, as well as to develop mitigation measures required for identified impacts. The following intersections were incorporated into this traffic study in accordance with Town of Breckenridge and State of Colorado Department of Transportation (CDOT) standards and requirements:

- Ski Hill Road and Park Avenue (SH-9)
- Ski Hill Road and Main Street
- 4 O’Clock Road and Park Avenue (SH-9)

In addition, the proposed project access along the south side of Ski Hill Road was included for evaluation.

Regional access will be provided by Interstate 70 (I-70) and State Highway 9 (SH-9). Primary access to the site will be provided by Ski Hill Road. Direct access to the project is proposed from one access located along the south site of Ski Hill Road. This access intersection proposes to allow full turning movements and be located approximately 375 feet east of the existing access to the One Ski Hill Place resort, which places it at approximately 350 feet west of Boulder Ridge Drive.

The East Peak 8 project is expected to generate approximately 2,150 daily external driveway trips with 174 of these trips occurring during the morning peak hour and 182 trips occurring during the afternoon peak hour.

Distribution of site traffic on the street system was based on the area street system characteristics, existing traffic patterns, anticipated surrounding development in the area, and the proposed access system for the project. Assignment of project traffic was based upon the trip generation described previously and the distributions developed.

Based on the analysis presented in this report, Kimley-Horn believes the proposed East Peak 8 project will be successfully incorporated into the existing and future roadway network. The proposed project development and expected traffic volumes resulted in the following recommendations and conclusions:

- The proposed access for the project is anticipated to include a full movement driveway along the south side of Ski Hill Road, located approximately 375 feet east of the existing access to the One Ski Hill Place resort and 350 feet west of Boulder Ridge Drive. The access is recommended to operate with stop-control with the installation of a R1-1 "STOP" sign on the driveway exiting approach to the public street.
- In 2022, the 150-foot eastbound and 100-foot northbound left turn lanes at the intersection of Ski Hill Road and Park Avenue (SH-9) should each be restriped to provide an additional 75 feet and 50 feet of length, respectively. This results in an eastbound left turn lane length of 225 feet and a northbound left turn lane of 150 feet. Both turn lane extensions only require restriping improvements.
- It is believed that an access permit for the Ski Hill Road intersection along Park Avenue (SH-9) will be required by CDOT in association with this project. Per CDOT turn bay length requirements, the 125-foot northbound and 175-foot southbound right turn lanes at the Ski Hill Road and Park Avenue intersection were found to require an extension to provide 150 feet and 250 feet of length, respectively. However, lengthening these right turn lanes may not be feasible due to possible right-of-way constraints.

- It is recommended that the eastbound left turn lane at the Ski Hill Road and Main Street intersection be restriped from 75 feet to 125 feet of length, which will extend to the existing alley west of Main Street.
- It is recommended that the Town of Breckenridge work with CDOT to improve the signal timing of the Ski Hill Road and Park Avenue (SH-9) intersection by reducing the cycle lengths during the morning peak from 135 seconds to 120 seconds and during the afternoon peak from 180 seconds to 120 seconds. Enhanced vehicle detection may be appropriate to better allocate the green time to the intersection. Further, it should be taken under consideration to coordinate the existing signalized intersections of Ski Hill Road/Park Avenue and Ski Hill Road/Main Street with communication equipment installed.
- Vehicles on the eastbound approach to the Ski Hill Road and Main Street intersection were observed to be backing into the intersection of Ski Hill Road and Park Avenue during the Saturday afternoon peak hour. This existing vehicle queuing issue prevents eastbound through, northbound right turn movements, and southbound left turn movements from operating well at the Ski Hill Road and Park Avenue (SH-9) intersection. As such, long vehicle queues are currently experienced along the eastbound approaches of the intersections of Ski Hill Road/Park Avenue and Ski Hill Road/Main Street. There were 2,071 pedestrians observed crossing at the intersection of Ski Hill Road and Main Street during the Saturday afternoon peak hour. For reference, 1,172 vehicles were observed traveling through the intersection of Ski Hill Road and Main Street during this same peak hour. The long vehicle queues experienced on the eastbound approach of the Ski Hill Road and Main Street intersection is due to the high volume of eastbound right turn movements conflicting with a high volume of pedestrians during a green light phase at this intersection. Studies suggest that a Barnes Dance, an exclusive pedestrian scramble phase, should be considered when there are more pedestrians than vehicles at an intersection, when there is a high volume of pedestrians, and a high volume of right turning movements without separate right turn lanes. All of these conditions exist as there are currently almost double the number of pedestrians compared to vehicles at this intersection during the Saturday afternoon peak hour. A pedestrian scramble also allows pedestrians to cross diagonally through the intersection with a pedestrian only phase while vehicles are stopped on all approaches. Pedestrians would not be permitted to cross this intersection during vehicle

phases, which will allow right turning movements to occur so that they don't block through movements. When the pedestrian scramble phase is implemented, right turn on red movements should be prohibited so no vehicle traffic travels through the intersection during the pedestrian phase. Removing the interaction between vehicles and pedestrians at this Ski Hill Road and Main Street intersection will improve safety as well as by improving operations at both the Ski Hill Road/Main Street and Ski Hill Road/Park Avenue (SH-9) intersections.

- By 2040, the eastbound and northbound left turn lanes at the intersection of Ski Hill Road and Park Avenue (SH-9) intersection may need to be extended further if future traffic volumes are realized.
- Any on-site and off-site signing and striping improvements should be incorporated into the Civil Drawings and conform to Town of Breckenridge and CDOT Standards as well as the Manual on Uniform Traffic Control Devices – 2009 Edition (MUTCD).

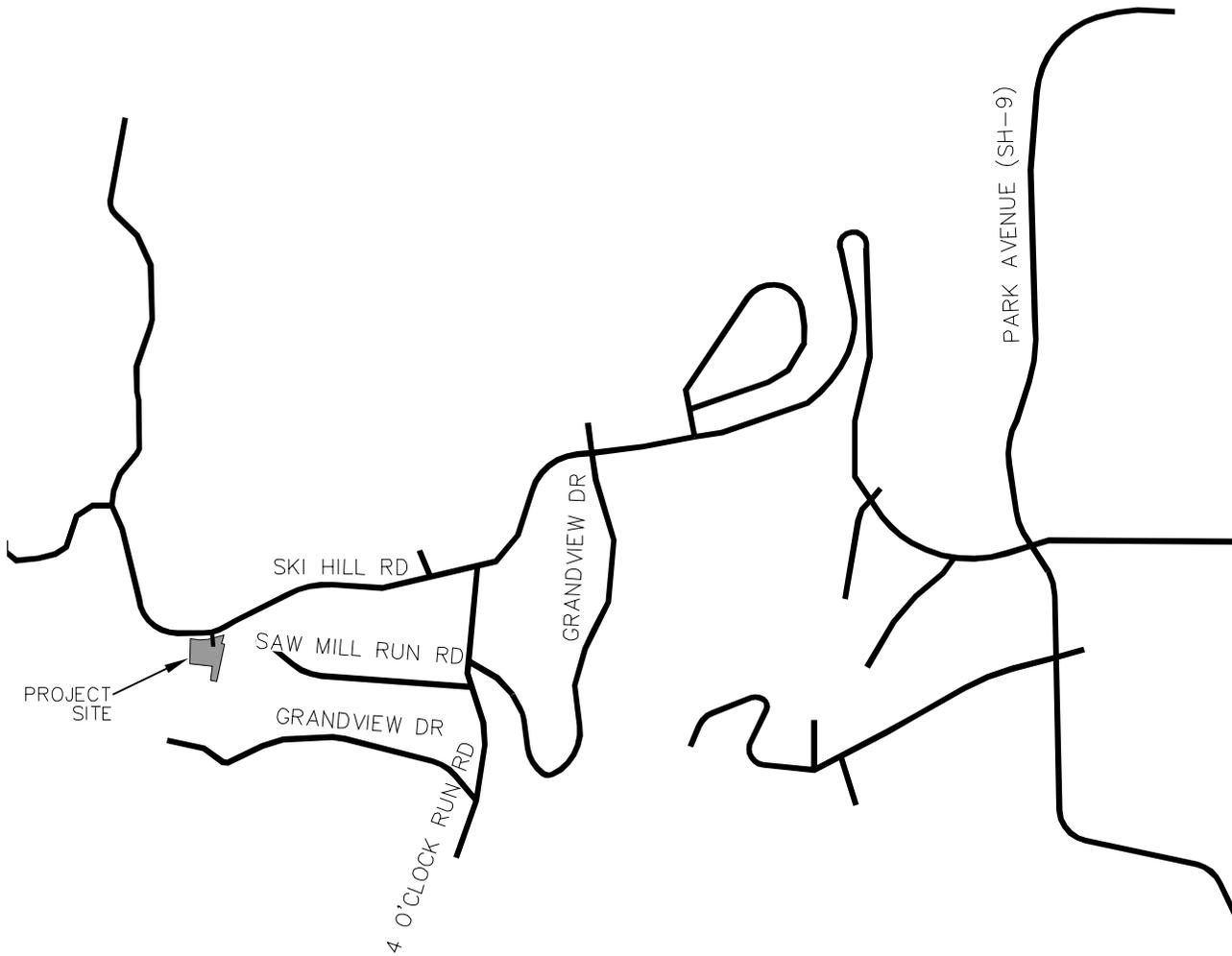
2.0 INTRODUCTION

Kimley-Horn and Associates, Inc. has prepared this report to document the results of a Traffic Impact Study of future traffic conditions associated with the proposed East Peak 8 residential and hotel development to be located along the south side of Ski Hill Road, immediately east of the One Ski Hill Place resort and the Peak 8 Gondola Station in Breckenridge, Colorado. A vicinity map illustrating the project location is shown in **Figure 1**.

The project is anticipated to include 49 condominiums, 137 hotel rooms plus 28 lock-offs (165 rooms total), approximately 4,008 square feet of restaurant and associated kitchen space, and 70 additional parking spaces above Town code required to be used by ski club members, BOEC, resort amenities, special events, and/or other functions. For reference, the ski club is proposed to include up to 150 members. A conceptual site plan illustrating the development is shown in **Appendix F**. It is expected that the project will be completed within the next couple of years; therefore, analysis was conducted for the 2022 short term horizon as well as the 2040 long-term horizon.

The purpose of this study is to identify project traffic generation characteristics and potential project traffic related impacts on the local street system, as well as to develop mitigation measures required for identified impacts. The intersections of Ski Hill Road/Park Avenue (SH-9), Ski Hill Road/Main Street, and 4 O'Clock Road/Park Avenue (SH-9) were incorporated into this traffic study in accordance with Town of Breckenridge and State of Colorado Department of Transportation (CDOT) standards and requirements. In addition, the proposed project access along the south side of Ski Hill Road was included for evaluation.

Regional access will be provided by Interstate 70 (I-70) and State Highway 9 (SH-9). Primary access to the site will be provided by Ski Hill Road. Direct access to the project is proposed from one access located along the south site of Ski Hill Road. This access intersection proposes to allow full turning movements and be located approximately 375 feet east of the existing access to the One Ski Hill Place resort, which places it at approximately 350 feet west of Boulder Ridge Drive.



EAST PEAK 8
BRECKENRIDGE, COLORADO
VICINITY MAP

FIGURE 1

3.0 EXISTING AND FUTURE CONDITIONS

3.1 Existing Roadway Network

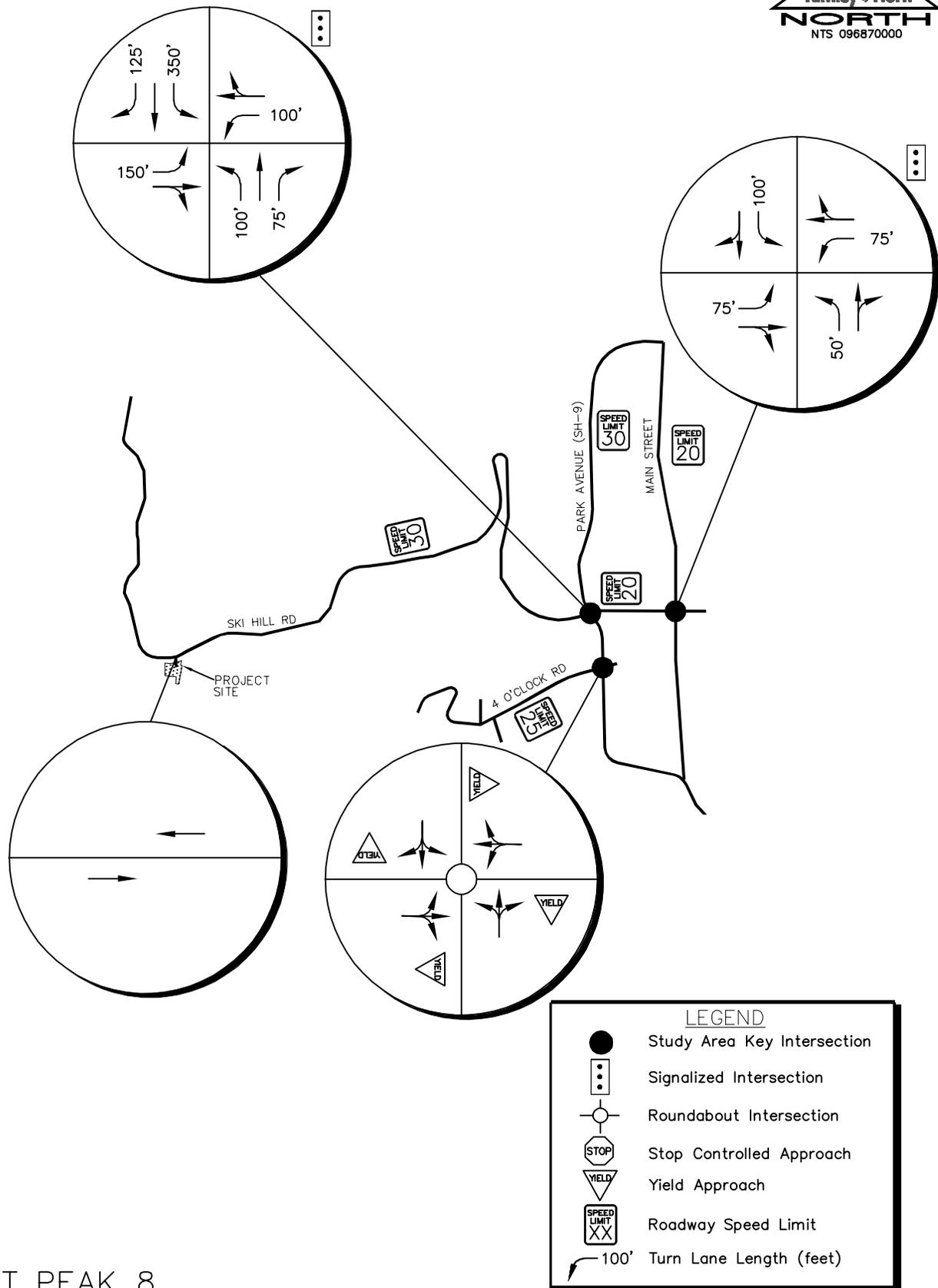
Adjacent to the site, Ski Hill Road provides one lane of travel each direction, eastbound and westbound with a 30 mile per hour posted speed limit. Ski Hill Road primarily extends east-west but does bend and extends north-south in several locations. Park Avenue (SH-9) extends north-south with one lane in each direction and has a posted speed limit of 30 miles per hour within the study area. Park Avenue widens at major intersections to provide left turn lanes and occasional right turn lanes. Main Street extends northbound and southbound with one lane in each direction with a speed limit of 20 miles per hour. Main Street provides bikes lanes and parallel parking on both sides of the roadway. 4 O'Clock Road extends primarily east-west with one through lane in each direction and has a speed limit of 25 miles per hour.

The existing intersection of Ski Hill Road and Park Avenue is signalized with protective-permissive left turn signal phasing on all four approaches. The eastbound and westbound approaches of this intersection provide a left turn lane and a shared through/right turn lane. The northbound and southbound approaches provide a left turn lane, one through lane, and a right turn lane.

The existing intersection of Ski Hill Road and Main Street is signalized with protective-permissive left turn signal phasing on all four approaches. During the morning peak hour, the left turn lane operates under permissive phasing on all four approaches. During the afternoon peak hour, the left-turn movement operates under protective-permissive phasing on the northbound, southbound, and eastbound approaches. All four approaches of this intersection provide a left turn lane and a shared through/right turn lane.

The existing intersection of 4 O'Clock Road and Park Avenue operates as a roundabout with a single lane on all four approaches. This intersection is approximately 675 feet south of the intersection of Ski Kill Road and Park Avenue, center to center.

The existing intersection lane configuration and control for these study area key intersections are shown in **Figure 2**.



EAST PEAK 8
 BRECKENRIDGE, COLORADO
 EXISTING LANE CONFIGURATIONS

FIGURE 2

3.2 Existing Study Area

The existing site is comprised of a parking lot serving employees and maintenance for Breckenridge Ski Resort. Peak 8 of the Breckenridge Ski Resort is located directly to the west of the site. One Ski Hill Place resort, the Peak 8 Gondola Station, and the Grand Colorado on Peak 8 resort is located to west of the proposed project. A mix of single-family detached homes and residential condominiums are located east of the project site.

3.3 Existing Traffic Volumes

Existing vehicle turning movement and pedestrian counts were conducted at the key area intersections on Friday, January 31, 2020 and Saturday, February 1, 2020. The counts were conducted in 15-minute intervals during the morning and afternoon peak hours of adjacent street traffic from 7:30 AM to 9:30 AM and 3:00 PM to 6:00 PM on these count dates. It was determined that the higher traffic volumes occurred during the morning and afternoon on Saturday. Therefore, these Saturday morning and afternoon peak hour volumes were used in the analysis of this study. Pedestrian and bicycle counts were also collected during these times. Existing turning movement counts, including vehicles and pedestrians, are shown in **Figure 3** with count sheets provided in **Appendix A**.

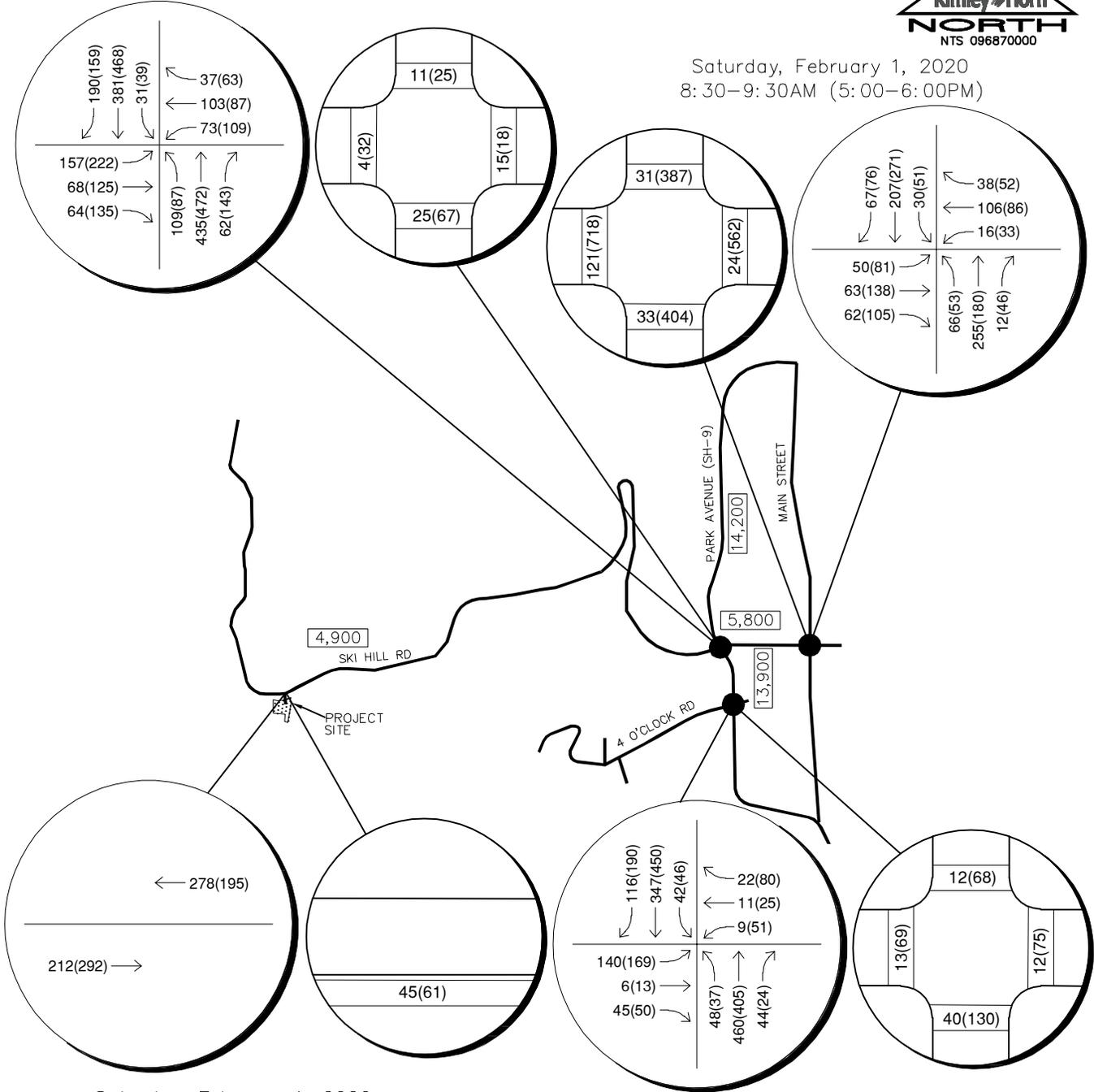
3.4 Unspecified Development Traffic Growth

Based on information provided on the website for the Colorado Department of Transportation, the 20-year growth factor along SH-9 adjacent to the study area ranges from 1.13 to 1.26. The higher end of the growth factor range equates to an annual growth rate of approximately 1.16 percent per year. Traffic information from the CDOT Online Transportation Information System (OTIS) website is included in **Appendix B**. Based on this, a 1.2 percent annual growth rate was used to calculate future traffic volumes at the study area intersections. This annual growth rate was used to estimate short term 2022 and long term 2040 traffic volume projections at the key intersections. Background traffic volumes for 2022 and 2040 are shown in **Figure 4** and **Figure 5**, respectively.

Saturday, February 1, 2020
8:00-9:00AM (4:15-5:15PM)



Saturday, February 1, 2020
8:30-9:30AM (5:00-6:00PM)



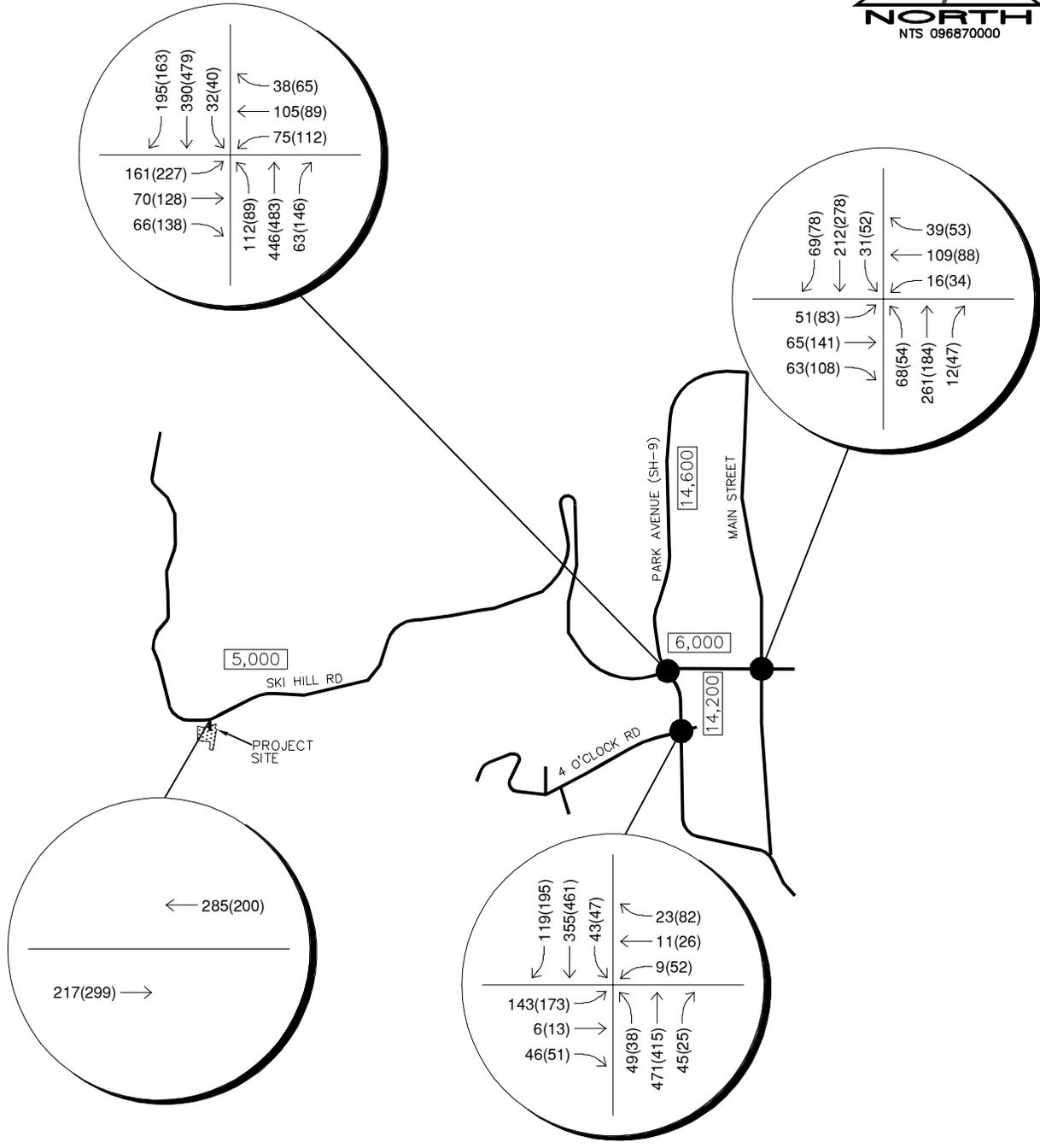
LEGEND

- Study Area Key Intersection
- XXX(XXX) AM(PM) Peak Hour Traffic Volumes
- XXX(XXX) Saturday AM(PM) Pedestrian Crossing Volume
- XX,X00 Estimated Daily Traffic Volume

EAST PEAK 8
BRECKENRIDGE, COLORADO
EXISTING TRAFFIC VOLUMES

FIGURE 3



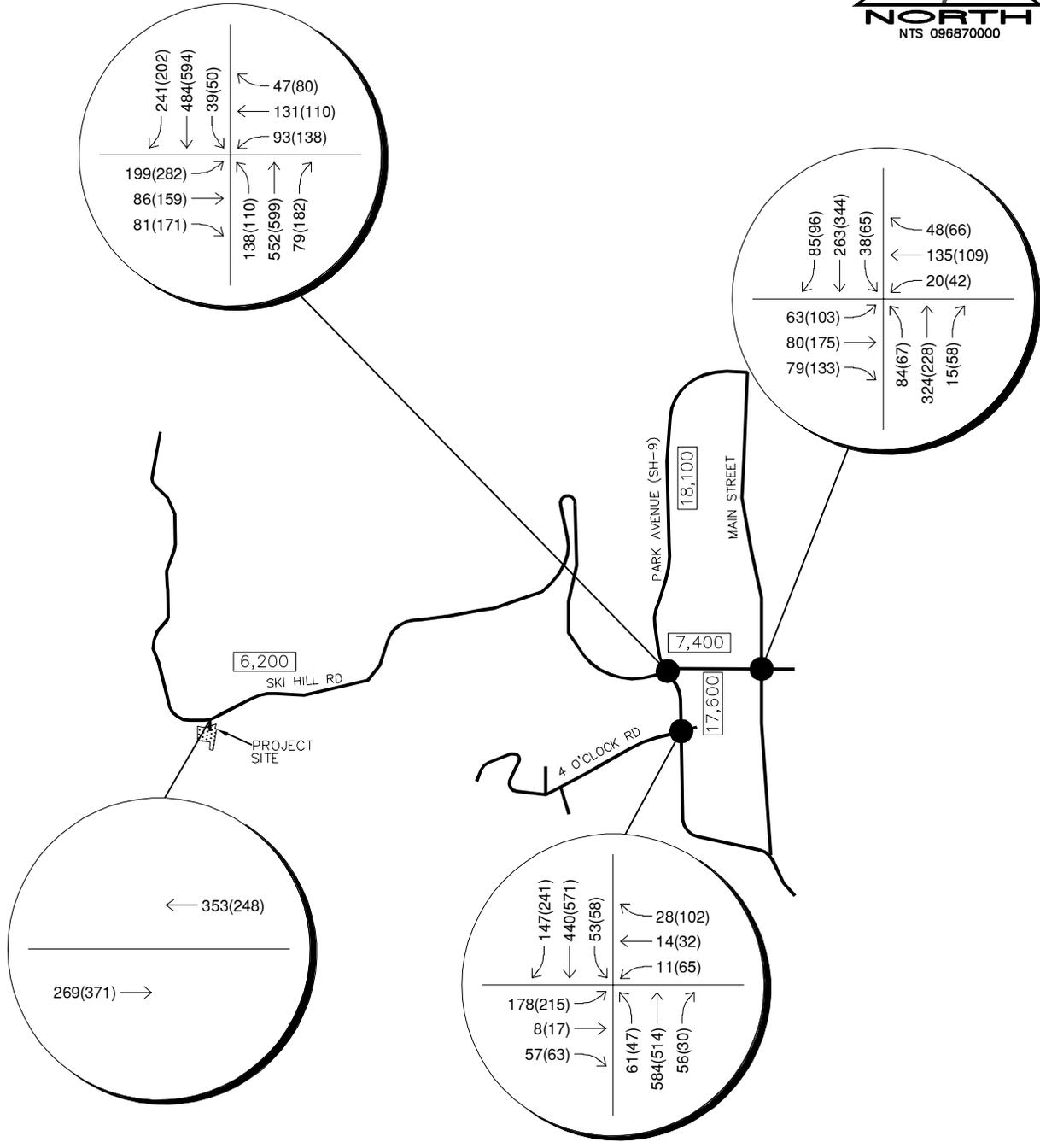


LEGEND

- Study Area Key Intersection
- XXX(XXX) AM(PM) Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume

EAST PEAK 8
 BRECKENRIDGE, COLORADO
 2022 BACKGROUND TRAFFIC VOLUMES

FIGURE 4



LEGEND

- Study Area Key Intersection
- XXX(XXX) AM(PM) Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume

EAST PEAK 8
 BRECKENRIDGE, COLORADO
 2040 BACKGROUND TRAFFIC VOLUMES

FIGURE 5

4.0 PROJECT TRAFFIC CHARACTERISTICS

4.1 Trip Generation

Site-generated traffic estimates are determined through a process known as trip generation. Rates and equations are applied to the proposed land uses to estimate traffic generated by the development during a specific time interval. The acknowledged source for trip generation rates is the *Trip Generation Manual*¹ published by the Institute of Transportation Engineers (ITE). ITE has established trip rates in nationwide studies of similar land uses. For this study, Kimley-Horn used the ITE Trip Generation Report average rates and regression equations that apply to Mid-Rise Multifamily Housing (ITE Code 221), Hotel (310), and Sit-Down Restaurant (932) for traffic associated with the development. The 70 parking spaces designated for ski club members, BOEC, hotel amenities, special events, and/or other functions was also incorporated. It was conservatively assumed that approximately 70 percent of the parking spaces would become occupied during the morning peak hour and that 50 percent of the parking spaces would have vehicles exit and depart during the afternoon peak hour. The remaining 30 percent in the morning and 50 percent during the afternoon are expected to arrive and depart outside of the peak hour of the adjacent street, respectively.

Since both residential and hotel uses are proposed with restaurant space within the same development, it is anticipated that traffic will be shared between the residential units/hotel rooms and the restaurant. The ITE internal capture procedure was used to determine the amount of traffic that may be shared between uses, which thereby determines the number of external trips. In an overall sense, much of the restaurant space will primarily be an amenity for the guests, residents, patrons, and skiers already at the facility and in the area, therefore applying the ITE internal capture procedure provides a conservative analysis. Based on this, the East Peak 8 project is expected to generate approximately 2,150 daily external driveway trips with 174 of these trips occurring during the morning peak hour and 182 trips occurring during the afternoon peak hour. Of note, these weekday peak hour trip generation volumes were applied to the Saturday morning and Saturday afternoon peak hours since ITE Trip Generation data for Saturday morning and afternoon peak hours is not available. Calculations were based on the procedure and information provided in the ITE *Trip Generation Manual, 10th Edition – Volume 2*:

¹ Institute of Transportation Engineers, *Trip Generation Manual*, Tenth Edition, Washington DC, 2017.

Data, 2017. **Table 1** summarizes the estimated trip generation for the proposed development. The trip generation worksheets are included in **Appendix C**.

Table 1 – East Peak 8 Project Traffic Generation

| Land Use | Quantity | Units | Vehicle Trips | | | | | | |
|--|----------|-------------|---------------|----------------------|-----|-------|----------------------|-----|-------|
| | | | Daily | Weekday AM Peak Hour | | | Weekday PM Peak Hour | | |
| | | | | In | Out | Total | In | Out | Total |
| Mid-Rise Multifamily Housing (ITE 221) | 49 | Units | 266 | 4 | 13 | 17 | 13 | 9 | 22 |
| Hotel (ITE 310) | 165 | Rooms | 1,436 | 45 | 32 | 77 | 50 | 48 | 98 |
| Sit Down Restaurant (ITE 932) | 4,008 | Square Feet | 450 | 22 | 18 | 40 | 24 | 15 | 39 |
| Additional Parking | 70 | Spaces | 140 | 50 | 0 | 50 | 0 | 35 | 35 |
| Total Site Generated Trips | | | 2,292 | 121 | 63 | 184 | 87 | 107 | 194 |
| Total Trips after Internal Capture | | | 2,150 | 117 | 57 | 174 | 82 | 100 | 182 |

4.2 Trip Distribution

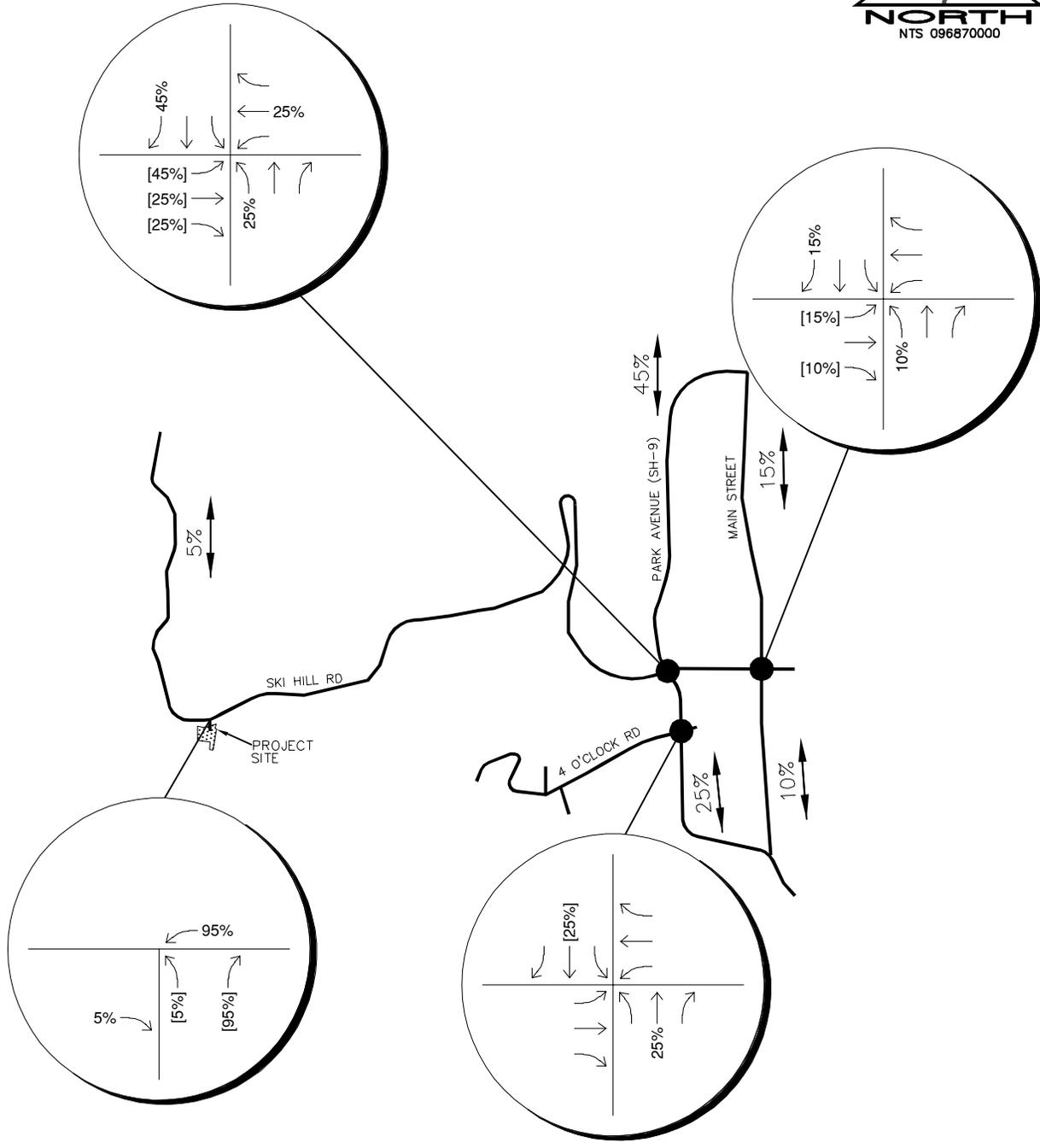
Distribution of site traffic on the street system was based on the area street system characteristics, existing traffic patterns, existing and anticipated surrounding demographic information, and the proposed access system for the project. The directional distribution of traffic is a means to quantify the percentage of site-generated traffic that approaches the site from a given direction and departs the site back to the original source. The project trip distribution is illustrated in **Figure 6**.

4.3 Traffic Assignment

Traffic assignment was obtained by applying the project trip distribution to the estimated traffic generation of the development shown in **Table 1**. Project traffic assignment for the East Peak 8 project is shown in **Figure 7**.

4.4 Total (Background Plus Project) Traffic

Site traffic volumes were added to the background volumes to represent estimated traffic conditions for the short term 2022 horizon and long term 2040 horizon. These total traffic volumes for the site are illustrated for the 2022 and 2040 horizon years in **Figure 8** and **Figure 9**, respectively.

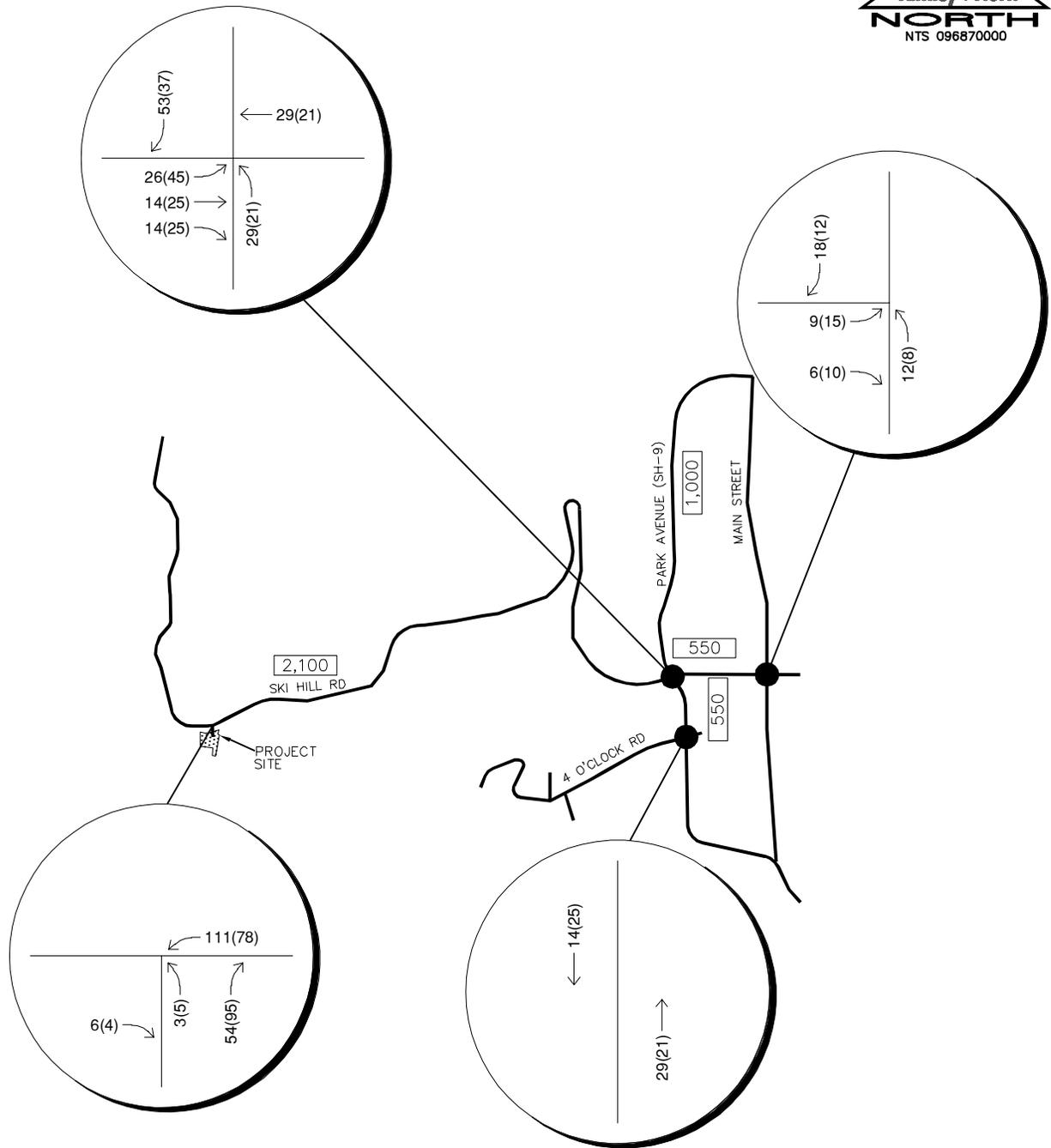


LEGEND

- Study Area Key Intersection
- XX% External Trip Distribution Percentage
- XX%[XX%] Entering[Exiting] Trip Distribution Percentage

EAST PEAK 8
 BRECKENRIDGE, COLORADO
 PROJECT TRIP DISTRIBUTION

FIGURE 6

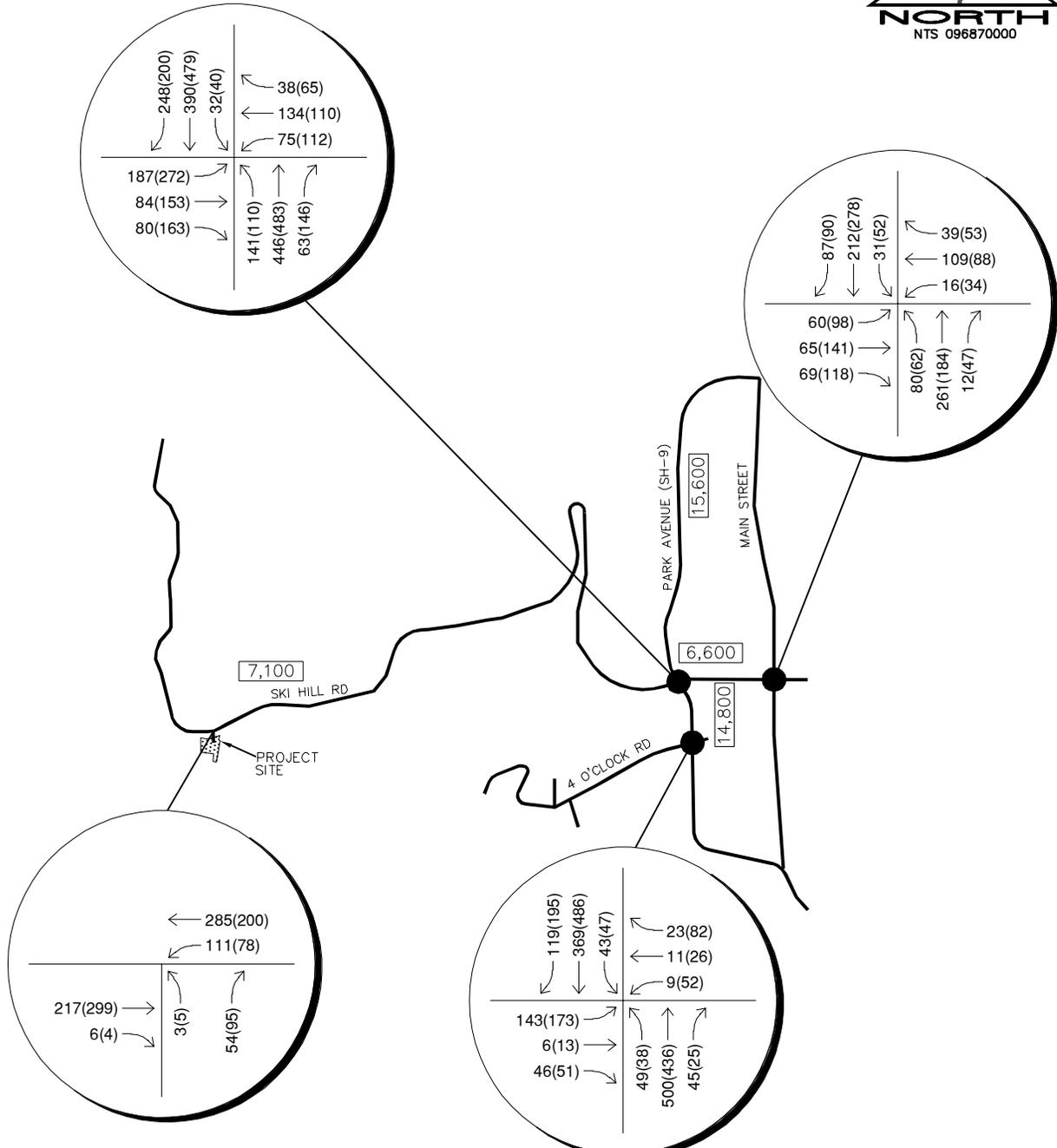


LEGEND

- Study Area Key Intersection
- XXX(XXX) AM(PM) Peak Hour Traffic Volumes
- [XX,X00] Estimated Daily Traffic Volume

EAST PEAK 8
 BRECKENRIDGE, COLORADO
 TRAFFIC ASSIGNMENT VOLUMES

FIGURE 7

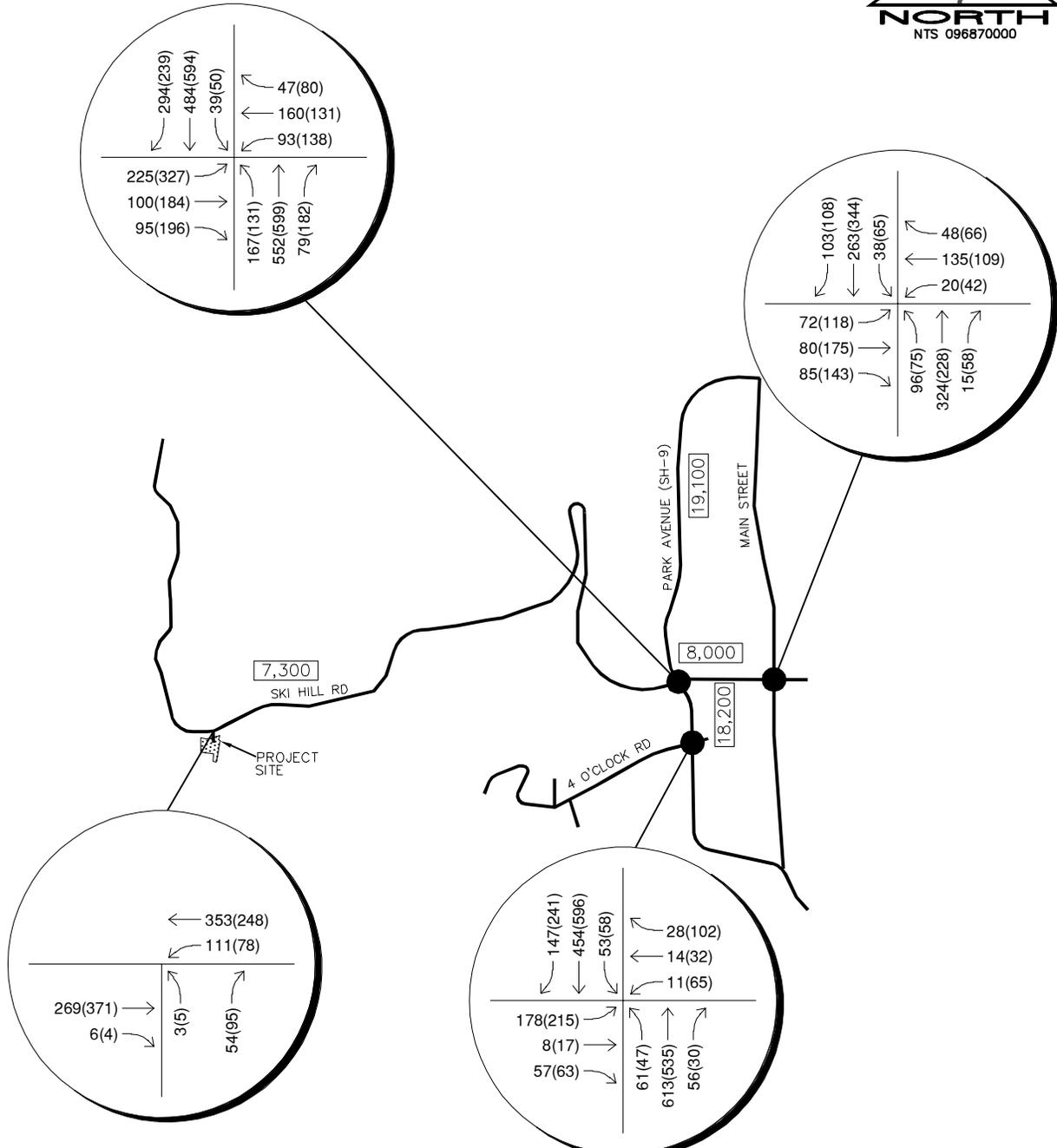


LEGEND

- Study Area Key Intersection
- XX(X) AM(PM) Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume

EAST PEAK 8
 BRECKENRIDGE, COLORADO
 2022 BACKGROUND
 PLUS PROJECT TRAFFIC VOLUMES

FIGURE 8



LEGEND

- Study Area Key Intersection
- XX(X) AM(PM) Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume

EAST PEAK 8
 BRECKENRIDGE, COLORADO
 2040 BACKGROUND
 PLUS PROJECT TRAFFIC VOLUMES

FIGURE 9

5.0 TRAFFIC OPERATIONS ANALYSIS

Kimley-Horn’s analysis of traffic operations in the site vicinity was conducted to determine potential capacity deficiencies in the 2022 and 2040 development horizons at the identified key intersections and access driveway. The acknowledged source for determining overall capacity is the current edition of the *Highway Capacity Manual (HCM)*².

5.1 Analysis Methodology

Capacity analysis results are listed in terms of Level of Service (LOS). LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. It ranges from A (very little delay) to F (long delays and congestion). Typical standard traffic engineering practice recommends LOS D for overall intersections and LOS E for movements or approaches as the minimum thresholds for acceptable operations at intersections. **Table 2** shows the definition of level of service for signalized and unsignalized intersections.

Table 2 – Level of Service Definitions

| Level of Service | Signalized Intersection Average Total Delay (sec/veh) | Unsignalized Intersection Average Total Delay (sec/veh) |
|------------------|---|---|
| A | ≤ 10 | ≤ 10 |
| B | > 10 and ≤ 20 | > 10 and ≤ 15 |
| C | > 20 and ≤ 35 | > 15 and ≤ 25 |
| D | > 35 and ≤ 55 | > 25 and ≤ 35 |
| E | > 55 and ≤ 80 | > 35 and ≤ 50 |
| F | > 80 | > 50 |

Definitions provided from the Highway Capacity Manual, Sixth Edition, Washington D.C., 2016.

Study area intersections were analyzed based on average total delay analysis for signalized and unsignalized intersections. Under the unsignalized analysis, the LOS for a two-way stop-controlled intersection is determined by the computed or measured control delay and is defined for each minor movement. LOS for a two-way stop-controlled intersection is not defined for the intersection as a whole. LOS for signalized, roundabout, and all-way stop controlled intersections are defined for each approach and for the overall intersection.

² Transportation Research Board, *Highway Capacity Manual*, Sixth Edition, Washington DC, 2016.

5.2 Key Intersection Operational Analysis

Calculations for the level of service at the key intersection and project access driveway for the study area are provided in **Appendix D**. The existing year analysis is based on the lane geometry and intersection control shown in **Figure 2**. Synchro traffic analysis software was used to analyze the study area intersection and access driveway. The Synchro Highway Capacity Manual (HCM) methodology reports were used to analyze intersection delay and level of service.

Ski Hill Road and Park Avenue (SH-9)

The intersection of Ski Hill Road and Park Avenue (SH-9) is signalized with protected-permissive phasing on all four approaches. With the existing signal timings and lane configurations, this intersection currently operates with LOS C and LOS D during the Saturday morning and afternoon peak hours, respectively. Signal optimization was conducted at this intersection under each analysis scenario to compare to the existing intersection splits.

The future analysis was also evaluated with coordinated cycles lengths with the Ski Hill Road and Main Street signalized intersection. It is recommended that the Town work with CDOT to improve the signal timing of the Ski Hill Road and Park Avenue (SH-9) intersection by reducing the cycle lengths during the morning peak from 135 seconds to 120 seconds and during the afternoon peak from 180 seconds to 120 seconds. With the existing lane configurations and improved signal timings, this intersection is anticipated to continue operating at LOS C during the Saturday morning peak hour and LOS D during the Saturday afternoon peak hour throughout the 2040 horizon. Otherwise with existing signal timing, the afternoon peak hour may operate at a LOS E during the afternoon peak hour in 2040. **Table 3** provides the results of the level of service at this intersection.

Of note, vehicles on the eastbound approach to the Ski Hill Road and Main Street intersection were observed to be backing into the intersection of Ski Hill Road and Park Avenue during the Saturday afternoon peak hour. This existing vehicle queuing issue prevents eastbound through, northbound right turn movements, and southbound left turn movements from operating well at the Ski Hill Road and Park Avenue (SH-9) intersection. As such, long vehicles queues are currently experienced along the eastbound approaches of the intersections of Ski Hill Road/Park Avenue and Ski Hill Road/Main Street. Mitigation for this issue is later discussed in the Ski Hill Road and Main Street intersection section.

Table 3 – Ski Hill Road and Park Avenue (SH-9) LOS Results

| Scenario | Saturday AM Peak Hour | | Saturday PM Peak Hour | |
|---|-----------------------|----------|-----------------------|----------|
| | Delay (sec/veh) | LOS | Delay (sec/veh) | LOS |
| 2020 Existing (Existing Timing) | 27.2 | C | 42.8 | D |
| Eastbound Approach | 48.9 | D | 81.9 | F |
| Westbound Approach | 44.7 | D | 65.2 | E |
| Northbound Approach | 14.9 | B | 20.5 | C |
| Southbound Approach | 15.7 | B | 21.4 | C |
| 2020 Existing (Optimized Timing) | 27.2 | C | 41.1 | D |
| Eastbound Approach | 49.3 | D | 69.4 | E |
| Westbound Approach | 45.0 | D | 70.8 | E |
| Northbound Approach | 14.7 | B | 21.7 | C |
| Southbound Approach | 15.4 | B | 22.6 | C |
| 2020 Existing (Cycle Length Change + Optimized) | 25.8 | C | 30.4 | C |
| Eastbound Approach | 43.0 | D | 46.3 | D |
| Westbound Approach | 43.8 | D | 47.2 | D |
| Northbound Approach | 14.9 | B | 19.4 | B |
| Southbound Approach | 15.6 | b | 20.0 | B |
| 2022 Background (Existing Timing) | 27.5 | C | 42.8 | D |
| Eastbound Approach | 48.4 | D | 81.9 | F |
| Westbound Approach | 44.2 | D | 65.2 | E |
| Northbound Approach | 15.6 | B | 20.5 | C |
| Southbound Approach | 16.5 | B | 21.4 | C |
| 2022 Total Traffic (Existing Timing) | 29.3 | C | 47.7 | D |
| Eastbound Approach | 45.2 | D | 84.9 | F |
| Westbound Approach | 39.9 | D | 60.9 | E |
| Northbound Approach | 19.1 | B | 25.0 | C |
| Southbound Approach | 21.2 | C | 27.2 | C |
| 2022 Total Traffic (Optimized Timing) | 29.3 | C | 45.0 | D |
| Eastbound Approach | 45.6 | D | 67.7 | E |
| Westbound Approach | 40.1 | D | 71.3 | E |
| Northbound Approach | 18.9 | B | 26.3 | C |
| Southbound Approach | 21.0 | C | 28.2 | C |
| 2022 Total Traffic (Cycle Length Change + Optimized) | 25.8 | C | 33.1 | C |
| Eastbound Approach | 40.4 | D | 45.4 | D |
| Westbound Approach | 30.8 | C | 41.1 | D |
| Northbound Approach | 17.8 | B | 24.4 | C |
| Southbound Approach | 19.6 | B | 25.5 | C |
| 2040 Background (Existing Timing) | 28.1 | C | 51.4 | D |
| Eastbound Approach | 47.3 | D | 91.9 | F |
| Westbound Approach | 41.0 | D | 69.6 | E |
| Northbound Approach | 18.8 | B | 27.6 | C |
| Southbound Approach | 20.2 | C | 29.9 | C |
| 2040 Total Traffic (Existing Timing) | 30.3 | C | 56.4 | E |
| Eastbound Approach | 44.4 | D | 96.3 | F |
| Westbound Approach | 37.1 | D | 64.3 | E |
| Northbound Approach | 22.7 | C | 32.1 | C |
| Southbound Approach | 25.5 | C | 35.9 | D |

| | | | | |
|---|-------------|----------|-------------|----------|
| 2040 Total Traffic (Optimized Timing) | 30.3 | C | 50.4 | D |
| Eastbound Approach | 45.0 | D | 65.8 | E |
| Westbound Approach | 37.3 | D | 72.0 | E |
| Northbound Approach | 22.5 | C | 35.1 | D |
| Southbound Approach | 25.2 | C | 39.2 | D |
| 2040 Total Traffic (Cycle Length Change + Optimized) | 24.6 | C | 38.8 | D |
| Eastbound Approach | 41.4 | D | 50.0 | D |
| Westbound Approach | 20.1 | C | 39.9 | D |
| Northbound Approach | 19.1 | B | 31.8 | C |
| Southbound Approach | 21.2 | C | 33.9 | C |

Ski Hill Road and Main Street

The intersection of Ski Hill Road and Main Street is signalized with protective-permissive phasing on all four approaches. The signal was observed operating with permissive only left turn phasing on all four approaches during the Saturday morning peak hour while operating with protected-permissive phasing on the eastbound, northbound, and southbound approaches during the Saturday afternoon peak hour. With the existing signal timings and lane configurations, this intersection currently operates with LOS B during the Saturday morning peak hour and LOS C during the Saturday afternoon peak hour.

As stated previously, vehicles on the eastbound approach to the Ski Hill Road and Main Street intersection were observed to be backing into the intersection of Ski Hill Road and Park Avenue during the Saturday afternoon peak hour. This existing vehicle queuing issue prevents eastbound through, northbound right turn movements, and southbound left turn movements from operating well at the Ski Hill Road and Park Avenue (SH-9) intersection. As such, long vehicles queues are currently experienced along the eastbound approaches of the intersections of Ski Hill Road/Park Avenue and Ski Hill Road/Main Street. There were 2,071 pedestrians observed crossing at the intersection of Ski Hill Road and Main Street during the Saturday afternoon peak hour. For reference, 1,172 vehicles were observed traveling through the intersection of Ski Hill Road and Main Street during this same peak hour. The long vehicle queues experienced on the eastbound approach of the Ski Hill Road and Main Street intersection is due to the high volume of eastbound right turn movements conflicting with a high volume of pedestrians during a green light phase at this intersection. Studies suggest that a Barnes Dance, an exclusive pedestrian scramble phase, should be considered when there are more pedestrians than vehicles at an intersection, when there is a high volume of pedestrians,

and a high volume of right turning movements without separate right turn lanes. All of these conditions exist as there are currently almost double the number of pedestrians compared to vehicles at this intersection during the Saturday afternoon peak hour. A pedestrian scramble also allows pedestrians to cross diagonally through the intersection with a pedestrian only phase while vehicles are stopped on all approaches. Pedestrians would not be permitted to cross this intersection during vehicle phases, which will allow right turning movements to occur so that they don't block through movements. When the pedestrian scramble phase is implemented, right turn on red movements should be prohibited so no vehicle traffic travels through the intersection during the pedestrian phase. Removing the interaction between vehicles and pedestrians at this Ski Hill Road and Main Street intersection will improve safety as well as by improving operations at both the Ski Hill Road/Main Street and Ski Hill Road/Park Avenue (SH-9) intersections.

With the pedestrian only phase implemented at the intersection of Ski Hill Road and Main Street, this intersection is expected to continue to operate acceptably with LOS C during Saturday peak hours throughout the 2040 horizon. The optimized timings at the intersection also show that the eastbound Ski Hill Road approach could benefit from additional green time. Further, vehicle delay changes at this intersection improve during the Saturday afternoon peak hour with the pedestrian only phase. If the pedestrian scramble is implemented during the morning peak hour, vehicle delays are expected to increase by approximately 10 seconds per vehicle; however, still operating at an acceptable LOS C. It should be noted that a pedestrian only phase is not needed during the morning peak hour but was analyzed with such in the scenario that signal equipment could potentially require a pedestrian only phase throughout the day. With this improvement, the traffic signal cycle length should increase from 60 seconds to 120 seconds during the Saturday morning peak hour if the pedestrian scramble is required throughout the day from an equipment and standardization standpoint. **Table 4** provides the results of the level of service at this intersection.

Table 4 – Ski Hill Road and Main Street LOS Results

| Scenario | Saturday AM Peak Hour | | Saturday PM Peak Hour | |
|--|-----------------------|----------|-----------------------|----------|
| | Delay (sec/veh) | LOS | Delay (sec/veh) | LOS |
| 2020 Existing (Existing Timing) | 14.2 | B | 32.4 | C |
| Eastbound Approach | 23.6 | C | 46.1 | D |
| Westbound Approach | 20.1 | C | 79.4 | E |
| Northbound Approach | 8.1 | A | 12.7 | B |
| Southbound Approach | 8.6 | A | 14.9 | B |
| 2020 Existing (with Ped Scramble Timing) | 23.0 | C | 29.6 | C |
| Eastbound Approach | 45.9 | D | 49.9 | D |
| Westbound Approach | 42.0 | D | 52.7 | D |
| Northbound Approach | 7.0 | A | 12.7 | B |
| Southbound Approach | 7.9 | A | 14.7 | B |
| 2022 Background (Existing Timing) | 14.4 | B | 32.4 | C |
| Eastbound Approach | 23.9 | C | 46.1 | D |
| Westbound Approach | 20.0 | C | 79.4 | E |
| Northbound Approach | 8.4 | A | 12.7 | B |
| Southbound Approach | 8.8 | A | 14.9 | B |
| 2022 Background Plus Project (Existing Timing) | 14.9 | B | 32.7 | C |
| Eastbound Approach | 24.5 | C | 46.6 | D |
| Westbound Approach | 19.8 | B | 75.8 | E |
| Northbound Approach | 9.0 | A | 13.5 | B |
| Southbound Approach | 9.4 | A | 16.5 | B |
| 2022 Background Plus Project (with Ped Scramble Timing) | 23.1 | C | 30.6 | C |
| Eastbound Approach | 45.2 | D | 50.1 | D |
| Westbound Approach | 40.7 | D | 52.1 | D |
| Northbound Approach | 7.7 | A | 13.7 | B |
| Southbound Approach | 8.9 | A | 16.6 | B |
| 2040 Background (Existing Timing) | 11.7 | B | 32.7 | C |
| Eastbound Approach | 21.0 | C | 47.7 | D |
| Westbound Approach | 20.4 | C | 70.1 | E |
| Northbound Approach | 7.0 | A | 14.6 | B |
| Southbound Approach | 6.9 | A | 17.3 | B |
| 2040 Background Plus Project (Existing Timing) | 11.9 | B | 33.3 | C |
| Eastbound Approach | 21.0 | C | 48.0 | D |
| Westbound Approach | 20.2 | C | 70.8 | E |
| Northbound Approach | 7.4 | A | 15.0 | B |
| Southbound Approach | 7.3 | A | 18.3 | B |
| 2040 Background Plus Project (with Ped Scramble Timing) | 21.5 | C | 31.3 | C |
| Eastbound Approach | 53.8 | D | 49.1 | D |
| Westbound Approach | 55.7 | E | 48.7 | D |
| Northbound Approach | 4.1 | A | 16.2 | B |
| Southbound Approach | 4.3 | A | 19.5 | B |

Park Avenue (SH-9) and 4 O’Clock Road

The intersection of Ski Hill Road and 4 O’Clock Road operates as single lane roundabout on all four approaches. With the existing lane configuration, this roundabout currently operates at LOS B or better during the Saturday morning and afternoon peak hours. With the existing lane configurations and control, this intersection is expected to continue to operate acceptably with LOS C or better during the Saturday morning and afternoon peak hours throughout the 2040 horizon. **Table 5** provides the results of the level of service at this intersection.

Table 5 – Ski Hill Road and 4 O’Clock Road LOS Results

| Scenario | Saturday AM Peak Hour | | Saturday PM Peak Hour | |
|-------------------------------------|-----------------------|----------|-----------------------|----------|
| | Delay (sec/veh) | LOS | Delay (sec/veh) | LOS |
| 2020 Existing | 10.0 | A | 11.5 | B |
| Eastbound Approach | 7.4 | A | 10.5 | B |
| Westbound Approach | 7.1 | A | 9.6 | A |
| Northbound Approach | 12.8 | B | 10.9 | B |
| Southbound Approach | 8.0 | A | 12.8 | B |
| 2022 Background | 10.4 | B | 11.5 | B |
| Eastbound Approach | 7.6 | A | 10.5 | B |
| Westbound Approach | 7.3 | A | 9.6 | A |
| Northbound Approach | 13.5 | B | 10.9 | B |
| Southbound Approach | 8.2 | A | 12.8 | B |
| 2022 Background Plus Project | 11.0 | B | 12.8 | B |
| Eastbound Approach | 7.8 | A | 11.5 | B |
| Westbound Approach | 7.6 | A | 10.3 | B |
| Northbound Approach | 14.6 | B | 12.0 | B |
| Southbound Approach | 8.4 | A | 14.3 | B |
| 2040 Background | 12.4 | B | 17.1 | C |
| Eastbound Approach | 8.9 | A | 14.8 | B |
| Westbound Approach | 8.1 | A | 12.5 | B |
| Northbound Approach | 16.5 | C | 14.7 | B |
| Southbound Approach | 9.5 | A | 20.5 | C |
| 2040 Background Plus Project | 13.2 | B | 18.4 | C |
| Eastbound Approach | 9.1 | A | 15.6 | C |
| Westbound Approach | 8.4 | A | 12.7 | B |
| Northbound Approach | 18.1 | C | 15.7 | C |
| Southbound Approach | 9.8 | A | 22.5 | C |

Ski Hill Road Full Movement Access

With completion of the East Peak 8 project, a full movement access is proposed along the south side of Ski Hill Road, approximately 375 feet east of the access to One Ski Hill Place. This project driveway will gain access to the resort lobby and residential underground parking within the development. The project access northbound approach to Ski Hill Road is recommended to be stop controlled with a R1-1 “STOP” sign installed for this approach. Based on the operational analysis, a single northbound exiting lane is anticipated to be sufficient to accommodate left and right turning traffic to Ski Hill Road. Single shared lane approaches in the eastbound and westbound directions are also expected to be sufficient to accommodate expected traffic demands along Ski Hill Road. With this configuration in the opening year of 2022 as well as the long-term horizon of 2040, all movements at this intersection are anticipated to operate at LOS B or better during the peak hours. **Table 6** provides the results of the level of service at this intersection.

Table 6 – Ski Hill Road and Access LOS Results

| Scenario | Saturday AM Peak Hour | | Saturday PM Peak Hour | |
|-------------------------------------|-----------------------|-----|-----------------------|-----|
| | Delay (sec) | LOS | Delay (sec) | LOS |
| 2022 Background Plus Project | | | | |
| Northbound Approach | 11.2 | B | 12.9 | B |
| Westbound Left | 8.4 | A | 8.7 | A |
| 2040 Background Plus Project | | | | |
| Northbound Approach | 11.9 | B | 14.3 | B |
| Westbound Left | 8.6 | A | 9.0 | A |

5.3 Turn Bay Length Analysis

Since Park Avenue (SH-9) is a state owned and maintained facility, it is recommended that auxiliary turn lanes along Park Avenue be constructed in accordance with the current CDOT State Highway Access Code (SHAC). The State Highway Access Category Schedule categorizes the segment of Park Avenue through the study and access intersections as NR-B: Non-Rural Arterial. According to the State Highway Access Code for category NR-B roadways, the following thresholds apply:

- A left turn lane with storage length plus taper is required for any access with a projected peak hour left ingress turning volume greater than 25 vph.

- A right turn lane with storage length plus taper is required for any access with a projected peak hour right ingress turning volume greater than 50 vph.
- An acceleration lane is generally not required.

It is believed that an access permit for the Ski Hill Road intersection along Park Avenue (SH-9) will be required by CDOT in association with this project. Based on traffic projections, the auxiliary turn lane requirements were calculated per the Colorado State Highway Access Code for the approaches along Park Avenue at the intersection with Ski Hill Road. Park Avenue provides one through lane in each direction, northbound and southbound, at the intersection with Ski Hill Road. Park Avenue has a posted speed limit of 30 miles per hour within the study area. As such, turn lane requirements along the Park Avenue approaches at the intersection with Ski Hill Road are as follows:

- Left and Right turn lanes currently exist on both the northbound and southbound approaches at the intersection of Ski Hill Road and Park Avenue.
- Park Avenue has a speed limit of 30 miles per hour; therefore, deceleration lengths are not required in turn lane length calculations. The turn lane length requirement is storage length plus taper length. The storage length required is one (1) foot per vehicle during the peak hour while the taper length requirement is 100 feet (8 to 1 taper ratio).
- Based on a speed limit of 30 miles per hour and an anticipated northbound left turn volume of 141 vehicles per hour during the peak hour in 2022, the required northbound left turn lane length is 150 feet of storage with a 100-foot taper. The existing northbound left turn lane at this intersection provides 100 feet of storage.
- Based on a speed limit of 30 miles per hour and an anticipated northbound right turn volume of 146 vehicles per hour during the peak hour in 2022, the required northbound right turn lane length is 150 feet of storage with a 100-foot taper. The existing northbound right turn lane at this intersection provides 75 feet of storage.
- Based on a speed limit of 30 miles per hour and an anticipated southbound left turn volume of 40 vehicles per hour during the peak hour in 2022, the required southbound left turn lane length is 50 feet of storage with a 100-foot taper. The existing southbound left turn lane at this intersection provides 350 feet of storage.
- Based on a speed limit of 30 miles per hour and an anticipated southbound right turn volume of 248 vehicles per hour during the peak hour in 2022, the required southbound

right turn lane length is 250 feet of storage with a 100-foot taper. The existing southbound right turn lane at this intersection provides 125 feet of storage.

5.4 Queuing Analysis

A queuing analysis was conducted for turn lanes at the intersections of Ski Hill Road and Park Avenue and Main Street and Ski Hill Road as well as the driveway approach at the project access. The queuing analysis was performed for existing signal phasing as well as optimized phasing with the exclusive pedestrian phase, as shown before and after the “/” in the table. The queuing analysis was calculated using the Synchro analysis software presenting the results of the 95th percentile queue length. Results are shown in the following **Table 7** with calculations provided in **Appendix D** for the unsignalized intersections and **Appendix E** for the signalized intersections.

Table 7 – Turn Lane Length Analysis Results

| Intersection Turn Lane | Existing Turn Lane Length (feet) | 2022 Total Queue Length (feet) | 2022 Recommended Turn Lane Length (feet) | 2040 Total Queue Length (feet) | 2040 Recommended Turn Lane Length (feet) |
|--------------------------------------|----------------------------------|--------------------------------|--|--------------------------------|--|
| Ski Hill Road and Park Avenue | | | | | |
| Eastbound Left | 150' | 303'/216' | 225' | 329'/263' | 250' |
| Westbound Left | 100' | 131'/91' | 100' | 138'/105' | 100' |
| Northbound Left | 100' | 120'/94' | 150' (CDOT) | 157'/202' | 225' |
| Northbound Right | 125' | 132'/58' | 150' (CDOT) | 197'/91' | 150' |
| Southbound Left | 350' | 49'/38' | 350' | 69'/49' | 350' |
| Southbound Right | 175' | 220'/118'' | 250' (CDOT) | 309'/147' | 250' |
| Main Street and Ski Hill Road | | | | | |
| Eastbound Left | 75' | 107'/114' | 125' | 128'/132' | 125' |
| Westbound Left | 75' | 58'/55' | 75' | 69'/68' | 75' |
| Northbound Left | 50' | 53'/53' | 50' | 43'/52' | 50' |
| Southbound Left | 100' | 31'/37' | 100' | 38'/46' | 100' |
| Ski Hill Road Access | | | | | |
| Northbound Approach | DNE | 25' | 25' | 25' | 25' |

Note: Existing Signal Phasing / Optimized Signal Phasing or Change in Pedestrian Phasing

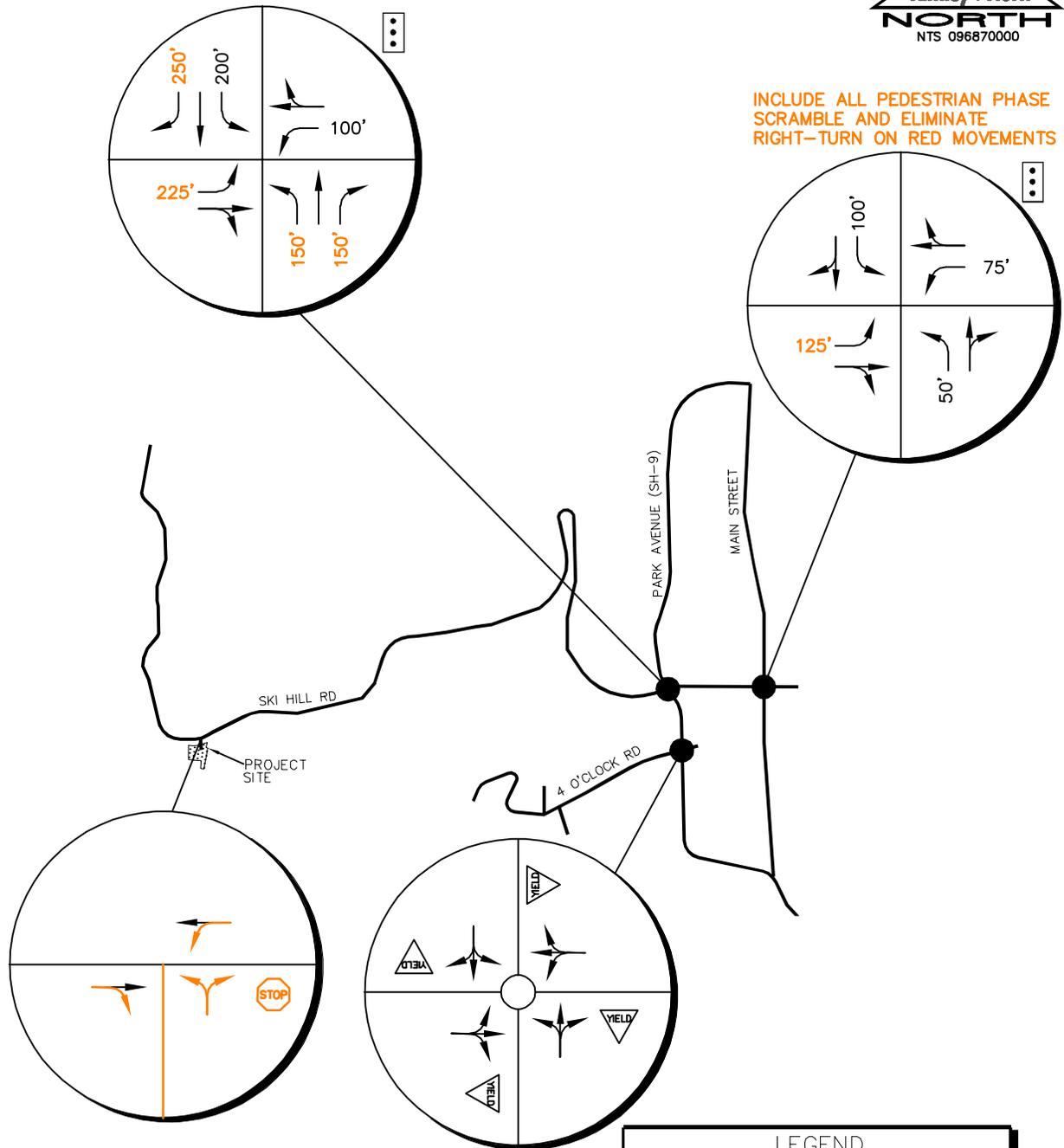
As shown in the queuing table for 2022, vehicles may extend beyond the existing 150-foot eastbound left turn lane at the intersection of Ski Hill Road and Park Avenue (SH-9) during the peak hour. By 2022, it is recommended that the eastbound left turn lane be restriped to provide 225 feet. Vehicles may also extend beyond the eastbound left turn lane at the Ski Hill Road and Main Street intersection during the peak hour in 2022. It is recommended that this eastbound left turn lane be restriped from 75 feet to 125 feet of length.

