Kaysville City Planning Commission
Meeting Notice and Agenda

The Kaysville City Planning Commission will hold a regular meeting on July 13, 2023, at 7:00 PM in the Council Chambers of the Kaysville City Municipal Building located at 23 East Center Street.. The public is encouraged to attend in person or may view the meeting online via www.Kaysvillelive.com.

1. Opening
2. Approval of the minutes from the June 22, 2023 Planning Commission Meeting
3. Election of a Chair and Vice Chair
4. Conditional Use Permit for Small Earthworks Construction, a Major B Home Occupation, located at 822 West Brandon Drive for Brian Carlson
5. Public Hearing for a text amendment to Title17 Chapter 19 General Commercial District and Title 17 Chapter 20 Central Commercial District
6. Public Hearing for a rezone application from Phil Holland for 521 West 350 North from General Commercial to Mixed Use Zoning District Overlay
7. Public Hearing for a text amendment to Title 17 Chapter 31 Provisions Applying to Particular Uses Section 14 Firework Stands, Christmas Tree Stands, and Temporary or Seasonal Retail Sales
8. Public Hearing for a text amendment to Title 17 Chapter 13 Special Provisision Applying to Particular Uses Section 4 Beekeeping
9. Call to the Public
10. Other matters that properly come before the Planning Commission
    a. Reports
    b. Correspondence
    c. Calendar
11. Adjournment

On a Notice of Meeting was posted in accordance with Utah State Code Section 52-4-202 (3).

Mindi Edstrom
Community Development Department

Kaysville City Planning Commission Meeting Minutes
June 22, 2023

The Planning Commission meeting was held on Thursday, June 22, 2023 at 7:00 pm in the Kaysville City Hall located at 23 East Center Street.

Planning Commission Members in Attendance: Chair Toby Barrus, Commissioners Steve Lyon, Erin Young, Rachel Lott, Mike Packer, Paul Allred and Debora Shepard

Staff Present: Mindi Edstrom and Dan Jessop

Public Attendees: Joan Willden, Bryan Carling, Marissa Loertscher, Kathy Christensen, Tony Christensen, Quincy Loertscher and City Councilmember Abbi Hunt

1-OPENING

Chair Toby Barrus opened the meeting by welcoming all in attendance to the June 22, 2023 Planning Commission meeting.

2- APPROVAL OF THE MINUTES FROM THE MAY 25, 2023 PLANNING COMMISSION MEETING

Commissioner Lyon made a motion to approve the May 25, 2023 minutes. The motion was seconded by Commissioner Lott and the vote was unanimous in favor of the motion (6-0). Commissioner Allred abstained from the vote as we was not present for the May 25 meeting.

3-FINAL PLAT SUBDIVISION APPROVAL FOR ARLING SUBDIVISION LOCATED AT 97 E CRESTWOOD ROAD

The item was introduced by Dan Jessop.
Mr. Jessop said that the property at 97 East Crestwood Road has previously been before the Planning Commission for a rezone to R-1-6 and preliminary plat subdivision. Mr. Carling has completed all of his construction drawings and the City Engineer, Dexter Fisher, approved the plans and gave us a letter of recommendation. When the preliminary plat came to Planning Commission the Commissioners approved the plat with conditions that the applicant modify the detached garage to meet setback requirements and have all the utility service stubs installed before the plat would be recorded.

Commissioner Allred asked if there is a standard plat checklist for preliminary and final plats.

Mr. Jessop answered that Mr. Fisher has a 21 point checklist that he uses to approve the plat.

Bryan Carling approached the Commissioners to let them know he is happy to answer any questions.

Commissioner Lott asked Mr. Carling about the lot with the garage.

Mr. Carling said that they will be removing 2.5 feet off the garage to comply with setbacks.

Commissioner Allred asked if there was any way to adjust the lot line somewhere to avoid having the applicant partially destroy the building.

Commissioner Lyon responded that it has been through many meetings and the applicant is ok with the conditions placed on the garage.

Commissioner Packer made a motion to approve the Final Plat for the Carling Subdivision at 97 East Crestwood with the given conditions placed. Commissioner Lyon seconded the motion with the findings that are in the staff report. The vote was unanimous in favor of the motion (7-0).

4- PUBLIC HEARING FOR A TEXT AMENDMENT TO TITLE 17 CHAPTER 24 FARM ANIMALS

The item was introduced by Dan Jessop.
Mr. Jessop had a resident reach out to him to see if it was permitted to have ducks where they live. Mr. Jessop found that where the resident lives is too small to allow for ducks. He told them that they could apply for a Text Amendment if they were interested in seeing Title 17 Chapter 24 Farm Animals change to allow for smaller properties to have ducks. Mr. Jessop researched urban chickens and the applicant provided lots of research in favor of allowing ducks on smaller lots. The research showed that the current ordinance was over exaggerated with the square footage and that a happy, healthy chicken only needs 15 ft^2 for running around and 3 ft^2 for a coop, which is very minimal space. Mr. Jessop presented the draft ordinance to the Commission and said he added the minimum lot size to be 4,000 ft^2 and only 700 ft^2 required for each animal. Mr. Jessop said that these numbers would allow for happy, healthy birds.

Commissioner Allred inquired about the setback for the coop and if it was from the property line or from a neighboring structure.

Mr. Jessop said that the coops need to be 15 feet. from the house or from a neighbors adjacent out building.

Commissioner Allred asked if the resident would need to come in and work with staff for permission to have birds.

Mr. Jessop said that this would be a permitted use if the resident can comply with the

ordinances requirments.

Chair Barrus opened up the public hearing and asked the resident to state their name.

Joan Willden approached the Commissioners to talk about allowing miniature goats. She gave an example of the Farm Ordinance 17.16.080 (attached in minutes) from West Bountiful, Utah where they use a point system for allowing the amount of animals on a parcel. West Bountiful's ordinance says that pygmy or miniature farm animals will have one half the points of a normal sized species. Mrs. Willden feels like this would be a good thing to add to the Kaysville City ordinance.

Quincy Loertscher thanked staff for assistance and discussion. He suggested setting a unified square footage number like sheep and horses have making the ordinance less complicated to understand.

Joan Willden commented that she would not want the ordinance changed to make it so less animals are permitted.

Chair Barrus closed the public hearing.

Commissioner Allred stated he is in favor of urban food production and enjoys the goats, dogs, and chicken in his neighborhood and feels that we could allow some flexibility for urban farming.

Commissioner Lott asked about the standardization of the number and asked for an explanation.

Mr. Jessop said that 21,780 ft^2 is considered a half acre and larger than that is when other larger animals start to get added to property. He feels that the 435 number is a good number to consider for the needs of the applicant. However he said the Commissioners could suggest a different number to forward to City Council.

Commissioner Young said that she would support the smaller number and it feels like ample room to her.

Commissioner Lyon suggested the 500 number to keep it simple and Commissioner Allred agreed.

Commissioner Lyon made a motion to approve the text amendment for Title 17 Chapter 24 Farm Animals with the amended language to allow for lot area to be 500 ft^2 across the board for all lot sizes down to the half-acre. Commissioner Lott seconded the motion. The vote was unanimous in favor of the motion (7-0).

5- PUBLIC HEARING FOR A TEXT AMENDMENT TO TITLE 17 CHAPTER 33 SIGN REGULATIONS

The item was introduced by Dan Jessop.

He said that this ordinance had come before the Commissioners and that the Commissioners asked for staff to do further research to see what is allowed in other cities. Mr. Jessop said that he used a list with 30 cities that are along scenic byways throughout the state to call and see what sign height was allowed in their cities. He spoke to several Directors of cities and counties and found the answer to be similar in each location. The byways are state regulated and they determine the signs and adjacent properties private property and they go by the zoning ordinances. He said that staff decided to recommend the height allowance of the current sign ordinance remain in place. Ms. Greenwood went thru our ordinance and made some simple housekeeping changes. The text amendment to the ordinance would be the same as other cities by allowing the byway to be its own identity and that adjacent properties would be regulated by zoning. The only protected area west of the corridor would have a clause in the ordinance that would exclude any signs over 8 feet.

Commissioner Allred clarified saying that nobody regulates signs outside of city limits. The text amendment would make signs prohibited over 8 feet tall in any zone located on the west side of SR177 and that regular zoning codes would apply everywhere.

Chair Barrus opened the Public Hearing. No comments were received and Chair Barrus closed the Public Hearing.

Commissioner Young asked about the 45 foot maximum height for on premise ground signs and asked if the Commissioners were locked into that number.

Mr. Jessop responded saying that the 45 f00t is for signs within 300 feet of I-15 and it is totally separate because the West Davis Corridor is down on the bottom of 200 north. The 45 foot allowance is only applicable to business near I-15. The West Davis Corridor is further than 300 feet from I-15 so a 30 foot sign would be permitted.

Commissioner Lott made a motion to approve the text amendment for Title 17 Chapter 33 Sign Code based on the findings from the staff report, which include:

- No substantive changes to the sign height are proposed.
- No best practices data have been found in Utah regarding sign heights along scenic byways.
- The General Plan is neutral on the proposed text amendment.
- Protection of Great Salt Lake view shed to the west will allow passersby to enjoy an unobstructed view.
- Development to the east of the scenic byway allows building heights which are equal to higher than proposed sign height limits.

- Other findings from the Planning Commission.

Commissioner Lyon seconded the motion. The vote was in favor of the motion and the vote was unanimous (7-0).

6- CALL TO THE PUBLIC

No comments were made.

7- OTHER MATTERS THAT PROPERLY COME BEFORE THE PLANNING COMMISSION

Commissioners will need to elect a new Chair to the Planning Commission at the next meeting. Planning Commission meeting dates are the 13th and 27th for July.

8- ADJOURNMENT

Commissioner Lyon motioned to adjourn the meeting at 7:45 pm.

PLANNING COMMISSION STAFF REPORT

To: Kaysville City Planning Commission
From: Mindi Edstrom, Business License Officer
Date: July 7, 2023

Agenda Item #4: Conditional Use Permit for a Major Home B Occupation for Small Earthworks Construction located at 822 West Brandon Drive for Brian Carlson

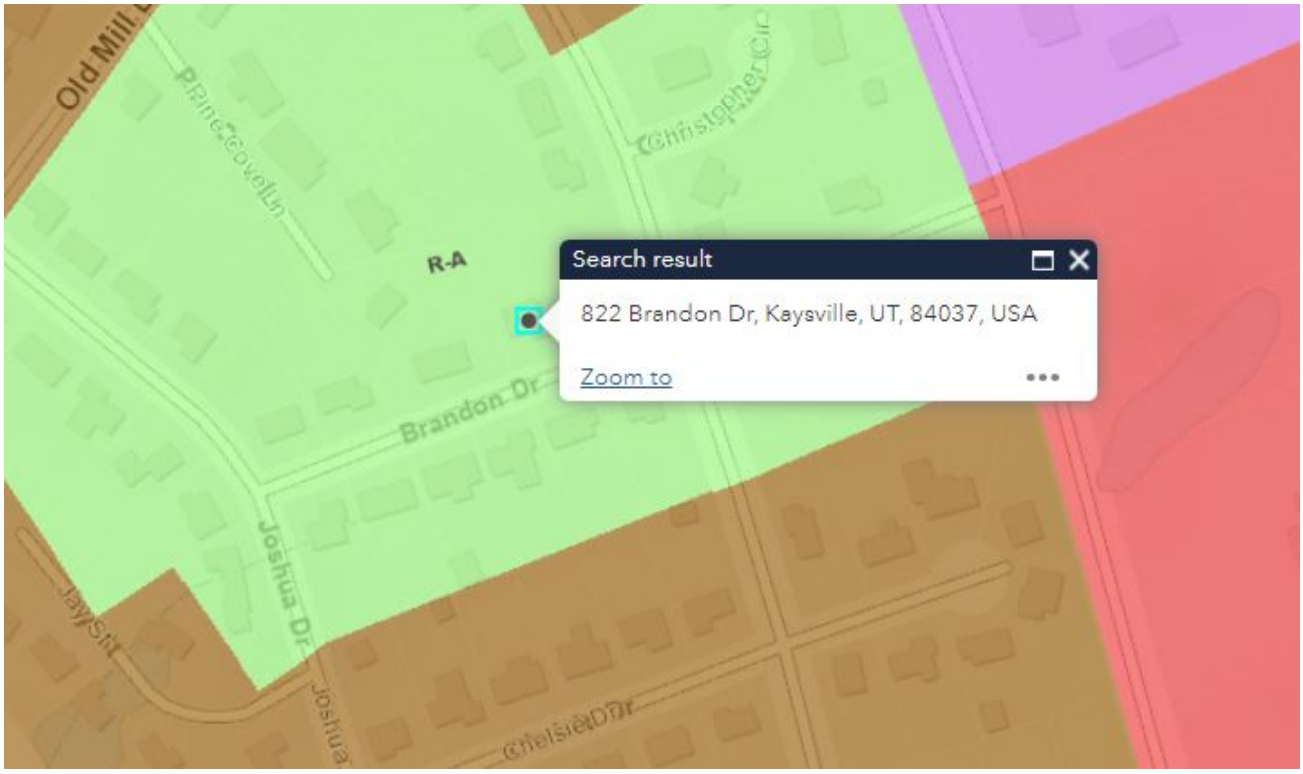
Meeting Date	July 13, 2023
Application Type	Conditional Use Permit
Applicant | Owner	Brian Carlson| Small Earthworks Construction
Address | Parcel ID Number	822 West Brandon Drive | 08-233-0037
Lot Size	0.52 acres | 22,651.2 ft²
Current Use	Single Family Dwelling
Conditional Use	Major B Home Occupation

1. BACKGROUND

Mr. Carlson is the owner of Small Earthworks Construction and came into Kaysville City offices to apply for a Major B Home Occupation business license on June 29, 2023. He is in the process of purchasing the home at 822 West Brandon Drive from his parents and will putting in an RV pad where he plans to store his small mini excavator. Mr. Carlson also has a personal truck and a dump trailer which will be stored on the property. Mr. Carlson delivered his DOPL application for General Contractor on June 30th to the state offices and should be licensed in the next three weeks.

2. Zoning

The property is zoned R-A. KCC 17-26-4 Major Home Occupations B allows for and regulates business such as this.



3. Public Noticing and Public Comment

A sign was placed on the property on July 7, 2023.

4. Recommendation

Staff is recommending approval of this Conditional Use Permit located at 822 W. Brandon Drive for Small Earthworks Construction with any conditions Planning Commission feel are necessary.

Findings for a recommendation of approval include:

1. The proposed use is consistent with the KCC 17026-4 Major Home Occupation B regulations for Contractors that have equipment such as a trailer stored at the home.
2. The applicant has been made aware of Major B Home Occupation regulations and has agreed to comply.
3. Application has been reviewed by staff and this business is compliant with City Zoning, Department of Commerce, and Department of Public Licensing.
4. The business will not have an adverse effect on the use, enjoyment, or valuation of property in the proposed neighborhood.
5. Any other findings the Planning Commission would like to make.

PLANNING COMMISSION STAFF REPORT

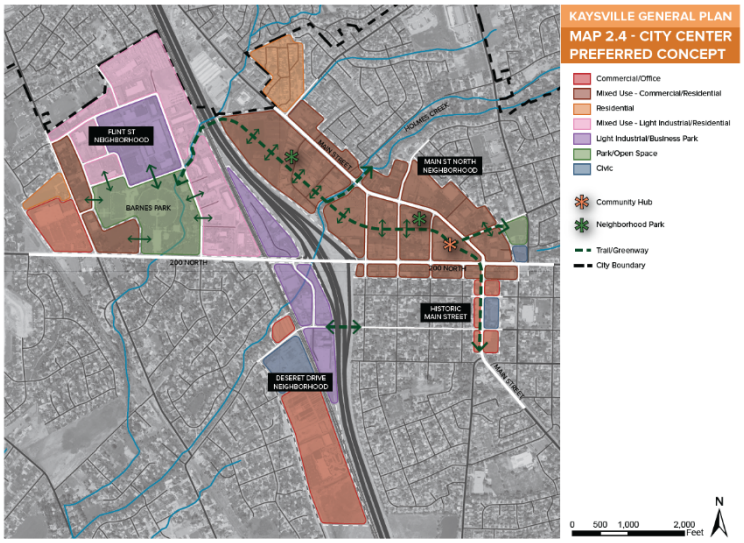
To: Kaysville City Planning Commission
From: Melinda Greenwood, Community Development Director
Date: July 6, 2023

Agenda Item #5: Public Hearing for a text amendment to Title17 Chapter 19 General Commercial District and Title 17 Chapter 20 Central Commercial District

Meeting Date	July 13, 2023
Application Type	Text Amendment
Applicant	Kaysville City Mayor & Council
Chapter | Title | Section	17-19-8 Prohibited Uses; 17-20-4 Conditional Uses and 17-20-8 Prohibited Uses

1. BACKGROUND

The City made extensive efforts the past few years to plan for redevelopment of the City Center area, which includes 200 North between 100 West and I-15 and Main Street from the north boundary through the historic downtown area.



Staff has been directed by elected officials to look at implementing an ordinance which would prevent the City Center area from becoming over-saturated by uses which only serve vehicles. Such uses detract from the vision of a mixed use and people-centered destination.

An initial discussion on changes in the City Center area took place at the March 23, 2023 Planning Commission Meeting, but was focused on limiting the particular use of car washes. During that meeting, Commissioners expressed the desire to look at limiting a variety of uses which only serve vehicles, instead of focusing on one use in particular. The Planning Commission implemented a pending ordinance restriction during the meeting and motioned to continue the item until a further date. Staff believes the updated proposed regulations align better with the Planning Commission's direction and the vision set forth in the recently adopted 2022 General Plan.

The proposed text amendments (see attachment 1) for Title 17 Chapter 19 General Commercial and Title 17 Chapter 20 Central Commercial aim to prohibit uses which are singularly focused on vehicles on the frontage of Main Street and 200 North in the designated City Center area between I-15 and 100 East and Main Street between the City's northern border and 100 South.

2. 2022 General Plan

Enrich our city center and downtown

We will enhance our city center with commercial and mixed-use development and investing in streetscape and parking.

The 2022 General Plan is founded upon five guiding principles, one of which is titled as "Enrich our city center and downtown" and specifically calls out a focus on mixed-use development. Guiding principles are broad in nature and all goals and objectives established in the General Plan should support one or more of these principles. The proposed text amendments to the General Commercial and Central Commercial zones will be a foundational first step in transforming and enriching our City Center area. If adopted, the change should spearhead desirable development and redevelopment that Kaysville citizens established during the community outreach process for the 2022 General Plan.

Also outlined in the 2022 General Plan is the City's goal of preserving Main Street and our City Center area for uses which will bring vitality, vibrancy and contribute to a pedestrian-oriented area. Page 18 (emphasis added) states:

> *Kaysville City Center is a place that builds upon the well-established history, patterns and forms of the downtown area,* ***yet is not timid in the introduction of new ideas*** *and places as part of creating a larger,* ***more diverse and people-centric City Center*** *of the future.*

Map 2.4 of the 2022 General Plan shows the preferred option of the City Center concept and includes a mixed use development along Main Street from approximately 100 South to the City's northern border and 200 North between the I-15 and 100 East. The proposed text amendment hones in on the bulk of the City Center area, and if adopted, will be a first bold step to begin the lengthy process of transforming Kaysville's longest-established commercial cores.

Page 21 of the 2022 General Plan states that as we continue to redevelop our City Center, we should look to create Walkable Mixed Use Streets (see excerpt to the left) and establish a foundation of design characteristics that "will need to be a human scale that is comfortable and safe to walk along."

WALKABLE MIXED USE STREETS

As the area transitions, the design of the streets themselves should transform to cater to pedestrians. While the area's streets will balance all the modes – driving, bicycling, transit, freight – their foundational design characteristic will need to be a human scale that is comfortable and safe to walk along.

Key aspects of the future walkable street profile for the Barnes Park and North Main Street areas are:

- A heavier emphasis on person space than vehicular space
- High quality pedestrian realm – wide sidewalks and furnishings area
- Regular street trees
- Streetscape amenities
- High-quality relationship with development sites – frequent direct building/site entries to the sidewalk, building transparency, and active yard spaces

Specific to the north section of Main Street, the 2022 General Plan continues and states we should place a "heavier emphasis on person space than vehicular space." For this to take place, we need to restrict uses along Main Street in the City Center as well as 200 North which only serve vehicle traffic and do not have dual spaces for dining, shopping or other retail services. The proposed text amendment accomplishes this task by disallowing business such as auto repair shops, towing services, and auto detailing, car washes and similar services.

The culmination of Chapter 1 Land Use & Placemaking Plan outlines specific goals and implementation measures which further support the proposed text amendments.

Chapter 1 Goal 2 is listed as: **Make Kaysville City Center Distinct and Identifiable from Adjacent Neighborhoods and Surrounding Cities** with the specific objectives pasted into the staff report below.

> ***2.1: Improve commercial Frontage and streetscapes along key corridors such as Main Street and 200 North***.
>
> > ***Implementation Measure:*** *Preserve the best of what exists and develop new commercial and mixed use buildings to create a "street edge" along the major corridors.*
>
> ***2.2: Create a distinct city center and expand the "heart of the community" to include areas beyond the historic core.***
>
> > ***Implementation Measure:*** *Modify existing ordinances and codes to allow for mixed-use development in the Main Street North and Barnes Park neighborhood areas, as detailed in the Placemaking Plan. Consider the implementation of a form-based code to guide future development in achieving a form, scale and style that are appropriate for Kaysville.*

Chapter 1 Goal 9 suggests the City should**: Encourage Diverse Commercial Uses to Meet the Needs of the Community and Visitors** and prescribes the following relevant objective and implementation measure.

> ***9.1: Focus primary commercial uses in the City Center and secondary uses in smaller existing/future nodes.***
>
> > ***Implementation Measure:*** *Encourage mixed use and flex development in the City Center.*

On page 34 of the 2022 General Plan, we find additional support for refining development of the northern portion of Main Street by focusing on walking, biking and transit and therefore limiting development which is vehicle-centric.

NORTH MAIN STREET

The vision for this northern segment of Main Street (north of 200 North) is to transform it to serve and complement the land use and character mix envisioned for the Main Street North (see *Kaysville City Center section*), including more emphasis on walking, bicycling and transit.

The 2022 General Plan continues to support the proposed text amendment in Chapter 2 where Goal 4 is listed as: **Improve Access, Walkability, and Sense of Place on Historic Main Street** which notes that "Historic and **North Main Street** are envisioned to be pedestrian-friendly corridors that support city center activities and uses." Specific to Main Street, the chapter's objectives continue to include:

> ***Objective 4.4: Improve Walkability.*** *Continue to create a high-quality pedestrian realm for a variety of uses such as walking and gathering.*

Chapter 2 sets similar minded goals Goal 5 and Objective 5.1 which again asks the City to create spaces that are less focused on cars and more focused on quality destinations and pedestrians.

> ***Objective 5.1: Create a new and enhanced person-focused network.***
> ***Implementation Measure (excerpt):*** *Create a foundation for the transformation of these areas by planning and implementing a connected and dense network. This network will include street types new to Kaysville that create more focus on space designed for people and less space designed for motor vehicles.*

The addition or expansion of businesses which are strictly focused on automobiles will prolong the City's ability to accomplish the defined place-making goals and objectives which have been specifically set for the City Center area. Implementing the proposed changes to our zoning code will decrease the focus on vehicles and begin the long task of working towards a sustainable, viable and active mixed-use City Center. Blending uses which create an inviting and destination focused atmosphere for both pedestrians, vehicles and other modes of transportation will be critical to realizing the City Center vision.

The proposed text amendments are duplicative for both the Central Commercial zone and the General Commercial zone and state:

> *Uses which are singularly focused on vehicles are expressly prohibited on properties with frontage along 200 North between I-15 and 100 East and Main Street between the City's northern border and 100 South. Such uses include but are not limited to auto repair shops, tire shops, auto detailing services, towing services, auto tinting services, auto rentals, lube and oil service stations, spray and tunnel car washes which are not accompanied with a convenience store, windshield repair centers, drive-through establishments which do not include indoor retail or dining spaces for customers and other uses which create a heavy emphasis on vehicle space.*
>
> *Storage services are not permitted on properties with frontage along 200 North between I-15 and 100 East and Main Street between the City's northern border and 100 South.*

It is worth clarifying that the City supports services and uses which are solely focused on a vehicle and we want and need them in our community. Nevertheless, we want to take steps to ensure

those services are only in locations where they will not detract from the vision which the 2002 General Plan has clearly established.

3. Public Noticing and Public Comment

A Public Hearing Notice for this matter was posted on Friday, June 30, 2023 and no comments have been received since that posting.

However, comments have been previously submitted to the Planning Commission which stem from the March 23, 2023 Planning Commission meeting. Property owners came and spoke to the Commission under the Call to the Public at the May 11, 2023 Planning Commission meeting and submitted a letter to the Planning Commissioners on June 15, 2023. All those communications are attached to this staff report.

4. Recommendation

Based on findings below, staff recommends the Planning Commission send a recommendation of approval to the City Council for the proposed text amendments for Title 17-19-8 Prohibited Uses, 17-20-4 Conditional Uses and 17-20-8 Prohibited Uses.

Findings for a recommendation of approval include:

a. The proposed text amendments supports the 2022 General Plan guiding principal of "Enriching our city center and downtown."
b. The proposed text amendments are consistent with and supported by the goals, objectives and implementation measures identified in the 2022 General Plan.
c. The proposed text amendments will support the City Center concept defined in Map 2.4 of the 2022 General Plan.
d. Any other findings identified by the Planning Commission.

Attachments:

1. Draft Ordinance Amendments
2. Minutes excerpt from March 23, 2023

ORDINANCE __-__-__

AN ORDINANCE ENACTING TITLE 17, CHAPTER 19, SECTION 8 AND TITLE 17, CHAPTER 20, SECTION 8 EXPRESSLY PROHIBITING CERTAIN USES IN SPECIFIC AREAS OF THE GENERAL COMMERCIAL ZONE AND CENTRAL COMMERCIAL ZONE; PROVIDING FOR REPEALER; PROVIDING FOR SEVERABILITY; AND PROVIDING FOR AN EFFECTIVE DATE

WHEREAS, Kaysville City desires to encourage a diverse and healthy business profile; and

WHEREAS, Kaysville City desires to implement the City Center and Downtown vision identified in the 2022 General Plan to ensure that development and redevelopment occur in a manner consistent with the resident's desires; and

WHEREAS, Kaysville City also desires to maintain and attract businesses and uses which create and enhance walkable mixed-use places which are desirable as a destination; and

WHEREAS, the City finds that limiting uses which are singularly focused on vehicles along major corridors of 200 North between I-15 and 100 East and Main Street between the City's northern border and 100 South is a critical first step in identified placemaking goals and objectives; and

WHEREAS, the Kaysville City Council finds it to be in the best interest of its citizens to enact the ordinance outlined below.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF KAYSVILLE, UTAH:

SECTION I: Repealer. If any provisions of the City's Code previously adopted are inconsistent herewith they are hereby repealed.

SECTION II: Enactment. Title 17, Chapter 19, Section 8 and Title 17, Chapter 20, Section 8 shall be enacted and Title 17, Chapter 20, Section 4 to be amended to read as follows:

General Commercial District

17-19-8 Prohibited Uses

Uses which are singularly focused on vehicles are expressly prohibited on properties with frontage along 200 North between I-15 and 100 East and Main Street between the City's northern border and 100 South. Such uses include but are not limited to auto repair shops, tire shops, auto detailing services, towing services, auto tinting services, auto rentals, lube and oil service stations, spray and tunnel car washes which are not accompanied with a convenience store, windshield repair centers, drive-through establishments which do not include indoor retail or dining spaces for customers and other uses which create a heavy emphasis on vehicle space.

Storage services are not permitted on properties with frontage along 200 North between I-15 and 100 East and Main Street between the City's northern border and 100 South.

Central Commercial District

17-20-4 Conditional Uses

Compliance with standards shall be determined by the Planning Commission by reference to KCC 17-30.

1. Theaters.
2. Motels or hotels.
3. Light industry/research uses subject to the provisions of KCC 17-23.
4. Dwellings.
5. Social halls, lodges, fraternal organizations.
6. ~~Automotive repair that does not break the continuity of retail store frontage for pedestrians, does not impose a nuisance on residences or other surrounding uses, does not create traffic hazards or undue traffic congestion, and has pump islands located so that vehicles serviced or awaiting service do not block any public sidewalk or driveway.~~
6. Amusement arcades.
7. Public utility substations.
8. Sale of beer for consumption on the premises of a full-service restaurant, limited-service restaurant, beer-only restaurant, banquet or reception center.
9. Sale of liquor for consumption on the premises of a full-service restaurant, limited-service restaurant, banquet or reception center.

17-20-8 Prohibited Uses

Uses which are singularly focused on vehicles are expressly prohibited on properties with frontage along 200 North between I-15 and 100 East and Main Street between the City's northern border and 100 South. Such uses include but are not limited to auto repair shops, tire shops, auto detailing services, towing services, auto tinting services, auto rentals, lube and oil service stations, spray and tunnel car washes which are not accompanied with a convenience store, windshield repair centers, drive-through establishments which do not include indoor retail or dining spaces for customers and other uses which create a heavy emphasis on vehicle space.

Storage services are not permitted on properties with frontage along 200 North between I-15 and 100 East and Main Street between the City's northern border and 100 South.

SECTION III: Severability. If any section, subsection, sentence, clause or phrase of this ordinance is declared invalid or unconstitutional by a court of competent jurisdiction, said portion shall be severed and such declaration shall not affect the validity of the remainder of this ordinance.

SECTION IV: Effective Date. This ordinance being necessary for the peace, health and safety of the City, shall become effective immediately upon posting.

PASSED AND ADOPTED by the City Council of Kaysville, Utah, this _____ day of _____, 2023.

_____

Tamara Tran, Mayor

ATTEST:

_____

Annemarie Plaizier, City Recorder

Commissioner Packer said that he has no problem passing this ordinance on to City Council.

Commissioner Allred made a suggestion to change the wall sign column verbiage.

Commissioner Sommerkorn asks what the street designation is of 200 North in Kaysville and Ms. Greenwood responded saying that it is a minor arterial street.

Commissioner Sommerkorn asked which streets are the major arterial streets in Kaysville and Ms. Greenwood responded those streets are I-15, US-89, and the West Davis Corridor (formerly known as State Route 67).

Commissioner Sommerkorn said that if it's not along a principal arterial or within a certain distance of a principal arterial in our code then a 30 foot sign is allowed. The on-premise and ground sign requirements in the PU, GC, CC and LI zones states that within 1,320 feet of a principal arterial it can be up to 30 feet tall as per the current ordinance.

Commissioner Allred made a motion to continue the ordinance for further discussion and motion was seconded by Commissioner Packer. The vote was unanimous in favor of the motion 7-0.

7- PUBLIC HEARING TO CONSIDER AMENDING TITLE 17 CHAPPTER 19 GENERAL COMMERCIAL DISTRICT AND TITLE 17 CHAPTER 20 CENTRAL COMMERCIAL DISTRIC OF KAYSVILLE CITY CODE
Introduced by Melinda Greenwood

This item is brought forward at the request of the Mayor because of tunnel carwash applications with very close proximity to one another. This agenda item is to potentially limit carwash locations and putting proximity regulations on them. Ms. Greenwood shared a slide of the City Center Preferred Concept from the General Plan as well as a map with all the car washes currently in the city. She shared the proposed amendment would prohibit car washes if they didn't fit the three circumstances in Prohibited Uses. The amendment would prohibit all together allowing car washes in the Central Commercial Zone. She said that staff is recommending approval of this ordinance.

Chair Barrus opened up the meeting to the Public Hearing.

Russell Nelson said he is involved with one of the existing car washes in Kaysville and brought up tearing down the Good Spray car wash and leasing the property for that lot and the lot next door to put in a Quick Quack Car Wash. By amending the ordinance it would make the Good Spray a nonconforming use. He said he is asking for consideration that in the ordinance to include some language that would allow the existing car washes to be able to upgrade and expand and improve to meet market demands.

Commissioner Allred asked the applicant if they are wanting a different car wash on the same property.

Russell Nelson said that there would be a complete demo of the existing car wash and the site layout would be changed and possibly a lot line adjustment to combine the two lots.

Ms. Greenwood referred to a chapter in Kaysville City Code about conforming which are not allowed to be expanded. She said that if the proposed ordinance changes are adopted, the applicant wants this chapter to not be applicable to the car wash use.

Commissioner Sommerkorn said that there is a provision in that chapter that says that the Planning Commission can authorize a more desirable non-conforming use to be substituted for one that is more desirable.

Commissioner Sommerkorn stated that the clock has started for a pending ordinance so staff and Planning Commission have six months to discuss this new ordinance. He also said that he would be in favor of not allowing all automobile oriented businesses in the General or Central Commercial Zones.

Commissioner Sundloff made a motion that we recommend approval for the proposed amendment. Motion was seconded by Commissioner Lyon.

Commissioner Sommerkorn said that this ordinance is a good first step, but there are lots of things that need to be considered to improve.

Commissioner Lyon amended his motion to second and said that the city needs to consider area with small area plans with a designated overlay zones that have zoning designated in there to create the community feel.

Commissioner Allred wants to make sure if we send this ordinance on that the property owner does not get nixed by this ordinance and that the language is more clear that says pre-existing uses if taken out then the use can continue and be modified and have some kind of parameters of how they can be modified unless the cities intent is to say no. He also said that distance provisions are not considered defensible in court.

Commissioner Sommerkorn made a substitute motion to table this item and Commissioner Keetch seconded the motion.

Commissioner Allred asked if Commissioner Sommerkorn is open to a substitute motion to change the word from table to continue and Commissioner Sommerkorn is amendable to that substitute.

Chair Barrus said that there is a second so they can vote. The vote was unanimous in favor of the motion (7-0).

8- CALL TO THE PUBLIC

No comments were made.

9- OTHER MATTERS THAT PROPERLY COME BEFORE THE PLANNING COMMISSION

Kaysville City Planning Commission Meeting Minutes
May 11, 2023

7- CALL TO THE PUBLIC

Sydney King owner of Good Spray Carwash. She is concerned about some of the new ordinances coming through Planning Commission in the future and how they will affect her and her carwash.

8- ADJOURNMENT

Commissioner Lyon motioned to adjourn the meeting at 7:31 pm.

Dear Kaysville City Planning Commission:

My name is Kelly King. My wife, Sydney King, and I own The Good Spray Car Wash property and adjacent vacant corner lot located at 370 No. Main, Kaysville.

I am sure you are aware of the our agreement with Quick Quack Car Wash to take down our existing car wash and build a new, state of the art, express car wash on our property.

I am writing in regards to the zoning code amendment Melinda Greenwood is proposing to the Kaysville City Council and Planning Commission.

Please allow me to give you some background and history regarding our Good Spray Kaysville Car Wash and adjacent vacant lot. This is a bit lengthy, but I think it is important for you to understand.

The Kaysville Good Spray Car Wash was originally a Super Wash car wash, built in 1994.

In 2008, Sydney and I had the opportunity to purchase three Super Wash car washes, in Centerville, Farmington and Kaysville. Sydney spent hundreds of thousands of dollars upgrading the equipment and renovating the car washes, to insure her customers could wash their cars in a clean and well operating car wash.

In 2014 we worked on a proposal to take down our Kaysville Good Spray Car Wash and construct a building for a Credit Union. Sydney had conversations with Lyle Gibson, from Kaysville City at the time, and they were not very excited about a credit union on the property because it would not provide any tax revenue for the City. We decided against the deal and thought we could find a better potential tenant.

In 2015 we signed a deal with a developer who was going to construct a building for a Burger King on the property. At the 11th hour and after spending thousands of dollars on planning and applications, a deed restriction was discovered on the Good Spray property, that would not allow food business of any kind to be operated on the property. We found the deed restriction was placed on our property by the Romney family. We tried to reason with Romney's to get them to remove the restriction, the Burger King developer even offered to pay the Romney family to remove the restriction, but the Romneys declined. The reason the Romneys gave was, "they did not want to see any other burger places, like Arctic Circle, going dark, because of the competition". So, the deal was killed.

In December, 2018 Lyle approached Sydney about the vacant lot on next to our car wash lot. He informed her the city was selling the lot and suggested she buy it. We purchased the corner lot from Kaysville in January of 2019.

Over the past 3 years we have listed the vacant lot with two different brokers in an attempt to find a good tenant to build to suit. The only companies interested have been independent coffee shop owners, a rental car company, and a physical therapy company.

We have been reluctant to develop the corner lot knowing the real value of the property is the car wash lot and the corner lot combined. However, with Romney's deed restriction on the car wash lot, our options for development are very limited.

In 2019, Sydney was approached by a developer who proposed a possible joint venture, taking our properties, the King Law Firm property and the Romney property to build a multiuse, residential and retail development. We said, we were interested, the King Law Firm people said they were interested, but the Romneys said no, so the concept was killed.

In 2022, we explored the idea of remodeling and expanding the current Good Spray car wash, to make larger bays and possibly a second in-bay automatic. We met with an architect, a builder and our car wash equipment supplier. The estimated cost was $1.5 million to complete the remodel. After learning Mister was building an express tunnel along with Charlie's, we decided against the investment.

Late 2022, we were approached by three major car wash companies who all wanted to purchase or lease our Kaysville properties to build a new express car wash. After months of meetings and negotiations, we signed a land lease contract with Quick Quack.

After Quick Quack presented to the Kaysville City Planning Commission in April, we were informed of Melinda Greenwood's proposed zone amendment that would restrict any new car wash development.

I deal with commercial real estate brokers all the time and when I explain our situation in Kaysville, they are baffled. They all say the same thing: how can Kaysville deny your application to develop an existing car wash into a new, improved, state of the art car wash when there is already a car wash on the property!

We are in a tough situation. Melinda Greenwood has made it clear that her zoning code amendment will be introduced to the City Council and Planning Commission and it will be passed, based on her email to Sydney dated June 1, 2023. If this amendment is passed, it kills our deal with Quick Quack along with our ability to expand or improve the existing Good Spray car wash.

The Good Spray Car Wash needs about $100,000 of new equipment and upgrades. We have not spent the money on the wash because of the Quick Quack deal. Now, knowing Kaysville is attempting to kill our deal with Quick Quack, the return on a spend of $100,000 on our little old car wash, with two new express tunnel car washes under construction nearby would be a questionable investment.

Conversely, we cannot develop the property for any sort of restaurant that would give us an acceptable ROI, and provide a nice tax income for Kaysville, because of the Romney family. Our property is not desirable for many businesses because of the worn out, mostly empty strip mall behind us. The best use of our property is a car wash, because there is and has been a car wash there for almost 30 years!

Sydney conferenced with Melinda and Mayor Tran in April. Both expressed the point that the city does not want any additional car washes in Kaysville. I completely understand her concern. By allowing Quick Quack to replace our little old car wash with a new car wash, the net result is no additional car washes in Kaysville.

I also understand Mayor Tran's concern of Charlie's, Mister and Come and Go on the west side, all approved express tunnels by the city. Come and Go should be taken off the list as they were purchased by Maverick and Maverick does not do car washes.

The car wash business has changed dramatically in the past 20 years. It used to be a territorial thing where car washes wanted to locate 5 or more miles apart. With the emergence of Express Tunnel car washes the game has changed. Now, the car wash business is about customer service and branding. Just like you may prefer Wendy's over McDonalds, some people prefer Quick Quack over Mister. Has the City counted how many fast food restaurants are in Kaysville and considered a building code amendment to not allow any more fast food restaurants? The analogy is truly the same.

The name of the game in the car wash business is the monthly passes. I can buy a Quick Quack monthly pass for $20 and wash my car in any one of 37 Utah locations and over 100, (and growing by the day) locations in the western states. Quick Quack is not looking at the City of Kaysville and saying, we need to locate there. They are looking at a map of Utah and saying, we don't have a location from Centerville to Layton, and we need a location somewhere in between. Our Kaysville property is obviously ideal for a new Quick Quack location.

Sydney was told that someone at the city would be willing to discuss removing the deed restrictions on our property. Subsequently, we were told the Romneys may be willing to talk about the deed restriction with us. Sydney called Michael Romney, left a message and did not receive a return phone call. Our commercial real estate broker also called and spoke to Keith Romney, who made it clear they would not remove the restriction and to stop asking. Two weeks after Sydney called Michael Romney, she received a text from him, reinforcing the Romney family stance, they will not consider removing the deed restriction. They will not allow ANY business that can compete with a tenant of theirs in the shopping center behind us.

We feel Melinda's proposal is unfairly penalizing a long term, independent Kaysville business owner. Instead of a nice new car wash building, with fresh landscaping, not to mention a dozen or more new employees and tons customers spending money in the local Kaysville stores and restaurants, Kaysville City residents will be looking at our self-serve car wash, with a vacant lot on the corner, for many years to come. Is that really what the City wants?

The reason I have provided all the detailed history of The Good Spray Kaysville property is to inform you that we have attempted to redevelop our property for many years, with businesses that provide an acceptable ROI and Kaysville City would be happy with. Please understand, we are being squeezed from both sides, the Romney deed restrictions on one side and Melinda's proposed zone amendment on the other side. Both of these restrictions extremely devalues our property.

By enacting the zoning restriction and preventing the new Quick Quack express tunnel wash, Kaysville City is placing Sydney and me in a no-win situation with our property and making decisions to change current building codes that will personally cost us over $2.7 million, and devalue our property over $1.2 million. I hope you can understand our concern.

I very much appreciate you taking the time to read this long email.

I am respectfully asking Melinda, Mayor Tran, the Kaysville City Council and the Kaysville City Planning commission to immediately exempt our property from your proposed zone amendment and allow Quick Quack to move forward with their application for construction of a new car wash on our property.

Sincerely,

Kelly King
[redacted]

PLANNING COMMISSION STAFF REPORT

To: Kaysville City Planning Commission
From: Melinda Greenwood, Community Development Director
Date: July 7, 2023

Agenda Item #6: Public Hearing for a rezone application from Phil Holland for 521 West 350 North from General Commercial to Mixed Use Zoning District Overlay

Meeting Date	July 13, 2023
Application Type	Rezone
Applicant | Owner	Phil Holland | H Group Ventures LLC
Address | Parcel ID Number	521 West 350 North | 11-879-0002 and 11-879-0007
Lot Size	6.26 acres | 272,685 ft²
Current Use	Undeveloped
Current Zoning	GC General Commercial
Density Entitlement	NA
Requested Zoning	GC Mixed Use Overlay
Density Entitlement	Density Approved Through Development Agreement (132 units proposed)

1. BACKGROUND

The two subject properties combine to create a 6.26 acre (272,685 ft²) area bordered by I-15 to the west, Holmes Creek to the north and the new Taco Bell and upcoming Charlie's Car Wash to the east. The applicant has requested a rezone from GC General Commercial District to GC Mixed Use Zoning District Overlay (GC MU).

A mixed-use overlay is technically a rezone which adds in a residential use to the General Commercial (GC) zone. All MU projects require a development agreement upfront, which will solidify

details of the intended project, phasing and other details.

The proposed GC MU project includes a five total buildings, three of which will be commercial and consist of a hotel, office and a retail building. The other two buildings are 3-story apartments with 66 units each for a total of 132 residential units.

2. Surrounding Land Use

When considering a zone change, a review and analysis of the existing character of the area is appropriate. The project parcels are located at 521 West 350 North and are found at the end of an existing cul-de-sac. The area currently includes a variety of businesses including healthcare, restaurants, fueling stations and other commercial services. The existing zoning and surrounding area characteristics are discussed in more detail in the bulleted list which follows.

- **Adjacent** – Directly adjacent to the subject property is I-15, Holmes Creek, Taco Bell, Charlie's Car Wash (which is under construction), Les Schwab Tire Center and an IHC clinic.
- **North** – Properties to the north are General Commercial.
- **South** – Directly south of the parcel is Les Schwab Tire Center, which is zoned General Commercial.
- **East** – Properties to the east are all zoned General Commercial.
- **West** – The property is bordered by Holmes Creek and I-15.

The rezone approval would not detrimentally impact the surround neighborhoods. Alternatively, based on the highly commercial nature of the area, the addition of residential apartments and hotel visitors would bring new customers and provide regular patrons which would augment existing and planned retail and commercial services.

3. 2022 General Plan

The 2022 General Plan Future Land Use Map indicates the property is to be used as a mixed use development, so the proposed zone change is supported by 2022 General Plan.

Diving deeper into the 2022 General Plan, we see the rezone application and proposed project is supported by three of the guiding principles, including:

> **Enrich our city center and downtown -** We will enhance our city center with commercial and mixed-use development and investing in streetscape and parking.

The project is located in the city center area, is a mixed use project and will provide opportunities for added commercial services.

> **Provide diverse housing options** - We will work to preserve our existing neighborhoods while accommodating a full range of housing opportunities to meet the economic, lifestyle and life-cycle needs of our residents.

The project includes two apartment buildings with each building having 66 dwelling units. Kaysville's rental units and apartment style housing only accounts for 2 percent of our housing. The location of this project is ideal as there is no single family housing in the area. Often times the public is averse to having any kind of density near their homes. Due to the distance from single family housing, the project will not negatively impact established residential neighborhoods.

> **Preserve our open space, trails and natural resources** - We will encourage the preservation of open space through clustered development and the protection of foothills, natural drainages and remaining agricultural areas.

The applicant plans to preserve existing trees near Holmes Creek and provide a walking path amenity and barbeque area near the creek, maximizing opportunities the existing natural area provides.

Each chapter of the 2022 General Plan concludes with goals, objectives and implementation measures. When considering a rezone application, we look to these goals to see if the project and rezone can be supported by the guidance set forward in the General Plan.
Chapter 1 Land Use & Placemaking Plan outlines specific goals and implementation measures which further support the mixed use rezone application and proposed project.

Chapter 1 Goal 2 is listed as: **Make Kaysville City Center Distinct and Identifiable from Adjacent Neighborhoods and Surrounding Cities** with specific ***Objective 2.2: Create a distinct city center and expand the "heart of the community" to include areas beyond the historic core.*** Development of vacant and undeveloped property to include missing services, add additional housing and create additional revenues for the City will allow for a natural extension of the core commercial area.

Chapter 1, Goal 8 continues with **"Provide a range of housing options and price points that help ensure Kaysville is an affordable place to live."** With only 2 percent of housing consisting of apartments with 10 or more units, Kaysville is limited in its existing housing options and affordability. The provision of 132 new residential units in varying sizes would diversify housing options and cost levels, fulfilling this goal.

Chapter 1 Goal 9 asks City leaders to**: Encourage Diverse Commercial Uses to Meet the Needs of the Community and Visitors** and ***Objective 9.1*** continues to say: ***Focus primary commercial uses in the City Center and secondary uses in smaller existing/future nodes.*** The attached *Implementation Measure* adds additional information to support the project: *Encourage mixed use and flex development in the City Center.* As the subject property is located in the middle of the City Center concept and the project would diversify the services presently delivered in our community, the project supports positive outcomes for this goal. Specifically, the addition of a hotel would be a new service which is not currently provided within City boundaries.

Chapter 3: Housing and Neighborhoods was amended in November of 2022 to account for state requirements for moderate income housing elements in the general plans. The chapter reports that 92% of housing in Kaysville is single family housing. This project would provide needed housing

which is outside the customary housing product offered in the city. The goals and objectives in this chapter offer ample support for this rezone and project.

Chapter 3, Goal 1 states Kaysville should aim to **"Provide a full range of housing opportunities to meet economic, lifestyle, and lifecycle needs and expectations for residents."** Objectives prescribed for this goal include:

> ***Objective 1.1: Allow for higher density and mixed use within the City Center to diversify housing stock.***
>
> ***Objective 1.2: (H) Amend land use regulations to eliminate or reduce parking requirements for residential development where a resident is less likely to rely on the resident's own vehicle, such as residential development near major transit investment corridors or senior living facilities.***
>
> ***Objective 1.3: Rezone for densities necessary to facilitate the production of moderate income housing.***
>
> ***Objective 1.4: (F) Zone or rezone for higher density or moderate income residential development in commercial or mixed-use zones near major transit investment corridors, commercial centers, or employment centers.***

The GC MU rezone and the proposed project creates an avenue to meet these objectives and approval would allow the City to report encouraging progress back to the State in subsequent Moderate Income Housing reports. The requested parking reduction, supported by a parking analysis is a reasonable reduction given the nature of the shared uses on the project site.

Lastly, **Chapter 5 Economic Development & Prosperity** contains three goals and several objectives that support the proposed project, including:

> **Goal 1: Promote Kaysville City Center redevelopment to strengthen commercial areas.**
>
> **Goal 2: Utilize a wide variety of tools and incentives available to help achieve economic development goals.**
>
> **Goal 3: Allow for mixed use development in identified areas to generate more rooftops and prevent Sales leakage.**

Goals & Objectives

GOAL 1: PROMOTE KAYSVILLE CITY CENTER REDEVELOPMENT TO STRENGTHEN COMMERCIAL AREAS

Objective 1.1: Allow for greater densities in Kaysville City Center to generate an increase in buying power and capture rates.

Objective 1.2: Focus on small scale and local services to meet public requests and provide local growth.

GOAL 2: UTILIZE THE WIDE VARIETY OF TOOLS AND INCENTIVES AVAILABLE TO HELP ACHIEVE ECONOMIC DEVELOPMENT GOALS

Objective 2.1: Establish redevelopment areas to fund infrastructure and future developments.

GOAL 3: ALLOW FOR MIXED USE DEVELOPMENT IN IDENTIFIED AREAS TO GENERATE MORE ROOFTOPS AND PREVENT SALES LEAKAGE

Kaysville City does not currently collect Transient Room Tax (TRT), which is a tax imposed on hotels, motels and other

short-term rentals. Bringing a 114-room hotel to the City would add an additional tax revenue source and diversify our tax base. The applicant submitted a white paper study (attached) which gives insight to impacts a hotel has on spending in a community. Not only would the City receive TRT, visitors to our community would be spending money to dine, fuel vehicles, and patron other retail services in Kaysville.

The 2022 General Plan contains substantial principals, goals, objectives and specific implementation measures to support the requested GC MU rezone and the mixed use project proposed by H Group Ventures LLC.

4. Mixed Use Zoning District Overlay

KCC 17-27-2 Project Evaluation/Review Process requires a number of documents and details to be submitted with the application. H Group Ventures LLC has submitted all the required items and those are attached to this staff report.

The Mixed Use Zoning District Overlay also requires a development agreement (DA) to be accompanied with the zone change application, and that agreement is attached to this memo. The purpose statement of the MU overlay zoning code says the district is designed:

> "…to facilitate the integration of diverse but compatible uses into a single development, with the goal of creating a community with more diverse development types providing a broader range in residential and commercial choice."

The purpose statement continues with:

> "The flexibility in use provided by this zone should help promote "live, work, and play" opportunities within the city while creating an appropriate transition from surrounding development."

The MU zone provides for both vertical and horizontal mixed use projects. The proposed project is the latter, and mixes uses across the entirety of the property instead of the more traditionally thought of vertical fashion. The MU overlay zone allows offices, retail services and sales, arcades, hotels and entertainment facilities. The proposed project is a mix of office, hotel, retail and residential uses. As proposed, the project uses are in compliance with the zoning code.

Section 27-3-2(b)ii requires a minimum of 30 percent of the combined square footage of the project be commercial building space. This project exceeds that requirement by 12 percent, offering a total of 42 percent of the project as commercial uses (see chart to the right).

Building	Square Footage
Apartment Building 1	53,370
Apartment Building 2	53,370
Residential Total	106,740
Hotel	57,971
Office	15,000
Retail	3,000
Commercial Total	75,971
Total Square Footage	182,711
% Commercial	**42%**
% Residential	**58%**

KCC 17-27-7 Development Standards creates a base for project standards, but realizing the unique characteristics that each mixed use project has, the code allows for some

variations through the DA. One such variation requested with this project is due to the unique shape, nature and location of the parcels. Requirements such as no more than 30 percent of the lot frontage being drive access or parking are not practicable at the end of a cul-de-sac. The applicant has been through many site plan iterations and offers the proposed layout as the best possible.

Staff believes the rezone request and proposed project meet the stated purpose of the Mixed Use Zoning District Overlay.

5. Project Specifics and Development Agreement Details

The full site plan, concept and building renderings are attached as well as the development agreement, parking analysis and the traffic impact study. The project would bring an additional 132 rooftops to Kaysville and position them in an area where access to I-15 for commuting, the park and ride, retail services and employment opportunities are in close proximity. The project is estimated to be $50M in value and proposes a total of five buildings with use and square footage broken out below.

Building Use	Square Footage	Additional Details
Hotel	57,971	Four stories, not to exceed 50' in height 114 rooms
Office	15,000	May be 2 or 3 stories, not to exceed 35' in height
Retail	3,000	Single story
Apartment Building 1	53,370	Three stories, not to exceed 35' in height Proposed 66 unit mix: 12 studio, 36 one-bedroom, 18 two-bedroom
Apartment Building 2	53,370	Three stories, not to exceed 35' in height Proposed 66 unit mix: 12 studio, 36 one-bedroom, 18 two-bedroom

Large projects such as this can have some fluid aspects which may need to be adjusted as financing, market research and timing comes into play. For this reason, the DA allows for some flexibility in minor adjustments. As noted in the table, the office building may be two or three stories, but must be a total of 15,000 ft^2. Similarly, the applicant would like the flexibility to determine at a later date if a residential amenity would be a pool or pickle ball court, but promises to provide a walking path, dog park and walking trail. Staff has drafted the DA to accommodate reasonable adjustments, but major changes must be approved by the City Council in an amendment to the DA.

The hotelier brand is a national chain, but confidentiality agreements prohibit the disclosure of the exact company. This is a common restriction in development negotiations and until projects are entitled, non-disclosures will remain in place.

Per code requirements in the MU zone and the City's parking code, a total of 344 parking stalls are required. A parking analysis has been provided and the site plan states 301 parking stalls will be provided for the project. The MU code allows for up to a 10 percent in reduction for shared parking facilities. A 10 percent reduction would allow for a decrease of 34.4 stalls. The applicant is

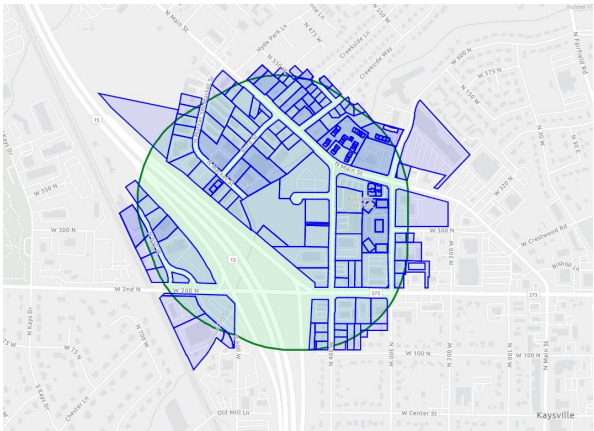
requesting a slightly higher reduction of 12.3 percent and 43 stalls. Given the study provided and the nature of the shared uses, this reduction is a reasonable amount.

The traffic study has been reviewed by both the Public Works Director and City Engineer and while there are significant impacts to traffic in the area, no mitigation measures are being proposed at this time. The City Engineer has initiated discussions with UDOT regarding the intersection at 400 West and 200 North to determine timing of their improvements to the intersection and the interchange. Traffic improvements are already needed in the area but may need to be accelerated. Staff expects the roadway impact fees will be significant and can be used to mitigate impacts at the intersection of Main Street and 400 West.

Staff has completed a review of the proposed project in relation to the zoning regulations and believes the project, proposed site plan and development agreement are in compliance with the zoning code and are reasonable based on the odd shape of the project site.

6. Public Notice and Public Comment

On Friday, June 30, 3023, public notices were mailed to property owners within 500' of the subject property as shown in the map. As of the date of this report, no comments have been received.



7. Recommendation

Based on the findings outlined in this staff report, staff recommends the Planning Commission forward a recommendation of approval to the City Council for the development agreement and the rezone of 521 West 350 North from GC General Commercial to General Commercial Mixed Use Overlay.

Findings for a recommendation of approval include:

a. The Mixed Use Zoning District Overlay is compliant with Map 2.2 Future Land Use Map approved with the 2022 General Plan.
b. The project is in keeping with the following Guiding Principles of the 2022 General Plan:
    i. Enrich our city center and downtown - We will enhance our city center with commercial and mixed-use development and investing in streetscape and parking.
    ii. Provide diverse housing options - We will work to preserve our existing neighborhoods while accommodating a full range of housing opportunities to meet the economic, lifestyle and life-cycle needs of our residents.
    iii. Preserve our open space, trails and natural resources - We will encourage the preservation of open space through clustered development and the protection of foothills, natural drainages and remaining agricultural areas.
c. Chapters 1, 3 and 5 of the 2022 General Plan contain adequate goals, policy objectives and implementation measures which support approval of the rezone request.
d. With the addition of 132 housing units, the rezone approval would allow the city to account for positive progress to the State for the 2023 Moderate Income Housing reporting.

e. The design of the project as outlined in the site plan and development agreement would not negatively impact the character of the area.
f. The project would diversify the housing product available in Kaysville and provide opportunities for a live-work environment.
g. The project would diversify and strengthen the City's economic and commercial base, adding new office, retail and an opportunity to collect Transient Room Tax with the hotel.
h. Staff review has found the project to be compliant with 17-27 Mixed Use Zoning Overlay purpose statement and code requirements.

ATTACHMENTS:

1. Project Location Map 521 West 350 North
2. Applicant Statement of Compliance
3. Draft Development Agreement for 521 West 350 North
4. Proposed Mixed Use Site Plan
5. Proposed Project Renderings
6. Proposed Landscape Plan
7. Kaysville Mixed-Use Development Traffic Impact Study (February 21, 2023)
8. Kaysville Mixed-Use Development Parking Analysis (March 3, 2023)
9. Economic Impact of Hotel Development by: Alan Suzuki

521 W 350 N - Location Map

THE HOLLAND GROUP

Creekside Commons

Our Vision

We appreciate the opportunity to introduce Creekside Commons to Kaysville City. The project aims to foster growth, boost economic activity, and integrate within the existing community. Our development, in its form and function, supports the city's long-term vision.

Project Compatability

Overview

Creekside Commons is a mixed-use development containing Office, Retail, Apartments, and Hotel uses. The development's location, near downtown and transportation corridors, lends itself well to these use types. Additionally, the development keeps consistent with Kaysville's General Plan.

General Plan

1. Land Use

Creekside Commons is located next to I-15 and Kaysville's main commercial area. Placing these types of developments near transportation hubs allows Kaysville, over time, to maintain the "small town" atmosphere in other parts of the City, while still providing much-needed commercial and residential uses. Creekside will also promote and benefit all adjacent commercial and future projects in the area. Building a hotel, the land's highest and best use, will encourage commercial opportunities and serve residents and existing commercial uses within Kaysville.

2. Transportation & Connectivity

The site has been laid out with connectivity in mind. The Development will benefit from two main accesses. We will also have main pedestrian connectivities throughout the development. Creekside Commons will have low impact to the traffic of Kaysville's general roadways, as shown in the traffic study done on our project.

3. Housing and Neighborhoods

As shown in the city's General Plan Table 3.8, the future demands of the renter population are greatly needed and increasing. Implementing apartments in this development provides the city's great long-term need. Also, developing housing close to I-15 and the commercial corridors keeps higher densities away from less dense areas in Kaysville. The proposed apartment community will also be rich in amenities, which until now have been scarce for Kaysville's multifamily.