The driveway exiting throat at the Ski Hill Road Access should be planned to provide 25 feet of length to accommodate one vehicle.

In 2040, the eastbound and northbound left turn lanes at the Ski Hill Road and Park Avenue intersection may have vehicle queues extending past the storage lanes. It is recommended that traffic volumes be monitored in the long-term future to determine if restriped extended storage lanes are necessary.

Based on the results of the operational and queuing analysis, the recommended lane configurations and control at the study key intersection and project access in 2022 and 2040 are shown in **Figure 10** and **Figure 11**, respectively.

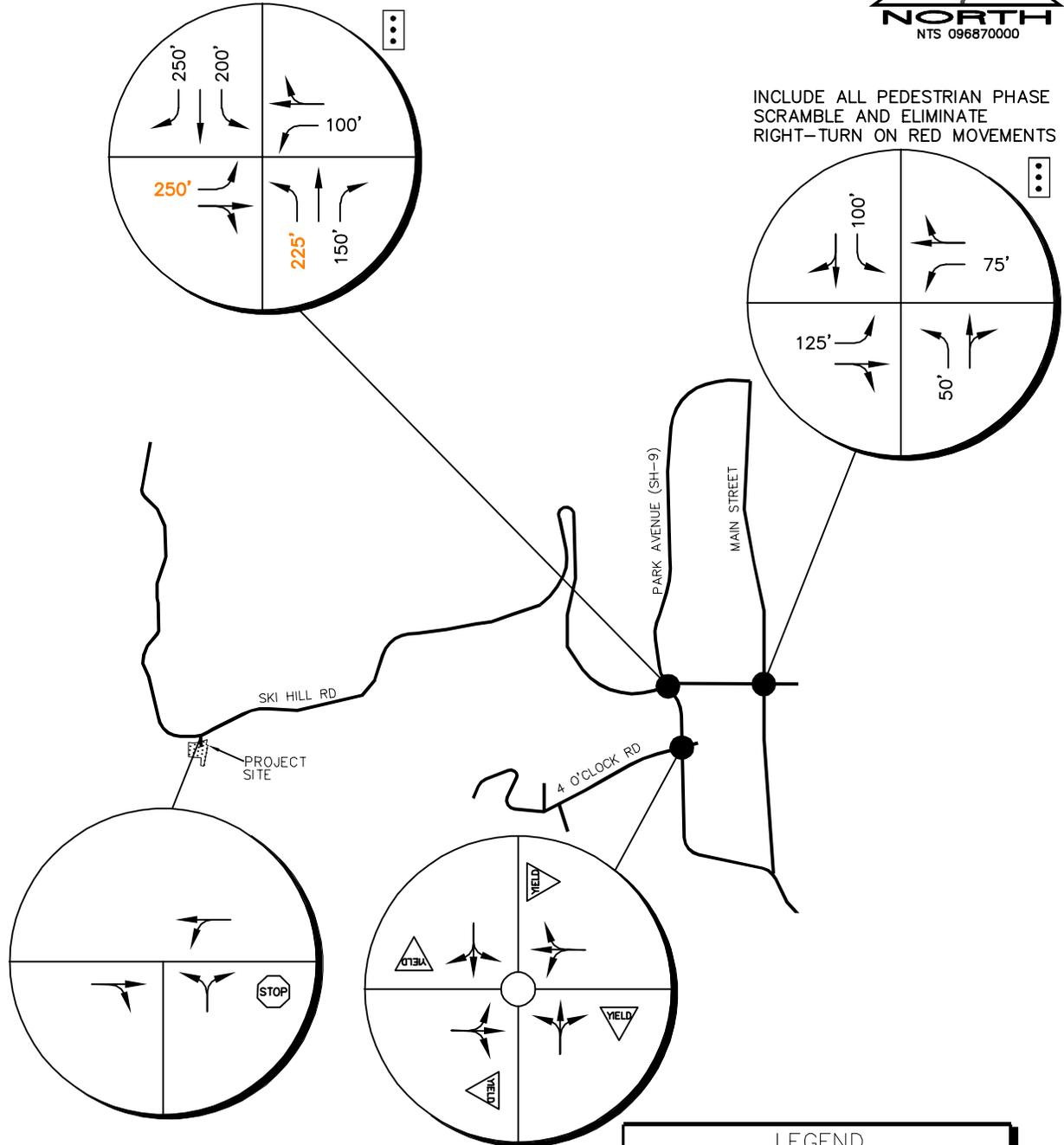
INCLUDE ALL PEDESTRIAN PHASE
 SCRAMBLE AND ELIMINATE
 RIGHT-TURN ON RED MOVEMENTS



EAST PEAK 8
 BRECKENRIDGE, COLORADO
 2022 RECOMMENDED LANE
 CONFIGURATIONS AND CONTROL

FIGURE 10

INCLUDE ALL PEDESTRIAN PHASE
 SCRAMBLE AND ELIMINATE
 RIGHT-TURN ON RED MOVEMENTS



LEGEND

- Study Area Key Intersection
- Signalized Intersection
- Roundabout Intersection
- Stop Controlled Approach
- Yield Approach
- Improvement
- 100' Turn Lane Length (feet)

EAST PEAK 8
 BRECKENRIDGE, COLORADO
 2040 RECOMMENDED LANE
 CONFIGURATIONS AND CONTROL

FIGURE 11

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis presented in this report, Kimley-Horn believes the proposed East Peak 8 project will be successfully incorporated into the existing and future roadway network. The proposed project development and expected traffic volumes resulted in the following recommendations and conclusions:

- The proposed access for the project is anticipated to include a full movement driveway along the south side of Ski Hill Road, located approximately 375 feet east of the existing access to the One Ski Hill Place resort and 350 feet west of Boulder Ridge Drive. The access is recommended to operate with stop-control with the installation of a R1-1 “STOP” sign on the driveway exiting approach to the public street.
- In 2022, the 150-foot eastbound and 100-foot northbound left turn lanes at the intersection of Ski Hill Road and Park Avenue (SH-9) should each be restriped to provide an additional 75 feet and 50 feet of length, respectively. This results in an eastbound left turn lane length of 225 feet and a northbound left turn lane of 150 feet. Both turn lane extensions only require restriping improvements.
- It is believed that an access permit for the Ski Hill Road intersection along Park Avenue (SH-9) will be required by CDOT in association with this project. Per CDOT turn bay length requirements, the 125-foot northbound and 175-foot southbound right turn lanes at the Ski Hill Road and Park Avenue intersection were found to require an extension to provide 150 feet and 250 feet of length, respectively. However, lengthening these right turn lanes may not be feasible due to possible right-of-way constraints.
- It is recommended that the eastbound left turn lane at the Ski Hill Road and Main Street intersection be restriped from 75 feet to 125 feet of length, which will extend to the existing alley west of Main Street.
- It is recommended that the Town of Breckenridge work with CDOT to improve the signal timing of the Ski Hill Road and Park Avenue (SH-9) intersection by reducing the cycle lengths during the morning peak from 135 seconds to 120 seconds and during the afternoon

peak from 180 seconds to 120 seconds. Enhanced vehicle detection may be appropriate to better allocate the green time to the intersection. Further, it should be taken under consideration to coordinate the existing signalized intersections of Ski Hill Road/Park Avenue and Ski Hill Road/Main Street with communication equipment installed.

- Vehicles on the eastbound approach to the Ski Hill Road and Main Street intersection were observed to be backing into the intersection of Ski Hill Road and Park Avenue during the Saturday afternoon peak hour. This existing vehicle queuing issue prevents eastbound through, northbound right turn movements, and southbound left turn movements from operating well at the Ski Hill Road and Park Avenue (SH-9) intersection. As such, long vehicle queues are currently experienced along the eastbound approaches of the intersections of Ski Hill Road/Park Avenue and Ski Hill Road/Main Street. There were 2,071 pedestrians observed crossing at the intersection of Ski Hill Road and Main Street during the Saturday afternoon peak hour. For reference, 1,172 vehicles were observed traveling through the intersection of Ski Hill Road and Main Street during this same peak hour. The long vehicle queues experienced on the eastbound approach of the Ski Hill Road and Main Street intersection is due to the high volume of eastbound right turn movements conflicting with a high volume of pedestrians during a green light phase at this intersection. Studies suggest that a Barnes Dance, an exclusive pedestrian scramble phase, should be considered when there are more pedestrians than vehicles at an intersection, when there is a high volume of pedestrians, and a high volume of right turning movements without separate right turn lanes. All of these conditions exist as there are currently almost double the number of pedestrians compared to vehicles at this intersection during the Saturday afternoon peak hour. A pedestrian scramble also allows pedestrians to cross diagonally through the intersection with a pedestrian only phase while vehicles are stopped on all approaches. Pedestrians would not be permitted to cross this intersection during vehicle phases, which will allow right turning movements to occur so that they don't block through movements. When the pedestrian scramble phase is implemented, right turn on red movements should be prohibited so no vehicle traffic travels through the intersection during the pedestrian phase. Removing the interaction between vehicles and pedestrians at this Ski Hill Road and Main Street intersection will improve safety as well as by improving operations at both the Ski Hill Road/Main Street and Ski Hill Road/Park Avenue (SH-9) intersections.

- By 2040, the eastbound and northbound left turn lanes at the intersection of Ski Hill Road and Park Avenue (SH-9) intersection may need to be extended further if future traffic volumes are realized.
- Any on-site and off-site signing and striping improvements should be incorporated into the Civil Drawings and conform to Town of Breckenridge and CDOT Standards as well as the Manual on Uniform Traffic Control Devices – 2009 Edition (MUTCD).

APPENDICES

APPENDIX A

Intersection Count Sheets



Breckenridge, CO
 East Peak 8
 Saturday AM Peak
 Ski Hill Road and Park Ave (SH-9)

File Name : Ski Hill and Park Ave AM Sat
 Site Code : IPO 488
 Start Date : 2/1/2020
 Page No : 1

Groups Printed- Automobiles - Bicycles and Pedestrians

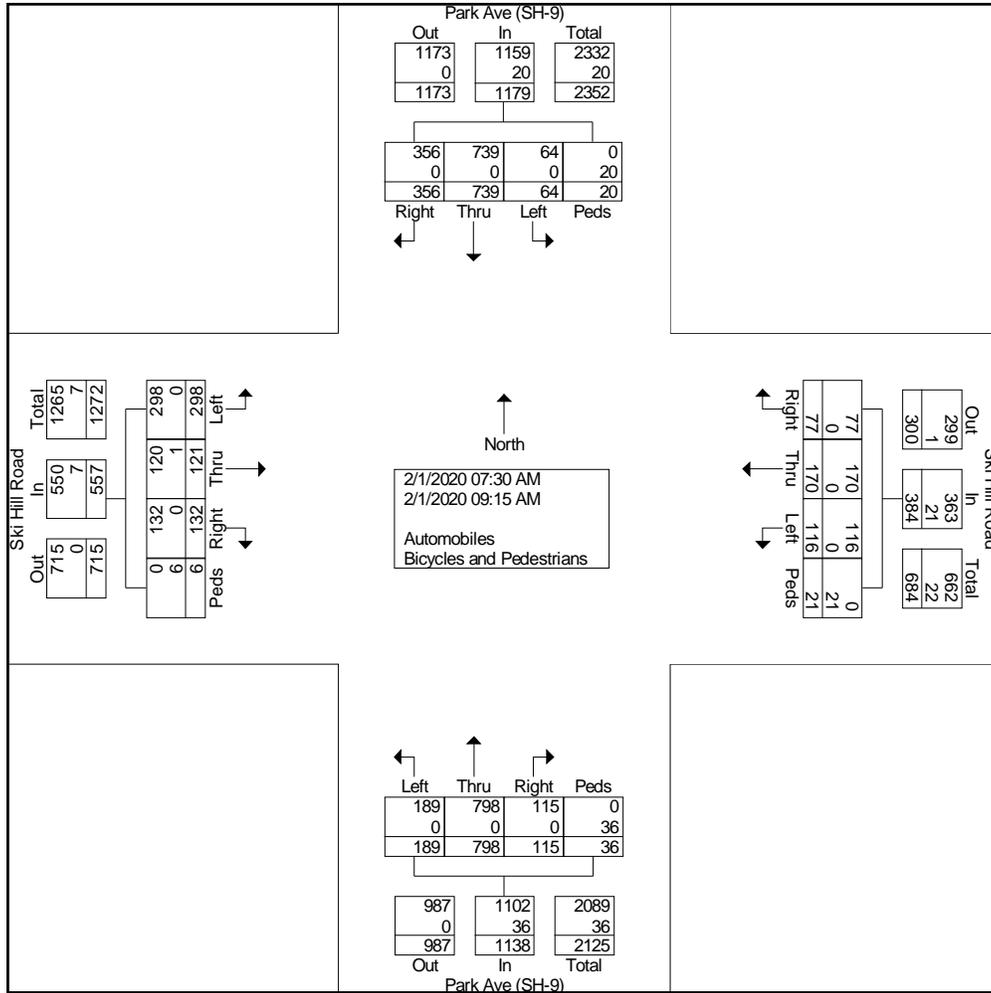
| Start Time | Ski Hill Road Eastbound | | | | | Ski Hill Road Westbound | | | | | Park Ave (SH-9) Northbound | | | | | Park Ave (SH-9) Southbound | | | | | Int. Total |
|----------------------------|-------------------------|------|-------|------|------------|-------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| 07:30 AM | 25 | 7 | 12 | 0 | 44 | 11 | 13 | 3 | 2 | 29 | 11 | 78 | 8 | 0 | 97 | 8 | 75 | 54 | 1 | 138 | 308 |
| 07:45 AM | 41 | 13 | 18 | 2 | 74 | 7 | 22 | 3 | 0 | 32 | 15 | 125 | 12 | 8 | 160 | 4 | 94 | 55 | 3 | 156 | 422 |
| Total | 66 | 20 | 30 | 2 | 118 | 18 | 35 | 6 | 2 | 61 | 26 | 203 | 20 | 8 | 257 | 12 | 169 | 109 | 4 | 294 | 730 |
| 08:00 AM | 36 | 13 | 15 | 1 | 65 | 13 | 16 | 4 | 3 | 36 | 25 | 124 | 9 | 3 | 161 | 12 | 98 | 46 | 6 | 162 | 424 |
| 08:15 AM | 37 | 12 | 11 | 2 | 62 | 20 | 32 | 11 | 4 | 67 | 25 | 121 | 12 | 6 | 164 | 4 | 109 | 55 | 0 | 168 | 461 |
| 08:30 AM | 37 | 16 | 15 | 0 | 68 | 25 | 30 | 9 | 0 | 64 | 32 | 95 | 17 | 0 | 144 | 4 | 96 | 39 | 5 | 144 | 420 |
| 08:45 AM | 47 | 27 | 23 | 1 | 98 | 15 | 25 | 13 | 8 | 61 | 27 | 95 | 24 | 16 | 162 | 11 | 78 | 50 | 0 | 139 | 460 |
| Total | 157 | 68 | 64 | 4 | 293 | 73 | 103 | 37 | 15 | 228 | 109 | 435 | 62 | 25 | 631 | 31 | 381 | 190 | 11 | 613 | 1765 |
| 09:00 AM | 37 | 17 | 24 | 0 | 78 | 16 | 13 | 24 | 3 | 56 | 23 | 76 | 15 | 1 | 115 | 11 | 96 | 36 | 4 | 147 | 396 |
| 09:15 AM | 38 | 16 | 14 | 0 | 68 | 9 | 19 | 10 | 1 | 39 | 31 | 84 | 18 | 2 | 135 | 10 | 93 | 21 | 1 | 125 | 367 |
| Grand Total | 298 | 121 | 132 | 6 | 557 | 116 | 170 | 77 | 21 | 384 | 189 | 798 | 115 | 36 | 1138 | 64 | 739 | 356 | 20 | 1179 | 3258 |
| Apprch % | 53.5 | 21.7 | 23.7 | 1.1 | | 30.2 | 44.3 | 20.1 | 5.5 | | 16.6 | 70.1 | 10.1 | 3.2 | | 5.4 | 62.7 | 30.2 | 1.7 | | |
| Total % | 9.1 | 3.7 | 4.1 | 0.2 | 17.1 | 3.6 | 5.2 | 2.4 | 0.6 | 11.8 | 5.8 | 24.5 | 3.5 | 1.1 | 34.9 | 2 | 22.7 | 10.9 | 0.6 | 36.2 | |
| Automobiles | 298 | 120 | 132 | 0 | 550 | 116 | 170 | 77 | 0 | 363 | 189 | 798 | 115 | 0 | 1102 | 64 | 739 | 356 | 0 | 1159 | 3174 |
| % Automobiles | 100 | 99.2 | 100 | 0 | 98.7 | 100 | 100 | 100 | 0 | 94.5 | 100 | 100 | 100 | 0 | 96.8 | 100 | 100 | 100 | 0 | 98.3 | 97.4 |
| Bicycles and Pedestrians | 0 | 1 | 0 | 6 | 7 | 0 | 0 | 0 | 21 | 21 | 0 | 0 | 0 | 36 | 36 | 0 | 0 | 0 | 20 | 20 | 84 |
| % Bicycles and Pedestrians | 0 | 0.8 | 0 | 100 | 1.3 | 0 | 0 | 0 | 100 | 5.5 | 0 | 0 | 0 | 100 | 3.2 | 0 | 0 | 0 | 100 | 1.7 | 2.6 |



Ridgeview Data
Collection

Breckenridge, CO
East Peak 8
Saturday AM Peak
Ski Hill Road and Park Ave (SH-9)

File Name : Ski Hill and Park Ave AM Sat
Site Code : IPO 488
Start Date : 2/1/2020
Page No : 2

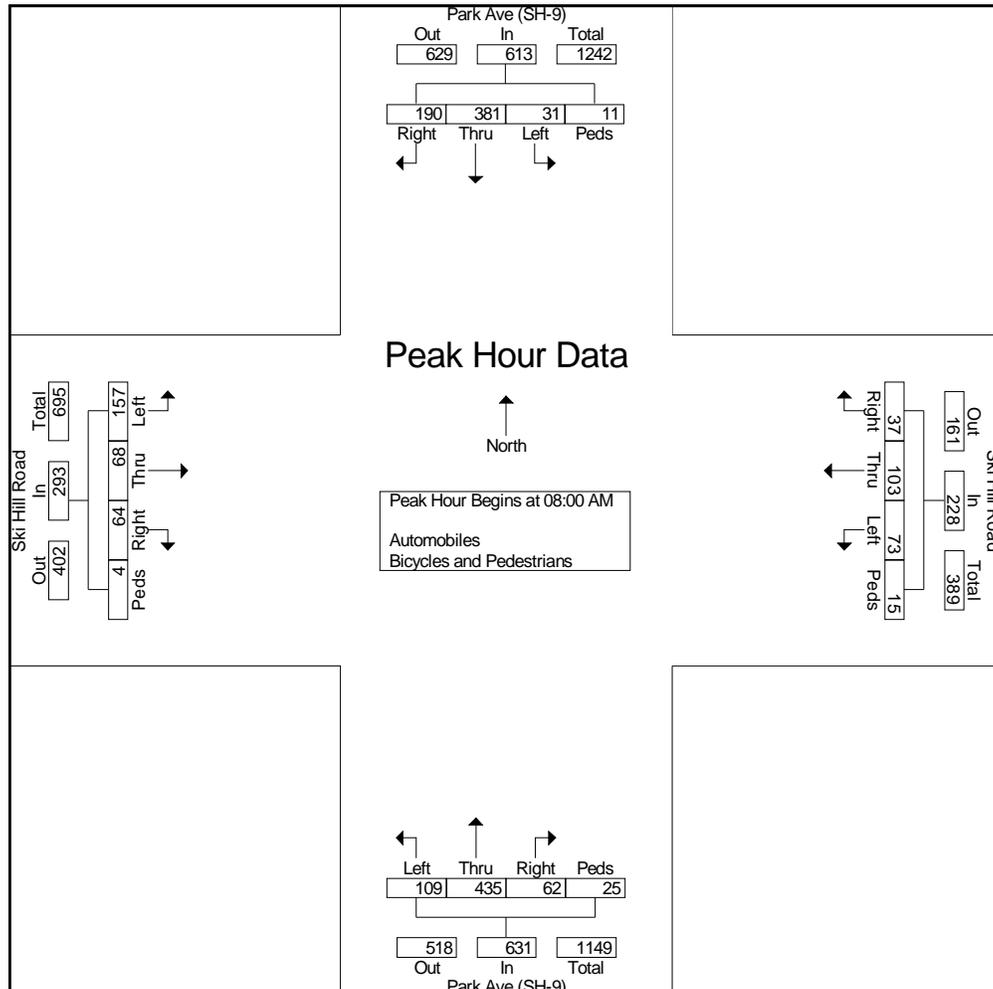




Breckenridge, CO
 East Peak 8
 Saturday AM Peak
 Ski Hill Road and Park Ave (SH-9)

File Name : Ski Hill and Park Ave AM Sat
 Site Code : IPO 488
 Start Date : 2/1/2020
 Page No : 3

| Start Time | Ski Hill Road Eastbound | | | | | Ski Hill Road Westbound | | | | | Park Ave (SH-9) Northbound | | | | | Park Ave (SH-9) Southbound | | | | | Int. Total |
|--|-------------------------|------|-------|------|------------|-------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 08:00 AM | | | | | | | | | | | | | | | | | | | | | |
| 08:00 AM | 36 | 13 | 15 | 1 | 65 | 13 | 16 | 4 | 3 | 36 | 25 | 124 | 9 | 3 | 161 | 12 | 98 | 46 | 6 | 162 | 424 |
| 08:15 AM | 37 | 12 | 11 | 2 | 62 | 20 | 32 | 11 | 4 | 67 | 25 | 121 | 12 | 6 | 164 | 4 | 109 | 55 | 0 | 168 | 461 |
| 08:30 AM | 37 | 16 | 15 | 0 | 68 | 25 | 30 | 9 | 0 | 64 | 32 | 95 | 17 | 0 | 144 | 4 | 96 | 39 | 5 | 144 | 420 |
| 08:45 AM | 47 | 27 | 23 | 1 | 98 | 15 | 25 | 13 | 8 | 61 | 27 | 95 | 24 | 16 | 162 | 11 | 78 | 50 | 0 | 139 | 460 |
| Total Volume | 157 | 68 | 64 | 4 | 293 | 73 | 103 | 37 | 15 | 228 | 109 | 435 | 62 | 25 | 631 | 31 | 381 | 190 | 11 | 613 | 1765 |
| % App. Total | 53.6 | 23.2 | 21.8 | 1.4 | | 32 | 45.2 | 16.2 | 6.6 | | 17.3 | 68.9 | 9.8 | 4 | | 5.1 | 62.2 | 31 | 1.8 | | |
| PHF | .835 | .630 | .696 | .500 | .747 | .730 | .805 | .712 | .469 | .851 | .852 | .877 | .646 | .391 | .962 | .646 | .874 | .864 | .458 | .912 | .957 |





Breckenridge, CO
 East Peak 8
 Saturday PM Peak
 Ski Hill Road and Park Ave (SH-9)

File Name : Ski Hill and Park Ave PM Sat
 Site Code : IPO 488
 Start Date : 2/1/2020
 Page No : 1

Groups Printed- Automobiles - Bicycles and Pedestrians

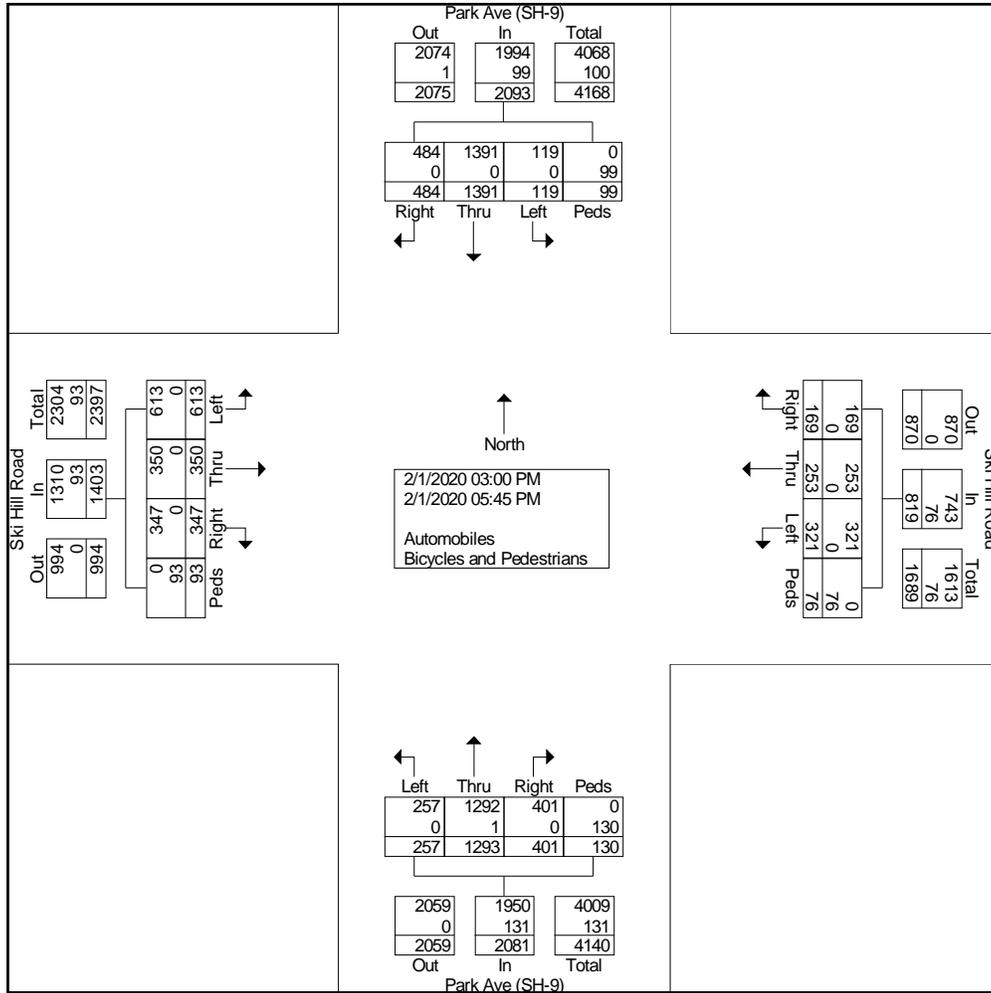
| Start Time | Ski Hill Road Eastbound | | | | | Ski Hill Road Westbound | | | | | Park Ave (SH-9) Northbound | | | | | Park Ave (SH-9) Southbound | | | | | Int. Total |
|----------------------------|-------------------------|------|-------|------|------------|-------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| 03:00 PM | 46 | 17 | 23 | 8 | 94 | 21 | 14 | 11 | 3 | 49 | 23 | 106 | 33 | 7 | 169 | 12 | 124 | 46 | 6 | 188 | 500 |
| 03:15 PM | 40 | 23 | 31 | 5 | 99 | 29 | 29 | 21 | 7 | 86 | 25 | 108 | 24 | 5 | 162 | 7 | 129 | 40 | 2 | 178 | 525 |
| 03:30 PM | 41 | 22 | 26 | 14 | 103 | 29 | 16 | 17 | 6 | 68 | 26 | 118 | 31 | 10 | 185 | 11 | 98 | 41 | 16 | 166 | 522 |
| 03:45 PM | 73 | 32 | 27 | 22 | 154 | 19 | 28 | 13 | 9 | 69 | 22 | 109 | 36 | 3 | 170 | 10 | 81 | 27 | 11 | 129 | 522 |
| Total | 200 | 94 | 107 | 49 | 450 | 98 | 87 | 62 | 25 | 272 | 96 | 441 | 124 | 25 | 686 | 40 | 432 | 154 | 35 | 661 | 2069 |
| 04:00 PM | 51 | 27 | 26 | 5 | 109 | 33 | 21 | 11 | 11 | 76 | 19 | 105 | 36 | 4 | 164 | 9 | 119 | 56 | 12 | 196 | 545 |
| 04:15 PM | 50 | 30 | 39 | 8 | 127 | 31 | 23 | 17 | 7 | 78 | 19 | 105 | 26 | 17 | 167 | 5 | 119 | 47 | 1 | 172 | 544 |
| 04:30 PM | 58 | 27 | 29 | 6 | 120 | 27 | 26 | 17 | 7 | 77 | 26 | 126 | 46 | 22 | 220 | 9 | 92 | 31 | 4 | 136 | 553 |
| 04:45 PM | 54 | 34 | 30 | 8 | 126 | 26 | 15 | 16 | 4 | 61 | 21 | 138 | 33 | 14 | 206 | 11 | 134 | 38 | 8 | 191 | 584 |
| Total | 213 | 118 | 124 | 27 | 482 | 117 | 85 | 61 | 29 | 292 | 85 | 474 | 141 | 57 | 757 | 34 | 464 | 172 | 25 | 695 | 2226 |
| 05:00 PM | 60 | 34 | 37 | 10 | 141 | 25 | 23 | 13 | 0 | 61 | 21 | 103 | 38 | 14 | 176 | 14 | 123 | 43 | 12 | 192 | 570 |
| 05:15 PM | 48 | 27 | 25 | 2 | 102 | 23 | 19 | 13 | 0 | 55 | 22 | 89 | 35 | 1 | 147 | 12 | 132 | 35 | 3 | 182 | 486 |
| 05:30 PM | 48 | 42 | 19 | 2 | 111 | 31 | 22 | 10 | 14 | 77 | 18 | 83 | 41 | 16 | 158 | 8 | 111 | 38 | 14 | 171 | 517 |
| 05:45 PM | 44 | 35 | 35 | 3 | 117 | 27 | 17 | 10 | 8 | 62 | 15 | 103 | 22 | 17 | 157 | 11 | 129 | 42 | 10 | 192 | 528 |
| Total | 200 | 138 | 116 | 17 | 471 | 106 | 81 | 46 | 22 | 255 | 76 | 378 | 136 | 48 | 638 | 45 | 495 | 158 | 39 | 737 | 2101 |
| Grand Total | 613 | 350 | 347 | 93 | 1403 | 321 | 253 | 169 | 76 | 819 | 257 | 1293 | 401 | 130 | 2081 | 119 | 1391 | 484 | 99 | 2093 | 6396 |
| Apprch % | 43.7 | 24.9 | 24.7 | 6.6 | | 39.2 | 30.9 | 20.6 | 9.3 | | 12.3 | 62.1 | 19.3 | 6.2 | | 5.7 | 66.5 | 23.1 | 4.7 | | |
| Total % | 9.6 | 5.5 | 5.4 | 1.5 | 21.9 | 5 | 4 | 2.6 | 1.2 | 12.8 | 4 | 20.2 | 6.3 | 2 | 32.5 | 1.9 | 21.7 | 7.6 | 1.5 | 32.7 | |
| Automobiles | 613 | 350 | 347 | 0 | 1310 | 321 | 253 | 169 | 0 | 743 | 257 | 1292 | 401 | 0 | 1950 | 119 | 1391 | 484 | 0 | 1994 | 5997 |
| % Automobiles | 100 | 100 | 100 | 0 | 93.4 | 100 | 100 | 100 | 0 | 90.7 | 100 | 99.9 | 100 | 0 | 93.7 | 100 | 100 | 100 | 0 | 95.3 | 93.8 |
| Bicycles and Pedestrians | 0 | 0 | 0 | 93 | 93 | 0 | 0 | 0 | 76 | 76 | 0 | 1 | 0 | 130 | 131 | 0 | 0 | 0 | 99 | 99 | 399 |
| % Bicycles and Pedestrians | 0 | 0 | 0 | 100 | 6.6 | 0 | 0 | 0 | 100 | 9.3 | 0 | 0.1 | 0 | 100 | 6.3 | 0 | 0 | 0 | 100 | 4.7 | 6.2 |



Ridgeview Data
Collection

Breckenridge, CO
East Peak 8
Saturday PM Peak
Ski Hill Road and Park Ave (SH-9)

File Name : Ski Hill and Park Ave PM Sat
Site Code : IPO 488
Start Date : 2/1/2020
Page No : 2

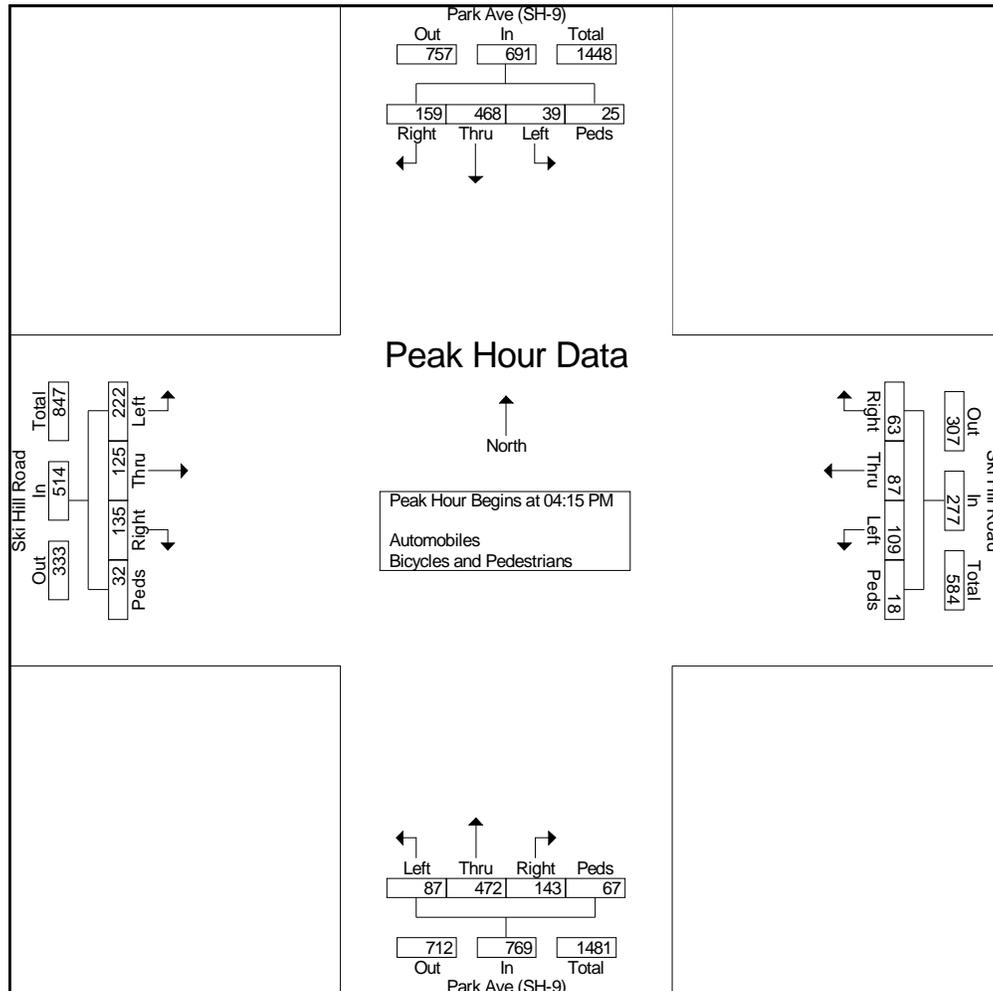




Breckenridge, CO
 East Peak 8
 Saturday PM Peak
 Ski Hill Road and Park Ave (SH-9)

File Name : Ski Hill and Park Ave PM Sat
 Site Code : IPO 488
 Start Date : 2/1/2020
 Page No : 3

| Start Time | Ski Hill Road Eastbound | | | | | Ski Hill Road Westbound | | | | | Park Ave (SH-9) Northbound | | | | | Park Ave (SH-9) Southbound | | | | | Int. Total |
|--|-------------------------|-----------|-----------|-----------|------------|-------------------------|-----------|-----------|----------|------------|----------------------------|------------|-----------|-----------|------------|----------------------------|------------|-----------|-----------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:15 PM | | | | | | | | | | | | | | | | | | | | | |
| 04:15 PM | 50 | 30 | 39 | 8 | 127 | 31 | 23 | 17 | 7 | 78 | 19 | 105 | 26 | 17 | 167 | 5 | 119 | 47 | 1 | 172 | 544 |
| 04:30 PM | 58 | 27 | 29 | 6 | 120 | 27 | 26 | 17 | 7 | 77 | 26 | 126 | 46 | 22 | 220 | 9 | 92 | 31 | 4 | 136 | 553 |
| 04:45 PM | 54 | 34 | 30 | 8 | 126 | 26 | 15 | 16 | 4 | 61 | 21 | 138 | 33 | 14 | 206 | 11 | 134 | 38 | 8 | 191 | 584 |
| 05:00 PM | 60 | 34 | 37 | 10 | 141 | 25 | 23 | 13 | 0 | 61 | 21 | 103 | 38 | 14 | 176 | 14 | 123 | 43 | 12 | 192 | 570 |
| Total Volume | 222 | 125 | 135 | 32 | 514 | 109 | 87 | 63 | 18 | 277 | 87 | 472 | 143 | 67 | 769 | 39 | 468 | 159 | 25 | 691 | 2251 |
| % App. Total | 43.2 | 24.3 | 26.3 | 6.2 | | 39.4 | 31.4 | 22.7 | 6.5 | | 11.3 | 61.4 | 18.6 | 8.7 | | 5.6 | 67.7 | 23 | 3.6 | | |
| PHF | .925 | .919 | .865 | .800 | .911 | .879 | .837 | .926 | .643 | .888 | .837 | .855 | .777 | .761 | .874 | .696 | .873 | .846 | .521 | .900 | .964 |





Breckenridge, CO
 East Peak 8
 Saturday AM Peak
 Ski Hill Road/Lincoln & Main St

File Name : Ski Hill and Main AM Sat
 Site Code : IPO 488
 Start Date : 2/1/2020
 Page No : 1

Groups Printed- Automobiles - Bicycles and Pedestrians

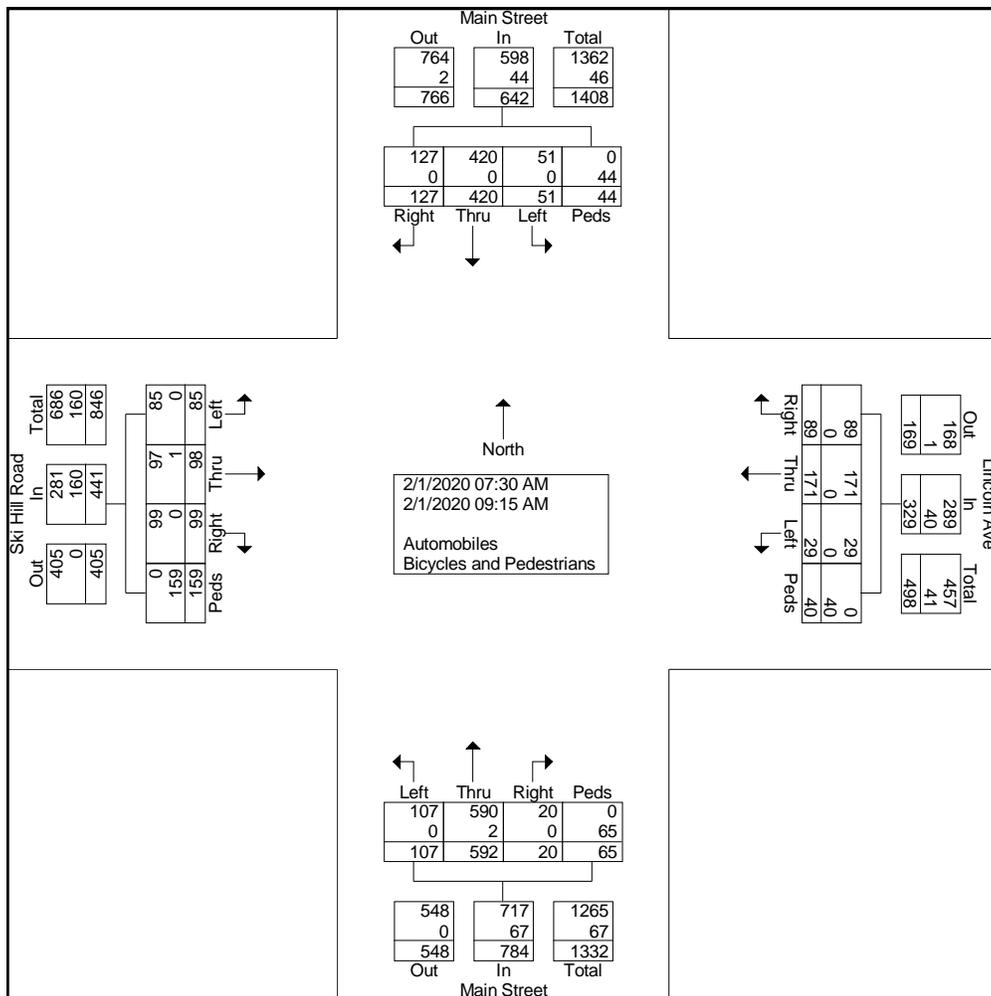
| Start Time | Ski Hill Road Eastbound | | | | | Lincoln Ave Westbound | | | | | Main Street Northbound | | | | | Main Street Southbound | | | | | Int. Total |
|----------------------------|-------------------------|------|-------|------|------------|-----------------------|------|-------|------|------------|------------------------|------|-------|------|------------|------------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| 07:30 AM | 5 | 5 | 7 | 7 | 24 | 2 | 10 | 11 | 0 | 23 | 6 | 93 | 1 | 7 | 107 | 5 | 32 | 11 | 2 | 50 | 204 |
| 07:45 AM | 6 | 10 | 10 | 15 | 41 | 3 | 14 | 12 | 5 | 34 | 13 | 81 | 2 | 2 | 98 | 4 | 50 | 12 | 3 | 69 | 242 |
| Total | 11 | 15 | 17 | 22 | 65 | 5 | 24 | 23 | 5 | 57 | 19 | 174 | 3 | 9 | 205 | 9 | 82 | 23 | 5 | 119 | 446 |
| 08:00 AM | 17 | 9 | 8 | 5 | 39 | 2 | 14 | 17 | 5 | 38 | 8 | 97 | 3 | 13 | 121 | 6 | 60 | 13 | 5 | 84 | 282 |
| 08:15 AM | 7 | 11 | 12 | 11 | 41 | 6 | 27 | 11 | 6 | 50 | 14 | 66 | 2 | 10 | 92 | 6 | 71 | 24 | 3 | 104 | 287 |
| 08:30 AM | 8 | 13 | 8 | 38 | 67 | 4 | 30 | 8 | 1 | 43 | 13 | 55 | 3 | 0 | 71 | 5 | 46 | 12 | 5 | 68 | 249 |
| 08:45 AM | 18 | 15 | 18 | 16 | 67 | 4 | 21 | 10 | 1 | 36 | 24 | 59 | 1 | 9 | 93 | 9 | 42 | 17 | 14 | 82 | 278 |
| Total | 50 | 48 | 46 | 70 | 214 | 16 | 92 | 46 | 13 | 167 | 59 | 277 | 9 | 32 | 377 | 26 | 219 | 66 | 27 | 338 | 1096 |
| 09:00 AM | 15 | 21 | 20 | 25 | 81 | 4 | 35 | 13 | 7 | 59 | 13 | 70 | 6 | 8 | 97 | 11 | 57 | 19 | 2 | 89 | 326 |
| 09:15 AM | 9 | 14 | 16 | 42 | 81 | 4 | 20 | 7 | 15 | 46 | 16 | 71 | 2 | 16 | 105 | 5 | 62 | 19 | 10 | 96 | 328 |
| Grand Total | 85 | 98 | 99 | 159 | 441 | 29 | 171 | 89 | 40 | 329 | 107 | 592 | 20 | 65 | 784 | 51 | 420 | 127 | 44 | 642 | 2196 |
| Apprch % | 19.3 | 22.2 | 22.4 | 36.1 | | 8.8 | 52 | 27.1 | 12.2 | | 13.6 | 75.5 | 2.6 | 8.3 | | 7.9 | 65.4 | 19.8 | 6.9 | | |
| Total % | 3.9 | 4.5 | 4.5 | 7.2 | 20.1 | 1.3 | 7.8 | 4.1 | 1.8 | 15 | 4.9 | 27 | 0.9 | 3 | 35.7 | 2.3 | 19.1 | 5.8 | 2 | 29.2 | |
| Automobiles | 85 | 97 | 99 | 0 | 281 | 29 | 171 | 89 | 0 | 289 | 107 | 590 | 20 | 0 | 717 | 51 | 420 | 127 | 0 | 598 | 1885 |
| % Automobiles | 100 | 99 | 100 | 0 | 63.7 | 100 | 100 | 100 | 0 | 87.8 | 100 | 99.7 | 100 | 0 | 91.5 | 100 | 100 | 100 | 0 | 93.1 | 85.8 |
| Bicycles and Pedestrians | 0 | 1 | 0 | 159 | 160 | 0 | 0 | 0 | 40 | 40 | 0 | 2 | 0 | 65 | 67 | 0 | 0 | 0 | 44 | 44 | 311 |
| % Bicycles and Pedestrians | 0 | 1 | 0 | 100 | 36.3 | 0 | 0 | 0 | 100 | 12.2 | 0 | 0.3 | 0 | 100 | 8.5 | 0 | 0 | 0 | 100 | 6.9 | 14.2 |



Ridgeview Data
Collection

Breckenridge, CO
East Peak 8
Saturday AM Peak
Ski Hill Road/Lincoln & Main St

File Name : Ski Hill and Main AM Sat
Site Code : IPO 488
Start Date : 2/1/2020
Page No : 2

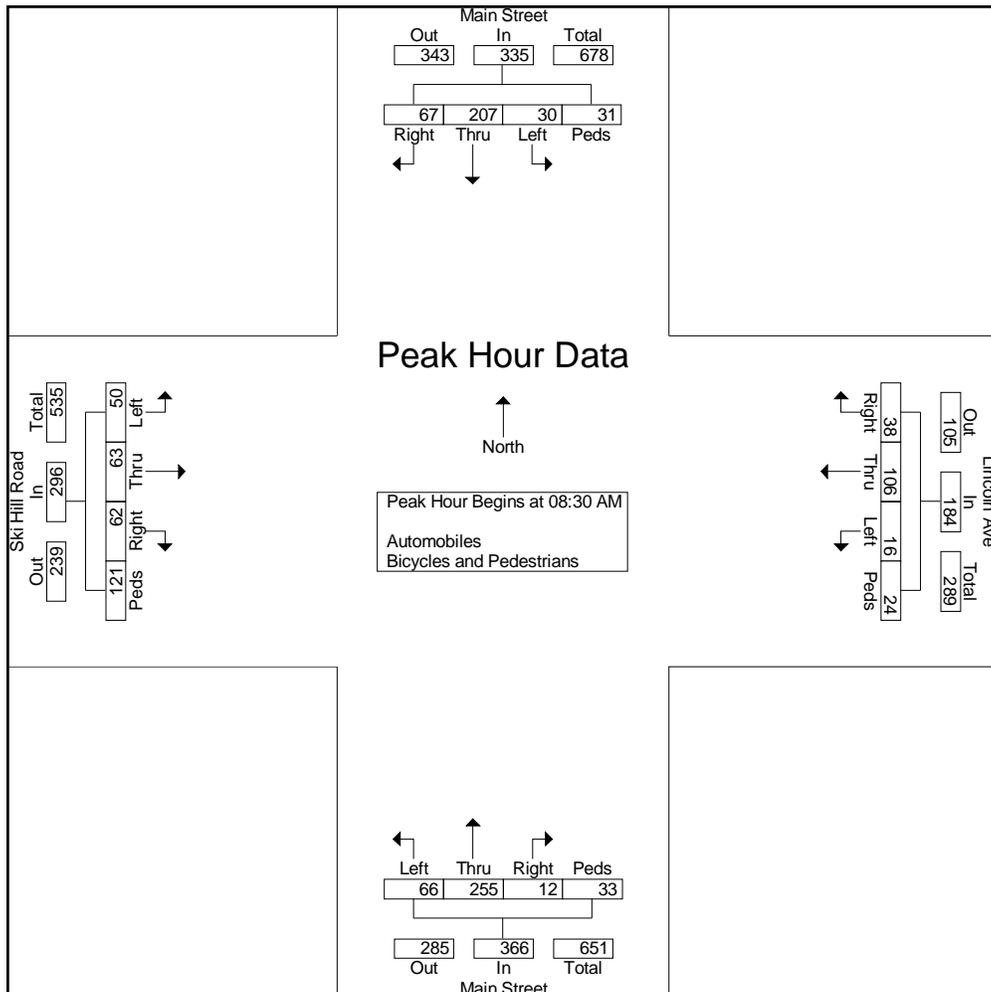




Breckenridge, CO
 East Peak 8
 Saturday AM Peak
 Ski Hill Road/Lincoln & Main St

File Name : Ski Hill and Main AM Sat
 Site Code : IPO 488
 Start Date : 2/1/2020
 Page No : 3

| Start Time | Ski Hill Road Eastbound | | | | | Lincoln Ave Westbound | | | | | Main Street Northbound | | | | | Main Street Southbound | | | | | Int. Total |
|--|-------------------------|------|-------|------|------------|-----------------------|------|-------|------|------------|------------------------|------|-------|------|------------|------------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 08:30 AM | | | | | | | | | | | | | | | | | | | | | |
| 08:30 AM | 8 | 13 | 8 | 38 | 67 | 4 | 30 | 8 | 1 | 43 | 13 | 55 | 3 | 0 | 71 | 5 | 46 | 12 | 5 | 68 | 249 |
| 08:45 AM | 18 | 15 | 18 | 16 | 67 | 4 | 21 | 10 | 1 | 36 | 24 | 59 | 1 | 9 | 93 | 9 | 42 | 17 | 14 | 82 | 278 |
| 09:00 AM | 15 | 21 | 20 | 25 | 81 | 4 | 35 | 13 | 7 | 59 | 13 | 70 | 6 | 8 | 97 | 11 | 57 | 19 | 2 | 89 | 326 |
| 09:15 AM | 9 | 14 | 16 | 42 | 81 | 4 | 20 | 7 | 15 | 46 | 16 | 71 | 2 | 16 | 105 | 5 | 62 | 19 | 10 | 96 | 328 |
| Total Volume | 50 | 63 | 62 | 121 | 296 | 16 | 106 | 38 | 24 | 184 | 66 | 255 | 12 | 33 | 366 | 30 | 207 | 67 | 31 | 335 | 1181 |
| % App. Total | 16.9 | 21.3 | 20.9 | 40.9 | | 8.7 | 57.6 | 20.7 | 13 | | 18 | 69.7 | 3.3 | 9 | | 9 | 61.8 | 20 | 9.3 | | |
| PHF | .694 | .750 | .775 | .720 | .914 | 1.00 | .757 | .731 | .400 | .780 | .688 | .898 | .500 | .516 | .871 | .682 | .835 | .882 | .554 | .872 | .900 |





Breckenridge, CO
 East Peak 8
 Saturday PM Peak
 Ski Hill Road/Lincoln & Main St

File Name : Ski Hill and Main PM Sat
 Site Code : IPO 488
 Start Date : 2/1/2020
 Page No : 1

Groups Printed- Automobiles - Bicycles and Pedestrians

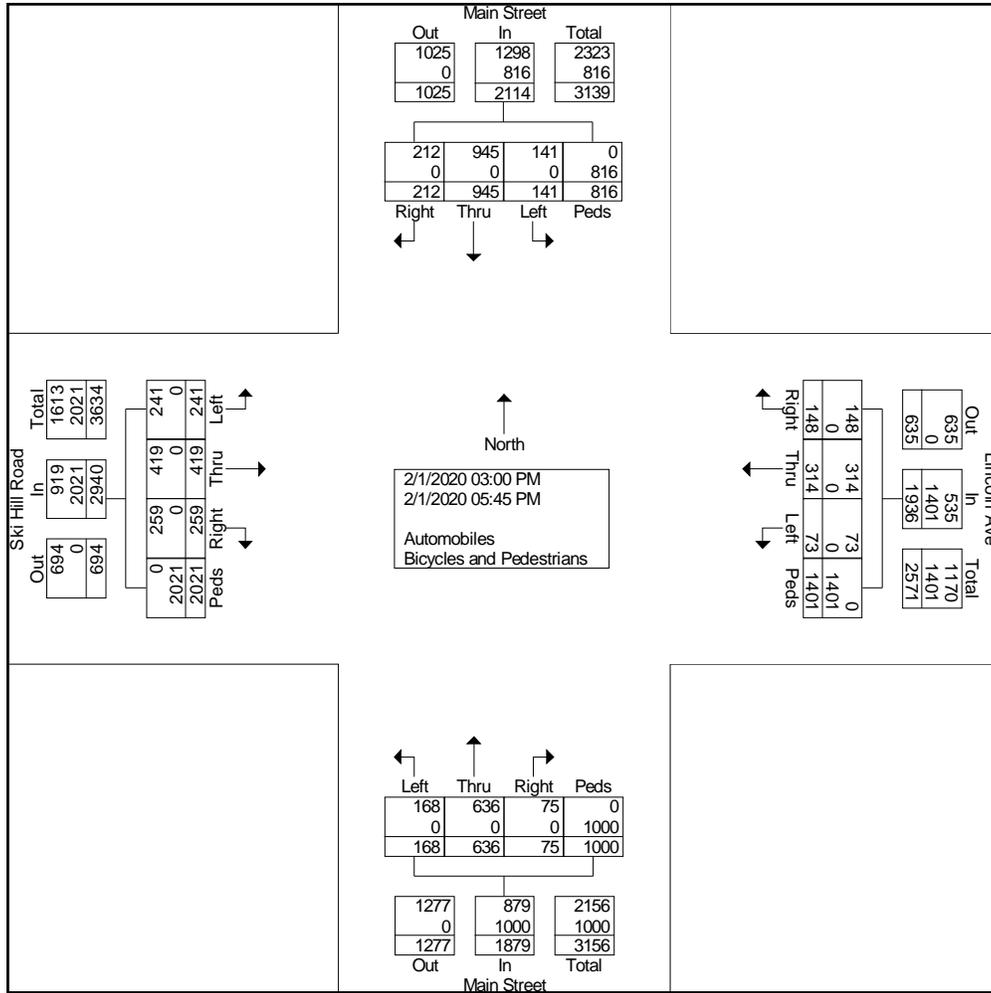
| Start Time | Ski Hill Road Eastbound | | | | | Lincoln Ave Westbound | | | | | Main Street Northbound | | | | | Main Street Southbound | | | | | Int. Total |
|----------------------------|-------------------------|------|-------|------|------------|-----------------------|------|-------|------|------------|------------------------|------|-------|------|------------|------------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| 03:00 PM | 16 | 15 | 24 | 161 | 216 | 6 | 21 | 13 | 110 | 150 | 10 | 58 | 2 | 55 | 125 | 10 | 87 | 19 | 57 | 173 | 664 |
| 03:15 PM | 16 | 21 | 21 | 130 | 188 | 4 | 27 | 4 | 115 | 150 | 18 | 57 | 6 | 77 | 158 | 5 | 79 | 20 | 44 | 148 | 644 |
| 03:30 PM | 21 | 34 | 16 | 159 | 230 | 4 | 29 | 15 | 128 | 176 | 14 | 53 | 3 | 56 | 126 | 5 | 86 | 20 | 45 | 156 | 688 |
| 03:45 PM | 29 | 37 | 24 | 153 | 243 | 3 | 27 | 13 | 83 | 126 | 12 | 66 | 4 | 87 | 169 | 10 | 90 | 14 | 58 | 172 | 710 |
| Total | 82 | 107 | 85 | 603 | 877 | 17 | 104 | 45 | 436 | 602 | 54 | 234 | 15 | 275 | 578 | 30 | 342 | 73 | 204 | 649 | 2706 |
| 04:00 PM | 25 | 42 | 18 | 143 | 228 | 4 | 31 | 14 | 83 | 132 | 21 | 65 | 3 | 90 | 179 | 12 | 86 | 14 | 59 | 171 | 710 |
| 04:15 PM | 14 | 43 | 15 | 202 | 274 | 5 | 32 | 10 | 103 | 150 | 20 | 53 | 1 | 75 | 149 | 20 | 93 | 14 | 58 | 185 | 758 |
| 04:30 PM | 21 | 56 | 17 | 186 | 280 | 9 | 31 | 11 | 120 | 171 | 11 | 57 | 5 | 58 | 131 | 15 | 70 | 20 | 51 | 156 | 738 |
| 04:45 PM | 18 | 33 | 19 | 169 | 239 | 5 | 30 | 16 | 97 | 148 | 9 | 47 | 5 | 98 | 159 | 13 | 83 | 15 | 57 | 168 | 714 |
| Total | 78 | 174 | 69 | 700 | 1021 | 23 | 124 | 51 | 403 | 601 | 61 | 222 | 14 | 321 | 618 | 60 | 332 | 63 | 225 | 680 | 2920 |
| 05:00 PM | 20 | 44 | 19 | 159 | 242 | 7 | 23 | 12 | 136 | 178 | 18 | 43 | 9 | 98 | 168 | 16 | 70 | 16 | 77 | 179 | 767 |
| 05:15 PM | 17 | 31 | 28 | 211 | 287 | 7 | 21 | 12 | 122 | 162 | 13 | 50 | 14 | 64 | 141 | 13 | 77 | 17 | 118 | 225 | 815 |
| 05:30 PM | 17 | 33 | 28 | 140 | 218 | 11 | 21 | 11 | 138 | 181 | 8 | 34 | 11 | 111 | 164 | 8 | 56 | 27 | 75 | 166 | 729 |
| 05:45 PM | 27 | 30 | 30 | 208 | 295 | 8 | 21 | 17 | 166 | 212 | 14 | 53 | 12 | 131 | 210 | 14 | 68 | 16 | 117 | 215 | 932 |
| Total | 81 | 138 | 105 | 718 | 1042 | 33 | 86 | 52 | 562 | 733 | 53 | 180 | 46 | 404 | 683 | 51 | 271 | 76 | 387 | 785 | 3243 |
| Grand Total | 241 | 419 | 259 | 2021 | 2940 | 73 | 314 | 148 | 1401 | 1936 | 168 | 636 | 75 | 1000 | 1879 | 141 | 945 | 212 | 816 | 2114 | 8869 |
| Apprch % | 8.2 | 14.3 | 8.8 | 68.7 | | 3.8 | 16.2 | 7.6 | 72.4 | | 8.9 | 33.8 | 4 | 53.2 | | 6.7 | 44.7 | 10 | 38.6 | | |
| Total % | 2.7 | 4.7 | 2.9 | 22.8 | 33.1 | 0.8 | 3.5 | 1.7 | 15.8 | 21.8 | 1.9 | 7.2 | 0.8 | 11.3 | 21.2 | 1.6 | 10.7 | 2.4 | 9.2 | 23.8 | |
| Automobiles | 241 | 419 | 259 | 0 | 919 | 73 | 314 | 148 | 0 | 535 | 168 | 636 | 75 | 0 | 879 | 141 | 945 | 212 | 0 | 1298 | 3631 |
| % Automobiles | 100 | 100 | 100 | 0 | 31.3 | 100 | 100 | 100 | 0 | 27.6 | 100 | 100 | 100 | 0 | 46.8 | 100 | 100 | 100 | 0 | 61.4 | 40.9 |
| Bicycles and Pedestrians | 0 | 0 | 0 | 2021 | 2021 | 0 | 0 | 0 | 1401 | 1401 | 0 | 0 | 0 | 1000 | 1000 | 0 | 0 | 0 | 816 | 816 | 5238 |
| % Bicycles and Pedestrians | 0 | 0 | 0 | 100 | 68.7 | 0 | 0 | 0 | 100 | 72.4 | 0 | 0 | 0 | 100 | 53.2 | 0 | 0 | 0 | 100 | 38.6 | 59.1 |



Ridgeview Data
Collection

Breckenridge, CO
East Peak 8
Saturday PM Peak
Ski Hill Road/Lincoln & Main St

File Name : Ski Hill and Main PM Sat
Site Code : IPO 488
Start Date : 2/1/2020
Page No : 2

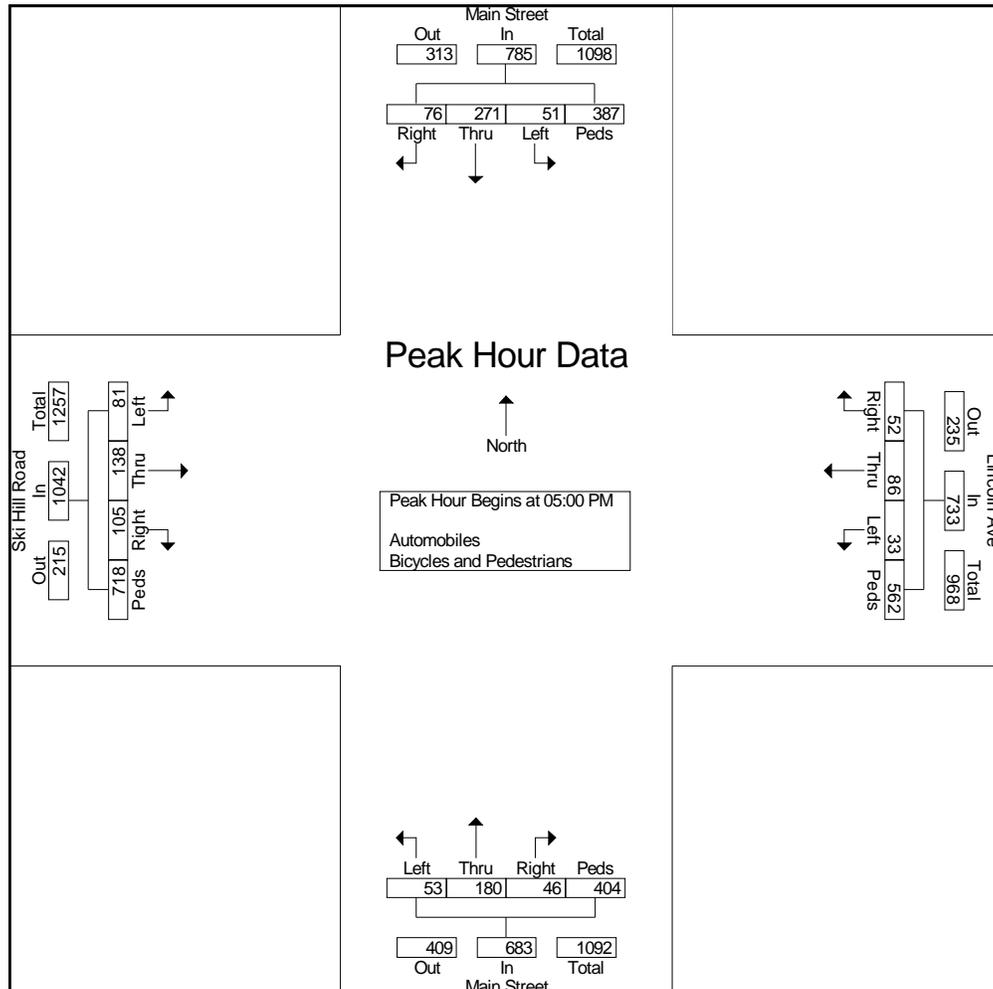




Breckenridge, CO
 East Peak 8
 Saturday PM Peak
 Ski Hill Road/Lincoln & Main St

File Name : Ski Hill and Main PM Sat
 Site Code : IPO 488
 Start Date : 2/1/2020
 Page No : 3

| Start Time | Ski Hill Road Eastbound | | | | | Lincoln Ave Westbound | | | | | Main Street Northbound | | | | | Main Street Southbound | | | | | Int. Total |
|--|-------------------------|------|-------|------|------------|-----------------------|------|-------|------|------------|------------------------|------|-------|------|------------|------------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 05:00 PM | | | | | | | | | | | | | | | | | | | | | |
| 05:00 PM | 20 | 44 | 19 | 159 | 242 | 7 | 23 | 12 | 136 | 178 | 18 | 43 | 9 | 98 | 168 | 16 | 70 | 16 | 77 | 179 | 767 |
| 05:15 PM | 17 | 31 | 28 | 211 | 287 | 7 | 21 | 12 | 122 | 162 | 13 | 50 | 14 | 64 | 141 | 13 | 77 | 17 | 118 | 225 | 815 |
| 05:30 PM | 17 | 33 | 28 | 140 | 218 | 11 | 21 | 11 | 138 | 181 | 8 | 34 | 11 | 111 | 164 | 8 | 56 | 27 | 75 | 166 | 729 |
| 05:45 PM | 27 | 30 | 30 | 208 | 295 | 8 | 21 | 17 | 166 | 212 | 14 | 53 | 12 | 131 | 210 | 14 | 68 | 16 | 117 | 215 | 932 |
| Total Volume | 81 | 138 | 105 | 718 | 1042 | 33 | 86 | 52 | 562 | 733 | 53 | 180 | 46 | 404 | 683 | 51 | 271 | 76 | 387 | 785 | 3243 |
| % App. Total | 7.8 | 13.2 | 10.1 | 68.9 | | 4.5 | 11.7 | 7.1 | 76.7 | | 7.8 | 26.4 | 6.7 | 59.2 | | 6.5 | 34.5 | 9.7 | 49.3 | | |
| PHF | .750 | .784 | .875 | .851 | .883 | .750 | .935 | .765 | .846 | .864 | .736 | .849 | .821 | .771 | .813 | .797 | .880 | .704 | .820 | .872 | .870 |





Breckenridge, CO
 East Peak 8
 Saturday AM Peak
 4 O'Clock Rd and Park Ave (SH-9) RAB

File Name : 4 OClock and Park Ave AM Sat
 Site Code : IPO 488
 Start Date : 2/1/2020
 Page No : 1

Groups Printed- Automobiles - Bicycles and Pedestrians

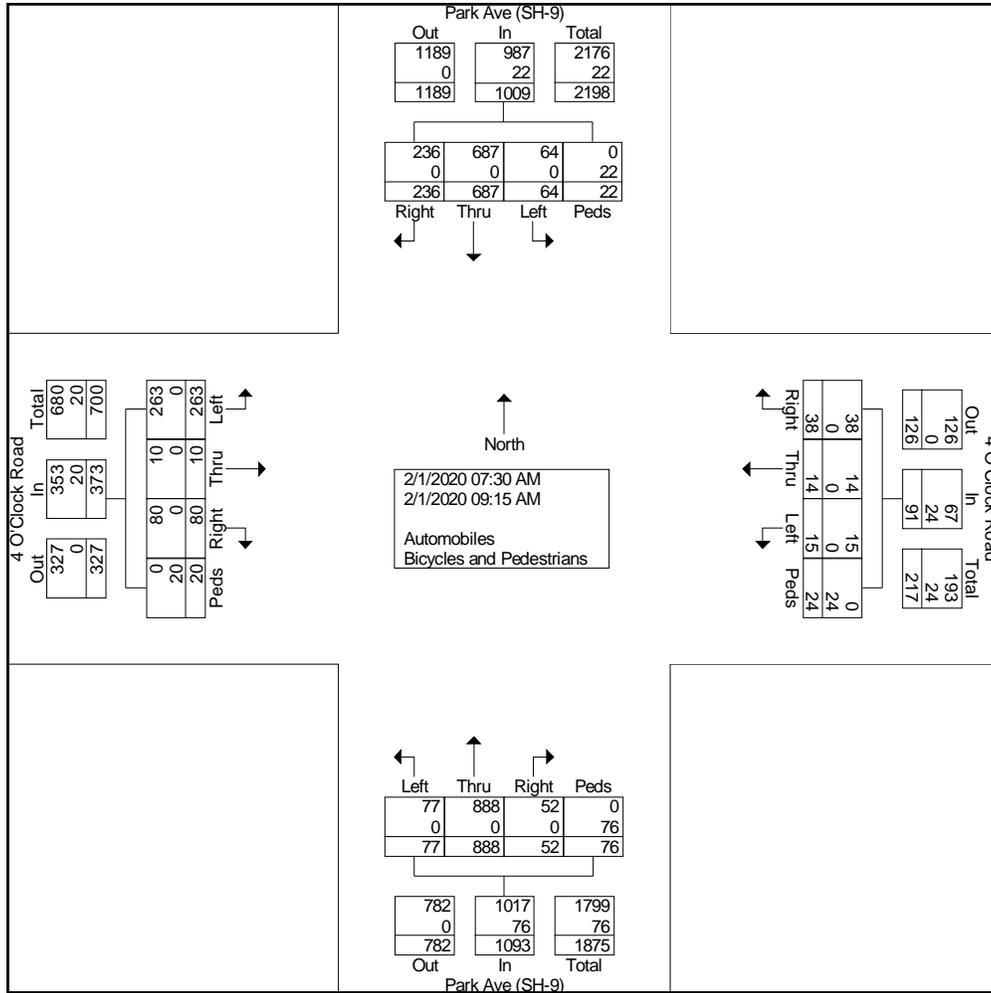
| Start Time | 4 O'Clock Road Eastbound | | | | | 4 O'Clock Road Westbound | | | | | Park Ave (SH-9) Northbound | | | | | Park Ave (SH-9) Southbound | | | | | Int. Total |
|----------------------------|--------------------------|------|-------|------|------------|--------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| 07:30 AM | 12 | 0 | 5 | 1 | 18 | 1 | 1 | 4 | 1 | 7 | 3 | 76 | 0 | 8 | 87 | 4 | 73 | 20 | 0 | 97 | 209 |
| 07:45 AM | 40 | 0 | 11 | 1 | 52 | 1 | 1 | 1 | 6 | 9 | 4 | 124 | 6 | 11 | 145 | 3 | 86 | 26 | 4 | 119 | 325 |
| Total | 52 | 0 | 16 | 2 | 70 | 2 | 2 | 5 | 7 | 16 | 7 | 200 | 6 | 19 | 232 | 7 | 159 | 46 | 4 | 216 | 534 |
| 08:00 AM | 35 | 1 | 9 | 3 | 48 | 3 | 0 | 4 | 4 | 11 | 9 | 120 | 0 | 9 | 138 | 6 | 88 | 38 | 3 | 135 | 332 |
| 08:15 AM | 36 | 3 | 10 | 2 | 51 | 1 | 1 | 7 | 1 | 10 | 13 | 108 | 2 | 8 | 131 | 9 | 93 | 36 | 3 | 141 | 333 |
| 08:30 AM | 32 | 1 | 8 | 8 | 49 | 2 | 1 | 4 | 2 | 9 | 14 | 101 | 2 | 10 | 127 | 9 | 101 | 26 | 2 | 138 | 323 |
| 08:45 AM | 40 | 1 | 10 | 3 | 54 | 3 | 4 | 3 | 0 | 10 | 12 | 109 | 8 | 14 | 143 | 8 | 79 | 29 | 1 | 117 | 324 |
| Total | 143 | 6 | 37 | 16 | 202 | 9 | 6 | 18 | 7 | 40 | 48 | 438 | 12 | 41 | 539 | 32 | 361 | 129 | 9 | 531 | 1312 |
| 09:00 AM | 36 | 3 | 14 | 0 | 53 | 1 | 4 | 11 | 3 | 19 | 9 | 133 | 10 | 8 | 160 | 16 | 91 | 28 | 2 | 137 | 369 |
| 09:15 AM | 32 | 1 | 13 | 2 | 48 | 3 | 2 | 4 | 7 | 16 | 13 | 117 | 24 | 8 | 162 | 9 | 76 | 33 | 7 | 125 | 351 |
| Grand Total | 263 | 10 | 80 | 20 | 373 | 15 | 14 | 38 | 24 | 91 | 77 | 888 | 52 | 76 | 1093 | 64 | 687 | 236 | 22 | 1009 | 2566 |
| Apprch % | 70.5 | 2.7 | 21.4 | 5.4 | | 16.5 | 15.4 | 41.8 | 26.4 | | 7 | 81.2 | 4.8 | 7 | | 6.3 | 68.1 | 23.4 | 2.2 | | |
| Total % | 10.2 | 0.4 | 3.1 | 0.8 | 14.5 | 0.6 | 0.5 | 1.5 | 0.9 | 3.5 | 3 | 34.6 | 2 | 3 | 42.6 | 2.5 | 26.8 | 9.2 | 0.9 | 39.3 | |
| Automobiles | 263 | 10 | 80 | 0 | 353 | 15 | 14 | 38 | 0 | 67 | 77 | 888 | 52 | 0 | 1017 | 64 | 687 | 236 | 0 | 987 | 2424 |
| % Automobiles | 100 | 100 | 100 | 0 | 94.6 | 100 | 100 | 100 | 0 | 73.6 | 100 | 100 | 100 | 0 | 93 | 100 | 100 | 100 | 0 | 97.8 | 94.5 |
| Bicycles and Pedestrians | 0 | 0 | 0 | 20 | 20 | 0 | 0 | 0 | 24 | 24 | 0 | 0 | 0 | 76 | 76 | 0 | 0 | 0 | 22 | 22 | 142 |
| % Bicycles and Pedestrians | 0 | 0 | 0 | 100 | 5.4 | 0 | 0 | 0 | 100 | 26.4 | 0 | 0 | 0 | 100 | 7 | 0 | 0 | 0 | 100 | 2.2 | 5.5 |



Ridgeview Data
Collection

Breckenridge, CO
East Peak 8
Saturday AM Peak
4 O'Clock Rd and Park Ave (SH-9) RAB

File Name : 4 O'Clock and Park Ave AM Sat
Site Code : IPO 488
Start Date : 2/1/2020
Page No : 2