Table 3.8 - Renter Population Projection

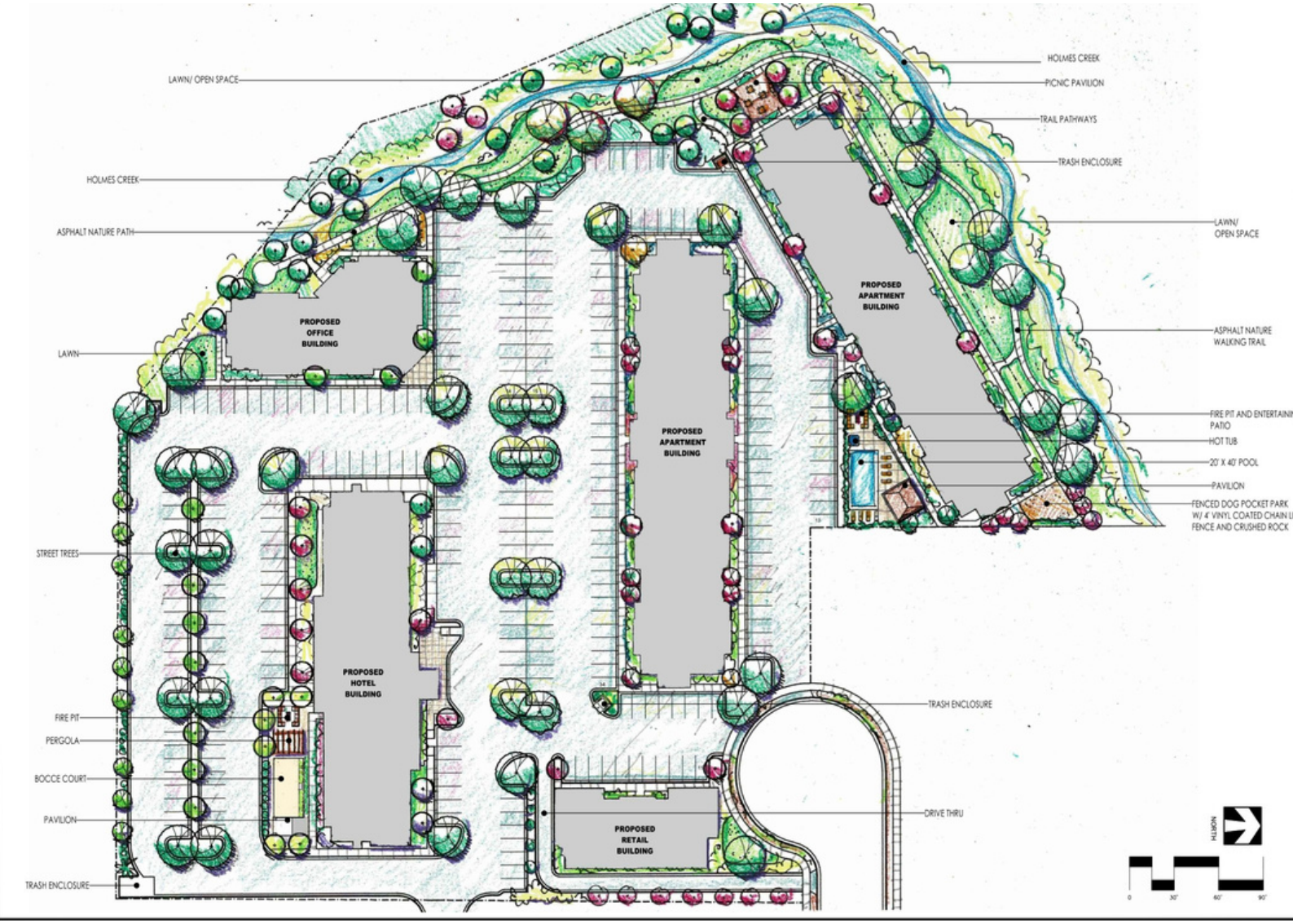
	5 YEAR PROJECTION	10 YEAR PROJECTION
≤ 80% HAMFI	3,982	4,621
≤ 50% HAMFI	3,755	5,441
≤ 30% HAMFI	1,157	1,358

Table 3.9 - Projected Affordable Housing Needs

	AFFORDABLE RENTAL UNITS	GROWTH RATE	5 YEAR UNIT DEMAND	10 YEAR UNIT DEMAND
≤ 80% HAMFI	940	3.02%	1,091	1,266
≤ 50% HAMFI	710	7.70%	1,029	1,491
≤ 30% HAMFI	270	3.26%	317	372

4. Open Space Trails and Natural Resources

We will maintain trees along historic Holmes Creek to provide a buffer between our projects and the adjacent land uses. The Landscape plan demonstrates the natural beauty of this project as we balance the fine line of efficient land use with the nature of Kaysville. A walking path is outlined within our project to create safe travel for pedestrians and interconnectivity.



5. Economic Development & Prosperity

Creating a mixed-use project with 3 commercial uses and with the residential use will strengthen the adjacent commercial hub. Kaysville will boost local businesses' ability to operate and thrive with the supported office and hotel patrons closer to them. The 6.2-acre site will be developed to its highest and best use. The development is estimated to be worth over $50 million upon completion. This would put this 6-acre property as the top value in Kaysville. The property tax to the city as well as the hotel's transient room tax will be a great long-term benefit for Kaysville City and its residents.

Kaysville Zoning Ordinances

We have created our vision based upon, and consistent with, the newly created Mixed Use zone outlined in Kaysville City's zoning ordinance.

Purpose of MU Zone

As indicated in the ordinance, the intent is to integrate a diverse and compatible option for individuals wishing to be in different family unit types. This achieves the objective by providing a broader range of residential and commercial options not currently found in Kaysville.

Surrounding land Uses

The adjacent land uses to the subject property are all General Commercial. Creekside Commons enhances and benefits all adjacent uses due to the increased office and residential presence coupled with Hotel patrons. It will increase all business in the area, promoting a flourishing commercial hub for Kaysville.

DEVELOPMENT AGREEMENT
FOR 521 WEST 350 NORTH

THIS AGREEMENT is made and entered into this ____ day of _____, 2023 by and between Kaysville City, a municipal corporation organized and existing under the laws of the State of Utah (hereinafter the "City") and H Group Ventures LLC (hereinafter the "Developer").

RECITALS

WHEREAS, Developer is desirous of developing a mixed-use project consisting of residential apartments and commercial facilities (the "Project") on certain real property located at 521 West 350 North, in the City of Kaysville, County of Davis, State of Utah and more particularly described as parcel number 11-879-0007 which is .619 acres in size and parcel number 11-879-0002 which is 5.64 acres for a combined total of 6.259 acres; and

WHERAS, the Property Location Map is attached hereto as Exhibit A and the legal description is attached as Exhibit B; and

WHEREAS, the purpose of this Agreement is to define development standards, conditions and improvements for the Project as well as other terms and conditions pursuant to which the Project proposed by Developer shall be developed within the City; and

WHEREAS the City is willing to grant the Mixed Use Zoning District Overlay (MU) rezone of the property and authorize the development of the Project proposed by Developer in conformance with this Agreement, City Ordinances, and applicable Utah law;

NOW, THEREFORE, in consideration of the mutual covenants and conditions set forth herein, and other good and valuable consideration, the sufficiency of which is hereby acknowledged, the parties agree as follows:

AGREEMENT

1. GENERAL DESCRIPTION.

A. Area Description. The property upon which the Project shall be developed (the "Property") is located as shown on the Property Location Map, a copy of which is attached as Exhibit A hereto and incorporated by reference herein. The property is further described in Exhibit B as parcel ID 11-879-0007 which is .619 acres in size and parcel number 11-879-0002 which is 5.64 addressed as 521 West 350 North.

B. Project Description. The Project proposed is a horizontal mixed-use development as shown in Exhibit C (the "Site Plan") and shall include commercial, retail and residential buildings and shall be constructed in substantial conformance to the attached concept Site Plan.

a. Commercial Space. The Project includes a total of approximately 75,971 square feet of commercial building space, which is 42% of the total square footage of the Project. The commercial buildings shall include:
   i. Hotel. One four-story hotel, which shall not exceed 50 feet in height and will have approximately:
      1. 57,971 square feet of space; and
      2. 114 rooms.
   ii. Office. An office building with approximately 15,000 square feet of space.
   iii. Retail. One single-story retail building with approximately 3,000 square feet of space and possible drive-thru.

b. Residential Space. Two three-story apartment buildings totaling approximately 106,740 square feet with each building consisting of:
   1. Approximately 53,370 square feet of space per building, for a total of approximately 106,740 square feet of space.
   2. Subject to final design, no more than 132 residential units shall be constructed.

c. Substantial Conformance. Substantial Conformance noted in section 1.B shall mean and include minimal fluctuations in overall project square footage, which is subject to final design.
   i. A reduction in the number of residential units or residential building square footage may be approved by Community Development staff.
   ii. An increase in the total commercial square footage shall be acceptable and approved by Community Development staff.
   iii. Reductions in the total commercial square footage provided may not fall below 40% without an amendment to this agreement, which shall be approved by the City Council.

2. DEVELOPMENT STANDARDS AND GUIDELINES

A. Adoption of Development Standards. As allowed by Kaysville City Code 17-27-7, the City hereby adopts, as the development standards, regulations and guidelines for the Project (the "Development Standards"), the following standards in addition to all other applicable City Ordinances, standards and guidelines:

i. Compliance with Approved Plans. Developer shall develop the site in general conformance with the concept site plan outlined in section 1B and attached to this Agreement as Exhibit C.

ii. Architecture. Developer shall construct the Project in substantial compliance and conformance with the architectural style and renderings shown in Exhibit D.

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iii. Building Materials. Developer shall construct all buildings in substantial compliance with materials shown in the concept renderings depicted in Exhibit D, which show rock and/or brick, wood, steel, glass.

iv. Building Height. Developer shall construct the buildings in compliance with the following:
   a. The four-story hotel shall not exceed fifty feet (50') in height.
   b. All other buildings in the project shall not exceed thirty-five feet (35') as defined by Kaysville City Ordinances.

v. Amenities Plan. Developer agrees to providing the following amenities for residents living in the apartments in the development:
   a. Walking path around the property.
      i. Developer will attempt to make walking path connections into properties which are adjacent to the Project.
   b. Dog park.
   c. Pickleball courts or a swimming pool.
   d. Clubhouse.
   e. Pavilion, picnic and barbeque area.

vi. Parking.
   a. Required Parking. Calculations of required parking based on the adopted Kaysville City Code 17-27 Mixed Use Zoning and 17-32 Off-Street Parking and Loading. Required parking of 344 total stalls is demonstrated in the breakdown noted below.
      i. Apartment Building – 204 parking stalls required
      ii. Office – 53 parking spaces required
      iii. Hotel – 76 spaces required
      iv. Retail – 11 units required

   b. Parking Reduction. Developer submitted a parking study included as Exhibit E along with a request to reduce parking by 12.3%. City agrees to reduce required parking by 12.3%, reducing the 344 required stalls by 43 and requiring a minimum of 301 parking stalls.

   c. For parcels that will be owned outside of H Ventures Group, LLC, cross-parking agreements shall be created between property owners and recorded against the property.

vii. Access.
   a. The Project has access to their site from 350 North. Developer will provide cross–access agreements to be recorded against the properties for any parcels that will not have street frontage.

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b. If a subdivision occurs, Developer shall provide cross-access agreements between all properties created by the subdivision.
c. Developer will attempt to get access agreements for pedestrian and vehicle traffic through neighboring properties to the east.

viii. Density. Developer may construct up to 132 residential dwelling units within Project. The overall residential unit count shall not exceed 132 units. Any increase in the count of residential dwelling units shall be approved by the City Council through an amendment to this agreement.

ix. Commercial Uses. Developer agrees to provide a four-story hotel consisting of 114 rooms, a 15,000 square foot office, and 3,000 of retail space. Removal of the hotel from the Project or any substantial changes to the hotel plans shall be approved by the City Council through an amendment to this agreement. Any changes to the commercial spacing for the office and retail space resulting in a substantial reduction of square footage shall only be approved by the City Council through an amendment to this agreement.

x. Traffic Mitigation. Developer agrees to construct any road improvements or traffic mitigation measures on 350 North as necessitated by the Project. Any such improvements shall be built to adopted City standards.

xi. Landscaping.
a. Developer agrees to use turf only in active recreation areas for the Project as defined in Kaysville City Code 17-5 Water Efficient Landscape Standards.
b. Developer shall not install turf or grass in park strip areas but will use water wise vegetation and materials.
c. Developer agrees to use water wise vegetation and materials in other landscaping areas where reasonable.

xii. Subdivision for Mixed-Use Overlay. Development of the Project may require a subdivision of the Property into two or more individual parcels.
a. Developer shall apply for a subdivision of the Property and shall follow all process and code requirements for the subdivision, including payment of fees, and submission of all outlined documents required for a subdivision.
b. This development agreement shall be subject to the entirety of the two parcels outlined in section 1A and will continue to run with the land regardless of subdivisions or how many lots are created in the future.
c. This agreement shall be recorded along with any subdivision plat and the plat shall have language placed on it to maintain the integrity of this agreement and Project.

B. Phasing of Project.

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Phasing of the Project and issuance of building permits shall be completed as outlined in either i or ii below.

i. The hotel shall be permitted prior to the residential apartment buildings or simultaneously with the residential apartment buildings.

ii. The office building and the retail building shall be permitted prior to or simultaneously with the residential apartment buildings.

C. Holmes Creek. Developer will coordinate with Davis County and follow all regulatory requirements for protection of Holmes Creek during construction and after occupancy.

D. Findings of Compatibility. In adopting the Development Standards identified in Section 2, the City hereby expressly finds that the development of the Project, in conformance with the Development Standards and this Agreement, promotes the creation of a desirable mixed-use Project in an appropriate location and is in harmony with the 2022 General Plan. The City further finds that the development of the Project, in conformance with the Development Standards and this Agreement, will not violate the general purpose, goals and objectives of the City Ordinances and any plans adopted by the Planning Commission and City Council.

Subject to the Developer's performance and compliance with the terms of this Agreement and City Ordinances in effect on the date of this Agreement, Developer's rights to develop the Project in accordance with the approved site plan, construction drawings and building plans are vested.

3. MAINTENANCE AND CARE OF THE PROJECT AND PROPERTY

Developer agrees to keep property, grounds and buildings in good condition, maintaining, repairing, replacing, etc. all commonly owned ground, property, and amenities, including the trail, playground area, pool, dog park, landscaped areas, parking areas, driveways, sidewalks, park strips, lighting, benches, etc. Developer agrees to remain in compliance with Kaysville City code.

4. APPLICABILITY AND AMENDMENTS

This agreement runs with the land and shall be considered a master plan for all properties outlined in Section 1A and is applicable and enforceable in perpetuity. Any substantial or significant changes to the Project outside of those defined in this agreement shall be approved by the City Council in an amendment to this agreement.

5. ON-SITE PROJECT IMPROVEMENTS

Developer shall construct and install all site improvements, including utilities, required for the Project, at Developer's sole cost and expense, in compliance with approvals, and all applicable ordinances, regulations, standards as approved by the City, the secondary water provider, Central Davis Sewer District, other providers and the State of Utah.

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6. **OFF-SITE PROJECT IMPROVEMENTS**
In accordance with applicable standards and subject to the design approval of the City Engineer, Developer shall construct and install street improvements, sidewalks, utilities, and drainage improvements, on 521 West 350 North with the construction of the on-site improvements.

7. **REPRESENTATIONS OF DEVELOPER**
   A. Authority. Developer hereby represents that Developer has authority to proceed with the Project.

   B. Ability. Developer represents that it has the ability to timely proceed with the development and construction of the Project. Developer agrees to begin construction of the Project as soon as practicable and complete occupancy approval with at least on commercial building by December 31, 2026.

8. **ASSIGNMENT**
Developer may assign this Agreement to any other third party provided that the City consents to such assignment, which consent shall not be unreasonably withheld, upon a showing to the satisfaction of the City that such third party has the financial ability to perform Developer's obligations hereunder.

9. **BINDING EFFECT**
This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

10. **ATTORNEY'S FEES**
In the event that this Agreement or any provision hereof shall be enforced by an attorney retained by a party hereto, whether by suit or otherwise, the fees and costs of such attorney shall be paid by the party who breaches or defaults hereunder, including fees and costs incurred upon appeal or in bankruptcy court.

11. **SEVERABILITY**
If any term or provision of this Agreement shall, to any extent, be determined by a court of competent jurisdiction to be void, voidable, or unenforceable, such void, voidable or unenforceable term or provision shall not affect the enforceability of any other term or provision of this Agreement.

12. **CAPTIONS**
The section and paragraph headings contained in this Agreement are for the purposes of reference only and shall not limit, expand or otherwise affect the construction of any provisions hereof.

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13. GOVERNING LAW

This Agreement and all matters relating hereto, shall be governed by, construed and interpreted in accordance with the laws of the State of Utah.

14. ENTIRE AGREEMENT

This Agreement, together with the exhibits attached hereto, constitutes the entire understanding and agreement by and among the parties hereto, and supersedes all prior agreements, representations or understandings by and among them, whether written or oral, pertaining to the subject matter hereof.

15. AUTHORIZATION OF EXECUTION

A. City. The execution of this Agreement by the City has been authorized by the City Council of Kaysville City at a regularly scheduled meeting of that body, pursuant to the notice.

B. Developer. The execution of this Agreement has been duly authorized by the Developer.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first above written.

DRAFT

H Group Ventures, LLC

By:_____

_____
Title

Attest:

Kaysville City

By:

_____
Annemarie Plaizier
City Recorder

_____
Tamara Tran
Mayor

On the _____ day of _____, 2023, personally appeared before me TAMARA TRAN, and ANNEMARIE PLAIZIER, who being by me duly sworn did say, each for himself and herself that he, the said TAMARA TRAN, is the Mayor of Kaysville City, Davis County, State of Utah and that she, the said ANNEMARIE PLAIZIER, is the City Recorder of Kaysville City, and that the within and foregoing instrument was signed on behalf of the said Kaysville City by authority of the City Council of Kaysville City and said TAMARA TRAN and ANNEMARIE PLAIZIER, each duly acknowledged to me that the said Kaysville City executed the same and that the seal affixed is the seal of the said Kaysville City.

_____
NOTARY PUBLIC

(SEAL)

STATE OF UTAH)
: ss.
COUNTY OF DAVIS)

DRAFT

On the _____ day of _____, 2023, personally appeared before me, _____, the signer of the foregoing Development Agreement for Phil Holland, who duly acknowledged to me that he executed the same for and on behalf of H Group Ventures LLC.

_____
NOTARY PUBLIC

(SEAL)

STATE OF UTAH)
: ss.
COUNTY OF DAVIS)

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Exhibit A – Property Location Map
Exhibit B – Legal Description of the Project property
Exhibit C – Site Plans
Exhibit D – Architectural Renderings
Exhibit E – Traffic Impact Study
Exhibit F – Parking study
Exhibit G – Application materials – Statement of Compliance

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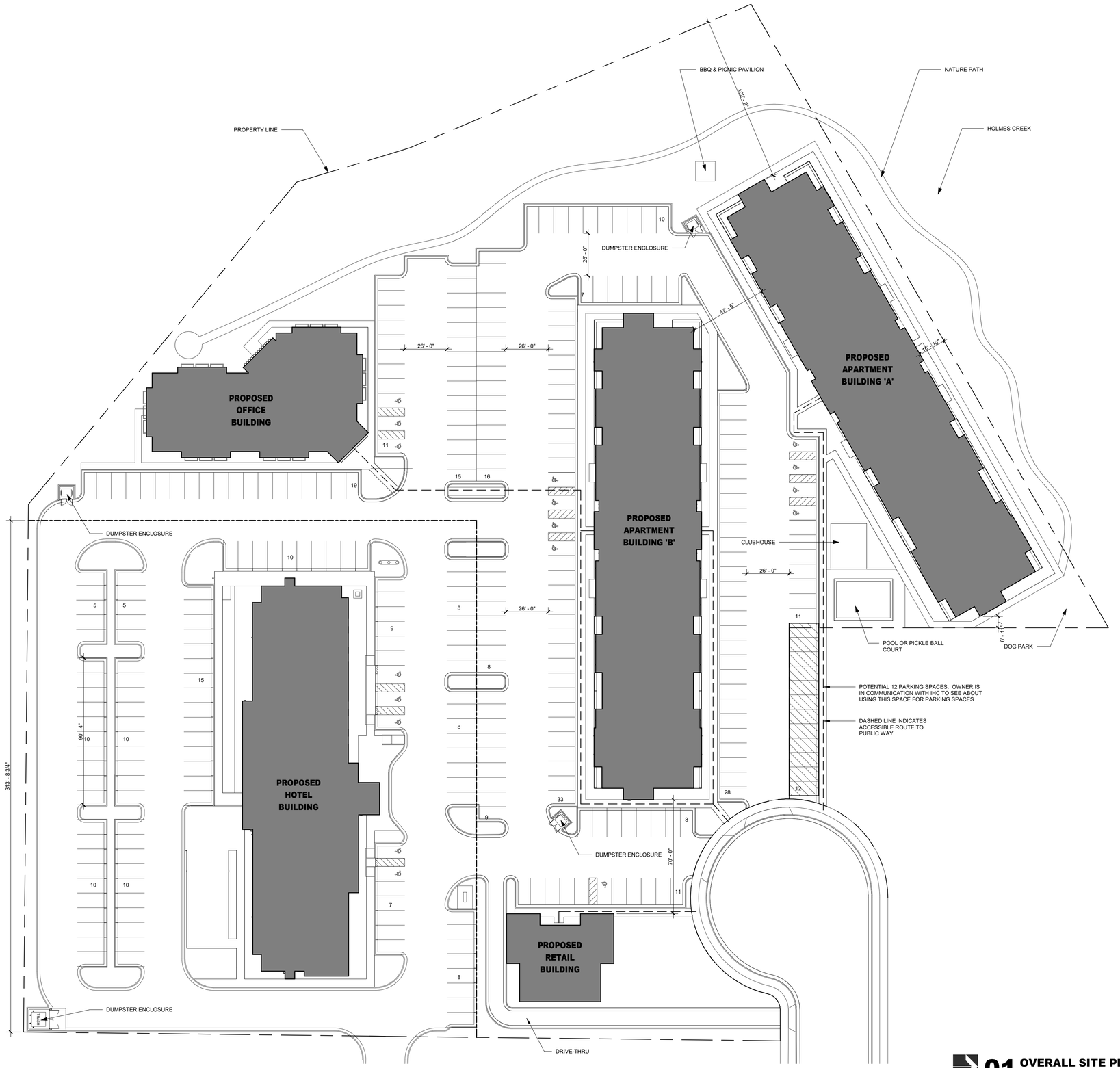


01 OVERALL SITE PLAN

1" = 30'-0"

SITE PLAN CALCULATIONS

APARTMENT DATA

- BUILDING 'A' FOOTPRINT 17,790 SQ. FT.
  - BUILDING 'A' SQ. FT. = 53,370 SQ. FT.
- BUILDING 'B' FOOTPRINT 17,790 SQ. FT.
  - BUILDING 'A' SQ. FT. = 53,370 SQ. FT.
- BUILDING HEIGHT = 3 STORIES
- UNIT COUNT
  - BUILDING 'A'
    - STUDIO = 12
    - 1 BED = 36
    - 2 BED = 18
    - TOTAL = 66
  - BUILDING 'B'
    - STUDIO = 12
    - 1 BED = 36
    - 2 BED = 18
    - TOTAL = 66
  - TOTAL APARTMENTS = 132 UNITS

HOTEL DATA

- BUILDING SQUARE FOOTAGE = 57,971 S. FT.
- BUILDING HEIGHT = 4 STORIES
- UNIT COUNT = 114

OFFICE DATA

- BUILDING SQUARE FOOTAGE = 15,000 SF
- BUILDING HEIGHT = 2 STORIES

RETAIL DATA

- BUILDING SQUARE FOOTAGE = 3,000 SF
- BUILDING HEIGHT = 1 STORY

PARKING

- REQUIRED

APARTMENTS	204 STALLS
OFFICE	53 STALLS
RETAIL	11 STALLS
HOTEL	76 STALLS
STALLS REQ'D	344 STALLS
10% REDUCTION	344 X 10% = 34.4
TOTAL REQ'D	310 STALLS
TOTAL PROVIDED	301 STALLS

AMENITIES

- POOL OR PICKLE BALL COURT
- DOG PARK
- NATURE PATH
- BBQ & PICNIC PAVILION
- CLUBHOUSE

ARCHITECTURAL DESIGN
450 WEST 600 SOUTH ■ LAYTON, UT 84041
jw-ad@adarchd.com ■ 801-455-8181

THE HOLLAND GROUP

CREEKSIDE COMMONS MIXED-USE DEVELOPMENT

XXXX

KAYSVILLE, UT

STAMP

REVISION

NO.	DESCRIPTION	DATE

DATE

06/06/2023

ISSUE

SHEET TITLE

SITE PLAN

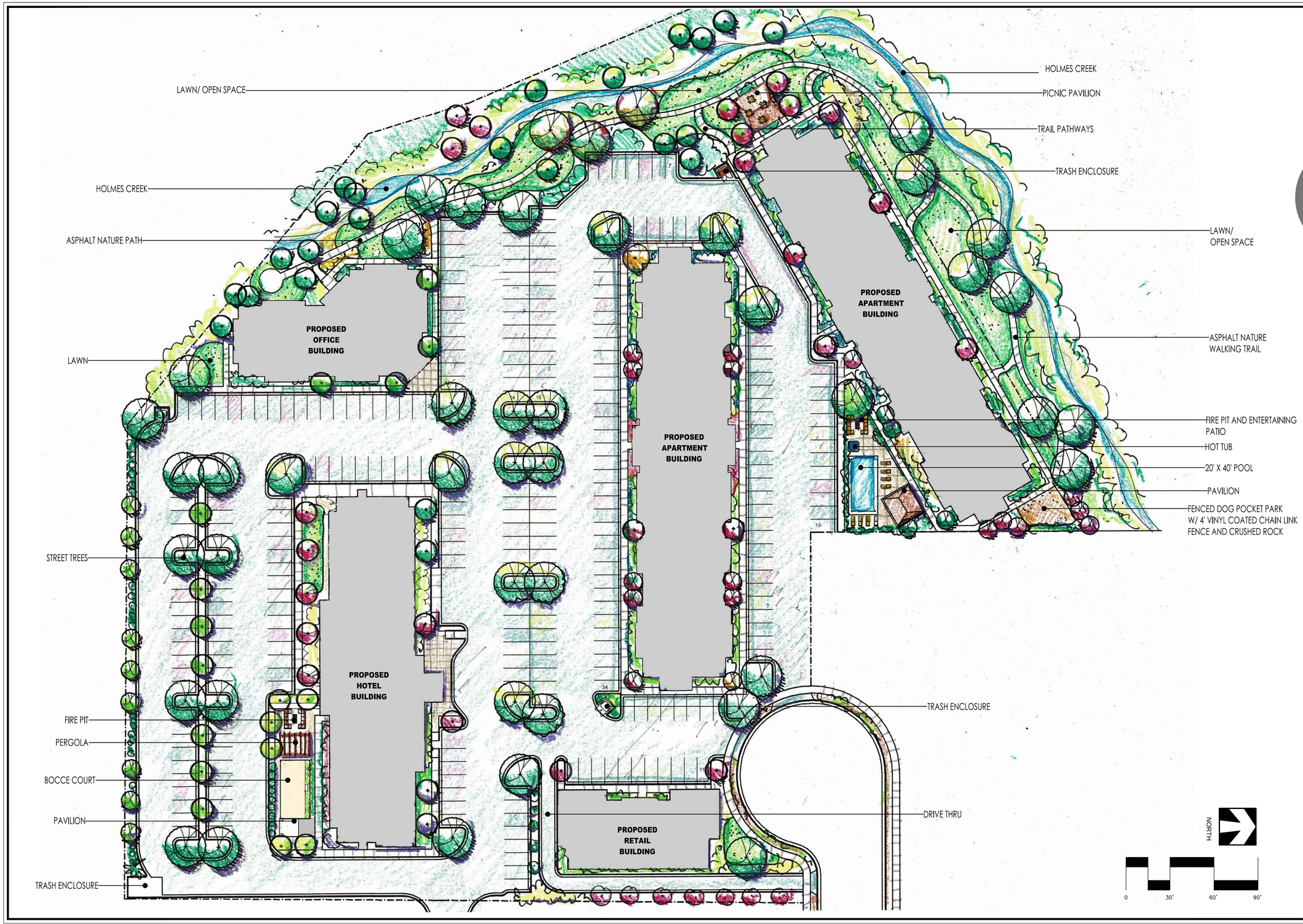
SHEET NO.

A1.01

HOTEL SIGNAGE

CREEKSIDE
CREEKSIDE

Tenant
Tenant
Tenant



LANDCURVE
LANDSCAPE ARCHITECTURE

2846 Beverly Street
Salt Lake City, Utah 84106
P. 801 209 1072
E. reid.mitchell@gmail.com

2023-038

STATE OF UTAH
REID B. MITCHELL
No.4987014-5301
LANDSCAPE ARCHITECT

STAMP

Kaysville Mixed Use Development
Landscape Concept Plan

Kaysville, Utah

SHEET NAME.

LA1

SHEET NO.

DATE. 5/9/2023

MEMORANDUM

To:	Kaysville City	From:	Jason Watson, PE, PTOE FOCUS Engineering & Surveying, LLC
File:	Kaysville Mixed-Use Development	Date:	July 10, 2023

Reference: Kaysville Mixed-Use Development Parking Analysis - REVISED

INTRODUCTION

FOCUS Engineering and Surveying, LLC (FOCUS) has been retained to complete a Parking Analysis for the addition of a new mixed-use development located along 400 West between Main Street and 200 North in Kaysville, Utah. The purpose of this Parking Analysis is to project the number of parking stalls that will be needed on the proposed site with the planned land uses. This memorandum will also compare the parking demand percentages between the different land uses proposed for this site. This will help determine the peak time periods for parking onsite and how the parking stalls can be shared between the different land uses. The proposed development will access onto 400 West. The site is currently undeveloped land that surrounds commercial and industrial buildings. Exhibit 1 illustrates the vicinity map of the proposed project site.

Exhibit 1 – Project Vicinity Map

www.focusutah.com

6949 South High Tech Drive
Suite 200
Midvale, UT 84047
801.352.0075

EXISTING CONDITIONS

Surrounding Land Uses and Roadways

This mixed-use development is bordered to the south by a commercial development, to the north by a medical facility, I-15 to the west and 400 West to the east. The proposed site for the new mixed-use development is currently vacant land and in a heavily commercialized area of Kaysville.

To the north is Main Street and to the south is 200 North, which are major roadways that provide access to Interstate 15 both north and south of the proposed development. There are existing roadways that the proposed development will use to access onto 400 West. One road is located just south of the Intermountain Kaysville Creekside Clinic and is currently a cul-de-sac. The second road is an existing access to the property, located roughly 280 feet south of the cul-de-sac.

Roadways

Main Street: Main Street currently consists of two lanes in each direction with bike lanes, curb, and gutter. Currently Main Street consists of a 12-foot two-way left turn lane for vehicles to access the many developments along this roadway. Main Street provides access to Layton Parkway to the north and 200 West to the south. The posted speed limit is 30 mph.

200 North: 200 North currently consists of two lanes in each direction with a center two-way left turn lane. 200 North runs east and west and provides access to I-15 to the west and US 89 to the east. 200 North is located on the south of the proposed development and the posted speed limit is 35 mph.

400 West: 400 West is a north/south roadway that provides access to the proposed development. 400 West is a local roadway owned by the Kaysville City and is currently not striped, but consists of one lane in each direct. The pavement is wide enough that vehicles making a left turn leave enough room for a vehicle to pass, basically functioning as a two-way left turn lane. The posted speed limit is 30 mph.