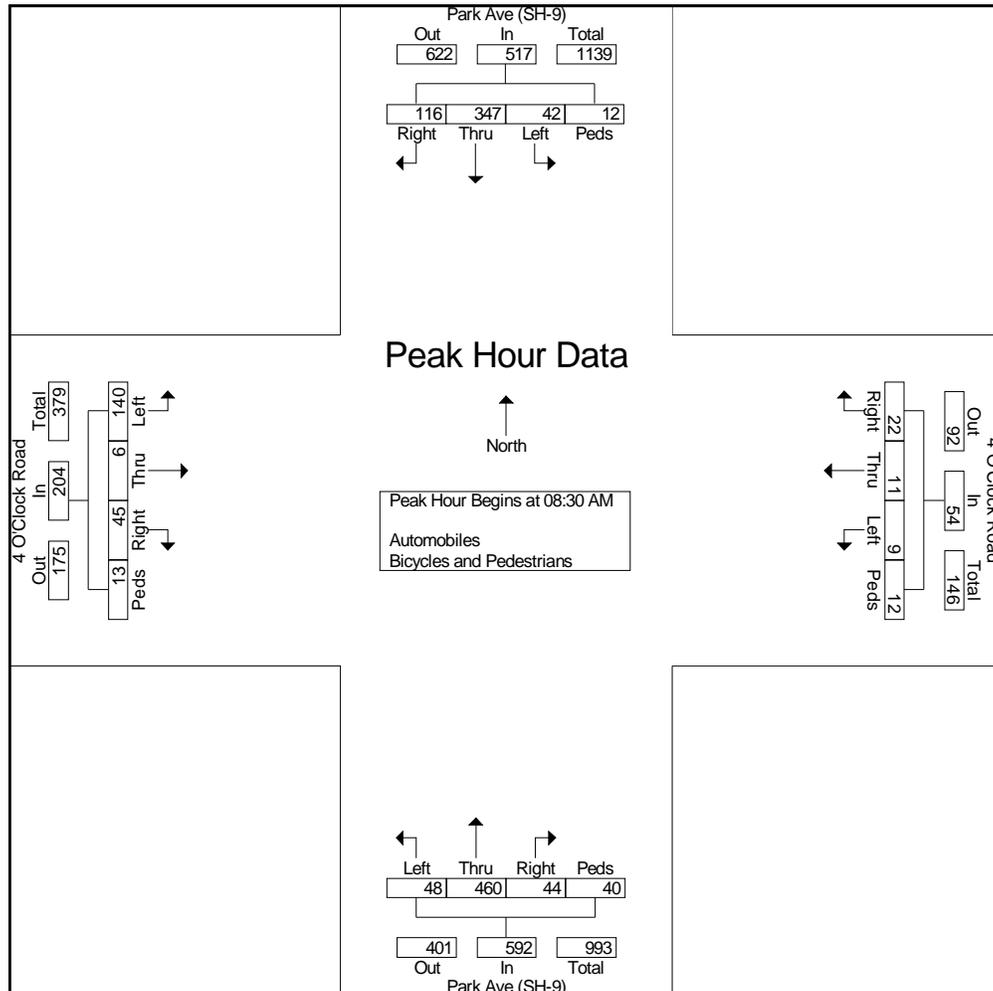




Breckenridge, CO
 East Peak 8
 Saturday AM Peak
 4 O'Clock Rd and Park Ave (SH-9) RAB

File Name : 4 O'Clock and Park Ave AM Sat
 Site Code : IPO 488
 Start Date : 2/1/2020
 Page No : 3

| Start Time | 4 O'Clock Road Eastbound | | | | | 4 O'Clock Road Westbound | | | | | Park Ave (SH-9) Northbound | | | | | Park Ave (SH-9) Southbound | | | | | Int. Total |
|--|--------------------------|------|-------|------|------------|--------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 08:30 AM | | | | | | | | | | | | | | | | | | | | | |
| 08:30 AM | 32 | 1 | 8 | 8 | 49 | 2 | 1 | 4 | 2 | 9 | 14 | 101 | 2 | 10 | 127 | 9 | 101 | 26 | 2 | 138 | 323 |
| 08:45 AM | 40 | 1 | 10 | 3 | 54 | 3 | 4 | 3 | 0 | 10 | 12 | 109 | 8 | 14 | 143 | 8 | 79 | 29 | 1 | 117 | 324 |
| 09:00 AM | 36 | 3 | 14 | 0 | 53 | 1 | 4 | 11 | 3 | 19 | 9 | 133 | 10 | 8 | 160 | 16 | 91 | 28 | 2 | 137 | 369 |
| 09:15 AM | 32 | 1 | 13 | 2 | 48 | 3 | 2 | 4 | 7 | 16 | 13 | 117 | 24 | 8 | 162 | 9 | 76 | 33 | 7 | 125 | 351 |
| Total Volume | 140 | 6 | 45 | 13 | 204 | 9 | 11 | 22 | 12 | 54 | 48 | 460 | 44 | 40 | 592 | 42 | 347 | 116 | 12 | 517 | 1367 |
| % App. Total | 68.6 | 2.9 | 22.1 | 6.4 | | 16.7 | 20.4 | 40.7 | 22.2 | | 8.1 | 77.7 | 7.4 | 6.8 | | 8.1 | 67.1 | 22.4 | 2.3 | | |
| PHF | .875 | .500 | .804 | .406 | .944 | .750 | .688 | .500 | .429 | .711 | .857 | .865 | .458 | .714 | .914 | .656 | .859 | .879 | .429 | .937 | .926 |





Breckenridge, CO
 East Peak 8
 Saturday PM Peak
 4 O'Clock Rd and Park Ave (SH-9) RAB

File Name : 4 OClock and Park Ave PM Sat
 Site Code : IPO 488
 Start Date : 2/1/2020
 Page No : 1

Groups Printed- Automobiles - Bicycles and Pedestrians

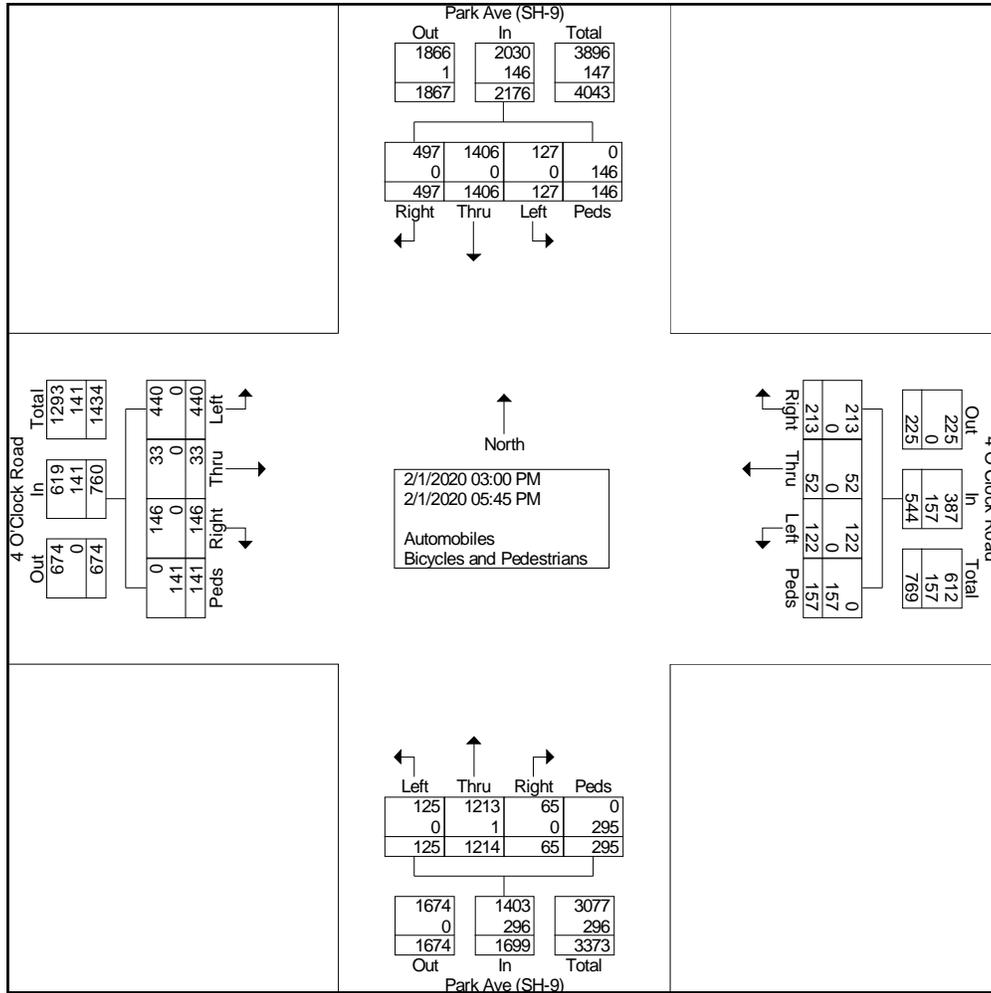
| Start Time | 4 O'Clock Road Eastbound | | | | | 4 O'Clock Road Westbound | | | | | Park Ave (SH-9) Northbound | | | | | Park Ave (SH-9) Southbound | | | | | Int. Total |
|----------------------------|--------------------------|------|-------|------|------------|--------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| 03:00 PM | 37 | 0 | 11 | 12 | 60 | 9 | 4 | 21 | 6 | 40 | 9 | 101 | 6 | 12 | 128 | 5 | 124 | 34 | 11 | 174 | 402 |
| 03:15 PM | 36 | 1 | 14 | 14 | 65 | 2 | 3 | 17 | 10 | 32 | 16 | 102 | 0 | 16 | 134 | 8 | 131 | 44 | 2 | 185 | 416 |
| 03:30 PM | 31 | 2 | 9 | 8 | 50 | 5 | 2 | 12 | 5 | 24 | 16 | 130 | 7 | 28 | 181 | 7 | 107 | 33 | 10 | 157 | 412 |
| 03:45 PM | 40 | 2 | 12 | 14 | 68 | 9 | 3 | 21 | 24 | 57 | 9 | 105 | 4 | 17 | 135 | 7 | 90 | 34 | 21 | 152 | 412 |
| Total | 144 | 5 | 46 | 48 | 243 | 25 | 12 | 71 | 45 | 153 | 50 | 438 | 17 | 73 | 578 | 27 | 452 | 145 | 44 | 668 | 1642 |
| 04:00 PM | 21 | 5 | 18 | 9 | 53 | 12 | 1 | 21 | 6 | 40 | 7 | 99 | 7 | 17 | 130 | 9 | 120 | 47 | 5 | 181 | 404 |
| 04:15 PM | 38 | 2 | 11 | 11 | 62 | 13 | 2 | 19 | 9 | 43 | 13 | 98 | 5 | 21 | 137 | 12 | 127 | 42 | 5 | 186 | 428 |
| 04:30 PM | 49 | 4 | 18 | 22 | 93 | 14 | 7 | 22 | 20 | 63 | 12 | 108 | 9 | 30 | 159 | 11 | 89 | 38 | 5 | 143 | 458 |
| 04:45 PM | 39 | 2 | 9 | 10 | 60 | 11 | 7 | 24 | 30 | 72 | 5 | 119 | 5 | 30 | 159 | 10 | 125 | 52 | 28 | 215 | 506 |
| Total | 147 | 13 | 56 | 52 | 268 | 50 | 17 | 86 | 65 | 218 | 37 | 424 | 26 | 98 | 585 | 42 | 461 | 179 | 43 | 725 | 1796 |
| 05:00 PM | 40 | 3 | 11 | 13 | 67 | 15 | 3 | 18 | 7 | 43 | 9 | 100 | 7 | 38 | 154 | 11 | 127 | 44 | 12 | 194 | 458 |
| 05:15 PM | 41 | 4 | 12 | 24 | 81 | 11 | 8 | 16 | 18 | 53 | 11 | 78 | 3 | 32 | 124 | 14 | 109 | 56 | 23 | 202 | 460 |
| 05:30 PM | 40 | 3 | 16 | 2 | 61 | 5 | 4 | 13 | 15 | 37 | 11 | 85 | 6 | 30 | 132 | 17 | 123 | 29 | 11 | 180 | 410 |
| 05:45 PM | 28 | 5 | 5 | 2 | 40 | 16 | 8 | 9 | 7 | 40 | 7 | 89 | 6 | 24 | 126 | 16 | 134 | 44 | 13 | 207 | 413 |
| Total | 149 | 15 | 44 | 41 | 249 | 47 | 23 | 56 | 47 | 173 | 38 | 352 | 22 | 124 | 536 | 58 | 493 | 173 | 59 | 783 | 1741 |
| Grand Total | 440 | 33 | 146 | 141 | 760 | 122 | 52 | 213 | 157 | 544 | 125 | 1214 | 65 | 295 | 1699 | 127 | 1406 | 497 | 146 | 2176 | 5179 |
| Apprch % | 57.9 | 4.3 | 19.2 | 18.6 | | 22.4 | 9.6 | 39.2 | 28.9 | | 7.4 | 71.5 | 3.8 | 17.4 | | 5.8 | 64.6 | 22.8 | 6.7 | | |
| Total % | 8.5 | 0.6 | 2.8 | 2.7 | 14.7 | 2.4 | 1 | 4.1 | 3 | 10.5 | 2.4 | 23.4 | 1.3 | 5.7 | 32.8 | 2.5 | 27.1 | 9.6 | 2.8 | 42 | |
| Automobiles | 440 | 33 | 146 | 0 | 619 | 122 | 52 | 213 | 0 | 387 | 125 | 1213 | 65 | 0 | 1403 | 127 | 1406 | 497 | 0 | 2030 | 4439 |
| % Automobiles | 100 | 100 | 100 | 0 | 81.4 | 100 | 100 | 100 | 0 | 71.1 | 100 | 99.9 | 100 | 0 | 82.6 | 100 | 100 | 100 | 0 | 93.3 | 85.7 |
| Bicycles and Pedestrians | 0 | 0 | 0 | 141 | 141 | 0 | 0 | 0 | 157 | 157 | 0 | 1 | 0 | 295 | 296 | 0 | 0 | 0 | 146 | 146 | 740 |
| % Bicycles and Pedestrians | 0 | 0 | 0 | 100 | 18.6 | 0 | 0 | 0 | 100 | 28.9 | 0 | 0.1 | 0 | 100 | 17.4 | 0 | 0 | 0 | 100 | 6.7 | 14.3 |



Ridgeview Data
Collection

Breckenridge, CO
East Peak 8
Saturday PM Peak
4 O'Clock Rd and Park Ave (SH-9) RAB

File Name : 4 O'Clock and Park Ave PM Sat
Site Code : IPO 488
Start Date : 2/1/2020
Page No : 2

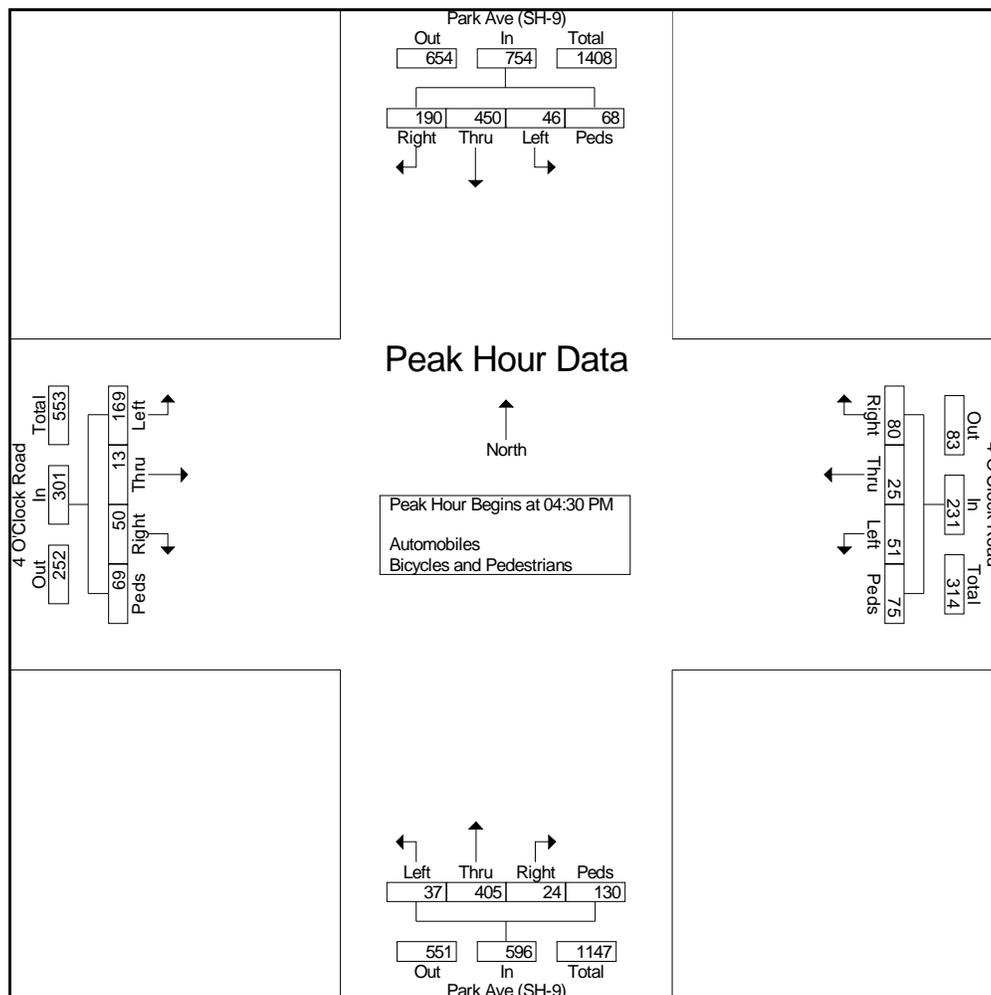




Breckenridge, CO
 East Peak 8
 Saturday PM Peak
 4 O'Clock Rd and Park Ave (SH-9) RAB

File Name : 4 O'Clock and Park Ave PM Sat
 Site Code : IPO 488
 Start Date : 2/1/2020
 Page No : 3

| Start Time | 4 O'Clock Road Eastbound | | | | | 4 O'Clock Road Westbound | | | | | Park Ave (SH-9) Northbound | | | | | Park Ave (SH-9) Southbound | | | | | Int. Total |
|--|--------------------------|------|-------|------|------------|--------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:30 PM | | | | | | | | | | | | | | | | | | | | | |
| 04:30 PM | 49 | 4 | 18 | 22 | 93 | 14 | 7 | 22 | 20 | 63 | 12 | 108 | 9 | 30 | 159 | 11 | 89 | 38 | 5 | 143 | 458 |
| 04:45 PM | 39 | 2 | 9 | 10 | 60 | 11 | 7 | 24 | 30 | 72 | 5 | 119 | 5 | 30 | 159 | 10 | 125 | 52 | 28 | 215 | 506 |
| 05:00 PM | 40 | 3 | 11 | 13 | 67 | 15 | 3 | 18 | 7 | 43 | 9 | 100 | 7 | 38 | 154 | 11 | 127 | 44 | 12 | 194 | 458 |
| 05:15 PM | 41 | 4 | 12 | 24 | 81 | 11 | 8 | 16 | 18 | 53 | 11 | 78 | 3 | 32 | 124 | 14 | 109 | 56 | 23 | 202 | 460 |
| Total Volume | 169 | 13 | 50 | 69 | 301 | 51 | 25 | 80 | 75 | 231 | 37 | 405 | 24 | 130 | 596 | 46 | 450 | 190 | 68 | 754 | 1882 |
| % App. Total | 56.1 | 4.3 | 16.6 | 22.9 | | 22.1 | 10.8 | 34.6 | 32.5 | | 6.2 | 68 | 4 | 21.8 | | 6.1 | 59.7 | 25.2 | 9 | | |
| PHF | .862 | .813 | .694 | .719 | .809 | .850 | .781 | .833 | .625 | .802 | .771 | .851 | .667 | .855 | .937 | .821 | .886 | .848 | .607 | .877 | .930 |





Breckenridge, CO
 East Peak 8
 Saturday AM Peak
 Ski Hill Road Adjacent to Parking Lot

File Name : Ski Hill Road at Parking AM Sat
 Site Code : IPO 488
 Start Date : 2/1/2020
 Page No : 1

Groups Printed- Automobiles - Bicycles and Pedestrians

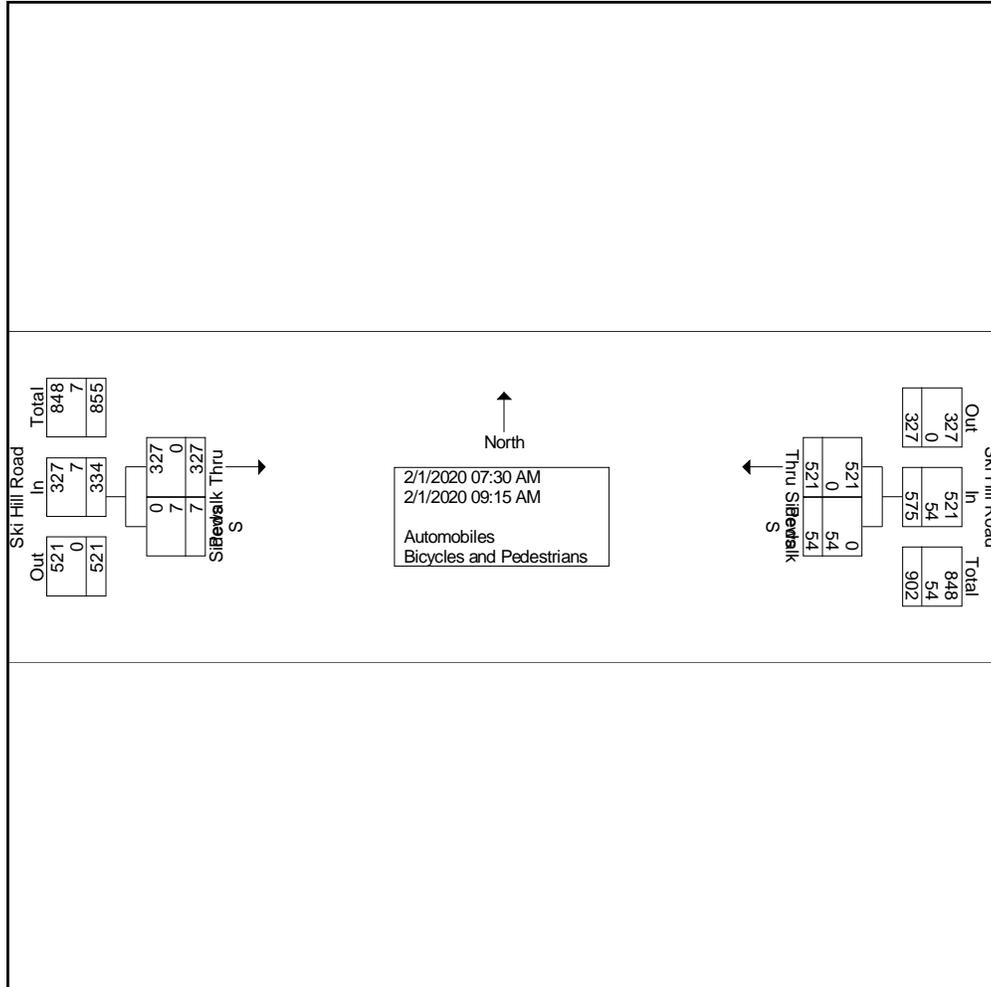
| Start Time | Ski Hill Road Eastbound | | | Ski Hill Road Westbound | | | Int. Total |
|----------------------------|-------------------------|-----------------|------------|-------------------------|-----------------|------------|------------|
| | Thru | Peds S Sidewalk | App. Total | Thru | Peds S Sidewalk | App. Total | |
| 07:30 AM | 24 | 1 | 25 | 54 | 3 | 57 | 82 |
| 07:45 AM | 37 | 1 | 38 | 66 | 3 | 69 | 107 |
| Total | 61 | 2 | 63 | 120 | 6 | 126 | 189 |
| 08:00 AM | 25 | 1 | 26 | 44 | 2 | 46 | 72 |
| 08:15 AM | 29 | 0 | 29 | 79 | 5 | 84 | 113 |
| 08:30 AM | 48 | 2 | 50 | 78 | 11 | 89 | 139 |
| 08:45 AM | 51 | 0 | 51 | 65 | 9 | 74 | 125 |
| Total | 153 | 3 | 156 | 266 | 27 | 293 | 449 |
| 09:00 AM | 65 | 0 | 65 | 73 | 7 | 80 | 145 |
| 09:15 AM | 48 | 2 | 50 | 62 | 14 | 76 | 126 |
| Grand Total | 327 | 7 | 334 | 521 | 54 | 575 | 909 |
| Apprch % | 97.9 | 2.1 | | 90.6 | 9.4 | | |
| Total % | 36 | 0.8 | 36.7 | 57.3 | 5.9 | 63.3 | |
| Automobiles | 327 | 0 | 327 | 521 | 0 | 521 | 848 |
| % Automobiles | 100 | 0 | 97.9 | 100 | 0 | 90.6 | 93.3 |
| Bicycles and Pedestrians | 0 | 7 | 7 | 0 | 54 | 54 | 61 |
| % Bicycles and Pedestrians | 0 | 100 | 2.1 | 0 | 100 | 9.4 | 6.7 |



Ridgeview Data Collection

Breckenridge, CO
East Peak 8
Saturday AM Peak
Ski Hill Road Adjacent to Parking Lot

File Name : Ski Hill Road at Parking AM Sat
Site Code : IPO 488
Start Date : 2/1/2020
Page No : 2



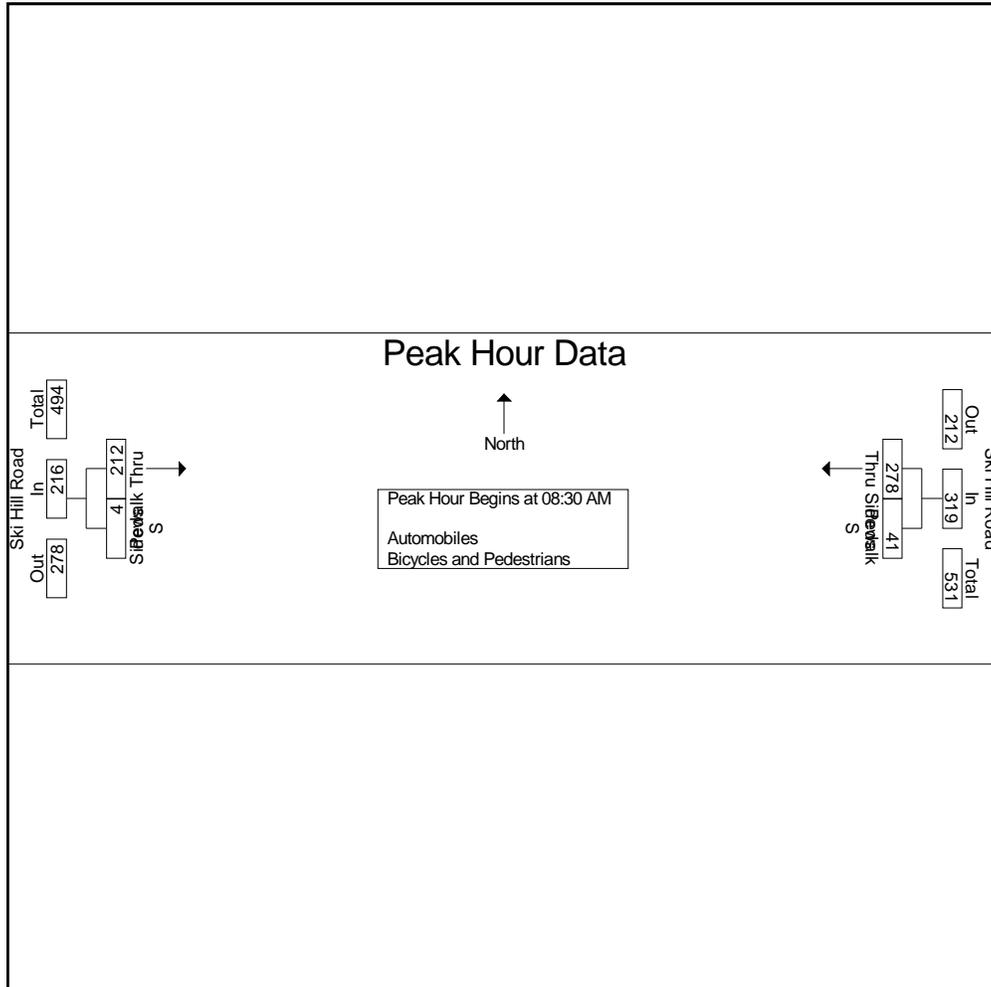


Ridgeview Data
Collection

Breckenridge, CO
East Peak 8
Saturday AM Peak
Ski Hill Road Adjacent to Parking Lot

File Name : Ski Hill Road at Parking AM Sat
Site Code : IPO 488
Start Date : 2/1/2020
Page No : 3

| Start Time | Ski Hill Road Eastbound | | | Ski Hill Road Westbound | | | Int. Total |
|--|-------------------------|-----------------|------------|-------------------------|-----------------|------------|------------|
| | Thru | Peds S Sidewalk | App. Total | Thru | Peds S Sidewalk | App. Total | |
| Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1 | | | | | | | |
| Peak Hour for Entire Intersection Begins at 08:30 AM | | | | | | | |
| 08:30 AM | 48 | 2 | 50 | 78 | 11 | 89 | 139 |
| 08:45 AM | 51 | 0 | 51 | 65 | 9 | 74 | 125 |
| 09:00 AM | 65 | 0 | 65 | 73 | 7 | 80 | 145 |
| 09:15 AM | 48 | 2 | 50 | 62 | 14 | 76 | 126 |
| Total Volume | 212 | 4 | 216 | 278 | 41 | 319 | 535 |
| % App. Total | 98.1 | 1.9 | | 87.1 | 12.9 | | |
| PHF | .815 | .500 | .831 | .891 | .732 | .896 | .922 |





Breckenridge, CO
 East Peak 8
 Saturday PM Peak
 Ski Hill Road Adjacent to Parking Lot

File Name : Ski Hill Road at Parking PM Sat
 Site Code : IPO 488
 Start Date : 2/1/2020
 Page No : 1

Groups Printed- Automobiles - Bicycles and Pedestrians

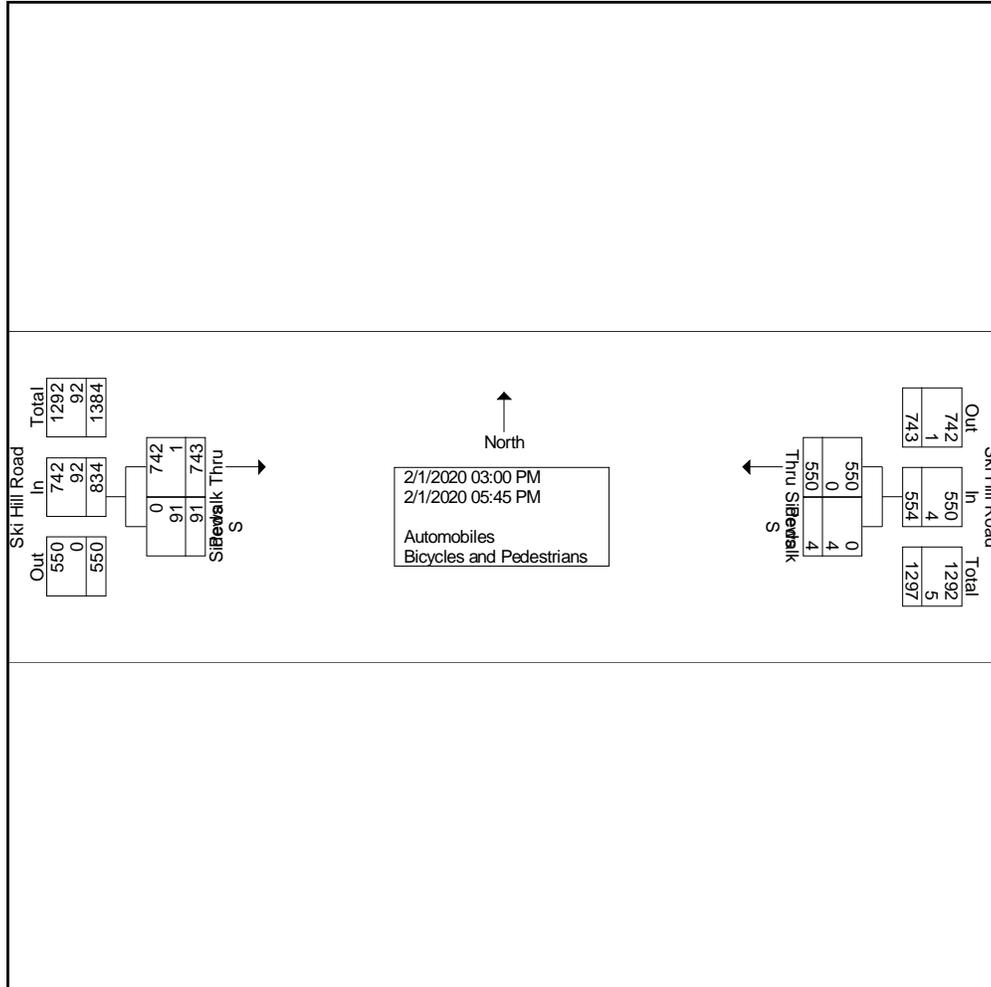
| Start Time | Ski Hill Road Eastbound | | | Ski Hill Road Westbound | | | Int. Total |
|----------------------------|-------------------------|-----------------|------------|-------------------------|-----------------|------------|------------|
| | Thru | Peds S Sidewalk | App. Total | Thru | Peds S Sidewalk | App. Total | |
| 03:00 PM | 60 | 1 | 61 | 57 | 2 | 59 | 120 |
| 03:15 PM | 43 | 4 | 47 | 50 | 0 | 50 | 97 |
| 03:30 PM | 74 | 12 | 86 | 53 | 0 | 53 | 139 |
| 03:45 PM | 62 | 25 | 87 | 39 | 0 | 39 | 126 |
| Total | 239 | 42 | 281 | 199 | 2 | 201 | 482 |
| 04:00 PM | 69 | 16 | 85 | 47 | 1 | 48 | 133 |
| 04:15 PM | 72 | 4 | 76 | 48 | 0 | 48 | 124 |
| 04:30 PM | 89 | 15 | 104 | 61 | 0 | 61 | 165 |
| 04:45 PM | 74 | 3 | 77 | 37 | 0 | 37 | 114 |
| Total | 304 | 38 | 342 | 193 | 1 | 194 | 536 |
| 05:00 PM | 52 | 9 | 61 | 46 | 1 | 47 | 108 |
| 05:15 PM | 50 | 2 | 52 | 43 | 0 | 43 | 95 |
| 05:30 PM | 49 | 0 | 49 | 26 | 0 | 26 | 75 |
| 05:45 PM | 49 | 0 | 49 | 43 | 0 | 43 | 92 |
| Total | 200 | 11 | 211 | 158 | 1 | 159 | 370 |
| Grand Total | 743 | 91 | 834 | 550 | 4 | 554 | 1388 |
| Aprrch % | 89.1 | 10.9 | | 99.3 | 0.7 | | |
| Total % | 53.5 | 6.6 | 60.1 | 39.6 | 0.3 | 39.9 | |
| Automobiles | 742 | 0 | 742 | 550 | 0 | 550 | 1292 |
| % Automobiles | 99.9 | 0 | 89 | 100 | 0 | 99.3 | 93.1 |
| Bicycles and Pedestrians | 1 | 91 | 92 | 0 | 4 | 4 | 96 |
| % Bicycles and Pedestrians | 0.1 | 100 | 11 | 0 | 100 | 0.7 | 6.9 |



Ridgeview Data
Collection

Breckenridge, CO
East Peak 8
Saturday PM Peak
Ski Hill Road Adjacent to Parking Lot

File Name : Ski Hill Road at Parking PM Sat
Site Code : IPO 488
Start Date : 2/1/2020
Page No : 2

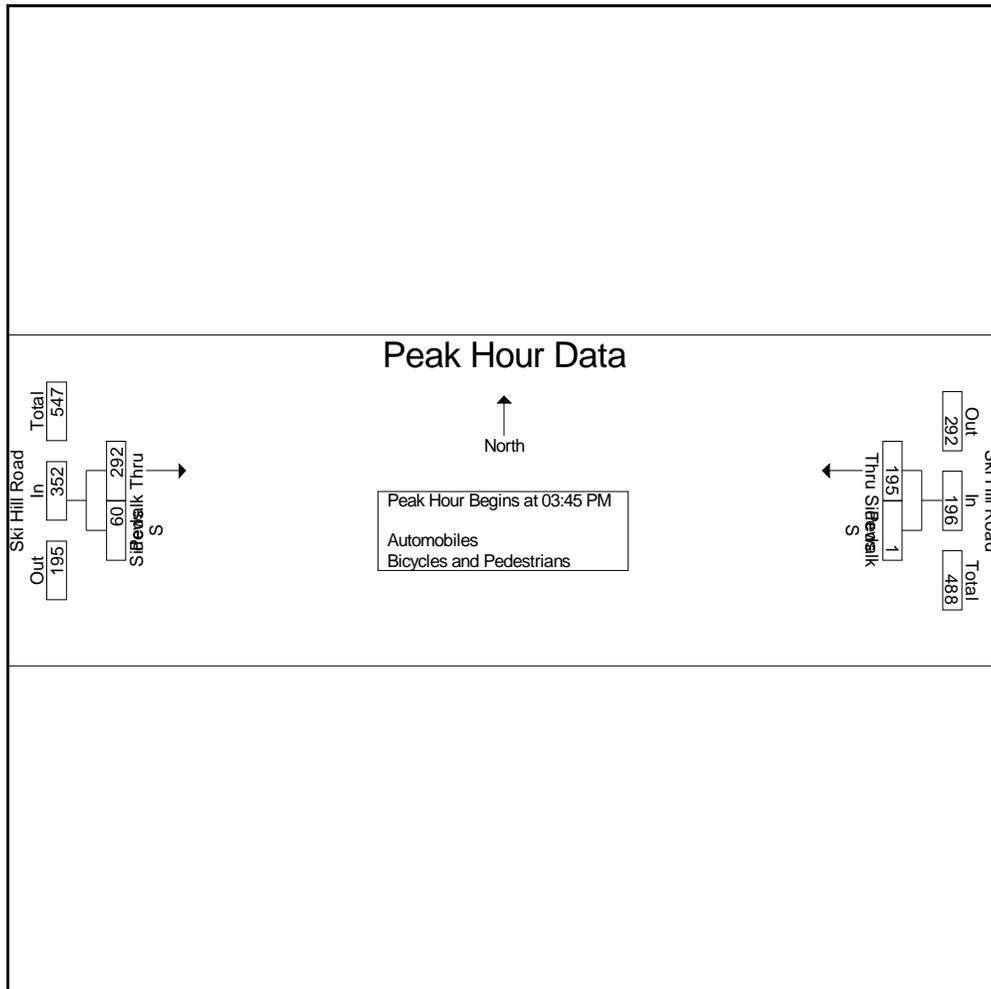




Breckenridge, CO
 East Peak 8
 Saturday PM Peak
 Ski Hill Road Adjacent to Parking Lot

File Name : Ski Hill Road at Parking PM Sat
 Site Code : IPO 488
 Start Date : 2/1/2020
 Page No : 3

| Start Time | Ski Hill Road Eastbound | | | Ski Hill Road Westbound | | | Int. Total |
|--|-------------------------|-----------------|------------|-------------------------|-----------------|------------|------------|
| | Thru | Peds S Sidewalk | App. Total | Thru | Peds S Sidewalk | App. Total | |
| Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | |
| Peak Hour for Entire Intersection Begins at 03:45 PM | | | | | | | |
| 03:45 PM | 62 | 25 | 87 | 39 | 0 | 39 | 126 |
| 04:00 PM | 69 | 16 | 85 | 47 | 1 | 48 | 133 |
| 04:15 PM | 72 | 4 | 76 | 48 | 0 | 48 | 124 |
| 04:30 PM | 89 | 15 | 104 | 61 | 0 | 61 | 165 |
| Total Volume | 292 | 60 | 352 | 195 | 1 | 196 | 548 |
| % App. Total | 83 | 17 | | 99.5 | 0.5 | | |
| PHF | .820 | .600 | .846 | .799 | .250 | .803 | .830 |





Breckenridge, CO
 East Peak 8
 AM Peak
 Ski Hill Road and Park Ave (SH-9)

File Name : Ski Hill and Park Ave AM
 Site Code : IPO 488
 Start Date : 1/31/2020
 Page No : 1

Groups Printed- Automobiles - Bicycles and Pedestrians

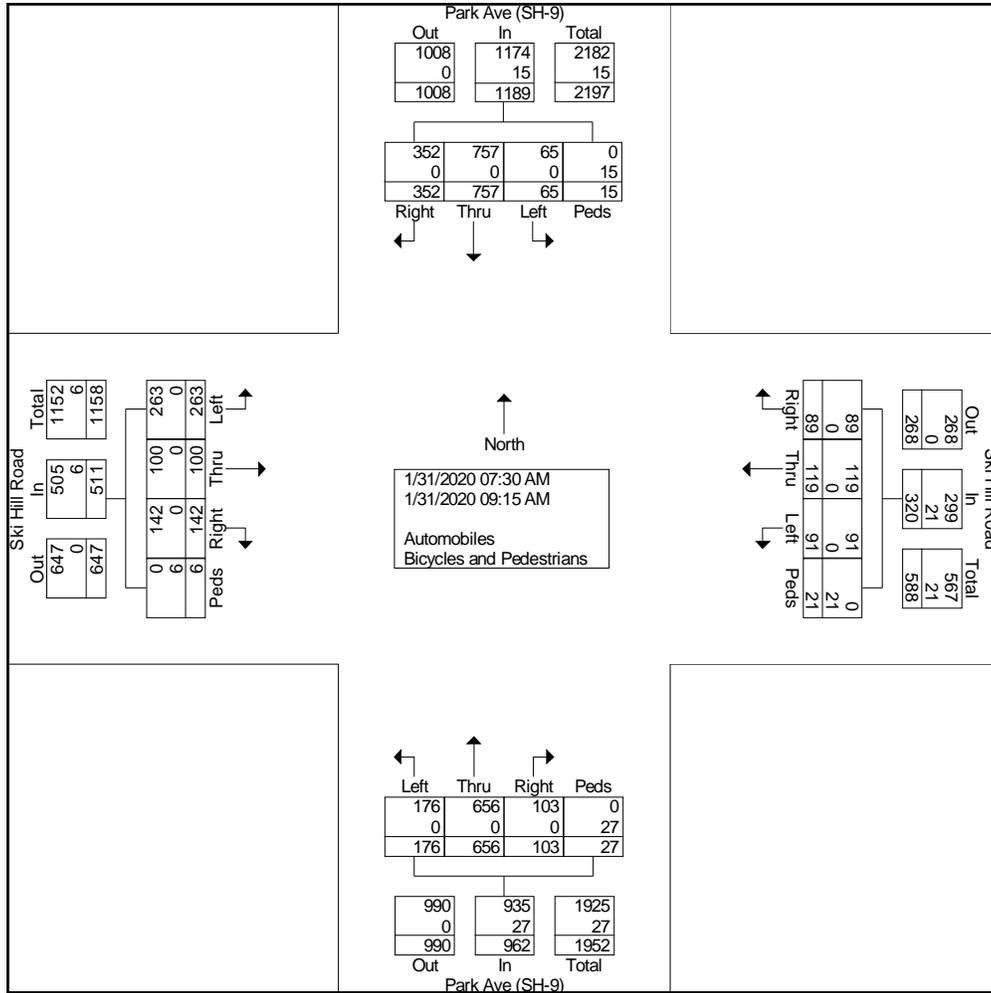
| Start Time | Ski Hill Road Eastbound | | | | | Ski Hill Road Westbound | | | | | Park Ave (SH-9) Northbound | | | | | Park Ave (SH-9) Southbound | | | | | Int. Total |
|----------------------------|-------------------------|------|-------|------|------------|-------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| 07:30 AM | 27 | 6 | 11 | 0 | 44 | 6 | 10 | 3 | 2 | 21 | 15 | 49 | 10 | 4 | 78 | 10 | 60 | 45 | 1 | 116 | 259 |
| 07:45 AM | 27 | 10 | 15 | 1 | 53 | 7 | 6 | 6 | 2 | 21 | 18 | 82 | 7 | 3 | 110 | 4 | 85 | 40 | 0 | 129 | 313 |
| Total | 54 | 16 | 26 | 1 | 97 | 13 | 16 | 9 | 4 | 42 | 33 | 131 | 17 | 7 | 188 | 14 | 145 | 85 | 1 | 245 | 572 |
| 08:00 AM | 28 | 12 | 13 | 2 | 55 | 7 | 14 | 7 | 1 | 29 | 13 | 83 | 6 | 1 | 103 | 9 | 101 | 52 | 7 | 169 | 356 |
| 08:15 AM | 31 | 6 | 13 | 0 | 50 | 16 | 16 | 9 | 0 | 41 | 24 | 80 | 13 | 0 | 117 | 8 | 101 | 62 | 1 | 172 | 380 |
| 08:30 AM | 29 | 15 | 24 | 0 | 68 | 15 | 21 | 15 | 6 | 57 | 26 | 95 | 18 | 12 | 151 | 3 | 101 | 47 | 1 | 152 | 428 |
| 08:45 AM | 46 | 18 | 29 | 2 | 95 | 16 | 19 | 15 | 5 | 55 | 24 | 104 | 16 | 4 | 148 | 11 | 119 | 52 | 3 | 185 | 483 |
| Total | 134 | 51 | 79 | 4 | 268 | 54 | 70 | 46 | 12 | 182 | 87 | 362 | 53 | 17 | 519 | 31 | 422 | 213 | 12 | 678 | 1647 |
| 09:00 AM | 37 | 17 | 24 | 1 | 79 | 15 | 14 | 24 | 4 | 57 | 24 | 77 | 15 | 1 | 117 | 11 | 97 | 35 | 1 | 144 | 397 |
| 09:15 AM | 38 | 16 | 13 | 0 | 67 | 9 | 19 | 10 | 1 | 39 | 32 | 86 | 18 | 2 | 138 | 9 | 93 | 19 | 1 | 122 | 366 |
| Grand Total | 263 | 100 | 142 | 6 | 511 | 91 | 119 | 89 | 21 | 320 | 176 | 656 | 103 | 27 | 962 | 65 | 757 | 352 | 15 | 1189 | 2982 |
| Apprch % | 51.5 | 19.6 | 27.8 | 1.2 | | 28.4 | 37.2 | 27.8 | 6.6 | | 18.3 | 68.2 | 10.7 | 2.8 | | 5.5 | 63.7 | 29.6 | 1.3 | | |
| Total % | 8.8 | 3.4 | 4.8 | 0.2 | 17.1 | 3.1 | 4 | 3 | 0.7 | 10.7 | 5.9 | 22 | 3.5 | 0.9 | 32.3 | 2.2 | 25.4 | 11.8 | 0.5 | 39.9 | |
| Automobiles | 263 | 100 | 142 | 0 | 505 | 91 | 119 | 89 | 0 | 299 | 176 | 656 | 103 | 0 | 935 | 65 | 757 | 352 | 0 | 1174 | 2913 |
| % Automobiles | 100 | 100 | 100 | 0 | 98.8 | 100 | 100 | 100 | 0 | 93.4 | 100 | 100 | 100 | 0 | 97.2 | 100 | 100 | 100 | 0 | 98.7 | 97.7 |
| Bicycles and Pedestrians | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 21 | 21 | 0 | 0 | 0 | 27 | 27 | 0 | 0 | 0 | 15 | 15 | 69 |
| % Bicycles and Pedestrians | 0 | 0 | 0 | 100 | 1.2 | 0 | 0 | 0 | 100 | 6.6 | 0 | 0 | 0 | 100 | 2.8 | 0 | 0 | 0 | 100 | 1.3 | 2.3 |



Ridgeview Data
Collection

Breckenridge, CO
East Peak 8
AM Peak
Ski Hill Road and Park Ave (SH-9)

File Name : Ski Hill and Park Ave AM
Site Code : IPO 488
Start Date : 1/31/2020
Page No : 2

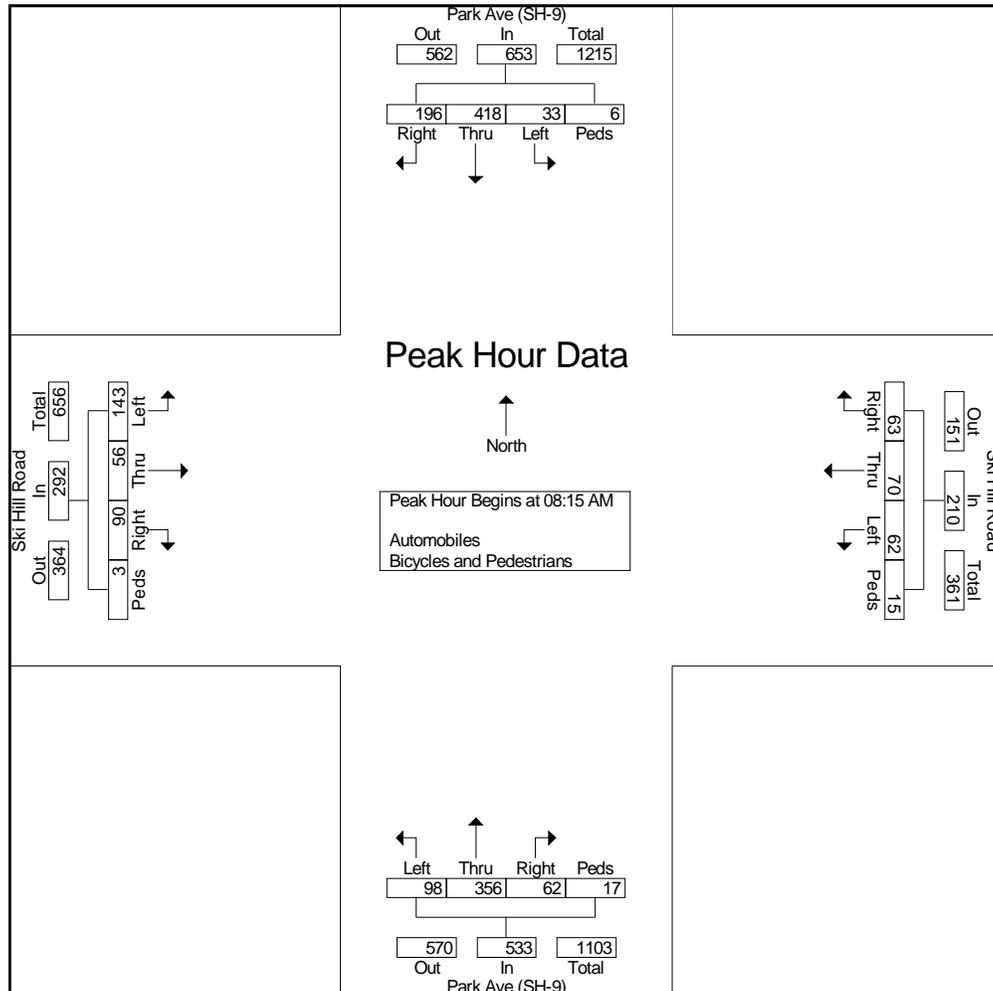




Breckenridge, CO
 East Peak 8
 AM Peak
 Ski Hill Road and Park Ave (SH-9)

File Name : Ski Hill and Park Ave AM
 Site Code : IPO 488
 Start Date : 1/31/2020
 Page No : 3

| Start Time | Ski Hill Road Eastbound | | | | | Ski Hill Road Westbound | | | | | Park Ave (SH-9) Northbound | | | | | Park Ave (SH-9) Southbound | | | | | Int. Total |
|--|-------------------------|------|-------|------|------------|-------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 08:15 AM | | | | | | | | | | | | | | | | | | | | | |
| 08:15 AM | 31 | 6 | 13 | 0 | 50 | 16 | 16 | 9 | 0 | 41 | 24 | 80 | 13 | 0 | 117 | 8 | 101 | 62 | 1 | 172 | 380 |
| 08:30 AM | 29 | 15 | 24 | 0 | 68 | 15 | 21 | 15 | 6 | 57 | 26 | 95 | 18 | 12 | 151 | 3 | 101 | 47 | 1 | 152 | 428 |
| 08:45 AM | 46 | 18 | 29 | 2 | 95 | 16 | 19 | 15 | 5 | 55 | 24 | 104 | 16 | 4 | 148 | 11 | 119 | 52 | 3 | 185 | 483 |
| 09:00 AM | 37 | 17 | 24 | 1 | 79 | 15 | 14 | 24 | 4 | 57 | 24 | 77 | 15 | 1 | 117 | 11 | 97 | 35 | 1 | 144 | 397 |
| Total Volume | 143 | 56 | 90 | 3 | 292 | 62 | 70 | 63 | 15 | 210 | 98 | 356 | 62 | 17 | 533 | 33 | 418 | 196 | 6 | 653 | 1688 |
| % App. Total | 49 | 19.2 | 30.8 | 1 | | 29.5 | 33.3 | 30 | 7.1 | | 18.4 | 66.8 | 11.6 | 3.2 | | 5.1 | 64 | 30 | 0.9 | | |
| PHF | .777 | .778 | .776 | .375 | .768 | .969 | .833 | .656 | .625 | .921 | .942 | .856 | .861 | .354 | .882 | .750 | .878 | .790 | .500 | .882 | .874 |





Breckenridge, CO
 East Peak 8
 PM Peak
 Ski Hill Road and Park Ave (SH-9)

File Name : Ski Hill and Park Ave PM
 Site Code : IPO 488
 Start Date : 1/31/2020
 Page No : 1

Groups Printed- Automobiles - Bicycles and Pedestrians

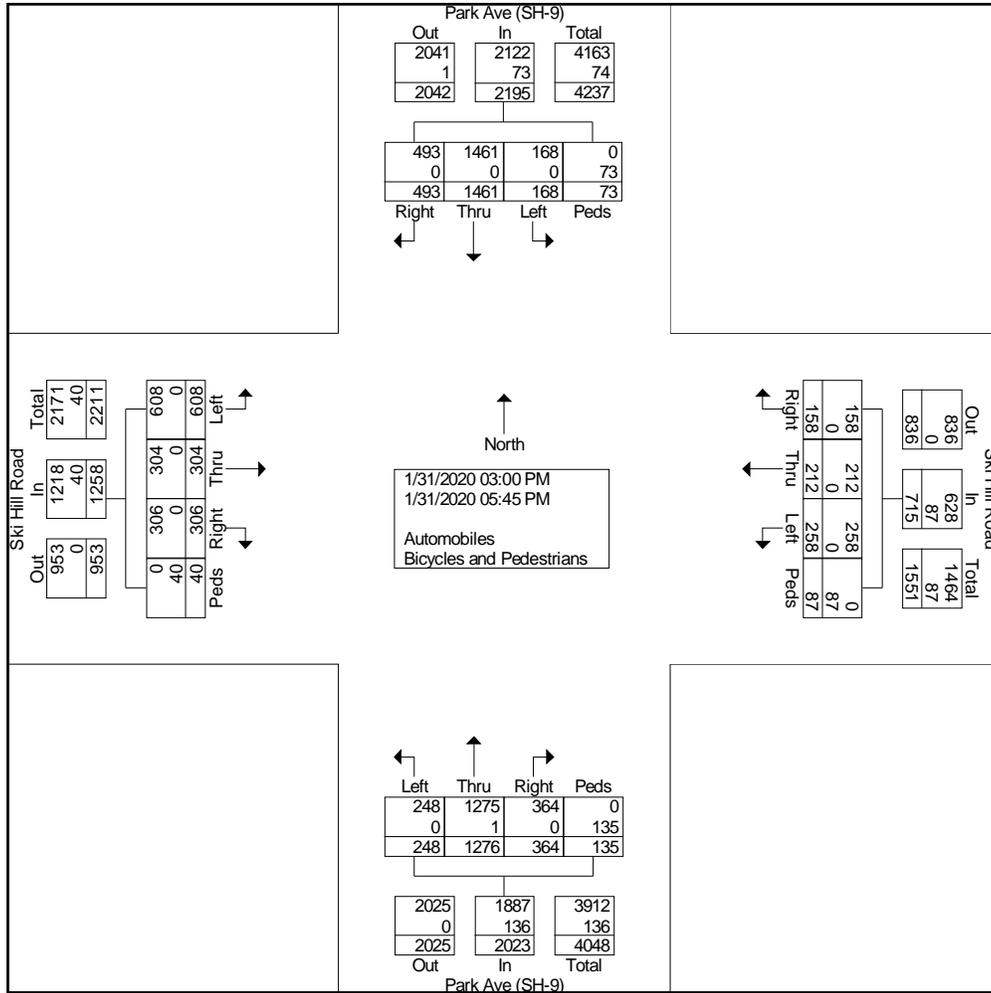
| Start Time | Ski Hill Road Eastbound | | | | | Ski Hill Road Westbound | | | | | Park Ave (SH-9) Northbound | | | | | Park Ave (SH-9) Southbound | | | | | Int. Total |
|----------------------------|-------------------------|------|-------|------|------------|-------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| 03:00 PM | 29 | 16 | 24 | 2 | 71 | 21 | 17 | 12 | 6 | 56 | 25 | 107 | 17 | 1 | 150 | 11 | 127 | 37 | 5 | 180 | 457 |
| 03:15 PM | 39 | 9 | 27 | 7 | 82 | 17 | 17 | 11 | 7 | 52 | 20 | 93 | 35 | 8 | 156 | 14 | 122 | 33 | 0 | 169 | 459 |
| 03:30 PM | 36 | 26 | 18 | 5 | 85 | 24 | 19 | 15 | 5 | 63 | 28 | 101 | 27 | 7 | 163 | 8 | 125 | 40 | 4 | 177 | 488 |
| 03:45 PM | 44 | 21 | 30 | 4 | 99 | 24 | 12 | 21 | 2 | 59 | 25 | 104 | 31 | 6 | 166 | 12 | 134 | 54 | 6 | 206 | 530 |
| Total | 148 | 72 | 99 | 18 | 337 | 86 | 65 | 59 | 20 | 230 | 98 | 405 | 110 | 22 | 635 | 45 | 508 | 164 | 15 | 732 | 1934 |
| 04:00 PM | 59 | 36 | 27 | 4 | 126 | 18 | 15 | 20 | 19 | 72 | 18 | 136 | 25 | 24 | 203 | 14 | 120 | 45 | 2 | 181 | 582 |
| 04:15 PM | 63 | 30 | 24 | 1 | 118 | 21 | 21 | 10 | 13 | 65 | 23 | 130 | 38 | 10 | 201 | 14 | 90 | 35 | 8 | 147 | 531 |
| 04:30 PM | 72 | 29 | 29 | 7 | 137 | 22 | 14 | 9 | 4 | 49 | 22 | 130 | 38 | 3 | 193 | 9 | 106 | 54 | 10 | 179 | 558 |
| 04:45 PM | 53 | 32 | 20 | 3 | 108 | 30 | 23 | 12 | 17 | 82 | 15 | 92 | 39 | 12 | 158 | 24 | 115 | 42 | 13 | 194 | 542 |
| Total | 247 | 127 | 100 | 15 | 489 | 91 | 73 | 51 | 53 | 268 | 78 | 488 | 140 | 49 | 755 | 61 | 431 | 176 | 33 | 701 | 2213 |
| 05:00 PM | 62 | 26 | 26 | 0 | 114 | 27 | 14 | 11 | 7 | 59 | 14 | 93 | 39 | 12 | 158 | 18 | 130 | 44 | 6 | 198 | 529 |
| 05:15 PM | 68 | 26 | 27 | 4 | 125 | 16 | 22 | 18 | 1 | 57 | 23 | 96 | 30 | 24 | 173 | 16 | 127 | 41 | 4 | 188 | 543 |
| 05:30 PM | 46 | 22 | 39 | 3 | 110 | 18 | 14 | 11 | 4 | 47 | 16 | 96 | 20 | 12 | 144 | 14 | 139 | 34 | 8 | 195 | 496 |
| 05:45 PM | 37 | 31 | 15 | 0 | 83 | 20 | 24 | 8 | 2 | 54 | 19 | 98 | 25 | 16 | 158 | 14 | 126 | 34 | 7 | 181 | 476 |
| Total | 213 | 105 | 107 | 7 | 432 | 81 | 74 | 48 | 14 | 217 | 72 | 383 | 114 | 64 | 633 | 62 | 522 | 153 | 25 | 762 | 2044 |
| Grand Total | 608 | 304 | 306 | 40 | 1258 | 258 | 212 | 158 | 87 | 715 | 248 | 1276 | 364 | 135 | 2023 | 168 | 1461 | 493 | 73 | 2195 | 6191 |
| Apprch % | 48.3 | 24.2 | 24.3 | 3.2 | | 36.1 | 29.7 | 22.1 | 12.2 | | 12.3 | 63.1 | 18 | 6.7 | | 7.7 | 66.6 | 22.5 | 3.3 | | |
| Total % | 9.8 | 4.9 | 4.9 | 0.6 | 20.3 | 4.2 | 3.4 | 2.6 | 1.4 | 11.5 | 4 | 20.6 | 5.9 | 2.2 | 32.7 | 2.7 | 23.6 | 8 | 1.2 | 35.5 | |
| Automobiles | 608 | 304 | 306 | 0 | 1218 | 258 | 212 | 158 | 0 | 628 | 248 | 1275 | 364 | 0 | 1887 | 168 | 1461 | 493 | 0 | 2122 | 5855 |
| % Automobiles | 100 | 100 | 100 | 0 | 96.8 | 100 | 100 | 100 | 0 | 87.8 | 100 | 99.9 | 100 | 0 | 93.3 | 100 | 100 | 100 | 0 | 96.7 | 94.6 |
| Bicycles and Pedestrians | 0 | 0 | 0 | 40 | 40 | 0 | 0 | 0 | 87 | 87 | 0 | 1 | 0 | 135 | 136 | 0 | 0 | 0 | 73 | 73 | 336 |
| % Bicycles and Pedestrians | 0 | 0 | 0 | 100 | 3.2 | 0 | 0 | 0 | 100 | 12.2 | 0 | 0.1 | 0 | 100 | 6.7 | 0 | 0 | 0 | 100 | 3.3 | 5.4 |



Ridgeview Data Collection

Breckenridge, CO
East Peak 8
PM Peak
Ski Hill Road and Park Ave (SH-9)

File Name : Ski Hill and Park Ave PM
Site Code : IPO 488
Start Date : 1/31/2020
Page No : 2

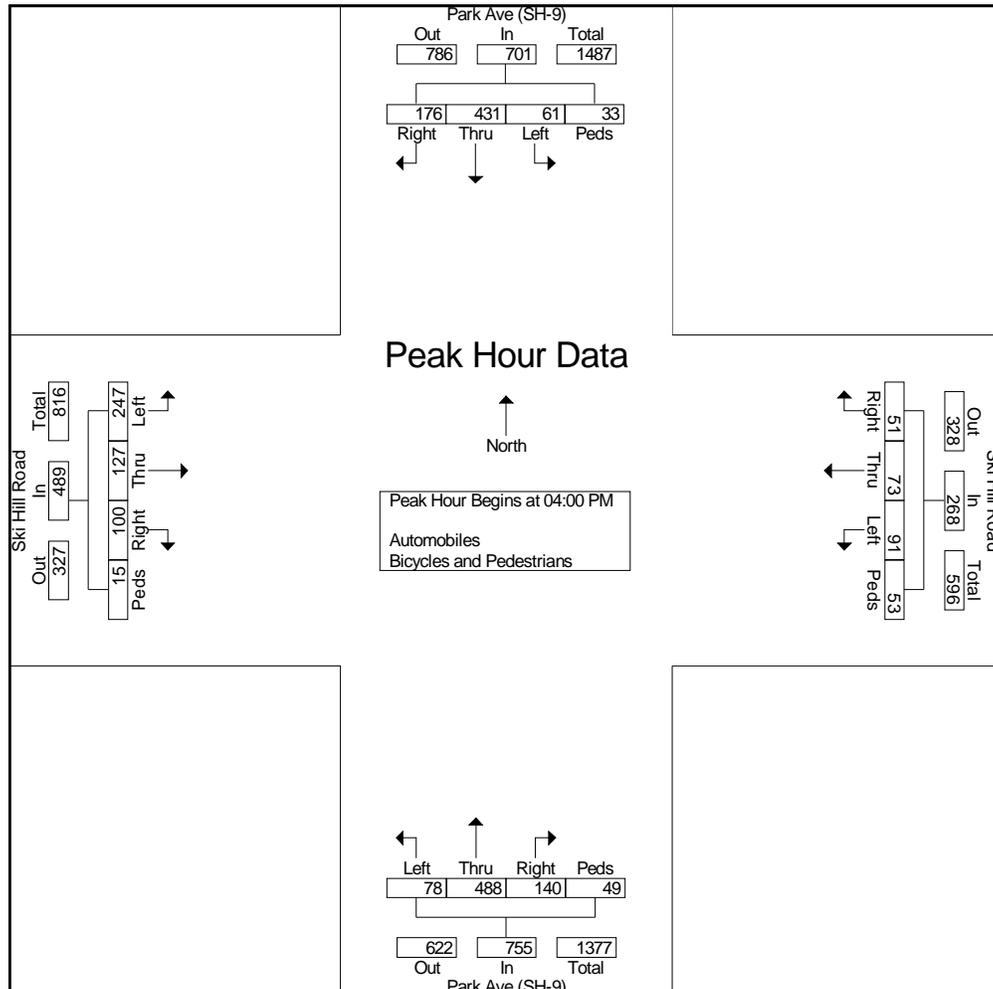




Breckenridge, CO
 East Peak 8
 PM Peak
 Ski Hill Road and Park Ave (SH-9)

File Name : Ski Hill and Park Ave PM
 Site Code : IPO 488
 Start Date : 1/31/2020
 Page No : 3

| Start Time | Ski Hill Road Eastbound | | | | | Ski Hill Road Westbound | | | | | Park Ave (SH-9) Northbound | | | | | Park Ave (SH-9) Southbound | | | | | Int. Total |
|--|-------------------------|------|-------|------|------------|-------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:00 PM | | | | | | | | | | | | | | | | | | | | | |
| 04:00 PM | 59 | 36 | 27 | 4 | 126 | 18 | 15 | 20 | 19 | 72 | 18 | 136 | 25 | 24 | 203 | 14 | 120 | 45 | 2 | 181 | 582 |
| 04:15 PM | 63 | 30 | 24 | 1 | 118 | 21 | 21 | 10 | 13 | 65 | 23 | 130 | 38 | 10 | 201 | 14 | 90 | 35 | 8 | 147 | 531 |
| 04:30 PM | 72 | 29 | 29 | 7 | 137 | 22 | 14 | 9 | 4 | 49 | 22 | 130 | 38 | 3 | 193 | 9 | 106 | 54 | 10 | 179 | 558 |
| 04:45 PM | 53 | 32 | 20 | 3 | 108 | 30 | 23 | 12 | 17 | 82 | 15 | 92 | 39 | 12 | 158 | 24 | 115 | 42 | 13 | 194 | 542 |
| Total Volume | 247 | 127 | 100 | 15 | 489 | 91 | 73 | 51 | 53 | 268 | 78 | 488 | 140 | 49 | 755 | 61 | 431 | 176 | 33 | 701 | 2213 |
| % App. Total | 50.5 | 26 | 20.4 | 3.1 | | 34 | 27.2 | 19 | 19.8 | | 10.3 | 64.6 | 18.5 | 6.5 | | 8.7 | 61.5 | 25.1 | 4.7 | | |
| PHF | .858 | .882 | .862 | .536 | .892 | .758 | .793 | .638 | .697 | .817 | .848 | .897 | .897 | .510 | .930 | .635 | .898 | .815 | .635 | .903 | .951 |





Breckenridge, CO
 East Peak 8
 AM Peak
 Ski Hill Road/Lincoln & Main St

File Name : Ski Hill and Main AM
 Site Code : IPO 488
 Start Date : 1/31/2020
 Page No : 1

Groups Printed- Automobiles - Bicycles and Pedestrians

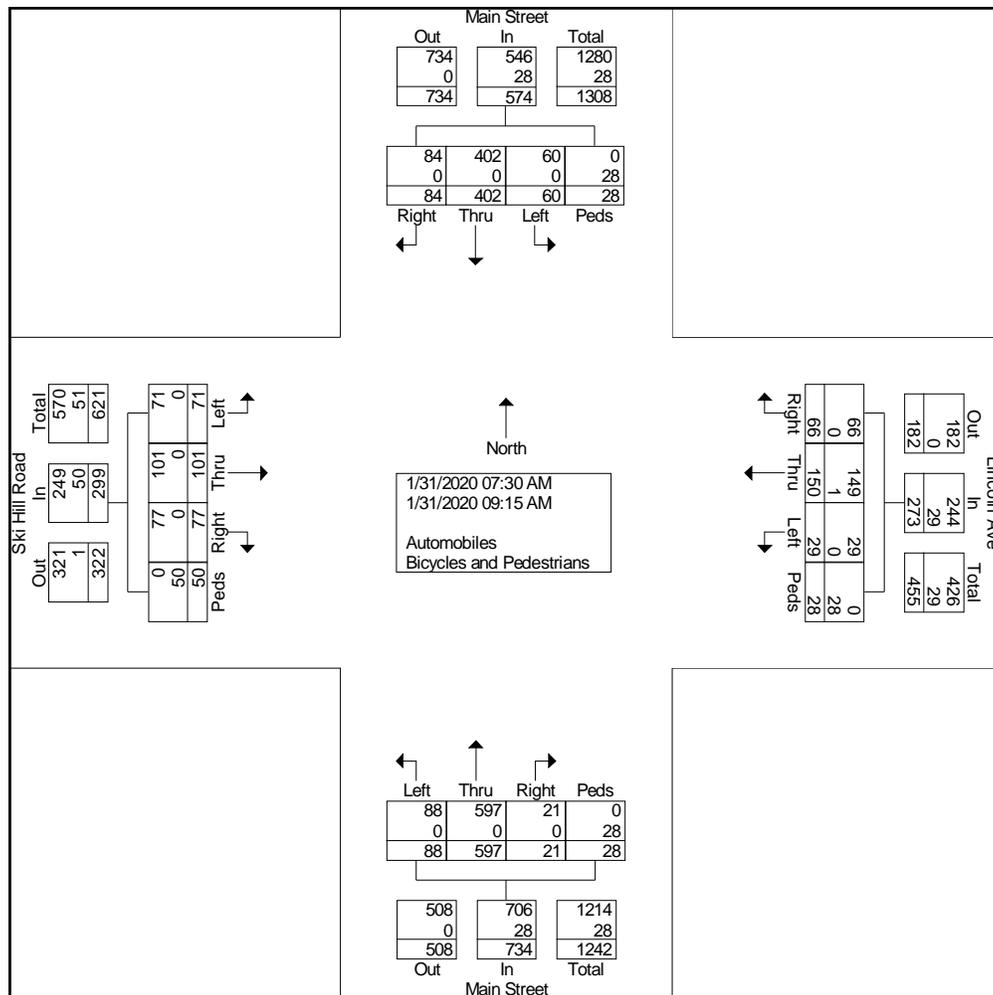
| Start Time | Ski Hill Road Eastbound | | | | | Lincoln Ave Westbound | | | | | Main Street Northbound | | | | | Main Street Southbound | | | | | Int. Total |
|----------------------------|-------------------------|------|-------|------|------------|-----------------------|------|-------|------|------------|------------------------|------|-------|------|------------|------------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| 07:30 AM | 6 | 9 | 7 | 2 | 24 | 1 | 9 | 4 | 1 | 15 | 8 | 81 | 1 | 1 | 91 | 3 | 34 | 4 | 0 | 41 | 171 |
| 07:45 AM | 9 | 3 | 8 | 9 | 29 | 5 | 20 | 7 | 2 | 34 | 10 | 77 | 2 | 3 | 92 | 6 | 44 | 7 | 4 | 61 | 216 |
| Total | 15 | 12 | 15 | 11 | 53 | 6 | 29 | 11 | 3 | 49 | 18 | 158 | 3 | 4 | 183 | 9 | 78 | 11 | 4 | 102 | 387 |
| 08:00 AM | 5 | 9 | 9 | 0 | 23 | 2 | 16 | 4 | 1 | 23 | 11 | 77 | 3 | 4 | 95 | 11 | 53 | 8 | 2 | 74 | 215 |
| 08:15 AM | 8 | 14 | 5 | 7 | 34 | 4 | 24 | 3 | 4 | 35 | 12 | 65 | 0 | 7 | 84 | 2 | 57 | 11 | 2 | 72 | 225 |
| 08:30 AM | 16 | 11 | 9 | 8 | 44 | 1 | 27 | 10 | 0 | 38 | 10 | 70 | 5 | 1 | 86 | 6 | 46 | 11 | 3 | 66 | 234 |
| 08:45 AM | 4 | 18 | 17 | 2 | 41 | 6 | 21 | 11 | 9 | 47 | 17 | 83 | 3 | 5 | 108 | 15 | 66 | 11 | 9 | 101 | 297 |
| Total | 33 | 52 | 40 | 17 | 142 | 13 | 88 | 28 | 14 | 143 | 50 | 295 | 11 | 17 | 373 | 34 | 222 | 41 | 16 | 313 | 971 |
| 09:00 AM | 13 | 17 | 15 | 7 | 52 | 4 | 20 | 8 | 5 | 37 | 9 | 77 | 2 | 3 | 91 | 8 | 57 | 17 | 5 | 87 | 267 |
| 09:15 AM | 10 | 20 | 7 | 15 | 52 | 6 | 13 | 19 | 6 | 44 | 11 | 67 | 5 | 4 | 87 | 9 | 45 | 15 | 3 | 72 | 255 |
| Grand Total | 71 | 101 | 77 | 50 | 299 | 29 | 150 | 66 | 28 | 273 | 88 | 597 | 21 | 28 | 734 | 60 | 402 | 84 | 28 | 574 | 1880 |
| Apprch % | 23.7 | 33.8 | 25.8 | 16.7 | | 10.6 | 54.9 | 24.2 | 10.3 | | 12 | 81.3 | 2.9 | 3.8 | | 10.5 | 70 | 14.6 | 4.9 | | |
| Total % | 3.8 | 5.4 | 4.1 | 2.7 | 15.9 | 1.5 | 8 | 3.5 | 1.5 | 14.5 | 4.7 | 31.8 | 1.1 | 1.5 | 39 | 3.2 | 21.4 | 4.5 | 1.5 | 30.5 | |
| Automobiles | 71 | 101 | 77 | 0 | 249 | 29 | 149 | 66 | 0 | 244 | 88 | 597 | 21 | 0 | 706 | 60 | 402 | 84 | 0 | 546 | 1745 |
| % Automobiles | 100 | 100 | 100 | 0 | 83.3 | 100 | 99.3 | 100 | 0 | 89.4 | 100 | 100 | 100 | 0 | 96.2 | 100 | 100 | 100 | 0 | 95.1 | 92.8 |
| Bicycles and Pedestrians | 0 | 0 | 0 | 50 | 50 | 0 | 1 | 0 | 28 | 29 | 0 | 0 | 0 | 28 | 28 | 0 | 0 | 0 | 28 | 28 | 135 |
| % Bicycles and Pedestrians | 0 | 0 | 0 | 100 | 16.7 | 0 | 0.7 | 0 | 100 | 10.6 | 0 | 0 | 0 | 100 | 3.8 | 0 | 0 | 0 | 100 | 4.9 | 7.2 |



Ridgeview Data Collection

Breckenridge, CO
East Peak 8
AM Peak
Ski Hill Road/Lincoln & Main St

File Name : Ski Hill and Main AM
Site Code : IPO 488
Start Date : 1/31/2020
Page No : 2

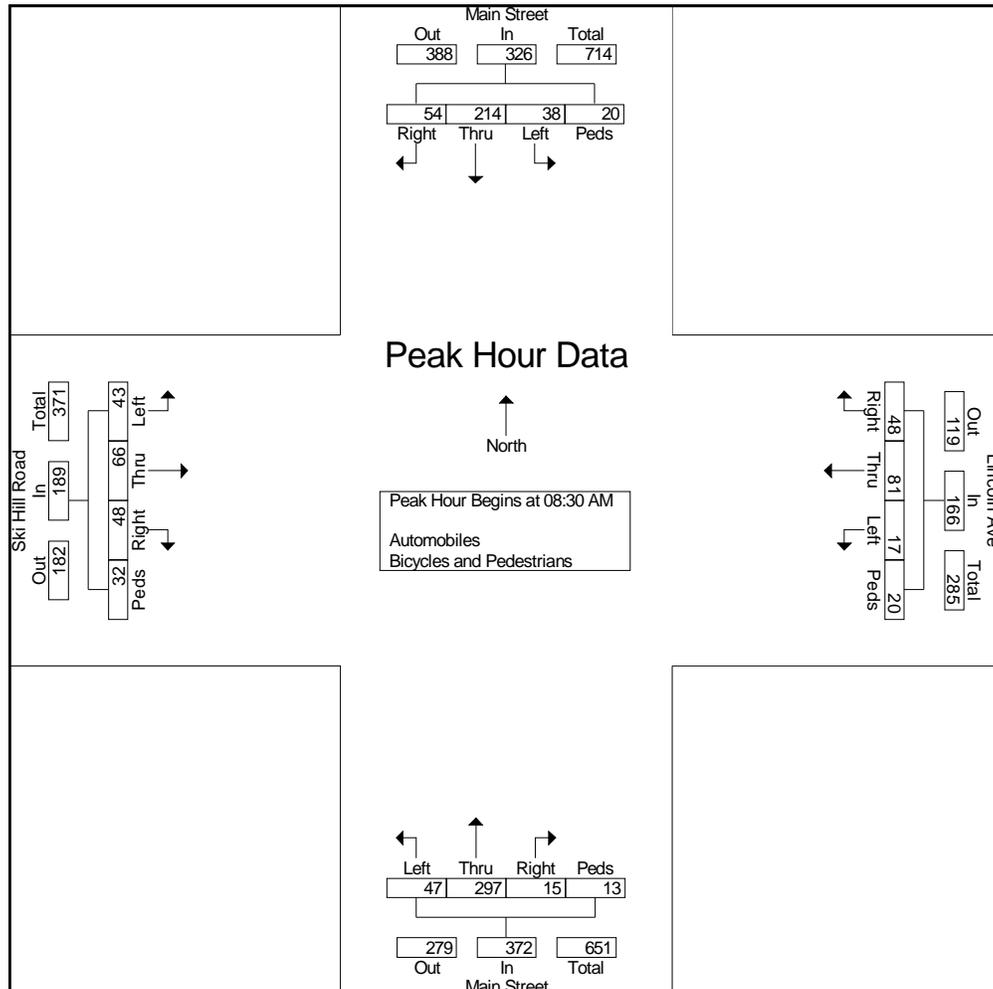




Breckenridge, CO
 East Peak 8
 AM Peak
 Ski Hill Road/Lincoln & Main St

File Name : Ski Hill and Main AM
 Site Code : IPO 488
 Start Date : 1/31/2020
 Page No : 3

| Start Time | Ski Hill Road Eastbound | | | | | Lincoln Ave Westbound | | | | | Main Street Northbound | | | | | Main Street Southbound | | | | | Int. Total |
|--|-------------------------|------|-------|------|------------|-----------------------|------|-------|------|------------|------------------------|------|-------|------|------------|------------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 08:30 AM | | | | | | | | | | | | | | | | | | | | | |
| 08:30 AM | 16 | 11 | 9 | 8 | 44 | 1 | 27 | 10 | 0 | 38 | 10 | 70 | 5 | 1 | 86 | 6 | 46 | 11 | 3 | 66 | 234 |
| 08:45 AM | 4 | 18 | 17 | 2 | 41 | 6 | 21 | 11 | 9 | 47 | 17 | 83 | 3 | 5 | 108 | 15 | 66 | 11 | 9 | 101 | 297 |
| 09:00 AM | 13 | 17 | 15 | 7 | 52 | 4 | 20 | 8 | 5 | 37 | 9 | 77 | 2 | 3 | 91 | 8 | 57 | 17 | 5 | 87 | 267 |
| 09:15 AM | 10 | 20 | 7 | 15 | 52 | 6 | 13 | 19 | 6 | 44 | 11 | 67 | 5 | 4 | 87 | 9 | 45 | 15 | 3 | 72 | 255 |
| Total Volume | 43 | 66 | 48 | 32 | 189 | 17 | 81 | 48 | 20 | 166 | 47 | 297 | 15 | 13 | 372 | 38 | 214 | 54 | 20 | 326 | 1053 |
| % App. Total | 22.8 | 34.9 | 25.4 | 16.9 | | 10.2 | 48.8 | 28.9 | 12 | | 12.6 | 79.8 | 4 | 3.5 | | 11.7 | 65.6 | 16.6 | 6.1 | | |
| PHF | .672 | .825 | .706 | .533 | .909 | .708 | .750 | .632 | .556 | .883 | .691 | .895 | .750 | .650 | .861 | .633 | .811 | .794 | .556 | .807 | .886 |





Breckenridge, CO
 East Peak 8
 PM Peak
 Ski Hill Road/Lincoln & Main St

File Name : Ski Hill and Main PM
 Site Code : IPO 488
 Start Date : 1/31/2020
 Page No : 1

Groups Printed- Automobiles - Bicycles and Pedestrians

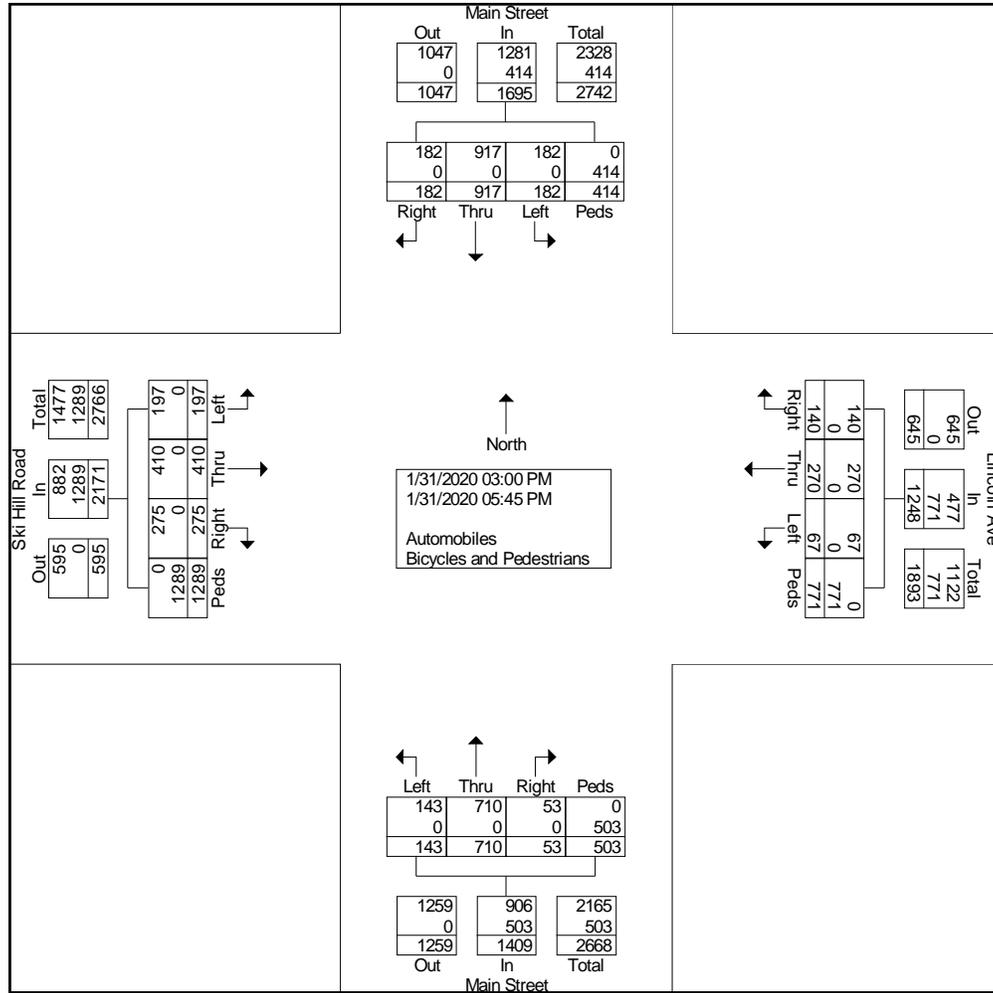
| Start Time | Ski Hill Road Eastbound | | | | | Lincoln Ave Westbound | | | | | Main Street Northbound | | | | | Main Street Southbound | | | | | Int. Total |
|----------------------------|-------------------------|------|-------|------|------------|-----------------------|------|-------|------|------------|------------------------|------|-------|------|------------|------------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| 03:00 PM | 11 | 30 | 11 | 88 | 140 | 5 | 20 | 7 | 46 | 78 | 14 | 46 | 3 | 25 | 88 | 17 | 71 | 11 | 17 | 116 | 422 |
| 03:15 PM | 17 | 24 | 13 | 65 | 119 | 3 | 26 | 12 | 24 | 65 | 10 | 57 | 8 | 11 | 86 | 13 | 64 | 16 | 12 | 105 | 375 |
| 03:30 PM | 12 | 31 | 19 | 49 | 111 | 4 | 15 | 10 | 57 | 86 | 17 | 74 | 6 | 28 | 125 | 13 | 84 | 18 | 24 | 139 | 461 |
| 03:45 PM | 14 | 34 | 20 | 123 | 191 | 5 | 28 | 14 | 46 | 93 | 12 | 61 | 5 | 42 | 120 | 11 | 80 | 13 | 33 | 137 | 541 |
| Total | 54 | 119 | 63 | 325 | 561 | 17 | 89 | 43 | 173 | 322 | 53 | 238 | 22 | 106 | 419 | 54 | 299 | 58 | 86 | 497 | 1799 |
| 04:00 PM | 19 | 44 | 14 | 108 | 185 | 7 | 32 | 15 | 65 | 119 | 6 | 76 | 3 | 51 | 136 | 16 | 84 | 11 | 44 | 155 | 595 |
| 04:15 PM | 17 | 43 | 30 | 82 | 172 | 5 | 20 | 12 | 45 | 82 | 14 | 66 | 0 | 58 | 138 | 13 | 84 | 22 | 29 | 148 | 540 |
| 04:30 PM | 14 | 36 | 28 | 80 | 158 | 6 | 23 | 15 | 60 | 104 | 6 | 58 | 2 | 51 | 117 | 13 | 86 | 16 | 15 | 130 | 509 |
| 04:45 PM | 16 | 35 | 46 | 113 | 210 | 6 | 28 | 11 | 70 | 115 | 17 | 56 | 4 | 23 | 100 | 10 | 75 | 21 | 47 | 153 | 578 |
| Total | 66 | 158 | 118 | 383 | 725 | 24 | 103 | 53 | 240 | 420 | 43 | 256 | 9 | 183 | 491 | 52 | 329 | 70 | 135 | 586 | 2222 |
| 05:00 PM | 18 | 38 | 33 | 123 | 212 | 7 | 18 | 16 | 69 | 110 | 12 | 60 | 6 | 23 | 101 | 15 | 81 | 11 | 39 | 146 | 569 |
| 05:15 PM | 18 | 42 | 19 | 153 | 232 | 7 | 20 | 11 | 75 | 113 | 12 | 65 | 6 | 34 | 117 | 19 | 79 | 17 | 33 | 148 | 610 |
| 05:30 PM | 15 | 29 | 16 | 114 | 174 | 4 | 18 | 11 | 69 | 102 | 9 | 58 | 6 | 65 | 138 | 19 | 57 | 16 | 45 | 137 | 551 |
| 05:45 PM | 26 | 24 | 26 | 191 | 267 | 8 | 22 | 6 | 145 | 181 | 14 | 33 | 4 | 92 | 143 | 23 | 72 | 10 | 76 | 181 | 772 |
| Total | 77 | 133 | 94 | 581 | 885 | 26 | 78 | 44 | 358 | 506 | 47 | 216 | 22 | 214 | 499 | 76 | 289 | 54 | 193 | 612 | 2502 |
| Grand Total | 197 | 410 | 275 | 1289 | 2171 | 67 | 270 | 140 | 771 | 1248 | 143 | 710 | 53 | 503 | 1409 | 182 | 917 | 182 | 414 | 1695 | 6523 |
| Apprch % | 9.1 | 18.9 | 12.7 | 59.4 | | 5.4 | 21.6 | 11.2 | 61.8 | | 10.1 | 50.4 | 3.8 | 35.7 | | 10.7 | 54.1 | 10.7 | 24.4 | | |
| Total % | 3 | 6.3 | 4.2 | 19.8 | 33.3 | 1 | 4.1 | 2.1 | 11.8 | 19.1 | 2.2 | 10.9 | 0.8 | 7.7 | 21.6 | 2.8 | 14.1 | 2.8 | 6.3 | 26 | |
| Automobiles | 197 | 410 | 275 | 0 | 882 | 67 | 270 | 140 | 0 | 477 | 143 | 710 | 53 | 0 | 906 | 182 | 917 | 182 | 0 | 1281 | 3546 |
| % Automobiles | 100 | 100 | 100 | 0 | 40.6 | 100 | 100 | 100 | 0 | 38.2 | 100 | 100 | 100 | 0 | 64.3 | 100 | 100 | 100 | 0 | 75.6 | 54.4 |
| Bicycles and Pedestrians | 0 | 0 | 0 | 1289 | 1289 | 0 | 0 | 0 | 771 | 771 | 0 | 0 | 0 | 503 | 503 | 0 | 0 | 0 | 414 | 414 | 2977 |
| % Bicycles and Pedestrians | 0 | 0 | 0 | 100 | 59.4 | 0 | 0 | 0 | 100 | 61.8 | 0 | 0 | 0 | 100 | 35.7 | 0 | 0 | 0 | 100 | 24.4 | 45.6 |



Ridgeview Data
Collection

Breckenridge, CO
East Peak 8
PM Peak
Ski Hill Road/Lincoln & Main St

File Name : Ski Hill and Main PM
Site Code : IPO 488
Start Date : 1/31/2020
Page No : 2

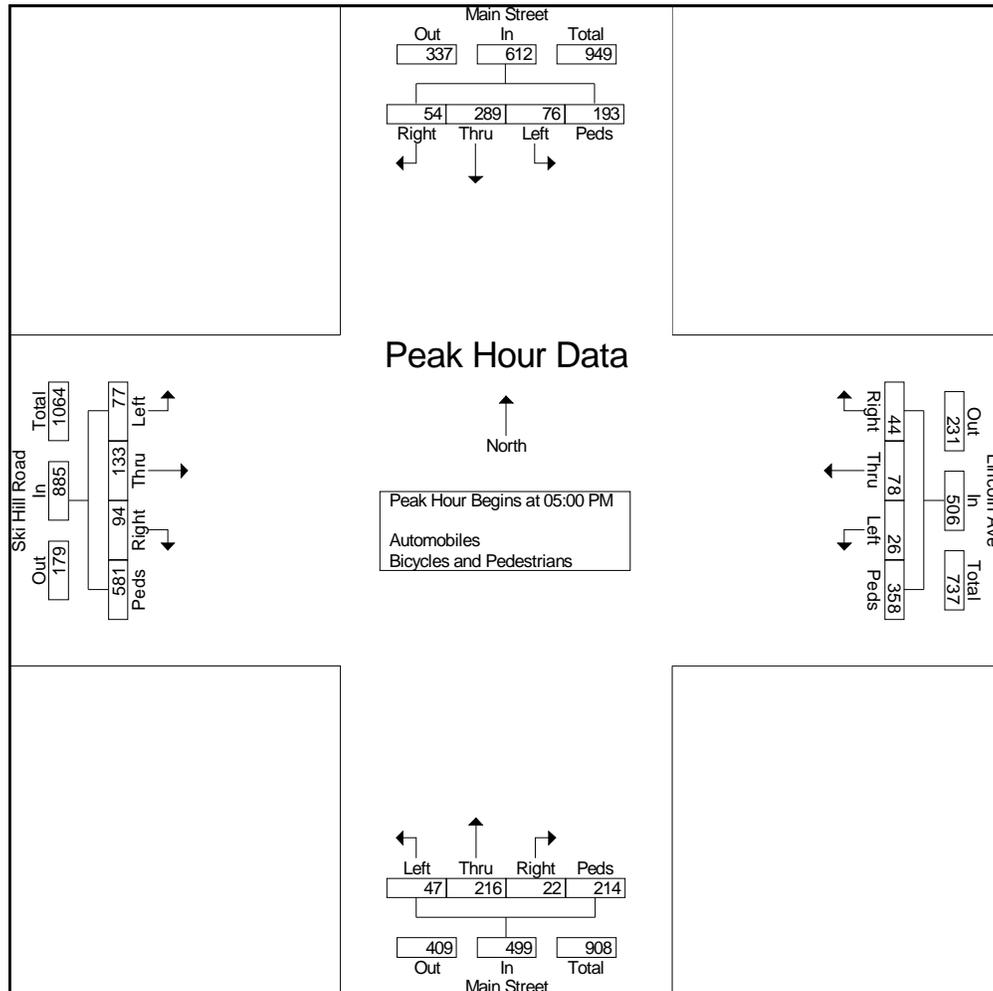




Breckenridge, CO
 East Peak 8
 PM Peak
 Ski Hill Road/Lincoln & Main St

File Name : Ski Hill and Main PM
 Site Code : IPO 488
 Start Date : 1/31/2020
 Page No : 3

| Start Time | Ski Hill Road Eastbound | | | | | Lincoln Ave Westbound | | | | | Main Street Northbound | | | | | Main Street Southbound | | | | | Int. Total |
|--|-------------------------|------|-------|------|------------|-----------------------|------|-------|------|------------|------------------------|------|-------|------|------------|------------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 05:00 PM | | | | | | | | | | | | | | | | | | | | | |
| 05:00 PM | 18 | 38 | 33 | 123 | 212 | 7 | 18 | 16 | 69 | 110 | 12 | 60 | 6 | 23 | 101 | 15 | 81 | 11 | 39 | 146 | 569 |
| 05:15 PM | 18 | 42 | 19 | 153 | 232 | 7 | 20 | 11 | 75 | 113 | 12 | 65 | 6 | 34 | 117 | 19 | 79 | 17 | 33 | 148 | 610 |
| 05:30 PM | 15 | 29 | 16 | 114 | 174 | 4 | 18 | 11 | 69 | 102 | 9 | 58 | 6 | 65 | 138 | 19 | 57 | 16 | 45 | 137 | 551 |
| 05:45 PM | 26 | 24 | 26 | 191 | 267 | 8 | 22 | 6 | 145 | 181 | 14 | 33 | 4 | 92 | 143 | 23 | 72 | 10 | 76 | 181 | 772 |
| Total Volume | 77 | 133 | 94 | 581 | 885 | 26 | 78 | 44 | 358 | 506 | 47 | 216 | 22 | 214 | 499 | 76 | 289 | 54 | 193 | 612 | 2502 |
| % App. Total | 8.7 | 15 | 10.6 | 65.6 | | 5.1 | 15.4 | 8.7 | 70.8 | | 9.4 | 43.3 | 4.4 | 42.9 | | 12.4 | 47.2 | 8.8 | 31.5 | | |
| PHF | .740 | .792 | .712 | .760 | .829 | .813 | .886 | .688 | .617 | .699 | .839 | .831 | .917 | .582 | .872 | .826 | .892 | .794 | .635 | .845 | .810 |





Breckenridge, CO
 East Peak 8
 AM Peak
 4 O'Clock Rd and Park Ave (SH-9) RAB

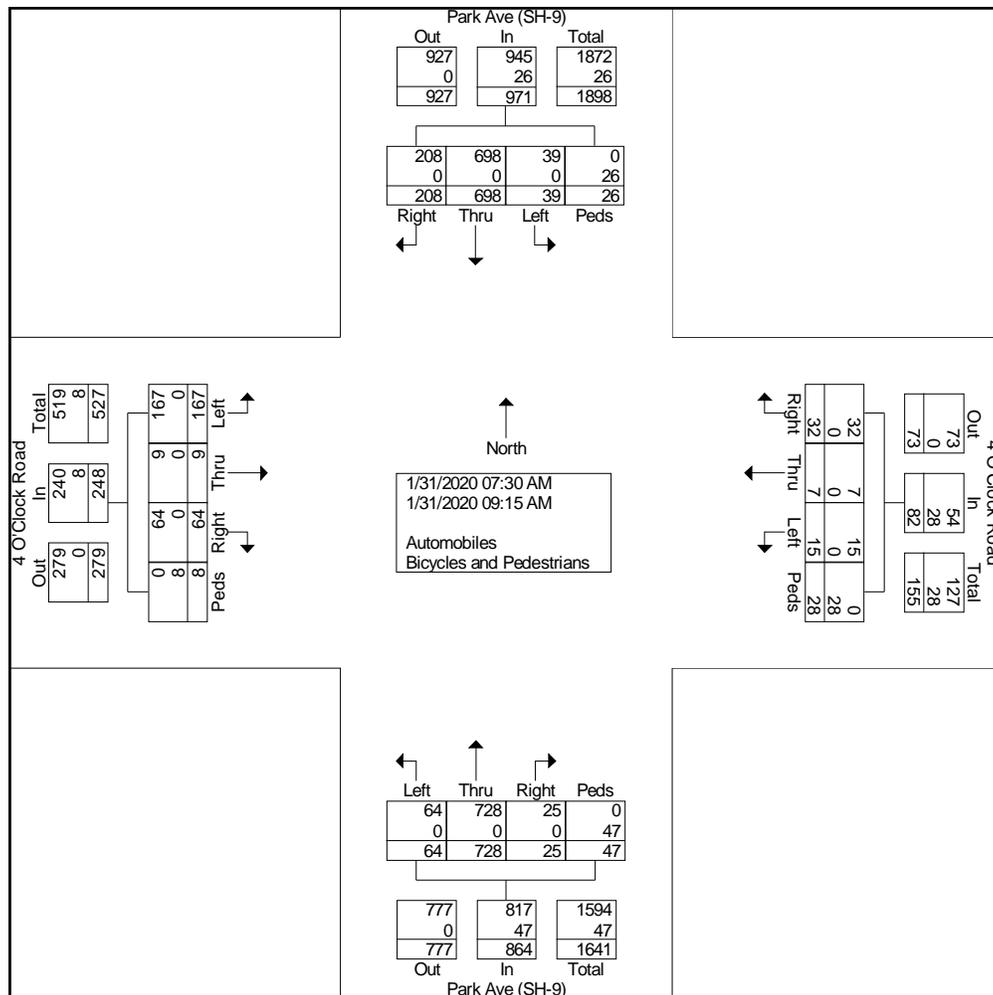
File Name : 4 OClock and Park Ave AM
 Site Code : IPO 488
 Start Date : 1/31/2020
 Page No : 1

Groups Printed- Automobiles - Bicycles and Pedestrians

| Start Time | 4 O'Clock Road Eastbound | | | | | 4 O'Clock Road Westbound | | | | | Park Ave (SH-9) Northbound | | | | | Park Ave (SH-9) Southbound | | | | | Int. Total |
|----------------------------|--------------------------|------|-------|------|------------|--------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| 07:30 AM | 12 | 0 | 4 | 0 | 16 | 2 | 1 | 2 | 4 | 9 | 2 | 57 | 2 | 8 | 69 | 1 | 50 | 17 | 1 | 69 | 163 |
| 07:45 AM | 15 | 0 | 8 | 1 | 24 | 1 | 0 | 2 | 2 | 5 | 2 | 96 | 1 | 12 | 111 | 5 | 83 | 24 | 3 | 115 | 255 |
| Total | 27 | 0 | 12 | 1 | 40 | 3 | 1 | 4 | 6 | 14 | 4 | 153 | 3 | 20 | 180 | 6 | 133 | 41 | 4 | 184 | 418 |
| 08:00 AM | 15 | 0 | 4 | 2 | 21 | 2 | 0 | 4 | 5 | 11 | 4 | 79 | 6 | 3 | 92 | 12 | 86 | 19 | 8 | 125 | 249 |
| 08:15 AM | 22 | 0 | 9 | 1 | 32 | 4 | 1 | 3 | 1 | 9 | 8 | 84 | 1 | 3 | 96 | 6 | 96 | 28 | 6 | 136 | 273 |
| 08:30 AM | 31 | 5 | 13 | 2 | 51 | 2 | 2 | 5 | 2 | 11 | 10 | 111 | 1 | 5 | 127 | 2 | 98 | 36 | 0 | 136 | 325 |
| 08:45 AM | 26 | 1 | 9 | 1 | 37 | 0 | 1 | 5 | 10 | 16 | 12 | 110 | 5 | 8 | 135 | 6 | 89 | 28 | 1 | 124 | 312 |
| Total | 94 | 6 | 35 | 6 | 141 | 8 | 4 | 17 | 18 | 47 | 34 | 384 | 13 | 19 | 450 | 26 | 369 | 111 | 15 | 521 | 1159 |
| 09:00 AM | 21 | 2 | 9 | 1 | 33 | 2 | 1 | 8 | 0 | 11 | 10 | 92 | 3 | 5 | 110 | 4 | 103 | 32 | 0 | 139 | 293 |
| 09:15 AM | 25 | 1 | 8 | 0 | 34 | 2 | 1 | 3 | 4 | 10 | 16 | 99 | 6 | 3 | 124 | 3 | 93 | 24 | 7 | 127 | 295 |
| Grand Total | 167 | 9 | 64 | 8 | 248 | 15 | 7 | 32 | 28 | 82 | 64 | 728 | 25 | 47 | 864 | 39 | 698 | 208 | 26 | 971 | 2165 |
| Apprch % | 67.3 | 3.6 | 25.8 | 3.2 | | 18.3 | 8.5 | 39 | 34.1 | | 7.4 | 84.3 | 2.9 | 5.4 | | 4 | 71.9 | 21.4 | 2.7 | | |
| Total % | 7.7 | 0.4 | 3 | 0.4 | 11.5 | 0.7 | 0.3 | 1.5 | 1.3 | 3.8 | 3 | 33.6 | 1.2 | 2.2 | 39.9 | 1.8 | 32.2 | 9.6 | 1.2 | 44.8 | |
| Automobiles | 167 | 9 | 64 | 0 | 240 | 15 | 7 | 32 | 0 | 54 | 64 | 728 | 25 | 0 | 817 | 39 | 698 | 208 | 0 | 945 | 2056 |
| % Automobiles | 100 | 100 | 100 | 0 | 96.8 | 100 | 100 | 100 | 0 | 65.9 | 100 | 100 | 100 | 0 | 94.6 | 100 | 100 | 100 | 0 | 97.3 | 95 |
| Bicycles and Pedestrians | 0 | 0 | 0 | 8 | 8 | 0 | 0 | 0 | 28 | 28 | 0 | 0 | 0 | 47 | 47 | 0 | 0 | 0 | 26 | 26 | 109 |
| % Bicycles and Pedestrians | 0 | 0 | 0 | 100 | 3.2 | 0 | 0 | 0 | 100 | 34.1 | 0 | 0 | 0 | 100 | 5.4 | 0 | 0 | 0 | 100 | 2.7 | 5 |

Breckenridge, CO
East Peak 8
AM Peak
4 O'Clock Rd and Park Ave (SH-9) RAB

File Name : 4 O'Clock and Park Ave AM
Site Code : IPO 488
Start Date : 1/31/2020
Page No : 2

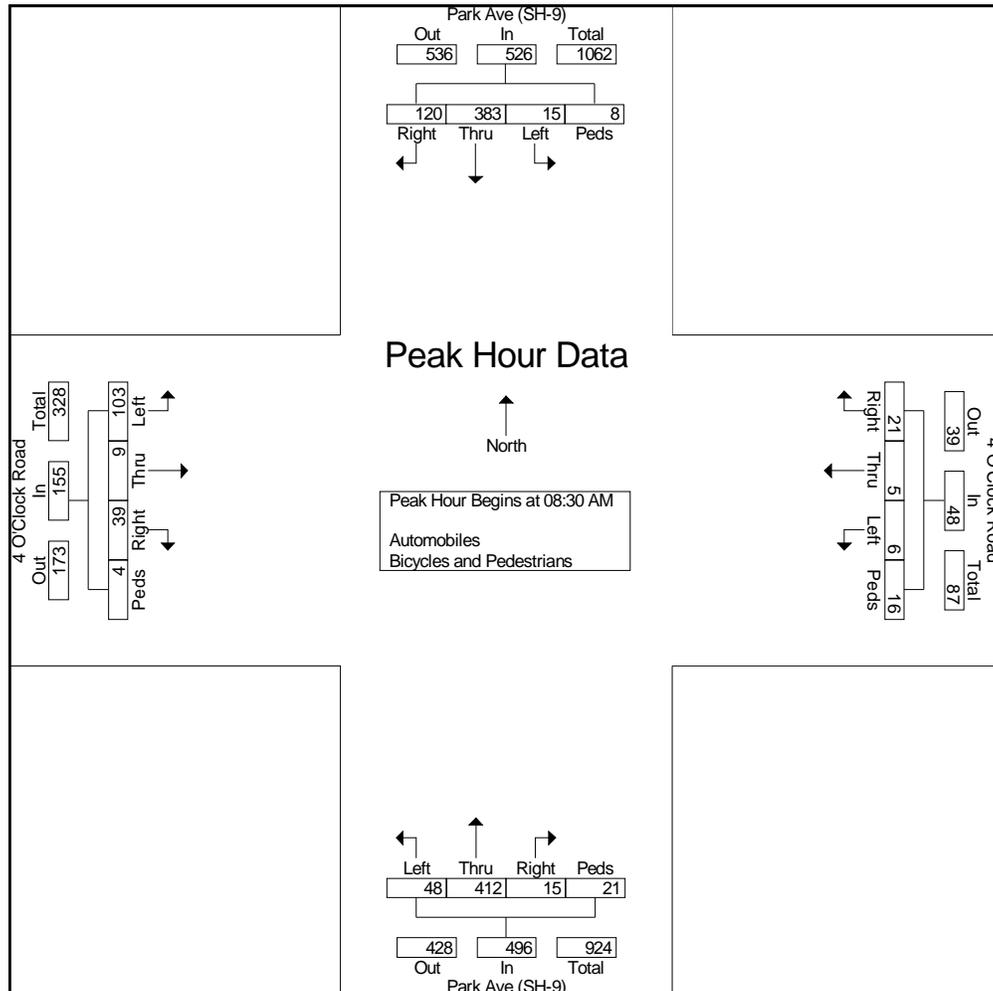




Breckenridge, CO
 East Peak 8
 AM Peak
 4 O'Clock Rd and Park Ave (SH-9) RAB

File Name : 4 O'Clock and Park Ave AM
 Site Code : IPO 488
 Start Date : 1/31/2020
 Page No : 3

| Start Time | 4 O'Clock Road Eastbound | | | | | 4 O'Clock Road Westbound | | | | | Park Ave (SH-9) Northbound | | | | | Park Ave (SH-9) Southbound | | | | | Int. Total |
|--|--------------------------|------|-------|------|------------|--------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 08:30 AM | | | | | | | | | | | | | | | | | | | | | |
| 08:30 AM | 31 | 5 | 13 | 2 | 51 | 2 | 2 | 5 | 2 | 11 | 10 | 111 | 1 | 5 | 127 | 2 | 98 | 36 | 0 | 136 | 325 |
| 08:45 AM | 26 | 1 | 9 | 1 | 37 | 0 | 1 | 5 | 10 | 16 | 12 | 110 | 5 | 8 | 135 | 6 | 89 | 28 | 1 | 124 | 312 |
| 09:00 AM | 21 | 2 | 9 | 1 | 33 | 2 | 1 | 8 | 0 | 11 | 10 | 92 | 3 | 5 | 110 | 4 | 103 | 32 | 0 | 139 | 293 |
| 09:15 AM | 25 | 1 | 8 | 0 | 34 | 2 | 1 | 3 | 4 | 10 | 16 | 99 | 6 | 3 | 124 | 3 | 93 | 24 | 7 | 127 | 295 |
| Total Volume | 103 | 9 | 39 | 4 | 155 | 6 | 5 | 21 | 16 | 48 | 48 | 412 | 15 | 21 | 496 | 15 | 383 | 120 | 8 | 526 | 1225 |
| % App. Total | 66.5 | 5.8 | 25.2 | 2.6 | | 12.5 | 10.4 | 43.8 | 33.3 | | 9.7 | 83.1 | 3 | 4.2 | | 2.9 | 72.8 | 22.8 | 1.5 | | |
| PHF | .831 | .450 | .750 | .500 | .760 | .750 | .625 | .656 | .400 | .750 | .750 | .928 | .625 | .656 | .919 | .625 | .930 | .833 | .286 | .946 | .942 |





Breckenridge, CO
 East Peak 8
 PM Peak
 4 O'Clock Rd and Park Ave (SH-9) RAB

File Name : 4 OClock and Park Ave PM
 Site Code : IPO 488
 Start Date : 1/31/2020
 Page No : 1

Groups Printed- Automobiles - Bicycles and Pedestrians

| Start Time | 4 O'Clock Road Eastbound | | | | | 4 O'Clock Road Westbound | | | | | Park Ave (SH-9) Northbound | | | | | Park Ave (SH-9) Southbound | | | | | Int. Total |
|----------------------------|--------------------------|------|-------|------|------------|--------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| 03:00 PM | 32 | 1 | 8 | 0 | 41 | 8 | 4 | 11 | 7 | 30 | 6 | 97 | 2 | 18 | 123 | 5 | 132 | 34 | 1 | 172 | 366 |
| 03:15 PM | 35 | 1 | 11 | 8 | 55 | 6 | 1 | 21 | 8 | 36 | 6 | 89 | 5 | 11 | 111 | 15 | 108 | 42 | 5 | 170 | 372 |
| 03:30 PM | 30 | 1 | 7 | 12 | 50 | 5 | 0 | 21 | 14 | 40 | 12 | 95 | 4 | 12 | 123 | 9 | 131 | 26 | 1 | 167 | 380 |
| 03:45 PM | 27 | 3 | 8 | 4 | 42 | 9 | 2 | 11 | 5 | 27 | 13 | 119 | 5 | 4 | 141 | 14 | 132 | 47 | 12 | 205 | 415 |
| Total | 124 | 6 | 34 | 24 | 188 | 28 | 7 | 64 | 34 | 133 | 37 | 400 | 16 | 45 | 498 | 43 | 503 | 149 | 19 | 714 | 1533 |
| 04:00 PM | 36 | 4 | 9 | 8 | 57 | 5 | 6 | 19 | 11 | 41 | 9 | 125 | 6 | 7 | 147 | 10 | 122 | 22 | 2 | 156 | 401 |
| 04:15 PM | 38 | 0 | 6 | 4 | 48 | 4 | 4 | 22 | 10 | 40 | 9 | 116 | 6 | 13 | 144 | 11 | 71 | 43 | 17 | 142 | 374 |
| 04:30 PM | 43 | 2 | 22 | 3 | 70 | 4 | 2 | 13 | 12 | 31 | 16 | 111 | 5 | 12 | 144 | 8 | 104 | 47 | 10 | 169 | 414 |
| 04:45 PM | 44 | 3 | 11 | 20 | 78 | 9 | 4 | 13 | 13 | 39 | 8 | 89 | 4 | 16 | 117 | 11 | 102 | 54 | 11 | 178 | 412 |
| Total | 161 | 9 | 48 | 35 | 253 | 22 | 16 | 67 | 46 | 151 | 42 | 441 | 21 | 48 | 552 | 40 | 399 | 166 | 40 | 645 | 1601 |
| 05:00 PM | 27 | 5 | 8 | 2 | 42 | 4 | 10 | 10 | 4 | 28 | 11 | 100 | 1 | 34 | 146 | 10 | 126 | 36 | 1 | 173 | 389 |
| 05:15 PM | 37 | 2 | 9 | 4 | 52 | 5 | 5 | 11 | 10 | 31 | 14 | 95 | 4 | 7 | 120 | 12 | 123 | 38 | 12 | 185 | 388 |
| 05:30 PM | 20 | 3 | 11 | 9 | 43 | 11 | 3 | 13 | 1 | 28 | 11 | 94 | 3 | 32 | 140 | 14 | 128 | 43 | 7 | 192 | 403 |
| 05:45 PM | 31 | 0 | 12 | 8 | 51 | 5 | 1 | 15 | 4 | 25 | 7 | 92 | 6 | 16 | 121 | 8 | 127 | 25 | 16 | 176 | 373 |
| Total | 115 | 10 | 40 | 23 | 188 | 25 | 19 | 49 | 19 | 112 | 43 | 381 | 14 | 89 | 527 | 44 | 504 | 142 | 36 | 726 | 1553 |
| Grand Total | 400 | 25 | 122 | 82 | 629 | 75 | 42 | 180 | 99 | 396 | 122 | 1222 | 51 | 182 | 1577 | 127 | 1406 | 457 | 95 | 2085 | 4687 |
| Apprch % | 63.6 | 4 | 19.4 | 13 | | 18.9 | 10.6 | 45.5 | 25 | | 7.7 | 77.5 | 3.2 | 11.5 | | 6.1 | 67.4 | 21.9 | 4.6 | | |
| Total % | 8.5 | 0.5 | 2.6 | 1.7 | 13.4 | 1.6 | 0.9 | 3.8 | 2.1 | 8.4 | 2.6 | 26.1 | 1.1 | 3.9 | 33.6 | 2.7 | 30 | 9.8 | 2 | 44.5 | |
| Automobiles | 400 | 25 | 122 | 0 | 547 | 75 | 42 | 180 | 0 | 297 | 122 | 1221 | 51 | 0 | 1394 | 127 | 1406 | 457 | 0 | 1990 | 4228 |
| % Automobiles | 100 | 100 | 100 | 0 | 87 | 100 | 100 | 100 | 0 | 75 | 100 | 99.9 | 100 | 0 | 88.4 | 100 | 100 | 100 | 0 | 95.4 | 90.2 |
| Bicycles and Pedestrians | 0 | 0 | 0 | 82 | 82 | 0 | 0 | 0 | 99 | 99 | 0 | 1 | 0 | 182 | 183 | 0 | 0 | 0 | 95 | 95 | 459 |
| % Bicycles and Pedestrians | 0 | 0 | 0 | 100 | 13 | 0 | 0 | 0 | 100 | 25 | 0 | 0.1 | 0 | 100 | 11.6 | 0 | 0 | 0 | 100 | 4.6 | 9.8 |



Ridgeview Data
Collection

Breckenridge, CO
East Peak 8
PM Peak
4 O'Clock Rd and Park Ave (SH-9) RAB

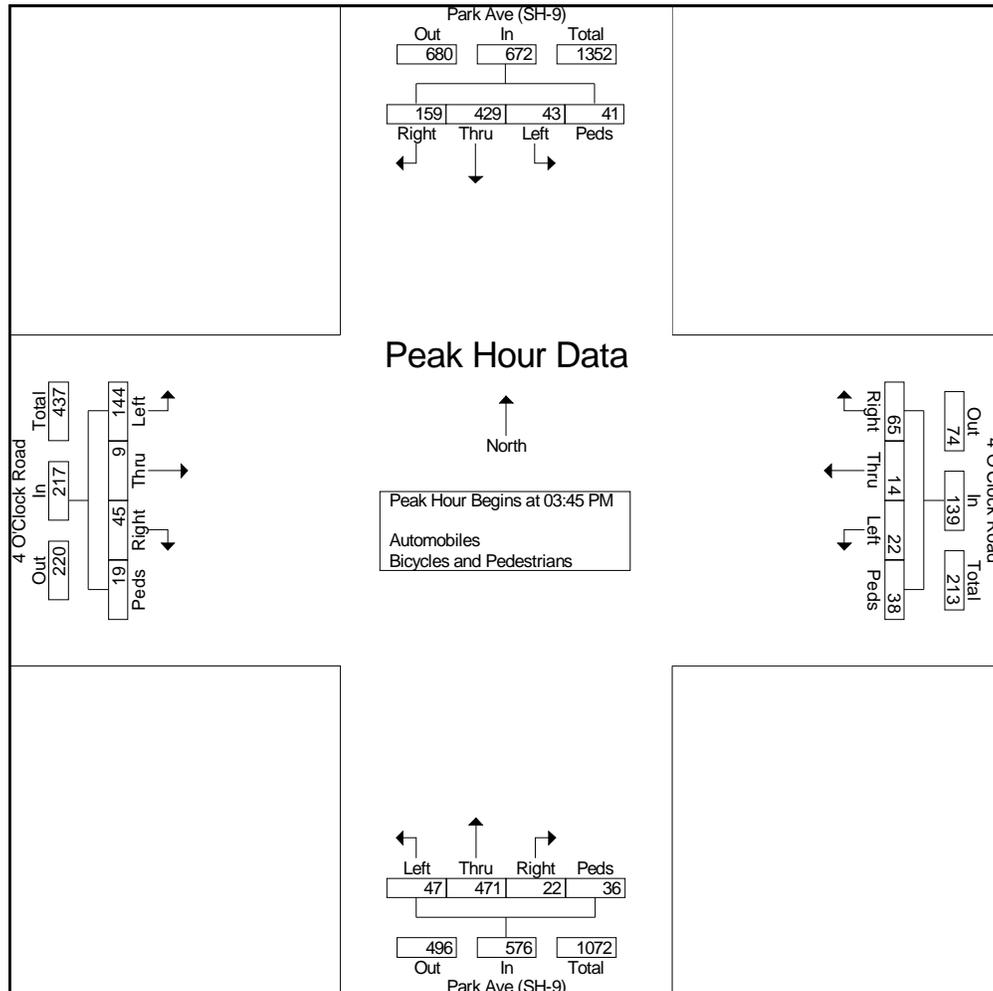
File Name : 4 OClock and Park Ave PM
Site Code : IPO 488
Start Date : 1/31/2020
Page No : 2



Breckenridge, CO
 East Peak 8
 PM Peak
 4 O'Clock Rd and Park Ave (SH-9) RAB

File Name : 4 O'Clock and Park Ave PM
 Site Code : IPO 488
 Start Date : 1/31/2020
 Page No : 3

| Start Time | 4 O'Clock Road Eastbound | | | | | 4 O'Clock Road Westbound | | | | | Park Ave (SH-9) Northbound | | | | | Park Ave (SH-9) Southbound | | | | | Int. Total |
|--|--------------------------|------|-------|------|------------|--------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 03:45 PM | | | | | | | | | | | | | | | | | | | | | |
| 03:45 PM | 27 | 3 | 8 | 4 | 42 | 9 | 2 | 11 | 5 | 27 | 13 | 119 | 5 | 4 | 141 | 14 | 132 | 47 | 12 | 205 | 415 |
| 04:00 PM | 36 | 4 | 9 | 8 | 57 | 5 | 6 | 19 | 11 | 41 | 9 | 125 | 6 | 7 | 147 | 10 | 122 | 22 | 2 | 156 | 401 |
| 04:15 PM | 38 | 0 | 6 | 4 | 48 | 4 | 4 | 22 | 10 | 40 | 9 | 116 | 6 | 13 | 144 | 11 | 71 | 43 | 17 | 142 | 374 |
| 04:30 PM | 43 | 2 | 22 | 3 | 70 | 4 | 2 | 13 | 12 | 31 | 16 | 111 | 5 | 12 | 144 | 8 | 104 | 47 | 10 | 169 | 414 |
| Total Volume | 144 | 9 | 45 | 19 | 217 | 22 | 14 | 65 | 38 | 139 | 47 | 471 | 22 | 36 | 576 | 43 | 429 | 159 | 41 | 672 | 1604 |
| % App. Total | 66.4 | 4.1 | 20.7 | 8.8 | | 15.8 | 10.1 | 46.8 | 27.3 | | 8.2 | 81.8 | 3.8 | 6.2 | | 6.4 | 63.8 | 23.7 | 6.1 | | |
| PHF | .837 | .563 | .511 | .594 | .775 | .611 | .583 | .739 | .792 | .848 | .734 | .942 | .917 | .692 | .980 | .768 | .813 | .846 | .603 | .820 | .966 |





Breckenridge, CO
 East Peak 8
 AM Peak
 Ski Hill Road Adjacent to Parking Lot

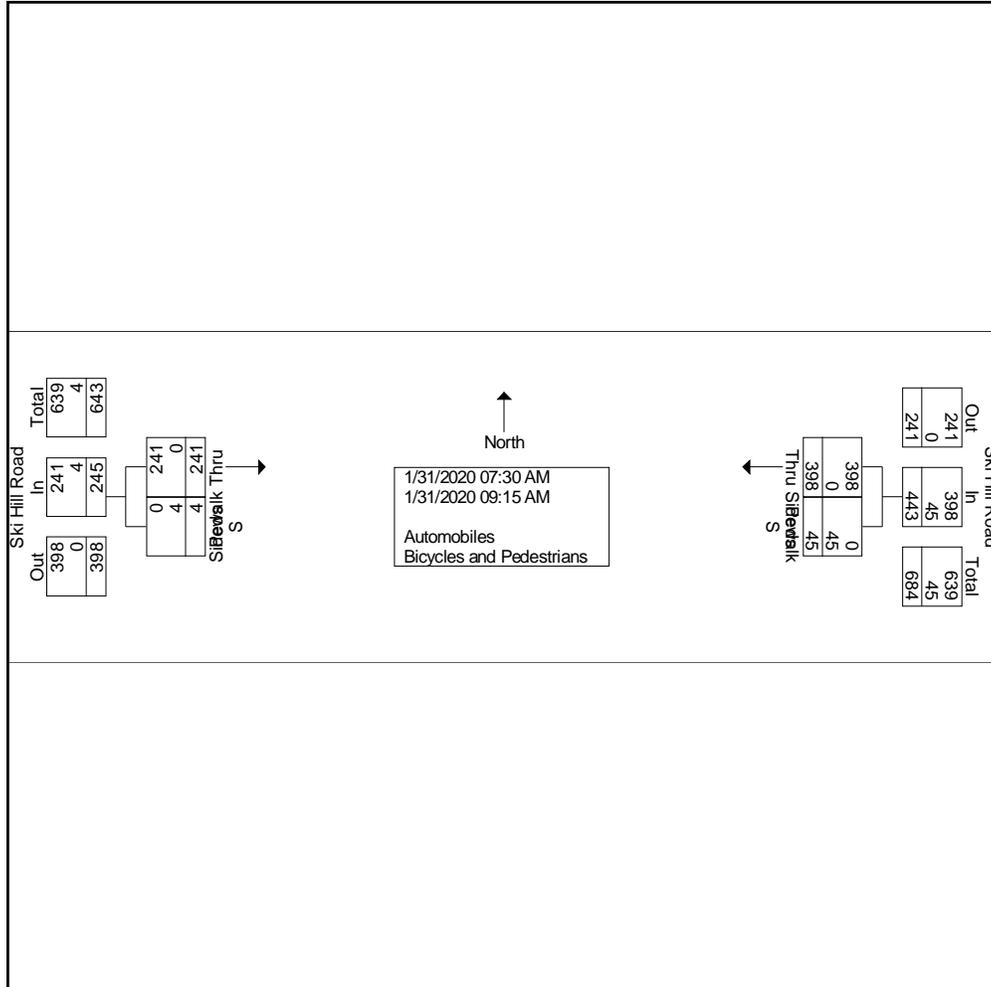
File Name : Ski Hill Road at Parking AM
 Site Code : IPO 488
 Start Date : 1/31/2020
 Page No : 1

Groups Printed- Automobiles - Bicycles and Pedestrians

| Start Time | Ski Hill Road Eastbound | | | Ski Hill Road Westbound | | | Int. Total |
|----------------------------|-------------------------|-----------------|------------|-------------------------|-----------------|------------|------------|
| | Thru | Peds S Sidewalk | App. Total | Thru | Peds S Sidewalk | App. Total | |
| 07:30 AM | 21 | 1 | 22 | 33 | 1 | 34 | 56 |
| 07:45 AM | 20 | 0 | 20 | 44 | 0 | 44 | 64 |
| Total | 41 | 1 | 42 | 77 | 1 | 78 | 120 |
| 08:00 AM | 29 | 0 | 29 | 52 | 0 | 52 | 81 |
| 08:15 AM | 25 | 2 | 27 | 53 | 0 | 53 | 80 |
| 08:30 AM | 31 | 0 | 31 | 71 | 1 | 72 | 103 |
| 08:45 AM | 33 | 0 | 33 | 63 | 12 | 75 | 108 |
| Total | 118 | 2 | 120 | 239 | 13 | 252 | 372 |
| 09:00 AM | 50 | 0 | 50 | 43 | 14 | 57 | 107 |
| 09:15 AM | 32 | 1 | 33 | 39 | 17 | 56 | 89 |
| Grand Total | 241 | 4 | 245 | 398 | 45 | 443 | 688 |
| Apprch % | 98.4 | 1.6 | | 89.8 | 10.2 | | |
| Total % | 35 | 0.6 | 35.6 | 57.8 | 6.5 | 64.4 | |
| Automobiles | 241 | 0 | 241 | 398 | 0 | 398 | 639 |
| % Automobiles | 100 | 0 | 98.4 | 100 | 0 | 89.8 | 92.9 |
| Bicycles and Pedestrians | 0 | 4 | 4 | 0 | 45 | 45 | 49 |
| % Bicycles and Pedestrians | 0 | 100 | 1.6 | 0 | 100 | 10.2 | 7.1 |

Breckenridge, CO
East Peak 8
AM Peak
Ski Hill Road Adjacent to Parking Lot

File Name : Ski Hill Road at Parking AM
Site Code : IPO 488
Start Date : 1/31/2020
Page No : 2

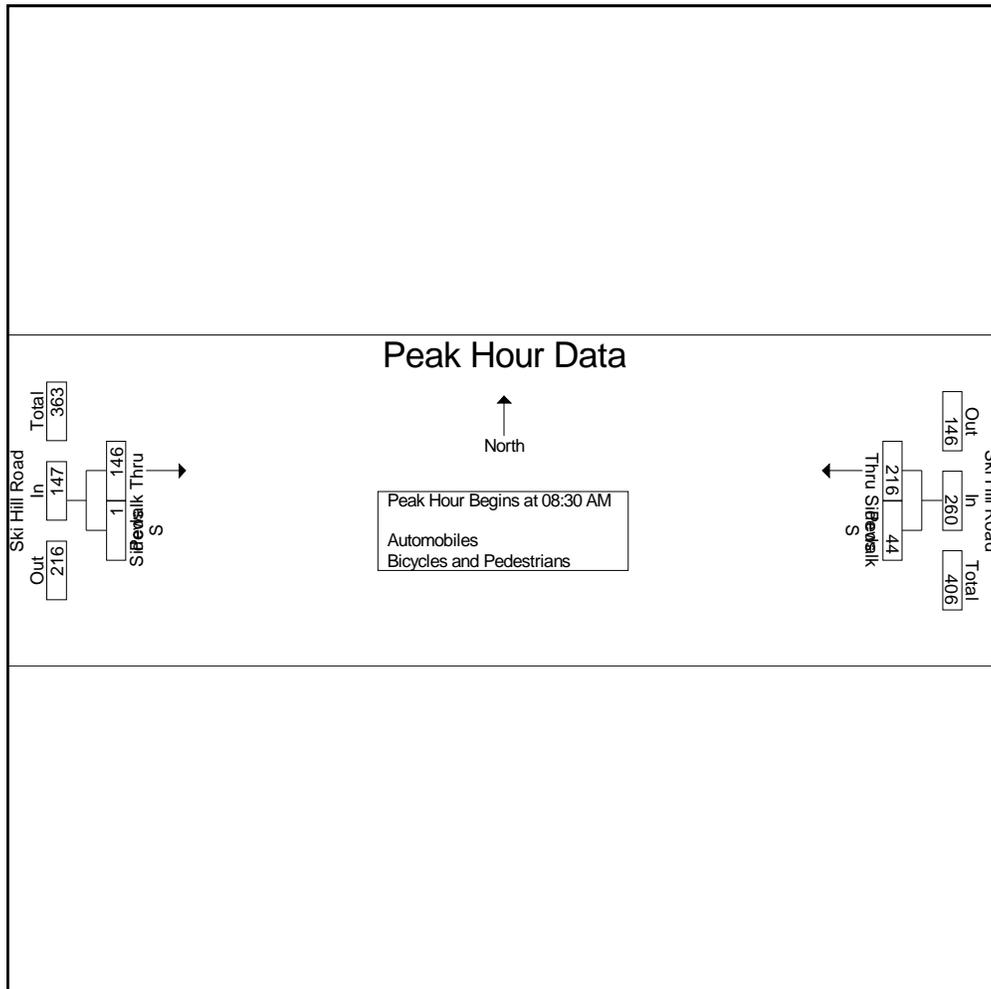




Breckenridge, CO
 East Peak 8
 AM Peak
 Ski Hill Road Adjacent to Parking Lot

File Name : Ski Hill Road at Parking AM
 Site Code : IPO 488
 Start Date : 1/31/2020
 Page No : 3

| Start Time | Ski Hill Road Eastbound | | | Ski Hill Road Westbound | | | Int. Total |
|--|-------------------------|-----------------|------------|-------------------------|-----------------|------------|------------|
| | Thru | Peds S Sidewalk | App. Total | Thru | Peds S Sidewalk | App. Total | |
| Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1 | | | | | | | |
| Peak Hour for Entire Intersection Begins at 08:30 AM | | | | | | | |
| 08:30 AM | 31 | 0 | 31 | 71 | 1 | 72 | 103 |
| 08:45 AM | 33 | 0 | 33 | 63 | 12 | 75 | 108 |
| 09:00 AM | 50 | 0 | 50 | 43 | 14 | 57 | 107 |
| 09:15 AM | 32 | 1 | 33 | 39 | 17 | 56 | 89 |
| Total Volume | 146 | 1 | 147 | 216 | 44 | 260 | 407 |
| % App. Total | 99.3 | 0.7 | | 83.1 | 16.9 | | |
| PHF | .730 | .250 | .735 | .761 | .647 | .867 | .942 |





Breckenridge, CO
 East Peak 8
 PM Peak
 Ski Hill Road Adjacent to Parking Lot

File Name : Ski Hill Road at Parking PM
 Site Code : IPO 488
 Start Date : 1/31/2020
 Page No : 1

Groups Printed- Automobiles - Bicycles and Pedestrians

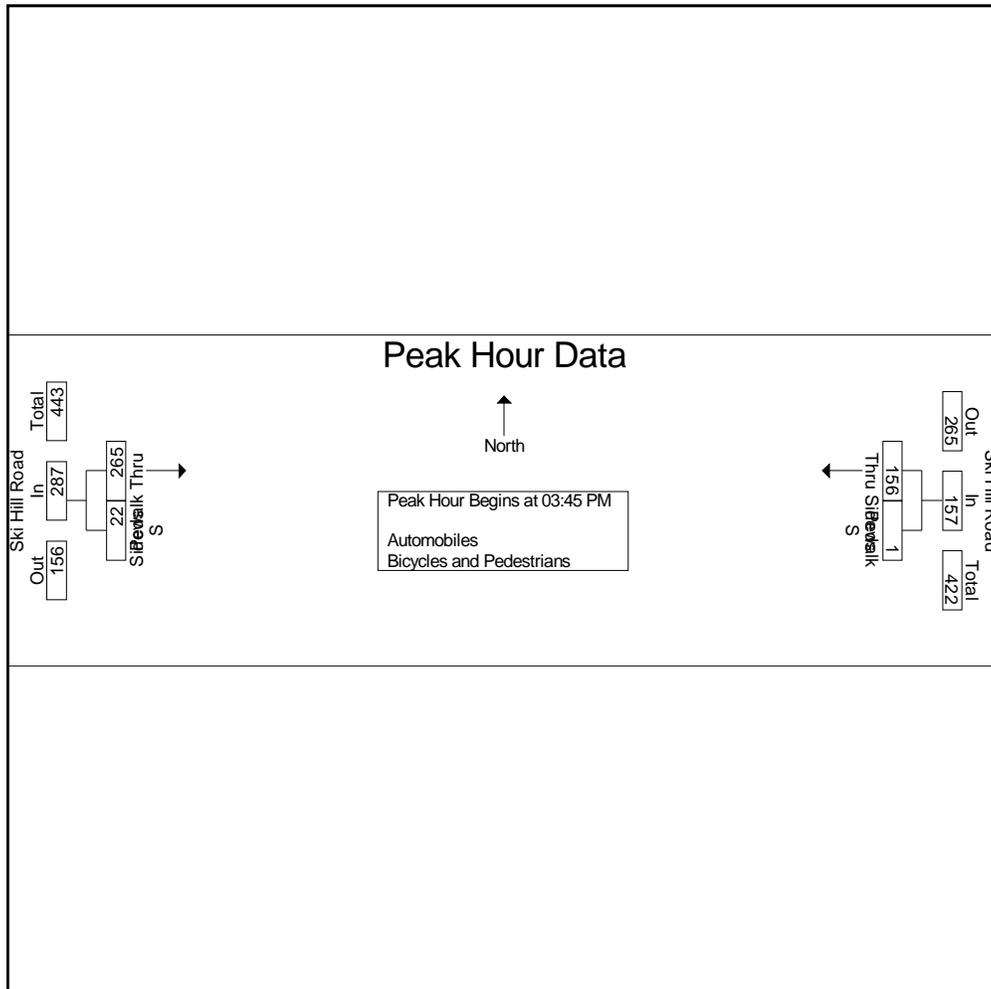
| Start Time | Ski Hill Road Eastbound | | | Ski Hill Road Westbound | | | Int. Total |
|----------------------------|-------------------------|-----------------|------------|-------------------------|-----------------|------------|------------|
| | Thru | Peds S Sidewalk | App. Total | Thru | Peds S Sidewalk | App. Total | |
| 03:00 PM | 37 | 5 | 42 | 39 | 0 | 39 | 81 |
| 03:15 PM | 49 | 4 | 53 | 31 | 1 | 32 | 85 |
| 03:30 PM | 50 | 4 | 54 | 43 | 0 | 43 | 97 |
| 03:45 PM | 63 | 5 | 68 | 44 | 0 | 44 | 112 |
| Total | 199 | 18 | 217 | 157 | 1 | 158 | 375 |
| 04:00 PM | 63 | 5 | 68 | 34 | 0 | 34 | 102 |
| 04:15 PM | 72 | 10 | 82 | 41 | 0 | 41 | 123 |
| 04:30 PM | 67 | 2 | 69 | 37 | 1 | 38 | 107 |
| 04:45 PM | 50 | 1 | 51 | 42 | 0 | 42 | 93 |
| Total | 252 | 18 | 270 | 154 | 1 | 155 | 425 |
| 05:00 PM | 56 | 4 | 60 | 36 | 0 | 36 | 96 |
| 05:15 PM | 50 | 1 | 51 | 40 | 0 | 40 | 91 |
| 05:30 PM | 42 | 1 | 43 | 23 | 1 | 24 | 67 |
| 05:45 PM | 43 | 0 | 43 | 29 | 0 | 29 | 72 |
| Total | 191 | 6 | 197 | 128 | 1 | 129 | 326 |
| Grand Total | 642 | 42 | 684 | 439 | 3 | 442 | 1126 |
| Apprch % | 93.9 | 6.1 | | 99.3 | 0.7 | | |
| Total % | 57 | 3.7 | 60.7 | 39 | 0.3 | 39.3 | |
| Automobiles | 642 | 0 | 642 | 439 | 0 | 439 | 1081 |
| % Automobiles | 100 | 0 | 93.9 | 100 | 0 | 99.3 | 96 |
| Bicycles and Pedestrians | 0 | 42 | 42 | 0 | 3 | 3 | 45 |
| % Bicycles and Pedestrians | 0 | 100 | 6.1 | 0 | 100 | 0.7 | 4 |



Breckenridge, CO
 East Peak 8
 PM Peak
 Ski Hill Road Adjacent to Parking Lot

File Name : Ski Hill Road at Parking PM
 Site Code : IPO 488
 Start Date : 1/31/2020
 Page No : 3

| Start Time | Ski Hill Road Eastbound | | | Ski Hill Road Westbound | | | Int. Total |
|--|-------------------------|-----------------|------------|-------------------------|-----------------|------------|------------|
| | Thru | Peds S Sidewalk | App. Total | Thru | Peds S Sidewalk | App. Total | |
| Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | |
| Peak Hour for Entire Intersection Begins at 03:45 PM | | | | | | | |
| 03:45 PM | 63 | 5 | 68 | 44 | 0 | 44 | 112 |
| 04:00 PM | 63 | 5 | 68 | 34 | 0 | 34 | 102 |
| 04:15 PM | 72 | 10 | 82 | 41 | 0 | 41 | 123 |
| 04:30 PM | 67 | 2 | 69 | 37 | 1 | 38 | 107 |
| Total Volume | 265 | 22 | 287 | 156 | 1 | 157 | 444 |
| % App. Total | 92.3 | 7.7 | | 99.4 | 0.6 | | |
| PHF | .920 | .550 | .875 | .886 | .250 | .892 | .902 |



APPENDIX B

CDOT Traffic Data

East Peak 8 Update: CDOT Traffic Projection

| ROUTE | REFPT | ENDREFPT | LENGTH | AADT | AADTYR | YR20FACTOR | DHV | LOCATION |
|-------|-------|----------|--------|-------|--------|------------|------|-----------------------------------|
| 009C | 86.67 | 86.744 | 0.127 | 11000 | 2018 | 1.26 | 12.5 | ON SH-9 (PARK AVE) S/O SKIHILL RD |

Annual Growth: 1.16%

APPENDIX C

Trip Generation Worksheets

East Peak 8 Update Trip Generation Summary

| Land Use | Quantity | Units | Vehicle Trips | | | | | | |
|---|----------|-------------|---------------|----------------------|-----------|------------|----------------------|------------|------------|
| | | | Daily | Weekday AM Peak Hour | | | Weekday PM Peak Hour | | |
| | | | | In | Out | Total | In | Out | Total |
| Mid-Rise Multifamily Housing (ITE 221) | 49 | Units | 266 | 4 | 13 | 17 | 13 | 9 | 22 |
| Hotel (ITE 310) | 165 | Rooms | 1,436 | 45 | 32 | 77 | 50 | 48 | 98 |
| Sit Down Restaurant (ITE 932) | 4,008 | Square Feet | 450 | 22 | 18 | 40 | 24 | 15 | 39 |
| Additional Parking | 70 | Spaces | 140 | 50 | 0 | 50 | 0 | 35 | 35 |
| Total Site Generated Trips | | | 2,292 | 121 | 63 | 184 | 87 | 107 | 194 |
| Total Trips after Internal Capture | | | 2,150 | 117 | 57 | 174 | 82 | 100 | 182 |

Project East Peak 8 Update
 Subject Trip Generation for Multifamily Housing (Mid-Rise)
 Designed by JRP Date February 05, 2020 Job No. 096870000
 Checked by _____ Date _____ Sheet No. 1 of 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - Multifamily Housing (Mid-Rise) (221)

Independent Variable - Dwelling Units (X)

$$X = 49$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (Series 200 Page 74)

$$\ln(T) = 0.98 \ln(X) - 0.98$$

$$\ln(T) = 0.98 * \ln(49.0) - 0.98$$

Directional Distribution: 26% ent. 74% exit.

T = 17 Average Vehicle Trip Ends

4 entering 13 exiting

$$4 + 13 = 17$$

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (Series 200 Page 75)

$$\ln(T) = 0.96 \ln(X) - 0.63$$

$$\ln(T) = 0.96 * \ln(49.0) - 0.63$$

Directional Distribution: 61% ent. 39% exit.

T = 22 Average Vehicle Trip Ends

13 entering 9 exiting

$$13 + 9 = 22$$

Weekday (Series 200 Page 73)

$$(T) = 5.45*(X) - 1.75$$

$$(T) = 5.45 * 49 - 1.75$$

Directional Distribution: 50% ent. 50% exit.

T = 266 Average Vehicle Trip Ends

133 entering 133 exiting

$$133 + 133 = 266$$

| | | | |
|-------------|---|------|-------------------|
| Project | East Peak 8 Update | | |
| Subject | Trip Generation for High-Turnover (Sit-Down) Restaurant | | |
| Designed by | JRP | Date | February 05, 2020 |
| Job No. | 096870000 | | |
| Checked by | | Date | |
| Sheet No. | 1 of 1 | | |

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - High Turnover Sit-Down Restaurant (932)

Independant Variable - 1000 Square Feet Gross Floor Area (X)

Gross Floor Area = **4,008** Square Feet

X = 4.008

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (900 Series Page 97)

| | | | |
|------------------|---------------------------|------------|---------------------------|
| Average Weekday | Directional Distribution: | 55% ent. | 45% exit. |
| T = 9.94 (X) | T = | 40 | Average Vehicle Trip Ends |
| T = 9.94 * 4.008 | 22 entering | 18 exiting | |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (900 Series Page 98)

| | | | |
|------------------|---------------------------|------------|---------------------------|
| Average Weekday | Directional Distribution: | 62% ent. | 38% exit. |
| T = 9.77 (X) | T = | 39 | Average Vehicle Trip Ends |
| T = 9.77 * 4.008 | 24 entering | 15 exiting | |

Weekday (900 Series Page 96)

| | | | |
|--------------------|---------------------------|---------------|---------------------------|
| Average Weekday | Directional Distribution: | 50% entering, | 50% exiting |
| T = 112.18 (X) | T = | 450 | Average Vehicle Trip Ends |
| T = 112.18 * 4.008 | 225 entering | 225 exiting | |

Non Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017-Page 207)

| | | | | | |
|----------------|-----|-------------|----------------|-----|------------------------------------|
| AM Peak Hour = | 57% | Non-Pass By | PM Peak Hour = | 57% | Non-Pass By |
| | IN | Out | Total | | |
| AM Peak | 12 | 10 | 23 | | |
| PM Peak | 14 | 8 | 22 | | |
| Daily | 128 | 128 | 256 | | PM Peak Hour Rate Applied to Daily |

Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017 -Page 207)

| | | | | | |
|----------------|-----|---------|----------------|-----|------------------------------------|
| AM Peak Hour = | 43% | Pass By | PM Peak Hour = | 43% | Pass By |
| | IN | Out | Total | | |
| AM Peak | 9 | 8 | 18 | | |
| PM Peak | 10 | 6 | 17 | | |
| Daily | 97 | 97 | 194 | | PM Peak Hour Rate Applied to Daily |

Project East Peak 8 Update
 Subject Trip Generation for Hotel
 Designed by JRP Date February 05, 2020 Job No. 096870000
 Checked by _____ Sheet No. 1 of 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve

Land Use Code -Hotel (310)

Independent Variable - Rooms (X)

X = 165
 T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (Series 300 Page 3)

| | |
|-----------------------------|--|
| (T) = 0.50 (X) - 5.34 | Directional Distribution: 59% ent. 41% exit. |
| (T) = 0.50 * (165.0) - 5.34 | T = 77 Average Vehicle Trip Ends |
| | 45 entering 32 exiting |
| | 45 + 32 = 77 |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (Series 300 page 4)

| | |
|------------------------|--|
| T = 0.75 (X) - 26.02 | Directional Distribution: 51% ent. 49% exit. |
| T = 0.75 * 165 - 26.02 | T = 98 Average Vehicle Trip Ends |
| | 50 entering 48 exiting |
| | 50 + 48 = 98 |

Weekday (Series 300 Page 2)

| | |
|--------------------------------|---|
| Average Weekday | Directional Distribution: 50% entering, 50% exiting |
| (T) = 11.29 (X) - 426.97 | T = 1436 Average Vehicle Trip Ends |
| (T) = 11.29 * (165.0) - 426.97 | 718 entering 718 exiting |
| | 718 + 718 = 1436 |

| NCHRP 684 Internal Trip Capture Estimation Tool | | | |
|---|---------------------|---------------|----------------------------------|
| Project Name: | East Peak 8 | Organization: | Kimley-Horn and Associates, Inc. |
| Project Location: | | Performed By: | |
| Scenario Description: | | Date: | 7/9/2019 |
| Analysis Year: | | Checked By: | |
| Analysis Period: | AM Street Peak Hour | Date: | |

| Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate) | | | | | | |
|--|---|----------|------------------|--------------------------------------|----------|---------|
| Land Use | Development Data (For Information Only) | | | Estimated Vehicle-Trips ³ | | |
| | ITE LUCs ¹ | Quantity | Units | Total | Entering | Exiting |
| Office | | - | 1,000 Sq Ft | 0 | 0 | 0 |
| Retail | | - | 1,000 Sq Ft | 0 | 0 | 0 |
| Restaurant | | 4 | 1,000 Sq Ft | 40 | 22 | 18 |
| Cinema/Entertainment | | - | Screen(s) | 0 | 0 | 0 |
| Residential | | 49 | Dwelling Unit(s) | 17 | 4 | 13 |
| Hotel | | 165 | Room(s) | 77 | 46 | 31 |
| All Other Land Uses ² | | - | 0 | 0 | 0 | 0 |
| | | | | 134 | 72 | 62 |

| Table 2-A: Mode Split and Vehicle Occupancy Estimates | | | | | | |
|---|------------------------|-----------|-----------------|------------------------|-----------|-----------------|
| Land Use | Entering Trips | | | Exiting Trips | | |
| | Veh. Occ. ⁴ | % Transit | % Non-Motorized | Veh. Occ. ⁴ | % Transit | % Non-Motorized |
| Office | 1.00 | 0% | 0% | 1.00 | 0% | 0% |
| Retail | 1.00 | 0% | 0% | 1.00 | 0% | 0% |
| Restaurant | 1.00 | 0% | 0% | 1.00 | 0% | 0% |
| Cinema/Entertainment | 1.00 | 0% | 0% | 1.00 | 0% | 0% |
| Residential | 1.00 | 0% | 0% | 1.00 | 0% | 0% |
| Hotel | 1.00 | 0% | 0% | 1.00 | 0% | 0% |
| All Other Land Uses ² | 1.00 | 0% | 0% | 1.00 | 0% | 0% |

| Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance) | | | | | | |
|---|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From) | Destination (To) | | | | | |
| | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office | | | | | | |
| Retail | | | | | | |
| Restaurant | | | | | | |
| Cinema/Entertainment | | | | | | |
| Residential | | | | | | |
| Hotel | | | | | | |

| Table 4-A: Internal Person-Trip Origin-Destination Matrix* | | | | | | |
|--|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From) | Destination (To) | | | | | |
| | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office | | | | | | |
| Retail | 0 | | | | | |
| Restaurant | 0 | 0 | | | | 1 |
| Cinema/Entertainment | 0 | 0 | 0 | | | 0 |
| Residential | 0 | 0 | 3 | | | 0 |
| Hotel | 0 | 0 | 1 | | 0 | |

| Table 5-A: Computations Summary | | | |
|---|-------|----------|---------|
| | Total | Entering | Exiting |
| All Person-Trips | 134 | 72 | 62 |
| Internal Capture Percentage | 7% | 7% | 8% |
| External Vehicle-Trips ⁵ | 124 | 67 | 57 |
| External Transit-Trips ⁶ | 0 | 0 | 0 |
| External Non-Motorized Trips ⁶ | 0 | 0 | 0 |

| Table 6-A: Internal Trip Capture Percentages by Land Use | | |
|--|----------------|---------------|
| Land Use | Entering Trips | Exiting Trips |
| Office | N/A | N/A |
| Retail | N/A | N/A |
| Restaurant | 18% | 6% |
| Cinema/Entertainment | N/A | N/A |
| Residential | 0% | 23% |
| Hotel | 2% | 3% |

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

⁴Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

⁵Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

⁶Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

| | |
|-------------------------|---------------------|
| Project Name: | East Peak 8 |
| Analysis Period: | AM Street Peak Hour |

| Land Use | Table 7-A (D): Entering Trips | | | Table 7-A (O): Exiting Trips | | |
|----------------------|-------------------------------|---------------|---------------|------------------------------|---------------|---------------|
| | Veh. Occ. | Vehicle-Trips | Person-Trips* | Veh. Occ. | Vehicle-Trips | Person-Trips* |
| Office | 1.00 | 0 | 0 | 1.00 | 0 | 0 |
| Retail | 1.00 | 0 | 0 | 1.00 | 0 | 0 |
| Restaurant | 1.00 | 22 | 22 | 1.00 | 18 | 18 |
| Cinema/Entertainment | 1.00 | 0 | 0 | 1.00 | 0 | 0 |
| Residential | 1.00 | 4 | 4 | 1.00 | 13.01310437 | 13 |
| Hotel | 1.00 | 46 | 46 | 1.00 | 31.16 | 31 |

| Origin (From) | Destination (To) | | | | | |
|----------------------|------------------|--------|------------|----------------------|-------------|-------|
| | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office | | 0 | 0 | 0 | 0 | 0 |
| Retail | 0 | | 0 | 0 | 0 | 0 |
| Restaurant | 6 | 3 | | 0 | 1 | 1 |
| Cinema/Entertainment | 0 | 0 | 0 | | 0 | 0 |
| Residential | 0 | 0 | 3 | 0 | | 0 |
| Hotel | 23 | 4 | 3 | 0 | 0 | |

| Origin (From) | Destination (To) | | | | | |
|----------------------|------------------|--------|------------|----------------------|-------------|-------|
| | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office | | 0 | 5 | 0 | 0 | 0 |
| Retail | 0 | | 11 | 0 | 0 | 0 |
| Restaurant | 0 | 0 | | 0 | 0 | 2 |
| Cinema/Entertainment | 0 | 0 | 0 | | 0 | 0 |
| Residential | 0 | 0 | 4 | 0 | | 0 |
| Hotel | 0 | 0 | 1 | 0 | 0 | |

| Destination Land Use | Person-Trip Estimates | | | External Trips by Mode* | | |
|----------------------------------|-----------------------|----------|-------|-------------------------|----------------------|----------------------------|
| | Internal | External | Total | Vehicles ¹ | Transit ² | Non-Motorized ² |
| Office | 0 | 0 | 0 | 0 | 0 | 0 |
| Retail | 0 | 0 | 0 | 0 | 0 | 0 |
| Restaurant | 4 | 18 | 22 | 18 | 0 | 0 |
| Cinema/Entertainment | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential | 0 | 4 | 4 | 4 | 0 | 0 |
| Hotel | 1 | 45 | 46 | 45 | 0 | 0 |
| All Other Land Uses ³ | 0 | 0 | 0 | 0 | 0 | 0 |

| Origin Land Use | Person-Trip Estimates | | | External Trips by Mode* | | |
|----------------------------------|-----------------------|----------|-------|-------------------------|----------------------|----------------------------|
| | Internal | External | Total | Vehicles ¹ | Transit ² | Non-Motorized ² |
| Office | 0 | 0 | 0 | 0 | 0 | 0 |
| Retail | 0 | 0 | 0 | 0 | 0 | 0 |
| Restaurant | 1 | 17 | 18 | 17 | 0 | 0 |
| Cinema/Entertainment | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential | 3 | 10 | 13 | 10 | 0 | 0 |
| Hotel | 1 | 30 | 31 | 30 | 0 | 0 |
| All Other Land Uses ³ | 0 | 0 | 0 | 0 | 0 | 0 |

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A
²Person-Trips
³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator
*Indicates computation that has been rounded to the nearest whole number.

| NCHRP 684 Internal Trip Capture Estimation Tool | | | |
|---|---------------------|---------------|----------------------------------|
| Project Name: | East Peak 8 | Organization: | Kimley-Horn and Associates, Inc. |
| Project Location: | | Performed By: | |
| Scenario Description: | | Date: | 7/9/2019 |
| Analysis Year: | | Checked By: | |
| Analysis Period: | PM Street Peak Hour | Date: | |

| Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate) | | | | | | |
|--|---|----------|------------------|--------------------------------------|----------|---------|
| Land Use | Development Data (For Information Only) | | | Estimated Vehicle-Trips ³ | | |
| | ITE LUCs ¹ | Quantity | Units | Total | Entering | Exiting |
| Office | | - | 1,000 Sq Ft | 0 | 0 | 0 |
| Retail | | - | 1,000 Sq Ft | 0 | 0 | 0 |
| Restaurant | | 4 | 1,000 Sq Ft | 39 | 24 | 15 |
| Cinema/Entertainment | | - | Screen(s) | 0 | 0 | 0 |
| Residential | | 49 | Dwelling Unit(s) | 22 | 14 | 8 |
| Hotel | | 165 | Room(s) | 98 | 50 | 48 |
| All Other Land Uses ² | | - | 0 | 0 | 0 | 0 |
| | | | | 159 | 88 | 71 |

| Table 2-P: Mode Split and Vehicle Occupancy Estimates | | | | | | |
|---|------------------------|-----------|-----------------|------------------------|-----------|-----------------|
| Land Use | Entering Trips | | | Exiting Trips | | |
| | Veh. Occ. ⁴ | % Transit | % Non-Motorized | Veh. Occ. ⁴ | % Transit | % Non-Motorized |
| Office | 1.00 | 0% | 0% | 1.00 | 0% | 0% |
| Retail | 1.00 | 0% | 0% | 1.00 | 0% | 0% |
| Restaurant | 1.00 | 0% | 0% | 1.00 | 0% | 0% |
| Cinema/Entertainment | 1.00 | 0% | 0% | 1.00 | 0% | 0% |
| Residential | 1.00 | 0% | 0% | 1.00 | 0% | 0% |
| Hotel | 1.00 | 0% | 0% | 1.00 | 0% | 0% |
| All Other Land Uses ² | 1.00 | 0% | 0% | 1.00 | 0% | 0% |

| Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance) | | | | | | |
|---|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From) | Destination (To) | | | | | |
| | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office | | | | | | |
| Retail | | | | | | |
| Restaurant | | | | | | |
| Cinema/Entertainment | | | | | | |
| Residential | | | | | | |
| Hotel | | | | | | |

| Table 4-P: Internal Person-Trip Origin-Destination Matrix* | | | | | | |
|--|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From) | Destination (To) | | | | | |
| | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office | | 0 | 0 | 0 | 0 | 0 |
| Retail | 0 | | 0 | 0 | 0 | 0 |
| Restaurant | 0 | 0 | | 0 | 2 | 1 |
| Cinema/Entertainment | 0 | 0 | 0 | | 0 | 0 |
| Residential | 0 | 0 | 2 | 0 | | 0 |
| Hotel | 0 | 0 | 1 | 0 | 0 | |

| Table 5-P: Computations Summary | | | |
|---|-------|----------|---------|
| | Total | Entering | Exiting |
| All Person-Trips | 159 | 88 | 71 |
| Internal Capture Percentage | 8% | 7% | 8% |
| External Vehicle-Trips ⁵ | 147 | 82 | 65 |
| External Transit-Trips ⁶ | 0 | 0 | 0 |
| External Non-Motorized Trips ⁶ | 0 | 0 | 0 |

| Table 6-P: Internal Trip Capture Percentages by Land Use | | |
|--|----------------|---------------|
| Land Use | Entering Trips | Exiting Trips |
| Office | N/A | N/A |
| Retail | N/A | N/A |
| Restaurant | 13% | 20% |
| Cinema/Entertainment | N/A | N/A |
| Residential | 14% | 25% |
| Hotel | 2% | 2% |

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

⁴Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made.