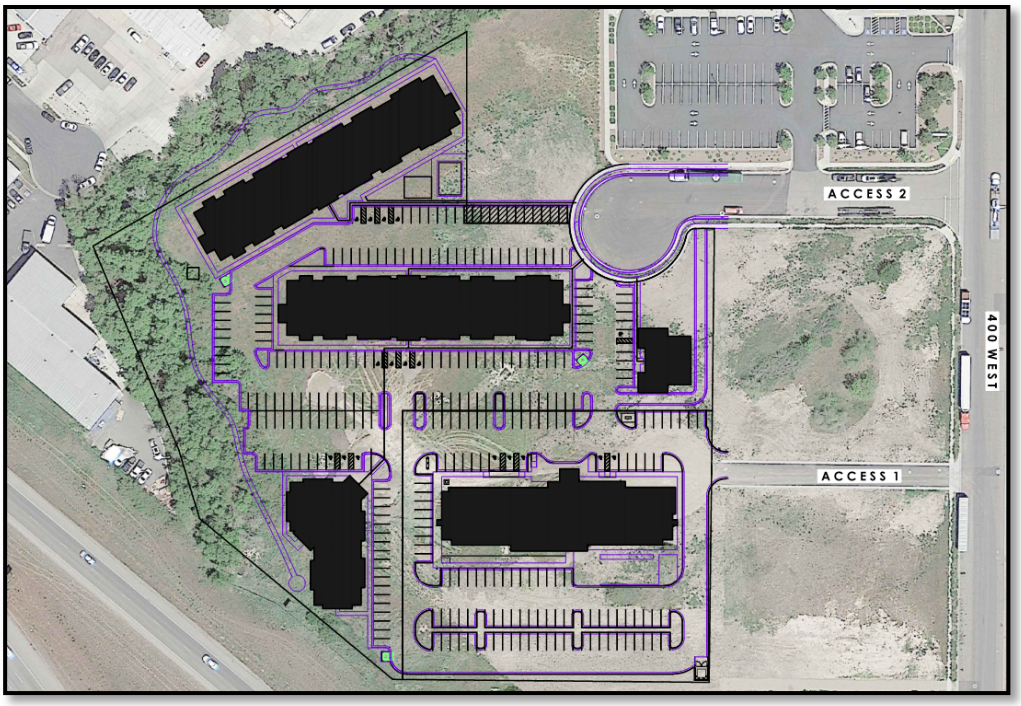
PROPOSED SITE CONDITIONS

The proposed mixed-use development located along 400 West will consist of a 15,000 SF general office building, a 3,000 SF small office space/retail, 132 units of apartments, and a 114-room hotel. All traffic exiting and entering the proposed site will access to and from 400 West. The proposed site plan has been designed to provide a total of 301 parking stalls. The owner of this development is in communication with the adjacent property

owner to possibly provide 12 additional parking stalls, which would bring the total to 313 for the entire site. These 12 parking stalls are hatched in Exhibit 2 adjacent to the Access 2 Cul-de-Sac.

Refer to Exhibit 2 for the proposed site plan of this mixed-use development. As illustrated in the proposed site plan some of the parking spaces within this area can be shared. With the types of uses planned for this site, there will be many times in an average day where the peak parking times will not overlap between land uses and therefore the parking stalls can be shared.

Exhibit 2 – Kaysville Mixed-Use Development Site Plan



PARKING GENERATION

Using the *Institute of Transportation Engineer's (ITE) Parking Generation Manual 5th Edition*, the proposed number of parking stalls needed for this mixed-use development were generated. Land Use Code 221 – Multifamily (Mid-Rise), Land Use Code 710 – General Office Building, Land Use Code 712 – Small Office Building, Land Use Code 310 – Hotel were all used to generate the number of parking stalls. The description of Land Use Code 221 – Multifamily (Mid-Rise) states "multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three or more dwelling

units and between three and ten levels(floors) of residence." In this proposed Mixed-Use Development, there will be 132 residential units in three levels. The description of Land Use Code 710 – General Office Building states, "A general office building is a location where affairs of businesses, commercial or industrial organizations, or professional person or firms are conducted." The description of Land Use Code 712 – Small Office Building states, "A small office building typically houses a single tenant and is less than or equal to 5,000 gross square feet in size." The description of Land Use Code 310 – Hotel states, "A place of lodging that provides sleeping accommodation and supporting facilities such as a full-service restaurant, cocktail lounge, meeting rooms, banquet room, and convention facilities."

It is proposed that this new development will include four different land uses in order to meet the needs of the community. Within the land uses in the *Parking Generation Manual*, there are also different settings/locations depending on where the development is located. There are urban/suburban settings to dense multi-use urban settings. Depending if the development is located near rail transit or not, there are also different calculations. For purposes of this mixed-use development, and according to the location of these land uses, the general urban/suburban settings were used to represent the proposed land uses in the area. Refer to the appendix of this statement for the full description and parking generation research from the *ITE Parking Generation Manual*. Table 1 illustrates the number of parking stalls needed for this development using the average rates from the manual.

Table 1 – Parking Generation for Mixed-Use Development

ITE Land Use Code	Land Use Description	Size	Weekday Ave. Rate	Parking Stalls	Saturday Ave. Rate	Parking Stalls	Sunday Ave. Rate	Parking Stalls
221	Multifamily Units	132 DU	1.31	**173**	1.22	**161**	2.05	**271**
710	General Office Building	15,000 SF	2.39	**36**	0.28	**5**	-	-
712	Small Office Building	3,000 SF	2.56	**8**	-	-	-	-
310	Hotel	114 ROOMS	0.74	**85**	1.15	**132**	-	-
Total				**302**		**298**		**271**

As can be seen in Table 1, the number of parking stalls needed for this mixed-use development varies from a typical weekday (Monday – Friday) to a typical Saturday and Sunday. The proposed mixed-use development will need 302 parking stalls during a typical weekday, 298 stalls on a typical Saturday and 271 stalls on a typical Sunday. These calculations are assuming full occupancy of all four different land uses for the proposed development. This also assumes all four land uses need their full amount of parking at the same time of day, which in this case will not occur. Office Space will need their maximum number of parking stalls during the middle of a typical week day, where an apartment or hotel will need their maximum number of stalls throughout the night time.

The proposed layout of the site plan shows that there is a total of 301 parking stalls planned for this development with a potential to increase to 313. This is one parking stall shy of the calculated number of stalls per the *ITE Parking Generation Manual* under the worst-case scenario, which would be on a typical weekday with 302 parking stalls. However, with the additional 12 stalls, this would be adequate.

The *ITE Parking Generation Manual* also provides the "Percent of Weekday Peak Parking Demand" tables. These table provide an average percentage of the number of stalls that are used throughout the day based on that land use. These tables present a time-of-day distribution of parking demand and can be found in the appendix of this analysis.

The peak demand for parking for Small Office land use is typically between the 10:00am to 11:00am hours. The peak demand for parking for General Office land use is typically between the 10:00am to 11:00am hours. The peak demand for parking for the Hotel land use is typically between the 9:00am to 10:00am hours. Unlike the other three land uses, Multi-family Housing (Mid-Rise) has a peak parking demand between 12:00am and 4:00am. This shows that many of the parking stalls within the proposed development can be shared between the four different land uses, even though there are sufficient stalls provided if they were on the same peak times. Table 2 illustrates the parking demand percentages and number of stalls needed for different times of the day based on the parking generation numbers from the *ITE Parking Generation Manual* listed in Table 2 - 6.

Table 2 – Land Use 221 Multifamily (Mid-Rise) Weekday Parking Demand Percentages

Hour Beginning	ITE Land use: 221: (%)	Parking Stalls
12:00-4:00 a.m.	100%	173
5:00 a.m.	94%	163
6:00 a.m.	83%	144
7:00 a.m.	71%	123
8:00 a.m.	61%	106
9:00 a.m.	55%	95
10:00 a.m.	54%	93
11:00 a.m.	53%	92
12:00 p.m.	50%	87
1:00 p.m.	49%	85
2:00 p.m.	49%	85
3:00 p.m.	50%	87
4:00 p.m.	58%	100
5:00 p.m.	64%	111
6:00 p.m.	67%	116
7:00 p.m.	70%	121
8:00 p.m.	76%	131
9:00 p.m.	83%	144
10:00 p.m.	90%	156
11:00 p.m.	93%	161

Table 3 – Land Use 710 General Office Building Weekday Parking Demand Percentages

Hour Beginning	ITE Land Use 710: (%)	Parking Stalls
12:00-4:00 a.m.	0%	0
5:00 a.m.	0%	0
6:00 a.m.	0%	0
7:00 a.m.	13%	5
8:00 a.m.	48%	17
9:00 a.m.	88%	32
10:00 a.m.	100%	36
11:00 a.m.	100%	36
12:00 p.m.	85%	31
1:00 p.m.	84%	30
2:00 p.m.	93%	33
3:00 p.m.	94%	34
4:00 p.m.	85%	31
5:00 p.m.	56%	20
6:00 p.m.	20%	7
7:00 p.m.	11%	4
8:00 p.m.	0%	0
9:00 p.m.	0%	0
10:00 p.m.	0%	0
11:00 p.m.	0%	0

Table 4 – Land Use 712 Small Office building Weekday Parking Demand Percentages

Hour Beginning	ITE Land Use 712: (%)	Parking Stalls
12:00-4:00 a.m.	0%	0
5:00 a.m.	0%	0
6:00 a.m.	0%	0
7:00 a.m.	0%	0
8:00 a.m.	27%	2
9:00 a.m.	69%	6
10:00 a.m.	88%	7
11:00 a.m.	100%	8
12:00 p.m.	81%	6
1:00 p.m.	81%	6
2:00 p.m.	84%	7
3:00 p.m.	86%	7
4:00 p.m.	92%	7
5:00 p.m.	85%	7
6:00 p.m.	4%	0
7:00 p.m.	0%	0
8:00 p.m.	0%	0
9:00 p.m.	0%	0
10:00 p.m.	0%	0
11:00 p.m.	0%	0

Table 5 – Land Use 310 Hotel Weekday Parking Demand Percentages

Hour Beginning	ITE Land use: 310: (%)	Parking Stalls
12:00-4:00 a.m.	96%	82
5:00 a.m.	0%	0
6:00 a.m.	91%	77
7:00 a.m.	89%	76
8:00 a.m.	90%	77
9:00 a.m.	100%	85
10:00 a.m.	98%	83
11:00 a.m.	89%	76
12:00 p.m.	85%	72
1:00 p.m.	75%	64
2:00 p.m.	81%	69
3:00 p.m.	70%	60
4:00 p.m.	74%	63
5:00 p.m.	65%	55
6:00 p.m.	73%	62
7:00 p.m.	78%	66
8:00 p.m.	93%	79
9:00 p.m.	96%	82
10:00 p.m.	95%	81
11:00 p.m.	95%	81

Table 6 – Total Parking Stalls with all Four Land Uses

Hour Beginning	Parking Stalls Land Use (221)	Parking Stalls Land Use (710)	Parking Stalls Land Use (310)	Parking Stalls Land Use (712)	Total Parking Stalls
12:00-4:00 a.m.	173	0	82	0	255
5:00 a.m.	163	0	0	0	163
6:00 a.m.	144	0	77	0	221
7:00 a.m.	123	5	76	0	204
8:00 a.m.	106	17	77	2	202
9:00 a.m.	95	32	85	6	218
10:00 a.m.	93	36	83	7	219
11:00 a.m.	92	36	76	8	212
12:00 p.m.	87	31	72	6	196
1:00 p.m.	85	30	64	6	185
2:00 p.m.	85	33	69	7	194
3:00 p.m.	87	34	60	7	188
4:00 p.m.	100	31	63	7	201
5:00 p.m.	111	20	55	7	193
6:00 p.m.	116	7	62	0	185
7:00 p.m.	121	4	66	0	191
8:00 p.m.	131	0	79	0	210
9:00 p.m.	144	0	82	0	226
10:00 p.m.	156	0	81	0	237
11:00 p.m.	161	0	81	0	242

As illustrated in Table 6, taking all four land uses into account, the maximum number of parking stalls that would be needed is 255 which would be between 12:00am and 4:00am.

CONCLUSION

Based on the provided site plan, the Kaysville Mixed-Use Development will consist of two apartment buildings with 132 residential units, a 3,000 square foot small office space/retail, a 15,000 square foot general office space, and a 114-room hotel. The proposed layout of the development will provide a total of 301 parking stalls on site with a possibility to increase to 313 stalls. Using the *ITE Parking Generation Manual*, the calculated number of parking stalls for these land uses will range from 302 parking stalls

during a typical weekday, to 298 stalls on a typical Saturday, to 271 stalls on a typical Sunday. This is taking the worst-case scenario where all four land uses, Multifamily (Mid-Rise), Hotel, General Office Building and Small Office Building, are using their maximum number of parking stalls at the same time. The proposed site plan will provide the recommended number of parking stalls per the *ITE Parking Generation Manual*. This will most likely never occur, therefore we also looked at the Peak Time of Day Percentages for each land use.

Using the percentage of peak parking demand for each land use, and as illustrated in Table 6, the highest number of parking stalls needed is 255, which would occur between 12:00am and 4:00am. It has been observed that the peak parking demand for a multifamily residential land use occurs between the hours of 12:00am and 4:00am, while the peak demand for parking for the other three land uses occurs during the hours of 9:00am to 11:00am. In this instance, the total number of parking stalls indicates that there was a high demand for parking between 12:00 am and 4:00 am, however the general office and small office space do not require a lot of parking during these hours. With a total of 301 parking provided in the site plan, and possibility to increase to 313 stalls, this will provide enough parking stalls at any particular hour during the week.

Therefore, it is concluded that the proposed site plan for the Kaysville Mixed-Use Development will provide adequate number of parking stalls, compared to the number of parking stalls calculated per the *ITE Parking Generation Manual*, and the number of parking stalls using the peak parking demand percentages.

Please feel free to contact me with any questions or comments.

Sincerely,

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KAYSVILLE MIXED-USE DEVELOPMENT

TRAFFIC IMPACT STUDY

KAYSVILLE, UT

FOCUS
ENGINEERING & SURVEYING, LLC

February 21, 2023

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Table of Contents

1.0 EXECUTIVE SUMMARY 3

1.1 DESCRIPTION OF PROJECT 3
1.2 FINDINGS 4

2.0 INTRODUCTION 8

2.1 DEVELOPMENT DESCRIPTION 8

3.0 EXISTING CONDITIONS 11

3.1 ROADWAYS 11
3.2 EXISTING TRAFFIC VOLUMES 11

4.0 OPENING AND FUTURE YEAR TRAFFIC CONDITIONS 13

5.0 TRIP GENERATION AND TRIP DISTRIBUTION 16

5.1 PASS-BY TRIP & INTERNAL CAPTURE REDUCTION 16
5.2 SITE TRAFFIC DISTRIBUTION 17

6.0 OPENING AND FUTURE YEAR WITH PROJECT TRAFFIC CONDITIONS 20

7.0 CAPACITY ANALYSIS 23

8.0 TRAFFIC SIGNAL WARRANT ANALYSIS 29

9.0 RECOMMENDATIONS 32

List of Figures

Figure 1 – Vicinity Map 9
Figure 2 - Site plan..... 10
Figure 3 – 2023 Existing Traffic Volumes 12
Figure 4 – 2025 Opening Year Traffic Volumes 14
Figure 5 – 2030 Future Year Traffic Volumes..... 15
Figure 6 – Project Trip Distribution Percentages..... 18
Figure 7 – Project Trip Generated Traffic Volumes 19
Figure 8 – 2025 Opening Year with Project Traffic Volumes 21
Figure 9 – 2030 Future Year with Project Traffic Volumes..... 22
Figure 10 – 400 West & 200 North 2025 Opening Year Scenario Signal Warrant 30
Figure 11 – 400 West & Main Street 2030 Future Year Scenario Signal Warrant..... 31

List of Tables

Table 1 - Trip Generation..... 16
Table 2 - Signalized and Unsignalized intersection LOS and Delay Parameters..... 23
Table 3 – 2023 Existing Traffic LOS 24
Table 4 – 2025 Opening Year Traffic LOS 25
Table 5 – 2030 Future Year Traffic LOS..... 26
Table 6 – 2025 Opening Year w/ Project LOS 27
Table 7 – 2030 Future Year w/ Project LOS..... 28

1.0 Executive Summary

1.1 DESCRIPTION OF PROJECT

This report presents the results of a traffic impact analysis for the Kaysville Mixed Use Development, located east of I-15, north of 200 North, south of Main Street and west of 400 West in Kaysville, Utah. The Kaysville Mixed Use Development is planned for both residential and commercial usage with two accesses onto 400 West. The two accesses will use existing roadways that connect to 400 West. The proposed parcel of land for the Kaysville Mixed Use development is currently undeveloped land that surrounds existing commercial and industrial buildings. Figure 1 illustrates the vicinity map and the location of this development in relation to the adjacent roadway network.

The Kaysville Mixed Use Development will consist of 132 apartments, a 15,000 SF general office building, a 5,000 SF small office building/retail space, and a 115-room hotel. For purposes of this study, and following UDOT's guidelines for a Level II traffic impact study, the analysis will consist of the following intersections:

- Main Street & 400 West
- 200 North & 400 West
- Access #1 & 400 West
- Access #2 & 400 West

The proposed development is planned to be built out by the end of 2025. Refer to Figure 2 for the overall site plan of the Kaysville Mixed Use Development and the proposed access locations.

The traffic associated with this development is generated using the Trip Generation Manuals published by the *Institute of Transportation Engineers (ITE)*. On an average weekday, the 132 residential apartment units are expected to generate 49 AM peak hour trips and 51 PM peak hour trips, with 599 trips generated on an average day. The general office building will generate 23 AM peak hour trips and 22 PM peak hour trips with an ADT of 163 trips. The small office space will generate 8 AM peak hour trips and 11 PM peak hour trips on an average day, with an ADT of 72 trips. The hotel will generate 53 AM peak hour trips and 68 PM peak hour trips, with an ADT of 919 trips generated on an average day.

1.2 FINDINGS

Based on the analysis performed in this traffic impact study, the following tables present the findings under the study scenarios for the 2023 Existing, 2025 Opening and 2030 Future Year scenarios and illustrates the Level of Service (LOS) and delay time at each intersection.

Table E1 – Existing, Opening & Future Year Level of Service

INTERSECTION	EXISTING, OPENING & FUTURE LEVEL OF SERVICE					
	2023 EXISTING YEAR		2025 OPENING YEAR		2030 FUTURE YEAR	
	AM	PM	AM	PM	AM	PM
400 West & 200 North	f(375.2)	f(380.4)	f(566.4)	f(976.5)	f(2086.9)	f(**)
400 West & Access #1	a(0.0)	a(0.0)	a(0.0)	a(0.0)	a(0.0)	a(0.0)
400 West & Access #2	b(10.0)	b(10.0)	b(10.1)	b(10.0)	b(10.3)	b(10.1)
400 West & Main Street	d(27.0)	c(17.6)	d(30.6)	c(18.6)	e(40.8)	c(22.0)
Values represent the overall LOS for all signalized intersections (uppercase letters) and the worst movement for all unsignalized intersections (lowercase letters) ** value is not provided in Synchro as the delay exceeds capacity						

Table E2 – Opening & Future Year with Project Level of Service

INTERSECTION	OPENING & FUTURE YEAR W/ PROJECT LEVEL OF SERVICE			
	2025 OPENING w/ PROJ		2030 FUTURE w/ PROJ	
	AM	PM	AM	PM
400 West & 200 North	f(1339.9)	f(**)	f(**)	f(**)
400 West & Access #1	b(10.4)	a(9.9)	b(10.6)	b(10.0)
400 West & Access #2	b(10.6)	b(10.2)	b(10.8)	b(10.4)
400 West & Main Street	d(34.9)	c(20.6)	e(48.8)	d(25.4)
Values represent the overall LOS for all signalized intersections (uppercase letters) and the worst movement for all unsignalized intersections (lowercase letters) ** value is not provided in Synchro as the delay exceeds capacity				

As seen in Table E1 and Table E2, the level of service for the southbound approach at 400 West & 200 North currently fails. The northbound approach at 400 West & Main Street also currently fails. With the growth in this area being minimal as open space is not as available, these approaches will continue to fail in the Opening and Future Years. With heavy traffic volumes along Main Street and 200 North, it is typical for side streets to fail

and have heavy delay to access the major streets as is the case here. With traffic sgnal located within close proximity to these intersections, the signals will provide gaps in traffic that allow vehicles to make the turning movements on and off of the major streets, which is not necessarily analyzed by Synchro. This was observed while collecting the traffic data.

With the addition of the traffic generated by the Kaysville Mixed Use Development at full build-out, the 400 West & Main Street intersection will continue to experience heavy delay in the northbound direction under the 2030 Future Year scenario. The 400 West & 200 North intersections will also continue to experience heavy delays in the southbound direction under the 2025 Opening Year scenarios.

In order to look at mitigations to improve the flow of traffic at these two intersections, a Peak Hour Traffic Signal Warrant Analysis was performed under the 2025 Opening Year scenario for the 200 North and 400 West intersection. Since the level of service for the northbound approach of the Main Street and 400 West intersection does not fall below acceptable levels of service until 2030 Future Year, the signal warrant analysis for this intersection was performed under the 2030 Future Year scenario. The 200 North and 400 West intersections does meet the warrant for a traffic signal analyzing the Peak Hour traffic volumes under the 2025 Opening Year scenario. Similarly, the Main Street and 400 West intersection will meet traffic signal warrants for peak hour volumes under the 2030 Future Year scenario.

Using the existing and projected traffic volumes at each of the study area intersections, both with and without the Kaysville Mixed Use development traffic, the following are the recommendations to improve the flow of traffic.

400 West and 200 North

2025 Opening Year Scenario

With the projected 2% growth in traffic to the 2025 Opening Year of the Kaysville Mixed Use Development, the northbound and southbound approaches will continue to experience excessive delay and failing levels of service. A traffic signal warrant analysis was performed under this scenario, and the projected traffic volumes do meet the warrant for a traffic signal. Although signalizing this intersection will improve the LOS, the close proximity of this intersection to the northbound on and off ramps to I-15 may increase delay with traffic flow along 200 North. It is recommended this intersection continue to be monitored. Another possible recommendation is to construct a raised median to control access along 200 North as a right-in/right-out. These are all mitigations that will be needed without the proposed Kaysville Mixed Use Development.

2025 Opening Year with Project Scenario

With the full build-out of the Kaysville Mixed-Use Development by 2025, 400 West and 200 North intersection will continue to function with similar levels of service as under the 2025 Opening Year scenario (without the development). No additional mitigations at this intersection are needed.

2030 Future Year Scenario

Similar to the 2025 Opening Year scenario, the northbound and southbound traffic movements will continue to fail. Similar mitigations will be necessary.

2030 Future Year with Project Scenario

With the previously mentioned mitigations of either a signal or right-in/right-out intersection, the traffic movements will function with acceptable levels under the 2030 Future Year with Project scenario.

400 West and Main Street

2025 Opening Year Scenario

All traffic movements will continue to function with acceptable levels of service under the 2025 Opening Year scenario and no mitigations are needed.

2025 Opening Year with Project Scenario

All traffic movements will continue to function with acceptable levels of service with the addition of the traffic from the Kaysville Mixed Use Development. No additional mitigations are needed.

2030 Future Year Scenario

By 2030, the northbound approach at the 400 West and Mian Street intersection will fall to a LOS E in the AM Peak Hour. A traffic signal warrant analysis was also performed for this intersection under the 2030 Future Year scenario. The projected traffic volumes do meet the warrant under the Peak Hour analysis. It is recommended this intersection be monitored for when future traffic volumes may meet the warrant.

2030 Future Year with Project Scenario

With the addition of the Kaysville Mixed Use Development traffic, 400 West and Main Street will continue to function with similar unacceptable levels of service as under the 2030 Future Year scenario without the development. If a traffic signal is warranted and constructed to improve this intersection in the future year, this intersection will function acceptably with the addition of the proposed development.

Access 1 and 400 West

Access 1 currently functions with a single receiving lane and one exiting lane onto 400 West. With the addition of the Kaysville Mixed Use Development, it is recommended this intersection continue to function with the existing lane configuration. This intersection will function with acceptable levels of service and very minimal delays along 400 West.

Access 2 and 400 West

Access 2 currently functions with acceptable levels of service. With the addition of the Kaysville Mixed Use Development, this access will continue to function with acceptable levels of service. This intersection currently functions with one receiving lane and one exiting lane and it is recommended this intersection continue to function with this lane configuration. Access to the existing Intermountain Kaysville Creekside Clinic will be maintained.

2.0 Introduction

2.1 DEVELOPMENT DESCRIPTION

The proposed development is situated on roughly 6 acres of land located east of I-15, south of Main Street, west of 400 West and north of 200 North in Kaysville. The proposed Kaysville Mixed-Use Development will consist of 132 residential apartment units, a 15,000 SF office building, a 5,000 SF office space/retail building, and a 115-room hotel. The buildings will be used for both residential and commercial purposes and are planned to be fulling built out by 2025.

The Kaysville Mixed Use Development will use the two existing accesses which connect to 400 West. Access 1 is located along the existing stub road to the property and is located roughly 660 feet the north of 200 North. Access 2 will connect onto the existing roadway which currently provides access along the south of Intermountain Kaysville Creekside Clinic. Access 2 is located roughly 280 feet to the north of Access 1.

Refer to the Vicinity Map and Site Plan in Figures 1 and 2, respectively, for the location of the new development and the layout of the site and location of the proposed accesses onto 400 West.

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FIGURE 1 - VICINITY MAP

T:_2023\23-8002\dwg\Sheets\FIGURE 1 - VICINITY MAP.dwg

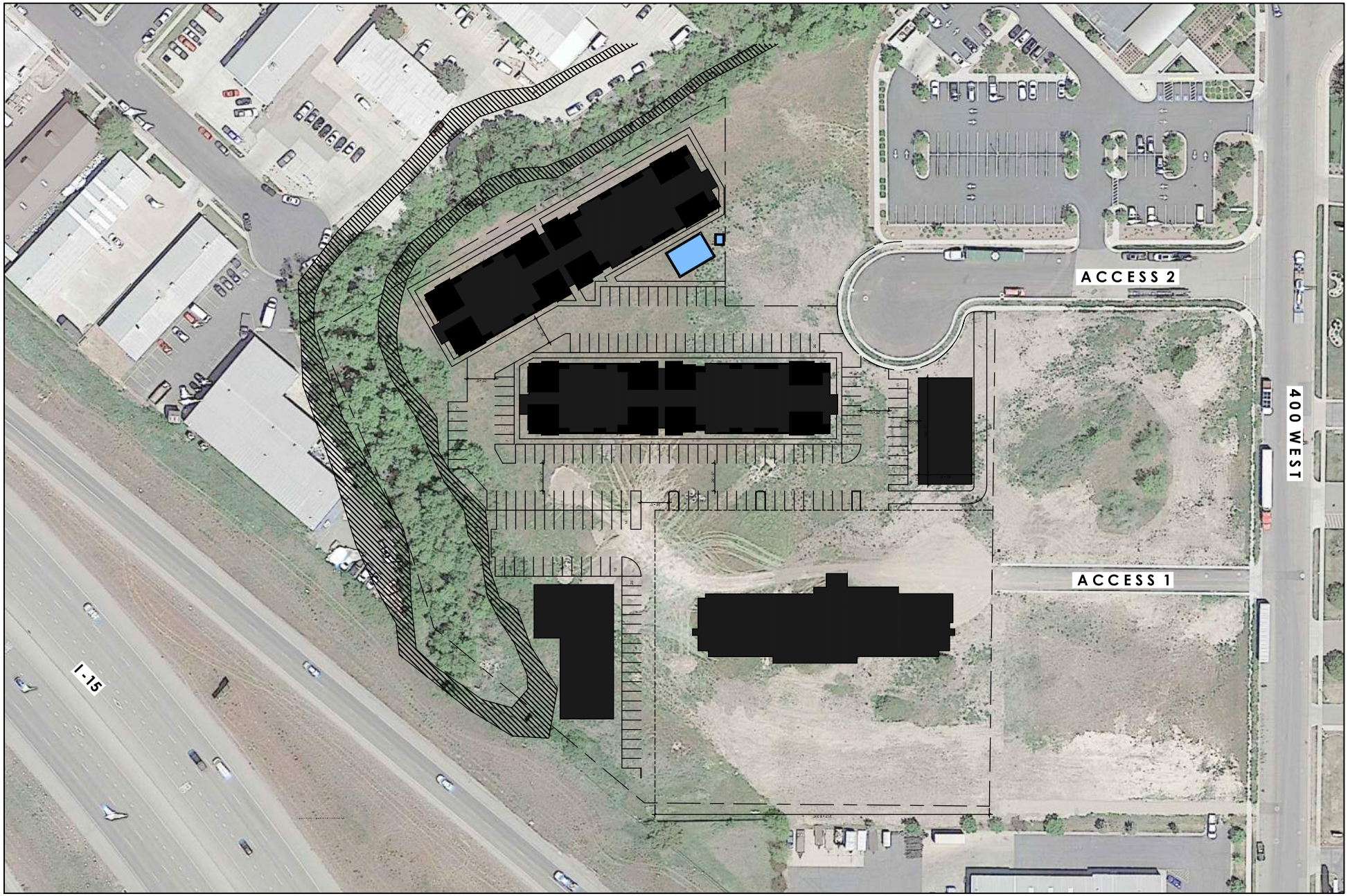

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FIGURE 2 - SITE PLAN

T:_2023\23-8002 - Kaysville Mixed-Use 1\Design 23-8002\dwg\Sheets\FIGURE 2 - SITE PLAN.dwg

3.0 Existing Conditions

3.1 ROADWAYS

Main Street: Main Street currently consists of two lanes in each direction with bike lanes, curb, and gutter. Currently Main Street consists of a 12-foot two-way left turn lane for vehicles to access the many developments along this roadway. Main Street provided access to Layton Parkway to the north and 200 West to the south. The posted speed limit is 30 mph.

200 North: 200 North currently consists of two lanes in each direction with a center two-way left turn lane. 200 North runs east and west and provides access to I-15 to the west and US 89 to the east. 200 North is located on the south of the proposed development and the posted speed limit is 35 mph.

400 West: 400 West is a north/south roadway that provides access to the proposed development. 400 West is a local roadway owned by the Kaysville City and is currently not striped. The pavement width is wide enough to allow for vehicles to turn left into the adjacent development and a vehicle to pass on the right that is traveling north or south. 400 West is posted at 30 mph.

3.2 EXISTING TRAFFIC VOLUMES

Using UDOT's Traffic Study Guidelines for a Level II Traffic Study, it was determined existing traffic counts would be collected at the following intersections which fall within ½ mile of the proposed project boundary:

- 400 West & Main Street
- 400 West & 200 North
- 400 West & South Access to Intermountain Kaysville Creekside Clinic
- 400 West & Existing Road to proposed property.

Existing AM and PM peak hour traffic volumes were collected on February 28, 2023 at these two intersections, between the peak hours of 7 AM to 9 AM and 4 PM to 6 PM. From the existing counts that were collected, it was determined the peak hours at the 400 West and Main Street intersection are from 7:45 AM to 8:45 AM and 4:45 PM to 5:45 PM. The peak hours at the 400 West and 200 North intersection are from 8:00 AM to 9:00 AM and from 4:45 PM to 5:45 PM. These volumes are illustrated in Figure 3.