⁵Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

⁶Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

| | |
|-------------------------|---------------------|
| Project Name: | East Peak 8 |
| Analysis Period: | PM Street Peak Hour |

| Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends | | | | | | |
|--|-------------------------------|---------------|---------------|------------------------------|---------------|---------------|
| Land Use | Table 7-P (D): Entering Trips | | | Table 7-P (O): Exiting Trips | | |
| | Veh. Occ. | Vehicle-Trips | Person-Trips* | Veh. Occ. | Vehicle-Trips | Person-Trips* |
| Office | 1.00 | 0 | 0 | 1.00 | 0 | 0 |
| Retail | 1.00 | 0 | 0 | 1.00 | 0 | 0 |
| Restaurant | 1.00 | 24 | 24 | 1.00 | 15 | 15 |
| Cinema/Entertainment | 1.00 | 0 | 0 | 1.00 | 0 | 0 |
| Residential | 1.00 | 14 | 14 | 1.00 | 8.334833189 | 8 |
| Hotel | 1.00 | 50 | 50 | 1.00 | 47.73 | 48 |

| Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin) | | | | | | |
|--|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From) | Destination (To) | | | | | |
| | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office | | 0 | 0 | 0 | 0 | 0 |
| Retail | 0 | | 0 | 0 | 0 | 0 |
| Restaurant | 0 | 6 | | 1 | 3 | 1 |
| Cinema/Entertainment | 0 | 0 | 0 | | 0 | 0 |
| Residential | 0 | 3 | 2 | 0 | | 0 |
| Hotel | 0 | 8 | 33 | 0 | 1 | |

| Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination) | | | | | | |
|---|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From) | Destination (To) | | | | | |
| | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office | | 0 | 0 | 0 | 1 | 0 |
| Retail | 0 | | 7 | 0 | 6 | 9 |
| Restaurant | 0 | 0 | | 0 | 2 | 36 |
| Cinema/Entertainment | 0 | 0 | 1 | | 1 | 1 |
| Residential | 0 | 0 | 3 | 0 | | 6 |
| Hotel | 0 | 0 | 1 | 0 | 0 | |

| Table 9-P (D): Internal and External Trips Summary (Entering Trips) | | | | | | |
|---|-----------------------|----------|-------|-------------------------|----------------------|----------------------------|
| Destination Land Use | Person-Trip Estimates | | | External Trips by Mode* | | |
| | Internal | External | Total | Vehicles ¹ | Transit ² | Non-Motorized ² |
| Office | 0 | 0 | 0 | 0 | 0 | 0 |
| Retail | 0 | 0 | 0 | 0 | 0 | 0 |
| Restaurant | 3 | 21 | 24 | 21 | 0 | 0 |
| Cinema/Entertainment | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential | 2 | 12 | 14 | 12 | 0 | 0 |
| Hotel | 1 | 49 | 50 | 49 | 0 | 0 |
| All Other Land Uses ³ | 0 | 0 | 0 | 0 | 0 | 0 |

| Table 9-P (O): Internal and External Trips Summary (Exiting Trips) | | | | | | |
|--|-----------------------|----------|-------|-------------------------|----------------------|----------------------------|
| Origin Land Use | Person-Trip Estimates | | | External Trips by Mode* | | |
| | Internal | External | Total | Vehicles ¹ | Transit ² | Non-Motorized ² |
| Office | 0 | 0 | 0 | 0 | 0 | 0 |
| Retail | 0 | 0 | 0 | 0 | 0 | 0 |
| Restaurant | 3 | 12 | 15 | 12 | 0 | 0 |
| Cinema/Entertainment | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential | 2 | 6 | 8 | 6 | 0 | 0 |
| Hotel | 1 | 47 | 48 | 47 | 0 | 0 |
| All Other Land Uses ³ | 0 | 0 | 0 | 0 | 0 | 0 |

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

²Person-Trips

³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

APPENDIX D

Intersection Analysis Worksheets

Timings
1: Park Avenue & Ski Hill Road

2020 Existing Saturday AM.syn

02/06/2020

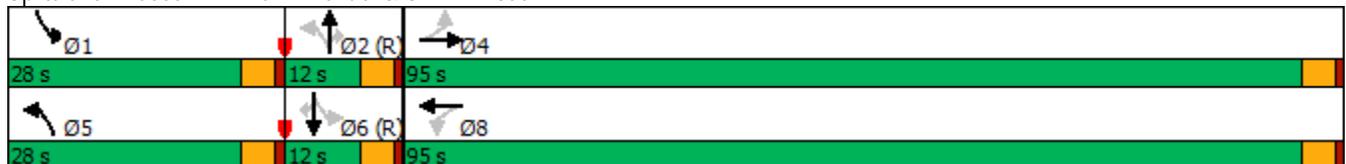


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↗ | ↖ | ↗ | ↗ |
| Traffic Volume (vph) | 157 | 68 | 73 | 103 | 109 | 435 | 62 | 31 | 381 | 190 |
| Future Volume (vph) | 157 | 68 | 73 | 103 | 109 | 435 | 62 | 31 | 381 | 190 |
| Turn Type | Perm | NA | Perm | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | | 4 | | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 |
| Total Split (s) | 95.0 | 95.0 | 95.0 | 95.0 | 28.0 | 12.0 | 12.0 | 28.0 | 12.0 | 12.0 |
| Total Split (%) | 70.4% | 70.4% | 70.4% | 70.4% | 20.7% | 8.9% | 8.9% | 20.7% | 8.9% | 8.9% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | | | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | | | | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effct Green (s) | 29.9 | 29.9 | 29.9 | 29.9 | 94.5 | 86.9 | 86.9 | 89.5 | 82.7 | 82.7 |
| Actuated g/C Ratio | 0.22 | 0.22 | 0.22 | 0.22 | 0.70 | 0.64 | 0.64 | 0.66 | 0.61 | 0.61 |
| v/c Ratio | 0.96 | 0.48 | 0.58 | 0.43 | 0.21 | 0.41 | 0.10 | 0.09 | 0.38 | 0.23 |
| Control Delay | 106.5 | 31.5 | 58.0 | 37.9 | 8.5 | 15.5 | 7.4 | 8.5 | 16.7 | 9.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 106.5 | 31.5 | 58.0 | 37.9 | 8.5 | 15.5 | 7.4 | 8.5 | 16.7 | 9.5 |
| LOS | F | C | E | D | A | B | A | A | B | A |
| Approach Delay | | 68.0 | | 45.1 | | 13.2 | | | 13.9 | |
| Approach LOS | | E | | D | | B | | | B | |

Intersection Summary

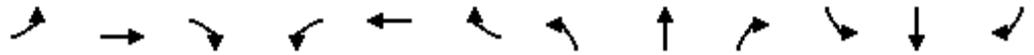
Cycle Length: 135
 Actuated Cycle Length: 135
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.96
 Intersection Signal Delay: 27.8
 Intersection Capacity Utilization 60.9%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service B

Splits and Phases: 1: Park Avenue & Ski Hill Road



HCM 6th Signalized Intersection Summary
1: Park Avenue & Ski Hill Road

2020 Existing Saturday AM.syn
02/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↗ | ↗ | ↖ | ↗ | ↖ |
| Traffic Volume (veh/h) | 157 | 68 | 64 | 73 | 103 | 37 | 109 | 435 | 62 | 31 | 381 | 190 |
| Future Volume (veh/h) | 157 | 68 | 64 | 73 | 103 | 37 | 109 | 435 | 62 | 31 | 381 | 190 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 0.99 | | 0.95 | 0.99 | | 0.95 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 189 | 108 | 91 | 100 | 127 | 52 | 128 | 494 | 0 | 48 | 438 | 0 |
| Peak Hour Factor | 0.83 | 0.63 | 0.70 | 0.73 | 0.81 | 0.71 | 0.85 | 0.88 | 0.65 | 0.65 | 0.87 | 0.86 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 273 | 245 | 207 | 253 | 333 | 136 | 572 | 1124 | | 522 | 1098 | |
| Arrive On Green | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.05 | 0.60 | 0.00 | 0.03 | 0.59 | 0.00 |
| Sat Flow, veh/h | 1189 | 916 | 771 | 1172 | 1241 | 508 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 189 | 0 | 199 | 100 | 0 | 179 | 128 | 494 | 0 | 48 | 438 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1189 | 0 | 1687 | 1172 | 0 | 1750 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 20.8 | 0.0 | 13.2 | 10.4 | 0.0 | 11.3 | 3.8 | 19.3 | 0.0 | 1.4 | 17.0 | 0.0 |
| Cycle Q Clear(g_c), s | 32.1 | 0.0 | 13.2 | 23.7 | 0.0 | 11.3 | 3.8 | 19.3 | 0.0 | 1.4 | 17.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.46 | 1.00 | | 0.29 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 273 | 0 | 452 | 253 | 0 | 469 | 572 | 1124 | | 522 | 1098 | |
| V/C Ratio(X) | 0.69 | 0.00 | 0.44 | 0.40 | 0.00 | 0.38 | 0.22 | 0.44 | | 0.09 | 0.40 | |
| Avail Cap(c_a), veh/h | 751 | 0 | 1131 | 724 | 0 | 1173 | 801 | 1124 | | 777 | 1098 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 0.93 | 0.00 | 0.93 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 53.4 | 0.0 | 41.0 | 50.8 | 0.0 | 40.3 | 11.1 | 14.6 | 0.0 | 11.3 | 15.0 | 0.0 |
| Incr Delay (d2), s/veh | 3.1 | 0.0 | 0.7 | 0.9 | 0.0 | 0.5 | 0.2 | 1.2 | 0.0 | 0.1 | 1.1 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.5 | 0.0 | 5.6 | 3.2 | 0.0 | 5.0 | 1.5 | 8.5 | 0.0 | 0.6 | 7.5 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 56.5 | 0.0 | 41.7 | 51.8 | 0.0 | 40.8 | 11.3 | 15.8 | 0.0 | 11.4 | 16.1 | 0.0 |
| LnGrp LOS | E | A | D | D | A | D | B | B | | B | B | |
| Approach Vol, veh/h | | 388 | | | 279 | | | 622 | A | | 486 | A |
| Approach Delay, s/veh | | 48.9 | | | 44.7 | | | 14.9 | | | 15.7 | |
| Approach LOS | | D | | | D | | | B | | | B | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.7 | 85.7 | | 40.7 | 10.6 | 83.7 | | 40.7 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | 23.5 | 7.5 | | 90.5 | 23.5 | 7.5 | | 90.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.4 | 21.3 | | 34.1 | 5.8 | 19.0 | | 25.7 | | | | |
| Green Ext Time (p_c), s | 0.1 | 0.0 | | 2.1 | 0.3 | 0.0 | | 1.6 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 27.2 |
| HCM 6th LOS | C |

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
1: Park Avenue & Ski Hill Road

2020 Existing Saturday PM.syn

02/06/2020

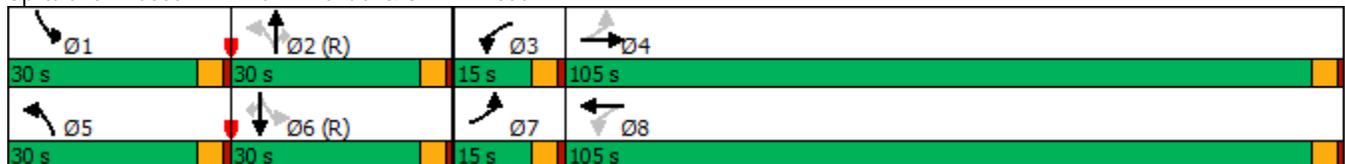


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↗ | ↖ | ↗ | ↗ |
| Traffic Volume (vph) | 222 | 125 | 109 | 87 | 87 | 472 | 143 | 39 | 468 | 159 |
| Future Volume (vph) | 222 | 125 | 109 | 87 | 87 | 472 | 143 | 39 | 468 | 159 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 |
| Total Split (s) | 15.0 | 105.0 | 15.0 | 105.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 |
| Total Split (%) | 8.3% | 58.3% | 8.3% | 58.3% | 16.7% | 16.7% | 16.7% | 16.7% | 16.7% | 16.7% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effct Green (s) | 51.0 | 40.5 | 51.0 | 40.5 | 113.5 | 105.1 | 105.1 | 109.2 | 101.2 | 101.2 |
| Actuated g/C Ratio | 0.28 | 0.22 | 0.28 | 0.22 | 0.63 | 0.58 | 0.58 | 0.61 | 0.56 | 0.56 |
| v/c Ratio | 0.83 | 0.83 | 0.64 | 0.44 | 0.24 | 0.51 | 0.22 | 0.13 | 0.51 | 0.25 |
| Control Delay | 76.6 | 72.6 | 60.1 | 50.5 | 15.6 | 27.3 | 14.6 | 15.2 | 29.0 | 16.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 76.6 | 72.6 | 60.1 | 50.5 | 15.6 | 27.3 | 14.6 | 15.2 | 29.0 | 16.0 |
| LOS | E | E | E | D | B | C | B | B | C | B |
| Approach Delay | | 74.4 | | 54.5 | | 23.1 | | | 24.9 | |
| Approach LOS | | E | | D | | C | | | C | |

Intersection Summary

Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 38.6
 Intersection Capacity Utilization 69.3%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service C

Splits and Phases: 1: Park Avenue & Ski Hill Road



HCM 6th Signalized Intersection Summary
 1: Park Avenue & Ski Hill Road

2020 Existing Saturday PM.syn
 02/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|-------|------|-------|------|-------|------|-------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↑ | ↗ | ↖ | ↑ | ↗ |
| Traffic Volume (veh/h) | 222 | 125 | 135 | 109 | 87 | 63 | 87 | 472 | 143 | 39 | 468 | 159 |
| Future Volume (veh/h) | 222 | 125 | 135 | 109 | 87 | 63 | 87 | 472 | 143 | 39 | 468 | 159 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 0.99 | | 0.84 | 1.00 | | 0.84 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 239 | 136 | 157 | 124 | 104 | 68 | 104 | 555 | 0 | 56 | 538 | 0 |
| Peak Hour Factor | 0.93 | 0.92 | 0.86 | 0.88 | 0.84 | 0.93 | 0.84 | 0.85 | 0.78 | 0.70 | 0.87 | 0.85 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 283 | 150 | 173 | 170 | 205 | 134 | 479 | 1133 | | 461 | 1116 | |
| Arrive On Green | 0.06 | 0.21 | 0.21 | 0.06 | 0.21 | 0.21 | 0.04 | 0.61 | 0.00 | 0.03 | 0.60 | 0.00 |
| Sat Flow, veh/h | 1781 | 714 | 824 | 1781 | 975 | 638 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 239 | 0 | 293 | 124 | 0 | 172 | 104 | 555 | 0 | 56 | 538 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1537 | 1781 | 0 | 1613 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 10.5 | 0.0 | 33.5 | 9.9 | 0.0 | 17.0 | 4.1 | 30.0 | 0.0 | 2.2 | 29.3 | 0.0 |
| Cycle Q Clear(g_c), s | 10.5 | 0.0 | 33.5 | 9.9 | 0.0 | 17.0 | 4.1 | 30.0 | 0.0 | 2.2 | 29.3 | 0.0 |
| Prop In Lane | 1.00 | | 0.54 | 1.00 | | 0.40 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 283 | 0 | 323 | 170 | 0 | 339 | 479 | 1133 | | 461 | 1116 | |
| V/C Ratio(X) | 0.84 | 0.00 | 0.91 | 0.73 | 0.00 | 0.51 | 0.22 | 0.49 | | 0.12 | 0.48 | |
| Avail Cap(c_a), veh/h | 283 | 0 | 858 | 170 | 0 | 900 | 669 | 1133 | | 667 | 1116 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 0.78 | 0.00 | 0.78 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 65.2 | 0.0 | 69.4 | 55.3 | 0.0 | 62.9 | 15.7 | 19.9 | 0.0 | 15.6 | 20.5 | 0.0 |
| Incr Delay (d2), s/veh | 20.2 | 0.0 | 9.6 | 11.7 | 0.0 | 0.9 | 0.2 | 1.5 | 0.0 | 0.1 | 1.5 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 7.4 | 0.0 | 14.1 | 5.0 | 0.0 | 7.1 | 1.7 | 13.8 | 0.0 | 0.9 | 13.5 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 85.4 | 0.0 | 79.0 | 67.0 | 0.0 | 63.8 | 15.9 | 21.4 | 0.0 | 15.7 | 22.0 | 0.0 |
| LnGrp LOS | F | A | E | E | A | E | B | C | | B | C | |
| Approach Vol, veh/h | | 532 | | | 296 | | | 659 | A | | 594 | A |
| Approach Delay, s/veh | | 81.9 | | | 65.2 | | | 20.5 | | | 21.4 | |
| Approach LOS | | F | | | E | | | C | | | C | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.2 | 113.5 | 15.0 | 42.3 | 10.8 | 111.9 | 15.0 | 42.3 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 25.5 | 25.5 | 10.5 | 100.5 | 25.5 | 25.5 | 10.5 | 100.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.2 | 32.0 | 11.9 | 35.5 | 6.1 | 31.3 | 12.5 | 19.0 | | | | |
| Green Ext Time (p_c), s | 0.1 | 0.0 | 0.0 | 2.3 | 0.2 | 0.0 | 0.0 | 1.2 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 42.8 |
| HCM 6th LOS | D |

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
1: Park Avenue & Ski Hill Road



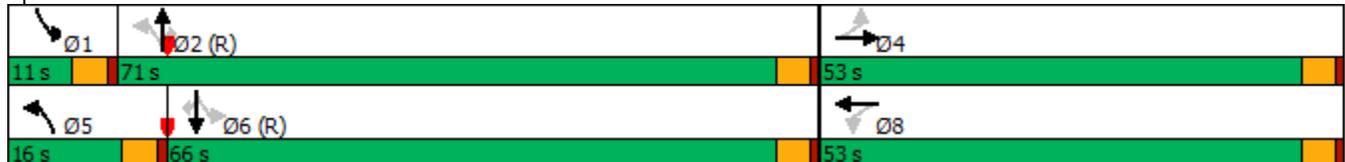
| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↗ | ↖ | ↗ | ↗ |
| Traffic Volume (vph) | 157 | 68 | 73 | 103 | 109 | 435 | 62 | 31 | 381 | 190 |
| Future Volume (vph) | 157 | 68 | 73 | 103 | 109 | 435 | 62 | 31 | 381 | 190 |
| Turn Type | Perm | NA | Perm | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | | 4 | | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 |
| Total Split (s) | 53.0 | 53.0 | 53.0 | 53.0 | 16.0 | 71.0 | 71.0 | 11.0 | 66.0 | 66.0 |
| Total Split (%) | 39.3% | 39.3% | 39.3% | 39.3% | 11.9% | 52.6% | 52.6% | 8.1% | 48.9% | 48.9% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | | | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | | | | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 30.3 | 30.3 | 30.3 | 30.3 | 94.1 | 86.5 | 86.5 | 89.1 | 82.4 | 82.4 |
| Actuated g/C Ratio | 0.22 | 0.22 | 0.22 | 0.22 | 0.70 | 0.64 | 0.64 | 0.66 | 0.61 | 0.61 |
| v/c Ratio | 0.94 | 0.50 | 0.56 | 0.44 | 0.21 | 0.41 | 0.10 | 0.09 | 0.39 | 0.22 |
| Control Delay | 101.0 | 40.2 | 56.5 | 42.2 | 8.5 | 15.5 | 7.3 | 8.4 | 16.7 | 5.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 101.0 | 40.2 | 56.5 | 42.2 | 8.5 | 15.5 | 7.3 | 8.4 | 16.7 | 5.9 |
| LOS | F | D | E | D | A | B | A | A | B | A |
| Approach Delay | | 69.8 | | 47.4 | | 13.2 | | | 12.7 | |
| Approach LOS | | E | | D | | B | | | B | |

Intersection Summary

Cycle Length: 135
 Actuated Cycle Length: 135
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 28.1
 Intersection Capacity Utilization 60.9%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service B

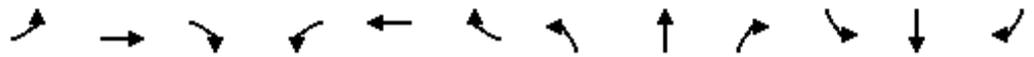
Splits and Phases: 1: Park Avenue & Ski Hill Road



HCM 6th Signalized Intersection Summary
1: Park Avenue & Ski Hill Road

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02/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 157 | 68 | 64 | 73 | 103 | 37 | 109 | 435 | 62 | 31 | 381 | 190 |
| Future Volume (veh/h) | 157 | 68 | 64 | 73 | 103 | 37 | 109 | 435 | 62 | 31 | 381 | 190 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 0.99 | | 0.95 | 0.99 | | 0.95 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 189 | 108 | 91 | 100 | 127 | 52 | 128 | 494 | 0 | 48 | 438 | 0 |
| Peak Hour Factor | 0.83 | 0.63 | 0.70 | 0.73 | 0.81 | 0.71 | 0.85 | 0.88 | 0.65 | 0.65 | 0.87 | 0.86 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 269 | 243 | 205 | 249 | 329 | 135 | 574 | 1129 | | 525 | 1105 | |
| Arrive On Green | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.04 | 0.60 | 0.00 | 0.03 | 0.59 | 0.00 |
| Sat Flow, veh/h | 1189 | 915 | 771 | 1172 | 1241 | 508 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 189 | 0 | 199 | 100 | 0 | 179 | 128 | 494 | 0 | 48 | 438 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1189 | 0 | 1687 | 1172 | 0 | 1749 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 20.9 | 0.0 | 13.3 | 10.5 | 0.0 | 11.3 | 3.8 | 19.2 | 0.0 | 1.4 | 16.9 | 0.0 |
| Cycle Q Clear(g_c), s | 32.2 | 0.0 | 13.3 | 23.8 | 0.0 | 11.3 | 3.8 | 19.2 | 0.0 | 1.4 | 16.9 | 0.0 |
| Prop In Lane | 1.00 | | 0.46 | 1.00 | | 0.29 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 269 | 0 | 448 | 249 | 0 | 464 | 574 | 1129 | | 525 | 1105 | |
| V/C Ratio(X) | 0.70 | 0.00 | 0.44 | 0.40 | 0.00 | 0.39 | 0.22 | 0.44 | | 0.09 | 0.40 | |
| Avail Cap(c_a), veh/h | 381 | 0 | 606 | 359 | 0 | 628 | 648 | 1129 | | 556 | 1105 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 0.92 | 0.00 | 0.92 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 53.7 | 0.0 | 41.3 | 51.2 | 0.0 | 40.6 | 10.9 | 14.4 | 0.0 | 11.1 | 14.8 | 0.0 |
| Incr Delay (d2), s/veh | 3.3 | 0.0 | 0.7 | 1.0 | 0.0 | 0.5 | 0.2 | 1.2 | 0.0 | 0.1 | 1.1 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.5 | 0.0 | 5.6 | 3.2 | 0.0 | 5.0 | 1.5 | 8.4 | 0.0 | 0.6 | 7.5 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 57.1 | 0.0 | 42.0 | 52.1 | 0.0 | 41.1 | 11.1 | 15.6 | 0.0 | 11.2 | 15.8 | 0.0 |
| LnGrp LOS | E | A | D | D | A | D | B | B | | B | B | |
| Approach Vol, veh/h | | 388 | | | 279 | | | 622 | A | | 486 | A |
| Approach Delay, s/veh | | 49.3 | | | 45.0 | | | 14.7 | | | 15.4 | |
| Approach LOS | | D | | | D | | | B | | | B | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.7 | 86.0 | | 40.3 | 10.4 | 84.3 | | 40.3 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | 6.5 | 66.5 | | 48.5 | 11.5 | 61.5 | | 48.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.4 | 21.2 | | 34.2 | 5.8 | 18.9 | | 25.8 | | | | |
| Green Ext Time (p_c), s | 0.0 | 3.6 | | 1.6 | 0.1 | 3.1 | | 1.4 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 27.2 |
| HCM 6th LOS | C |

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
1: Park Avenue & Ski Hill Road



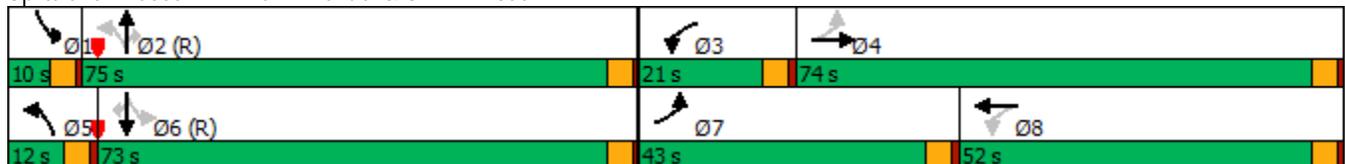
| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↗ | ↖ | ↗ | ↗ |
| Traffic Volume (vph) | 222 | 125 | 109 | 87 | 87 | 472 | 143 | 39 | 468 | 159 |
| Future Volume (vph) | 222 | 125 | 109 | 87 | 87 | 472 | 143 | 39 | 468 | 159 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 |
| Total Split (s) | 43.0 | 74.0 | 21.0 | 52.0 | 12.0 | 75.0 | 75.0 | 10.0 | 73.0 | 73.0 |
| Total Split (%) | 23.9% | 41.1% | 11.7% | 28.9% | 6.7% | 41.7% | 41.7% | 5.6% | 40.6% | 40.6% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 59.3 | 40.3 | 45.3 | 30.8 | 110.0 | 101.3 | 101.3 | 105.0 | 97.1 | 97.1 |
| Actuated g/C Ratio | 0.33 | 0.22 | 0.25 | 0.17 | 0.61 | 0.56 | 0.56 | 0.58 | 0.54 | 0.54 |
| v/c Ratio | 0.67 | 0.86 | 0.55 | 0.58 | 0.25 | 0.53 | 0.22 | 0.14 | 0.54 | 0.25 |
| Control Delay | 54.5 | 80.3 | 51.5 | 67.7 | 17.6 | 30.1 | 12.8 | 17.2 | 32.2 | 14.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 54.5 | 80.3 | 51.5 | 67.7 | 17.6 | 30.1 | 12.8 | 17.2 | 32.2 | 14.2 |
| LOS | D | F | D | E | B | C | B | B | C | B |
| Approach Delay | | 68.8 | | 60.9 | | 24.8 | | | 26.8 | |
| Approach LOS | | E | | E | | C | | | C | |

Intersection Summary

Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 39.3
 Intersection Capacity Utilization 69.3%
 Analysis Period (min) 15

Intersection LOS: D
 ICU Level of Service C

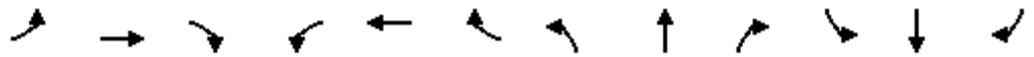
Splits and Phases: 1: Park Avenue & Ski Hill Road



HCM 6th Signalized Intersection Summary
 1: Park Avenue & Ski Hill Road

2020 Existing Saturday PM_1 Optimized.syn

02/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|-------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 222 | 125 | 135 | 109 | 87 | 63 | 87 | 472 | 143 | 39 | 468 | 159 |
| Future Volume (veh/h) | 222 | 125 | 135 | 109 | 87 | 63 | 87 | 472 | 143 | 39 | 468 | 159 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.84 | 1.00 | | 0.78 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 239 | 136 | 157 | 124 | 104 | 68 | 104 | 555 | 0 | 56 | 538 | 0 |
| Peak Hour Factor | 0.93 | 0.92 | 0.86 | 0.88 | 0.84 | 0.93 | 0.84 | 0.85 | 0.78 | 0.70 | 0.87 | 0.85 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 322 | 149 | 173 | 189 | 146 | 95 | 465 | 1113 | | 448 | 1097 | |
| Arrive On Green | 0.12 | 0.21 | 0.21 | 0.07 | 0.15 | 0.15 | 0.03 | 0.59 | 0.00 | 0.03 | 0.59 | 0.00 |
| Sat Flow, veh/h | 1781 | 713 | 824 | 1781 | 942 | 616 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 239 | 0 | 293 | 124 | 0 | 172 | 104 | 555 | 0 | 56 | 538 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1537 | 1781 | 0 | 1558 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 19.8 | 0.0 | 33.5 | 10.4 | 0.0 | 18.9 | 4.2 | 30.8 | 0.0 | 2.3 | 30.1 | 0.0 |
| Cycle Q Clear(g_c), s | 19.8 | 0.0 | 33.5 | 10.4 | 0.0 | 18.9 | 4.2 | 30.8 | 0.0 | 2.3 | 30.1 | 0.0 |
| Prop In Lane | 1.00 | | 0.54 | 1.00 | | 0.40 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 322 | 0 | 322 | 189 | 0 | 241 | 465 | 1113 | | 448 | 1097 | |
| V/C Ratio(X) | 0.74 | 0.00 | 0.91 | 0.66 | 0.00 | 0.71 | 0.22 | 0.50 | | 0.12 | 0.49 | |
| Avail Cap(c_a), veh/h | 481 | 0 | 593 | 229 | 0 | 411 | 478 | 1113 | | 456 | 1097 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 0.84 | 0.00 | 0.84 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 53.9 | 0.0 | 69.5 | 60.0 | 0.0 | 72.3 | 16.6 | 21.0 | 0.0 | 16.5 | 21.6 | 0.0 |
| Incr Delay (d2), s/veh | 3.4 | 0.0 | 9.8 | 4.2 | 0.0 | 3.3 | 0.2 | 1.6 | 0.0 | 0.1 | 1.6 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 9.3 | 0.0 | 14.1 | 5.0 | 0.0 | 7.8 | 1.8 | 14.2 | 0.0 | 1.0 | 13.9 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 57.3 | 0.0 | 79.3 | 64.2 | 0.0 | 75.6 | 16.8 | 22.6 | 0.0 | 16.6 | 23.2 | 0.0 |
| LnGrp LOS | E | A | E | E | A | E | B | C | | B | C | |
| Approach Vol, veh/h | | 532 | | | 296 | | | 659 | A | | 594 | A |
| Approach Delay, s/veh | | 69.4 | | | 70.8 | | | 21.7 | | | 22.6 | |
| Approach LOS | | E | | | E | | | C | | | C | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.2 | 111.6 | 17.0 | 42.2 | 10.7 | 110.1 | 26.9 | 32.3 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 70.5 | 16.5 | 69.5 | 7.5 | 68.5 | 38.5 | 47.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.3 | 32.8 | 12.4 | 35.5 | 6.2 | 32.1 | 21.8 | 20.9 | | | | |
| Green Ext Time (p_c), s | 0.0 | 4.2 | 0.1 | 2.2 | 0.0 | 4.0 | 0.6 | 1.1 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 41.1 |
| HCM 6th LOS | D |

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
1: Park Avenue & Ski Hill Road

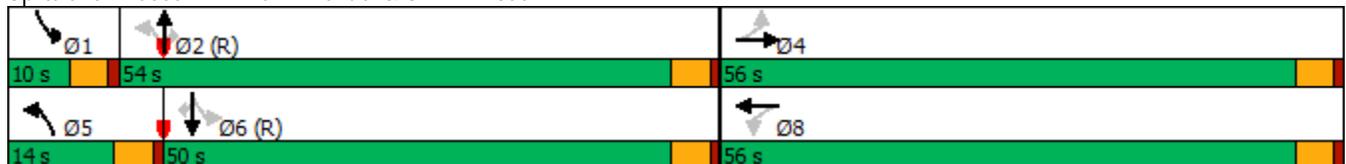


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | |
| Traffic Volume (vph) | 157 | 68 | 73 | 103 | 109 | 435 | 62 | 31 | 381 | 190 |
| Future Volume (vph) | 157 | 68 | 73 | 103 | 109 | 435 | 62 | 31 | 381 | 190 |
| Turn Type | Perm | NA | Perm | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | | 4 | | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 |
| Total Split (s) | 56.0 | 56.0 | 56.0 | 56.0 | 14.0 | 54.0 | 54.0 | 10.0 | 50.0 | 50.0 |
| Total Split (%) | 46.7% | 46.7% | 46.7% | 46.7% | 11.7% | 45.0% | 45.0% | 8.3% | 41.7% | 41.7% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | | | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | | | | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effct Green (s) | 27.0 | 27.0 | 27.0 | 27.0 | 82.2 | 74.9 | 74.9 | 77.5 | 70.9 | 70.9 |
| Actuated g/C Ratio | 0.22 | 0.22 | 0.22 | 0.22 | 0.68 | 0.62 | 0.62 | 0.65 | 0.59 | 0.59 |
| v/c Ratio | 0.91 | 0.49 | 0.54 | 0.44 | 0.22 | 0.43 | 0.10 | 0.09 | 0.40 | 0.23 |
| Control Delay | 87.8 | 33.6 | 46.7 | 33.5 | 8.2 | 15.5 | 6.6 | 8.2 | 16.6 | 6.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 87.8 | 33.6 | 46.7 | 33.5 | 8.2 | 15.5 | 6.6 | 8.2 | 16.6 | 6.1 |
| LOS | F | C | D | C | A | B | A | A | B | A |
| Approach Delay | | 60.0 | | 38.2 | | 13.0 | | | 12.8 | |
| Approach LOS | | E | | D | | B | | | B | |

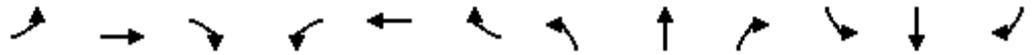
Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 25.0
 Intersection Capacity Utilization 60.9%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service B

Splits and Phases: 1: Park Avenue & Ski Hill Road



HCM 6th Signalized Intersection Summary 2020 Existing Saturday AM_Cycle & Optimized.syn
 1: Park Avenue & Ski Hill Road 02/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 157 | 68 | 64 | 73 | 103 | 37 | 109 | 435 | 62 | 31 | 381 | 190 |
| Future Volume (veh/h) | 157 | 68 | 64 | 73 | 103 | 37 | 109 | 435 | 62 | 31 | 381 | 190 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 0.99 | | 0.95 | 0.99 | | 0.95 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 189 | 108 | 91 | 100 | 127 | 52 | 128 | 494 | 0 | 48 | 438 | 0 |
| Peak Hour Factor | 0.83 | 0.63 | 0.70 | 0.73 | 0.81 | 0.71 | 0.85 | 0.88 | 0.65 | 0.65 | 0.87 | 0.86 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 281 | 253 | 213 | 269 | 342 | 140 | 554 | 1082 | | 505 | 1057 | |
| Arrive On Green | 0.28 | 0.28 | 0.28 | 0.18 | 0.18 | 0.18 | 0.05 | 0.58 | 0.00 | 0.03 | 0.56 | 0.00 |
| Sat Flow, veh/h | 1187 | 916 | 772 | 1168 | 1242 | 508 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 189 | 0 | 199 | 100 | 0 | 179 | 128 | 494 | 0 | 48 | 438 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1187 | 0 | 1688 | 1168 | 0 | 1750 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 18.5 | 0.0 | 11.6 | 9.6 | 0.0 | 10.7 | 3.6 | 18.2 | 0.0 | 1.3 | 16.0 | 0.0 |
| Cycle Q Clear(g_c), s | 29.2 | 0.0 | 11.6 | 21.2 | 0.0 | 10.7 | 3.6 | 18.2 | 0.0 | 1.3 | 16.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.46 | 1.00 | | 0.29 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 281 | 0 | 465 | 269 | 0 | 483 | 554 | 1082 | | 505 | 1057 | |
| V/C Ratio(X) | 0.67 | 0.00 | 0.43 | 0.37 | 0.00 | 0.37 | 0.23 | 0.46 | | 0.10 | 0.41 | |
| Avail Cap(c_a), veh/h | 463 | 0 | 724 | 448 | 0 | 751 | 611 | 1082 | | 527 | 1057 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.67 | 0.67 | 0.67 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 0.92 | 0.00 | 0.92 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 47.3 | 0.0 | 35.7 | 49.5 | 0.0 | 39.8 | 11.0 | 14.5 | 0.0 | 11.2 | 14.8 | 0.0 |
| Incr Delay (d2), s/veh | 2.8 | 0.0 | 0.6 | 0.8 | 0.0 | 0.4 | 0.2 | 1.4 | 0.0 | 0.1 | 1.2 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 5.7 | 0.0 | 4.9 | 3.0 | 0.0 | 4.9 | 1.4 | 7.9 | 0.0 | 0.5 | 7.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 50.0 | 0.0 | 36.3 | 50.3 | 0.0 | 40.2 | 11.2 | 15.9 | 0.0 | 11.2 | 16.0 | 0.0 |
| LnGrp LOS | D | A | D | D | A | D | B | B | | B | B | |
| Approach Vol, veh/h | | 388 | | | 279 | | | 622 | A | | 486 | A |
| Approach Delay, s/veh | | 43.0 | | | 43.8 | | | 14.9 | | | 15.6 | |
| Approach LOS | | D | | | D | | | B | | | B | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.5 | 73.9 | | 37.6 | 10.1 | 72.3 | | 37.6 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 49.5 | | 51.5 | 9.5 | 45.5 | | 51.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.3 | 20.2 | | 31.2 | 5.6 | 18.0 | | 23.2 | | | | |
| Green Ext Time (p_c), s | 0.0 | 3.4 | | 1.9 | 0.1 | 2.9 | | 1.5 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 25.8 |
| HCM 6th LOS | C |

Notes

User approved pedestrian interval to be less than phase max green.
 Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
1: Park Avenue & Ski Hill Road

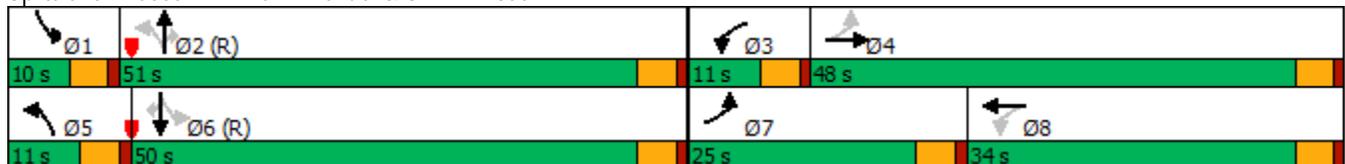


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↗ | ↖ | ↗ | ↗ |
| Traffic Volume (vph) | 222 | 125 | 109 | 87 | 87 | 472 | 143 | 39 | 468 | 159 |
| Future Volume (vph) | 222 | 125 | 109 | 87 | 87 | 472 | 143 | 39 | 468 | 159 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 |
| Total Split (s) | 25.0 | 48.0 | 11.0 | 34.0 | 11.0 | 51.0 | 51.0 | 10.0 | 50.0 | 50.0 |
| Total Split (%) | 20.8% | 40.0% | 9.2% | 28.3% | 9.2% | 42.5% | 42.5% | 8.3% | 41.7% | 41.7% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 38.1 | 27.1 | 22.4 | 15.9 | 70.6 | 63.2 | 63.2 | 66.9 | 59.7 | 59.7 |
| Actuated g/C Ratio | 0.32 | 0.23 | 0.19 | 0.13 | 0.59 | 0.53 | 0.53 | 0.56 | 0.50 | 0.50 |
| v/c Ratio | 0.68 | 0.77 | 0.62 | 0.70 | 0.26 | 0.57 | 0.22 | 0.14 | 0.58 | 0.25 |
| Control Delay | 41.2 | 48.2 | 51.7 | 63.5 | 13.3 | 25.0 | 6.8 | 12.8 | 26.9 | 7.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 41.2 | 48.2 | 51.7 | 63.5 | 13.3 | 25.0 | 6.8 | 12.8 | 26.9 | 7.7 |
| LOS | D | D | D | E | B | C | A | B | C | A |
| Approach Delay | | 45.1 | | 58.5 | | 19.6 | | | 21.3 | |
| Approach LOS | | D | | E | | B | | | C | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 30.4
 Intersection Capacity Utilization 69.3%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service C

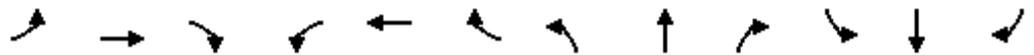
Splits and Phases: 1: Park Avenue & Ski Hill Road



HCM 6th Signalized Intersection Summary 2020 Existing Saturday PM_Cycle & Optimized.syn

1: Park Avenue & Ski Hill Road

02/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 222 | 125 | 135 | 109 | 87 | 63 | 87 | 472 | 143 | 39 | 468 | 159 |
| Future Volume (veh/h) | 222 | 125 | 135 | 109 | 87 | 63 | 87 | 472 | 143 | 39 | 468 | 159 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 0.93 | | 0.85 | 0.90 | | 0.77 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 239 | 136 | 157 | 124 | 104 | 68 | 104 | 555 | 0 | 56 | 538 | 0 |
| Peak Hour Factor | 0.93 | 0.92 | 0.86 | 0.88 | 0.84 | 0.93 | 0.84 | 0.85 | 0.78 | 0.70 | 0.87 | 0.85 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 340 | 160 | 184 | 196 | 138 | 90 | 432 | 1007 | | 416 | 994 | |
| Arrive On Green | 0.13 | 0.22 | 0.22 | 0.09 | 0.25 | 0.25 | 0.04 | 0.54 | 0.00 | 0.04 | 0.53 | 0.00 |
| Sat Flow, veh/h | 1781 | 718 | 829 | 1781 | 936 | 612 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 239 | 0 | 293 | 124 | 0 | 172 | 104 | 555 | 0 | 56 | 538 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1547 | 1781 | 0 | 1548 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 13.1 | 0.0 | 21.8 | 6.5 | 0.0 | 12.3 | 3.2 | 23.4 | 0.0 | 1.7 | 22.7 | 0.0 |
| Cycle Q Clear(g_c), s | 13.1 | 0.0 | 21.8 | 6.5 | 0.0 | 12.3 | 3.2 | 23.4 | 0.0 | 1.7 | 22.7 | 0.0 |
| Prop In Lane | 1.00 | | 0.54 | 1.00 | | 0.40 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 340 | 0 | 344 | 196 | 0 | 229 | 432 | 1007 | | 416 | 994 | |
| V/C Ratio(X) | 0.70 | 0.00 | 0.85 | 0.63 | 0.00 | 0.75 | 0.24 | 0.55 | | 0.13 | 0.54 | |
| Avail Cap(c_a), veh/h | 415 | 0 | 561 | 196 | 0 | 381 | 453 | 1007 | | 435 | 994 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.67 | 1.67 | 1.67 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 0.00 | 1.00 | 0.84 | 0.00 | 0.84 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 35.7 | 0.0 | 44.8 | 41.5 | 0.0 | 43.2 | 14.0 | 18.2 | 0.0 | 13.9 | 18.5 | 0.0 |
| Incr Delay (d2), s/veh | 4.1 | 0.0 | 6.9 | 5.4 | 0.0 | 4.2 | 0.3 | 2.2 | 0.0 | 0.1 | 2.1 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.1 | 0.0 | 9.0 | 3.3 | 0.0 | 4.6 | 1.3 | 10.5 | 0.0 | 0.7 | 10.2 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 39.8 | 0.0 | 51.6 | 46.9 | 0.0 | 47.4 | 14.3 | 20.4 | 0.0 | 14.0 | 20.6 | 0.0 |
| LnGrp LOS | D | A | D | D | A | D | B | C | | B | C | |
| Approach Vol, veh/h | | 532 | | | 296 | | | 659 | A | | 594 | A |
| Approach Delay, s/veh | | 46.3 | | | 47.2 | | | 19.4 | | | 20.0 | |
| Approach LOS | | D | | | D | | | B | | | B | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.7 | 69.1 | 11.0 | 31.2 | 9.5 | 68.3 | 20.0 | 22.2 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 46.5 | 6.5 | 43.5 | 6.5 | 45.5 | 20.5 | 29.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.7 | 25.4 | 8.5 | 23.8 | 5.2 | 24.7 | 15.1 | 14.3 | | | | |
| Green Ext Time (p_c), s | 0.0 | 3.7 | 0.0 | 1.9 | 0.0 | 3.5 | 0.3 | 0.9 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 30.4 |
| HCM 6th LOS | C |

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
1: Park Avenue & Ski Hill Road

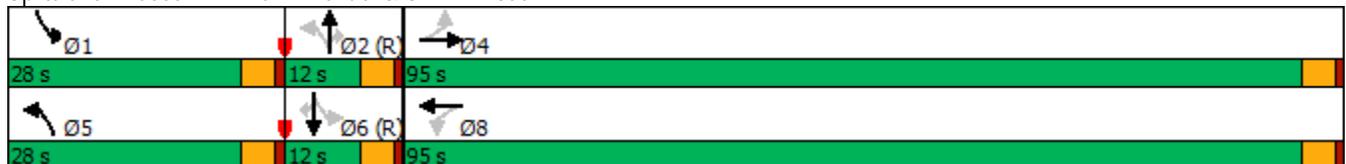


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↗ | ↖ | ↗ | ↗ |
| Traffic Volume (vph) | 161 | 70 | 75 | 105 | 112 | 446 | 63 | 32 | 390 | 195 |
| Future Volume (vph) | 161 | 70 | 75 | 105 | 112 | 446 | 63 | 32 | 390 | 195 |
| Turn Type | Perm | NA | Perm | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | | 4 | | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 |
| Total Split (s) | 95.0 | 95.0 | 95.0 | 95.0 | 28.0 | 12.0 | 12.0 | 28.0 | 12.0 | 12.0 |
| Total Split (%) | 70.4% | 70.4% | 70.4% | 70.4% | 20.7% | 8.9% | 8.9% | 20.7% | 8.9% | 8.9% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | | | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | | | | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 30.8 | 30.8 | 30.8 | 30.8 | 93.7 | 86.0 | 86.0 | 88.5 | 81.7 | 81.7 |
| Actuated g/C Ratio | 0.23 | 0.23 | 0.23 | 0.23 | 0.69 | 0.64 | 0.64 | 0.66 | 0.61 | 0.61 |
| v/c Ratio | 0.97 | 0.48 | 0.58 | 0.43 | 0.22 | 0.43 | 0.10 | 0.09 | 0.40 | 0.24 |
| Control Delay | 106.2 | 31.3 | 57.4 | 37.2 | 8.9 | 16.3 | 7.7 | 8.8 | 17.5 | 10.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 106.2 | 31.3 | 57.4 | 37.2 | 8.9 | 16.3 | 7.7 | 8.8 | 17.5 | 10.1 |
| LOS | F | C | E | D | A | B | A | A | B | B |
| Approach Delay | | 67.7 | | 44.5 | | 13.8 | | | 14.6 | |
| Approach LOS | | E | | D | | B | | | B | |

Intersection Summary

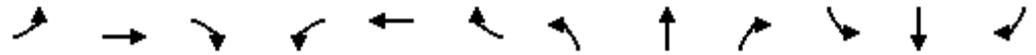
Cycle Length: 135
 Actuated Cycle Length: 135
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.97
 Intersection Signal Delay: 28.2
 Intersection LOS: C
 Intersection Capacity Utilization 61.8%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 1: Park Avenue & Ski Hill Road



HCM 6th Signalized Intersection Summary
 1: Park Avenue & Ski Hill Road

2022 BG Saturday AM.syn
 02/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 161 | 70 | 66 | 75 | 105 | 38 | 112 | 446 | 63 | 32 | 390 | 195 |
| Future Volume (veh/h) | 161 | 70 | 66 | 75 | 105 | 38 | 112 | 446 | 63 | 32 | 390 | 195 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 0.99 | | 0.95 | 0.99 | | 0.95 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 194 | 111 | 94 | 103 | 130 | 54 | 132 | 507 | 0 | 49 | 448 | 0 |
| Peak Hour Factor | 0.83 | 0.63 | 0.70 | 0.73 | 0.81 | 0.71 | 0.85 | 0.88 | 0.65 | 0.65 | 0.87 | 0.86 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 278 | 251 | 213 | 257 | 340 | 141 | 556 | 1111 | | 504 | 1082 | |
| Arrive On Green | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.05 | 0.59 | 0.00 | 0.03 | 0.58 | 0.00 |
| Sat Flow, veh/h | 1185 | 914 | 774 | 1167 | 1236 | 513 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 194 | 0 | 205 | 103 | 0 | 184 | 132 | 507 | 0 | 49 | 448 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1185 | 0 | 1688 | 1167 | 0 | 1749 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 21.4 | 0.0 | 13.5 | 10.8 | 0.0 | 11.5 | 4.1 | 20.4 | 0.0 | 1.5 | 17.9 | 0.0 |
| Cycle Q Clear(g_c), s | 32.9 | 0.0 | 13.5 | 24.3 | 0.0 | 11.5 | 4.1 | 20.4 | 0.0 | 1.5 | 17.9 | 0.0 |
| Prop In Lane | 1.00 | | 0.46 | 1.00 | | 0.29 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 278 | 0 | 464 | 257 | 0 | 481 | 556 | 1111 | | 504 | 1082 | |
| V/C Ratio(X) | 0.70 | 0.00 | 0.44 | 0.40 | 0.00 | 0.38 | 0.24 | 0.46 | | 0.10 | 0.41 | |
| Avail Cap(c_a), veh/h | 747 | 0 | 1131 | 719 | 0 | 1173 | 783 | 1111 | | 759 | 1082 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 0.00 | 1.00 | 0.93 | 0.00 | 0.93 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 53.0 | 0.0 | 40.4 | 50.4 | 0.0 | 39.7 | 11.6 | 15.3 | 0.0 | 11.9 | 15.8 | 0.0 |
| Incr Delay (d2), s/veh | 3.2 | 0.0 | 0.7 | 0.9 | 0.0 | 0.5 | 0.2 | 1.4 | 0.0 | 0.1 | 1.2 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.6 | 0.0 | 5.8 | 3.2 | 0.0 | 5.1 | 1.6 | 9.0 | 0.0 | 0.6 | 8.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 56.2 | 0.0 | 41.1 | 51.4 | 0.0 | 40.1 | 11.8 | 16.6 | 0.0 | 12.0 | 16.9 | 0.0 |
| LnGrp LOS | E | A | D | D | A | D | B | B | | B | B | |
| Approach Vol, veh/h | | 399 | | | 287 | | | 639 | A | | 497 | A |
| Approach Delay, s/veh | | 48.4 | | | 44.2 | | | 15.6 | | | 16.5 | |
| Approach LOS | | D | | | D | | | B | | | B | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.7 | 84.7 | | 41.6 | 10.8 | 82.6 | | 41.6 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | 23.5 | 7.5 | | 90.5 | 23.5 | 7.5 | | 90.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.5 | 22.4 | | 34.9 | 6.1 | 19.9 | | 26.3 | | | | |
| Green Ext Time (p_c), s | 0.1 | 0.0 | | 2.2 | 0.3 | 0.0 | | 1.6 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 27.5 |
| HCM 6th LOS | C |

Notes

User approved pedestrian interval to be less than phase max green.
 Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
1: Park Avenue & Ski Hill Road

2022 BG Saturday PM.syn

02/06/2020

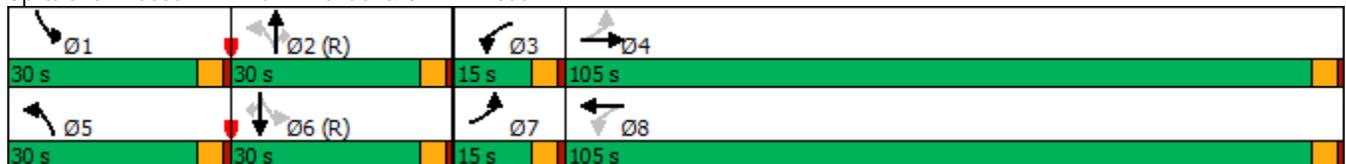


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↗ | ↖ | ↗ | ↗ |
| Traffic Volume (vph) | 222 | 125 | 109 | 87 | 87 | 472 | 143 | 39 | 468 | 159 |
| Future Volume (vph) | 222 | 125 | 109 | 87 | 87 | 472 | 143 | 39 | 468 | 159 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 |
| Total Split (s) | 15.0 | 105.0 | 15.0 | 105.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 |
| Total Split (%) | 8.3% | 58.3% | 8.3% | 58.3% | 16.7% | 16.7% | 16.7% | 16.7% | 16.7% | 16.7% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effct Green (s) | 51.0 | 40.5 | 51.0 | 40.5 | 113.5 | 105.1 | 105.1 | 109.2 | 101.2 | 101.2 |
| Actuated g/C Ratio | 0.28 | 0.22 | 0.28 | 0.22 | 0.63 | 0.58 | 0.58 | 0.61 | 0.56 | 0.56 |
| v/c Ratio | 0.83 | 0.83 | 0.64 | 0.44 | 0.24 | 0.51 | 0.22 | 0.13 | 0.51 | 0.25 |
| Control Delay | 76.6 | 72.6 | 60.1 | 50.5 | 15.6 | 27.3 | 14.6 | 15.2 | 29.0 | 16.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 76.6 | 72.6 | 60.1 | 50.5 | 15.6 | 27.3 | 14.6 | 15.2 | 29.0 | 16.0 |
| LOS | E | E | E | D | B | C | B | B | C | B |
| Approach Delay | | 74.4 | | 54.5 | | 23.1 | | | 24.9 | |
| Approach LOS | | E | | D | | C | | | C | |

Intersection Summary

Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 38.6
 Intersection Capacity Utilization 69.3%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service C

Splits and Phases: 1: Park Avenue & Ski Hill Road



HCM 6th Signalized Intersection Summary
1: Park Avenue & Ski Hill Road

2022 BG Saturday PM.syn
02/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|-------|------|-------|------|-------|------|-------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↑ | ↗ | ↖ | ↑ | ↗ |
| Traffic Volume (veh/h) | 222 | 125 | 135 | 109 | 87 | 63 | 87 | 472 | 143 | 39 | 468 | 159 |
| Future Volume (veh/h) | 222 | 125 | 135 | 109 | 87 | 63 | 87 | 472 | 143 | 39 | 468 | 159 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 0.99 | | 0.84 | 1.00 | | 0.84 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 239 | 136 | 157 | 124 | 104 | 68 | 104 | 555 | 0 | 56 | 538 | 0 |
| Peak Hour Factor | 0.93 | 0.92 | 0.86 | 0.88 | 0.84 | 0.93 | 0.84 | 0.85 | 0.78 | 0.70 | 0.87 | 0.85 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 283 | 150 | 173 | 170 | 205 | 134 | 479 | 1133 | | 461 | 1116 | |
| Arrive On Green | 0.06 | 0.21 | 0.21 | 0.06 | 0.21 | 0.21 | 0.04 | 0.61 | 0.00 | 0.03 | 0.60 | 0.00 |
| Sat Flow, veh/h | 1781 | 714 | 824 | 1781 | 975 | 638 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 239 | 0 | 293 | 124 | 0 | 172 | 104 | 555 | 0 | 56 | 538 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1537 | 1781 | 0 | 1613 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 10.5 | 0.0 | 33.5 | 9.9 | 0.0 | 17.0 | 4.1 | 30.0 | 0.0 | 2.2 | 29.3 | 0.0 |
| Cycle Q Clear(g_c), s | 10.5 | 0.0 | 33.5 | 9.9 | 0.0 | 17.0 | 4.1 | 30.0 | 0.0 | 2.2 | 29.3 | 0.0 |
| Prop In Lane | 1.00 | | 0.54 | 1.00 | | 0.40 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 283 | 0 | 323 | 170 | 0 | 339 | 479 | 1133 | | 461 | 1116 | |
| V/C Ratio(X) | 0.84 | 0.00 | 0.91 | 0.73 | 0.00 | 0.51 | 0.22 | 0.49 | | 0.12 | 0.48 | |
| Avail Cap(c_a), veh/h | 283 | 0 | 858 | 170 | 0 | 900 | 669 | 1133 | | 667 | 1116 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 0.00 | 1.00 | 0.78 | 0.00 | 0.78 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 65.2 | 0.0 | 69.4 | 55.3 | 0.0 | 62.9 | 15.7 | 19.9 | 0.0 | 15.6 | 20.5 | 0.0 |
| Incr Delay (d2), s/veh | 20.2 | 0.0 | 9.6 | 11.7 | 0.0 | 0.9 | 0.2 | 1.5 | 0.0 | 0.1 | 1.5 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 7.4 | 0.0 | 14.1 | 5.0 | 0.0 | 7.1 | 1.7 | 13.8 | 0.0 | 0.9 | 13.5 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 85.4 | 0.0 | 79.0 | 67.0 | 0.0 | 63.8 | 15.9 | 21.4 | 0.0 | 15.7 | 22.0 | 0.0 |
| LnGrp LOS | F | A | E | E | A | E | B | C | | B | C | |
| Approach Vol, veh/h | | 532 | | | 296 | | | 659 | A | | 594 | A |
| Approach Delay, s/veh | | 81.9 | | | 65.2 | | | 20.5 | | | 21.4 | |
| Approach LOS | | F | | | E | | | C | | | C | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.2 | 113.5 | 15.0 | 42.3 | 10.8 | 111.9 | 15.0 | 42.3 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 25.5 | 25.5 | 10.5 | 100.5 | 25.5 | 25.5 | 10.5 | 100.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.2 | 32.0 | 11.9 | 35.5 | 6.1 | 31.3 | 12.5 | 19.0 | | | | |
| Green Ext Time (p_c), s | 0.1 | 0.0 | 0.0 | 2.3 | 0.2 | 0.0 | 0.0 | 1.2 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 42.8 |
| HCM 6th LOS | D |

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
1: Park Avenue & Ski Hill Road

2022 Total Saturday AM.syn
02/17/2020

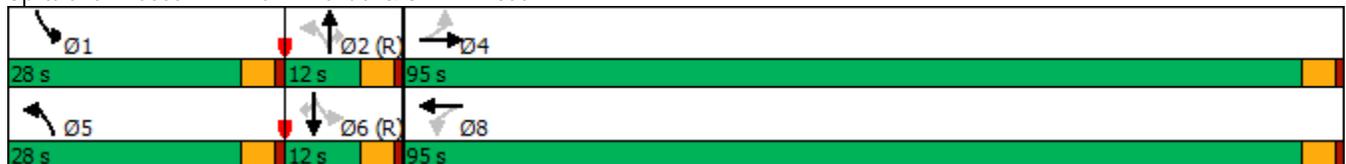


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↗ | ↖ | ↗ | ↗ |
| Traffic Volume (vph) | 187 | 84 | 75 | 134 | 141 | 446 | 63 | 32 | 390 | 248 |
| Future Volume (vph) | 187 | 84 | 75 | 134 | 141 | 446 | 63 | 32 | 390 | 248 |
| Turn Type | Perm | NA | Perm | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | | 4 | | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 |
| Total Split (s) | 95.0 | 95.0 | 95.0 | 95.0 | 28.0 | 12.0 | 12.0 | 28.0 | 12.0 | 12.0 |
| Total Split (%) | 70.4% | 70.4% | 70.4% | 70.4% | 20.7% | 8.9% | 8.9% | 20.7% | 8.9% | 8.9% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | | | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | | | | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effct Green (s) | 37.1 | 37.1 | 37.1 | 37.1 | 88.3 | 79.5 | 79.5 | 80.7 | 73.7 | 73.7 |
| Actuated g/C Ratio | 0.27 | 0.27 | 0.27 | 0.27 | 0.65 | 0.59 | 0.59 | 0.60 | 0.55 | 0.55 |
| v/c Ratio | 0.97 | 0.49 | 0.50 | 0.44 | 0.31 | 0.46 | 0.11 | 0.10 | 0.44 | 0.33 |
| Control Delay | 97.6 | 30.4 | 47.3 | 35.9 | 12.4 | 20.9 | 9.9 | 12.0 | 23.4 | 14.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 97.6 | 30.4 | 47.3 | 35.9 | 12.4 | 20.9 | 9.9 | 12.0 | 23.4 | 14.0 |
| LOS | F | C | D | D | B | C | A | B | C | B |
| Approach Delay | | 62.4 | | 39.5 | | 17.7 | | | 19.2 | |
| Approach LOS | | E | | D | | B | | | B | |

Intersection Summary

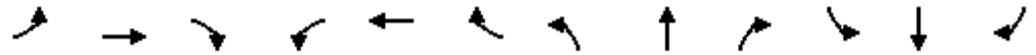
Cycle Length: 135
 Actuated Cycle Length: 135
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.97
 Intersection Signal Delay: 30.2
 Intersection LOS: C
 Intersection Capacity Utilization 65.0%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 1: Park Avenue & Ski Hill Road



HCM 6th Signalized Intersection Summary
 1: Park Avenue & Ski Hill Road

2022 Total Saturday AM.syn
 02/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 187 | 84 | 80 | 75 | 134 | 38 | 141 | 446 | 63 | 32 | 390 | 248 |
| Future Volume (veh/h) | 187 | 84 | 80 | 75 | 134 | 38 | 141 | 446 | 63 | 32 | 390 | 248 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 0.99 | | 0.96 | 1.00 | | 0.96 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 225 | 133 | 114 | 103 | 165 | 54 | 166 | 507 | 0 | 49 | 448 | 0 |
| Peak Hour Factor | 0.83 | 0.63 | 0.70 | 0.73 | 0.81 | 0.71 | 0.85 | 0.88 | 0.65 | 0.65 | 0.87 | 0.86 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 311 | 291 | 249 | 282 | 426 | 139 | 509 | 1028 | | 450 | 975 | |
| Arrive On Green | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.06 | 0.55 | 0.00 | 0.03 | 0.52 | 0.00 |
| Sat Flow, veh/h | 1154 | 911 | 781 | 1129 | 1334 | 437 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 225 | 0 | 247 | 103 | 0 | 219 | 166 | 507 | 0 | 49 | 448 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1154 | 0 | 1692 | 1129 | 0 | 1771 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 25.4 | 0.0 | 15.7 | 10.8 | 0.0 | 13.0 | 5.7 | 22.6 | 0.0 | 1.7 | 20.4 | 0.0 |
| Cycle Q Clear(g_c), s | 38.4 | 0.0 | 15.7 | 26.5 | 0.0 | 13.0 | 5.7 | 22.6 | 0.0 | 1.7 | 20.4 | 0.0 |
| Prop In Lane | 1.00 | | 0.46 | 1.00 | | 0.25 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 311 | 0 | 540 | 282 | 0 | 565 | 509 | 1028 | | 450 | 975 | |
| V/C Ratio(X) | 0.72 | 0.00 | 0.46 | 0.36 | 0.00 | 0.39 | 0.33 | 0.49 | | 0.11 | 0.46 | |
| Avail Cap(c_a), veh/h | 716 | 0 | 1134 | 679 | 0 | 1187 | 713 | 1028 | | 705 | 975 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 0.90 | 0.00 | 0.90 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 50.6 | 0.0 | 36.6 | 47.2 | 0.0 | 35.7 | 14.6 | 18.8 | 0.0 | 15.3 | 20.3 | 0.0 |
| Incr Delay (d2), s/veh | 3.2 | 0.0 | 0.6 | 0.7 | 0.0 | 0.4 | 0.4 | 1.7 | 0.0 | 0.1 | 1.6 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 7.6 | 0.0 | 6.6 | 3.1 | 0.0 | 5.7 | 2.3 | 10.2 | 0.0 | 0.7 | 9.3 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 53.8 | 0.0 | 37.3 | 47.9 | 0.0 | 36.1 | 14.9 | 20.5 | 0.0 | 15.4 | 21.9 | 0.0 |
| LnGrp LOS | D | A | D | D | A | D | B | C | | B | C | |
| Approach Vol, veh/h | | 472 | | | 322 | | | 673 | A | | 497 | A |
| Approach Delay, s/veh | | 45.2 | | | 39.9 | | | 19.1 | | | 21.2 | |
| Approach LOS | | D | | | D | | | B | | | C | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.7 | 78.7 | | 47.6 | 12.5 | 74.9 | | 47.6 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | 23.5 | 7.5 | | 90.5 | 23.5 | 7.5 | | 90.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.7 | 24.6 | | 40.4 | 7.7 | 22.4 | | 28.5 | | | | |
| Green Ext Time (p_c), s | 0.1 | 0.0 | | 2.7 | 0.4 | 0.0 | | 1.9 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 29.3 |
| HCM 6th LOS | C |

Notes

User approved pedestrian interval to be less than phase max green.
 Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
1: Park Avenue & Ski Hill Road

2022 Total Saturday PM.syn
02/17/2020

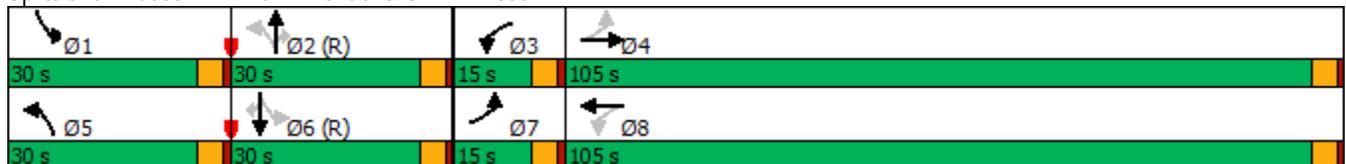


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | |
| Traffic Volume (vph) | 272 | 153 | 112 | 110 | 110 | 483 | 146 | 40 | 479 | 200 |
| Future Volume (vph) | 272 | 153 | 112 | 110 | 110 | 483 | 146 | 40 | 479 | 200 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 |
| Total Split (s) | 15.0 | 105.0 | 15.0 | 105.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 |
| Total Split (%) | 8.3% | 58.3% | 8.3% | 58.3% | 16.7% | 16.7% | 16.7% | 16.7% | 16.7% | 16.7% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 60.9 | 50.4 | 60.9 | 50.4 | 105.0 | 95.0 | 95.0 | 97.6 | 89.3 | 89.3 |
| Actuated g/C Ratio | 0.34 | 0.28 | 0.34 | 0.28 | 0.58 | 0.53 | 0.53 | 0.54 | 0.50 | 0.50 |
| v/c Ratio | 0.87 | 0.83 | 0.59 | 0.41 | 0.36 | 0.58 | 0.24 | 0.16 | 0.60 | 0.35 |
| Control Delay | 74.2 | 67.2 | 48.4 | 46.7 | 21.8 | 35.7 | 18.8 | 20.3 | 39.3 | 24.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 74.2 | 67.2 | 48.4 | 46.7 | 21.8 | 35.7 | 18.8 | 20.3 | 39.3 | 24.3 |
| LOS | E | E | D | D | C | D | B | C | D | C |
| Approach Delay | | 70.4 | | 47.3 | | 30.1 | | | 33.8 | |
| Approach LOS | | E | | D | | C | | | C | |

Intersection Summary

Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 43.0
 Intersection LOS: D
 Intersection Capacity Utilization 74.5%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 1: Park Avenue & Ski Hill Road

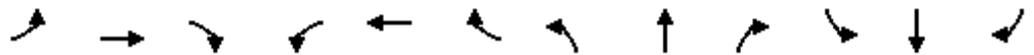


HCM 6th Signalized Intersection Summary

2022 Total Saturday PM.syn

1: Park Avenue & Ski Hill Road

02/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|-------|------|-------|------|-------|------|-------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 272 | 153 | 163 | 112 | 110 | 65 | 110 | 483 | 146 | 40 | 479 | 200 |
| Future Volume (veh/h) | 272 | 153 | 163 | 112 | 110 | 65 | 110 | 483 | 146 | 40 | 479 | 200 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.86 | 1.00 | | 0.86 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 292 | 166 | 190 | 127 | 131 | 70 | 131 | 568 | 0 | 57 | 551 | 0 |
| Peak Hour Factor | 0.93 | 0.92 | 0.86 | 0.88 | 0.84 | 0.93 | 0.84 | 0.85 | 0.78 | 0.70 | 0.87 | 0.85 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 315 | 181 | 207 | 171 | 268 | 143 | 428 | 1061 | | 406 | 1027 | |
| Arrive On Green | 0.06 | 0.25 | 0.25 | 0.06 | 0.25 | 0.25 | 0.04 | 0.57 | 0.00 | 0.03 | 0.55 | 0.00 |
| Sat Flow, veh/h | 1781 | 730 | 836 | 1781 | 1082 | 578 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 292 | 0 | 356 | 127 | 0 | 201 | 131 | 568 | 0 | 57 | 551 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1566 | 1781 | 0 | 1660 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 10.5 | 0.0 | 39.8 | 9.6 | 0.0 | 18.6 | 5.7 | 34.0 | 0.0 | 2.5 | 33.9 | 0.0 |
| Cycle Q Clear(g_c), s | 10.5 | 0.0 | 39.8 | 9.6 | 0.0 | 18.6 | 5.7 | 34.0 | 0.0 | 2.5 | 33.9 | 0.0 |
| Prop In Lane | 1.00 | | 0.53 | 1.00 | | 0.35 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 315 | 0 | 389 | 171 | 0 | 412 | 428 | 1061 | | 406 | 1027 | |
| V/C Ratio(X) | 0.93 | 0.00 | 0.92 | 0.74 | 0.00 | 0.49 | 0.31 | 0.54 | | 0.14 | 0.54 | |
| Avail Cap(c_a), veh/h | 315 | 0 | 874 | 171 | 0 | 927 | 601 | 1061 | | 612 | 1027 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 0.00 | 1.00 | 0.80 | 0.00 | 0.80 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 64.6 | 0.0 | 65.9 | 51.6 | 0.0 | 57.9 | 19.6 | 24.2 | 0.0 | 19.6 | 26.0 | 0.0 |
| Incr Delay (d2), s/veh | 32.6 | 0.0 | 8.9 | 12.8 | 0.0 | 0.7 | 0.4 | 1.9 | 0.0 | 0.2 | 2.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 11.4 | 0.0 | 16.9 | 4.9 | 0.0 | 8.0 | 2.5 | 15.9 | 0.0 | 1.1 | 15.9 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 97.3 | 0.0 | 74.7 | 64.4 | 0.0 | 58.6 | 20.0 | 26.1 | 0.0 | 19.7 | 28.0 | 0.0 |
| LnGrp LOS | F | A | E | E | A | E | C | C | | B | C | |
| Approach Vol, veh/h | | 648 | | | 328 | | | 699 | A | | 608 | A |
| Approach Delay, s/veh | | 84.9 | | | 60.9 | | | 25.0 | | | 27.2 | |
| Approach LOS | | F | | | E | | | C | | | C | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.2 | 106.6 | 15.0 | 49.2 | 12.5 | 103.3 | 15.0 | 49.2 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 25.5 | 25.5 | 10.5 | 100.5 | 25.5 | 25.5 | 10.5 | 100.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.5 | 36.0 | 11.6 | 41.8 | 7.7 | 35.9 | 12.5 | 20.6 | | | | |
| Green Ext Time (p_c), s | 0.1 | 0.0 | 0.0 | 2.8 | 0.3 | 0.0 | 0.0 | 1.4 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 47.7 |
| HCM 6th LOS | D |

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
1: Park Avenue & Ski Hill Road

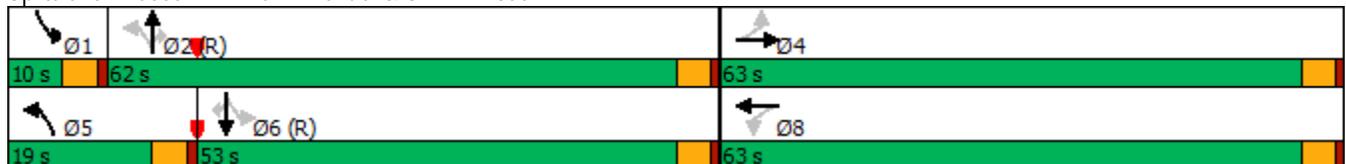


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↗ | ↖ | ↗ | ↗ |
| Traffic Volume (vph) | 187 | 84 | 75 | 134 | 141 | 446 | 63 | 32 | 390 | 248 |
| Future Volume (vph) | 187 | 84 | 75 | 134 | 141 | 446 | 63 | 32 | 390 | 248 |
| Turn Type | Perm | NA | Perm | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | | 4 | | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 |
| Total Split (s) | 63.0 | 63.0 | 63.0 | 63.0 | 19.0 | 62.0 | 62.0 | 10.0 | 53.0 | 53.0 |
| Total Split (%) | 46.7% | 46.7% | 46.7% | 46.7% | 14.1% | 45.9% | 45.9% | 7.4% | 39.3% | 39.3% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | | | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | | | | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 36.4 | 36.4 | 36.4 | 36.4 | 89.0 | 80.2 | 80.2 | 81.5 | 74.6 | 74.6 |
| Actuated g/C Ratio | 0.27 | 0.27 | 0.27 | 0.27 | 0.66 | 0.59 | 0.59 | 0.60 | 0.55 | 0.55 |
| v/c Ratio | 0.99 | 0.52 | 0.52 | 0.45 | 0.30 | 0.46 | 0.11 | 0.10 | 0.44 | 0.31 |
| Control Delay | 105.5 | 37.1 | 48.8 | 39.2 | 11.7 | 20.0 | 9.4 | 11.2 | 22.4 | 9.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 105.5 | 37.1 | 48.8 | 39.2 | 11.7 | 20.0 | 9.4 | 11.2 | 22.4 | 9.9 |
| LOS | F | D | D | D | B | C | A | B | C | A |
| Approach Delay | | 69.7 | | 42.3 | | 16.9 | | | 17.1 | |
| Approach LOS | | E | | D | | B | | | B | |