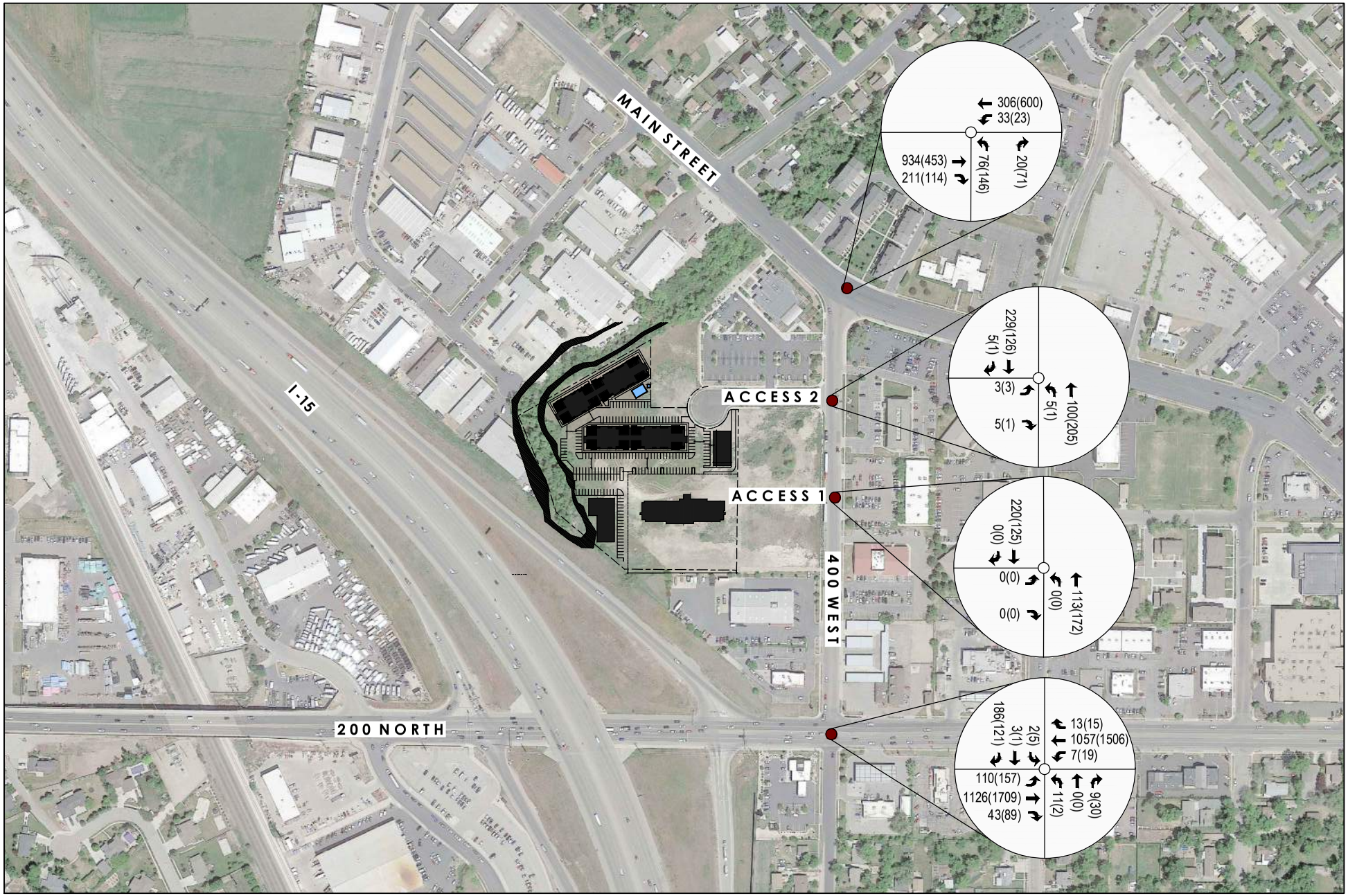

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FIGURE 3 - 2023 EXISTING YEAR TRAFFIC VOLUMES

XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES

T:_2023\23-8002 - Kaysville Mixed-Use 1\Adesign 23-8002\dwg\Sheets\FIGURE 3 - 2023 EXISTING YEAR VOLUMES.dwg

4.0 Opening and Future Year Traffic Conditions

Opening Year traffic, also known as Background traffic, is the traffic that is on the roadways within the study area regardless if the proposed development is constructed or not. These traffic volumes are a projection of growth within the study area based on current land available and opportunities for future development within this area.

It is assumed an average growth of 2% will occur from 2023 to 2030 along the roadways within the study area. 2025 is the planned year for the completion of the Kaysville Mixed Use Development. Applying the assumed growth rate to the existing traffic volumes, the projected traffic volumes for the 2025 Opening Year traffic volumes are illustrated in Figure 4.

Following the UDOT Traffic Impact Study Guidelines, a Level II traffic study will also look at five years after Opening Year. These are recognized as the Future Year conditions. It is assumed after 2025, the growth rate will continue at 2% as vacant land becomes developed and less growth is available. Applying this growth to the Existing and Opening Year traffic volumes, the 2030 Future Year traffic volumes are generated. These volumes can be found in Figure 5.

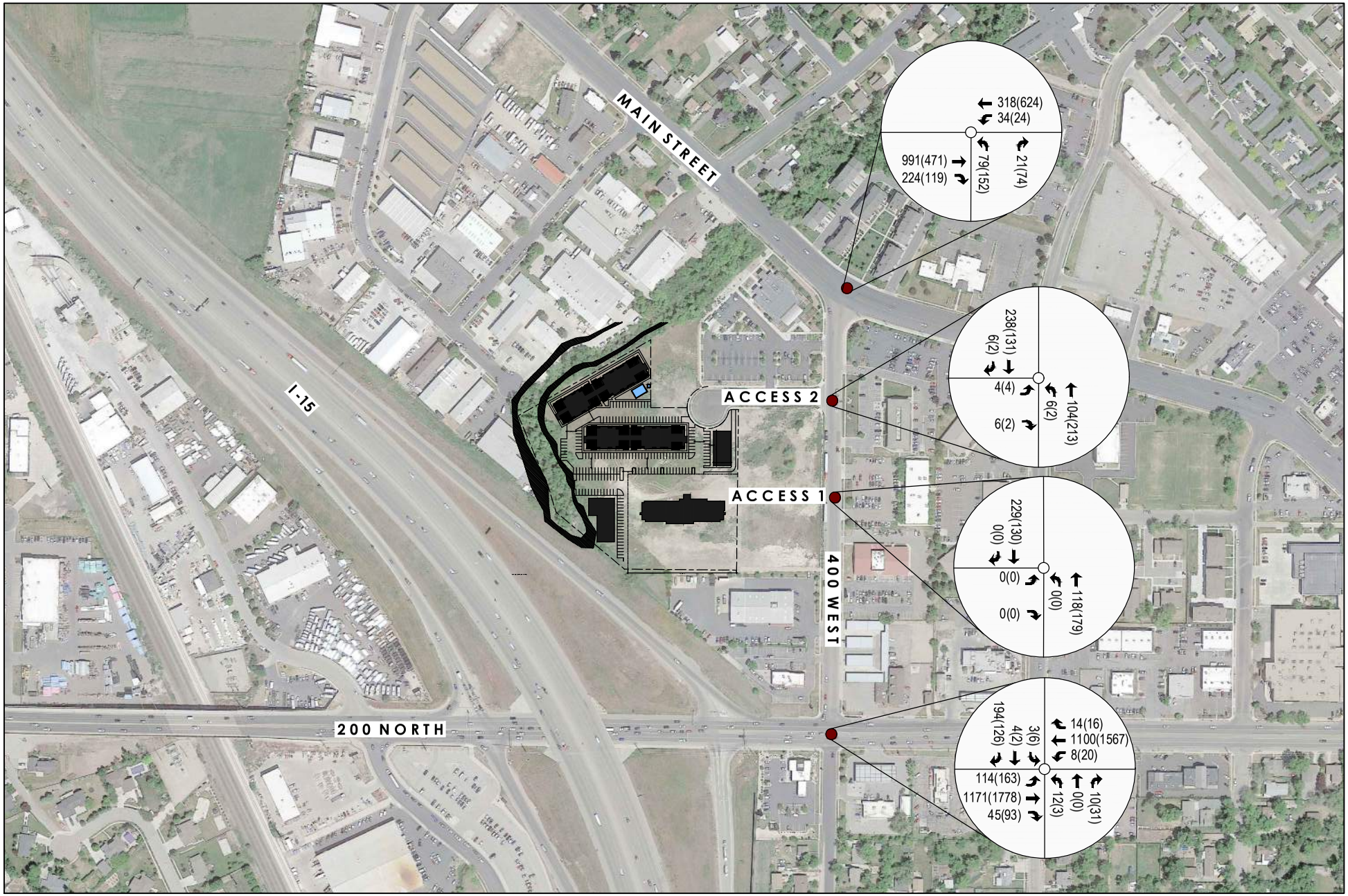

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FIGURE 4 - 2025 OPENING YEAR TRAFFIC VOLUMES

XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES

T:_2023\23-8002 - Kaysville Mixed-Use 1\Adesign 23-8002dwg\Sheets\FIGURE 4 - 2025 OPENING YEAR VOLUMES.dwg

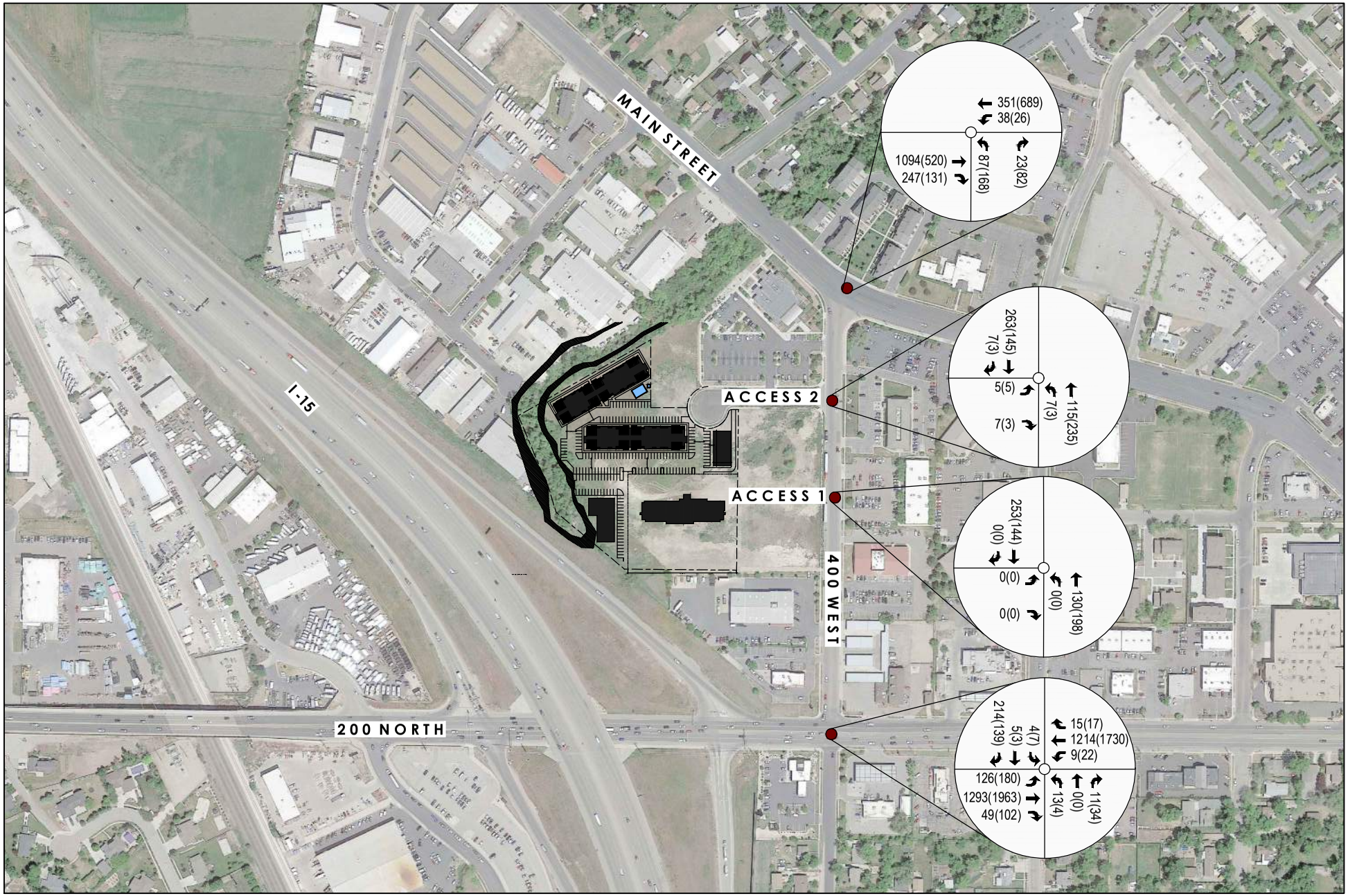

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FIGURE 5 - 2030 FUTURE YEAR TRAFFIC VOLUMES

XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES

T:_2023\23-8002 - Kaysville Mixed-Use 1\Adesign 23-8002\dwg\Sheets\FIGURE 5 - 2030 FUTURE YEAR VOLUMES.dwg

5.0 Trip Generation and Trip Distribution

The full build-out of the proposed Kaysville Mixed Use Development will consist of 132 apartment units, a 15,000 SF general office building, a 5,000 SF small office building/retail and a 115-room hotel. Using land use codes 221, 710, 712 and 310 for each of these different land uses, the trip generation rates were determined using the 11th Edition of the Trip Generation Manual. This manual is an ITE information report, published by the *Institute of Transportation Engineers*. Trips generated by the proposed development which will occur during the peak hours of the proposed development were used for the analysis. The Peak Hour of Adjacent Street Traffic rates are used to generate the AM and PM peak hour volumes. The trips generated from the Kaysville Mixed Use Development are presented in Table 1.

Table 1 - Trip Generation

ITE Land Use Code	Land Use	Land Use Description	Size	Daily	Trip Generation (AM)		Trip Generation (PM)	
				(AADT)	Enter	Exit	Enter	Exit
221	Multifamily Housing (Mid-Rise)	Dwelling Units	132	599	11	38	31	20
710	General Office Building	1000 Sq. Ft. GFA	15	163	20	3	4	18
712	Small Office Building	1000 Sq. Ft. GFA	5	72	7	1	4	7
310	Hotel	ROOMS	115	919	30	23	35	33
Total				**1753**	**68**	**65**	**74**	**78**

5.1 PASS-BY TRIP & INTERNAL CAPTURE REDUCTION

Pass-by trips are represented as traffic already on the surrounding roadways and not a new trip generated by the proposed development. For instance, someone on their way home from work and stops by the gas station, but then continues on to their final destination, i.e., home. Internal Capture trips are vehicles that will enter the site and visit more than one land use in their visit. For instance, someone enters the development to visit a retail store, and also stops at a gas station. The internal capture helps so trips generated by one vehicle that visit multiple land uses, aren't counted multiple times. The land uses proposed with the Kaysville Mixed-Use Development will not likely have pass-

by traffic or internal capture, therefore no reduction in the amount of traffic was accounted for.

5.2 SITE TRAFFIC DISTRIBUTION

Site ingress/egress traffic at the proposed accesses were distributed based on the anticipated direction vehicles would be coming from or going to. Directional distribution was estimated based on current traffic patterns and also current land uses within the proximity of the proposed development, mainly access to highways, employment districts, shopping area, schools, etc. Figure 6 illustrates the site traffic distribution percentages throughout the study area.

Using the distribution percentages along with the projected traffic volumes outlined in Table 1, Figure 7 illustrates the site traffic volumes anticipated at the study area intersections.

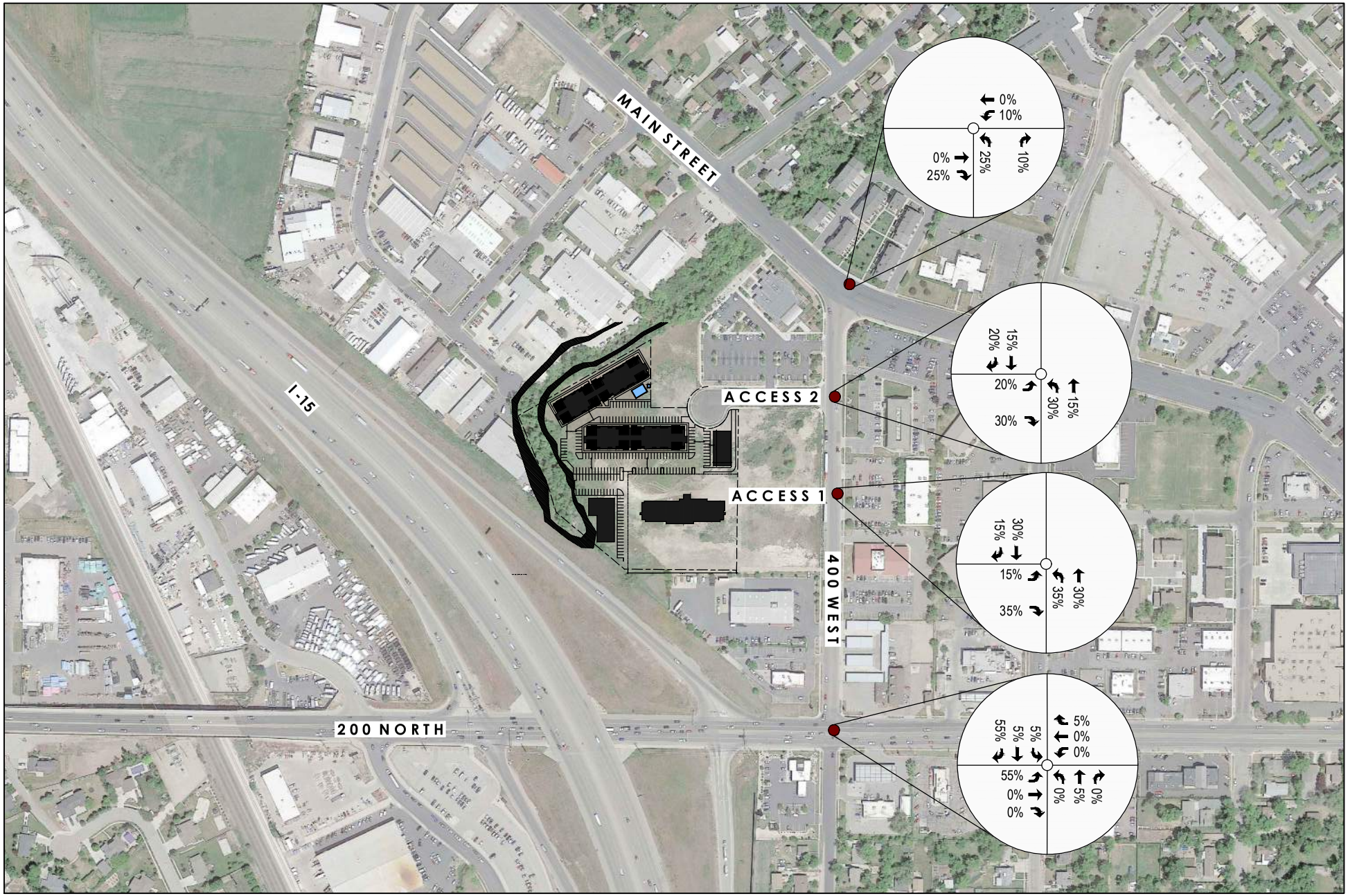

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FIGURE 6 - PROJECT DISTRIBUTION PERCENTAGES

XX% = PROJECT DISTRIBUTION PERCENTAGE

T:_2023\23-8002\dwg\Sheets\FIGURE 6 - PROJECT DISTRIBUTION PERCENTAGES.dwg

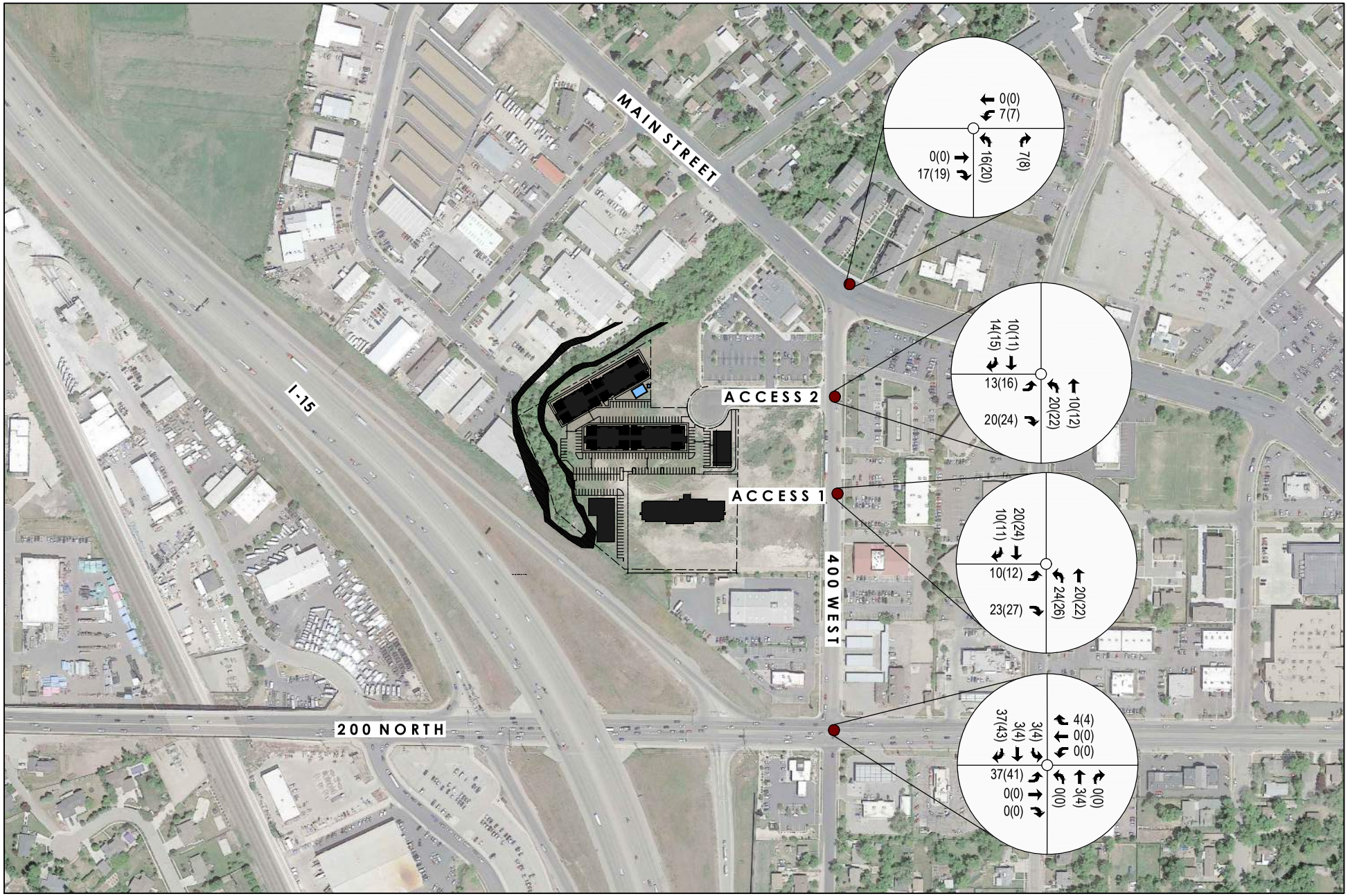

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FIGURE 7 - TRIP DISTRIBUTION VOLUMES

XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES

T:_2023\23-8002 - Kaysville Mixed-Use 1\Adesign 23-8002\dwg\Sheets\FIGURE 7 - PROJECT DISTRIBUTION VOLUMES.dwg

6.0 Opening and Future Year with Project Traffic Conditions

The Opening and Future Year with Project traffic volumes represent the traffic that will be added to the study area with the addition of the Kaysville Mixed Use Development. Using the 2025 Opening Year traffic volumes (Figure 4) and the site generated traffic volumes (Figure 7), the 2025 Opening Year with Project traffic volumes are generated. Per the developer's schedule, it is anticipated the Kaysville Mixed Use Development will be built out in 2025. The 2025 Opening Year with Project traffic volumes, which illustrates the full build-out of the development, are illustrated in Figure 8.

Applying this same approach, using the 2030 Future Year traffic volumes (Figure 5) and the site generated traffic volumes (Figure 7), the 2030 Future Year with Project traffic volumes are generated. These volumes are found in Figure 9.

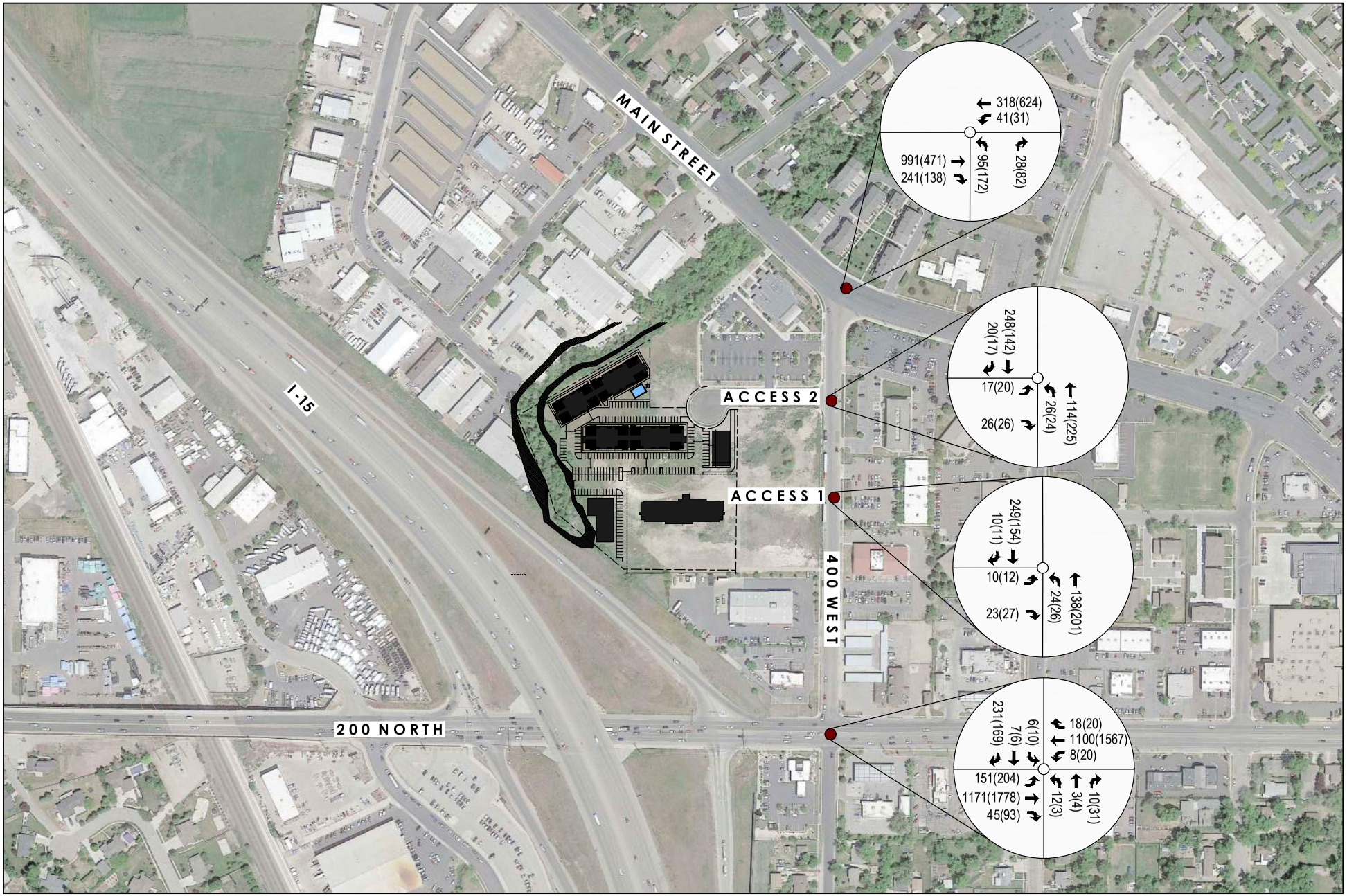

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FIGURE 8 - 2025 OPENING YEAR W/ PROJECT TRAFFIC VOLUMES

XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES

T:_2023\23-8002 - Kaysville Mixed-Use 1\Adesign 23-8002dwg\Sheets\FIGURE 8 - 2025 OPENING YEAR w PROJ VOLUMES.dwg

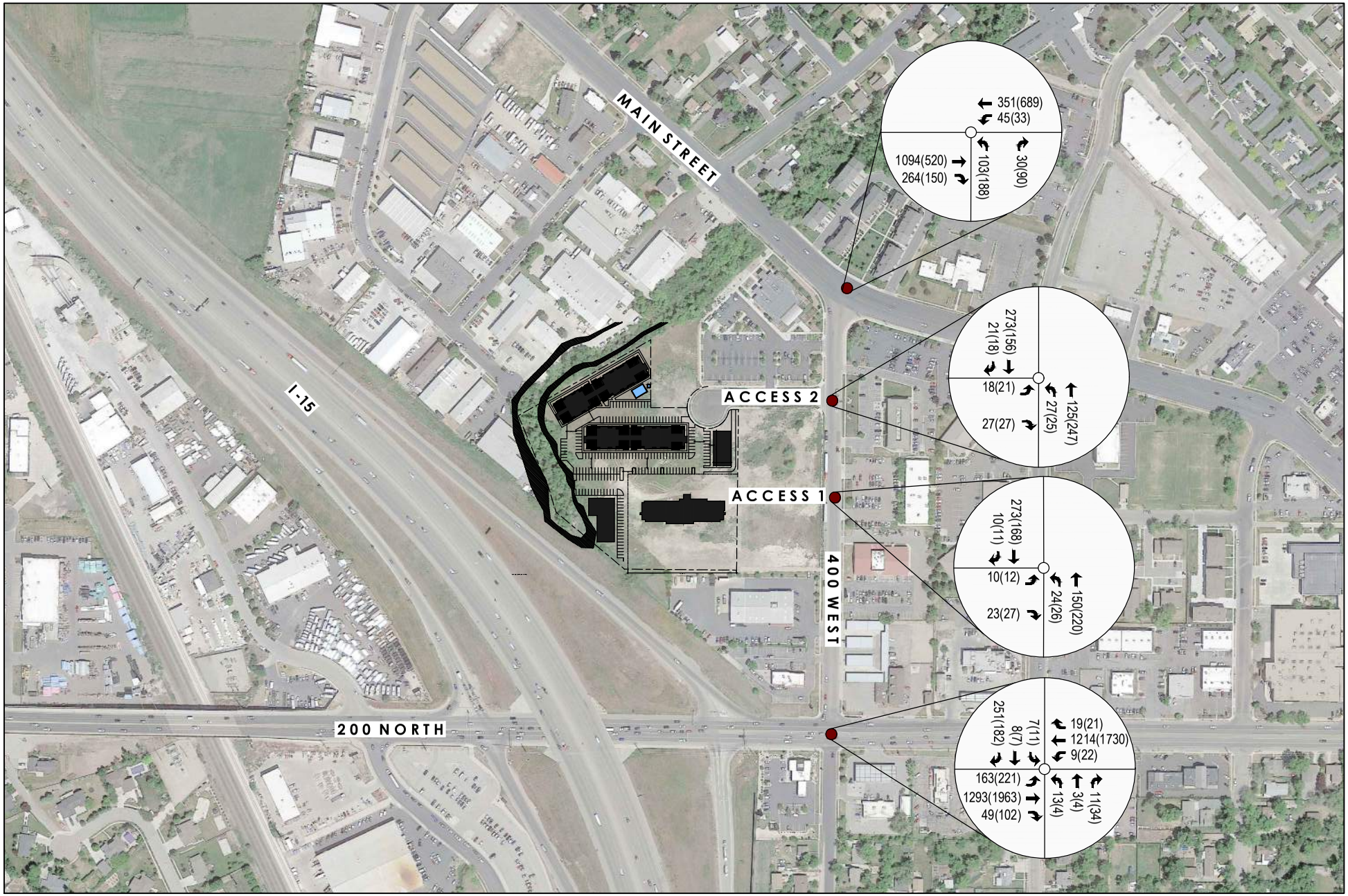

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FIGURE 9 - 2030 FUTURE YEAR W/ PROJECT TRAFFIC VOLUMES

XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES

T:_2023\23-8002 - Kaysville Mixed-Use 1\Adesign 23-8002dwg\Sheets\FIGURE 9 - 2030 OPENING YEAR w PROJ VOLUMES.dwg

7.0 Capacity Analysis

Intersection capacity analysis was performed at the study area intersections and the proposed accesses to the Kaysville Mixed Use Development. Synchro© Version 11 was used to analyze the study intersections for the proposed trip conditions according to methods put forth by the Transportation Research Board's **Highway Capacity Manual** (**HCM 6th Edition**).