Intersection Summary

Cycle Length: 135
 Actuated Cycle Length: 135
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.99
 Intersection Signal Delay: 31.1
 Intersection LOS: C
 Intersection Capacity Utilization 65.0%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 1: Park Avenue & Ski Hill Road



HCM 6th Signalized Intersection Summary
 1: Park Avenue & Ski Hill Road

2022 Total Saturday AM_1 Optimized.syn

02/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 187 | 84 | 80 | 75 | 134 | 38 | 141 | 446 | 63 | 32 | 390 | 248 |
| Future Volume (veh/h) | 187 | 84 | 80 | 75 | 134 | 38 | 141 | 446 | 63 | 32 | 390 | 248 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 0.99 | | 0.96 | 1.00 | | 0.96 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 225 | 133 | 114 | 103 | 165 | 54 | 166 | 507 | 0 | 49 | 448 | 0 |
| Peak Hour Factor | 0.83 | 0.63 | 0.70 | 0.73 | 0.81 | 0.71 | 0.85 | 0.88 | 0.65 | 0.65 | 0.87 | 0.86 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 308 | 289 | 248 | 280 | 423 | 138 | 510 | 1032 | | 452 | 981 | |
| Arrive On Green | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.06 | 0.55 | 0.00 | 0.03 | 0.52 | 0.00 |
| Sat Flow, veh/h | 1154 | 911 | 781 | 1129 | 1334 | 437 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 225 | 0 | 247 | 103 | 0 | 219 | 166 | 507 | 0 | 49 | 448 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1154 | 0 | 1692 | 1129 | 0 | 1771 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 25.5 | 0.0 | 15.8 | 10.8 | 0.0 | 13.0 | 5.7 | 22.5 | 0.0 | 1.7 | 20.2 | 0.0 |
| Cycle Q Clear(g_c), s | 38.5 | 0.0 | 15.8 | 26.6 | 0.0 | 13.0 | 5.7 | 22.5 | 0.0 | 1.7 | 20.2 | 0.0 |
| Prop In Lane | 1.00 | | 0.46 | 1.00 | | 0.25 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 308 | 0 | 536 | 280 | 0 | 561 | 510 | 1032 | | 452 | 981 | |
| V/C Ratio(X) | 0.73 | 0.00 | 0.46 | 0.37 | 0.00 | 0.39 | 0.33 | 0.49 | | 0.11 | 0.46 | |
| Avail Cap(c_a), veh/h | 442 | 0 | 733 | 411 | 0 | 767 | 598 | 1032 | | 470 | 981 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 0.00 | 1.00 | 0.91 | 0.00 | 0.91 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 50.9 | 0.0 | 36.9 | 47.5 | 0.0 | 35.9 | 14.5 | 18.6 | 0.0 | 15.1 | 20.1 | 0.0 |
| Incr Delay (d2), s/veh | 3.5 | 0.0 | 0.6 | 0.7 | 0.0 | 0.4 | 0.4 | 1.7 | 0.0 | 0.1 | 1.5 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 7.7 | 0.0 | 6.7 | 3.1 | 0.0 | 5.7 | 2.3 | 10.2 | 0.0 | 0.7 | 9.2 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 54.5 | 0.0 | 37.5 | 48.2 | 0.0 | 36.3 | 14.8 | 20.3 | 0.0 | 15.2 | 21.6 | 0.0 |
| LnGrp LOS | D | A | D | D | A | D | B | C | | B | C | |
| Approach Vol, veh/h | | 472 | | | 322 | | | 673 | A | | 497 | A |
| Approach Delay, s/veh | | 45.6 | | | 40.1 | | | 18.9 | | | 21.0 | |
| Approach LOS | | D | | | D | | | B | | | C | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.7 | 79.0 | | 47.3 | 12.4 | 75.3 | | 47.3 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 57.5 | | 58.5 | 14.5 | 48.5 | | 58.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.7 | 24.5 | | 40.5 | 7.7 | 22.2 | | 28.6 | | | | |
| Green Ext Time (p_c), s | 0.0 | 3.6 | | 2.3 | 0.2 | 3.0 | | 1.8 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 29.3 |
| HCM 6th LOS | C |

Notes

User approved pedestrian interval to be less than phase max green.
 Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
1: Park Avenue & Ski Hill Road

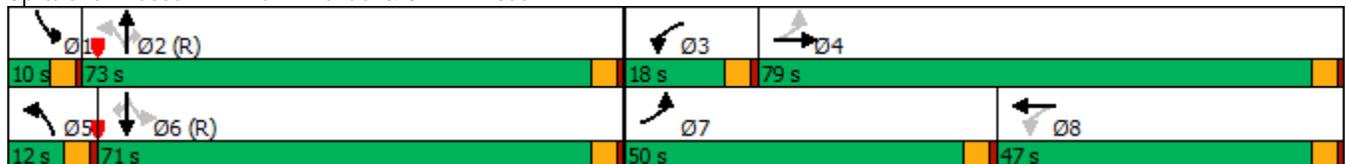


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | |
| Traffic Volume (vph) | 272 | 153 | 112 | 110 | 110 | 483 | 146 | 40 | 479 | 200 |
| Future Volume (vph) | 272 | 153 | 112 | 110 | 110 | 483 | 146 | 40 | 479 | 200 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 |
| Total Split (s) | 50.0 | 79.0 | 18.0 | 47.0 | 12.0 | 73.0 | 73.0 | 10.0 | 71.0 | 71.0 |
| Total Split (%) | 27.8% | 43.9% | 10.0% | 26.1% | 6.7% | 40.6% | 40.6% | 5.6% | 39.4% | 39.4% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effct Green (s) | 66.6 | 49.2 | 47.4 | 34.5 | 104.2 | 93.8 | 93.8 | 95.7 | 87.5 | 87.5 |
| Actuated g/C Ratio | 0.37 | 0.27 | 0.26 | 0.19 | 0.58 | 0.52 | 0.52 | 0.53 | 0.49 | 0.49 |
| v/c Ratio | 0.73 | 0.87 | 0.57 | 0.60 | 0.36 | 0.59 | 0.24 | 0.16 | 0.61 | 0.35 |
| Control Delay | 52.7 | 75.7 | 48.3 | 68.4 | 22.3 | 36.3 | 15.3 | 20.7 | 40.5 | 21.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 52.7 | 75.7 | 48.3 | 68.4 | 22.3 | 36.3 | 15.3 | 20.7 | 40.5 | 21.1 |
| LOS | D | E | D | E | C | D | B | C | D | C |
| Approach Delay | | 65.3 | | 60.6 | | 29.8 | | | 33.8 | |
| Approach LOS | | E | | E | | C | | | C | |

Intersection Summary

Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 43.3
 Intersection Capacity Utilization 74.5%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service D

Splits and Phases: 1: Park Avenue & Ski Hill Road



HCM 6th Signalized Intersection Summary
 1: Park Avenue & Ski Hill Road

2022 Total Saturday PM_1 Optimized.syn

02/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|-------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 272 | 153 | 163 | 112 | 110 | 65 | 110 | 483 | 146 | 40 | 479 | 200 |
| Future Volume (veh/h) | 272 | 153 | 163 | 112 | 110 | 65 | 110 | 483 | 146 | 40 | 479 | 200 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.86 | 1.00 | | 0.80 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 292 | 166 | 190 | 127 | 131 | 70 | 131 | 568 | 0 | 57 | 551 | 0 |
| Peak Hour Factor | 0.93 | 0.92 | 0.86 | 0.88 | 0.84 | 0.93 | 0.84 | 0.85 | 0.78 | 0.70 | 0.87 | 0.85 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 363 | 181 | 207 | 191 | 178 | 95 | 414 | 1041 | | 393 | 1012 | |
| Arrive On Green | 0.15 | 0.25 | 0.25 | 0.07 | 0.17 | 0.17 | 0.04 | 0.56 | 0.00 | 0.03 | 0.54 | 0.00 |
| Sat Flow, veh/h | 1781 | 730 | 836 | 1781 | 1047 | 560 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 292 | 0 | 356 | 127 | 0 | 201 | 131 | 568 | 0 | 57 | 551 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1566 | 1781 | 0 | 1607 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 23.7 | 0.0 | 39.9 | 10.5 | 0.0 | 21.4 | 5.9 | 34.8 | 0.0 | 2.6 | 34.5 | 0.0 |
| Cycle Q Clear(g_c), s | 23.7 | 0.0 | 39.9 | 10.5 | 0.0 | 21.4 | 5.9 | 34.8 | 0.0 | 2.6 | 34.5 | 0.0 |
| Prop In Lane | 1.00 | | 0.53 | 1.00 | | 0.35 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 363 | 0 | 388 | 191 | 0 | 273 | 414 | 1041 | | 393 | 1012 | |
| V/C Ratio(X) | 0.80 | 0.00 | 0.92 | 0.67 | 0.00 | 0.74 | 0.32 | 0.55 | | 0.14 | 0.54 | |
| Avail Cap(c_a), veh/h | 551 | 0 | 648 | 200 | 0 | 379 | 414 | 1041 | | 401 | 1012 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 0.00 | 1.00 | 0.90 | 0.00 | 0.90 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 50.6 | 0.0 | 66.0 | 58.2 | 0.0 | 70.9 | 20.7 | 25.4 | 0.0 | 20.5 | 26.9 | 0.0 |
| Incr Delay (d2), s/veh | 5.1 | 0.0 | 11.7 | 6.9 | 0.0 | 4.2 | 0.4 | 2.1 | 0.0 | 0.2 | 2.1 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 11.2 | 0.0 | 17.3 | 5.2 | 0.0 | 9.2 | 2.6 | 16.3 | 0.0 | 1.1 | 16.2 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 55.7 | 0.0 | 77.6 | 65.1 | 0.0 | 75.1 | 21.2 | 27.5 | 0.0 | 20.6 | 29.0 | 0.0 |
| LnGrp LOS | E | A | E | E | A | E | C | C | | C | C | |
| Approach Vol, veh/h | | 648 | | | 328 | | | 699 | A | | 608 | A |
| Approach Delay, s/veh | | 67.7 | | | 71.3 | | | 26.3 | | | 28.2 | |
| Approach LOS | | E | | | E | | | C | | | C | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.2 | 104.7 | 17.0 | 49.1 | 12.0 | 101.9 | 31.0 | 35.0 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 68.5 | 13.5 | 74.5 | 7.5 | 66.5 | 45.5 | 42.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.6 | 36.8 | 12.5 | 41.9 | 7.9 | 36.5 | 25.7 | 23.4 | | | | |
| Green Ext Time (p_c), s | 0.0 | 4.2 | 0.0 | 2.7 | 0.0 | 4.0 | 0.8 | 1.1 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 45.0 |
| HCM 6th LOS | D |

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
1: Park Avenue & Ski Hill Road

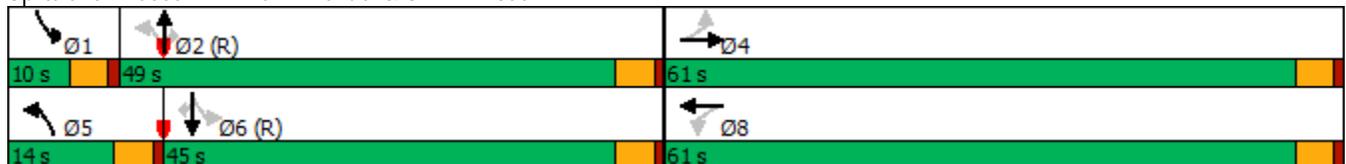


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↶ | ↷ | ↶ | ↷ | ↶ | ↷ | ↷ | ↶ | ↷ | ↷ |
| Traffic Volume (vph) | 187 | 84 | 75 | 134 | 141 | 446 | 63 | 32 | 390 | 248 |
| Future Volume (vph) | 187 | 84 | 75 | 134 | 141 | 446 | 63 | 32 | 390 | 248 |
| Turn Type | Perm | NA | Perm | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | | 4 | | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 |
| Total Split (s) | 61.0 | 61.0 | 61.0 | 61.0 | 14.0 | 49.0 | 49.0 | 10.0 | 45.0 | 45.0 |
| Total Split (%) | 50.8% | 50.8% | 50.8% | 50.8% | 11.7% | 40.8% | 40.8% | 8.3% | 37.5% | 37.5% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | | | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | | | | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 32.5 | 32.5 | 32.5 | 32.5 | 77.7 | 69.1 | 69.1 | 70.6 | 63.8 | 63.8 |
| Actuated g/C Ratio | 0.27 | 0.27 | 0.27 | 0.27 | 0.65 | 0.58 | 0.58 | 0.59 | 0.53 | 0.53 |
| v/c Ratio | 0.96 | 0.51 | 0.50 | 0.44 | 0.31 | 0.47 | 0.11 | 0.10 | 0.45 | 0.32 |
| Control Delay | 91.4 | 31.3 | 39.8 | 31.1 | 11.4 | 19.9 | 8.5 | 10.9 | 22.2 | 9.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 91.4 | 31.3 | 39.8 | 31.1 | 11.4 | 19.9 | 8.5 | 10.9 | 22.2 | 9.1 |
| LOS | F | C | D | C | B | B | A | B | C | A |
| Approach Delay | | 60.0 | | 33.9 | | 16.6 | | | 16.7 | |
| Approach LOS | | E | | C | | B | | | B | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.96
 Intersection Signal Delay: 27.7
 Intersection LOS: C
 Intersection Capacity Utilization 65.0%
 ICU Level of Service C
 Analysis Period (min) 15

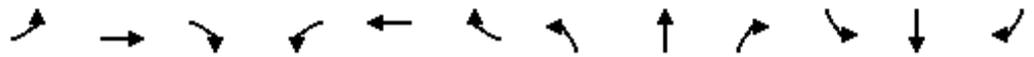
Splits and Phases: 1: Park Avenue & Ski Hill Road



HCM 6th Signalized Intersection Summary
1: Park Avenue & Ski Hill Road

2022 Total Saturday AM_Cycle & Optimized.syn

02/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 187 | 84 | 80 | 75 | 134 | 38 | 141 | 446 | 63 | 32 | 390 | 248 |
| Future Volume (veh/h) | 187 | 84 | 80 | 75 | 134 | 38 | 141 | 446 | 63 | 32 | 390 | 248 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 0.99 | | 0.96 | 0.99 | | 0.96 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 225 | 133 | 114 | 103 | 165 | 54 | 166 | 507 | 0 | 49 | 448 | 0 |
| Peak Hour Factor | 0.83 | 0.63 | 0.70 | 0.73 | 0.81 | 0.71 | 0.85 | 0.88 | 0.65 | 0.65 | 0.87 | 0.86 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 319 | 284 | 244 | 279 | 417 | 136 | 509 | 1013 | | 451 | 963 | |
| Arrive On Green | 0.31 | 0.31 | 0.31 | 0.42 | 0.42 | 0.42 | 0.06 | 0.54 | 0.00 | 0.03 | 0.51 | 0.00 |
| Sat Flow, veh/h | 1148 | 911 | 781 | 1126 | 1334 | 437 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 225 | 0 | 247 | 103 | 0 | 219 | 166 | 507 | 0 | 49 | 448 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1148 | 0 | 1691 | 1126 | 0 | 1770 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 22.7 | 0.0 | 14.1 | 9.3 | 0.0 | 10.4 | 5.2 | 20.5 | 0.0 | 1.5 | 18.3 | 0.0 |
| Cycle Q Clear(g_c), s | 33.0 | 0.0 | 14.1 | 23.4 | 0.0 | 10.4 | 5.2 | 20.5 | 0.0 | 1.5 | 18.3 | 0.0 |
| Prop In Lane | 1.00 | | 0.46 | 1.00 | | 0.25 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 319 | 0 | 528 | 279 | 0 | 553 | 509 | 1013 | | 451 | 963 | |
| V/C Ratio(X) | 0.71 | 0.00 | 0.47 | 0.37 | 0.00 | 0.40 | 0.33 | 0.50 | | 0.11 | 0.47 | |
| Avail Cap(c_a), veh/h | 501 | 0 | 796 | 458 | 0 | 834 | 542 | 1013 | | 473 | 963 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.33 | 1.33 | 1.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 0.91 | 0.00 | 0.91 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 44.7 | 0.0 | 33.2 | 36.9 | 0.0 | 27.2 | 13.4 | 17.3 | 0.0 | 13.9 | 18.6 | 0.0 |
| Incr Delay (d2), s/veh | 2.9 | 0.0 | 0.6 | 0.7 | 0.0 | 0.4 | 0.4 | 1.8 | 0.0 | 0.1 | 1.6 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.7 | 0.0 | 5.9 | 2.5 | 0.0 | 4.2 | 2.1 | 9.1 | 0.0 | 0.6 | 8.3 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 47.6 | 0.0 | 33.9 | 37.7 | 0.0 | 27.6 | 13.8 | 19.1 | 0.0 | 14.0 | 20.2 | 0.0 |
| LnGrp LOS | D | A | C | D | A | C | B | B | | B | C | |
| Approach Vol, veh/h | | 472 | | | 322 | | | 673 | A | | 497 | A |
| Approach Delay, s/veh | | 40.4 | | | 30.8 | | | 17.8 | | | 19.6 | |
| Approach LOS | | D | | | C | | | B | | | B | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.5 | 69.5 | | 42.0 | 11.7 | 66.3 | | 42.0 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 44.5 | | 56.5 | 9.5 | 40.5 | | 56.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.5 | 22.5 | | 35.0 | 7.2 | 20.3 | | 25.4 | | | | |
| Green Ext Time (p_c), s | 0.0 | 3.3 | | 2.4 | 0.1 | 2.8 | | 1.8 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 25.8 |
| HCM 6th LOS | C |

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
1: Park Avenue & Ski Hill Road

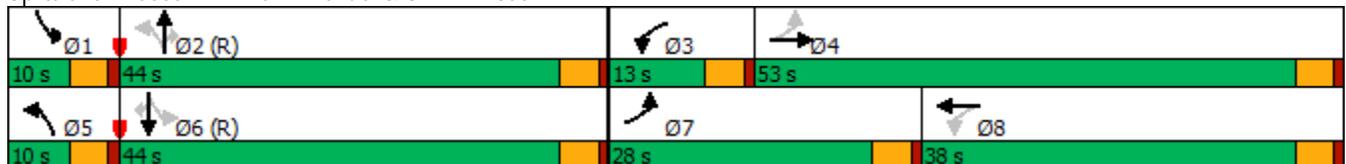


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↗ | ↖ | ↗ | ↗ |
| Traffic Volume (vph) | 272 | 153 | 112 | 110 | 110 | 483 | 146 | 40 | 479 | 200 |
| Future Volume (vph) | 272 | 153 | 112 | 110 | 110 | 483 | 146 | 40 | 479 | 200 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 |
| Total Split (s) | 28.0 | 53.0 | 13.0 | 38.0 | 10.0 | 44.0 | 44.0 | 10.0 | 44.0 | 44.0 |
| Total Split (%) | 23.3% | 44.2% | 10.8% | 31.7% | 8.3% | 36.7% | 36.7% | 8.3% | 36.7% | 36.7% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effct Green (s) | 43.9 | 31.0 | 27.9 | 19.4 | 66.6 | 57.2 | 57.2 | 58.7 | 51.3 | 51.3 |
| Actuated g/C Ratio | 0.37 | 0.26 | 0.23 | 0.16 | 0.56 | 0.48 | 0.48 | 0.49 | 0.43 | 0.43 |
| v/c Ratio | 0.73 | 0.83 | 0.57 | 0.68 | 0.38 | 0.64 | 0.24 | 0.17 | 0.69 | 0.35 |
| Control Delay | 38.9 | 50.8 | 36.7 | 54.9 | 17.9 | 31.1 | 8.6 | 16.3 | 35.8 | 13.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 38.9 | 50.8 | 36.7 | 54.9 | 17.9 | 31.1 | 8.6 | 16.3 | 35.8 | 13.0 |
| LOS | D | D | D | D | B | C | A | B | D | B |
| Approach Delay | | 45.4 | | 47.8 | | 24.4 | | | 28.1 | |
| Approach LOS | | D | | D | | C | | | C | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 33.5
 Intersection LOS: C
 Intersection Capacity Utilization 74.5%
 ICU Level of Service D
 Analysis Period (min) 15

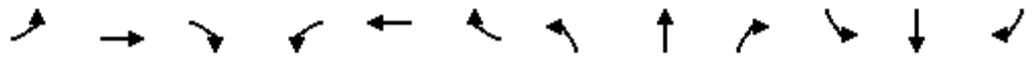
Splits and Phases: 1: Park Avenue & Ski Hill Road



HCM 6th Signalized Intersection Summary
1: Park Avenue & Ski Hill Road

2022 Total Saturday PM_Cycle & Optimized.syn

02/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↑ | ↗ | ↖ | ↑ | ↗ |
| Traffic Volume (veh/h) | 272 | 153 | 163 | 112 | 110 | 65 | 110 | 483 | 146 | 40 | 479 | 200 |
| Future Volume (veh/h) | 272 | 153 | 163 | 112 | 110 | 65 | 110 | 483 | 146 | 40 | 479 | 200 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 0.97 | | 0.87 | 0.98 | | 0.81 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 292 | 166 | 190 | 127 | 131 | 70 | 131 | 568 | 0 | 57 | 551 | 0 |
| Peak Hour Factor | 0.93 | 0.92 | 0.86 | 0.88 | 0.84 | 0.93 | 0.84 | 0.85 | 0.78 | 0.70 | 0.87 | 0.85 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 401 | 187 | 214 | 223 | 185 | 99 | 365 | 914 | | 347 | 895 | |
| Arrive On Green | 0.15 | 0.25 | 0.25 | 0.12 | 0.29 | 0.29 | 0.05 | 0.49 | 0.00 | 0.04 | 0.48 | 0.00 |
| Sat Flow, veh/h | 1781 | 732 | 838 | 1781 | 1052 | 562 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 292 | 0 | 356 | 127 | 0 | 201 | 131 | 568 | 0 | 57 | 551 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1570 | 1781 | 0 | 1614 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 15.5 | 0.0 | 26.2 | 6.9 | 0.0 | 13.3 | 4.5 | 26.8 | 0.0 | 1.9 | 26.1 | 0.0 |
| Cycle Q Clear(g_c), s | 15.5 | 0.0 | 26.2 | 6.9 | 0.0 | 13.3 | 4.5 | 26.8 | 0.0 | 1.9 | 26.1 | 0.0 |
| Prop In Lane | 1.00 | | 0.53 | 1.00 | | 0.35 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 401 | 0 | 400 | 223 | 0 | 285 | 365 | 914 | | 347 | 895 | |
| V/C Ratio(X) | 0.73 | 0.00 | 0.89 | 0.57 | 0.00 | 0.71 | 0.36 | 0.62 | | 0.16 | 0.62 | |
| Avail Cap(c_a), veh/h | 484 | 0 | 635 | 223 | 0 | 450 | 365 | 914 | | 366 | 895 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.67 | 1.67 | 1.67 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 0.00 | 1.00 | 0.89 | 0.00 | 0.89 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 32.3 | 0.0 | 43.1 | 36.0 | 0.0 | 39.6 | 18.0 | 22.5 | 0.0 | 17.6 | 23.1 | 0.0 |
| Incr Delay (d2), s/veh | 4.4 | 0.0 | 9.5 | 3.1 | 0.0 | 2.9 | 0.6 | 3.2 | 0.0 | 0.2 | 3.2 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 7.1 | 0.0 | 11.2 | 3.1 | 0.0 | 5.0 | 1.9 | 12.4 | 0.0 | 0.8 | 12.1 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 36.7 | 0.0 | 52.5 | 39.1 | 0.0 | 42.4 | 18.6 | 25.7 | 0.0 | 17.8 | 26.3 | 0.0 |
| LnGrp LOS | D | A | D | D | A | D | B | C | | B | C | |
| Approach Vol, veh/h | | 648 | | | 328 | | | 699 | A | | 608 | A |
| Approach Delay, s/veh | | 45.4 | | | 41.1 | | | 24.4 | | | 25.5 | |
| Approach LOS | | D | | | D | | | C | | | C | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.8 | 63.2 | 13.0 | 35.1 | 10.0 | 61.9 | 22.4 | 25.7 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 39.5 | 8.5 | 48.5 | 5.5 | 39.5 | 23.5 | 33.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.9 | 28.8 | 8.9 | 28.2 | 6.5 | 28.1 | 17.5 | 15.3 | | | | |
| Green Ext Time (p_c), s | 0.0 | 2.8 | 0.0 | 2.4 | 0.0 | 2.8 | 0.5 | 1.1 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 33.1 |
| HCM 6th LOS | C |

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
1: Park Avenue & Ski Hill Road

2040 BG Saturday AM.syn
02/06/2020

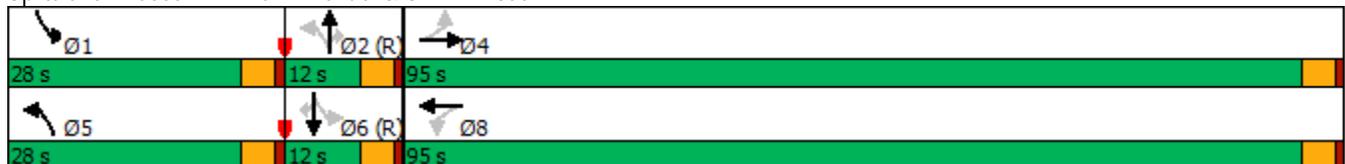


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↗ | ↖ | ↗ | ↗ |
| Traffic Volume (vph) | 199 | 86 | 93 | 131 | 138 | 552 | 79 | 39 | 484 | 241 |
| Future Volume (vph) | 199 | 86 | 93 | 131 | 138 | 552 | 79 | 39 | 484 | 241 |
| Turn Type | Perm | NA | Perm | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | | 4 | | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 |
| Total Split (s) | 95.0 | 95.0 | 95.0 | 95.0 | 28.0 | 12.0 | 12.0 | 28.0 | 12.0 | 12.0 |
| Total Split (%) | 70.4% | 70.4% | 70.4% | 70.4% | 20.7% | 8.9% | 8.9% | 20.7% | 8.9% | 8.9% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | | | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | | | | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 34.4 | 34.4 | 34.4 | 34.4 | 90.7 | 82.4 | 82.4 | 83.9 | 77.2 | 77.2 |
| Actuated g/C Ratio | 0.25 | 0.25 | 0.25 | 0.25 | 0.67 | 0.61 | 0.61 | 0.62 | 0.57 | 0.57 |
| v/c Ratio | 0.95 | 0.38 | 0.44 | 0.41 | 0.30 | 0.53 | 0.09 | 0.10 | 0.49 | 0.29 |
| Control Delay | 95.6 | 23.4 | 45.8 | 35.8 | 11.1 | 20.5 | 8.2 | 10.7 | 22.2 | 13.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 95.6 | 23.4 | 45.8 | 35.8 | 11.1 | 20.5 | 8.2 | 10.7 | 22.2 | 13.1 |
| LOS | F | C | D | D | B | C | A | B | C | B |
| Approach Delay | | 62.7 | | 39.2 | | 17.6 | | | 18.8 | |
| Approach LOS | | E | | D | | B | | | B | |

Intersection Summary

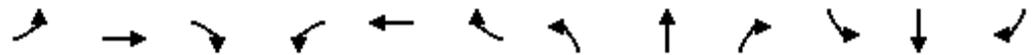
Cycle Length: 135
 Actuated Cycle Length: 135
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 28.3
 Intersection LOS: C
 Intersection Capacity Utilization 70.8%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 1: Park Avenue & Ski Hill Road



HCM 6th Signalized Intersection Summary
 1: Park Avenue & Ski Hill Road

2040 BG Saturday AM.syn
 02/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 199 | 86 | 81 | 93 | 131 | 47 | 138 | 552 | 79 | 39 | 484 | 241 |
| Future Volume (veh/h) | 199 | 86 | 81 | 93 | 131 | 47 | 138 | 552 | 79 | 39 | 484 | 241 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 0.99 | | 0.96 | 0.99 | | 0.96 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 216 | 93 | 88 | 101 | 142 | 51 | 150 | 600 | 0 | 42 | 526 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 299 | 255 | 241 | 303 | 383 | 137 | 478 | 1077 | | 413 | 1032 | |
| Arrive On Green | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.05 | 0.58 | 0.00 | 0.03 | 0.55 | 0.00 |
| Sat Flow, veh/h | 1177 | 864 | 817 | 1189 | 1297 | 466 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 216 | 0 | 181 | 101 | 0 | 193 | 150 | 600 | 0 | 42 | 526 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1177 | 0 | 1681 | 1189 | 0 | 1762 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 24.0 | 0.0 | 11.5 | 9.9 | 0.0 | 11.7 | 4.8 | 27.1 | 0.0 | 1.4 | 23.7 | 0.0 |
| Cycle Q Clear(g_c), s | 35.7 | 0.0 | 11.5 | 21.4 | 0.0 | 11.7 | 4.8 | 27.1 | 0.0 | 1.4 | 23.7 | 0.0 |
| Prop In Lane | 1.00 | | 0.49 | 1.00 | | 0.26 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 299 | 0 | 496 | 303 | 0 | 520 | 478 | 1077 | | 413 | 1032 | |
| V/C Ratio(X) | 0.72 | 0.00 | 0.37 | 0.33 | 0.00 | 0.37 | 0.31 | 0.56 | | 0.10 | 0.51 | |
| Avail Cap(c_a), veh/h | 740 | 0 | 1127 | 749 | 0 | 1181 | 694 | 1077 | | 671 | 1032 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 0.00 | 1.00 | 0.95 | 0.00 | 0.95 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 51.8 | 0.0 | 37.6 | 46.0 | 0.0 | 37.7 | 13.9 | 17.9 | 0.0 | 14.3 | 18.8 | 0.0 |
| Incr Delay (d2), s/veh | 3.3 | 0.0 | 0.5 | 0.6 | 0.0 | 0.4 | 0.4 | 2.1 | 0.0 | 0.1 | 1.8 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 7.4 | 0.0 | 4.8 | 3.0 | 0.0 | 5.2 | 2.0 | 12.1 | 0.0 | 0.6 | 10.7 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 55.1 | 0.0 | 38.0 | 46.7 | 0.0 | 38.1 | 14.2 | 20.0 | 0.0 | 14.4 | 20.6 | 0.0 |
| LnGrp LOS | E | A | D | D | A | D | B | B | | B | C | |
| Approach Vol, veh/h | | 397 | | | 294 | | | 750 | A | | 568 | A |
| Approach Delay, s/veh | | 47.3 | | | 41.0 | | | 18.8 | | | 20.2 | |
| Approach LOS | | D | | | D | | | B | | | C | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.5 | 82.2 | | 44.3 | 11.7 | 79.0 | | 44.3 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | 23.5 | 7.5 | | 90.5 | 23.5 | 7.5 | | 90.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.4 | 29.1 | | 37.7 | 6.8 | 25.7 | | 23.4 | | | | |
| Green Ext Time (p_c), s | 0.1 | 0.0 | | 2.1 | 0.3 | 0.0 | | 1.7 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 28.1 |
| HCM 6th LOS | C |

Notes

User approved pedestrian interval to be less than phase max green.
 Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
1: Park Avenue & Ski Hill Road

2040 BG Saturday PM.syn
02/06/2020

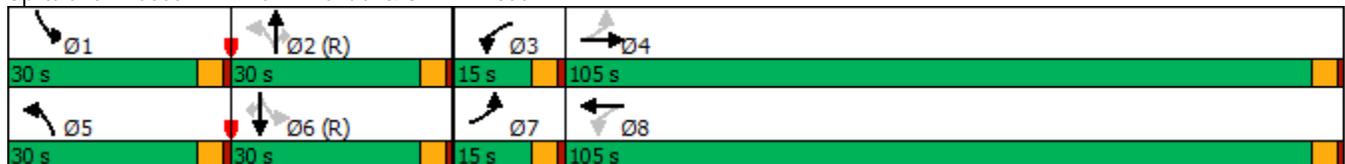


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | |
| Traffic Volume (vph) | 282 | 159 | 138 | 110 | 110 | 599 | 182 | 50 | 594 | 202 |
| Future Volume (vph) | 282 | 159 | 138 | 110 | 110 | 599 | 182 | 50 | 594 | 202 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 |
| Total Split (s) | 15.0 | 105.0 | 15.0 | 105.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 |
| Total Split (%) | 8.3% | 58.3% | 8.3% | 58.3% | 16.7% | 16.7% | 16.7% | 16.7% | 16.7% | 16.7% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effct Green (s) | 61.3 | 50.8 | 61.3 | 50.8 | 104.4 | 94.7 | 94.7 | 97.5 | 89.5 | 89.5 |
| Actuated g/C Ratio | 0.34 | 0.28 | 0.34 | 0.28 | 0.58 | 0.53 | 0.53 | 0.54 | 0.50 | 0.50 |
| v/c Ratio | 0.91 | 0.83 | 0.69 | 0.42 | 0.40 | 0.66 | 0.26 | 0.18 | 0.70 | 0.32 |
| Control Delay | 80.1 | 67.3 | 54.9 | 44.7 | 23.3 | 38.7 | 19.5 | 20.9 | 42.5 | 23.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 80.1 | 67.3 | 54.9 | 44.7 | 23.3 | 38.7 | 19.5 | 20.9 | 42.5 | 23.3 |
| LOS | F | E | D | D | C | D | B | C | D | C |
| Approach Delay | | 73.2 | | 49.0 | | 32.9 | | | 36.6 | |
| Approach LOS | | E | | D | | C | | | D | |

Intersection Summary

Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 45.2
 Intersection Capacity Utilization 81.5%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service D

Splits and Phases: 1: Park Avenue & Ski Hill Road



HCM 6th Signalized Intersection Summary
 1: Park Avenue & Ski Hill Road

2040 BG Saturday PM.syn
 02/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|-------|-------|------|-------|------|-------|------|-------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↑ | ↗ | ↖ | ↑ | ↗ |
| Traffic Volume (veh/h) | 282 | 159 | 171 | 138 | 110 | 80 | 110 | 599 | 182 | 50 | 594 | 202 |
| Future Volume (veh/h) | 282 | 159 | 171 | 138 | 110 | 80 | 110 | 599 | 182 | 50 | 594 | 202 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.87 | 1.00 | | 0.87 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 303 | 173 | 186 | 150 | 120 | 86 | 120 | 651 | 0 | 54 | 646 | 0 |
| Peak Hour Factor | 0.93 | 0.92 | 0.92 | 0.92 | 0.92 | 0.93 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 308 | 189 | 203 | 171 | 235 | 169 | 361 | 1060 | | 348 | 1031 | |
| Arrive On Green | 0.06 | 0.25 | 0.25 | 0.06 | 0.25 | 0.25 | 0.04 | 0.57 | 0.00 | 0.03 | 0.55 | 0.00 |
| Sat Flow, veh/h | 1781 | 758 | 815 | 1781 | 946 | 678 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 303 | 0 | 359 | 150 | 0 | 206 | 120 | 651 | 0 | 54 | 646 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1574 | 1781 | 0 | 1624 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 10.5 | 0.0 | 39.9 | 10.5 | 0.0 | 19.6 | 5.3 | 41.6 | 0.0 | 2.4 | 42.6 | 0.0 |
| Cycle Q Clear(g_c), s | 10.5 | 0.0 | 39.9 | 10.5 | 0.0 | 19.6 | 5.3 | 41.6 | 0.0 | 2.4 | 42.6 | 0.0 |
| Prop In Lane | 1.00 | | 0.52 | 1.00 | | 0.42 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 308 | 0 | 392 | 171 | 0 | 404 | 361 | 1060 | | 348 | 1031 | |
| V/C Ratio(X) | 0.98 | 0.00 | 0.92 | 0.87 | 0.00 | 0.51 | 0.33 | 0.61 | | 0.16 | 0.63 | |
| Avail Cap(c_a), veh/h | 308 | 0 | 879 | 171 | 0 | 907 | 539 | 1060 | | 554 | 1031 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 0.00 | 1.00 | 0.76 | 0.00 | 0.76 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 66.0 | 0.0 | 65.8 | 54.9 | 0.0 | 58.1 | 21.9 | 25.9 | 0.0 | 21.1 | 27.7 | 0.0 |
| Incr Delay (d2), s/veh | 46.4 | 0.0 | 8.8 | 29.4 | 0.0 | 0.8 | 0.5 | 2.7 | 0.0 | 0.2 | 2.9 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 13.1 | 0.0 | 17.1 | 6.6 | 0.0 | 8.3 | 2.3 | 19.5 | 0.0 | 1.0 | 20.1 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 112.4 | 0.0 | 74.6 | 84.3 | 0.0 | 58.9 | 22.4 | 28.6 | 0.0 | 21.3 | 30.6 | 0.0 |
| LnGrp LOS | F | A | E | F | A | E | C | C | | C | C | |
| Approach Vol, veh/h | | 662 | | | 356 | | | 771 | A | | 700 | A |
| Approach Delay, s/veh | | 91.9 | | | 69.6 | | | 27.6 | | | 29.9 | |
| Approach LOS | | F | | | E | | | C | | | C | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.2 | 106.5 | 15.0 | 49.3 | 12.0 | 103.7 | 15.0 | 49.3 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 25.5 | 25.5 | 10.5 | 100.5 | 25.5 | 25.5 | 10.5 | 100.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.4 | 43.6 | 12.5 | 41.9 | 7.3 | 44.6 | 12.5 | 21.6 | | | | |
| Green Ext Time (p_c), s | 0.1 | 0.0 | 0.0 | 2.9 | 0.3 | 0.0 | 0.0 | 1.5 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 51.4 |
| HCM 6th LOS | D |

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
1: Park Avenue & Ski Hill Road

2040 Total Saturday AM.syn
02/17/2020

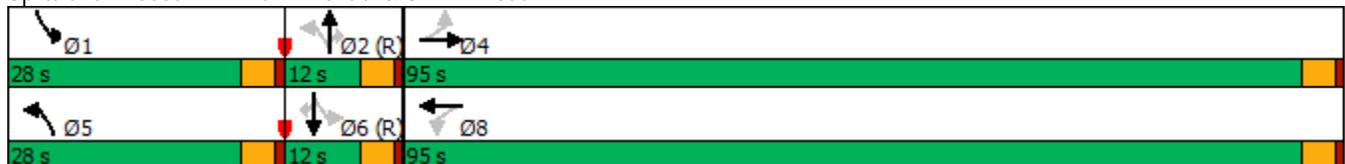


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↗ | ↖ | ↗ | ↗ |
| Traffic Volume (vph) | 225 | 100 | 93 | 160 | 167 | 552 | 79 | 39 | 484 | 294 |
| Future Volume (vph) | 225 | 100 | 93 | 160 | 167 | 552 | 79 | 39 | 484 | 294 |
| Turn Type | Perm | NA | Perm | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | | 4 | | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 |
| Total Split (s) | 95.0 | 95.0 | 95.0 | 95.0 | 28.0 | 12.0 | 12.0 | 28.0 | 12.0 | 12.0 |
| Total Split (%) | 70.4% | 70.4% | 70.4% | 70.4% | 20.7% | 8.9% | 8.9% | 20.7% | 8.9% | 8.9% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | | | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | | | | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effct Green (s) | 39.7 | 39.7 | 39.7 | 39.7 | 86.0 | 76.9 | 76.9 | 77.0 | 70.1 | 70.1 |
| Actuated g/C Ratio | 0.29 | 0.29 | 0.29 | 0.29 | 0.64 | 0.57 | 0.57 | 0.57 | 0.52 | 0.52 |
| v/c Ratio | 0.97 | 0.40 | 0.40 | 0.42 | 0.40 | 0.57 | 0.10 | 0.11 | 0.54 | 0.38 |
| Control Delay | 94.5 | 23.8 | 39.7 | 34.2 | 14.8 | 25.1 | 10.1 | 13.7 | 28.3 | 17.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 94.5 | 23.8 | 39.7 | 34.2 | 14.8 | 25.1 | 10.1 | 13.7 | 28.3 | 17.4 |
| LOS | F | C | D | C | B | C | B | B | C | B |
| Approach Delay | | 61.7 | | 35.9 | | 21.4 | | | 23.7 | |
| Approach LOS | | E | | D | | C | | | C | |

Intersection Summary

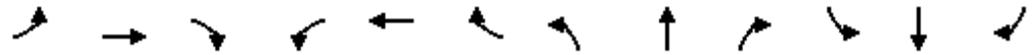
Cycle Length: 135
 Actuated Cycle Length: 135
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.97
 Intersection Signal Delay: 31.3
 Intersection Capacity Utilization 74.8%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 1: Park Avenue & Ski Hill Road



HCM 6th Signalized Intersection Summary
 1: Park Avenue & Ski Hill Road

2040 Total Saturday AM.syn
 02/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 225 | 100 | 95 | 93 | 160 | 47 | 167 | 552 | 79 | 39 | 484 | 294 |
| Future Volume (veh/h) | 225 | 100 | 95 | 93 | 160 | 47 | 167 | 552 | 79 | 39 | 484 | 294 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 0.99 | | 0.96 | 0.99 | | 0.96 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 245 | 109 | 103 | 101 | 174 | 51 | 182 | 600 | 0 | 42 | 526 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 329 | 291 | 275 | 332 | 462 | 135 | 435 | 1000 | | 364 | 932 | |
| Arrive On Green | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.07 | 0.53 | 0.00 | 0.03 | 0.50 | 0.00 |
| Sat Flow, veh/h | 1148 | 867 | 819 | 1161 | 1376 | 403 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 245 | 0 | 212 | 101 | 0 | 225 | 182 | 600 | 0 | 42 | 526 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1148 | 0 | 1686 | 1161 | 0 | 1779 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 27.8 | 0.0 | 12.9 | 9.8 | 0.0 | 13.0 | 6.5 | 29.7 | 0.0 | 1.5 | 26.5 | 0.0 |
| Cycle Q Clear(g_c), s | 40.8 | 0.0 | 12.9 | 22.7 | 0.0 | 13.0 | 6.5 | 29.7 | 0.0 | 1.5 | 26.5 | 0.0 |
| Prop In Lane | 1.00 | | 0.49 | 1.00 | | 0.23 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 329 | 0 | 566 | 332 | 0 | 598 | 435 | 1000 | | 364 | 932 | |
| V/C Ratio(X) | 0.75 | 0.00 | 0.37 | 0.30 | 0.00 | 0.38 | 0.42 | 0.60 | | 0.12 | 0.56 | |
| Avail Cap(c_a), veh/h | 713 | 0 | 1130 | 721 | 0 | 1193 | 628 | 1000 | | 621 | 932 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 0.90 | 0.00 | 0.90 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 49.6 | 0.0 | 34.1 | 42.7 | 0.0 | 34.1 | 17.1 | 21.5 | 0.0 | 17.8 | 23.6 | 0.0 |
| Incr Delay (d2), s/veh | 3.4 | 0.0 | 0.4 | 0.5 | 0.0 | 0.4 | 0.6 | 2.7 | 0.0 | 0.1 | 2.5 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 8.3 | 0.0 | 5.4 | 2.9 | 0.0 | 5.7 | 2.7 | 13.6 | 0.0 | 0.6 | 12.3 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 53.0 | 0.0 | 34.5 | 43.1 | 0.0 | 34.4 | 17.8 | 24.2 | 0.0 | 17.9 | 26.1 | 0.0 |
| LnGrp LOS | D | A | C | D | A | C | B | C | | B | C | |
| Approach Vol, veh/h | | 457 | | | 326 | | | 782 | A | | 568 | A |
| Approach Delay, s/veh | | 44.4 | | | 37.1 | | | 22.7 | | | 25.5 | |
| Approach LOS | | D | | | D | | | C | | | C | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.5 | 76.7 | | 49.8 | 13.4 | 71.8 | | 49.8 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | 23.5 | 7.5 | | 90.5 | 23.5 | 7.5 | | 90.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.5 | 31.7 | | 42.8 | 8.5 | 28.5 | | 24.7 | | | | |
| Green Ext Time (p_c), s | 0.1 | 0.0 | | 2.5 | 0.4 | 0.0 | | 1.9 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 30.3 |
| HCM 6th LOS | C |

Notes

User approved pedestrian interval to be less than phase max green.
 Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
1: Park Avenue & Ski Hill Road

2040 Total Saturday PM.syn

02/17/2020

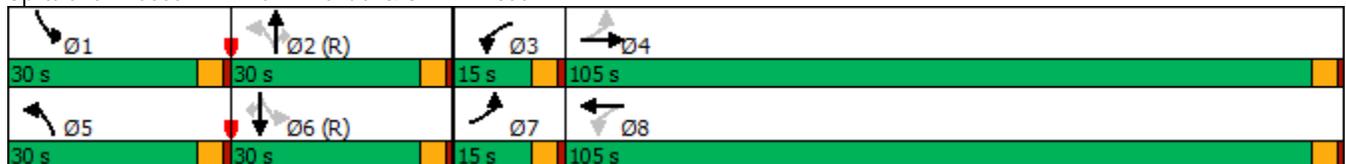


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | |
| Traffic Volume (vph) | 327 | 184 | 138 | 131 | 131 | 599 | 182 | 50 | 594 | 239 |
| Future Volume (vph) | 327 | 184 | 138 | 131 | 131 | 599 | 182 | 50 | 594 | 239 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 |
| Total Split (s) | 15.0 | 105.0 | 15.0 | 105.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 |
| Total Split (%) | 8.3% | 58.3% | 8.3% | 58.3% | 16.7% | 16.7% | 16.7% | 16.7% | 16.7% | 16.7% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 69.9 | 59.4 | 69.9 | 59.4 | 96.4 | 85.8 | 85.8 | 87.2 | 78.9 | 78.9 |
| Actuated g/C Ratio | 0.39 | 0.33 | 0.39 | 0.33 | 0.54 | 0.48 | 0.48 | 0.48 | 0.44 | 0.44 |
| v/c Ratio | 0.94 | 0.83 | 0.59 | 0.40 | 0.58 | 0.73 | 0.28 | 0.23 | 0.79 | 0.43 |
| Control Delay | 78.8 | 62.3 | 42.1 | 40.9 | 33.6 | 46.6 | 23.7 | 26.6 | 53.1 | 32.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 78.8 | 62.3 | 42.1 | 40.9 | 33.6 | 46.6 | 23.7 | 26.6 | 53.1 | 32.1 |
| LOS | E | E | D | D | C | D | C | C | D | C |
| Approach Delay | | 69.9 | | 41.3 | | 40.1 | | | 45.9 | |
| Approach LOS | | E | | D | | D | | | D | |

Intersection Summary

Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 49.4
 Intersection Capacity Utilization 85.6%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service E

Splits and Phases: 1: Park Avenue & Ski Hill Road



HCM 6th Signalized Intersection Summary
 1: Park Avenue & Ski Hill Road

2040 Total Saturday PM.syn
 02/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|-------|-------|------|-------|------|------|------|-------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↑ | ↗ | ↖ | ↑ | ↗ |
| Traffic Volume (veh/h) | 327 | 184 | 196 | 138 | 131 | 80 | 131 | 599 | 182 | 50 | 594 | 239 |
| Future Volume (veh/h) | 327 | 184 | 196 | 138 | 131 | 80 | 131 | 599 | 182 | 50 | 594 | 239 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.88 | 1.00 | | 0.88 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 352 | 200 | 213 | 150 | 142 | 86 | 142 | 651 | 0 | 54 | 646 | 0 |
| Peak Hour Factor | 0.93 | 0.92 | 0.92 | 0.92 | 0.92 | 0.93 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 336 | 217 | 231 | 173 | 291 | 176 | 327 | 999 | | 309 | 954 | |
| Arrive On Green | 0.06 | 0.28 | 0.28 | 0.06 | 0.28 | 0.28 | 0.05 | 0.53 | 0.00 | 0.03 | 0.51 | 0.00 |
| Sat Flow, veh/h | 1781 | 771 | 821 | 1781 | 1033 | 625 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 352 | 0 | 413 | 150 | 0 | 228 | 142 | 651 | 0 | 54 | 646 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1592 | 1781 | 0 | 1658 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 10.5 | 0.0 | 45.3 | 10.5 | 0.0 | 20.6 | 6.7 | 44.8 | 0.0 | 2.6 | 46.5 | 0.0 |
| Cycle Q Clear(g_c), s | 10.5 | 0.0 | 45.3 | 10.5 | 0.0 | 20.6 | 6.7 | 44.8 | 0.0 | 2.6 | 46.5 | 0.0 |
| Prop In Lane | 1.00 | | 0.52 | 1.00 | | 0.38 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 336 | 0 | 448 | 173 | 0 | 467 | 327 | 999 | | 309 | 954 | |
| V/C Ratio(X) | 1.05 | 0.00 | 0.92 | 0.87 | 0.00 | 0.49 | 0.43 | 0.65 | | 0.17 | 0.68 | |
| Avail Cap(c_a), veh/h | 336 | 0 | 889 | 173 | 0 | 926 | 490 | 999 | | 515 | 954 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 0.00 | 1.00 | 0.77 | 0.00 | 0.77 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 64.1 | 0.0 | 62.8 | 50.8 | 0.0 | 53.9 | 26.0 | 29.9 | 0.0 | 24.8 | 33.0 | 0.0 |
| Incr Delay (d2), s/veh | 61.8 | 0.0 | 8.3 | 28.4 | 0.0 | 0.6 | 0.9 | 3.3 | 0.0 | 0.3 | 3.9 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 16.4 | 0.0 | 19.5 | 6.3 | 0.0 | 8.8 | 2.9 | 21.3 | 0.0 | 1.2 | 22.3 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 126.0 | 0.0 | 71.0 | 79.1 | 0.0 | 54.5 | 26.9 | 33.2 | 0.0 | 25.1 | 36.8 | 0.0 |
| LnGrp LOS | F | A | E | E | A | D | C | C | | C | D | |
| Approach Vol, veh/h | | 765 | | | 378 | | | 793 | A | | 700 | A |
| Approach Delay, s/veh | | 96.3 | | | 64.3 | | | 32.1 | | | 35.9 | |
| Approach LOS | | F | | | E | | | C | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.2 | 100.7 | 15.0 | 55.2 | 13.5 | 96.3 | 15.0 | 55.2 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 25.5 | 25.5 | 10.5 | 100.5 | 25.5 | 25.5 | 10.5 | 100.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.6 | 46.8 | 12.5 | 47.3 | 8.7 | 48.5 | 12.5 | 22.6 | | | | |
| Green Ext Time (p_c), s | 0.1 | 0.0 | 0.0 | 3.3 | 0.3 | 0.0 | 0.0 | 1.6 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 56.4 |
| HCM 6th LOS | E |

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
1: Park Avenue & Ski Hill Road

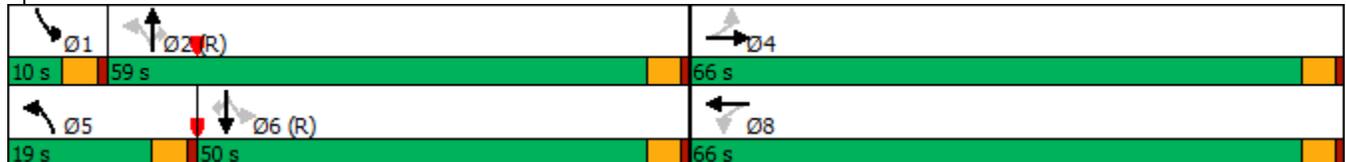


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | |
| Traffic Volume (vph) | 225 | 100 | 93 | 160 | 167 | 552 | 79 | 39 | 484 | 294 |
| Future Volume (vph) | 225 | 100 | 93 | 160 | 167 | 552 | 79 | 39 | 484 | 294 |
| Turn Type | Perm | NA | Perm | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | | 4 | | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 |
| Total Split (s) | 66.0 | 66.0 | 66.0 | 66.0 | 19.0 | 59.0 | 59.0 | 10.0 | 50.0 | 50.0 |
| Total Split (%) | 48.9% | 48.9% | 48.9% | 48.9% | 14.1% | 43.7% | 43.7% | 7.4% | 37.0% | 37.0% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | | | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | | | | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effct Green (s) | 39.3 | 39.3 | 39.3 | 39.3 | 86.5 | 77.4 | 77.4 | 77.2 | 70.4 | 70.4 |
| Actuated g/C Ratio | 0.29 | 0.29 | 0.29 | 0.29 | 0.64 | 0.57 | 0.57 | 0.57 | 0.52 | 0.52 |
| v/c Ratio | 0.98 | 0.42 | 0.40 | 0.43 | 0.39 | 0.56 | 0.10 | 0.10 | 0.54 | 0.37 |
| Control Delay | 98.3 | 30.4 | 40.6 | 36.9 | 14.1 | 24.2 | 9.5 | 13.1 | 27.8 | 13.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 98.3 | 30.4 | 40.6 | 36.9 | 14.1 | 24.2 | 9.5 | 13.1 | 27.8 | 13.8 |
| LOS | F | C | D | D | B | C | A | B | C | B |
| Approach Delay | | 66.8 | | 38.0 | | 20.6 | | | 22.1 | |
| Approach LOS | | E | | D | | C | | | C | |

Intersection Summary

Cycle Length: 135
 Actuated Cycle Length: 135
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 31.7
 Intersection Capacity Utilization 74.8%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 1: Park Avenue & Ski Hill Road



HCM 6th Signalized Intersection Summary
 1: Park Avenue & Ski Hill Road

2040 Total Saturday AM_1 Optimized.syn

02/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↑ | ↗ | ↖ | ↑ | ↗ |
| Traffic Volume (veh/h) | 225 | 100 | 95 | 93 | 160 | 47 | 167 | 552 | 79 | 39 | 484 | 294 |
| Future Volume (veh/h) | 225 | 100 | 95 | 93 | 160 | 47 | 167 | 552 | 79 | 39 | 484 | 294 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 0.99 | | 0.96 | 0.99 | | 0.96 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 245 | 109 | 103 | 101 | 174 | 51 | 182 | 600 | 0 | 42 | 526 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 326 | 290 | 274 | 330 | 460 | 135 | 437 | 1003 | | 366 | 938 | |
| Arrive On Green | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.06 | 0.54 | 0.00 | 0.03 | 0.50 | 0.00 |
| Sat Flow, veh/h | 1148 | 867 | 819 | 1161 | 1376 | 403 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 245 | 0 | 212 | 101 | 0 | 225 | 182 | 600 | 0 | 42 | 526 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1148 | 0 | 1685 | 1161 | 0 | 1779 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 27.9 | 0.0 | 12.9 | 9.8 | 0.0 | 13.0 | 6.4 | 29.6 | 0.0 | 1.5 | 26.3 | 0.0 |
| Cycle Q Clear(g_c), s | 40.9 | 0.0 | 12.9 | 22.7 | 0.0 | 13.0 | 6.4 | 29.6 | 0.0 | 1.5 | 26.3 | 0.0 |
| Prop In Lane | 1.00 | | 0.49 | 1.00 | | 0.23 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 326 | 0 | 563 | 330 | 0 | 595 | 437 | 1003 | | 366 | 938 | |
| V/C Ratio(X) | 0.75 | 0.00 | 0.38 | 0.31 | 0.00 | 0.38 | 0.42 | 0.60 | | 0.11 | 0.56 | |
| Avail Cap(c_a), veh/h | 466 | 0 | 768 | 471 | 0 | 811 | 513 | 1003 | | 386 | 938 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 0.90 | 0.00 | 0.90 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 49.9 | 0.0 | 34.2 | 42.9 | 0.0 | 34.3 | 17.0 | 21.4 | 0.0 | 17.6 | 23.3 | 0.0 |
| Incr Delay (d2), s/veh | 4.1 | 0.0 | 0.4 | 0.5 | 0.0 | 0.4 | 0.6 | 2.6 | 0.0 | 0.1 | 2.4 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 8.4 | 0.0 | 5.4 | 2.9 | 0.0 | 5.7 | 2.7 | 13.5 | 0.0 | 0.6 | 12.2 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 54.0 | 0.0 | 34.6 | 43.3 | 0.0 | 34.6 | 17.6 | 24.0 | 0.0 | 17.8 | 25.8 | 0.0 |
| LnGrp LOS | D | A | C | D | A | C | B | C | | B | C | |
| Approach Vol, veh/h | | 457 | | | 326 | | | 782 | A | | 568 | A |
| Approach Delay, s/veh | | 45.0 | | | 37.3 | | | 22.5 | | | 25.2 | |
| Approach LOS | | D | | | D | | | C | | | C | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.5 | 76.9 | | 49.6 | 13.2 | 72.2 | | 49.6 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 54.5 | | 61.5 | 14.5 | 45.5 | | 61.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.5 | 31.6 | | 42.9 | 8.4 | 28.3 | | 24.7 | | | | |
| Green Ext Time (p_c), s | 0.0 | 4.2 | | 2.2 | 0.2 | 3.2 | | 1.9 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 30.3 |
| HCM 6th LOS | C |

Notes

User approved pedestrian interval to be less than phase max green.
 Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
1: Park Avenue & Ski Hill Road

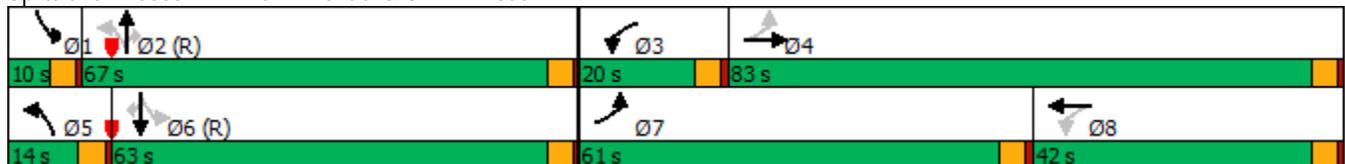


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | |
| Traffic Volume (vph) | 327 | 184 | 138 | 131 | 131 | 599 | 182 | 50 | 594 | 239 |
| Future Volume (vph) | 327 | 184 | 138 | 131 | 131 | 599 | 182 | 50 | 594 | 239 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 |
| Total Split (s) | 61.0 | 83.0 | 20.0 | 42.0 | 14.0 | 67.0 | 67.0 | 10.0 | 63.0 | 63.0 |
| Total Split (%) | 33.9% | 46.1% | 11.1% | 23.3% | 7.8% | 37.2% | 37.2% | 5.6% | 35.0% | 35.0% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 76.1 | 57.0 | 55.4 | 40.8 | 94.8 | 84.1 | 84.1 | 80.8 | 72.4 | 72.4 |
| Actuated g/C Ratio | 0.42 | 0.32 | 0.31 | 0.23 | 0.53 | 0.47 | 0.47 | 0.45 | 0.40 | 0.40 |
| v/c Ratio | 0.76 | 0.88 | 0.60 | 0.59 | 0.57 | 0.75 | 0.28 | 0.24 | 0.86 | 0.45 |
| Control Delay | 47.3 | 71.2 | 43.0 | 62.9 | 36.8 | 48.4 | 19.8 | 27.6 | 62.5 | 29.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 47.3 | 71.2 | 43.0 | 62.9 | 36.8 | 48.4 | 19.8 | 27.6 | 62.5 | 29.9 |
| LOS | D | E | D | E | D | D | B | C | E | C |
| Approach Delay | | 60.2 | | 55.0 | | 41.0 | | | 51.7 | |
| Approach LOS | | E | | E | | D | | | D | |

Intersection Summary

Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 50.8
 Intersection Capacity Utilization 85.6%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service E

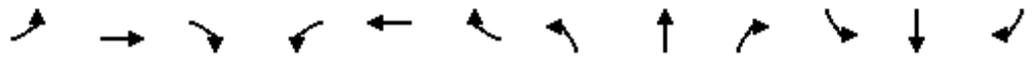
Splits and Phases: 1: Park Avenue & Ski Hill Road



HCM 6th Signalized Intersection Summary
 1: Park Avenue & Ski Hill Road

2040 Total Saturday PM_1 Optimized.syn

02/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 327 | 184 | 196 | 138 | 131 | 80 | 131 | 599 | 182 | 50 | 594 | 239 |
| Future Volume (veh/h) | 327 | 184 | 196 | 138 | 131 | 80 | 131 | 599 | 182 | 50 | 594 | 239 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.88 | 1.00 | | 0.82 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 352 | 200 | 213 | 150 | 142 | 86 | 142 | 651 | 0 | 54 | 646 | 0 |
| Peak Hour Factor | 0.93 | 0.92 | 0.92 | 0.92 | 0.92 | 0.93 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 408 | 216 | 230 | 208 | 187 | 114 | 303 | 962 | | 286 | 917 | |
| Arrive On Green | 0.17 | 0.28 | 0.28 | 0.08 | 0.19 | 0.19 | 0.05 | 0.51 | 0.00 | 0.03 | 0.49 | 0.00 |
| Sat Flow, veh/h | 1781 | 771 | 821 | 1781 | 1000 | 606 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 352 | 0 | 413 | 150 | 0 | 228 | 142 | 651 | 0 | 54 | 646 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1591 | 1781 | 0 | 1606 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 27.9 | 0.0 | 45.4 | 12.1 | 0.0 | 24.2 | 7.0 | 46.7 | 0.0 | 2.7 | 48.4 | 0.0 |
| Cycle Q Clear(g_c), s | 27.9 | 0.0 | 45.4 | 12.1 | 0.0 | 24.2 | 7.0 | 46.7 | 0.0 | 2.7 | 48.4 | 0.0 |
| Prop In Lane | 1.00 | | 0.52 | 1.00 | | 0.38 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 408 | 0 | 447 | 208 | 0 | 301 | 303 | 962 | | 286 | 917 | |
| V/C Ratio(X) | 0.86 | 0.00 | 0.92 | 0.72 | 0.00 | 0.76 | 0.47 | 0.68 | | 0.19 | 0.70 | |
| Avail Cap(c_a), veh/h | 660 | 0 | 694 | 221 | 0 | 335 | 308 | 962 | | 294 | 917 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 0.00 | 1.00 | 0.87 | 0.00 | 0.87 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 47.1 | 0.0 | 62.9 | 55.6 | 0.0 | 69.3 | 28.3 | 32.5 | 0.0 | 27.1 | 35.7 | 0.0 |
| Incr Delay (d2), s/veh | 6.7 | 0.0 | 13.0 | 8.9 | 0.0 | 7.6 | 1.1 | 3.8 | 0.0 | 0.3 | 4.5 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 13.3 | 0.0 | 20.1 | 6.0 | 0.0 | 10.7 | 3.1 | 22.4 | 0.0 | 1.2 | 23.5 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 53.9 | 0.0 | 75.9 | 64.5 | 0.0 | 76.9 | 29.4 | 36.3 | 0.0 | 27.4 | 40.2 | 0.0 |
| LnGrp LOS | D | A | E | E | A | E | C | D | | C | D | |
| Approach Vol, veh/h | | 765 | | | 378 | | | 793 | A | | 700 | A |
| Approach Delay, s/veh | | 65.8 | | | 72.0 | | | 35.1 | | | 39.2 | |
| Approach LOS | | E | | | E | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.2 | 97.1 | 18.7 | 55.0 | 13.5 | 92.8 | 35.5 | 38.2 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 62.5 | 15.5 | 78.5 | 9.5 | 58.5 | 56.5 | 37.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.7 | 48.7 | 14.1 | 47.4 | 9.0 | 50.4 | 29.9 | 26.2 | | | | |
| Green Ext Time (p_c), s | 0.0 | 3.8 | 0.0 | 3.2 | 0.0 | 2.7 | 1.1 | 1.0 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 50.4 |
| HCM 6th LOS | D |

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
1: Park Avenue & Ski Hill Road

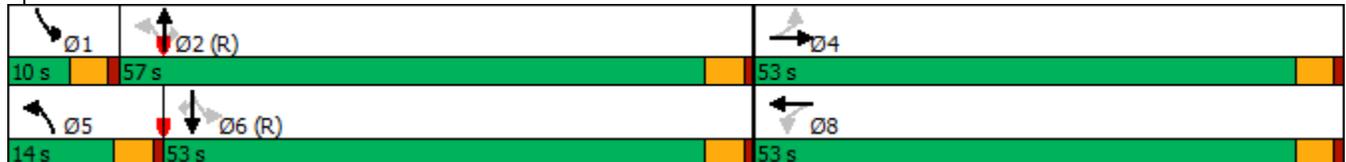


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↗ | ↖ | ↗ | ↗ |
| Traffic Volume (vph) | 225 | 100 | 93 | 160 | 167 | 552 | 79 | 39 | 484 | 294 |
| Future Volume (vph) | 225 | 100 | 93 | 160 | 167 | 552 | 79 | 39 | 484 | 294 |
| Turn Type | Perm | NA | Perm | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | | 4 | | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 4 | 4 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 |
| Total Split (s) | 53.0 | 53.0 | 53.0 | 53.0 | 14.0 | 57.0 | 57.0 | 10.0 | 53.0 | 53.0 |
| Total Split (%) | 44.2% | 44.2% | 44.2% | 44.2% | 11.7% | 47.5% | 47.5% | 8.3% | 44.2% | 44.2% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | | | | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | | | | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effct Green (s) | 35.1 | 35.1 | 35.1 | 35.1 | 75.4 | 67.2 | 67.2 | 67.9 | 61.6 | 61.6 |
| Actuated g/C Ratio | 0.29 | 0.29 | 0.29 | 0.29 | 0.63 | 0.56 | 0.56 | 0.57 | 0.51 | 0.51 |
| v/c Ratio | 0.95 | 0.41 | 0.39 | 0.42 | 0.41 | 0.58 | 0.10 | 0.11 | 0.55 | 0.37 |
| Control Delay | 85.9 | 26.6 | 35.5 | 32.2 | 13.8 | 23.1 | 8.0 | 12.1 | 25.2 | 10.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 85.9 | 26.6 | 35.5 | 32.2 | 13.8 | 23.1 | 8.0 | 12.1 | 25.2 | 10.1 |
| LOS | F | C | D | C | B | C | A | B | C | B |
| Approach Delay | | 58.4 | | 33.2 | | 19.7 | | | 19.2 | |
| Approach LOS | | E | | C | | B | | | B | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 28.2
 Intersection Capacity Utilization 74.8%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

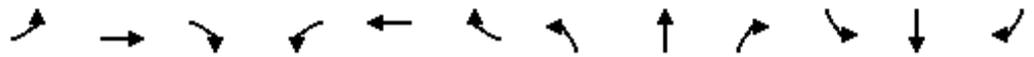
Splits and Phases: 1: Park Avenue & Ski Hill Road



HCM 6th Signalized Intersection Summary
 1: Park Avenue & Ski Hill Road

2040 Total Saturday AM_Cycle & Optimized.syn

02/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 225 | 100 | 95 | 93 | 160 | 47 | 167 | 552 | 79 | 39 | 484 | 294 |
| Future Volume (veh/h) | 225 | 100 | 95 | 93 | 160 | 47 | 167 | 552 | 79 | 39 | 484 | 294 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 0.98 | | 0.96 | 0.99 | | 0.96 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 245 | 109 | 103 | 101 | 174 | 51 | 182 | 600 | 0 | 42 | 526 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 334 | 265 | 251 | 300 | 422 | 124 | 461 | 1027 | | 391 | 967 | |
| Arrive On Green | 0.31 | 0.31 | 0.31 | 0.61 | 0.61 | 0.61 | 0.06 | 0.55 | 0.00 | 0.03 | 0.52 | 0.00 |
| Sat Flow, veh/h | 1136 | 865 | 817 | 1158 | 1375 | 403 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 245 | 0 | 212 | 101 | 0 | 225 | 182 | 600 | 0 | 42 | 526 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1136 | 0 | 1682 | 1158 | 0 | 1778 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 25.0 | 0.0 | 12.0 | 7.4 | 0.0 | 7.9 | 5.6 | 25.6 | 0.0 | 1.3 | 22.7 | 0.0 |
| Cycle Q Clear(g_c), s | 32.9 | 0.0 | 12.0 | 19.4 | 0.0 | 7.9 | 5.6 | 25.6 | 0.0 | 1.3 | 22.7 | 0.0 |
| Prop In Lane | 1.00 | | 0.49 | 1.00 | | 0.23 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 334 | 0 | 516 | 300 | 0 | 546 | 461 | 1027 | | 391 | 967 | |
| V/C Ratio(X) | 0.73 | 0.00 | 0.41 | 0.34 | 0.00 | 0.41 | 0.39 | 0.58 | | 0.11 | 0.54 | |
| Avail Cap(c_a), veh/h | 445 | 0 | 680 | 412 | 0 | 718 | 488 | 1027 | | 417 | 967 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 0.00 | 1.00 | 0.90 | 0.00 | 0.90 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 44.0 | 0.0 | 33.0 | 24.1 | 0.0 | 17.6 | 14.2 | 18.0 | 0.0 | 14.6 | 19.5 | 0.0 |
| Incr Delay (d2), s/veh | 4.2 | 0.0 | 0.5 | 0.6 | 0.0 | 0.4 | 0.5 | 2.4 | 0.0 | 0.1 | 2.2 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 7.4 | 0.0 | 5.0 | 1.7 | 0.0 | 2.8 | 2.2 | 11.4 | 0.0 | 0.5 | 10.3 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 48.2 | 0.0 | 33.5 | 24.7 | 0.0 | 18.0 | 14.7 | 20.4 | 0.0 | 14.7 | 21.7 | 0.0 |
| LnGrp LOS | D | A | C | C | A | B | B | C | | B | C | |
| Approach Vol, veh/h | | 457 | | | 326 | | | 782 | A | | 568 | A |
| Approach Delay, s/veh | | 41.4 | | | 20.1 | | | 19.1 | | | 21.2 | |
| Approach LOS | | D | | | C | | | B | | | C | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.3 | 70.4 | | 41.3 | 12.1 | 66.5 | | 41.3 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 52.5 | | 48.5 | 9.5 | 48.5 | | 48.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.3 | 27.6 | | 34.9 | 7.6 | 24.7 | | 21.4 | | | | |
| Green Ext Time (p_c), s | 0.0 | 4.3 | | 2.0 | 0.1 | 3.6 | | 1.8 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 24.6 |
| HCM 6th LOS | C |

Notes

User approved pedestrian interval to be less than phase max green.
 Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
1: Park Avenue & Ski Hill Road



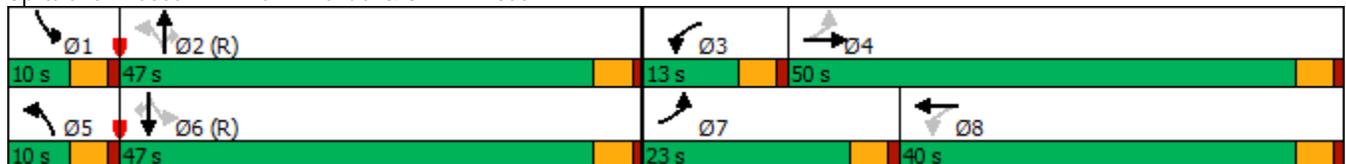
| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↗ | ↖ | ↗ | ↗ |
| Traffic Volume (vph) | 327 | 184 | 138 | 131 | 131 | 599 | 182 | 50 | 594 | 239 |
| Future Volume (vph) | 327 | 184 | 138 | 131 | 131 | 599 | 182 | 50 | 594 | 239 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 |
| Total Split (s) | 23.0 | 50.0 | 13.0 | 40.0 | 10.0 | 47.0 | 47.0 | 10.0 | 47.0 | 47.0 |
| Total Split (%) | 19.2% | 41.7% | 10.8% | 33.3% | 8.3% | 39.2% | 39.2% | 8.3% | 39.2% | 39.2% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 48.3 | 35.3 | 34.1 | 25.6 | 61.3 | 53.6 | 53.6 | 53.9 | 47.3 | 47.3 |
| Actuated g/C Ratio | 0.40 | 0.29 | 0.28 | 0.21 | 0.51 | 0.45 | 0.45 | 0.45 | 0.39 | 0.39 |
| v/c Ratio | 0.84 | 0.86 | 0.65 | 0.60 | 0.62 | 0.78 | 0.27 | 0.25 | 0.88 | 0.41 |
| Control Delay | 44.4 | 52.1 | 35.0 | 40.9 | 34.7 | 39.1 | 9.9 | 20.0 | 50.1 | 15.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 44.4 | 52.1 | 35.0 | 40.9 | 34.7 | 39.1 | 9.9 | 20.0 | 50.1 | 15.4 |
| LOS | D | D | D | D | C | D | A | B | D | B |
| Approach Delay | | 48.6 | | 38.5 | | 32.7 | | | 39.0 | |
| Approach LOS | | D | | D | | C | | | D | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 39.3
 Intersection Capacity Utilization 85.6%
 Analysis Period (min) 15

Intersection LOS: D
 ICU Level of Service E

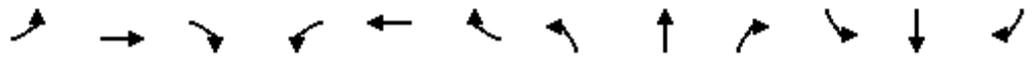
Splits and Phases: 1: Park Avenue & Ski Hill Road



HCM 6th Signalized Intersection Summary
1: Park Avenue & Ski Hill Road

2040 Total Saturday PM_Cycle & Optimized.syn

02/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↑ | ↗ | ↖ | ↑ | ↗ |
| Traffic Volume (veh/h) | 327 | 184 | 196 | 138 | 131 | 80 | 131 | 599 | 182 | 50 | 594 | 239 |
| Future Volume (veh/h) | 327 | 184 | 196 | 138 | 131 | 80 | 131 | 599 | 182 | 50 | 594 | 239 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 0.99 | | 0.88 | 1.00 | | 0.83 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 352 | 200 | 213 | 150 | 142 | 86 | 142 | 651 | 0 | 54 | 646 | 0 |
| Peak Hour Factor | 0.93 | 0.92 | 0.92 | 0.92 | 0.92 | 0.93 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 427 | 221 | 235 | 222 | 204 | 124 | 264 | 857 | | 254 | 837 | |
| Arrive On Green | 0.15 | 0.29 | 0.29 | 0.12 | 0.34 | 0.34 | 0.05 | 0.46 | 0.00 | 0.03 | 0.45 | 0.00 |
| Sat Flow, veh/h | 1781 | 772 | 822 | 1781 | 1008 | 610 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 352 | 0 | 413 | 150 | 0 | 228 | 142 | 651 | 0 | 54 | 646 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1594 | 1781 | 0 | 1618 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 18.5 | 0.0 | 30.0 | 8.1 | 0.0 | 14.6 | 5.3 | 34.7 | 0.0 | 1.9 | 35.0 | 0.0 |
| Cycle Q Clear(g_c), s | 18.5 | 0.0 | 30.0 | 8.1 | 0.0 | 14.6 | 5.3 | 34.7 | 0.0 | 1.9 | 35.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.52 | 1.00 | | 0.38 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 427 | 0 | 456 | 222 | 0 | 328 | 264 | 857 | | 254 | 837 | |
| V/C Ratio(X) | 0.82 | 0.00 | 0.91 | 0.68 | 0.00 | 0.70 | 0.54 | 0.76 | | 0.21 | 0.77 | |
| Avail Cap(c_a), veh/h | 427 | 0 | 604 | 222 | 0 | 479 | 264 | 857 | | 274 | 837 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.67 | 1.67 | 1.67 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 0.87 | 0.00 | 0.87 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 31.0 | 0.0 | 41.3 | 34.7 | 0.0 | 36.5 | 23.0 | 27.0 | 0.0 | 21.6 | 28.0 | 0.0 |
| Incr Delay (d2), s/veh | 12.5 | 0.0 | 14.3 | 7.0 | 0.0 | 2.3 | 2.2 | 6.3 | 0.0 | 0.4 | 6.8 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 9.3 | 0.0 | 13.5 | 3.7 | 0.0 | 5.3 | 2.3 | 16.7 | 0.0 | 0.8 | 16.9 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 43.5 | 0.0 | 55.6 | 41.7 | 0.0 | 38.8 | 25.2 | 33.3 | 0.0 | 22.0 | 34.8 | 0.0 |
| LnGrp LOS | D | A | E | D | A | D | C | C | | C | C | |
| Approach Vol, veh/h | | 765 | | | 378 | | | 793 | A | | 700 | A |
| Approach Delay, s/veh | | 50.0 | | | 39.9 | | | 31.8 | | | 33.9 | |
| Approach LOS | | D | | | D | | | C | | | C | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.7 | 59.5 | 13.0 | 38.8 | 10.0 | 58.2 | 23.0 | 28.8 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 42.5 | 8.5 | 45.5 | 5.5 | 42.5 | 18.5 | 35.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.9 | 36.7 | 10.1 | 32.0 | 7.3 | 37.0 | 20.5 | 16.6 | | | | |
| Green Ext Time (p_c), s | 0.0 | 2.2 | 0.0 | 2.4 | 0.0 | 2.1 | 0.0 | 1.3 | | | | |

Intersection Summary

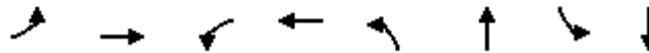
| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 38.8 |
| HCM 6th LOS | D |

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings

2: Main Street & Ski Hill Road

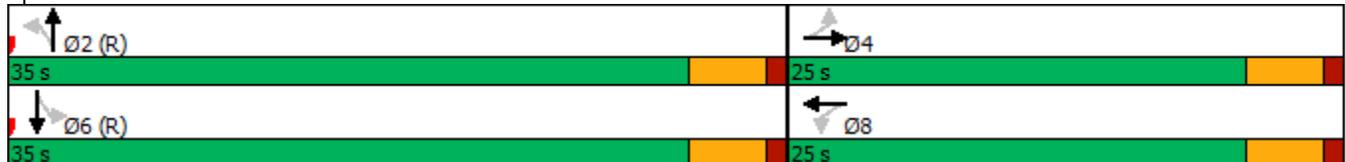


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ |
| Traffic Volume (vph) | 50 | 63 | 16 | 106 | 66 | 255 | 30 | 207 |
| Future Volume (vph) | 50 | 63 | 16 | 106 | 66 | 255 | 30 | 207 |
| Turn Type | Perm | NA | Perm | NA | Perm | NA | Perm | NA |
| Protected Phases | | 4 | | 8 | | 2 | | 6 |
| Permitted Phases | 4 | | 8 | | 2 | | 6 | |
| Detector Phase | 4 | 4 | 8 | 8 | 2 | 2 | 6 | 6 |
| Switch Phase | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 25.0 | 25.0 | 25.0 | 25.0 | 35.0 | 35.0 | 35.0 | 35.0 |
| Total Split (%) | 41.7% | 41.7% | 41.7% | 41.7% | 58.3% | 58.3% | 58.3% | 58.3% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | |
| Recall Mode | None | None | None | None | C-Max | C-Max | C-Max | C-Max |
| Act Effect Green (s) | 15.2 | 15.2 | 15.2 | 15.2 | 35.8 | 35.8 | 35.8 | 35.8 |
| Actuated g/C Ratio | 0.25 | 0.25 | 0.25 | 0.25 | 0.60 | 0.60 | 0.60 | 0.60 |
| v/c Ratio | 0.34 | 0.71 | 0.13 | 0.50 | 0.21 | 0.28 | 0.12 | 0.44 |
| Control Delay | 20.7 | 24.6 | 17.0 | 16.9 | 8.7 | 7.6 | 7.5 | 8.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 20.7 | 24.6 | 17.0 | 16.9 | 8.7 | 7.6 | 7.5 | 8.8 |
| LOS | C | C | B | B | A | A | A | A |
| Approach Delay | | 23.8 | | 16.9 | | 7.8 | | 8.6 |
| Approach LOS | | C | | B | | A | | A |

Intersection Summary

| | |
|---|------------------------|
| Cycle Length: 60 | |
| Actuated Cycle Length: 60 | |
| Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green | |
| Natural Cycle: 45 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.71 | |
| Intersection Signal Delay: 13.7 | Intersection LOS: B |
| Intersection Capacity Utilization 52.8% | ICU Level of Service A |
| Analysis Period (min) 15 | |

Splits and Phases: 2: Main Street & Ski Hill Road



HCM 6th Signalized Intersection Summary
2: Main Street & Ski Hill Road

2020 Existing Saturday AM.syn
02/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↗ | |
| Traffic Volume (veh/h) | 50 | 63 | 62 | 16 | 106 | 38 | 66 | 255 | 12 | 30 | 207 | 67 |
| Future Volume (veh/h) | 50 | 63 | 62 | 16 | 106 | 38 | 66 | 255 | 12 | 30 | 207 | 67 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 0.97 | | 0.94 | 0.97 | | 0.94 | 0.97 | | 0.90 | 0.95 | | 0.90 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 79 | 203 | 135 | 21 | 145 | 95 | 96 | 283 | 24 | 75 | 357 | 99 |
| Peak Hour Factor | 0.63 | 0.31 | 0.46 | 0.76 | 0.73 | 0.40 | 0.69 | 0.90 | 0.50 | 0.40 | 0.58 | 0.68 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 285 | 275 | 183 | 210 | 277 | 181 | 513 | 976 | 83 | 625 | 795 | 220 |
| Arrive On Green | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 |
| Sat Flow, veh/h | 1101 | 1019 | 678 | 1016 | 1026 | 672 | 909 | 1682 | 143 | 1020 | 1370 | 380 |
| Grp Volume(v), veh/h | 79 | 0 | 338 | 21 | 0 | 240 | 96 | 0 | 307 | 75 | 0 | 456 |
| Grp Sat Flow(s),veh/h/ln | 1101 | 0 | 1696 | 1016 | 0 | 1698 | 909 | 0 | 1825 | 1020 | 0 | 1750 |
| Q Serve(g_s), s | 3.9 | 0.0 | 10.9 | 1.2 | 0.0 | 7.2 | 4.0 | 0.0 | 5.1 | 2.4 | 0.0 | 8.9 |
| Cycle Q Clear(g_c), s | 11.2 | 0.0 | 10.9 | 12.1 | 0.0 | 7.2 | 12.9 | 0.0 | 5.1 | 7.5 | 0.0 | 8.9 |
| Prop In Lane | 1.00 | | 0.40 | 1.00 | | 0.40 | 1.00 | | 0.08 | 1.00 | | 0.22 |
| Lane Grp Cap(c), veh/h | 285 | 0 | 458 | 210 | 0 | 458 | 513 | 0 | 1059 | 625 | 0 | 1015 |
| V/C Ratio(X) | 0.28 | 0.00 | 0.74 | 0.10 | 0.00 | 0.52 | 0.19 | 0.00 | 0.29 | 0.12 | 0.00 | 0.45 |
| Avail Cap(c_a), veh/h | 364 | 0 | 580 | 283 | 0 | 580 | 513 | 0 | 1059 | 625 | 0 | 1015 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.96 | 0.00 | 0.96 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 23.4 | 0.0 | 20.0 | 25.5 | 0.0 | 18.6 | 10.8 | 0.0 | 6.4 | 8.2 | 0.0 | 7.2 |
| Incr Delay (d2), s/veh | 0.5 | 0.0 | 3.6 | 0.2 | 0.0 | 0.9 | 0.8 | 0.0 | 0.7 | 0.4 | 0.0 | 1.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.0 | 0.0 | 4.4 | 0.3 | 0.0 | 2.7 | 0.8 | 0.0 | 1.7 | 0.5 | 0.0 | 2.9 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 23.9 | 0.0 | 23.6 | 25.7 | 0.0 | 19.6 | 11.6 | 0.0 | 7.0 | 8.6 | 0.0 | 8.6 |
| LnGrp LOS | C | A | C | C | A | B | B | A | A | A | A | A |
| Approach Vol, veh/h | | 417 | | | 261 | | | 403 | | | 531 | |
| Approach Delay, s/veh | | 23.6 | | | 20.1 | | | 8.1 | | | 8.6 | |
| Approach LOS | | C | | | C | | | A | | | A | |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 39.3 | | 20.7 | | 39.3 | | 20.7 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 30.5 | | 20.5 | | 30.5 | | 20.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 14.9 | | 13.2 | | 10.9 | | 14.1 | | | | |
| Green Ext Time (p_c), s | | 2.1 | | 1.4 | | 3.3 | | 0.8 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 14.2 |
| HCM 6th LOS | B |

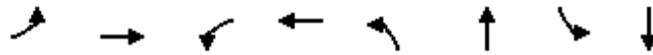
Notes

User approved pedestrian interval to be less than phase max green.