The Level of Service (LOS) of an intersection range from A to F, where LOS A has a low vehicular delay indicating smooth free-flowing traffic. LOS F has a high vehicular delay and indicates the worst-case scenario with high congestion and a complete breakdown of traffic flow. Although LOS A through C are the desired levels, LOS D is considered acceptable in urban conditions. Traffic conditions with LOS of E or F are generally deemed unacceptable and represent significant travel delay, increased accident potential, and inefficient motor vehicle operation. Table 2 shows the relation between LOS and vehicular delay for signalized and unsignalized intersections.

Table 2 - Signalized and Unsignalized intersection LOS and Delay Parameters

Level of Service (LOS)	Vehicular Delay (seconds/vehicle)	
	Signalized Intersection	Stop Controlled Approach
A	0.0 ≤10.0	0.0 < 10.0
B	>10.0 ≤ 20.0	> 10.0 < 15.0
C	> 20.0 ≤ 35.0	> 15.0 < 25.0
D	> 35.0 ≤ 55.0	> 25.0 < 35.0
E	> 55.0 ≤ 80.0	> 35.0 < 50.0
F	> 80.0	> 50.0

The 2023 Existing traffic volumes at the study area intersections were analyzed using Synchro. The levels of service at each of the turning movements can be seen in the following table.

Table 3 – 2023 Existing Traffic LOS

Intersection	2023 Existing Year Traffic LOS(Delay)				
	Overall LOS	Northbound	Southbound	Eastbound	Westbound
1: 400 West & 200 North					
AM Peak Hour	-	F(375.2)	D(34.3)	A(1.1)	A(0.1)
PM Peak Hour	-	F(380.4)	F(215.7)	A(1.7)	A(0.2)
2: 400 West & Access 1					
AM Peak Hour	-	A(0.0)	A(0.0)	A(0.0)	-
PM Peak Hour	-	A(0.0)	A(0.0)	A(0.0)	-
3: 400 West & Access 2					
AM Peak Hour	-	A(0.4)	A(0.0)	B(10.0)	-
PM Peak Hour	-	A(0.1)	A(0.0)	B(10.0)	-
4: 400 West & Main Street					
AM Peak Hour	-	D(27.0)	-	A(0.0)	A(1.2)
PM Peak Hour	-	C(17.6)	-	A(0.0)	A(0.3)

As can be seen in Table 3, under the existing traffic conditions, the northbound and southbound traffic movements at 400 West and 200 North currently experience heavy delays and function at unacceptable levels of service (LOS). All other movements at the study area intersection function with acceptable levels of service.

With the projected growth to the Opening Year of 2025 and the Future Year of 2030, the following tables illustrate the LOS for the study area intersections under these scenarios.

Table 4 – 2025 Opening Year Traffic LOS

Intersection	2025 Opening Year Traffic LOS(Delay)				
	Overall LOS	Northbound	Southbound	Eastbound	Westbound
1: 400 West & 200 North					
AM Peak Hour	-	F(566.4)	F(51.4)	A(1.1)	A(0.1)
PM Peak Hour	-	F(*)	F(976.5)	A(1.9)	A(0.2)
2: 400 West & Access 1					
AM Peak Hour	-	A(0.0)	A(0.0)	A(0.0)	-
PM Peak Hour	-	A(0.0)	A(0.0)	A(0.0)	-
3: 400 West & Access 2					
AM Peak Hour	-	A(0.4)	A(0.0)	B(10.1)	-
PM Peak Hour	-	A(0.1)	A(0.0)	B(10.0)	-
4: 400 West & Main Street					
AM Peak Hour	-	D(30.6)	-	A(0.0)	A(1.2)
PM Peak Hour	-	C(18.6)	-	A(0.0)	A(0.3)

* = Synchro analysis provides an "error" as delay time exceed capacity.

As seen in Table 4, the northbound and southbound traffic movements at 200 North and 400 West will continue to fail. The other traffic movements at the other intersection will continue with similar levels of services as under the existing year conditions.

Table 5 – 2030 Future Year Traffic LOS

Intersection	2030 Future Year Traffic LOS(Delay)				
	Overall LOS	Northbound	Southbound	Eastbound	Westbound
1: 400 West & 200 North					
AM Peak Hour	-	F(2086.9)	F(170.9)	A(1.3)	A(0.1)
PM Peak Hour	-	F(*)	F(452.6)	A(2.8)	A(0.3)
2: 400 West & Access 1					
AM Peak Hour	-	A(0.0)	A(0.0)	A(0.0)	-
PM Peak Hour	-	A(0.0)	A(0.0)	A(0.0)	-
3: 400 West & Access 2					
AM Peak Hour	-	A(0.5)	A(0.0)	B(10.3)	-
PM Peak Hour	-	A(0.1)	A(0.0)	B(10.1)	-
4: 400 West & Main Street					
AM Peak Hour	-	E(40.8)	-	A(0.0)	A(1.3)
PM Peak Hour	-	C(22.0)	-	A(0.0)	A(0.3)

* = Synchro analysis provides an "error" as delay time exceed capacity.

Table 5 illustrates similar results at the 200 North and 400 West intersection as the northbound and southbound movements will continue to fail. The northbound movements at the 400 West and Main Street intersection will fall to a LOS E in the AM peak hour.

With the addition of Kaysville Mixed Use Development within this study area, the following tables illustrates the projected levels of service at the study area intersections under the 2025 Opening Year with Project and the 2030 Future Year with Project scenarios.

Table 6 – 2025 Opening Year w/ Project LOS

Intersection	2025 Opening Year w/ Project LOS				
	Overall LOS	Northbound	Southbound	Eastbound	Westbound
1: 400 West & 200 North					
AM Peak Hour	-	F(1339.9)	F(198.5)	A(1.5)	A(0.1)
PM Peak Hour	-	F(*)	F(*)	A(2.9)	A(0.2)
2: 400 West & Access 1					
AM Peak Hour	-	A(1.2)	A(0.0)	B(10.4)	-
PM Peak Hour	-	A(0.9)	A(0.0)	A(9.9)	-
3: 400 West & Access 2					
AM Peak Hour	-	A(1.5)	A(0.0)	B(10.6)	-
PM Peak Hour	-	A(0.7)	A(0.0)	B(10.2)	-
4: 400 West & Main Street					
AM Peak Hour	-	D(34.9)	-	A(0.0)	A(1.5)
PM Peak Hour	-	C(20.6)	-	A(0.0)	A(0.4)

* = Synchro analysis provides an "error" as delay time exceed capacity.

With the addition of the Kaysville Mixed Use Development, traffic movements will continue to function with the same levels of service as under the 2025 Opening Year scenario (without the proposed development).

Table 7 – 2030 Future Year w/ Project LOS

Intersection	2030 Future Year w/ Project LOS				
	Overall LOS	Northbound	Southbound	Eastbound	Westbound
1: 400 West & 200 North					
AM Peak Hour	-	F(*)	F(497.8)	A(1.7)	A(0.1)
PM Peak Hour	-	F(*)	F(661.8)	A(4.6)	A(0.3)
2: 400 West & Access 1					
AM Peak Hour	-	A(1.1)	A(0.0)	B(10.6)	-
PM Peak Hour	-	A(0.8)	A(0.0)	B(10.0)	-
3: 400 West & Access 2					
AM Peak Hour	-	A(1.4)	A(0.0)	B(10.8)	-
PM Peak Hour	-	A(0.7)	A(0.0)	B(10.4)	-
4: 400 West & Main Street					
AM Peak Hour	-	E(48.8)	-	A(0.0)	A(1.6)
PM Peak Hour	-	D(25.4)	-	A(0.0)	A(0.4)

* = Synchro analysis provides an "error" as delay time exceed capacity.

Under the 2030 Future Year with Project analysis, the northbound and southbound traffic movements at 400 West and 200 North will continue to function with unacceptable levels of service. The northbound approach at 400 West and Main Street will also continue to function with unacceptable levels of service.

8.0 Traffic Signal Warrant Analysis

With the unacceptable levels of service at the northbound and southbound approaches at 400 West and 200 North under all of the study scenarios, a peak hour signal warrant analysis was performed to look at a possible mitigation at this intersection. It should be noted that this intersection is only located roughly 300 feet from the northbound on and off ramp to I-15, which is signalized. Having two intersections within this close proximity, may not be viable. In order to analyze the need for a traffic signal, the 2009 Edition of the Manual on Traffic Control Devices (MUTCD), Part 4 is used. As per the MUTCD there are nine signal warrants and even if one warrant is met, a signal may be installed at the study intersection. The warrants are:

Warrant 1 - Eight Hour Vehicular Volume

Warrant 2 - Four Hour Vehicular Volume

Warrant 3 - Peak Hour

Warrant 4 - Pedestrian Volume

Warrant 5 - School Crossing

Warrant 6 - Coordinated Signal System

Warrant 7 - Crash Experience

Warrant 8 - Roadway Network

Warrant 9 - Intersection near a Grade Crossing

Based on the study location, traffic patterns and information we have available at this time, only Warrant 3 - Peak Hour was able to be analyzed with the projected peak hour traffic volumes under the 2025 Opening Year scenario. The following paragraphs provide the details of the signal warrant analysis.

Note that in all scenarios that were analyzed at the 400 West and 200 North intersection for a traffic signal warrant, the Major Street (200 North) total for both directions do not include the vehicles making a right turn from 200 North as these vehicles are not often counted in a traffic signal warrant analysis as they do not impede the Minor Street (400 West) traffic from making their movement.

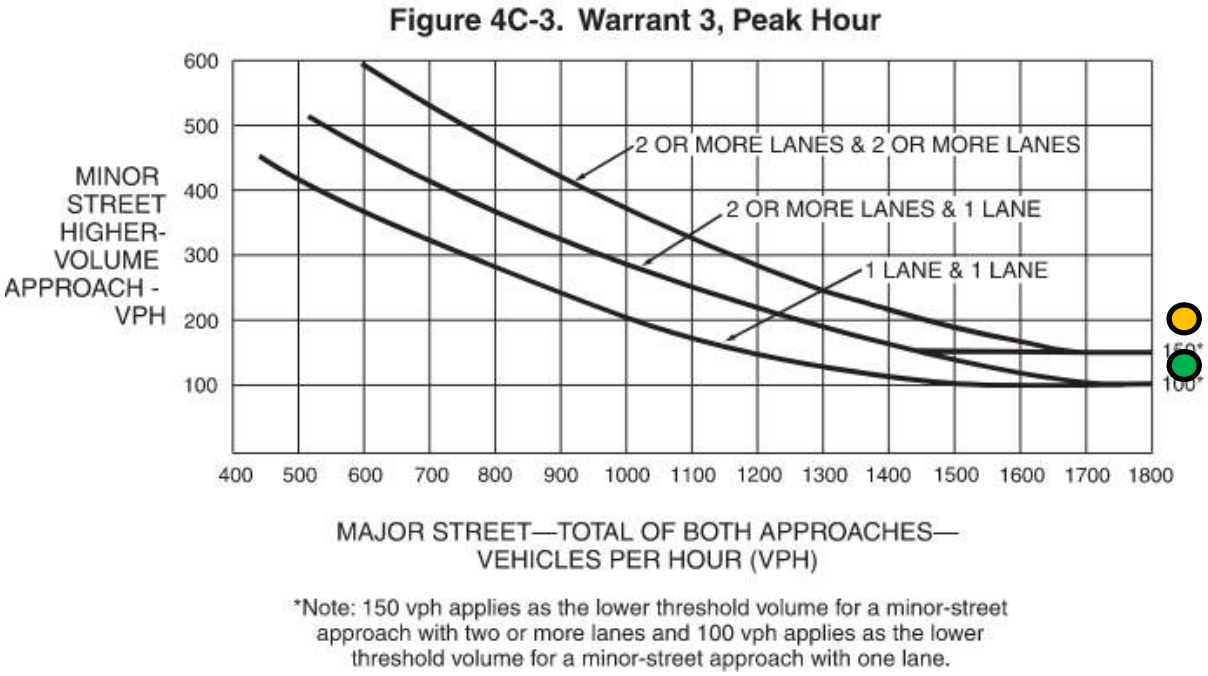
Warrant 3 (Peak Hour)

400 West and 200 North

This traffic signal warrant analysis was performed at 400 West and 200 North intersection. The Major Street is 200 North and the Minor Street is 400 West. It is projected under the 2025 Opening Year traffic volumes, along 200 North, the combined vehicles per hours (vph) of the Major Street in the AM Peak Hour will be 2438 vph and in the PM Peak Hour, 3621 vph. The higher volume of the Minor Street (400 West) under the 2025 Opening Year scenario, will be 201 vph in the AM peak hour and 134 vph in the PM peak hour.

As seen in the figure below, the plotted points of these volumes fall above the applicable curve and therefore warrant a traffic signal under the 2025 Opening Year scenario.

Figure 10 – 400 West & 200 North 2025 Opening Year Scenario Signal Warrant



= 2025 Opening Year Traffic Volumes at 400 West and 200 North Intersection (AM Peak Hour)

= 2025 Opening Year Traffic Volumes at 400 West and 200 North Intersection (PM Peak Hour)

With the 400 West and 200 North traffic volumes warranting a traffic signal under the 2025 Opening Year scenario, the other scenarios were not analyzed as they would also meet the warrant.

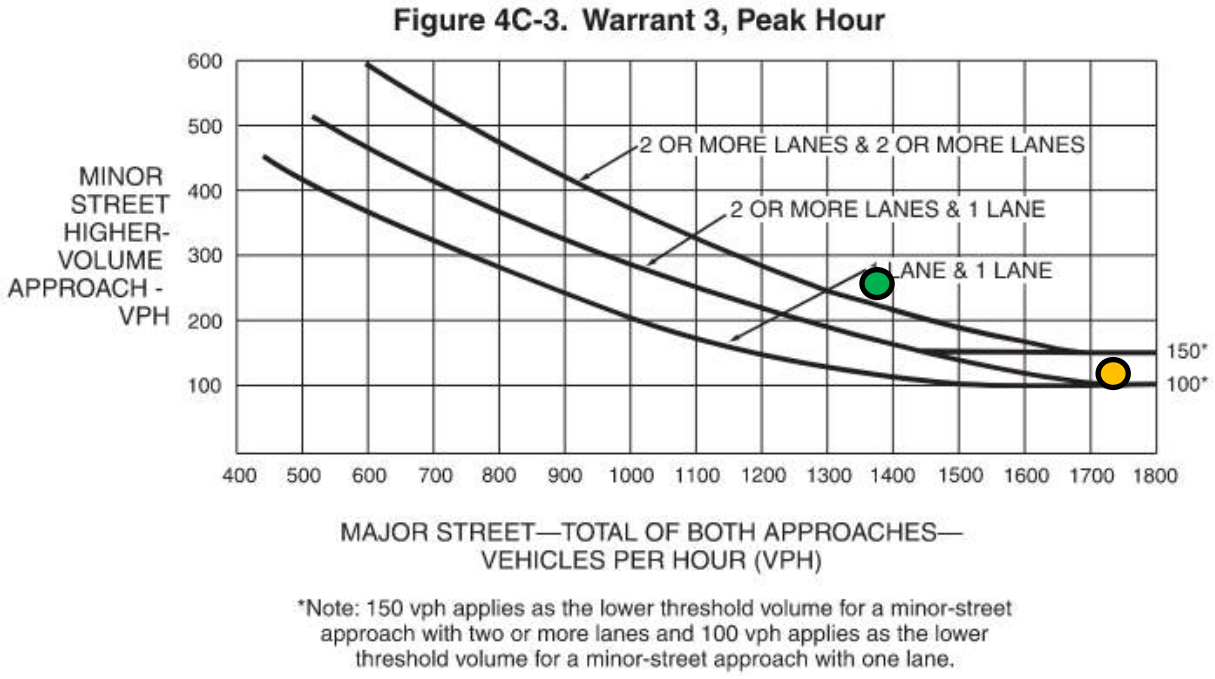
400 West and Main Street

This traffic signal warrant analysis was performed at 400 West and Main Street intersection under the 2030 Future Year scenario as the level of service falls below the acceptable threshold. The Major Street is Main Street and the Minor Street is 400 West. It is anticipated that 2030 Future Years and 2030 Future with Project are used in this analysis.

It is projected under the 2030 Future Year traffic volumes, along Main Street, the combined vehicles per hours (vph) of the Major Street in the AM Peak Hour will be 1730 vph and in the PM Peak Hour, 1366 vph. The higher volume of the Minor Street (400 West) under the 2030 Future Year scenario, will be 110 vph in the AM peak hour and 250 vph in the PM peak hour.

As seen in the figure below, the plotted points of these volumes fall above the applicable curve and therefore warrant a traffic signal under the 2030 Future Year scenario.

Figure 11 – 400 West & Main Street 2030 Future Year Scenario Signal Warrant



= 2030 Future Year Traffic Volumes at 400 West and Main Street Intersection (AM Peak Hour)

= 2030 Future Year Traffic Volumes at 400 West and Main Street Intersection (PM Peak Hour)

9.0 Recommendations

Based on the information and findings presented in this report, the following recommendations are proposed under the different study scenarios.

2025 Opening Year Scenario

The 200 North and 400 West intersection currently and under the 2025 Opening Year scenario functions with a LOS F in the northbound and southbound movements. The 200 North and 400 West intersection does meet the Peak Hour Warrant for a traffic signal which will improve the LOS. However, with the close proximity to I-15 on and off ramps, it would not make for a viable location with access spacing to signalize this intersection. It is recommended the city look at the entire corridor of 200 North for access control. Possible solution may be right-in/right-out, or continue the existing traffic operations and as delays increase, vehicles will find alternate routes if the delay is too excessive.

2025 Opening Year w/ Project Scenario

With the addition of the Kaysville Mixed Use Development, all intersections will continue to function with similar levels of service as under the scenarios without the development.

It is recommended Access 1 use the existing roadway with one receiving lane and one exiting lane. This access will meet city standards with appropriate driveway approach, signing and striping.

It is recommended Access 2 continue to function with one receiving lane and one exiting lane. This will continue to serve access to the adjacent property.

2030 Future Year Scenario

Similar to the 2025 Opening Year scenario, the 400 West and 200 North intersection will meet signal warrants. It is recommended this intersection be further analyzed to appropriate improvements, such as a signal, right-in/right-out or simply leave as existing functions.

400 West and Main Street will fall to a LOS E in the northbound direction under the 2030 Future Year scenario. It is the 400 West and Main Street intersection be monitored for when traffic volumes warrant a signal. The projected volumes illustrate a signal will meet warrants for the peak hour under the 2030 Future Year scenario.

2030 Future Year with Project Scenario

With the addition of the Kaysville Mixed Use Development and the implementation of a signal as recommended under the 2030 Future Year scenario, this intersection will function with acceptable levels of service. However, if no improvements are implemented under the 2030 Future Year scenario, this intersection will function with the similar levels of service.

Appendix

Existing Traffic Counts

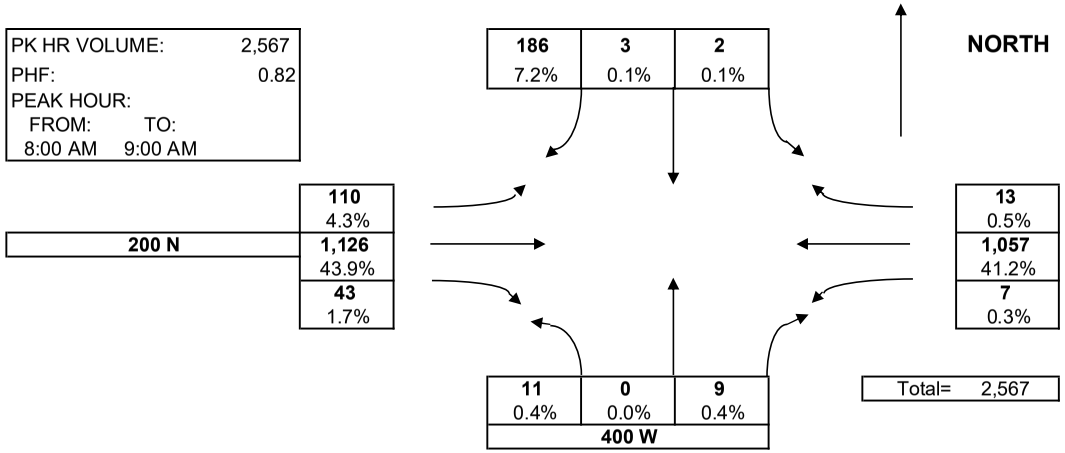
TURNING MOVEMENT COUNT SUMMARY

FOCUS ENGINEERING & SURVEYING, LLC

AM PEAK HOUR VOLUMES

INTERSECTION:	**400 W and 200 N**
N-S STREET:	**400 W**
E-W STREET:	**200 N**
FOCUS PROJ. NO.:	**23-8001**
COUNT DATE:	**28-Feb-23**
NOTES:	
COUNT TIME:	
FROM:	**7:00 AM**
TO:	**9:00 AM**

PK HR VOLUME:	2,567
PHF:	0.82
PEAK HOUR:	
FROM:	TO:
8:00 AM	9:00 AM



COUNT DATA INPUT:

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL
FROM:	TO:	L	T	R	L	T	R	L	T	R	L	T	R	VOLUMES
7:00 AM	7:15 AM	5	0	1	20	128	5	1	0	29	0	144	0	333
7:15 AM	7:30 AM	1	0	2	20	181	7	1	1	39	1	180	1	434
7:30 AM	7:45 AM	3	0	1	17	259	6	1	0	48	1	221	0	557
7:45 AM	8:00 AM	3	0	4	35	349	2	0	0	30	3	211	7	644
8:00 AM	8:15 AM	2	0	1	33	290	10	0	0	51	0	226	1	614
8:15 AM	8:30 AM	3	0	3	29	243	13	1	2	42	3	196	1	536
8:30 AM	8:45 AM	6	0	3	12	267	8	1	0	43	1	288	6	635
8:45 AM	9:00 AM	0	0	2	36	326	12	0	1	50	3	347	5	782

HOURLY TOTALS:

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL
FROM:	TO:	L	T	R	L	T	R	L	T	R	L	T	R	VOLUMES
7:00 AM	8:00 AM	12	0	8	92	917	20	3	1	146	5	756	8	1,968
7:15 AM	8:15 AM	9	0	8	105	1,079	25	2	1	168	5	838	9	2,249
7:30 AM	8:30 AM	11	0	9	114	1,141	31	2	2	171	7	854	9	2,351
7:45 AM	8:45 AM	14	0	11	109	1,149	33	2	2	166	7	921	15	2,429
8:00 AM	9:00 AM	11	0	9	110	1,126	43	2	3	186	7	1,057	13	2,567

NOTE PHF IS BASED ON 15 MIN. PEAK WITHIN THE PEAK HOUR.

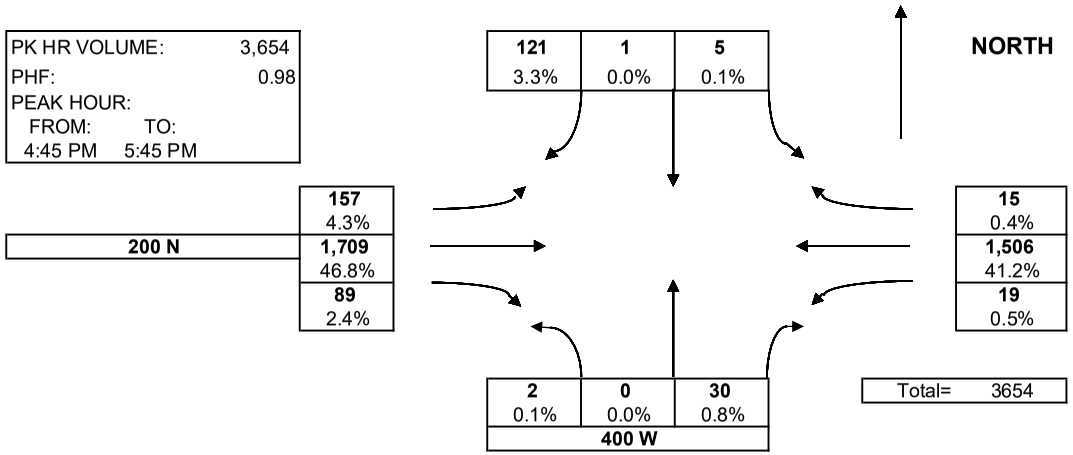
TURNING MOVEMENT COUNT SUMMARY

FOCUS ENGINEERING & SURVEYING, LLC

INTERSECTION:	**400 W and 200 N**
N-S STREET:	**400 W**
E-W STREET:	**200 N**
FOCUS PROJ. NO.:	**23-8001**
COUNT DATE:	**28-Feb-23**
NOTES:	
COUNT TIME:	
FROM:	**4:00 PM**
TO:	**6:00 PM**

PM PEAK HOUR VOLUMES

PK HR VOLUME:	3,654
PHF:	0.98
PEAK HOUR:	
FROM:	TO:
4:45 PM	5:45 PM



Total= 3654

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TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL
FROM:	TO:	L	T	R	L	T	R	L	T	R	L	T	R	VOLUMES
4:00 PM	4:15 PM	0	0	5	38	385	18	1	0	31	8	376	0	862
4:15 PM	4:30 PM	3	0	8	35	362	14	2	0	44	4	329	3	804
4:30 PM	4:45 PM	1	0	5	21	390	28	2	0	12	2	336	1	798
4:45 PM	5:00 PM	1	0	9	43	440	23	1	1	15	6	347	3	889
5:00 PM	5:15 PM	0	0	6	38	431	20	2	0	17	4	409	2	929
5:15 PM	5:30 PM	0	0	7	48	410	22	2	0	48	5	373	7	922
5:30 PM	5:45 PM	1	0	8	28	428	24	0	0	41	4	377	3	914
5:45 PM	6:00 PM	2	0	5	28	446	19	2	1	50	5	310	1	869
														6,987

HOURLY TOTALS:

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL
FROM:	TO:	L	T	R	L	T	R	L	T	R	L	T	R	VOLUMES
4:00 PM	5:00 PM	5	0	27	137	1,577	83	6	1	102	20	1,388	7	3,353
4:15 PM	5:15 PM	5	0	28	137	1,623	85	7	1	88	16	1,421	9	3,420
4:30 PM	5:30 PM	2	0	27	150	1,671	93	7	1	92	17	1,465	13	3,538
4:45 PM	5:45 PM	2	0	30	157	1,709	89	5	1	121	19	1,506	15	3,654
5:00 PM	6:00 PM	3	0	26	142	1,715	85	6	1	156	18	1,469	13	3,634

NOTE PHF IS BASED ON 15 MIN. PEAK WITHIN THE PEAK HOUR.

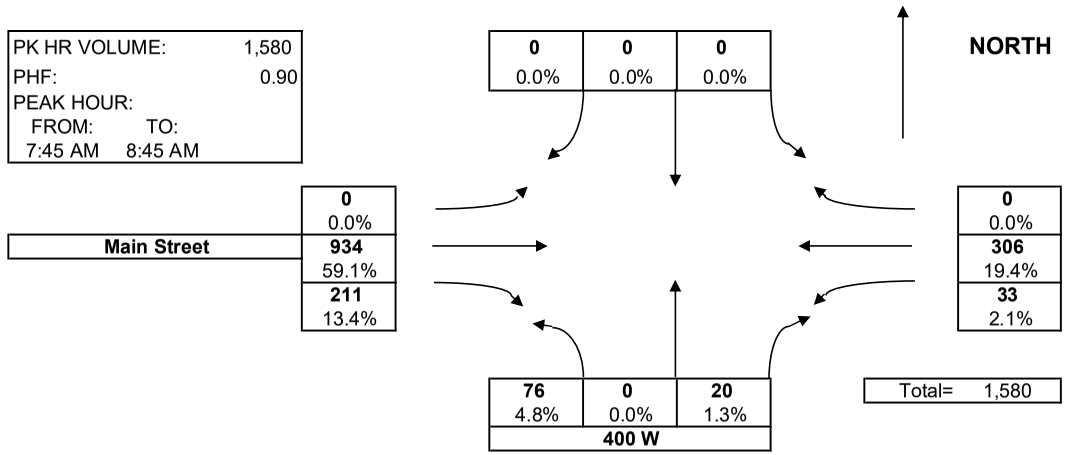
TURNING MOVEMENT COUNT SUMMARY

FOCUS ENGINEERING & SURVEYING, LLC

INTERSECTION:	**400 W and Main Street**
N-S STREET:	**400 W**
E-W STREET:	**Main Street**
FOCUS PROJ. NO.:	**23-8001**
COUNT DATE:	**28-Feb-23**
NOTES:	
COUNT TIME:	
FROM:	**7:00 AM**
TO:	**9:00 AM**

PK HR VOLUME:	1,580
PHF:	0.90
PEAK HOUR:	
FROM:	TO:
7:45 AM	8:45 AM

AM PEAK HOUR VOLUMES



COUNT DATA INPUT:

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL
FROM:	TO:	L	T	R	L	T	R	L	T	R	L	T	R	VOLUMES
7:00 AM	7:15 AM	7	0	3	0	99	28	0	0	0	3	39	0	179
7:15 AM	7:30 AM	26	0	3	0	159	28	0	0	0	6	36	0	258
7:30 AM	7:45 AM	16	0	2	0	189	46	0	0	0	2	49	0	304
7:45 AM	8:00 AM	17	0	7	0	266	58	0	0	0	7	71	0	426
8:00 AM	8:15 AM	23	0	7	0	272	58	0	0	0	9	68	0	437
8:15 AM	8:30 AM	19	0	1	0	203	49	0	0	0	6	88	0	366
8:30 AM	8:45 AM	17	0	5	0	193	46	0	0	0	11	79	0	351
8:45 AM	9:00 AM	17	0	15	0	213	56	0	0	0	24	76	0	401

HOURLY TOTALS:

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL
FROM:	TO:	L	T	R	L	T	R	L	T	R	L	T	R	VOLUMES
7:00 AM	8:00 AM	66	0	15	0	713	160	0	0	0	18	195	0	1,167
7:15 AM	8:15 AM	82	0	19	0	886	190	0	0	0	24	224	0	1,425
7:30 AM	8:30 AM	75	0	17	0	930	211	0	0	0	24	276	0	1,533
7:45 AM	8:45 AM	76	0	20	0	934	211	0	0	0	33	306	0	1,580
8:00 AM	9:00 AM	76	0	28	0	881	209	0	0	0	50	311	0	1,555

NOTE PHF IS BASED ON 15 MIN. PEAK WITHIN THE PEAK HOUR.