Timings
2: Main Street & Ski Hill Road

2020 Existing Saturday PM.syn

02/06/2020

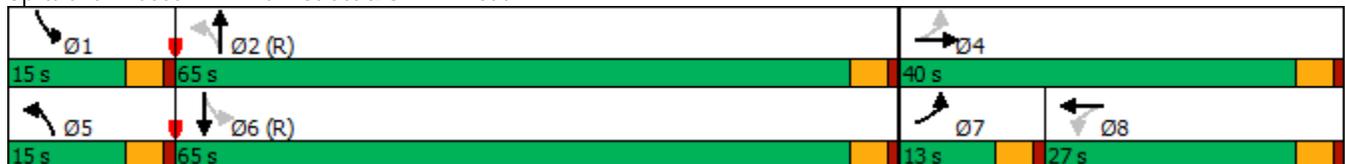


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ |
| Traffic Volume (vph) | 81 | 138 | 33 | 86 | 53 | 180 | 51 | 271 |
| Future Volume (vph) | 81 | 138 | 33 | 86 | 53 | 180 | 51 | 271 |
| Turn Type | pm+pt | NA | Perm | NA | pm+pt | NA | pm+pt | NA |
| Protected Phases | 7 | 4 | | 8 | 5 | 2 | 1 | 6 |
| Permitted Phases | 4 | | 8 | | 2 | | 6 | |
| Detector Phase | 7 | 4 | 8 | 8 | 5 | 2 | 1 | 6 |
| Switch Phase | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 22.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 |
| Total Split (s) | 13.0 | 40.0 | 27.0 | 27.0 | 15.0 | 65.0 | 15.0 | 65.0 |
| Total Split (%) | 10.8% | 33.3% | 22.5% | 22.5% | 12.5% | 54.2% | 12.5% | 54.2% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | | Lag | Lag | Lead | Lag | Lead | Lag |
| Lead-Lag Optimize? | Yes | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | None | C-Max |
| Act Effect Green (s) | 30.3 | 30.3 | 17.5 | 17.5 | 77.3 | 71.2 | 77.0 | 71.0 |
| Actuated g/C Ratio | 0.25 | 0.25 | 0.15 | 0.15 | 0.64 | 0.59 | 0.64 | 0.59 |
| v/c Ratio | 0.55 | 0.86 | 0.52 | 0.78 | 0.16 | 0.30 | 0.15 | 0.51 |
| Control Delay | 45.0 | 62.2 | 66.9 | 64.2 | 8.8 | 14.2 | 8.7 | 18.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 45.0 | 62.2 | 66.9 | 64.2 | 8.8 | 14.2 | 8.7 | 18.3 |
| LOS | D | E | E | E | A | B | A | B |
| Approach Delay | | 57.6 | | 64.8 | | 13.1 | | 17.0 |
| Approach LOS | | E | | E | | B | | B |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 34.3
 Intersection LOS: C
 Intersection Capacity Utilization 62.3%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 2: Main Street & Ski Hill Road



HCM 6th Signalized Intersection Summary
 2: Main Street & Ski Hill Road

2020 Existing Saturday PM.syn

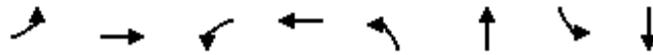
02/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↗ | |
| Traffic Volume (veh/h) | 81 | 138 | 105 | 33 | 86 | 52 | 53 | 180 | 46 | 51 | 271 | 76 |
| Future Volume (veh/h) | 81 | 138 | 105 | 33 | 86 | 52 | 53 | 180 | 46 | 51 | 271 | 76 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.63 | 0.78 | | 0.41 | 1.00 | | 0.77 | 0.94 | | 0.77 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 108 | 177 | 119 | 44 | 91 | 68 | 72 | 212 | 56 | 64 | 308 | 109 |
| Peak Hour Factor | 0.75 | 0.78 | 0.88 | 0.75 | 0.94 | 0.77 | 0.74 | 0.85 | 0.82 | 0.80 | 0.88 | 0.70 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 197 | 224 | 151 | 121 | 101 | 75 | 548 | 773 | 204 | 646 | 703 | 249 |
| Arrive On Green | 0.06 | 0.27 | 0.27 | 0.17 | 0.17 | 0.17 | 0.04 | 0.58 | 0.58 | 0.04 | 0.58 | 0.58 |
| Sat Flow, veh/h | 1781 | 827 | 556 | 848 | 593 | 443 | 1781 | 1333 | 352 | 1781 | 1214 | 430 |
| Grp Volume(v), veh/h | 108 | 0 | 296 | 44 | 0 | 159 | 72 | 0 | 268 | 64 | 0 | 417 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1384 | 848 | 0 | 1036 | 1781 | 0 | 1685 | 1781 | 0 | 1644 |
| Q Serve(g_s), s | 5.8 | 0.0 | 23.8 | 6.1 | 0.0 | 18.1 | 1.9 | 0.0 | 9.5 | 1.7 | 0.0 | 17.2 |
| Cycle Q Clear(g_c), s | 5.8 | 0.0 | 23.8 | 17.8 | 0.0 | 18.1 | 1.9 | 0.0 | 9.5 | 1.7 | 0.0 | 17.2 |
| Prop In Lane | 1.00 | | 0.40 | 1.00 | | 0.43 | 1.00 | | 0.21 | 1.00 | | 0.26 |
| Lane Grp Cap(c), veh/h | 197 | 0 | 375 | 121 | 0 | 176 | 548 | 0 | 977 | 646 | 0 | 951 |
| V/C Ratio(X) | 0.55 | 0.00 | 0.79 | 0.36 | 0.00 | 0.90 | 0.13 | 0.00 | 0.27 | 0.10 | 0.00 | 0.44 |
| Avail Cap(c_a), veh/h | 210 | 0 | 409 | 136 | 0 | 194 | 636 | 0 | 977 | 736 | 0 | 951 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.82 | 0.00 | 0.82 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 37.8 | 0.0 | 40.6 | 54.5 | 0.0 | 48.8 | 10.5 | 0.0 | 12.6 | 9.6 | 0.0 | 14.3 |
| Incr Delay (d2), s/veh | 2.2 | 0.0 | 7.7 | 1.8 | 0.0 | 37.0 | 0.1 | 0.0 | 0.7 | 0.1 | 0.0 | 1.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.7 | 0.0 | 8.9 | 1.4 | 0.0 | 6.5 | 0.8 | 0.0 | 3.7 | 0.7 | 0.0 | 6.6 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 39.9 | 0.0 | 48.3 | 56.3 | 0.0 | 85.9 | 10.6 | 0.0 | 13.3 | 9.7 | 0.0 | 15.7 |
| LnGrp LOS | D | A | D | E | A | F | B | A | B | A | A | B |
| Approach Vol, veh/h | | 404 | | | 203 | | | 340 | | | 481 | |
| Approach Delay, s/veh | | 46.1 | | | 79.4 | | | 12.7 | | | 14.9 | |
| Approach LOS | | D | | | E | | | B | | | B | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.9 | 74.1 | | 37.0 | 9.0 | 74.0 | 12.1 | 24.9 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 10.5 | 60.5 | | 35.5 | 10.5 | 60.5 | 8.5 | 22.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.7 | 11.5 | | 25.8 | 3.9 | 19.2 | 7.8 | 20.1 | | | | |
| Green Ext Time (p_c), s | 0.1 | 1.9 | | 1.4 | 0.1 | 3.2 | 0.0 | 0.3 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 32.4 | | | | | | | | |
| HCM 6th LOS | | | | C | | | | | | | | |

Timings

2: Main Street & Ski Hill Road

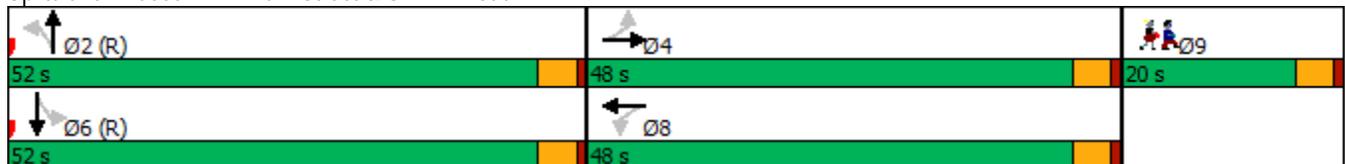


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | Ø9 |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | |
| Traffic Volume (vph) | 50 | 63 | 16 | 106 | 66 | 255 | 30 | 207 | |
| Future Volume (vph) | 50 | 63 | 16 | 106 | 66 | 255 | 30 | 207 | |
| Turn Type | Perm | NA | Perm | NA | Perm | NA | Perm | NA | |
| Protected Phases | | 4 | | 8 | | 2 | | 6 | 9 |
| Permitted Phases | 4 | | 8 | | 2 | | 6 | | |
| Detector Phase | 4 | 4 | 8 | 8 | 2 | 2 | 6 | 6 | |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 9.5 |
| Total Split (s) | 48.0 | 48.0 | 48.0 | 48.0 | 52.0 | 52.0 | 52.0 | 52.0 | 20.0 |
| Total Split (%) | 40.0% | 40.0% | 40.0% | 40.0% | 43.3% | 43.3% | 43.3% | 43.3% | 17% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | |
| Recall Mode | None | None | None | None | C-Max | C-Max | C-Max | C-Max | None |
| Act Effect Green (s) | 27.4 | 27.4 | 27.4 | 27.4 | 83.6 | 83.6 | 83.6 | 83.6 | |
| Actuated g/C Ratio | 0.23 | 0.23 | 0.23 | 0.23 | 0.70 | 0.70 | 0.70 | 0.70 | |
| v/c Ratio | 0.48 | 0.80 | 0.23 | 0.57 | 0.16 | 0.24 | 0.10 | 0.36 | |
| Control Delay | 43.9 | 48.3 | 41.2 | 39.7 | 8.5 | 8.1 | 7.9 | 9.1 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 43.9 | 48.3 | 41.2 | 39.7 | 8.5 | 8.1 | 7.9 | 9.1 | |
| LOS | D | D | D | D | A | A | A | A | |
| Approach Delay | | 47.4 | | 39.8 | | 8.2 | | 8.9 | |
| Approach LOS | | D | | D | | A | | A | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 23.7
 Intersection Capacity Utilization 46.2%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service A

Splits and Phases: 2: Main Street & Ski Hill Road



HCM Signalized Intersection Capacity Analysis 2020 Existing Saturday AM_Ped Scramble.syn
 2: Main Street & Ski Hill Road

02/07/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|------|-------|------|------|------|------|------|------|------|------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 50 | 63 | 62 | 16 | 106 | 38 | 66 | 255 | 12 | 30 | 207 | 67 |
| Future Volume (vph) | 50 | 63 | 62 | 16 | 106 | 38 | 66 | 255 | 12 | 30 | 207 | 67 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.94 | | 1.00 | 0.94 | | 1.00 | 0.99 | | 1.00 | 0.97 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 1751 | | 1770 | 1752 | | 1770 | 1841 | | 1770 | 1802 | |
| Flt Permitted | 0.39 | 1.00 | | 0.21 | 1.00 | | 0.45 | 1.00 | | 0.55 | 1.00 | |
| Satd. Flow (perm) | 732 | 1751 | | 398 | 1752 | | 844 | 1841 | | 1030 | 1802 | |
| Peak-hour factor, PHF | 0.63 | 0.31 | 0.46 | 0.76 | 0.73 | 0.40 | 0.69 | 0.90 | 0.50 | 0.40 | 0.58 | 0.68 |
| Adj. Flow (vph) | 79 | 203 | 135 | 21 | 145 | 95 | 96 | 283 | 24 | 75 | 357 | 99 |
| RTOR Reduction (vph) | 0 | 24 | 0 | 0 | 24 | 0 | 0 | 1 | 0 | 0 | 4 | 0 |
| Lane Group Flow (vph) | 79 | 314 | 0 | 21 | 216 | 0 | 96 | 306 | 0 | 75 | 452 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | 27.4 | 27.4 | | 27.4 | 27.4 | | 83.6 | 83.6 | | 83.6 | 83.6 | |
| Effective Green, g (s) | 27.4 | 27.4 | | 27.4 | 27.4 | | 83.6 | 83.6 | | 83.6 | 83.6 | |
| Actuated g/C Ratio | 0.23 | 0.23 | | 0.23 | 0.23 | | 0.70 | 0.70 | | 0.70 | 0.70 | |
| Clearance Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 167 | 399 | | 90 | 400 | | 587 | 1282 | | 717 | 1255 | |
| v/s Ratio Prot | | c0.18 | | | 0.12 | | | 0.17 | | | c0.25 | |
| v/s Ratio Perm | 0.11 | | | 0.05 | | | 0.11 | | | 0.07 | | |
| v/c Ratio | 0.47 | 0.79 | | 0.23 | 0.54 | | 0.16 | 0.24 | | 0.10 | 0.36 | |
| Uniform Delay, d1 | 40.1 | 43.6 | | 37.7 | 40.8 | | 6.2 | 6.6 | | 6.0 | 7.4 | |
| Progression Factor | 0.90 | 0.87 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 2.1 | 9.8 | | 1.3 | 1.5 | | 0.6 | 0.4 | | 0.3 | 0.8 | |
| Delay (s) | 38.0 | 47.8 | | 39.1 | 42.2 | | 6.8 | 7.1 | | 6.2 | 8.2 | |
| Level of Service | D | D | | D | D | | A | A | | A | A | |
| Approach Delay (s) | | 45.9 | | | 42.0 | | | 7.0 | | | 7.9 | |
| Approach LOS | | D | | | D | | | A | | | A | |

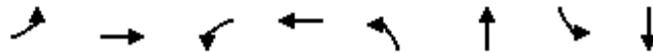
Intersection Summary

| | | | |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay | 23.0 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.48 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 13.5 |
| Intersection Capacity Utilization | 46.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

Timings

2: Main Street & Ski Hill Road

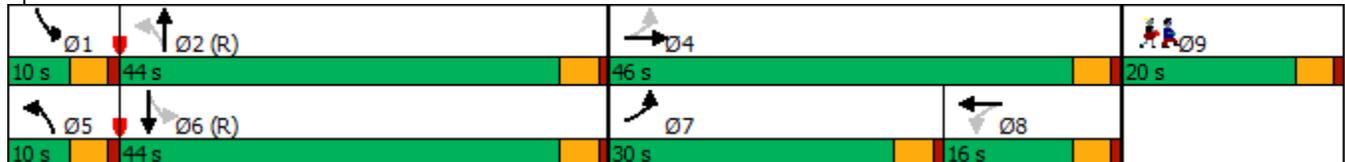


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | Ø9 |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | |
| Traffic Volume (vph) | 81 | 138 | 33 | 86 | 53 | 180 | 51 | 271 | |
| Future Volume (vph) | 81 | 138 | 33 | 86 | 53 | 180 | 51 | 271 | |
| Turn Type | pm+pt | NA | Perm | NA | pm+pt | NA | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 8 | 5 | 2 | 1 | 6 | 9 |
| Permitted Phases | 4 | | 8 | | 2 | | 6 | | |
| Detector Phase | 7 | 4 | 8 | 8 | 5 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 22.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 9.5 |
| Total Split (s) | 30.0 | 46.0 | 16.0 | 16.0 | 10.0 | 44.0 | 10.0 | 44.0 | 20.0 |
| Total Split (%) | 25.0% | 38.3% | 13.3% | 13.3% | 8.3% | 36.7% | 8.3% | 36.7% | 17% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | | Lag | Lag | Lead | Lag | Lead | Lag | |
| Lead-Lag Optimize? | Yes | | Yes | Yes | Yes | Yes | Yes | Yes | |
| Recall Mode | None | None | None | None | None | C-Max | None | C-Max | None |
| Act Effect Green (s) | 31.9 | 31.9 | 15.6 | 15.6 | 75.7 | 69.5 | 75.3 | 69.3 | |
| Actuated g/C Ratio | 0.27 | 0.27 | 0.13 | 0.13 | 0.63 | 0.58 | 0.63 | 0.58 | |
| v/c Ratio | 0.39 | 0.61 | 0.31 | 0.64 | 0.13 | 0.26 | 0.09 | 0.40 | |
| Control Delay | 45.9 | 48.5 | 51.9 | 52.9 | 9.4 | 14.9 | 9.3 | 17.1 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 45.9 | 48.5 | 51.9 | 52.9 | 9.4 | 14.9 | 9.3 | 17.1 | |
| LOS | D | D | D | D | A | B | A | B | |
| Approach Delay | | 47.8 | | 52.7 | | 13.7 | | 16.0 | |
| Approach LOS | | D | | D | | B | | B | |

Intersection Summary

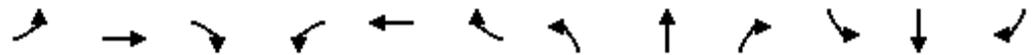
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 29.7
 Intersection Capacity Utilization 55.9%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service B

Splits and Phases: 2: Main Street & Ski Hill Road



HCM Signalized Intersection Capacity Analysis 2020 Existing Saturday PM_Ped Scramble.syn
 2: Main Street & Ski Hill Road

02/07/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-------|-------|------|------|------|------|-------|------|------|-------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 81 | 138 | 105 | 33 | 86 | 52 | 53 | 180 | 46 | 51 | 271 | 76 |
| Future Volume (vph) | 81 | 138 | 105 | 33 | 86 | 52 | 53 | 180 | 46 | 51 | 271 | 76 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.94 | | 1.00 | 0.94 | | 1.00 | 0.97 | | 1.00 | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 1750 | | 1770 | 1743 | | 1770 | 1804 | | 1770 | 1790 | |
| Flt Permitted | 0.33 | 1.00 | | 0.58 | 1.00 | | 0.43 | 1.00 | | 0.56 | 1.00 | |
| Satd. Flow (perm) | 607 | 1750 | | 1079 | 1743 | | 807 | 1804 | | 1037 | 1790 | |
| Peak-hour factor, PHF | 0.75 | 0.78 | 0.88 | 0.75 | 0.94 | 0.77 | 0.74 | 0.85 | 0.82 | 0.80 | 0.88 | 0.70 |
| Adj. Flow (vph) | 108 | 177 | 119 | 44 | 91 | 68 | 72 | 212 | 56 | 64 | 308 | 109 |
| RTOR Reduction (vph) | 0 | 23 | 0 | 0 | 22 | 0 | 0 | 5 | 0 | 0 | 7 | 0 |
| Lane Group Flow (vph) | 108 | 273 | 0 | 44 | 137 | 0 | 72 | 263 | 0 | 64 | 410 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | | pm+pt | NA | | pm+pt | NA | |
| Protected Phases | 7 | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | 31.9 | 31.9 | | 15.6 | 15.6 | | 74.8 | 68.6 | | 74.4 | 68.4 | |
| Effective Green, g (s) | 31.9 | 31.9 | | 15.6 | 15.6 | | 74.8 | 68.6 | | 74.4 | 68.4 | |
| Actuated g/C Ratio | 0.27 | 0.27 | | 0.13 | 0.13 | | 0.62 | 0.57 | | 0.62 | 0.57 | |
| Clearance Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 275 | 465 | | 140 | 226 | | 552 | 1031 | | 679 | 1020 | |
| v/s Ratio Prot | 0.04 | c0.16 | | | 0.08 | | c0.01 | 0.15 | | 0.00 | c0.23 | |
| v/s Ratio Perm | 0.07 | | | 0.04 | | | 0.07 | | | 0.05 | | |
| v/c Ratio | 0.39 | 0.59 | | 0.31 | 0.61 | | 0.13 | 0.25 | | 0.09 | 0.40 | |
| Uniform Delay, d1 | 34.9 | 38.3 | | 47.3 | 49.3 | | 9.4 | 12.9 | | 9.1 | 14.4 | |
| Progression Factor | 1.28 | 1.29 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.9 | 1.8 | | 1.3 | 4.6 | | 0.1 | 0.6 | | 0.1 | 1.2 | |
| Delay (s) | 45.6 | 51.5 | | 48.6 | 53.9 | | 9.6 | 13.5 | | 9.1 | 15.6 | |
| Level of Service | D | D | | D | D | | A | B | | A | B | |
| Approach Delay (s) | | 49.9 | | | 52.7 | | | 12.7 | | | 14.7 | |
| Approach LOS | | D | | | D | | | B | | | B | |

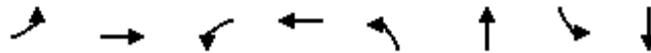
Intersection Summary

| | | | |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay | 29.6 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.48 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 22.5 |
| Intersection Capacity Utilization | 55.9% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

Timings

2: Main Street & Ski Hill Road

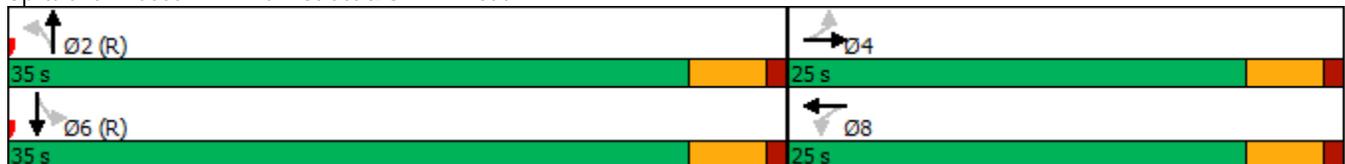


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ |
| Traffic Volume (vph) | 51 | 65 | 16 | 109 | 68 | 261 | 31 | 212 |
| Future Volume (vph) | 51 | 65 | 16 | 109 | 68 | 261 | 31 | 212 |
| Turn Type | Perm | NA | Perm | NA | Perm | NA | Perm | NA |
| Protected Phases | | 4 | | 8 | | 2 | | 6 |
| Permitted Phases | 4 | | 8 | | 2 | | 6 | |
| Detector Phase | 4 | 4 | 8 | 8 | 2 | 2 | 6 | 6 |
| Switch Phase | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 25.0 | 25.0 | 25.0 | 25.0 | 35.0 | 35.0 | 35.0 | 35.0 |
| Total Split (%) | 41.7% | 41.7% | 41.7% | 41.7% | 58.3% | 58.3% | 58.3% | 58.3% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | |
| Recall Mode | None | None | None | None | C-Max | C-Max | C-Max | C-Max |
| Act Effect Green (s) | 15.5 | 15.5 | 15.5 | 15.5 | 35.5 | 35.5 | 35.5 | 35.5 |
| Actuated g/C Ratio | 0.26 | 0.26 | 0.26 | 0.26 | 0.59 | 0.59 | 0.59 | 0.59 |
| v/c Ratio | 0.35 | 0.72 | 0.14 | 0.51 | 0.22 | 0.29 | 0.13 | 0.45 |
| Control Delay | 20.8 | 25.0 | 16.9 | 17.1 | 9.0 | 7.7 | 7.6 | 9.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 20.8 | 25.0 | 16.9 | 17.1 | 9.0 | 7.7 | 7.6 | 9.1 |
| LOS | C | C | B | B | A | A | A | A |
| Approach Delay | | 24.2 | | 17.1 | | 8.0 | | 8.9 |
| Approach LOS | | C | | B | | A | | A |

Intersection Summary

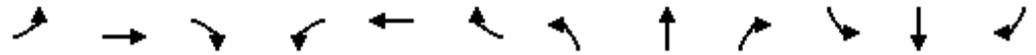
| | |
|---|------------------------|
| Cycle Length: 60 | |
| Actuated Cycle Length: 60 | |
| Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green | |
| Natural Cycle: 45 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.72 | |
| Intersection Signal Delay: 14.0 | Intersection LOS: B |
| Intersection Capacity Utilization 53.2% | ICU Level of Service A |
| Analysis Period (min) 15 | |

Splits and Phases: 2: Main Street & Ski Hill Road



HCM 6th Signalized Intersection Summary
 2: Main Street & Ski Hill Road

2022 BG Saturday AM.syn
 02/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 51 | 65 | 63 | 16 | 109 | 39 | 68 | 261 | 12 | 31 | 212 | 69 |
| Future Volume (veh/h) | 51 | 65 | 63 | 16 | 109 | 39 | 68 | 261 | 12 | 31 | 212 | 69 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 0.97 | | 0.94 | 0.98 | | 0.94 | 0.97 | | 0.90 | 0.95 | | 0.90 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 81 | 210 | 137 | 21 | 149 | 98 | 99 | 290 | 24 | 78 | 366 | 101 |
| Peak Hour Factor | 0.63 | 0.31 | 0.46 | 0.76 | 0.73 | 0.40 | 0.69 | 0.90 | 0.50 | 0.40 | 0.58 | 0.68 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 283 | 280 | 183 | 207 | 279 | 184 | 501 | 973 | 81 | 616 | 792 | 218 |
| Arrive On Green | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 |
| Sat Flow, veh/h | 1095 | 1028 | 671 | 1008 | 1024 | 674 | 901 | 1686 | 140 | 1014 | 1371 | 378 |
| Grp Volume(v), veh/h | 81 | 0 | 347 | 21 | 0 | 247 | 99 | 0 | 314 | 78 | 0 | 467 |
| Grp Sat Flow(s),veh/h/ln | 1095 | 0 | 1699 | 1008 | 0 | 1698 | 901 | 0 | 1826 | 1014 | 0 | 1750 |
| Q Serve(g_s), s | 4.1 | 0.0 | 11.2 | 1.2 | 0.0 | 7.4 | 4.3 | 0.0 | 5.3 | 2.6 | 0.0 | 9.2 |
| Cycle Q Clear(g_c), s | 11.5 | 0.0 | 11.2 | 12.4 | 0.0 | 7.4 | 13.5 | 0.0 | 5.3 | 7.8 | 0.0 | 9.2 |
| Prop In Lane | 1.00 | | 0.39 | 1.00 | | 0.40 | 1.00 | | 0.08 | 1.00 | | 0.22 |
| Lane Grp Cap(c), veh/h | 283 | 0 | 463 | 207 | 0 | 463 | 501 | 0 | 1054 | 616 | 0 | 1010 |
| V/C Ratio(X) | 0.29 | 0.00 | 0.75 | 0.10 | 0.00 | 0.53 | 0.20 | 0.00 | 0.30 | 0.13 | 0.00 | 0.46 |
| Avail Cap(c_a), veh/h | 359 | 0 | 580 | 276 | 0 | 580 | 501 | 0 | 1054 | 616 | 0 | 1010 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 0.96 | 0.00 | 0.96 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 23.5 | 0.0 | 19.9 | 25.6 | 0.0 | 18.6 | 11.2 | 0.0 | 6.5 | 8.5 | 0.0 | 7.3 |
| Incr Delay (d2), s/veh | 0.5 | 0.0 | 4.0 | 0.2 | 0.0 | 1.0 | 0.9 | 0.0 | 0.7 | 0.4 | 0.0 | 1.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.0 | 0.0 | 4.5 | 0.3 | 0.0 | 2.8 | 0.9 | 0.0 | 1.8 | 0.5 | 0.0 | 3.1 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 24.0 | 0.0 | 23.9 | 25.8 | 0.0 | 19.5 | 12.1 | 0.0 | 7.2 | 8.9 | 0.0 | 8.8 |
| LnGrp LOS | C | A | C | C | A | B | B | A | A | A | A | A |
| Approach Vol, veh/h | | 428 | | | 268 | | | 413 | | | 545 | |
| Approach Delay, s/veh | | 23.9 | | | 20.0 | | | 8.4 | | | 8.8 | |
| Approach LOS | | C | | | C | | | A | | | A | |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 39.1 | | 20.9 | | 39.1 | | 20.9 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 30.5 | | 20.5 | | 30.5 | | 20.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 15.5 | | 13.5 | | 11.2 | | 14.4 | | | | |
| Green Ext Time (p_c), s | | 2.1 | | 1.4 | | 3.4 | | 0.8 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 14.4 | | | | | | | | |
| HCM 6th LOS | | | | B | | | | | | | | |
| Notes | | | | | | | | | | | | |
| User approved pedestrian interval to be less than phase max green. | | | | | | | | | | | | |

Timings

2: Main Street & Ski Hill Road



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↶ | ↷ | ↶ | ↷ | ↶ | ↷ | ↶ | ↷ |
| Traffic Volume (vph) | 81 | 138 | 33 | 86 | 53 | 180 | 51 | 271 |
| Future Volume (vph) | 81 | 138 | 33 | 86 | 53 | 180 | 51 | 271 |
| Turn Type | pm+pt | NA | Perm | NA | pm+pt | NA | pm+pt | NA |
| Protected Phases | 7 | 4 | | 8 | 5 | 2 | 1 | 6 |
| Permitted Phases | 4 | | 8 | | 2 | | 6 | |
| Detector Phase | 7 | 4 | 8 | 8 | 5 | 2 | 1 | 6 |
| Switch Phase | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 22.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 |
| Total Split (s) | 13.0 | 40.0 | 27.0 | 27.0 | 15.0 | 65.0 | 15.0 | 65.0 |
| Total Split (%) | 10.8% | 33.3% | 22.5% | 22.5% | 12.5% | 54.2% | 12.5% | 54.2% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | | Lag | Lag | Lead | Lag | Lead | Lag |
| Lead-Lag Optimize? | Yes | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | None | C-Max |
| Act Effct Green (s) | 30.3 | 30.3 | 17.5 | 17.5 | 77.3 | 71.2 | 77.0 | 71.0 |
| Actuated g/C Ratio | 0.25 | 0.25 | 0.15 | 0.15 | 0.64 | 0.59 | 0.64 | 0.59 |
| v/c Ratio | 0.55 | 0.86 | 0.52 | 0.78 | 0.16 | 0.30 | 0.15 | 0.51 |
| Control Delay | 45.0 | 62.2 | 66.9 | 64.2 | 8.8 | 14.2 | 8.7 | 18.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 45.0 | 62.2 | 66.9 | 64.2 | 8.8 | 14.2 | 8.7 | 18.3 |
| LOS | D | E | E | E | A | B | A | B |
| Approach Delay | | 57.6 | | 64.8 | | 13.1 | | 17.0 |
| Approach LOS | | E | | E | | B | | B |

Intersection Summary

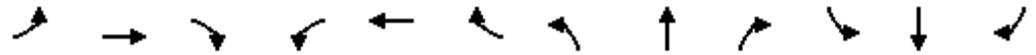
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 34.3
 Intersection Capacity Utilization 62.3%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service B

Splits and Phases: 2: Main Street & Ski Hill Road



HCM 6th Signalized Intersection Summary
 2: Main Street & Ski Hill Road

2022 BG Saturday PM.syn
 02/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 81 | 138 | 105 | 33 | 86 | 52 | 53 | 180 | 46 | 51 | 271 | 76 |
| Future Volume (veh/h) | 81 | 138 | 105 | 33 | 86 | 52 | 53 | 180 | 46 | 51 | 271 | 76 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.63 | 0.78 | | 0.41 | 1.00 | | 0.77 | 0.94 | | 0.77 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 108 | 177 | 119 | 44 | 91 | 68 | 72 | 212 | 56 | 64 | 308 | 109 |
| Peak Hour Factor | 0.75 | 0.78 | 0.88 | 0.75 | 0.94 | 0.77 | 0.74 | 0.85 | 0.82 | 0.80 | 0.88 | 0.70 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 197 | 224 | 151 | 121 | 101 | 75 | 548 | 773 | 204 | 646 | 703 | 249 |
| Arrive On Green | 0.06 | 0.27 | 0.27 | 0.17 | 0.17 | 0.17 | 0.04 | 0.58 | 0.58 | 0.04 | 0.58 | 0.58 |
| Sat Flow, veh/h | 1781 | 827 | 556 | 848 | 593 | 443 | 1781 | 1333 | 352 | 1781 | 1214 | 430 |
| Grp Volume(v), veh/h | 108 | 0 | 296 | 44 | 0 | 159 | 72 | 0 | 268 | 64 | 0 | 417 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1384 | 848 | 0 | 1036 | 1781 | 0 | 1685 | 1781 | 0 | 1644 |
| Q Serve(g_s), s | 5.8 | 0.0 | 23.8 | 6.1 | 0.0 | 18.1 | 1.9 | 0.0 | 9.5 | 1.7 | 0.0 | 17.2 |
| Cycle Q Clear(g_c), s | 5.8 | 0.0 | 23.8 | 17.8 | 0.0 | 18.1 | 1.9 | 0.0 | 9.5 | 1.7 | 0.0 | 17.2 |
| Prop In Lane | 1.00 | | 0.40 | 1.00 | | 0.43 | 1.00 | | 0.21 | 1.00 | | 0.26 |
| Lane Grp Cap(c), veh/h | 197 | 0 | 375 | 121 | 0 | 176 | 548 | 0 | 977 | 646 | 0 | 951 |
| V/C Ratio(X) | 0.55 | 0.00 | 0.79 | 0.36 | 0.00 | 0.90 | 0.13 | 0.00 | 0.27 | 0.10 | 0.00 | 0.44 |
| Avail Cap(c_a), veh/h | 210 | 0 | 409 | 136 | 0 | 194 | 636 | 0 | 977 | 736 | 0 | 951 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 0.82 | 0.00 | 0.82 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 37.8 | 0.0 | 40.6 | 54.5 | 0.0 | 48.8 | 10.5 | 0.0 | 12.6 | 9.6 | 0.0 | 14.3 |
| Incr Delay (d2), s/veh | 2.2 | 0.0 | 7.7 | 1.8 | 0.0 | 37.0 | 0.1 | 0.0 | 0.7 | 0.1 | 0.0 | 1.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.7 | 0.0 | 8.9 | 1.4 | 0.0 | 6.5 | 0.8 | 0.0 | 3.7 | 0.7 | 0.0 | 6.6 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 39.9 | 0.0 | 48.3 | 56.3 | 0.0 | 85.9 | 10.6 | 0.0 | 13.3 | 9.7 | 0.0 | 15.7 |
| LnGrp LOS | D | A | D | E | A | F | B | A | B | A | A | B |
| Approach Vol, veh/h | | 404 | | | 203 | | | 340 | | | 481 | |
| Approach Delay, s/veh | | 46.1 | | | 79.4 | | | 12.7 | | | 14.9 | |
| Approach LOS | | D | | | E | | | B | | | B | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.9 | 74.1 | | 37.0 | 9.0 | 74.0 | 12.1 | 24.9 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 10.5 | 60.5 | | 35.5 | 10.5 | 60.5 | 8.5 | 22.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.7 | 11.5 | | 25.8 | 3.9 | 19.2 | 7.8 | 20.1 | | | | |
| Green Ext Time (p_c), s | 0.1 | 1.9 | | 1.4 | 0.1 | 3.2 | 0.0 | 0.3 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 32.4 | | | | | | | | |
| HCM 6th LOS | | | | C | | | | | | | | |

Timings

2: Main Street & Ski Hill Road



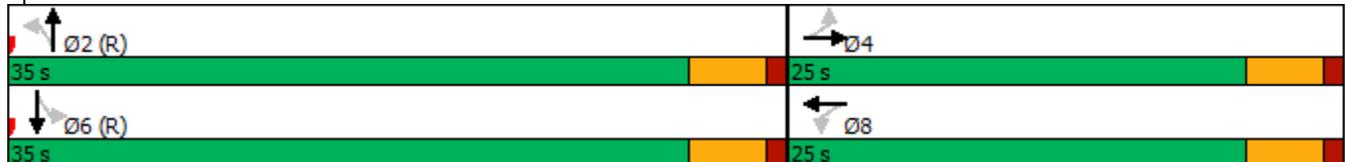
| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ |
| Traffic Volume (vph) | 60 | 65 | 16 | 109 | 80 | 261 | 31 | 212 |
| Future Volume (vph) | 60 | 65 | 16 | 109 | 80 | 261 | 31 | 212 |
| Turn Type | Perm | NA | Perm | NA | Perm | NA | Perm | NA |
| Protected Phases | | 4 | | 8 | | 2 | | 6 |
| Permitted Phases | 4 | | 8 | | 2 | | 6 | |
| Detector Phase | 4 | 4 | 8 | 8 | 2 | 2 | 6 | 6 |
| Switch Phase | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 25.0 | 25.0 | 25.0 | 25.0 | 35.0 | 35.0 | 35.0 | 35.0 |
| Total Split (%) | 41.7% | 41.7% | 41.7% | 41.7% | 58.3% | 58.3% | 58.3% | 58.3% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | |
| Recall Mode | None | None | None | None | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 15.7 | 15.7 | 15.7 | 15.7 | 35.3 | 35.3 | 35.3 | 35.3 |
| Actuated g/C Ratio | 0.26 | 0.26 | 0.26 | 0.26 | 0.59 | 0.59 | 0.59 | 0.59 |
| v/c Ratio | 0.40 | 0.73 | 0.14 | 0.51 | 0.28 | 0.29 | 0.13 | 0.49 |
| Control Delay | 21.9 | 25.2 | 17.1 | 16.8 | 9.9 | 7.9 | 7.7 | 9.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 21.9 | 25.2 | 17.1 | 16.8 | 9.9 | 7.9 | 7.7 | 9.6 |
| LOS | C | C | B | B | A | A | A | A |
| Approach Delay | | 24.5 | | 16.8 | | 8.4 | | 9.3 |
| Approach LOS | | C | | B | | A | | A |

Intersection Summary

Cycle Length: 60
 Actuated Cycle Length: 60
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 14.3
 Intersection Capacity Utilization 55.0%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 2: Main Street & Ski Hill Road



HCM 6th Signalized Intersection Summary
 2: Main Street & Ski Hill Road

2022 Total Saturday AM.syn
 02/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↶ | ↷ | | ↶ | ↷ | | ↶ | ↷ | | ↶ | ↷ | |
| Traffic Volume (veh/h) | 60 | 65 | 69 | 16 | 109 | 39 | 80 | 261 | 12 | 31 | 212 | 87 |
| Future Volume (veh/h) | 60 | 65 | 69 | 16 | 109 | 39 | 80 | 261 | 12 | 31 | 212 | 87 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 0.97 | | 0.94 | 0.98 | | 0.94 | 0.98 | | 0.89 | 0.95 | | 0.89 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 95 | 210 | 150 | 21 | 149 | 98 | 116 | 290 | 24 | 78 | 366 | 128 |
| Peak Hour Factor | 0.63 | 0.31 | 0.46 | 0.76 | 0.73 | 0.40 | 0.69 | 0.90 | 0.50 | 0.40 | 0.58 | 0.68 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 289 | 274 | 195 | 202 | 284 | 187 | 474 | 965 | 80 | 610 | 733 | 256 |
| Arrive On Green | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 |
| Sat Flow, veh/h | 1096 | 986 | 705 | 998 | 1025 | 674 | 882 | 1686 | 140 | 1014 | 1280 | 448 |
| Grp Volume(v), veh/h | 95 | 0 | 360 | 21 | 0 | 247 | 116 | 0 | 314 | 78 | 0 | 494 |
| Grp Sat Flow(s),veh/h/ln | 1096 | 0 | 1691 | 998 | 0 | 1699 | 882 | 0 | 1826 | 1014 | 0 | 1727 |
| Q Serve(g_s), s | 4.8 | 0.0 | 11.7 | 1.2 | 0.0 | 7.4 | 5.4 | 0.0 | 5.3 | 2.6 | 0.0 | 10.3 |
| Cycle Q Clear(g_c), s | 12.2 | 0.0 | 11.7 | 12.9 | 0.0 | 7.4 | 15.7 | 0.0 | 5.3 | 7.9 | 0.0 | 10.3 |
| Prop In Lane | 1.00 | | 0.42 | 1.00 | | 0.40 | 1.00 | | 0.08 | 1.00 | | 0.26 |
| Lane Grp Cap(c), veh/h | 289 | 0 | 469 | 202 | 0 | 471 | 474 | 0 | 1045 | 610 | 0 | 989 |
| V/C Ratio(X) | 0.33 | 0.00 | 0.77 | 0.10 | 0.00 | 0.52 | 0.24 | 0.00 | 0.30 | 0.13 | 0.00 | 0.50 |
| Avail Cap(c_a), veh/h | 360 | 0 | 578 | 266 | 0 | 580 | 474 | 0 | 1045 | 610 | 0 | 989 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 0.95 | 0.00 | 0.95 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 23.5 | 0.0 | 19.9 | 25.8 | 0.0 | 18.3 | 12.4 | 0.0 | 6.6 | 8.7 | 0.0 | 7.7 |
| Incr Delay (d2), s/veh | 0.6 | 0.0 | 4.7 | 0.2 | 0.0 | 0.9 | 1.2 | 0.0 | 0.7 | 0.4 | 0.0 | 1.8 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.2 | 0.0 | 4.8 | 0.3 | 0.0 | 2.8 | 1.1 | 0.0 | 1.8 | 0.6 | 0.0 | 3.4 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 24.1 | 0.0 | 24.6 | 26.0 | 0.0 | 19.2 | 13.6 | 0.0 | 7.4 | 9.1 | 0.0 | 9.5 |
| LnGrp LOS | C | A | C | C | A | B | B | A | A | A | A | A |
| Approach Vol, veh/h | | 455 | | | 268 | | | 430 | | | 572 | |
| Approach Delay, s/veh | | 24.5 | | | 19.8 | | | 9.0 | | | 9.4 | |
| Approach LOS | | C | | | B | | | A | | | A | |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 38.9 | | 21.1 | | 38.9 | | 21.1 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 30.5 | | 20.5 | | 30.5 | | 20.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 17.7 | | 14.2 | | 12.3 | | 14.9 | | | | |
| Green Ext Time (p_c), s | | 2.1 | | 1.4 | | 3.6 | | 0.7 | | | | |

Intersection Summary

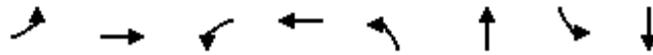
| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 14.9 |
| HCM 6th LOS | B |

Notes

User approved pedestrian interval to be less than phase max green.

Timings

2: Main Street & Ski Hill Road

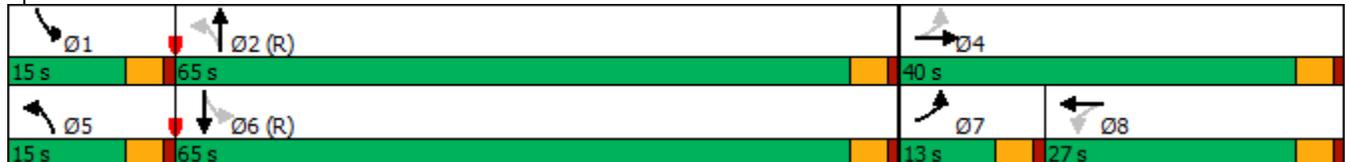


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↶ | ↷ | ↶ | ↷ | ↶ | ↷ | ↶ | ↷ |
| Traffic Volume (vph) | 98 | 141 | 34 | 88 | 62 | 184 | 52 | 278 |
| Future Volume (vph) | 98 | 141 | 34 | 88 | 62 | 184 | 52 | 278 |
| Turn Type | pm+pt | NA | Perm | NA | pm+pt | NA | pm+pt | NA |
| Protected Phases | 7 | 4 | | 8 | 5 | 2 | 1 | 6 |
| Permitted Phases | 4 | | 8 | | 2 | | 6 | |
| Detector Phase | 7 | 4 | 8 | 8 | 5 | 2 | 1 | 6 |
| Switch Phase | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 22.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 |
| Total Split (s) | 13.0 | 40.0 | 27.0 | 27.0 | 15.0 | 65.0 | 15.0 | 65.0 |
| Total Split (%) | 10.8% | 33.3% | 22.5% | 22.5% | 12.5% | 54.2% | 12.5% | 54.2% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | | Lag | Lag | Lead | Lag | Lead | Lag |
| Lead-Lag Optimize? | Yes | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | None | C-Max |
| Act Effect Green (s) | 31.5 | 31.5 | 18.5 | 18.5 | 76.4 | 69.9 | 75.4 | 69.4 |
| Actuated g/C Ratio | 0.26 | 0.26 | 0.15 | 0.15 | 0.64 | 0.58 | 0.63 | 0.58 |
| v/c Ratio | 0.64 | 0.90 | 0.52 | 0.75 | 0.20 | 0.31 | 0.15 | 0.57 |
| Control Delay | 49.0 | 67.1 | 66.3 | 61.2 | 9.3 | 14.8 | 9.1 | 20.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 49.0 | 67.1 | 66.3 | 61.2 | 9.3 | 14.8 | 9.1 | 20.7 |
| LOS | D | E | E | E | A | B | A | C |
| Approach Delay | | 61.8 | | 62.3 | | 13.5 | | 19.2 |
| Approach LOS | | E | | E | | B | | B |

Intersection Summary

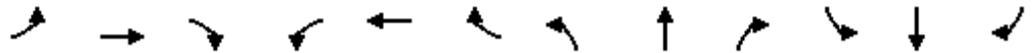
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 36.2
 Intersection LOS: D
 Intersection Capacity Utilization 65.0%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 2: Main Street & Ski Hill Road



HCM 6th Signalized Intersection Summary
 2: Main Street & Ski Hill Road

2022 Total Saturday PM.syn
 02/17/2020

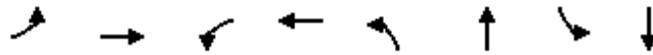


| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↗ | |
| Traffic Volume (veh/h) | 98 | 141 | 118 | 34 | 88 | 53 | 62 | 184 | 47 | 52 | 278 | 90 |
| Future Volume (veh/h) | 98 | 141 | 118 | 34 | 88 | 53 | 62 | 184 | 47 | 52 | 278 | 90 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.64 | 0.81 | | 0.42 | 1.00 | | 0.77 | 0.94 | | 0.77 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 131 | 181 | 134 | 45 | 94 | 69 | 84 | 216 | 57 | 65 | 316 | 129 |
| Peak Hour Factor | 0.75 | 0.78 | 0.88 | 0.75 | 0.94 | 0.77 | 0.74 | 0.85 | 0.82 | 0.80 | 0.88 | 0.70 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 215 | 224 | 166 | 120 | 106 | 78 | 509 | 757 | 200 | 629 | 651 | 266 |
| Arrive On Green | 0.07 | 0.28 | 0.28 | 0.17 | 0.17 | 0.17 | 0.04 | 0.57 | 0.57 | 0.04 | 0.57 | 0.57 |
| Sat Flow, veh/h | 1781 | 794 | 588 | 866 | 613 | 450 | 1781 | 1331 | 351 | 1781 | 1149 | 469 |
| Grp Volume(v), veh/h | 131 | 0 | 315 | 45 | 0 | 163 | 84 | 0 | 273 | 65 | 0 | 445 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1381 | 866 | 0 | 1062 | 1781 | 0 | 1682 | 1781 | 0 | 1618 |
| Q Serve(g_s), s | 7.0 | 0.0 | 25.5 | 6.1 | 0.0 | 18.0 | 2.3 | 0.0 | 10.0 | 1.8 | 0.0 | 19.7 |
| Cycle Q Clear(g_c), s | 7.0 | 0.0 | 25.5 | 18.6 | 0.0 | 18.0 | 2.3 | 0.0 | 10.0 | 1.8 | 0.0 | 19.7 |
| Prop In Lane | 1.00 | | 0.43 | 1.00 | | 0.42 | 1.00 | | 0.21 | 1.00 | | 0.29 |
| Lane Grp Cap(c), veh/h | 215 | 0 | 390 | 120 | 0 | 184 | 509 | 0 | 956 | 629 | 0 | 916 |
| V/C Ratio(X) | 0.61 | 0.00 | 0.81 | 0.37 | 0.00 | 0.88 | 0.16 | 0.00 | 0.29 | 0.10 | 0.00 | 0.49 |
| Avail Cap(c_a), veh/h | 215 | 0 | 409 | 132 | 0 | 199 | 596 | 0 | 956 | 719 | 0 | 916 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 0.78 | 0.00 | 0.78 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 37.2 | 0.0 | 40.1 | 54.8 | 0.0 | 48.4 | 11.6 | 0.0 | 13.3 | 10.2 | 0.0 | 15.6 |
| Incr Delay (d2), s/veh | 3.8 | 0.0 | 8.9 | 1.9 | 0.0 | 32.6 | 0.2 | 0.0 | 0.7 | 0.1 | 0.0 | 1.8 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.3 | 0.0 | 9.5 | 1.4 | 0.0 | 6.4 | 0.9 | 0.0 | 3.9 | 0.7 | 0.0 | 7.6 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 41.0 | 0.0 | 48.9 | 56.7 | 0.0 | 81.0 | 11.7 | 0.0 | 14.1 | 10.3 | 0.0 | 17.4 |
| LnGrp LOS | D | A | D | E | A | F | B | A | B | B | A | B |
| Approach Vol, veh/h | | 446 | | | 208 | | | 357 | | | 510 | |
| Approach Delay, s/veh | | 46.6 | | | 75.8 | | | 13.5 | | | 16.5 | |
| Approach LOS | | D | | | E | | | B | | | B | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.9 | 72.7 | | 38.3 | 9.2 | 72.5 | 13.0 | 25.3 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 10.5 | 60.5 | | 35.5 | 10.5 | 60.5 | 8.5 | 22.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.8 | 12.0 | | 27.5 | 4.3 | 21.7 | 9.0 | 20.6 | | | | |
| Green Ext Time (p_c), s | 0.1 | 1.9 | | 1.4 | 0.1 | 3.5 | 0.0 | 0.3 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 32.7 | | | | | | | | |
| HCM 6th LOS | | | | C | | | | | | | | |

Timings

2: Main Street & Ski Hill Road

02/17/2020

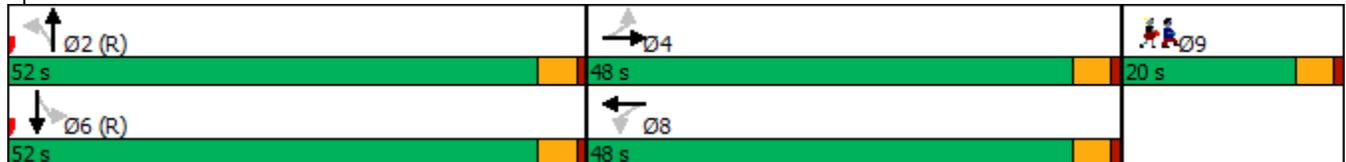


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | Ø9 |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | |
| Traffic Volume (vph) | 60 | 65 | 16 | 109 | 80 | 261 | 31 | 212 | |
| Future Volume (vph) | 60 | 65 | 16 | 109 | 80 | 261 | 31 | 212 | |
| Turn Type | Perm | NA | Perm | NA | Perm | NA | Perm | NA | |
| Protected Phases | | 4 | | 8 | | 2 | | 6 | 9 |
| Permitted Phases | 4 | | 8 | | 2 | | 6 | | |
| Detector Phase | 4 | 4 | 8 | 8 | 2 | 2 | 6 | 6 | |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 9.5 |
| Total Split (s) | 48.0 | 48.0 | 48.0 | 48.0 | 52.0 | 52.0 | 52.0 | 52.0 | 20.0 |
| Total Split (%) | 40.0% | 40.0% | 40.0% | 40.0% | 43.3% | 43.3% | 43.3% | 43.3% | 17% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | |
| Recall Mode | None | None | None | None | C-Max | C-Max | C-Max | C-Max | None |
| Act Effect Green (s) | 28.9 | 28.9 | 28.9 | 28.9 | 82.1 | 82.1 | 82.1 | 82.1 | |
| Actuated g/C Ratio | 0.24 | 0.24 | 0.24 | 0.24 | 0.68 | 0.68 | 0.68 | 0.68 | |
| v/c Ratio | 0.54 | 0.81 | 0.23 | 0.56 | 0.21 | 0.25 | 0.11 | 0.40 | |
| Control Delay | 45.0 | 47.1 | 40.1 | 38.3 | 9.8 | 8.8 | 8.6 | 10.3 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 45.0 | 47.1 | 40.1 | 38.3 | 9.8 | 8.8 | 8.6 | 10.3 | |
| LOS | D | D | D | D | A | A | A | B | |
| Approach Delay | | 46.6 | | 38.4 | | 9.1 | | 10.0 | |
| Approach LOS | | D | | D | | A | | B | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 23.9
 Intersection Capacity Utilization 48.2%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service A

Splits and Phases: 2: Main Street & Ski Hill Road





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|------|-------|------|------|------|------|------|------|------|------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 60 | 65 | 69 | 16 | 109 | 39 | 80 | 261 | 12 | 31 | 212 | 87 |
| Future Volume (vph) | 60 | 65 | 69 | 16 | 109 | 39 | 80 | 261 | 12 | 31 | 212 | 87 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.94 | | 1.00 | 0.94 | | 1.00 | 0.99 | | 1.00 | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 1746 | | 1770 | 1752 | | 1770 | 1841 | | 1770 | 1790 | |
| Flt Permitted | 0.40 | 1.00 | | 0.20 | 1.00 | | 0.42 | 1.00 | | 0.55 | 1.00 | |
| Satd. Flow (perm) | 738 | 1746 | | 374 | 1752 | | 792 | 1841 | | 1016 | 1790 | |
| Peak-hour factor, PHF | 0.63 | 0.31 | 0.46 | 0.76 | 0.73 | 0.40 | 0.69 | 0.90 | 0.50 | 0.40 | 0.58 | 0.68 |
| Adj. Flow (vph) | 95 | 210 | 150 | 21 | 149 | 98 | 116 | 290 | 24 | 78 | 366 | 128 |
| RTOR Reduction (vph) | 0 | 26 | 0 | 0 | 24 | 0 | 0 | 1 | 0 | 0 | 5 | 0 |
| Lane Group Flow (vph) | 95 | 334 | 0 | 21 | 223 | 0 | 116 | 313 | 0 | 78 | 489 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | 28.9 | 28.9 | | 28.9 | 28.9 | | 82.1 | 82.1 | | 82.1 | 82.1 | |
| Effective Green, g (s) | 28.9 | 28.9 | | 28.9 | 28.9 | | 82.1 | 82.1 | | 82.1 | 82.1 | |
| Actuated g/C Ratio | 0.24 | 0.24 | | 0.24 | 0.24 | | 0.68 | 0.68 | | 0.68 | 0.68 | |
| Clearance Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 177 | 420 | | 90 | 421 | | 541 | 1259 | | 695 | 1224 | |
| v/s Ratio Prot | | c0.19 | | | 0.13 | | | 0.17 | | | c0.27 | |
| v/s Ratio Perm | 0.13 | | | 0.06 | | | 0.15 | | | 0.08 | | |
| v/c Ratio | 0.54 | 0.80 | | 0.23 | 0.53 | | 0.21 | 0.25 | | 0.11 | 0.40 | |
| Uniform Delay, d1 | 39.7 | 42.8 | | 36.6 | 39.6 | | 7.0 | 7.2 | | 6.5 | 8.2 | |
| Progression Factor | 0.89 | 0.86 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 3.1 | 10.0 | | 1.3 | 1.3 | | 0.9 | 0.5 | | 0.3 | 1.0 | |
| Delay (s) | 38.3 | 47.0 | | 38.0 | 40.9 | | 7.9 | 7.7 | | 6.8 | 9.2 | |
| Level of Service | D | D | | D | D | | A | A | | A | A | |
| Approach Delay (s) | | 45.2 | | | 40.7 | | | 7.7 | | | 8.9 | |
| Approach LOS | | D | | | D | | | A | | | A | |

Intersection Summary

| | | | |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay | 23.1 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.52 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 13.5 |
| Intersection Capacity Utilization | 48.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

Timings

2: Main Street & Ski Hill Road

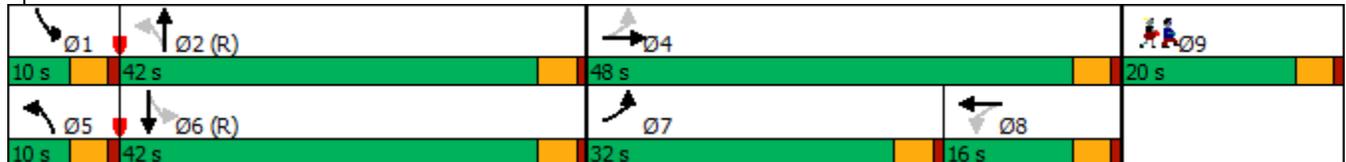


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | Ø9 |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | |
| Traffic Volume (vph) | 98 | 141 | 34 | 88 | 62 | 184 | 52 | 278 | |
| Future Volume (vph) | 98 | 141 | 34 | 88 | 62 | 184 | 52 | 278 | |
| Turn Type | pm+pt | NA | Perm | NA | pm+pt | NA | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 8 | 5 | 2 | 1 | 6 | 9 |
| Permitted Phases | 4 | | 8 | | 2 | | 6 | | |
| Detector Phase | 7 | 4 | 8 | 8 | 5 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 22.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 9.5 |
| Total Split (s) | 32.0 | 48.0 | 16.0 | 16.0 | 10.0 | 42.0 | 10.0 | 42.0 | 20.0 |
| Total Split (%) | 26.7% | 40.0% | 13.3% | 13.3% | 8.3% | 35.0% | 8.3% | 35.0% | 17% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | | Lag | Lag | Lead | Lag | Lead | Lag | |
| Lead-Lag Optimize? | Yes | | Yes | Yes | Yes | Yes | Yes | Yes | |
| Recall Mode | None | None | None | None | None | C-Max | None | C-Max | None |
| Act Effect Green (s) | 33.8 | 33.8 | 16.2 | 16.2 | 74.1 | 67.4 | 73.1 | 66.9 | |
| Actuated g/C Ratio | 0.28 | 0.28 | 0.14 | 0.14 | 0.62 | 0.56 | 0.61 | 0.56 | |
| v/c Ratio | 0.44 | 0.61 | 0.32 | 0.64 | 0.16 | 0.27 | 0.10 | 0.44 | |
| Control Delay | 46.6 | 48.3 | 51.5 | 52.7 | 10.4 | 16.1 | 10.1 | 19.2 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 46.6 | 48.3 | 51.5 | 52.7 | 10.4 | 16.1 | 10.1 | 19.2 | |
| LOS | D | D | D | D | B | B | B | B | |
| Approach Delay | | 47.8 | | 52.5 | | 14.8 | | 18.0 | |
| Approach LOS | | D | | D | | B | | B | |

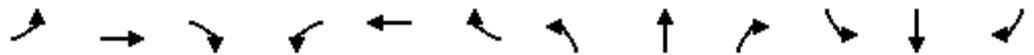
Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 30.7
 Intersection LOS: C
 Intersection Capacity Utilization 58.1%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 2: Main Street & Ski Hill Road



HCM Signalized Intersection Capacity Analysis 2022 Total Saturday PM_Ped Scramble.syn
 2: Main Street & Ski Hill Road 02/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-------|-------|------|------|------|------|-------|------|------|-------|-------|------|
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↗ | |
| Traffic Volume (vph) | 98 | 141 | 118 | 34 | 88 | 53 | 62 | 184 | 47 | 52 | 278 | 90 |
| Future Volume (vph) | 98 | 141 | 118 | 34 | 88 | 53 | 62 | 184 | 47 | 52 | 278 | 90 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.94 | | 1.00 | 0.94 | | 1.00 | 0.97 | | 1.00 | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 1744 | | 1770 | 1744 | | 1770 | 1804 | | 1770 | 1782 | |
| Flt Permitted | 0.33 | 1.00 | | 0.57 | 1.00 | | 0.40 | 1.00 | | 0.55 | 1.00 | |
| Satd. Flow (perm) | 610 | 1744 | | 1060 | 1744 | | 747 | 1804 | | 1026 | 1782 | |
| Peak-hour factor, PHF | 0.75 | 0.78 | 0.88 | 0.75 | 0.94 | 0.77 | 0.74 | 0.85 | 0.82 | 0.80 | 0.88 | 0.70 |
| Adj. Flow (vph) | 131 | 181 | 134 | 45 | 94 | 69 | 84 | 216 | 57 | 65 | 316 | 129 |
| RTOR Reduction (vph) | 0 | 25 | 0 | 0 | 21 | 0 | 0 | 5 | 0 | 0 | 8 | 0 |
| Lane Group Flow (vph) | 131 | 290 | 0 | 45 | 142 | 0 | 84 | 268 | 0 | 65 | 437 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | | pm+pt | NA | | pm+pt | NA | |
| Protected Phases | 7 | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | 33.9 | 33.9 | | 16.2 | 16.2 | | 73.1 | 66.5 | | 72.1 | 66.0 | |
| Effective Green, g (s) | 33.9 | 33.9 | | 16.2 | 16.2 | | 73.1 | 66.5 | | 72.1 | 66.0 | |
| Actuated g/C Ratio | 0.28 | 0.28 | | 0.13 | 0.13 | | 0.61 | 0.55 | | 0.60 | 0.55 | |
| Clearance Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 299 | 492 | | 143 | 235 | | 511 | 999 | | 654 | 980 | |
| v/s Ratio Prot | 0.05 | c0.17 | | | 0.08 | | c0.01 | 0.15 | | 0.01 | c0.25 | |
| v/s Ratio Perm | 0.08 | | | 0.04 | | | 0.09 | | | 0.05 | | |
| v/c Ratio | 0.44 | 0.59 | | 0.31 | 0.61 | | 0.16 | 0.27 | | 0.10 | 0.45 | |
| Uniform Delay, d1 | 33.9 | 37.1 | | 46.9 | 48.9 | | 10.5 | 14.0 | | 10.0 | 16.1 | |
| Progression Factor | 1.33 | 1.35 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 1.0 | 1.7 | | 1.3 | 4.4 | | 0.2 | 0.7 | | 0.1 | 1.5 | |
| Delay (s) | 45.9 | 51.9 | | 48.2 | 53.2 | | 10.6 | 14.7 | | 10.1 | 17.6 | |
| Level of Service | D | D | | D | D | | B | B | | B | B | |
| Approach Delay (s) | | 50.1 | | | 52.1 | | | 13.7 | | | 16.6 | |
| Approach LOS | | D | | | D | | | B | | | B | |

| Intersection Summary | | |
|-----------------------------------|-------|-----------------------------|
| HCM 2000 Control Delay | 30.6 | HCM 2000 Level of Service C |
| HCM 2000 Volume to Capacity ratio | 0.52 | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) 22.5 |
| Intersection Capacity Utilization | 58.1% | ICU Level of Service B |
| Analysis Period (min) | 15 | |

c Critical Lane Group

Timings

2: Main Street & Ski Hill Road

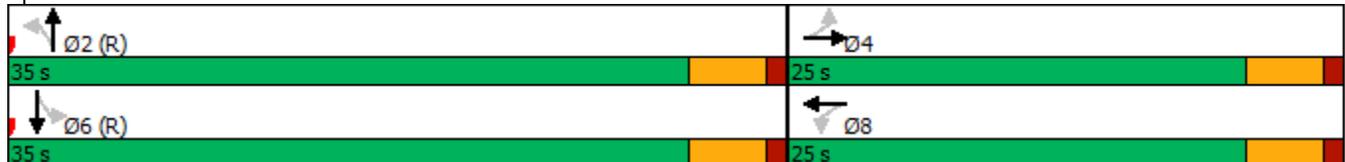


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | |
| Traffic Volume (vph) | 63 | 80 | 20 | 135 | 84 | 324 | 38 | 263 |
| Future Volume (vph) | 63 | 80 | 20 | 135 | 84 | 324 | 38 | 263 |
| Turn Type | Perm | NA | Perm | NA | Perm | NA | Perm | NA |
| Protected Phases | | 4 | | 8 | | 2 | | 6 |
| Permitted Phases | 4 | | 8 | | 2 | | 6 | |
| Detector Phase | 4 | 4 | 8 | 8 | 2 | 2 | 6 | 6 |
| Switch Phase | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 25.0 | 25.0 | 25.0 | 25.0 | 35.0 | 35.0 | 35.0 | 35.0 |
| Total Split (%) | 41.7% | 41.7% | 41.7% | 41.7% | 58.3% | 58.3% | 58.3% | 58.3% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | |
| Recall Mode | None | None | None | None | C-Max | C-Max | C-Max | C-Max |
| Act Effect Green (s) | 11.1 | 11.1 | 11.1 | 11.1 | 39.9 | 39.9 | 39.9 | 39.9 |
| Actuated g/C Ratio | 0.18 | 0.18 | 0.18 | 0.18 | 0.66 | 0.66 | 0.66 | 0.66 |
| v/c Ratio | 0.38 | 0.46 | 0.11 | 0.57 | 0.16 | 0.30 | 0.06 | 0.33 |
| Control Delay | 26.4 | 15.0 | 19.6 | 24.4 | 5.6 | 5.6 | 4.9 | 5.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 26.4 | 15.0 | 19.6 | 24.4 | 5.6 | 5.6 | 4.9 | 5.5 |
| LOS | C | B | B | C | A | A | A | A |
| Approach Delay | | 18.2 | | 23.9 | | 5.6 | | 5.4 |
| Approach LOS | | B | | C | | A | | A |

Intersection Summary

Cycle Length: 60
 Actuated Cycle Length: 60
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 45
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.57
 Intersection Signal Delay: 10.8
 Intersection Capacity Utilization 57.9%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 2: Main Street & Ski Hill Road



HCM 6th Signalized Intersection Summary
 2: Main Street & Ski Hill Road

2040 BG Saturday AM.syn
 02/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 63 | 80 | 79 | 20 | 135 | 48 | 84 | 324 | 15 | 38 | 263 | 85 |
| Future Volume (veh/h) | 63 | 80 | 79 | 20 | 135 | 48 | 84 | 324 | 15 | 38 | 263 | 85 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 0.96 | | 0.93 | 0.96 | | 0.93 | 0.96 | | 0.90 | 0.96 | | 0.90 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 68 | 87 | 86 | 22 | 147 | 52 | 91 | 352 | 16 | 41 | 286 | 92 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 285 | 201 | 199 | 298 | 313 | 111 | 602 | 1073 | 49 | 616 | 800 | 257 |
| Arrive On Green | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 |
| Sat Flow, veh/h | 1135 | 831 | 821 | 1159 | 1292 | 457 | 967 | 1765 | 80 | 973 | 1316 | 423 |
| Grp Volume(v), veh/h | 68 | 0 | 173 | 22 | 0 | 199 | 91 | 0 | 368 | 41 | 0 | 378 |
| Grp Sat Flow(s),veh/h/ln | 1135 | 0 | 1652 | 1159 | 0 | 1749 | 967 | 0 | 1845 | 973 | 0 | 1739 |
| Q Serve(g_s), s | 3.3 | 0.0 | 5.3 | 1.0 | 0.0 | 5.8 | 3.1 | 0.0 | 5.9 | 1.3 | 0.0 | 6.5 |
| Cycle Q Clear(g_c), s | 9.1 | 0.0 | 5.3 | 6.3 | 0.0 | 5.8 | 9.7 | 0.0 | 5.9 | 7.2 | 0.0 | 6.5 |
| Prop In Lane | 1.00 | | 0.50 | 1.00 | | 0.26 | 1.00 | | 0.04 | 1.00 | | 0.24 |
| Lane Grp Cap(c), veh/h | 285 | 0 | 400 | 298 | 0 | 424 | 602 | 0 | 1121 | 616 | 0 | 1057 |
| V/C Ratio(X) | 0.24 | 0.00 | 0.43 | 0.07 | 0.00 | 0.47 | 0.15 | 0.00 | 0.33 | 0.07 | 0.00 | 0.36 |
| Avail Cap(c_a), veh/h | 397 | 0 | 564 | 413 | 0 | 597 | 602 | 0 | 1121 | 616 | 0 | 1057 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 0.97 | 0.00 | 0.97 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 23.3 | 0.0 | 19.2 | 21.9 | 0.0 | 19.4 | 8.3 | 0.0 | 5.8 | 7.5 | 0.0 | 5.9 |
| Incr Delay (d2), s/veh | 0.4 | 0.0 | 0.7 | 0.1 | 0.0 | 0.8 | 0.5 | 0.0 | 0.8 | 0.2 | 0.0 | 0.9 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.9 | 0.0 | 2.0 | 0.3 | 0.0 | 2.3 | 0.6 | 0.0 | 1.9 | 0.3 | 0.0 | 2.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 23.7 | 0.0 | 20.0 | 22.0 | 0.0 | 20.2 | 8.9 | 0.0 | 6.5 | 7.7 | 0.0 | 6.8 |
| LnGrp LOS | C | A | B | C | A | C | A | A | A | A | A | A |
| Approach Vol, veh/h | | 241 | | | 221 | | | 459 | | | | 419 |
| Approach Delay, s/veh | | 21.0 | | | 20.4 | | | 7.0 | | | | 6.9 |
| Approach LOS | | C | | | C | | | A | | | | A |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 41.0 | | 19.0 | | 41.0 | | 19.0 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 30.5 | | 20.5 | | 30.5 | | 20.5 | | | | |
| Max Q Clear Time (g_c+l1), s | | 11.7 | | 11.1 | | 9.2 | | 8.3 | | | | |
| Green Ext Time (p_c), s | | 2.6 | | 0.8 | | 2.6 | | 0.9 | | | | |

Intersection Summary

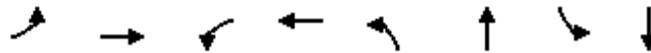
| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 11.7 |
| HCM 6th LOS | B |

Notes

User approved pedestrian interval to be less than phase max green.

Timings

2: Main Street & Ski Hill Road

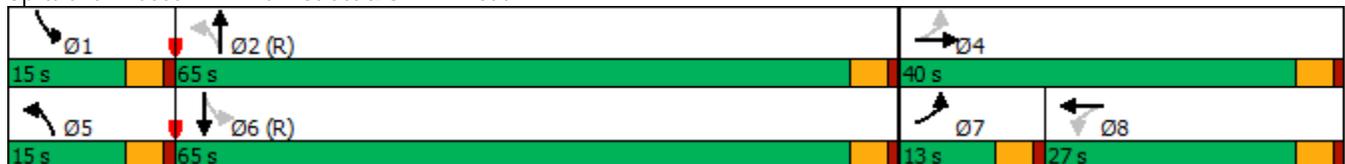


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↶ | ↷ | ↶ | ↷ | ↶ | ↷ | ↶ | ↷ |
| Traffic Volume (vph) | 103 | 175 | 42 | 109 | 67 | 228 | 65 | 344 |
| Future Volume (vph) | 103 | 175 | 42 | 109 | 67 | 228 | 65 | 344 |
| Turn Type | pm+pt | NA | Perm | NA | pm+pt | NA | pm+pt | NA |
| Protected Phases | 7 | 4 | | 8 | 5 | 2 | 1 | 6 |
| Permitted Phases | 4 | | 8 | | 2 | | 6 | |
| Detector Phase | 7 | 4 | 8 | 8 | 5 | 2 | 1 | 6 |
| Switch Phase | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 22.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 |
| Total Split (s) | 13.0 | 40.0 | 27.0 | 27.0 | 15.0 | 65.0 | 15.0 | 65.0 |
| Total Split (%) | 10.8% | 33.3% | 22.5% | 22.5% | 12.5% | 54.2% | 12.5% | 54.2% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | | Lag | Lag | Lead | Lag | Lead | Lag |
| Lead-Lag Optimize? | Yes | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | None | C-Max |
| Act Effct Green (s) | 32.9 | 32.9 | 20.1 | 20.1 | 74.6 | 68.4 | 74.5 | 68.3 |
| Actuated g/C Ratio | 0.27 | 0.27 | 0.17 | 0.17 | 0.62 | 0.57 | 0.62 | 0.57 |
| v/c Ratio | 0.54 | 0.93 | 0.51 | 0.79 | 0.18 | 0.36 | 0.16 | 0.57 |
| Control Delay | 43.2 | 70.7 | 64.6 | 64.8 | 9.5 | 16.2 | 9.4 | 21.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 43.2 | 70.7 | 64.6 | 64.8 | 9.5 | 16.2 | 9.4 | 21.0 |
| LOS | D | E | E | E | A | B | A | C |
| Approach Delay | | 63.8 | | 64.8 | | 14.9 | | 19.5 |
| Approach LOS | | E | | E | | B | | B |

Intersection Summary

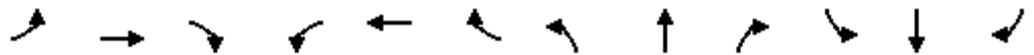
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 37.3
 Intersection LOS: D
 Intersection Capacity Utilization 71.1%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 2: Main Street & Ski Hill Road



HCM 6th Signalized Intersection Summary
 2: Main Street & Ski Hill Road

2040 BG Saturday PM.syn
 02/06/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 103 | 175 | 133 | 42 | 109 | 66 | 67 | 228 | 58 | 65 | 344 | 96 |
| Future Volume (veh/h) | 103 | 175 | 133 | 42 | 109 | 66 | 67 | 228 | 58 | 65 | 344 | 96 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.65 | 0.90 | | 0.46 | 1.00 | | 0.76 | 0.96 | | 0.76 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 112 | 190 | 145 | 46 | 116 | 72 | 73 | 248 | 63 | 71 | 374 | 104 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.94 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 214 | 227 | 174 | 119 | 136 | 84 | 480 | 753 | 191 | 599 | 733 | 204 |
| Arrive On Green | 0.06 | 0.29 | 0.29 | 0.19 | 0.19 | 0.19 | 0.04 | 0.56 | 0.56 | 0.04 | 0.56 | 0.56 |
| Sat Flow, veh/h | 1781 | 786 | 600 | 942 | 726 | 451 | 1781 | 1344 | 341 | 1781 | 1309 | 364 |
| Grp Volume(v), veh/h | 112 | 0 | 335 | 46 | 0 | 188 | 73 | 0 | 311 | 71 | 0 | 478 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1386 | 942 | 0 | 1176 | 1781 | 0 | 1685 | 1781 | 0 | 1673 |
| Q Serve(g_s), s | 5.9 | 0.0 | 27.2 | 5.8 | 0.0 | 18.5 | 2.1 | 0.0 | 11.9 | 2.0 | 0.0 | 21.1 |
| Cycle Q Clear(g_c), s | 5.9 | 0.0 | 27.2 | 20.7 | 0.0 | 18.5 | 2.1 | 0.0 | 11.9 | 2.0 | 0.0 | 21.1 |
| Prop In Lane | 1.00 | | 0.43 | 1.00 | | 0.38 | 1.00 | | 0.20 | 1.00 | | 0.22 |
| Lane Grp Cap(c), veh/h | 214 | 0 | 401 | 119 | 0 | 221 | 480 | 0 | 944 | 599 | 0 | 937 |
| V/C Ratio(X) | 0.52 | 0.00 | 0.84 | 0.39 | 0.00 | 0.85 | 0.15 | 0.00 | 0.33 | 0.12 | 0.00 | 0.51 |
| Avail Cap(c_a), veh/h | 226 | 0 | 410 | 119 | 0 | 221 | 568 | 0 | 944 | 688 | 0 | 937 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 0.78 | 0.00 | 0.78 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 36.2 | 0.0 | 40.0 | 55.4 | 0.0 | 47.1 | 12.1 | 0.0 | 14.2 | 10.7 | 0.0 | 16.2 |
| Incr Delay (d2), s/veh | 1.5 | 0.0 | 11.0 | 2.0 | 0.0 | 26.0 | 0.1 | 0.0 | 0.9 | 0.1 | 0.0 | 2.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.7 | 0.0 | 10.4 | 1.4 | 0.0 | 7.0 | 0.8 | 0.0 | 4.7 | 0.8 | 0.0 | 8.4 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 37.8 | 0.0 | 51.0 | 57.4 | 0.0 | 73.1 | 12.3 | 0.0 | 15.1 | 10.8 | 0.0 | 18.2 |
| LnGrp LOS | D | A | D | E | A | E | B | A | B | B | A | B |
| Approach Vol, veh/h | | 447 | | | 234 | | | 384 | | | 549 | |
| Approach Delay, s/veh | | 47.7 | | | 70.1 | | | 14.6 | | | 17.3 | |
| Approach LOS | | D | | | E | | | B | | | B | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.0 | 71.8 | | 39.2 | 9.1 | 71.7 | 12.2 | 27.0 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 10.5 | 60.5 | | 35.5 | 10.5 | 60.5 | 8.5 | 22.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.0 | 13.9 | | 29.2 | 4.1 | 23.1 | 7.9 | 22.7 | | | | |
| Green Ext Time (p_c), s | 0.1 | 2.2 | | 1.2 | 0.1 | 3.7 | 0.0 | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 32.7 | | | | | | | | |
| HCM 6th LOS | | | | C | | | | | | | | |

Timings

2: Main Street & Ski Hill Road

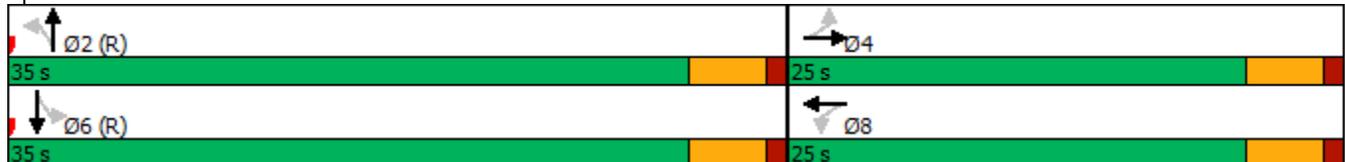


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ |
| Traffic Volume (vph) | 72 | 80 | 20 | 135 | 96 | 324 | 38 | 263 |
| Future Volume (vph) | 72 | 80 | 20 | 135 | 96 | 324 | 38 | 263 |
| Turn Type | Perm | NA | Perm | NA | Perm | NA | Perm | NA |
| Protected Phases | | 4 | | 8 | | 2 | | 6 |
| Permitted Phases | 4 | | 8 | | 2 | | 6 | |
| Detector Phase | 4 | 4 | 8 | 8 | 2 | 2 | 6 | 6 |
| Switch Phase | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 25.0 | 25.0 | 25.0 | 25.0 | 35.0 | 35.0 | 35.0 | 35.0 |
| Total Split (%) | 41.7% | 41.7% | 41.7% | 41.7% | 58.3% | 58.3% | 58.3% | 58.3% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | |
| Recall Mode | None | None | None | None | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 11.1 | 11.1 | 11.1 | 11.1 | 39.9 | 39.9 | 39.9 | 39.9 |
| Actuated g/C Ratio | 0.18 | 0.18 | 0.18 | 0.18 | 0.66 | 0.66 | 0.66 | 0.66 |
| v/c Ratio | 0.44 | 0.47 | 0.11 | 0.57 | 0.18 | 0.30 | 0.06 | 0.35 |
| Control Delay | 28.3 | 14.9 | 19.7 | 24.4 | 5.9 | 5.6 | 4.9 | 5.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 28.3 | 14.9 | 19.7 | 24.4 | 5.9 | 5.6 | 4.9 | 5.5 |
| LOS | C | B | B | C | A | A | A | A |
| Approach Delay | | 18.9 | | 23.9 | | 5.7 | | 5.5 |
| Approach LOS | | B | | C | | A | | A |

Intersection Summary

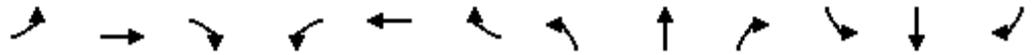
Cycle Length: 60
 Actuated Cycle Length: 60
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 45
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.57
 Intersection Signal Delay: 11.0
 Intersection LOS: B
 Intersection Capacity Utilization 60.1%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 2: Main Street & Ski Hill Road



HCM 6th Signalized Intersection Summary
 2: Main Street & Ski Hill Road

2040 Total Saturday AM.syn
 02/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 72 | 80 | 85 | 20 | 135 | 48 | 96 | 324 | 15 | 38 | 263 | 103 |
| Future Volume (veh/h) | 72 | 80 | 85 | 20 | 135 | 48 | 96 | 324 | 15 | 38 | 263 | 103 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 0.96 | | 0.93 | 0.96 | | 0.93 | 0.97 | | 0.90 | 0.96 | | 0.90 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 78 | 87 | 92 | 22 | 147 | 52 | 104 | 352 | 16 | 41 | 286 | 112 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 291 | 198 | 209 | 299 | 319 | 113 | 580 | 1064 | 48 | 611 | 745 | 292 |
| Arrive On Green | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 |
| Sat Flow, veh/h | 1135 | 800 | 846 | 1154 | 1292 | 457 | 952 | 1765 | 80 | 973 | 1236 | 484 |
| Grp Volume(v), veh/h | 78 | 0 | 179 | 22 | 0 | 199 | 104 | 0 | 368 | 41 | 0 | 398 |
| Grp Sat Flow(s),veh/h/ln | 1135 | 0 | 1647 | 1154 | 0 | 1749 | 952 | 0 | 1845 | 973 | 0 | 1720 |
| Q Serve(g_s), s | 3.8 | 0.0 | 5.5 | 1.0 | 0.0 | 5.8 | 3.8 | 0.0 | 5.9 | 1.3 | 0.0 | 7.2 |
| Cycle Q Clear(g_c), s | 9.6 | 0.0 | 5.5 | 6.5 | 0.0 | 5.8 | 11.0 | 0.0 | 5.9 | 7.2 | 0.0 | 7.2 |
| Prop In Lane | 1.00 | | 0.51 | 1.00 | | 0.26 | 1.00 | | 0.04 | 1.00 | | 0.28 |
| Lane Grp Cap(c), veh/h | 291 | 0 | 407 | 299 | 0 | 432 | 580 | 0 | 1113 | 611 | 0 | 1037 |
| V/C Ratio(X) | 0.27 | 0.00 | 0.44 | 0.07 | 0.00 | 0.46 | 0.18 | 0.00 | 0.33 | 0.07 | 0.00 | 0.38 |
| Avail Cap(c_a), veh/h | 398 | 0 | 563 | 408 | 0 | 598 | 580 | 0 | 1113 | 611 | 0 | 1037 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 0.97 | 0.00 | 0.97 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 23.3 | 0.0 | 19.1 | 21.8 | 0.0 | 19.2 | 9.0 | 0.0 | 5.9 | 7.7 | 0.0 | 6.2 |
| Incr Delay (d2), s/veh | 0.5 | 0.0 | 0.7 | 0.1 | 0.0 | 0.8 | 0.7 | 0.0 | 0.8 | 0.2 | 0.0 | 1.1 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.0 | 0.0 | 2.0 | 0.3 | 0.0 | 2.3 | 0.8 | 0.0 | 2.0 | 0.3 | 0.0 | 2.2 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 23.7 | 0.0 | 19.8 | 21.9 | 0.0 | 20.0 | 9.7 | 0.0 | 6.7 | 7.9 | 0.0 | 7.2 |
| LnGrp LOS | C | A | B | C | A | B | A | A | A | A | A | A |
| Approach Vol, veh/h | | 257 | | | 221 | | | 472 | | | | 439 |
| Approach Delay, s/veh | | 21.0 | | | 20.2 | | | 7.4 | | | | 7.3 |
| Approach LOS | | C | | | C | | | A | | | | A |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 40.7 | | 19.3 | | 40.7 | | 19.3 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 30.5 | | 20.5 | | 30.5 | | 20.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 13.0 | | 11.6 | | 9.2 | | 8.5 | | | | |
| Green Ext Time (p_c), s | | 2.6 | | 0.9 | | 2.8 | | 0.9 | | | | |

Intersection Summary

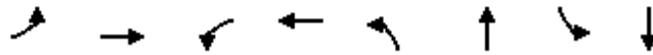
| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 11.9 |
| HCM 6th LOS | B |

Notes

User approved pedestrian interval to be less than phase max green.

Timings

2: Main Street & Ski Hill Road

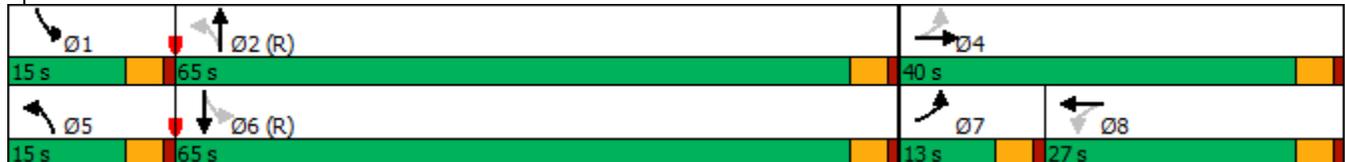


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↶ | ↷ | ↶ | ↷ | ↶ | ↷ | ↶ | ↷ |
| Traffic Volume (vph) | 118 | 175 | 42 | 109 | 75 | 228 | 65 | 344 |
| Future Volume (vph) | 118 | 175 | 42 | 109 | 75 | 228 | 65 | 344 |
| Turn Type | pm+pt | NA | Perm | NA | pm+pt | NA | pm+pt | NA |
| Protected Phases | 7 | 4 | | 8 | 5 | 2 | 1 | 6 |
| Permitted Phases | 4 | | 8 | | 2 | | 6 | |
| Detector Phase | 7 | 4 | 8 | 8 | 5 | 2 | 1 | 6 |
| Switch Phase | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 22.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 |
| Total Split (s) | 13.0 | 40.0 | 27.0 | 27.0 | 15.0 | 65.0 | 15.0 | 65.0 |
| Total Split (%) | 10.8% | 33.3% | 22.5% | 22.5% | 12.5% | 54.2% | 12.5% | 54.2% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | | Lag | Lag | Lead | Lag | Lead | Lag |
| Lead-Lag Optimize? | Yes | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | None | C-Max |
| Act Effect Green (s) | 33.7 | 33.7 | 20.8 | 20.8 | 73.9 | 67.5 | 73.4 | 67.2 |
| Actuated g/C Ratio | 0.28 | 0.28 | 0.17 | 0.17 | 0.62 | 0.56 | 0.61 | 0.56 |
| v/c Ratio | 0.60 | 0.95 | 0.45 | 0.76 | 0.20 | 0.36 | 0.17 | 0.61 |
| Control Delay | 45.5 | 73.4 | 60.0 | 61.5 | 9.8 | 16.5 | 9.5 | 22.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 45.5 | 73.4 | 60.0 | 61.5 | 9.8 | 16.5 | 9.5 | 22.7 |
| LOS | D | E | E | E | A | B | A | C |
| Approach Delay | | 65.9 | | 61.2 | | 15.1 | | 21.0 |
| Approach LOS | | E | | E | | B | | C |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 38.0
 Intersection LOS: D
 Intersection Capacity Utilization 72.8%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 2: Main Street & Ski Hill Road



HCM 6th Signalized Intersection Summary

2040 Total Saturday PM.syn

2: Main Street & Ski Hill Road

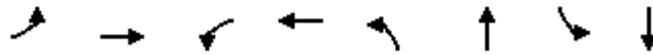
02/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↗ | | ↖ | ↗ | |
| Traffic Volume (veh/h) | 118 | 175 | 143 | 42 | 109 | 66 | 75 | 228 | 58 | 65 | 344 | 108 |
| Future Volume (veh/h) | 118 | 175 | 143 | 42 | 109 | 66 | 75 | 228 | 58 | 65 | 344 | 108 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 0.66 | 0.91 | | 0.46 | 1.00 | | 0.76 | 0.96 | | 0.76 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 128 | 190 | 155 | 42 | 116 | 72 | 82 | 248 | 63 | 71 | 374 | 117 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 1.00 | 0.94 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 224 | 225 | 183 | 117 | 135 | 84 | 460 | 744 | 189 | 591 | 697 | 218 |
| Arrive On Green | 0.07 | 0.30 | 0.30 | 0.19 | 0.19 | 0.19 | 0.04 | 0.55 | 0.55 | 0.04 | 0.55 | 0.55 |
| Sat Flow, veh/h | 1781 | 761 | 621 | 938 | 725 | 450 | 1781 | 1342 | 341 | 1781 | 1260 | 394 |
| Grp Volume(v), veh/h | 128 | 0 | 345 | 42 | 0 | 188 | 82 | 0 | 311 | 71 | 0 | 491 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1381 | 938 | 0 | 1174 | 1781 | 0 | 1683 | 1781 | 0 | 1654 |
| Q Serve(g_s), s | 6.7 | 0.0 | 28.1 | 5.3 | 0.0 | 18.6 | 2.4 | 0.0 | 12.1 | 2.0 | 0.0 | 22.6 |
| Cycle Q Clear(g_c), s | 6.7 | 0.0 | 28.1 | 20.4 | 0.0 | 18.6 | 2.4 | 0.0 | 12.1 | 2.0 | 0.0 | 22.6 |
| Prop In Lane | 1.00 | | 0.45 | 1.00 | | 0.38 | 1.00 | | 0.20 | 1.00 | | 0.24 |
| Lane Grp Cap(c), veh/h | 224 | 0 | 408 | 117 | 0 | 220 | 460 | 0 | 933 | 591 | 0 | 915 |
| V/C Ratio(X) | 0.57 | 0.00 | 0.85 | 0.36 | 0.00 | 0.86 | 0.18 | 0.00 | 0.33 | 0.12 | 0.00 | 0.54 |
| Avail Cap(c_a), veh/h | 224 | 0 | 409 | 117 | 0 | 220 | 546 | 0 | 933 | 680 | 0 | 915 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 0.75 | 0.00 | 0.75 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 36.0 | 0.0 | 39.7 | 55.4 | 0.0 | 47.2 | 12.8 | 0.0 | 14.6 | 11.1 | 0.0 | 17.0 |
| Incr Delay (d2), s/veh | 2.6 | 0.0 | 11.7 | 1.8 | 0.0 | 26.7 | 0.2 | 0.0 | 1.0 | 0.1 | 0.0 | 2.3 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.1 | 0.0 | 10.8 | 1.3 | 0.0 | 7.0 | 0.9 | 0.0 | 4.8 | 0.8 | 0.0 | 9.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 38.6 | 0.0 | 51.4 | 57.3 | 0.0 | 73.9 | 13.0 | 0.0 | 15.6 | 11.2 | 0.0 | 19.3 |
| LnGrp LOS | D | A | D | E | A | E | B | A | B | B | A | B |
| Approach Vol, veh/h | | 473 | | | 230 | | | 393 | | | 562 | |
| Approach Delay, s/veh | | 48.0 | | | 70.8 | | | 15.0 | | | 18.3 | |
| Approach LOS | | D | | | E | | | B | | | B | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.0 | 71.0 | | 39.9 | 9.2 | 70.9 | 13.0 | 26.9 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 10.5 | 60.5 | | 35.5 | 10.5 | 60.5 | 8.5 | 22.5 | | | | |
| Max Q Clear Time (g_c+l1), s | 4.0 | 14.1 | | 30.1 | 4.4 | 24.6 | 8.7 | 22.4 | | | | |
| Green Ext Time (p_c), s | 0.1 | 2.2 | | 1.1 | 0.1 | 3.9 | 0.0 | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 33.3 | | | | | | | | |
| HCM 6th LOS | | | | C | | | | | | | | |

Timings

2: Main Street & Ski Hill Road

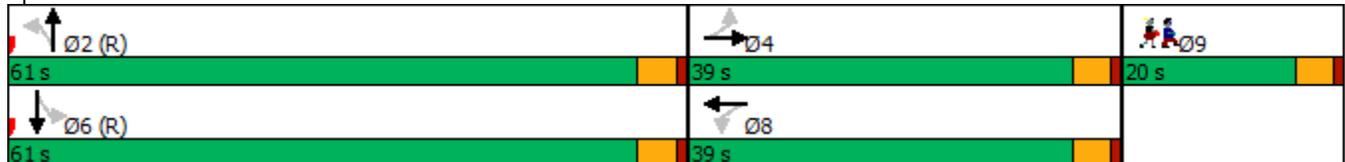


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | Ø9 |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | |
| Traffic Volume (vph) | 72 | 80 | 20 | 135 | 96 | 324 | 38 | 263 | |
| Future Volume (vph) | 72 | 80 | 20 | 135 | 96 | 324 | 38 | 263 | |
| Turn Type | Perm | NA | Perm | NA | Perm | NA | Perm | NA | |
| Protected Phases | | 4 | | 8 | | 2 | | 6 | 9 |
| Permitted Phases | 4 | | 8 | | 2 | | 6 | | |
| Detector Phase | 4 | 4 | 8 | 8 | 2 | 2 | 6 | 6 | |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 9.5 |
| Total Split (s) | 39.0 | 39.0 | 39.0 | 39.0 | 61.0 | 61.0 | 61.0 | 61.0 | 20.0 |
| Total Split (%) | 32.5% | 32.5% | 32.5% | 32.5% | 50.8% | 50.8% | 50.8% | 50.8% | 17% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | |
| Recall Mode | None | None | None | None | C-Max | C-Max | C-Max | C-Max | None |
| Act Effect Green (s) | 17.8 | 17.8 | 17.8 | 17.8 | 93.2 | 93.2 | 93.2 | 93.2 | |
| Actuated g/C Ratio | 0.15 | 0.15 | 0.15 | 0.15 | 0.78 | 0.78 | 0.78 | 0.78 | |
| v/c Ratio | 0.83 | 0.61 | 0.20 | 0.72 | 0.14 | 0.26 | 0.05 | 0.29 | |
| Control Delay | 96.2 | 36.8 | 46.8 | 58.8 | 4.6 | 4.7 | 4.2 | 4.7 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 96.2 | 36.8 | 46.8 | 58.8 | 4.6 | 4.7 | 4.2 | 4.7 | |
| LOS | F | D | D | E | A | A | A | A | |
| Approach Delay | | 54.8 | | 57.6 | | 4.7 | | 4.7 | |
| Approach LOS | | D | | E | | A | | A | |

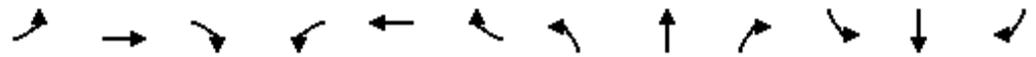
Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 22.4
 Intersection Capacity Utilization 54.6%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service A

Splits and Phases: 2: Main Street & Ski Hill Road



HCM Signalized Intersection Capacity Analysis 2040 Total Saturday AM_Ped Scramble.syn
 2: Main Street & Ski Hill Road 02/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-------|------|------|------|------|------|------|------|------|------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 72 | 80 | 85 | 20 | 135 | 48 | 96 | 324 | 15 | 38 | 263 | 103 |
| Future Volume (vph) | 72 | 80 | 85 | 20 | 135 | 48 | 96 | 324 | 15 | 38 | 263 | 103 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.92 | | 1.00 | 0.96 | | 1.00 | 0.99 | | 1.00 | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 1719 | | 1770 | 1790 | | 1770 | 1851 | | 1770 | 1784 | |
| Flt Permitted | 0.34 | 1.00 | | 0.40 | 1.00 | | 0.51 | 1.00 | | 0.53 | 1.00 | |
| Satd. Flow (perm) | 635 | 1719 | | 743 | 1790 | | 950 | 1851 | | 984 | 1784 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 78 | 87 | 92 | 22 | 147 | 52 | 104 | 352 | 16 | 41 | 286 | 112 |
| RTOR Reduction (vph) | 0 | 38 | 0 | 0 | 13 | 0 | 0 | 1 | 0 | 0 | 5 | 0 |
| Lane Group Flow (vph) | 78 | 141 | 0 | 22 | 186 | 0 | 104 | 367 | 0 | 41 | 393 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | 17.8 | 17.8 | | 17.8 | 17.8 | | 93.2 | 93.2 | | 93.2 | 93.2 | |
| Effective Green, g (s) | 17.8 | 17.8 | | 17.8 | 17.8 | | 93.2 | 93.2 | | 93.2 | 93.2 | |
| Actuated g/C Ratio | 0.15 | 0.15 | | 0.15 | 0.15 | | 0.78 | 0.78 | | 0.78 | 0.78 | |
| Clearance Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 94 | 254 | | 110 | 265 | | 737 | 1437 | | 764 | 1385 | |
| v/s Ratio Prot | | 0.08 | | | 0.10 | | | 0.20 | | | c0.22 | |
| v/s Ratio Perm | c0.12 | | | 0.03 | | | 0.11 | | | 0.04 | | |
| v/c Ratio | 0.83 | 0.55 | | 0.20 | 0.70 | | 0.14 | 0.26 | | 0.05 | 0.28 | |
| Uniform Delay, d1 | 49.6 | 47.4 | | 44.9 | 48.6 | | 3.4 | 3.7 | | 3.1 | 3.8 | |
| Progression Factor | 0.84 | 0.80 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 42.4 | 2.6 | | 0.9 | 8.2 | | 0.4 | 0.4 | | 0.1 | 0.5 | |
| Delay (s) | 84.1 | 40.6 | | 45.7 | 56.8 | | 3.8 | 4.2 | | 3.3 | 4.4 | |
| Level of Service | F | D | | D | E | | A | A | | A | A | |
| Approach Delay (s) | | 53.8 | | | 55.7 | | | 4.1 | | | 4.3 | |
| Approach LOS | | D | | | E | | | A | | | A | |

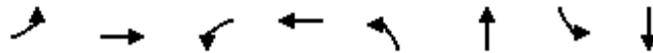
Intersection Summary

| | | | |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay | 21.5 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.39 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 13.5 |
| Intersection Capacity Utilization | 54.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

Timings

2: Main Street & Ski Hill Road

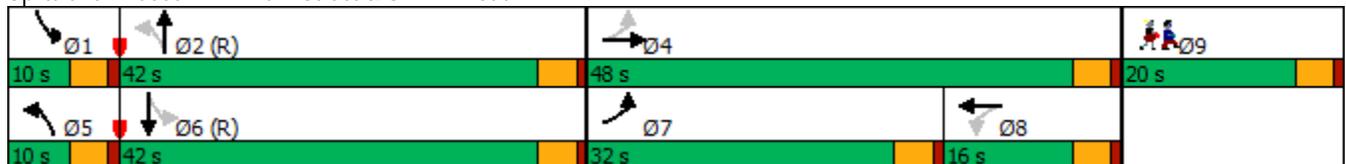


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | Ø9 |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ | |
| Traffic Volume (vph) | 118 | 175 | 42 | 109 | 75 | 228 | 65 | 344 | |
| Future Volume (vph) | 118 | 175 | 42 | 109 | 75 | 228 | 65 | 344 | |
| Turn Type | pm+pt | NA | Perm | NA | pm+pt | NA | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 8 | 5 | 2 | 1 | 6 | 9 |
| Permitted Phases | 4 | | 8 | | 2 | | 6 | | |
| Detector Phase | 7 | 4 | 8 | 8 | 5 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 22.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 9.5 |
| Total Split (s) | 32.0 | 48.0 | 16.0 | 16.0 | 10.0 | 42.0 | 10.0 | 42.0 | 20.0 |
| Total Split (%) | 26.7% | 40.0% | 13.3% | 13.3% | 8.3% | 35.0% | 8.3% | 35.0% | 17% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | | Lag | Lag | Lead | Lag | Lead | Lag | |
| Lead-Lag Optimize? | Yes | | Yes | Yes | Yes | Yes | Yes | Yes | |
| Recall Mode | None | None | None | None | None | C-Max | None | C-Max | None |
| Act Effect Green (s) | 37.0 | 37.0 | 19.7 | 19.7 | 70.7 | 64.0 | 70.1 | 63.7 | |
| Actuated g/C Ratio | 0.31 | 0.31 | 0.16 | 0.16 | 0.59 | 0.53 | 0.58 | 0.53 | |
| v/c Ratio | 0.41 | 0.61 | 0.27 | 0.61 | 0.18 | 0.32 | 0.12 | 0.51 | |
| Control Delay | 44.6 | 47.7 | 47.8 | 50.3 | 11.4 | 18.3 | 11.0 | 22.1 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 44.6 | 47.7 | 47.8 | 50.3 | 11.4 | 18.3 | 11.0 | 22.1 | |
| LOS | D | D | D | D | B | B | B | C | |
| Approach Delay | | 46.8 | | 49.8 | | 16.8 | | 20.7 | |
| Approach LOS | | D | | D | | B | | C | |

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.61
 Intersection Signal Delay: 31.3
 Intersection Capacity Utilization 66.0%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 2: Main Street & Ski Hill Road



HCM Signalized Intersection Capacity Analysis 2040 Total Saturday PM_Ped Scramble.syn
 2: Main Street & Ski Hill Road 02/17/2020



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-------|-------|------|------|------|------|-------|------|------|-------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 118 | 175 | 143 | 42 | 109 | 66 | 75 | 228 | 58 | 65 | 344 | 108 |
| Future Volume (vph) | 118 | 175 | 143 | 42 | 109 | 66 | 75 | 228 | 58 | 65 | 344 | 108 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.93 | | 1.00 | 0.94 | | 1.00 | 0.97 | | 1.00 | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 1737 | | 1770 | 1756 | | 1770 | 1806 | | 1770 | 1796 | |
| Flt Permitted | 0.33 | 1.00 | | 0.55 | 1.00 | | 0.35 | 1.00 | | 0.51 | 1.00 | |
| Satd. Flow (perm) | 615 | 1737 | | 1031 | 1756 | | 655 | 1806 | | 944 | 1796 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.94 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 128 | 190 | 155 | 46 | 116 | 72 | 82 | 248 | 63 | 71 | 374 | 117 |
| RTOR Reduction (vph) | 0 | 26 | 0 | 0 | 18 | 0 | 0 | 5 | 0 | 0 | 7 | 0 |
| Lane Group Flow (vph) | 128 | 319 | 0 | 46 | 170 | 0 | 82 | 306 | 0 | 71 | 484 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | | pm+pt | NA | | pm+pt | NA | |
| Protected Phases | 7 | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | 37.0 | 37.0 | | 19.7 | 19.7 | | 69.8 | 63.1 | | 69.2 | 62.8 | |
| Effective Green, g (s) | 37.0 | 37.0 | | 19.7 | 19.7 | | 69.8 | 63.1 | | 69.2 | 62.8 | |
| Actuated g/C Ratio | 0.31 | 0.31 | | 0.16 | 0.16 | | 0.58 | 0.53 | | 0.58 | 0.52 | |
| Clearance Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 312 | 535 | | 169 | 288 | | 443 | 949 | | 588 | 939 | |
| v/s Ratio Prot | 0.04 | c0.18 | | | 0.10 | | c0.01 | 0.17 | | 0.01 | c0.27 | |
| v/s Ratio Perm | 0.08 | | | 0.04 | | | 0.10 | | | 0.06 | | |
| v/c Ratio | 0.41 | 0.60 | | 0.27 | 0.59 | | 0.19 | 0.32 | | 0.12 | 0.52 | |
| Uniform Delay, d1 | 31.6 | 35.2 | | 43.9 | 46.4 | | 12.4 | 16.2 | | 11.4 | 18.7 | |
| Progression Factor | 1.37 | 1.40 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.8 | 1.6 | | 0.9 | 3.2 | | 0.2 | 0.9 | | 0.1 | 2.0 | |
| Delay (s) | 44.1 | 51.0 | | 44.8 | 49.7 | | 12.6 | 17.1 | | 11.5 | 20.7 | |
| Level of Service | D | D | | D | D | | B | B | | B | C | |
| Approach Delay (s) | | 49.1 | | | 48.7 | | | 16.2 | | | 19.5 | |
| Approach LOS | | D | | | D | | | B | | | B | |

| Intersection Summary | | | |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay | 31.3 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.57 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 22.5 |
| Intersection Capacity Utilization | 66.0% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Intersection | | | | |
|-----------------------------|-------|-------|-------|-------|
| Intersection Delay, s/veh | 10.0 | | | |
| 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 | 227 | 72 | 687 | 599 |
| Demand Flow Rate, veh/h | 231 | 73 | 701 | 611 |
| Vehicles Circulating, veh/h | 488 | 765 | 239 | 85 |
| Vehicles Exiting, veh/h | 208 | 175 | 480 | 753 |
| Ped Vol Crossing Leg, #/h | 13 | 12 | 40 | 12 |
| Ped Cap Adj | 0.998 | 0.998 | 0.995 | 0.998 |
| Approach Delay, s/veh | 7.4 | 7.1 | 12.8 | 8.0 |
| Approach LOS | A | A | B | 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 | 231 | 73 | 701 | 611 |
| Cap Entry Lane, veh/h | 839 | 632 | 1081 | 1265 |
| Entry HV Adj Factor | 0.982 | 0.982 | 0.980 | 0.980 |
| Flow Entry, veh/h | 227 | 72 | 687 | 599 |
| Cap Entry, veh/h | 822 | 620 | 1054 | 1238 |
| V/C Ratio | 0.276 | 0.116 | 0.652 | 0.484 |
| Control Delay, s/veh | 7.4 | 7.1 | 12.8 | 8.0 |
| LOS | A | A | B | A |
| 95th %tile Queue, veh | 1 | 0 | 5 | 3 |

| Intersection | | | | |
|-----------------------------|-------|-------|-------|-------|
| Intersection Delay, s/veh | 11.5 | | | |
| 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 | 283 | 188 | 560 | 786 |
| Demand Flow Rate, veh/h | 288 | 192 | 572 | 801 |
| Vehicles Circulating, veh/h | 634 | 736 | 272 | 143 |
| Vehicles Exiting, veh/h | 310 | 108 | 650 | 785 |
| Ped Vol Crossing Leg, #/h | 69 | 75 | 130 | 68 |
| Ped Cap Adj | 0.991 | 0.990 | 0.974 | 0.991 |
| Approach Delay, s/veh | 10.5 | 9.6 | 10.9 | 12.8 |
| 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 | 288 | 192 | 572 | 801 |
| Cap Entry Lane, veh/h | 723 | 651 | 1046 | 1193 |
| Entry HV Adj Factor | 0.982 | 0.981 | 0.980 | 0.981 |
| Flow Entry, veh/h | 283 | 188 | 560 | 786 |
| Cap Entry, veh/h | 703 | 632 | 997 | 1159 |
| V/C Ratio | 0.402 | 0.298 | 0.562 | 0.678 |
| Control Delay, s/veh | 10.5 | 9.6 | 10.9 | 12.8 |
| LOS | B | A | B | B |
| 95th %tile Queue, veh | 2 | 1 | 4 | 6 |

| Intersection | | | | |
|-----------------------------|-------|-------|-------|-------|
| Intersection Delay, s/veh | 10.4 | | | |
| 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 | 233 | 74 | 703 | 613 |
| Demand Flow Rate, veh/h | 237 | 75 | 717 | 625 |
| Vehicles Circulating, veh/h | 499 | 783 | 244 | 86 |
| Vehicles Exiting, veh/h | 212 | 178 | 492 | 772 |
| Ped Vol Crossing Leg, #/h | 13 | 12 | 40 | 12 |
| Ped Cap Adj | 0.998 | 0.998 | 0.995 | 0.998 |
| Approach Delay, s/veh | 7.6 | 7.3 | 13.5 | 8.2 |
| Approach LOS | A | A | B | 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 | 237 | 75 | 717 | 625 |
| Cap Entry Lane, veh/h | 829 | 621 | 1076 | 1264 |
| Entry HV Adj Factor | 0.982 | 0.982 | 0.981 | 0.980 |
| Flow Entry, veh/h | 233 | 74 | 703 | 613 |
| Cap Entry, veh/h | 813 | 609 | 1049 | 1237 |
| V/C Ratio | 0.286 | 0.121 | 0.670 | 0.495 |
| Control Delay, s/veh | 7.6 | 7.3 | 13.5 | 8.2 |
| LOS | A | A | B | A |
| 95th %tile Queue, veh | 1 | 0 | 5 | 3 |

| Intersection | | | | |
|-----------------------------|-------|-------|-------|-------|
| Intersection Delay, s/veh | 11.5 | | | |
| 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 | 283 | 188 | 560 | 786 |
| Demand Flow Rate, veh/h | 288 | 192 | 572 | 801 |
| Vehicles Circulating, veh/h | 634 | 736 | 272 | 143 |
| Vehicles Exiting, veh/h | 310 | 108 | 650 | 785 |
| Ped Vol Crossing Leg, #/h | 69 | 75 | 130 | 68 |
| Ped Cap Adj | 0.991 | 0.990 | 0.974 | 0.991 |
| Approach Delay, s/veh | 10.5 | 9.6 | 10.9 | 12.8 |
| 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 | 288 | 192 | 572 | 801 |
| Cap Entry Lane, veh/h | 723 | 651 | 1046 | 1193 |
| Entry HV Adj Factor | 0.982 | 0.981 | 0.980 | 0.981 |
| Flow Entry, veh/h | 283 | 188 | 560 | 786 |
| Cap Entry, veh/h | 703 | 632 | 997 | 1159 |
| V/C Ratio | 0.402 | 0.298 | 0.562 | 0.678 |
| Control Delay, s/veh | 10.5 | 9.6 | 10.9 | 12.8 |
| LOS | B | A | B | B |
| 95th %tile Queue, veh | 2 | 1 | 4 | 6 |

| Intersection | | | | |
|-----------------------------|-------|-------|-------|-------|
| Intersection Delay, s/veh | 11.0 | | | |
| 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 | 233 | 74 | 736 | 629 |
| Demand Flow Rate, veh/h | 237 | 75 | 751 | 642 |
| Vehicles Circulating, veh/h | 516 | 817 | 244 | 86 |
| Vehicles Exiting, veh/h | 212 | 178 | 509 | 806 |
| Ped Vol Crossing Leg, #/h | 13 | 12 | 40 | 12 |
| Ped Cap Adj | 0.998 | 0.998 | 0.995 | 0.998 |
| Approach Delay, s/veh | 7.8 | 7.6 | 14.6 | 8.4 |
| Approach LOS | A | A | B | 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 | 237 | 75 | 751 | 642 |
| Cap Entry Lane, veh/h | 815 | 600 | 1076 | 1264 |
| Entry HV Adj Factor | 0.982 | 0.982 | 0.981 | 0.980 |
| Flow Entry, veh/h | 233 | 74 | 736 | 629 |
| Cap Entry, veh/h | 799 | 588 | 1049 | 1237 |
| V/C Ratio | 0.291 | 0.125 | 0.702 | 0.509 |
| Control Delay, s/veh | 7.8 | 7.6 | 14.6 | 8.4 |
| LOS | A | A | B | A |
| 95th %tile Queue, veh | 1 | 0 | 6 | 3 |

| Intersection | | | | |
|-----------------------------|-------|-------|-------|-------|
| Intersection Delay, s/veh | 12.8 | | | |
| 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 | 289 | 193 | 599 | 832 |
| Demand Flow Rate, veh/h | 294 | 197 | 611 | 849 |
| Vehicles Circulating, veh/h | 677 | 778 | 277 | 146 |
| Vehicles Exiting, veh/h | 318 | 110 | 694 | 829 |
| Ped Vol Crossing Leg, #/h | 69 | 75 | 130 | 68 |
| Ped Cap Adj | 0.991 | 0.990 | 0.974 | 0.991 |
| Approach Delay, s/veh | 11.5 | 10.3 | 12.0 | 14.3 |
| 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 | 294 | 197 | 611 | 849 |
| Cap Entry Lane, veh/h | 692 | 624 | 1040 | 1189 |
| Entry HV Adj Factor | 0.982 | 0.981 | 0.980 | 0.980 |
| Flow Entry, veh/h | 289 | 193 | 599 | 832 |
| Cap Entry, veh/h | 673 | 606 | 992 | 1154 |
| V/C Ratio | 0.429 | 0.319 | 0.603 | 0.721 |
| Control Delay, s/veh | 11.5 | 10.3 | 12.0 | 14.3 |
| LOS | B | B | B | B |
| 95th %tile Queue, veh | 2 | 1 | 4 | 7 |

| 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 | 264 | 57 | 762 | 696 |
| Demand Flow Rate, veh/h | 269 | 58 | 777 | 710 |
| Vehicles Circulating, veh/h | 559 | 912 | 265 | 94 |
| Vehicles Exiting, veh/h | 245 | 130 | 563 | 876 |
| Ped Vol Crossing Leg, #/h | 13 | 12 | 40 | 12 |
| Ped Cap Adj | 0.998 | 1.000 | 0.995 | 0.998 |
| Approach Delay, s/veh | 8.9 | 8.1 | 16.5 | 9.5 |
| Approach LOS | A | A | C | 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 | 269 | 58 | 777 | 710 |
| Cap Entry Lane, veh/h | 780 | 544 | 1053 | 1254 |
| Entry HV Adj Factor | 0.981 | 0.978 | 0.981 | 0.981 |
| Flow Entry, veh/h | 264 | 57 | 762 | 696 |
| Cap Entry, veh/h | 764 | 532 | 1027 | 1228 |
| V/C Ratio | 0.345 | 0.107 | 0.742 | 0.567 |
| Control Delay, s/veh | 8.9 | 8.1 | 16.5 | 9.5 |
| LOS | A | A | C | A |
| 95th %tile Queue, veh | 2 | 0 | 7 | 4 |

| Intersection | | | | |
|-----------------------------|-------|-------|-------|-------|
| Intersection Delay, s/veh | 17.1 | | | |
| Intersection LOS | C | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 320 | 217 | 643 | 946 |
| Demand Flow Rate, veh/h | 326 | 221 | 656 | 964 |
| Vehicles Circulating, veh/h | 769 | 861 | 321 | 160 |
| Vehicles Exiting, veh/h | 355 | 116 | 774 | 922 |
| Ped Vol Crossing Leg, #/h | 69 | 75 | 130 | 68 |
| Ped Cap Adj | 0.991 | 0.990 | 0.974 | 0.991 |
| Approach Delay, s/veh | 14.8 | 12.5 | 14.7 | 20.5 |
| Approach LOS | B | B | B | C |
| 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 | 326 | 221 | 656 | 964 |
| Cap Entry Lane, veh/h | 630 | 573 | 995 | 1172 |
| Entry HV Adj Factor | 0.981 | 0.983 | 0.980 | 0.981 |
| Flow Entry, veh/h | 320 | 217 | 643 | 946 |
| Cap Entry, veh/h | 612 | 558 | 950 | 1139 |
| V/C Ratio | 0.523 | 0.389 | 0.677 | 0.830 |
| Control Delay, s/veh | 14.8 | 12.5 | 14.7 | 20.5 |
| LOS | B | B | B | C |
| 95th %tile Queue, veh | 3 | 2 | 5 | 10 |

| Intersection | | | | |
|-----------------------------|-------|-------|-------|-------|
| Intersection Delay, s/veh | 13.2 | | | |
| 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 | 264 | 57 | 793 | 711 |
| Demand Flow Rate, veh/h | 269 | 58 | 808 | 725 |
| Vehicles Circulating, veh/h | 574 | 943 | 265 | 94 |
| Vehicles Exiting, veh/h | 245 | 130 | 578 | 907 |
| Ped Vol Crossing Leg, #/h | 13 | 12 | 40 | 12 |
| Ped Cap Adj | 0.998 | 1.000 | 0.995 | 0.998 |
| Approach Delay, s/veh | 9.1 | 8.4 | 18.1 | 9.8 |
| Approach LOS | A | A | C | 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 | 269 | 58 | 808 | 725 |
| Cap Entry Lane, veh/h | 768 | 527 | 1053 | 1254 |
| Entry HV Adj Factor | 0.981 | 0.978 | 0.981 | 0.981 |
| Flow Entry, veh/h | 264 | 57 | 793 | 711 |
| Cap Entry, veh/h | 752 | 516 | 1027 | 1228 |
| V/C Ratio | 0.351 | 0.110 | 0.772 | 0.579 |
| Control Delay, s/veh | 9.1 | 8.4 | 18.1 | 9.8 |
| LOS | A | A | C | A |
| 95th %tile Queue, veh | 2 | 0 | 8 | 4 |

| Intersection | | | | |
|-----------------------------|-------|-------|-------|-------|
| Intersection Delay, s/veh | 18.4 | | | |
| Intersection LOS | C | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 320 | 217 | 666 | 973 |
| Demand Flow Rate, veh/h | 326 | 221 | 680 | 992 |
| Vehicles Circulating, veh/h | 797 | 885 | 321 | 160 |
| Vehicles Exiting, veh/h | 355 | 116 | 802 | 946 |
| Ped Vol Crossing Leg, #/h | 69 | 75 | 130 | 68 |
| Ped Cap Adj | 0.991 | 1.000 | 0.974 | 0.991 |
| Approach Delay, s/veh | 15.6 | 12.7 | 15.7 | 22.5 |
| Approach LOS | C | B | C | C |
| 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 | 326 | 221 | 680 | 992 |
| Cap Entry Lane, veh/h | 612 | 560 | 995 | 1172 |
| Entry HV Adj Factor | 0.981 | 0.983 | 0.980 | 0.981 |
| Flow Entry, veh/h | 320 | 217 | 666 | 973 |
| Cap Entry, veh/h | 594 | 550 | 950 | 1139 |
| V/C Ratio | 0.538 | 0.395 | 0.702 | 0.854 |
| Control Delay, s/veh | 15.6 | 12.7 | 15.7 | 22.5 |
| LOS | C | B | C | C |
| 95th %tile Queue, veh | 3 | 2 | 6 | 11 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.2 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 217 | 6 | 111 | 285 | 3 | 54 |
| Future Vol, veh/h | 217 | 6 | 111 | 285 | 3 | 54 |
| Conflicting Peds, #/hr | 0 | 4 | 41 | 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 | 92 | 92 | 89 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 268 | 7 | 121 | 320 | 3 | 59 |

| Major/Minor | Major1 | Major2 | Minor1 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0 | 0 | 316 | 0 | 875 313 |
| Stage 1 | - | - | - | - | 313 - |
| Stage 2 | - | - | - | - | 562 - |
| 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 | - | - | 1244 | - | 320 727 |
| Stage 1 | - | - | - | - | 741 - |
| Stage 2 | - | - | - | - | 571 - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1195 | - | 270 699 |
| Mov Cap-2 Maneuver | - | - | - | - | 270 - |
| Stage 1 | - | - | - | - | 712 - |
| Stage 2 | - | - | - | - | 501 - |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 2.3 | 11.2 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 645 | - | - | 1195 | - |
| HCM Lane V/C Ratio | 0.096 | - | - | 0.101 | - |
| HCM Control Delay (s) | 11.2 | - | - | 8.4 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.3 | - | - | 0.3 | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.6 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↔ | | | ↔ | | ↔ |
| Traffic Vol, veh/h | 299 | 4 | 78 | 200 | 5 | 95 |
| Future Vol, veh/h | 299 | 4 | 78 | 200 | 5 | 95 |
| Conflicting Peds, #/hr | 0 | 60 | 1 | 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 | 82 | 92 | 92 | 80 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 365 | 4 | 85 | 250 | 5 | 103 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 | Minor3 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 429 | 0 | 847 |
| Stage 1 | - | - | - | - | 427 |
| Stage 2 | - | - | - | - | 420 |
| Critical Hdwy | - | - | 4.12 | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 |
| Follow-up Hdwy | - | - | 2.218 | - | 3.518 |
| Pot Cap-1 Maneuver | - | - | 1130 | - | 332 |
| Stage 1 | - | - | - | - | 658 |
| Stage 2 | - | - | - | - | 663 |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1065 | - | 284 |
| Mov Cap-2 Maneuver | - | - | - | - | 284 |
| Stage 1 | - | - | - | - | 620 |
| Stage 2 | - | - | - | - | 601 |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 2.2 | 12.9 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h) | 562 | - | - | 1065 | - |
| HCM Lane V/C Ratio | 0.193 | - | - | 0.08 | - |
| HCM Control Delay (s) | 12.9 | - | - | 8.7 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.7 | - | - | 0.3 | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.9 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 269 | 6 | 111 | 353 | 3 | 54 |
| Future Vol, veh/h | 269 | 6 | 111 | 353 | 3 | 54 |
| Conflicting Peds, #/hr | 0 | 4 | 41 | 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 | 92 | 92 | 89 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 332 | 7 | 121 | 397 | 3 | 59 |

| Major/Minor | Major1 | Major2 | Minor1 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0 | 0 | 380 | 0 | 1016 377 |
| Stage 1 | - | - | - | - | 377 - |
| Stage 2 | - | - | - | - | 639 - |
| 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 | - | - | 1178 | - | 264 670 |
| Stage 1 | - | - | - | - | 694 - |
| Stage 2 | - | - | - | - | 526 - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1132 | - | 219 644 |
| Mov Cap-2 Maneuver | - | - | - | - | 219 - |
| Stage 1 | - | - | - | - | 667 - |
| Stage 2 | - | - | - | - | 454 - |

| Approach | EB | WB | NB |
|----------------------|----|----|------|
| HCM Control Delay, s | 0 | 2 | 11.9 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 584 | - | - | 1132 | - |
| HCM Lane V/C Ratio | 0.106 | - | - | 0.107 | - |
| HCM Control Delay (s) | 11.9 | - | - | 8.6 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.4 | - | - | 0.4 | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.4 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 371 | 4 | 78 | 248 | 5 | 95 |
| Future Vol, veh/h | 371 | 4 | 78 | 248 | 5 | 95 |
| Conflicting Peds, #/hr | 0 | 60 | 1 | 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 | 82 | 92 | 92 | 80 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 452 | 4 | 85 | 310 | 5 | 103 |

| Major/Minor | Major1 | Major2 | Minor1 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0 | 0 | 516 | 0 | 994 514 |
| Stage 1 | - | - | - | - | 514 - |
| Stage 2 | - | - | - | - | 480 - |
| 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 | - | - | 1050 | - | 272 560 |
| Stage 1 | - | - | - | - | 600 - |
| Stage 2 | - | - | - | - | 622 - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 990 | - | 230 528 |
| Mov Cap-2 Maneuver | - | - | - | - | 230 - |
| Stage 1 | - | - | - | - | 566 - |
| Stage 2 | - | - | - | - | 557 - |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 1.9 | 14.3 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 496 | - | - | 990 | - |
| HCM Lane V/C Ratio | 0.219 | - | - | 0.086 | - |
| HCM Control Delay (s) | 14.3 | - | - | 9 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.8 | - | - | 0.3 | - |

APPENDIX E

Queuing Analysis Worksheets

Queues

1: Park Avenue & Ski Hill Road



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 225 | 247 | 103 | 219 | 166 | 507 | 97 | 49 | 448 | 288 |
| v/c Ratio | 0.97 | 0.49 | 0.50 | 0.44 | 0.31 | 0.46 | 0.11 | 0.10 | 0.44 | 0.33 |
| Control Delay | 97.6 | 30.4 | 47.3 | 35.9 | 12.4 | 20.9 | 9.9 | 12.0 | 23.4 | 14.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 97.6 | 30.4 | 47.3 | 35.9 | 12.4 | 20.9 | 9.9 | 12.0 | 23.4 | 14.0 |
| Queue Length 50th (ft) | 196 | 131 | 76 | 140 | 51 | 248 | 18 | 14 | 224 | 78 |
| Queue Length 95th (ft) | 234 | 102 | 89 | 156 | 106 | 445 | 36 | 29 | 411 | 179 |
| Internal Link Dist (ft) | | 847 | | 644 | | 282 | | | 462 | |
| Turn Bay Length (ft) | 150 | | 100 | | 100 | | 75 | 350 | | 125 |
| Base Capacity (vph) | 569 | 1125 | 498 | 1193 | 642 | 1096 | 881 | 656 | 1017 | 883 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.40 | 0.22 | 0.21 | 0.18 | 0.26 | 0.46 | 0.11 | 0.07 | 0.44 | 0.33 |

Intersection Summary

Queues

1: Park Avenue & Ski Hill Road



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 292 | 356 | 127 | 201 | 131 | 568 | 187 | 57 | 551 | 235 |
| v/c Ratio | 0.87 | 0.83 | 0.59 | 0.41 | 0.36 | 0.58 | 0.24 | 0.16 | 0.60 | 0.35 |
| Control Delay | 74.2 | 67.2 | 48.4 | 46.7 | 21.8 | 35.7 | 18.8 | 20.3 | 39.3 | 24.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 74.2 | 67.2 | 48.4 | 46.7 | 21.8 | 35.7 | 18.8 | 20.3 | 39.3 | 24.3 |
| Queue Length 50th (ft) | 264 | 348 | 103 | 172 | 67 | 457 | 76 | 28 | 457 | 119 |
| Queue Length 95th (ft) | 303 | 424 | 131 | 201 | 120 | 675 | 132 | 49 | 709 | 220 |
| Internal Link Dist (ft) | | 847 | | 644 | | 282 | | | 462 | |
| Turn Bay Length (ft) | 150 | | 100 | | 100 | | 75 | 350 | | 125 |
| Base Capacity (vph) | 335 | 801 | 217 | 947 | 468 | 982 | 775 | 496 | 924 | 678 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.87 | 0.44 | 0.59 | 0.21 | 0.28 | 0.58 | 0.24 | 0.11 | 0.60 | 0.35 |

Intersection Summary

Queues

2022 Total Saturday AM_Cycle & Optimized.syn

1: Park Avenue & Ski Hill Road

02/17/2020



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 225 | 247 | 103 | 219 | 166 | 507 | 97 | 49 | 448 | 288 |
| v/c Ratio | 0.96 | 0.51 | 0.50 | 0.44 | 0.31 | 0.47 | 0.11 | 0.10 | 0.45 | 0.32 |
| Control Delay | 91.4 | 31.3 | 39.8 | 31.1 | 11.4 | 19.9 | 8.5 | 10.9 | 22.2 | 9.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 91.4 | 31.3 | 39.8 | 31.1 | 11.4 | 19.9 | 8.5 | 10.9 | 22.2 | 9.1 |
| Queue Length 50th (ft) | 171 | 129 | 64 | 111 | 46 | 227 | 14 | 13 | 205 | 42 |
| Queue Length 95th (ft) | 216 | 107 | 83 | 144 | 94 | 405 | 30 | 26 | 374 | 118 |
| Internal Link Dist (ft) | | 847 | | 644 | | 282 | | | 462 | |
| Turn Bay Length (ft) | 150 | | 100 | | 100 | | 75 | 350 | | 125 |
| Base Capacity (vph) | 407 | 804 | 358 | 842 | 542 | 1073 | 872 | 489 | 990 | 895 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.55 | 0.31 | 0.29 | 0.26 | 0.31 | 0.47 | 0.11 | 0.10 | 0.45 | 0.32 |

Intersection Summary

Queues

1: Park Avenue & Ski Hill Road



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 292 | 356 | 127 | 201 | 131 | 568 | 187 | 57 | 551 | 235 |
| v/c Ratio | 0.73 | 0.83 | 0.57 | 0.68 | 0.38 | 0.64 | 0.24 | 0.17 | 0.69 | 0.35 |
| Control Delay | 38.9 | 50.8 | 36.7 | 54.9 | 17.9 | 31.1 | 8.6 | 16.3 | 35.8 | 13.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 38.9 | 50.8 | 36.7 | 54.9 | 17.9 | 31.1 | 8.6 | 16.3 | 35.8 | 13.0 |
| Queue Length 50th (ft) | 170 | 222 | 75 | 127 | 46 | 333 | 22 | 19 | 345 | 47 |
| Queue Length 95th (ft) | 211 | 298 | 91 | 164 | 90 | #557 | 58 | 38 | #574 | 114 |
| Internal Link Dist (ft) | | 847 | | 644 | | 282 | | | 462 | |
| Turn Bay Length (ft) | 150 | | 100 | | 100 | | 75 | 350 | | 125 |
| Base Capacity (vph) | 436 | 638 | 224 | 491 | 345 | 888 | 767 | 328 | 797 | 670 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.67 | 0.56 | 0.57 | 0.41 | 0.38 | 0.64 | 0.24 | 0.17 | 0.69 | 0.35 |

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Queues

1: Park Avenue & Ski Hill Road



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 245 | 212 | 101 | 225 | 182 | 600 | 86 | 42 | 526 | 320 |
| v/c Ratio | 0.97 | 0.40 | 0.40 | 0.42 | 0.40 | 0.57 | 0.10 | 0.11 | 0.54 | 0.38 |
| Control Delay | 94.5 | 23.8 | 39.7 | 34.2 | 14.8 | 25.1 | 10.1 | 13.7 | 28.3 | 17.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 94.5 | 23.8 | 39.7 | 34.2 | 14.8 | 25.1 | 10.1 | 13.7 | 28.3 | 17.4 |
| Queue Length 50th (ft) | 214 | 94 | 72 | 143 | 59 | 326 | 14 | 13 | 293 | 104 |
| Queue Length 95th (ft) | 281 | 135 | 104 | 177 | 131 | 608 | 55 | 38 | #568 | 248 |
| Internal Link Dist (ft) | | 847 | | 644 | | 282 | | | 462 | |
| Turn Bay Length (ft) | 150 | | 100 | | 100 | | 75 | 350 | | 125 |
| Base Capacity (vph) | 577 | 1119 | 577 | 1197 | 567 | 1061 | 854 | 578 | 967 | 843 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.42 | 0.19 | 0.18 | 0.19 | 0.32 | 0.57 | 0.10 | 0.07 | 0.54 | 0.38 |

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Queues

1: Park Avenue & Ski Hill Road



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|-------|------|------|-------|------|
| Lane Group Flow (vph) | 352 | 413 | 150 | 228 | 142 | 651 | 198 | 54 | 646 | 260 |
| v/c Ratio | 0.94 | 0.83 | 0.59 | 0.40 | 0.58 | 0.73 | 0.28 | 0.23 | 0.79 | 0.43 |
| Control Delay | 78.8 | 62.3 | 42.1 | 40.9 | 33.6 | 46.6 | 23.7 | 26.6 | 53.1 | 32.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 78.8 | 62.3 | 42.1 | 40.9 | 33.6 | 46.6 | 23.7 | 26.6 | 53.1 | 32.1 |
| Queue Length 50th (ft) | 304 | 409 | 114 | 184 | 83 | 625 | 94 | 30 | 649 | 157 |
| Queue Length 95th (ft) | 329 | 473 | 138 | 225 | 157 | #1063 | 197 | 69 | #1151 | 309 |
| Internal Link Dist (ft) | | 847 | | 644 | | 282 | | | 462 | |
| Turn Bay Length (ft) | 150 | | 100 | | 100 | | 75 | 350 | | 125 |
| Base Capacity (vph) | 376 | 808 | 253 | 939 | 349 | 888 | 706 | 389 | 816 | 606 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.94 | 0.51 | 0.59 | 0.24 | 0.41 | 0.73 | 0.28 | 0.14 | 0.79 | 0.43 |

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Queues

1: Park Avenue & Ski Hill Road



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 245 | 212 | 101 | 225 | 182 | 600 | 86 | 42 | 526 | 320 |
| v/c Ratio | 0.95 | 0.41 | 0.39 | 0.42 | 0.41 | 0.58 | 0.10 | 0.11 | 0.55 | 0.37 |
| Control Delay | 85.9 | 26.6 | 35.5 | 32.2 | 13.8 | 23.1 | 8.0 | 12.1 | 25.2 | 10.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 85.9 | 26.6 | 35.5 | 32.2 | 13.8 | 23.1 | 8.0 | 12.1 | 25.2 | 10.1 |
| Queue Length 50th (ft) | 186 | 101 | 65 | 136 | 54 | 303 | 11 | 11 | 271 | 55 |
| Queue Length 95th (ft) | 263 | 145 | 103 | 183 | 115 | 523 | 45 | 34 | 466 | 147 |
| Internal Link Dist (ft) | | 847 | | 644 | | 282 | | | 462 | |
| Turn Bay Length (ft) | 150 | | 100 | | 100 | | 75 | 350 | | 125 |
| Base Capacity (vph) | 355 | 691 | 359 | 727 | 454 | 1042 | 849 | 389 | 956 | 875 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.69 | 0.31 | 0.28 | 0.31 | 0.40 | 0.58 | 0.10 | 0.11 | 0.55 | 0.37 |

Intersection Summary

Queues

1: Park Avenue & Ski Hill Road



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 352 | 413 | 150 | 228 | 142 | 651 | 198 | 54 | 646 | 260 |
| v/c Ratio | 0.84 | 0.86 | 0.65 | 0.60 | 0.62 | 0.78 | 0.27 | 0.25 | 0.88 | 0.41 |
| Control Delay | 44.4 | 52.1 | 35.0 | 40.9 | 34.7 | 39.1 | 9.9 | 20.0 | 50.1 | 15.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 44.4 | 52.1 | 35.0 | 40.9 | 34.7 | 39.1 | 9.9 | 20.0 | 50.1 | 15.4 |
| Queue Length 50th (ft) | 199 | 268 | 75 | 121 | 56 | 442 | 29 | 20 | 478 | 67 |
| Queue Length 95th (ft) | 246 | 355 | m105 | 180 | #202 | #746 | 91 | 49 | #738 | 147 |
| Internal Link Dist (ft) | | 847 | | 644 | | 282 | | | 462 | |
| Turn Bay Length (ft) | 150 | | 100 | | 100 | | 75 | 350 | | 125 |
| Base Capacity (vph) | 421 | 603 | 232 | 517 | 230 | 831 | 726 | 220 | 733 | 628 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.84 | 0.68 | 0.65 | 0.44 | 0.62 | 0.78 | 0.27 | 0.25 | 0.88 | 0.41 |

Intersection Summary

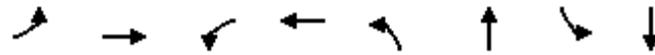
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

2022 Total Saturday AM.syn

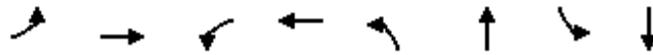
2: Main Street & Ski Hill Road

02/17/2020



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|-------------------------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 95 | 360 | 21 | 247 | 116 | 314 | 78 | 494 |
| v/c Ratio | 0.40 | 0.73 | 0.14 | 0.51 | 0.28 | 0.29 | 0.13 | 0.49 |
| Control Delay | 21.9 | 25.2 | 17.1 | 16.8 | 9.9 | 7.9 | 7.7 | 9.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 21.9 | 25.2 | 17.1 | 16.8 | 9.9 | 7.9 | 7.7 | 9.6 |
| Queue Length 50th (ft) | 28 | 96 | 6 | 56 | 18 | 48 | 11 | 82 |
| Queue Length 95th (ft) | 38 | 31 | 16 | 74 | 38 | 105 | 13 | 88 |
| Internal Link Dist (ft) | | 644 | | 647 | | 308 | | 208 |
| Turn Bay Length (ft) | 75 | | 50 | | 50 | | 100 | |
| Base Capacity (vph) | 311 | 620 | 196 | 621 | 418 | 1083 | 596 | 1011 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.31 | 0.58 | 0.11 | 0.40 | 0.28 | 0.29 | 0.13 | 0.49 |

Intersection Summary



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|-------------------------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 131 | 315 | 45 | 163 | 84 | 273 | 65 | 445 |
| v/c Ratio | 0.64 | 0.90 | 0.52 | 0.75 | 0.20 | 0.31 | 0.15 | 0.57 |
| Control Delay | 49.0 | 67.1 | 66.3 | 61.2 | 9.3 | 14.8 | 9.1 | 20.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 49.0 | 67.1 | 66.3 | 61.2 | 9.3 | 14.8 | 9.1 | 20.7 |
| Queue Length 50th (ft) | 78 | 208 | 32 | 100 | 23 | 106 | 18 | 215 |
| Queue Length 95th (ft) | 107 | 262 | 58 | 176 | 36 | 161 | 31 | 335 |
| Internal Link Dist (ft) | | 644 | | 647 | | 308 | | 208 |
| Turn Bay Length (ft) | 75 | | 50 | | 50 | | 100 | |
| Base Capacity (vph) | 206 | 389 | 106 | 257 | 467 | 886 | 480 | 778 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.64 | 0.81 | 0.42 | 0.63 | 0.18 | 0.31 | 0.14 | 0.57 |

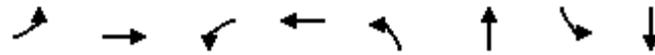
Intersection Summary

Queues

2022 Total Saturday AM_Ped Scamble.syn

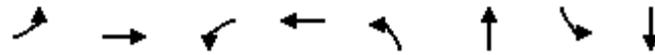
2: Main Street & Ski Hill Road

02/17/2020



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|-------------------------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 95 | 360 | 21 | 247 | 116 | 314 | 78 | 494 |
| v/c Ratio | 0.54 | 0.81 | 0.23 | 0.56 | 0.21 | 0.25 | 0.11 | 0.40 |
| Control Delay | 44.8 | 47.0 | 40.1 | 38.3 | 9.8 | 8.8 | 8.6 | 10.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 44.8 | 47.0 | 40.1 | 38.3 | 9.8 | 8.8 | 8.6 | 10.3 |
| Queue Length 50th (ft) | 54 | 192 | 13 | 148 | 30 | 82 | 19 | 144 |
| Queue Length 95th (ft) | 62 | 65 | 28 | 156 | 53 | 160 | 20 | 144 |
| Internal Link Dist (ft) | | 644 | | 647 | | 308 | | 208 |
| Turn Bay Length (ft) | 75 | | 50 | | 50 | | 100 | |
| Base Capacity (vph) | 267 | 654 | 135 | 654 | 541 | 1261 | 694 | 1229 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.36 | 0.55 | 0.16 | 0.38 | 0.21 | 0.25 | 0.11 | 0.40 |

Intersection Summary



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|-------------------------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 131 | 315 | 45 | 163 | 84 | 273 | 65 | 445 |
| v/c Ratio | 0.44 | 0.61 | 0.32 | 0.64 | 0.16 | 0.27 | 0.10 | 0.44 |
| Control Delay | 46.6 | 48.3 | 51.5 | 52.7 | 10.4 | 16.1 | 10.1 | 19.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 46.6 | 48.3 | 51.5 | 52.7 | 10.4 | 16.1 | 10.1 | 19.2 |
| Queue Length 50th (ft) | 93 | 218 | 32 | 103 | 23 | 104 | 18 | 195 |
| Queue Length 95th (ft) | 114 | 240 | 55 | 170 | 43 | 179 | 37 | 331 |
| Internal Link Dist (ft) | | 644 | | 647 | | 308 | | 208 |
| Turn Bay Length (ft) | 75 | | 50 | | 50 | | 100 | |
| Base Capacity (vph) | 441 | 654 | 144 | 258 | 527 | 1019 | 669 | 1002 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.30 | 0.48 | 0.31 | 0.63 | 0.16 | 0.27 | 0.10 | 0.44 |

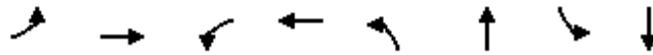
Intersection Summary

Queues

2040 Total Saturday AM.syn

2: Main Street & Ski Hill Road

02/17/2020



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|-------------------------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 78 | 179 | 22 | 199 | 104 | 368 | 41 | 398 |
| v/c Ratio | 0.44 | 0.47 | 0.11 | 0.57 | 0.18 | 0.30 | 0.06 | 0.35 |
| Control Delay | 28.3 | 14.9 | 19.7 | 24.4 | 5.9 | 5.6 | 4.9 | 5.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 28.3 | 14.9 | 19.7 | 24.4 | 5.9 | 5.6 | 4.9 | 5.5 |
| Queue Length 50th (ft) | 25 | 27 | 7 | 55 | 12 | 44 | 4 | 43 |
| Queue Length 95th (ft) | 56 | 68 | 21 | 100 | 37 | 101 | 16 | 105 |
| Internal Link Dist (ft) | | 644 | | 647 | | 308 | | 208 |
| Turn Bay Length (ft) | 75 | | 50 | | 50 | | 100 | |
| Base Capacity (vph) | 332 | 625 | 360 | 621 | 567 | 1230 | 646 | 1131 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.23 | 0.29 | 0.06 | 0.32 | 0.18 | 0.30 | 0.06 | 0.35 |

Intersection Summary

Queues

2040 Total Saturday PM.syn

02/17/2020

2: Main Street & Ski Hill Road



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|-------------------------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 128 | 345 | 42 | 188 | 82 | 311 | 71 | 491 |
| v/c Ratio | 0.60 | 0.95 | 0.45 | 0.76 | 0.20 | 0.36 | 0.17 | 0.61 |
| Control Delay | 45.5 | 73.4 | 60.0 | 61.5 | 9.8 | 16.5 | 9.5 | 22.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 45.5 | 73.4 | 60.0 | 61.5 | 9.8 | 16.5 | 9.5 | 22.7 |
| Queue Length 50th (ft) | 75 | 234 | 29 | 121 | 23 | 129 | 20 | 253 |
| Queue Length 95th (ft) | 128 | #416 | 69 | #225 | 43 | 203 | 38 | 390 |
| Internal Link Dist (ft) | | 644 | | 647 | | 308 | | 208 |
| Turn Bay Length (ft) | 75 | | 50 | | 50 | | 100 | |
| Base Capacity (vph) | 214 | 382 | 101 | 264 | 443 | 862 | 472 | 803 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.60 | 0.90 | 0.42 | 0.71 | 0.19 | 0.36 | 0.15 | 0.61 |

Intersection Summary

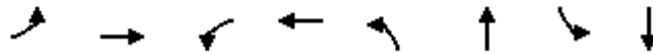
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

2040 Total Saturday AM_Ped Scramble.syn

2: Main Street & Ski Hill Road

02/17/2020



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|-------------------------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 78 | 179 | 22 | 199 | 104 | 368 | 41 | 398 |
| v/c Ratio | 0.83 | 0.61 | 0.20 | 0.72 | 0.14 | 0.26 | 0.05 | 0.29 |
| Control Delay | 96.2 | 36.8 | 46.8 | 58.8 | 4.6 | 4.7 | 4.2 | 4.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 96.2 | 36.8 | 46.8 | 58.8 | 4.6 | 4.7 | 4.2 | 4.7 |
| Queue Length 50th (ft) | 46 | 71 | 15 | 138 | 17 | 66 | 6 | 69 |
| Queue Length 95th (ft) | #123 | 127 | 39 | 206 | 41 | 125 | 19 | 133 |
| Internal Link Dist (ft) | | 644 | | 647 | | 308 | | 208 |
| Turn Bay Length (ft) | 75 | | 50 | | 50 | | 100 | |
| Base Capacity (vph) | 182 | 526 | 213 | 525 | 737 | 1437 | 764 | 1391 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.43 | 0.34 | 0.10 | 0.38 | 0.14 | 0.26 | 0.05 | 0.29 |

Intersection Summary

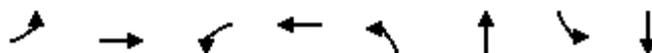
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

2040 Total Saturday PM_Ped Scramble.syn

2: Main Street & Ski Hill Road

02/17/2020



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|-------------------------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 128 | 345 | 46 | 188 | 82 | 311 | 71 | 491 |
| v/c Ratio | 0.41 | 0.61 | 0.27 | 0.61 | 0.18 | 0.32 | 0.12 | 0.51 |
| Control Delay | 44.6 | 47.7 | 47.8 | 50.3 | 11.4 | 18.3 | 11.0 | 22.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 44.6 | 47.7 | 47.8 | 50.3 | 11.4 | 18.3 | 11.0 | 22.1 |
| Queue Length 50th (ft) | 88 | 232 | 32 | 121 | 24 | 131 | 21 | 238 |
| Queue Length 95th (ft) | m132 | 312 | 68 | 197 | 52 | 226 | 46 | 395 |
| Internal Link Dist (ft) | | 644 | | 647 | | 308 | | 208 |
| Turn Bay Length (ft) | 75 | | 50 | | 50 | | 100 | |
| Base Capacity (vph) | 454 | 654 | 169 | 306 | 459 | 969 | 602 | 959 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.28 | 0.53 | 0.27 | 0.61 | 0.18 | 0.32 | 0.12 | 0.51 |

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

APPENDIX F

Conceptual Site Plan

Consultants:

Issuances and Revisions:

| | |
|------------|--|
| 11.16.2018 | TOB PLANNING - CLASS A 1ST PRELIMINARY |
| 07.12.2019 | TOB PLANNING - CLASS A 2ND PRELIMINARY |
| 08.09.2019 | TOB PLANNING - REVISIONS |
| 09.18.2019 | TOB PLANNING - CLASS A 3RD PRELIMINARY |
| 11.15.2019 | TOB PLANNING - CLASS A FINAL |
| 12.20.2019 | TOB PLANNING - REVISIONS |



EAST PEAK 8

EAST PEAK 8
 1599 SKI HILL RD.
 BRECKENRIDGE, CO 80424

PROJECT NO:
 21729.00

SHEET
**PROPOSED
 NEIGHBORHOOD
 ADJACENCIES PLAN**
 SCALE: 1" = 60'-0"

A1.2

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1
 A1.2 PROPOSED NEIGHBORHOOD ADJACENCIES PLAN
 SCALE: 1" = 60'-0"

PLAN NORTH TRUE NORTH