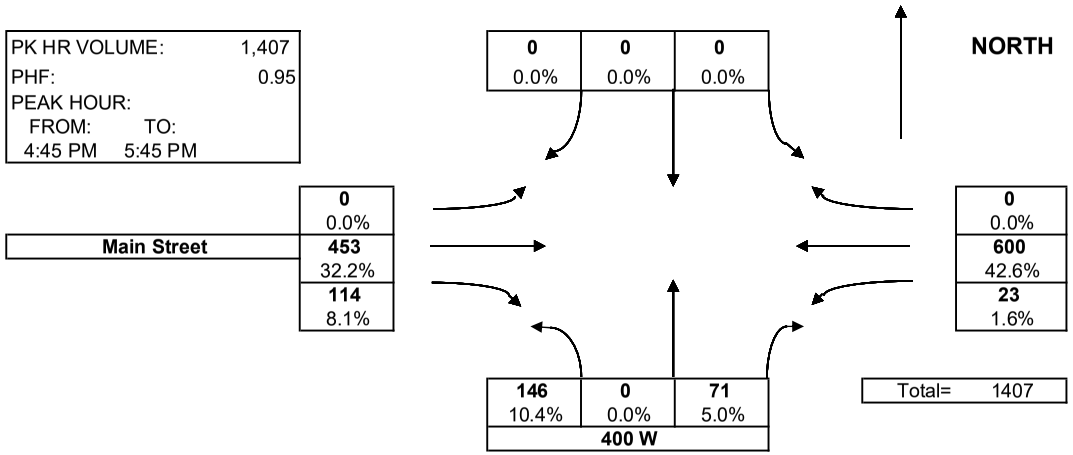
TURNING MOVEMENT COUNT SUMMARY

FOCUS ENGINEERING & SURVEYING, LLC

INTERSECTION:	**400 W and Main Street**
N-S STREET:	**400 W**
E-W STREET:	**Main Street**
FOCUS PROJ. NO.:	**23-8001**
COUNT DATE:	**28-Feb-23**
NOTES:	
COUNT TIME:	
FROM:	**4:00 PM**
TO:	**6:00 PM**

PK HR VOLUME:	1,407
PHF:	0.95
PEAK HOUR:	
FROM:	TO:
4:45 PM	5:45 PM

PM PEAK HOUR VOLUMES



COUNT DATA INPUT:

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL
FROM:	TO:	L	T	R	L	T	R	L	T	R	L	T	R	VOLUMES
4:00 PM	4:15 PM	31	0	12	0	101	26	0	0	0	13	168	0	351
4:15 PM	4:30 PM	29	0	9	0	111	38	0	0	0	6	123	0	316
4:30 PM	4:45 PM	36	0	18	0	109	36	0	0	0	5	132	0	336
4:45 PM	5:00 PM	33	0	21	0	112	24	0	0	0	8	151	0	349
5:00 PM	5:15 PM	23	0	15	0	129	27	0	0	0	4	172	0	370
5:15 PM	5:30 PM	50	0	20	0	106	30	0	0	0	7	135	0	348
5:30 PM	5:45 PM	40	0	15	0	106	33	0	0	0	4	142	0	340
5:45 PM	6:00 PM	20	0	15	0	105	24	0	0	0	9	133	0	306
														2,716

HOURLY TOTALS:

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL
FROM:	TO:	L	T	R	L	T	R	L	T	R	L	T	R	VOLUMES
4:00 PM	5:00 PM	129	0	60	0	433	124	0	0	0	32	574	0	1,352
4:15 PM	5:15 PM	121	0	63	0	461	125	0	0	0	23	578	0	1,371
4:30 PM	5:30 PM	142	0	74	0	456	117	0	0	0	24	590	0	1,403
4:45 PM	5:45 PM	146	0	71	0	453	114	0	0	0	23	600	0	1,407
5:00 PM	6:00 PM	133	0	65	0	446	114	0	0	0	24	582	0	1,364

NOTE PHF IS BASED ON 15 MIN. PEAK WITHIN THE PEAK HOUR.

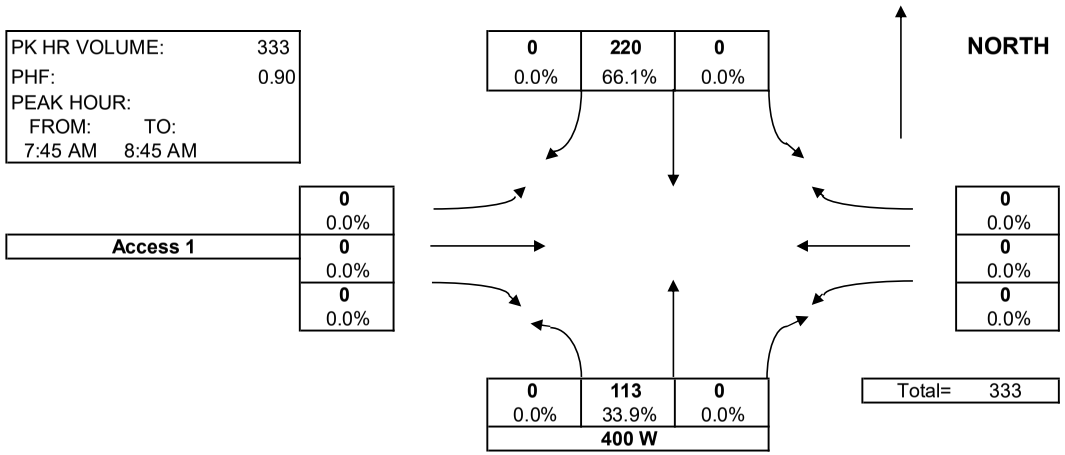
TURNING MOVEMENT COUNT SUMMARY

FOCUS ENGINEERING & SURVEYING, LLC

INTERSECTION:	**400 W and Access 1**
N-S STREET:	**400 W**
E-W STREET:	**Access 1**
FOCUS PROJ. NO.:	**23-8001**
COUNT DATE:	**28-Feb-23**
NOTES:	
COUNT TIME:	
FROM:	**7:00 AM**
TO:	**9:00 AM**

PK HR VOLUME:	333
PHF:	0.90
PEAK HOUR:	
FROM:	TO:
7:45 AM	8:45 AM

AM PEAK HOUR VOLUMES



COUNT DATA INPUT:

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL
FROM:	TO:	L	T	R	L	T	R	L	T	R	L	T	R	VOLUMES
7:00 AM	7:15 AM	1	13	0	0	0	0	0	39	0	0	0	0	53
7:15 AM	7:30 AM	1	12	0	0	0	0	0	37	0	0	0	0	50
7:30 AM	7:45 AM	1	11	0	0	0	0	0	42	0	0	0	0	54
7:45 AM	8:00 AM	0	38	0	0	0	0	0	43	0	0	0	0	81
8:00 AM	8:15 AM	0	29	0	0	0	0	0	64	0	0	0	0	93
8:15 AM	8:30 AM	0	26	0	0	0	0	0	59	0	0	0	0	85
8:30 AM	8:45 AM	0	20	0	0	0	0	0	54	0	0	0	0	74
8:45 AM	9:00 AM	0	5	0	0	0	0	0	32	0	0	0	0	37

HOURLY TOTALS:

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL
FROM:	TO:	L	T	R	L	T	R	L	T	R	L	T	R	VOLUMES
7:00 AM	8:00 AM	3	74	0	0	0	0	0	161	0	0	0	0	238
7:15 AM	8:15 AM	2	90	0	0	0	0	0	186	0	0	0	0	278
7:30 AM	8:30 AM	1	104	0	0	0	0	0	208	0	0	0	0	313
7:45 AM	8:45 AM	0	113	0	0	0	0	0	220	0	0	0	0	333
8:00 AM	9:00 AM	0	80	0	0	0	0	0	209	0	0	0	0	289

NOTE PHF IS BASED ON 15 MIN. PEAK WITHIN THE PEAK HOUR.

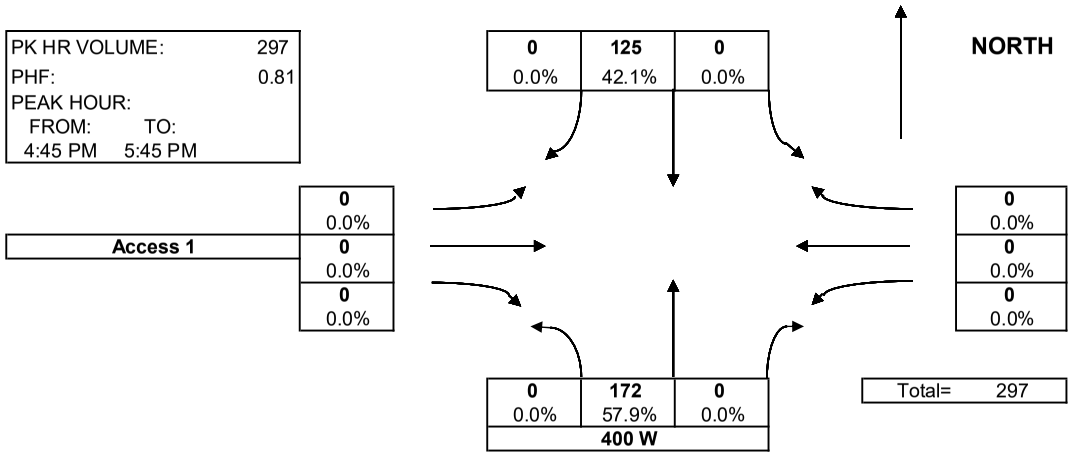
TURNING MOVEMENT COUNT SUMMARY

FOCUS ENGINEERING & SURVEYING, LLC

INTERSECTION:	**400 W and Access 1**
N-S STREET:	**400 W**
E-W STREET:	**Access 1**
FOCUS PROJ. NO.:	**23-8001**
COUNT DATE:	**28-Feb-23**
NOTES:	
COUNT TIME:	
FROM:	**4:00 PM**
TO:	**6:00 PM**

PK HR VOLUME:	297
PHF:	0.81
PEAK HOUR:	
FROM:	TO:
4:45 PM	5:45 PM

PM PEAK HOUR VOLUMES



COUNT DATA INPUT:

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL
FROM:	TO:	L	T	R	L	T	R	L	T	R	L	T	R	VOLUMES
4:00 PM	4:15 PM	0	26	0	1	0	1	0	29	0	0	0	0	57
4:15 PM	4:30 PM	0	33	0	1	0	0	0	25	1	0	0	0	60
4:30 PM	4:45 PM	1	34	0	0	0	0	0	23	0	0	0	0	58
4:45 PM	5:00 PM	0	37	0	0	0	0	0	21	0	0	0	0	58
5:00 PM	5:15 PM	0	56	0	0	0	0	0	36	0	0	0	0	92
5:15 PM	5:30 PM	0	41	0	0	0	0	0	29	0	0	0	0	70
5:30 PM	5:45 PM	0	38	0	0	0	0	0	39	0	0	0	0	77
5:45 PM	6:00 PM	0	29	0	2	0	0	0	24	0	0	0	0	55
														527

HOURLY TOTALS:

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL
FROM:	TO:	L	T	R	L	T	R	L	T	R	L	T	R	VOLUMES
4:00 PM	5:00 PM	1	130	0	2	0	1	0	98	1	0	0	0	233
4:15 PM	5:15 PM	1	160	0	1	0	0	0	105	1	0	0	0	268
4:30 PM	5:30 PM	1	168	0	0	0	0	0	109	0	0	0	0	278
4:45 PM	5:45 PM	0	172	0	0	0	0	0	125	0	0	0	0	297
5:00 PM	6:00 PM	0	164	0	2	0	0	0	128	0	0	0	0	294

NOTE PHF IS BASED ON 15 MIN. PEAK WITHIN THE PEAK HOUR.

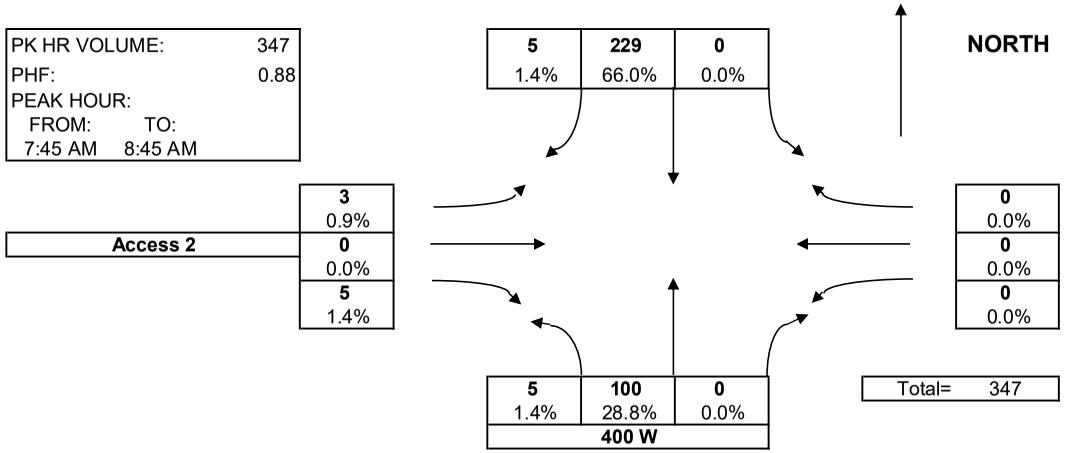
TURNING MOVEMENT COUNT SUMMARY

FOCUS ENGINEERING & SURVEYING, LLC

INTERSECTION:	**400 W and Access 2**
N-S STREET:	**400 W**
E-W STREET:	**Access 2**
FOCUS PROJ. NO.:	**23-8001**
COUNT DATE:	**28-Feb-23**
NOTES:	
COUNT TIME:	
FROM:	**7:00 AM**
TO:	**9:00 AM**

PK HR VOLUME:	347
PHF:	0.88
PEAK HOUR:	
FROM:	TO:
7:45 AM	8:45 AM

AM PEAK HOUR VOLUMES



COUNT DATA INPUT:

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL
FROM:	TO:	L	T	R	L	T	R	L	T	R	L	T	R	VOLUMES
7:00 AM	7:15 AM	0	13	0	1	0	0	0	41	3	0	0	0	58
7:15 AM	7:30 AM	0	11	0	0	0	0	0	34	0	0	0	0	45
7:30 AM	7:45 AM	1	12	0	1	0	1	0	39	0	0	0	0	54
7:45 AM	8:00 AM	1	34	0	0	0	0	0	45	2	0	0	0	82
8:00 AM	8:15 AM	1	24	0	0	0	1	0	59	0	0	0	0	85
8:15 AM	8:30 AM	2	23	0	3	0	2	0	67	2	0	0	0	99
8:30 AM	8:45 AM	1	19	0	0	0	2	0	58	1	0	0	0	81
8:45 AM	9:00 AM	0	5	0	0	0	1	0	32	0	0	0	0	38

HOURLY TOTALS:

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL
FROM:	TO:	L	T	R	L	T	R	L	T	R	L	T	R	VOLUMES
7:00 AM	8:00 AM	2	70	0	2	0	1	0	159	5	0	0	0	239
7:15 AM	8:15 AM	3	81	0	1	0	2	0	177	2	0	0	0	266
7:30 AM	8:30 AM	5	93	0	4	0	4	0	210	4	0	0	0	320
7:45 AM	8:45 AM	5	100	0	3	0	5	0	229	5	0	0	0	347
8:00 AM	9:00 AM	4	71	0	3	0	6	0	216	3	0	0	0	303

NOTE PHF IS BASED ON 15 MIN. PEAK WITHIN THE PEAK HOUR.

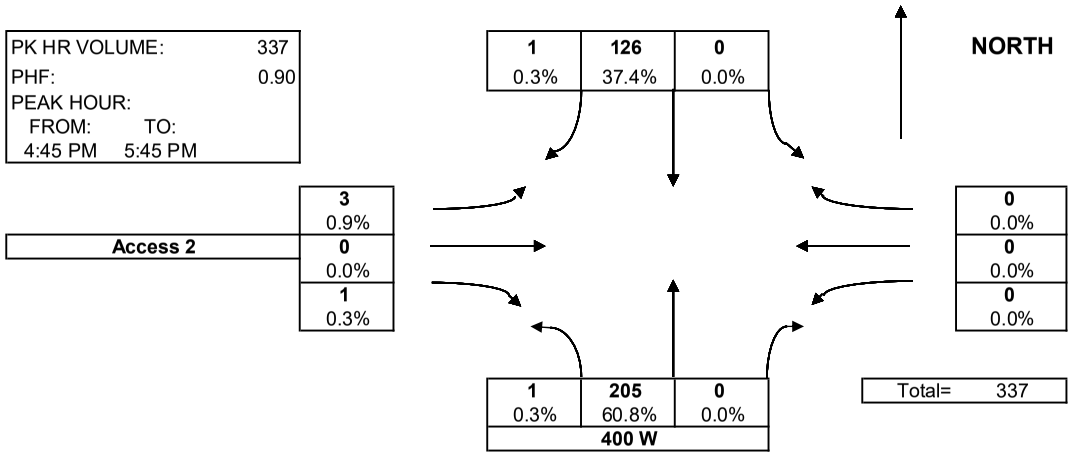
TURNING MOVEMENT COUNT SUMMARY

FOCUS ENGINEERING & SURVEYING, LLC

INTERSECTION:	**400 W and Access 2**
N-S STREET:	**400 W**
E-W STREET:	**Access 2**
FOCUS PROJ. NO.:	**23-8001**
COUNT DATE:	**28-Feb-23**
NOTES:	
COUNT TIME:	
FROM:	**4:00 PM**
TO:	**6:00 PM**

PK HR VOLUME:	337
PHF:	0.90
PEAK HOUR:	
FROM:	TO:
4:45 PM	5:45 PM

PM PEAK HOUR VOLUMES



COUNT DATA INPUT:

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL
FROM:	TO:	L	T	R	L	T	R	L	T	R	L	T	R	VOLUMES
4:00 PM	4:15 PM	0	28	0	2	0	1	0	23	0	0	0	0	54
4:15 PM	4:30 PM	0	32	0	1	0	0	0	19	0	0	0	0	52
4:30 PM	4:45 PM	0	39	0	0	0	0	0	21	1	0	0	0	61
4:45 PM	5:00 PM	0	51	0	0	0	0	0	24	0	0	0	0	75
5:00 PM	5:15 PM	0	58	0	1	0	0	0	32	1	0	0	0	92
5:15 PM	5:30 PM	1	44	0	1	0	1	0	29	0	0	0	0	76
5:30 PM	5:45 PM	0	52	0	1	0	0	0	41	0	0	0	0	94
5:45 PM	6:00 PM	0	19	0	0	0	0	0	19	0	0	0	0	38
														542

HOURLY TOTALS:

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL
FROM:	TO:	L	T	R	L	T	R	L	T	R	L	T	R	VOLUMES
4:00 PM	5:00 PM	0	150	0	3	0	1	0	87	1	0	0	0	242
4:15 PM	5:15 PM	0	180	0	2	0	0	0	96	2	0	0	0	280
4:30 PM	5:30 PM	1	192	0	2	0	1	0	106	2	0	0	0	304
4:45 PM	5:45 PM	1	205	0	3	0	1	0	126	1	0	0	0	337
5:00 PM	6:00 PM	1	173	0	3	0	1	0	121	1	0	0	0	300

NOTE PHF IS BASED ON 15 MIN. PEAK WITHIN THE PEAK HOUR.

Trip Generation Reports

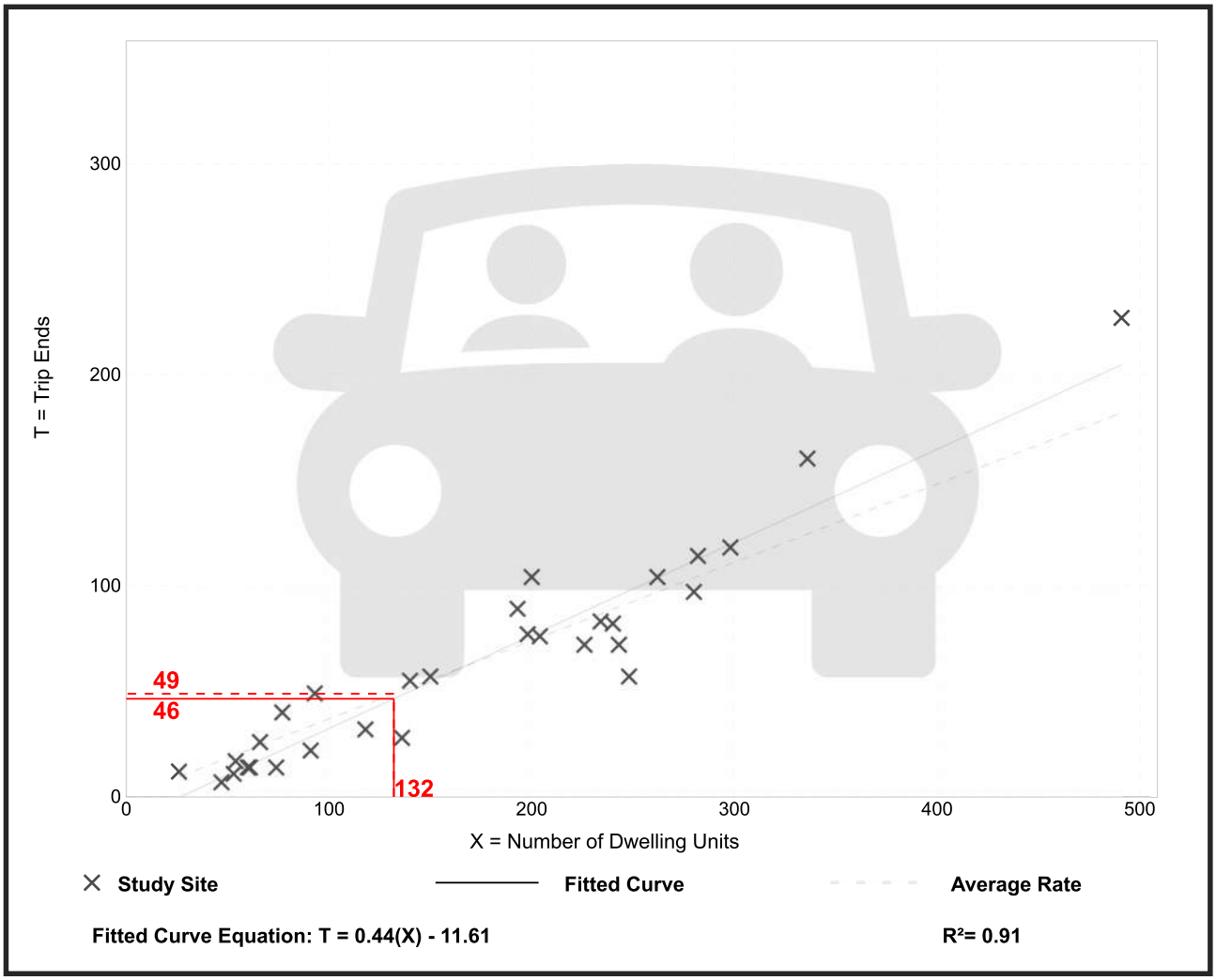
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	30
Avg. Num. of Dwelling Units:	173
Directional Distribution:	23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.37	0.15 - 0.53	0.09

Data Plot and Equation



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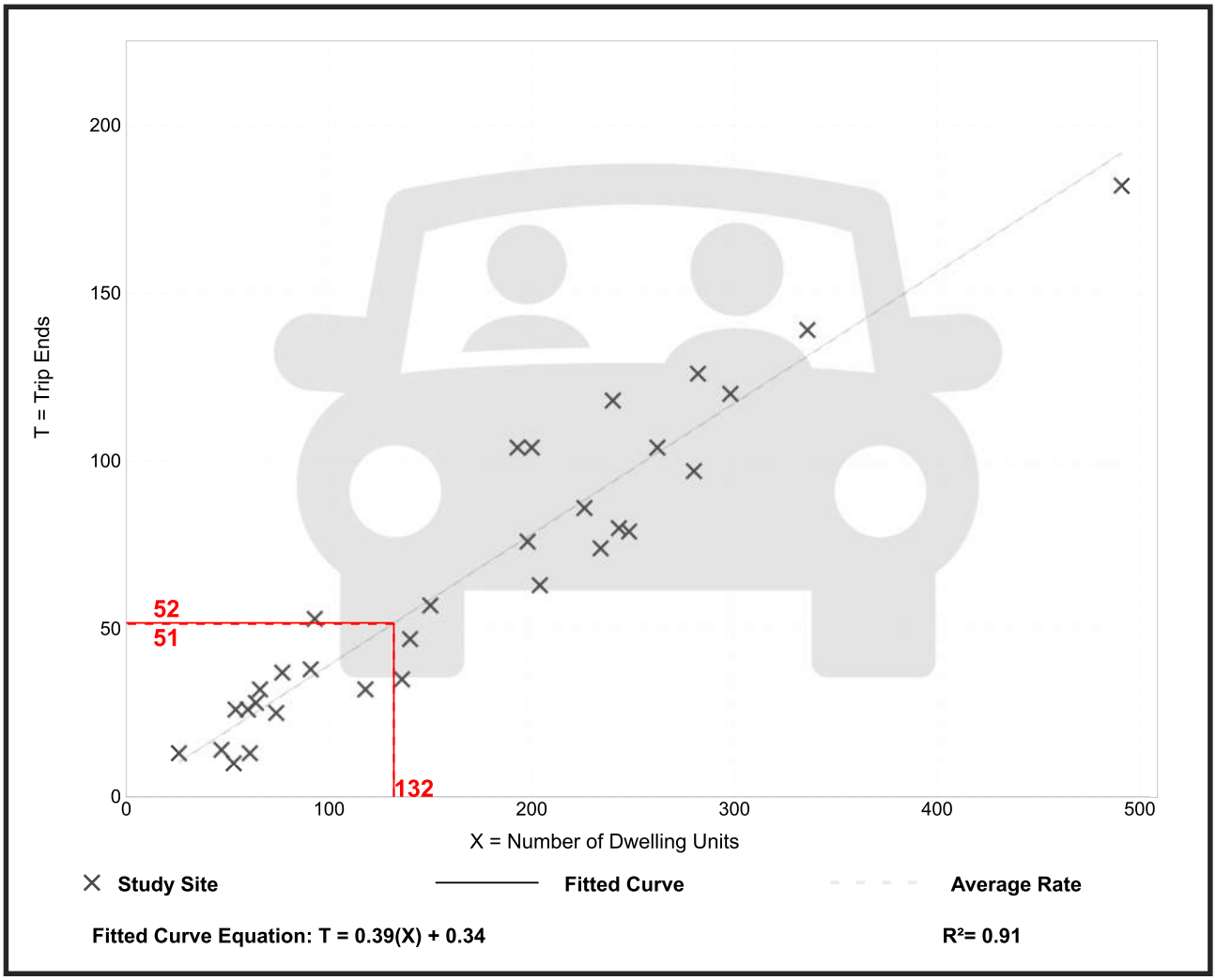
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	31
Avg. Num. of Dwelling Units:	169
Directional Distribution:	61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.19 - 0.57	0.08

Data Plot and Equation



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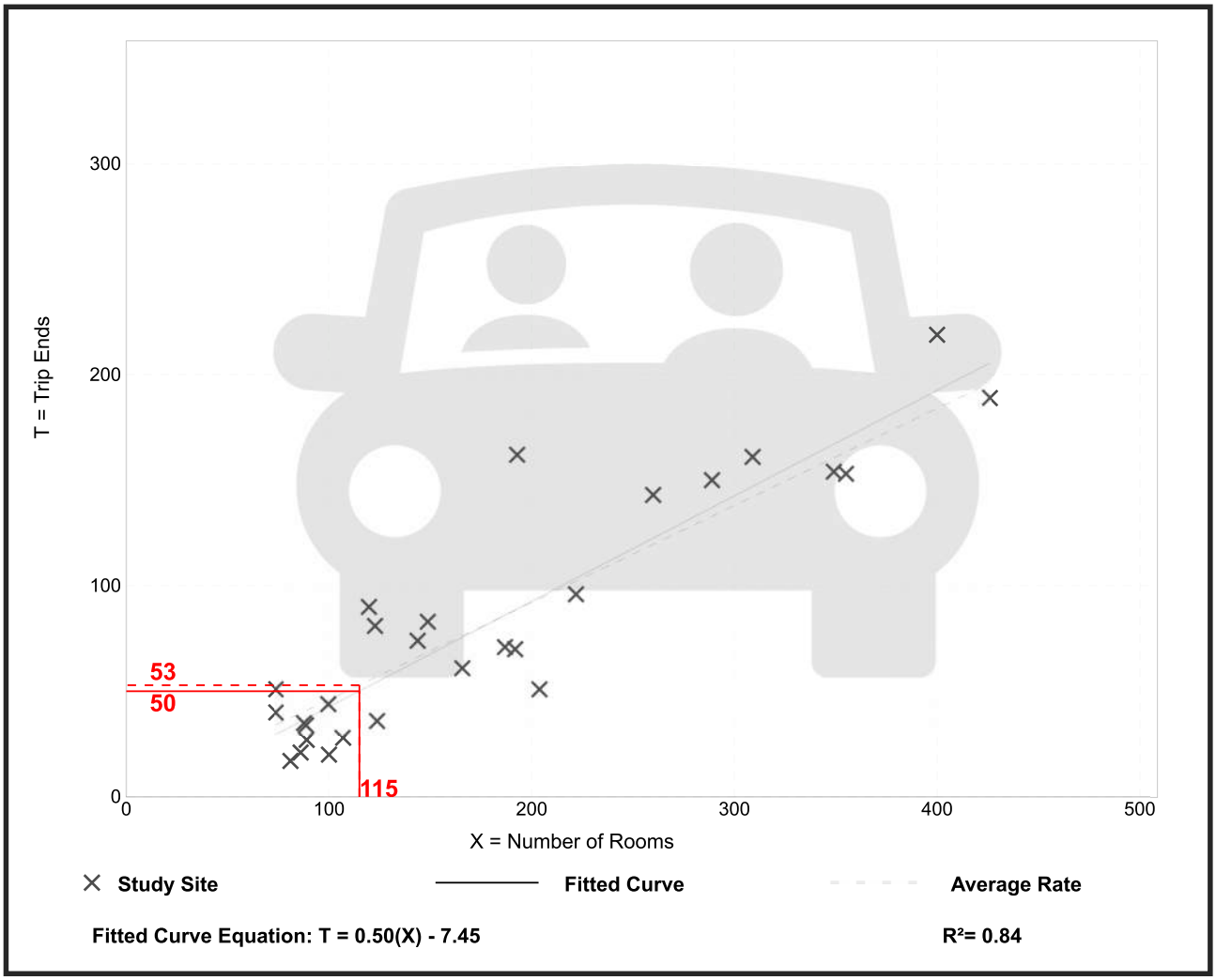
Hotel
(310)

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

Vehicle Trip Generation per Room

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

Data Plot and Equation



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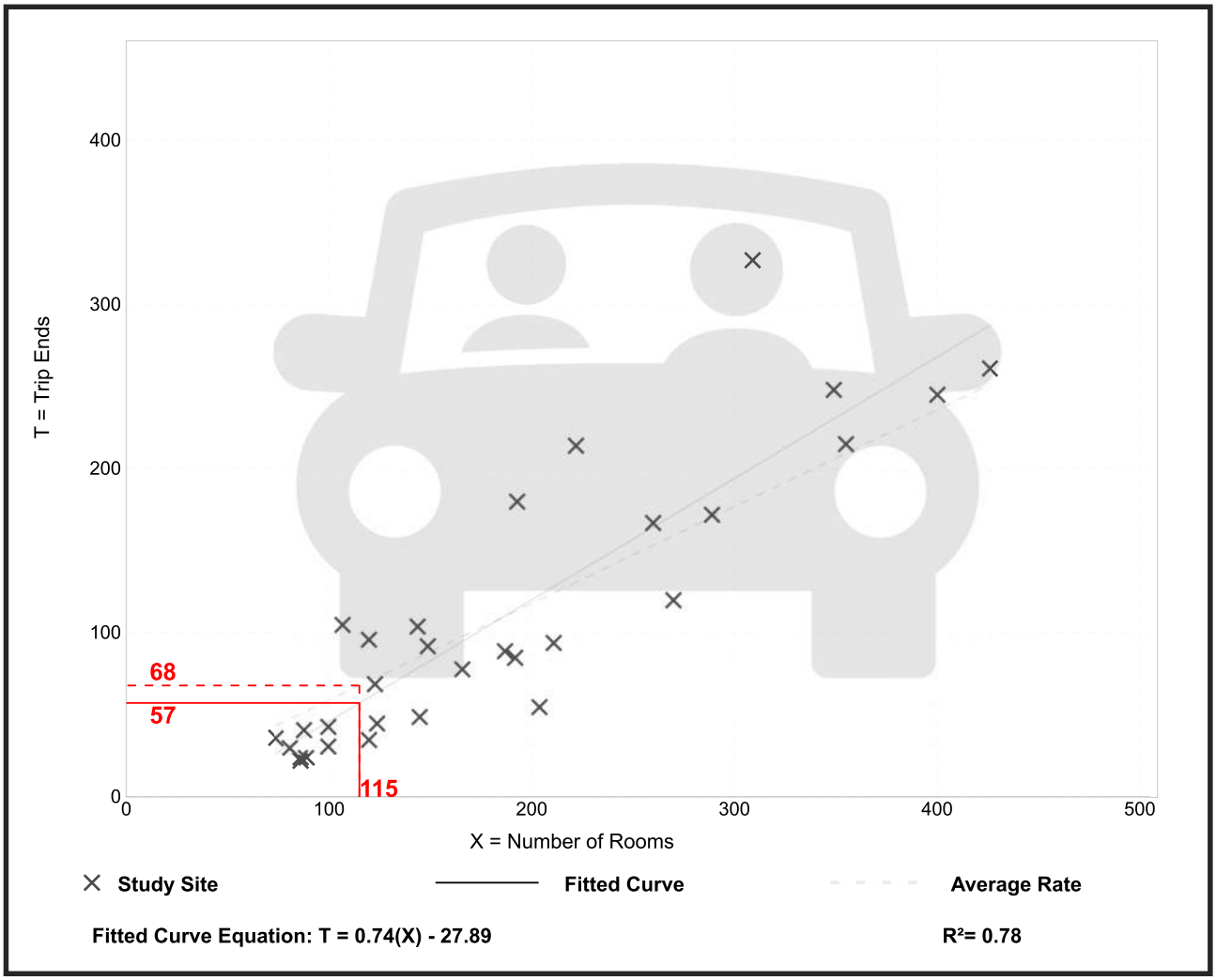
Hotel
(310)

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

Vehicle Trip Generation per Room

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

Data Plot and Equation



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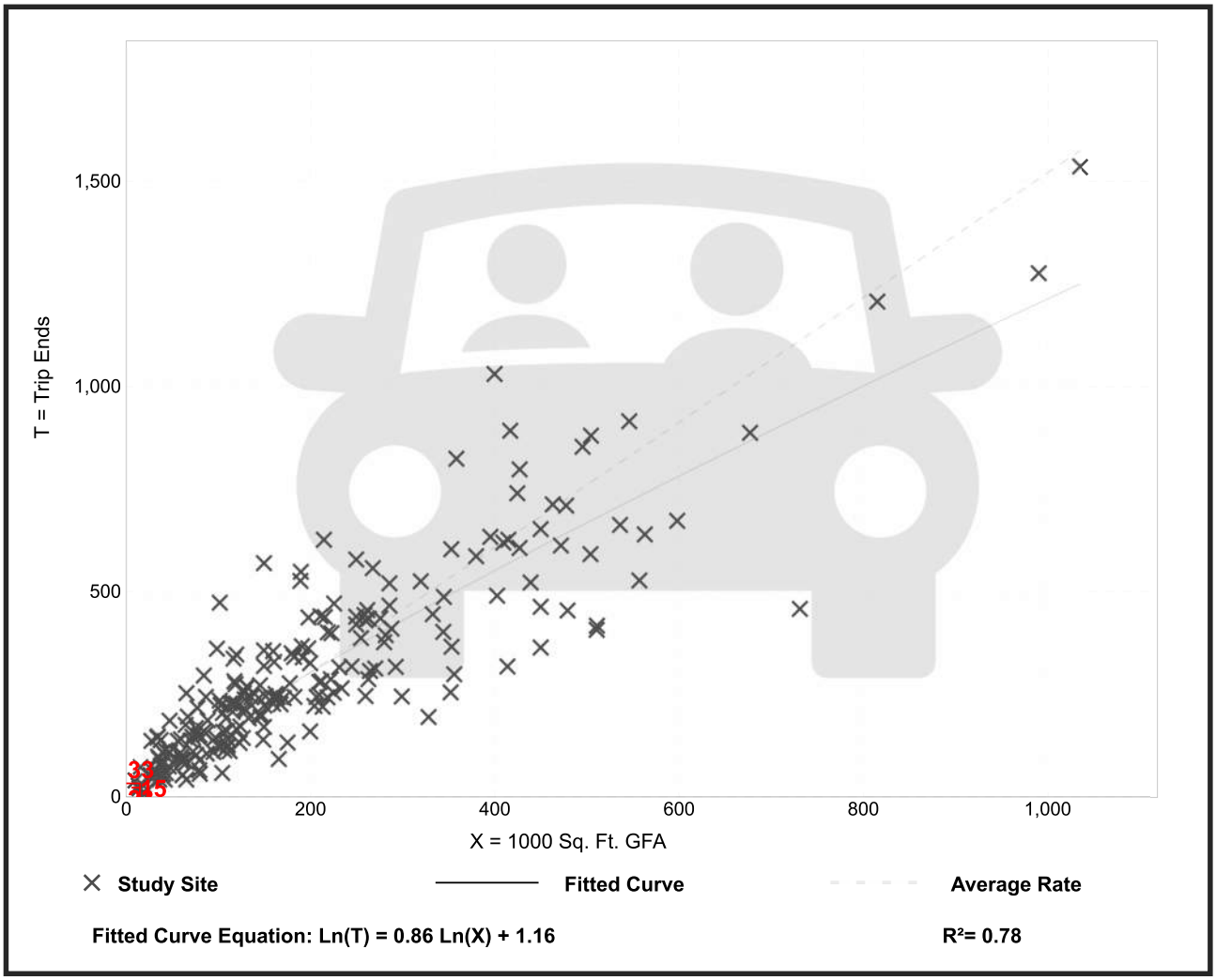
General Office Building
(710)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	221
Avg. 1000 Sq. Ft. GFA:	201
Directional Distribution:	88% entering, 12% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.52	0.32 - 4.93	0.58

Data Plot and Equation



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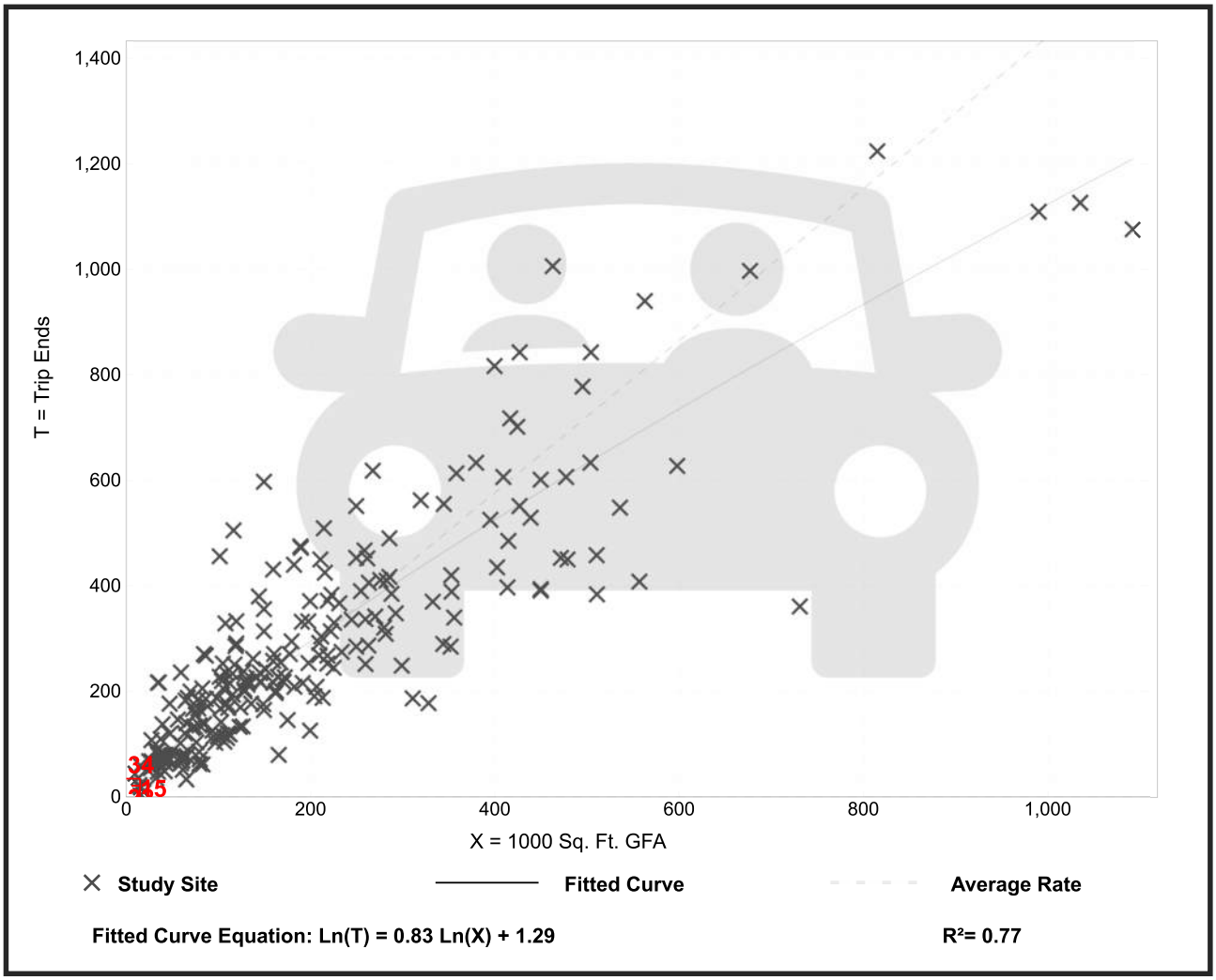
General Office Building
(710)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	232
Avg. 1000 Sq. Ft. GFA:	199
Directional Distribution:	17% entering, 83% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.44	0.26 - 6.20	0.60

Data Plot and Equation



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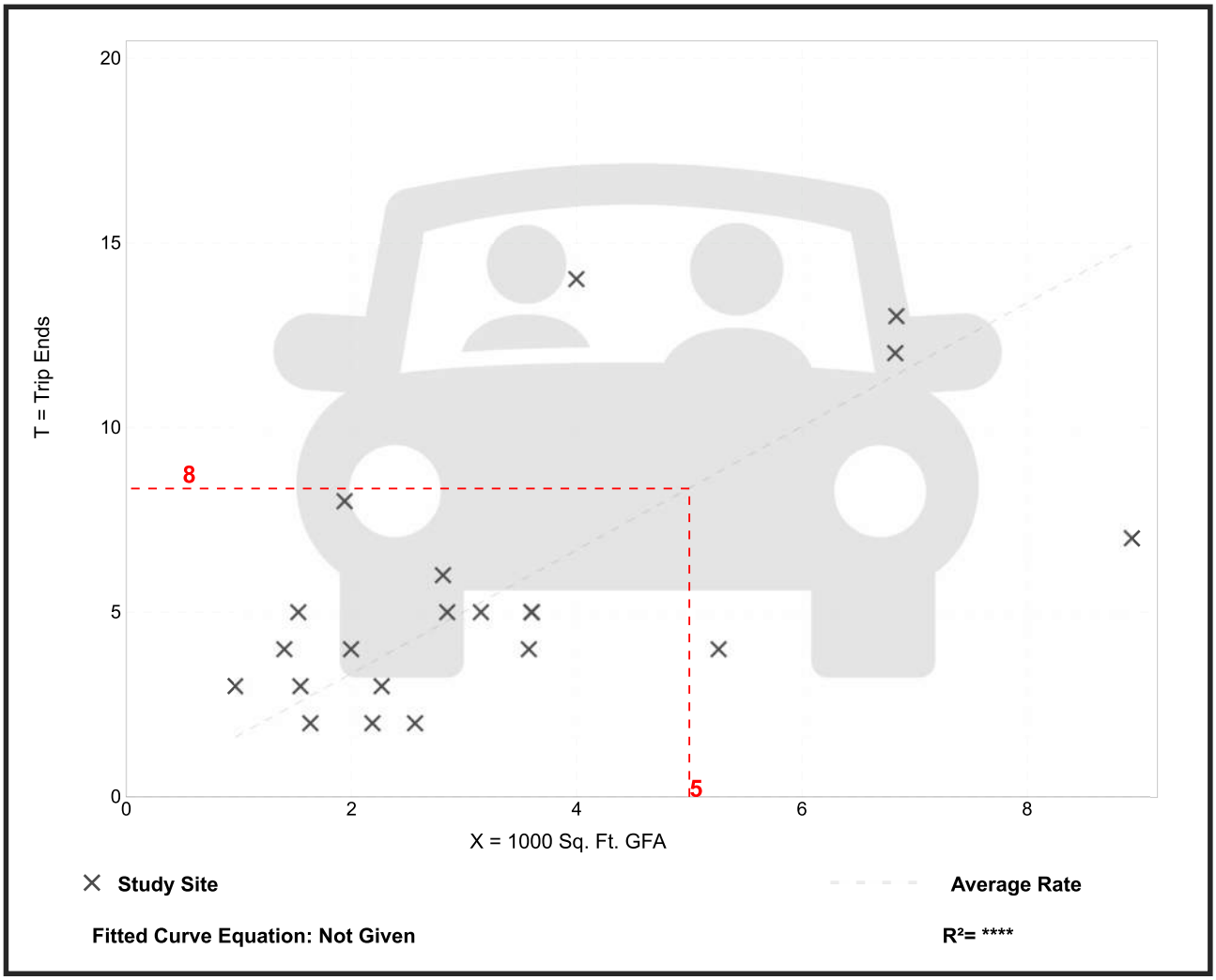
Small Office Building
(712)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	21
Avg. 1000 Sq. Ft. GFA:	3
Directional Distribution:	82% entering, 18% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.67	0.76 - 4.12	0.88

Data Plot and Equation



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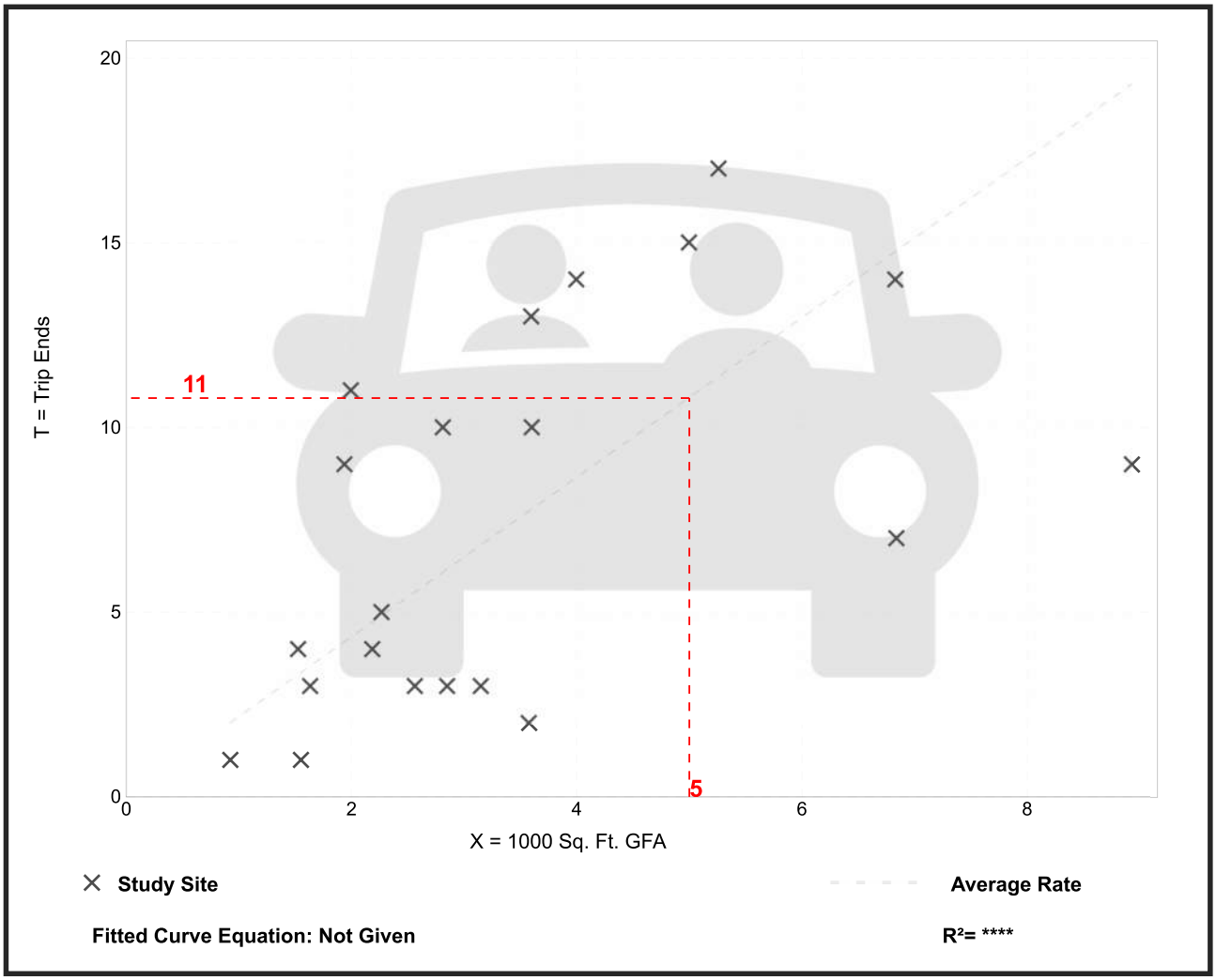
Small Office Building
(712)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	21
Avg. 1000 Sq. Ft. GFA:	3
Directional Distribution:	34% entering, 66% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.16	0.56 - 5.50	1.26

Data Plot and Equation



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Traffic Analysis Reports

2023 Existing Traffic Analysis

Intersection	
Int Delay, s/veh	6.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	110	1126	43	7	1057	13	11	0	9	2	3	186
Future Vol, veh/h	110	1126	43	7	1057	13	11	0	9	2	3	186
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	100	100	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	120	1224	47	8	1149	14	12	0	10	2	3	202

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1163	0	0	1271	0	0	2080	2667	636	2017	2676	575
Stage 1	-	-	-	-	-	-	1488	1488	-	1165	1165	-
Stage 2	-	-	-	-	-	-	592	1179	-	852	1511	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	596	-	-	542	-	-	31	22	421	34	22	461
Stage 1	-	-	-	-	-	-	130	186	-	206	267	-
Stage 2	-	-	-	-	-	-	460	262	-	321	181	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	596	-	-	542	-	-	12	17	421	28	17	461
Mov Cap-2 Maneuver	-	-	-	-	-	-	12	17	-	28	17	-
Stage 1	-	-	-	-	-	-	104	149	-	165	263	-
Stage 2	-	-	-	-	-	-	251	258	-	250	145	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.1	$ 375.2	34.3
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	12	421	596	-	-	542	-	-	28	326
HCM Lane V/C Ratio	0.996	0.023	0.201	-	-	0.014	-	-	0.078	0.63
HCM Control Delay (s)	$ 670.9	13.8	12.6	-	-	11.7	-	-	144.1	33.1
HCM Lane LOS	F	B	B	-	-	B	-	-	F	D
HCM 95th %tile Q(veh)	2.1	0.1	0.7	-	-	0	-	-	0.2	4

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	113	220	0
Future Vol, veh/h	0	0	0	113	220	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	123	239	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	362	239	239	0	-	0
Stage 1	239	-	-	-	-	-
Stage 2	123	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	637	800	1328	-	-	-
Stage 1	801	-	-	-	-	-
Stage 2	902	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	637	800	1328	-	-	-
Mov Cap-2 Maneuver	674	-	-	-	-	-
Stage 1	801	-	-	-	-	-
Stage 2	902	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1328	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	5	5	100	229	5
Future Vol, veh/h	3	5	5	100	229	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	5	5	109	249	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	371	252	254	0	-	0
Stage 1	252	-	-	-	-	-
Stage 2	119	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	630	787	1311	-	-	-
Stage 1	790	-	-	-	-	-
Stage 2	906	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	627	787	1311	-	-	-
Mov Cap-2 Maneuver	665	-	-	-	-	-
Stage 1	787	-	-	-	-	-
Stage 2	906	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1311	-	736	-	-
HCM Lane V/C Ratio	0.004	-	0.012	-	-
HCM Control Delay (s)	7.8	-	10	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	934	211	33	306	76	20
Future Vol, veh/h	934	211	33	306	76	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1015	229	36	333	83	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1244	0	1369	622
Stage 1	-	-	-	-	1130	-
Stage 2	-	-	-	-	239	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	555	-	138	430
Stage 1	-	-	-	-	270	-
Stage 2	-	-	-	-	778	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	555	-	129	430
Mov Cap-2 Maneuver	-	-	-	-	222	-
Stage 1	-	-	-	-	270	-
Stage 2	-	-	-	-	727	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	27
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	222	430	-	-	555	-
HCM Lane V/C Ratio	0.372	0.051	-	-	0.065	-
HCM Control Delay (s)	30.5	13.8	-	-	11.9	-
HCM Lane LOS	D	B	-	-	B	-
HCM 95th %tile Q(veh)	1.6	0.2	-	-	0.2	-

Intersection	
Int Delay, s/veh	11.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	157	1709	89	19	1506	15	2	0	30	5	1	121
Future Vol, veh/h	157	1709	89	19	1506	15	2	0	30	5	1	121
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	100	100	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	171	1858	97	21	1637	16	2	0	33	5	1	132

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1653	0	0	1955	0	0	3110	3944	978	2950	3976	819
Stage 1	-	-	-	-	-	-	2249	2249	-	1679	1679	-
Stage 2	-	-	-	-	-	-	861	1695	-	1271	2297	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	386	-	-	295	-	-	5	3	250	6	3	319
Stage 1	-	-	-	-	-	-	43	77	-	99	150	-
Stage 2	-	-	-	-	-	-	317	147	-	178	73	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	386	-	-	295	-	-	~ 1	2	250	~ 3	2	319
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 1	2	-	~ 3	2	-
Stage 1	-	-	-	-	-	-	24	43	-	55	139	-
Stage 2	-	-	-	-	-	-	172	137	-	86	41	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.7	0.2	$ 380.4	215.7
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1	250	386	-	-	295	-	-	3	139
HCM Lane V/C Ratio	2.174	0.13	0.442	-	-	0.07	-	-	1.812	0.954
HCM Control Delay (s)	$ 5764.3	21.5	21.5	-	-	18.1	-	-	$ 2393.4	126.5
HCM Lane LOS	F	C	C	-	-	C	-	-	F	F
HCM 95th %tile Q(veh)	1	0.4	2.2	-	-	0.2	-	-	1.6	6.7

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	172	125	0
Future Vol, veh/h	0	0	0	172	125	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	187	136	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	323	136	136	0	-	0
Stage 1	136	-	-	-	-	-
Stage 2	187	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	671	913	1448	-	-	-
Stage 1	890	-	-	-	-	-
Stage 2	845	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	671	913	1448	-	-	-
Mov Cap-2 Maneuver	701	-	-	-	-	-
Stage 1	890	-	-	-	-	-
Stage 2	845	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1448	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	1	1	205	126	1
Future Vol, veh/h	3	1	1	205	126	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	1	1	223	137	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	363	138	138	0	-	0
Stage 1	138	-	-	-	-	-
Stage 2	225	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	636	910	1446	-	-	-
Stage 1	889	-	-	-	-	-
Stage 2	812	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	635	910	1446	-	-	-
Mov Cap-2 Maneuver	675	-	-	-	-	-
Stage 1	888	-	-	-	-	-
Stage 2	812	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1446	-	722	-	-
HCM Lane V/C Ratio	0.001	-	0.006	-	-
HCM Control Delay (s)	7.5	-	10	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	453	114	23	600	146	71
Future Vol, veh/h	453	114	23	600	146	71
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	492	124	25	652	159	77

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	616	0	930	308
Stage 1	-	-	-	-	554	-
Stage 2	-	-	-	-	376	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	960	-	266	688
Stage 1	-	-	-	-	539	-
Stage 2	-	-	-	-	664	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	960	-	259	688
Mov Cap-2 Maneuver	-	-	-	-	385	-
Stage 1	-	-	-	-	539	-
Stage 2	-	-	-	-	647	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	17.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	385	688	-	-	960	-
HCM Lane V/C Ratio	0.412	0.112	-	-	0.026	-
HCM Control Delay (s)	20.8	10.9	-	-	8.8	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	2	0.4	-	-	0.1	-

2025 Opening Year Traffic Analysis

Intersection	
Int Delay, s/veh	9.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	114	1171	45	8	1100	14	12	0	10	3	4	194
Future Vol, veh/h	114	1171	45	8	1100	14	12	0	10	3	4	194
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	100	100	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	124	1273	49	9	1196	15	13	0	11	3	4	211

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1211	0	0	1322	0	0	2164	2775	661	2099	2784	598
Stage 1	-	-	-	-	-	-	1546	1546	-	1214	1214	-
Stage 2	-	-	-	-	-	-	618	1229	-	885	1570	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	572	-	-	519	-	-	26	19	405	30	19	445
Stage 1	-	-	-	-	-	-	120	174	-	193	253	-
Stage 2	-	-	-	-	-	-	443	248	-	306	170	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	572	-	-	519	-	-	~ 9	15	405	24	15	445
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 9	15	-	24	15	-
Stage 1	-	-	-	-	-	-	94	136	-	151	249	-
Stage 2	-	-	-	-	-	-	225	244	-	233	133	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.1	$ 566.4	51.4
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	9	405	572	-	-	519	-	-	24	282
HCM Lane V/C Ratio	1.449	0.027	0.217	-	-	0.017	-	-	0.136	0.763
HCM Control Delay (s)	$ 1026.7	14.1	13	-	-	12.1	-	-	177.3	49.5
HCM Lane LOS	F	B	B	-	-	B	-	-	F	E
HCM 95th %tile Q(veh)	2.5	0.1	0.8	-	-	0.1	-	-	0.4	5.7

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	118	229	0
Future Vol, veh/h	0	0	0	118	229	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	128	249	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	377	249	249	0	-	0
Stage 1	249	-	-	-	-	-
Stage 2	128	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	625	790	1317	-	-	-
Stage 1	792	-	-	-	-	-
Stage 2	898	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	625	790	1317	-	-	-
Mov Cap-2 Maneuver	665	-	-	-	-	-
Stage 1	792	-	-	-	-	-
Stage 2	898	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1317	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	6	6	104	238	6
Future Vol, veh/h	4	6	6	104	238	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	7	7	113	259	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	390	263	266	0	-	0
Stage 1	263	-	-	-	-	-
Stage 2	127	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	614	776	1298	-	-	-
Stage 1	781	-	-	-	-	-
Stage 2	899	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	611	776	1298	-	-	-
Mov Cap-2 Maneuver	654	-	-	-	-	-
Stage 1	777	-	-	-	-	-
Stage 2	899	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1298	-	722	-	-
HCM Lane V/C Ratio	0.005	-	0.015	-	-
HCM Control Delay (s)	7.8	-	10.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	991	224	34	318	79	21
Future Vol, veh/h	991	224	34	318	79	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1077	243	37	346	86	23

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1320	0	1446	660
Stage 1	-	-	-	-	1199	-
Stage 2	-	-	-	-	247	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	519	-	122	406
Stage 1	-	-	-	-	248	-
Stage 2	-	-	-	-	771	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	519	-	113	406
Mov Cap-2 Maneuver	-	-	-	-	204	-
Stage 1	-	-	-	-	248	-
Stage 2	-	-	-	-	716	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	30.6
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	204	406	-	-	519	-
HCM Lane V/C Ratio	0.421	0.056	-	-	0.071	-
HCM Control Delay (s)	34.9	14.4	-	-	12.5	-
HCM Lane LOS	D	B	-	-	B	-
HCM 95th %tile Q(veh)	1.9	0.2	-	-	0.2	-

Intersection	
Int Delay, s/veh	35.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	163	1778	93	20	1567	16	3	0	31	6	2	126
Future Vol, veh/h	163	1778	93	20	1567	16	3	0	31	6	2	126
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	100	100	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	177	1933	101	22	1703	17	3	0	34	7	2	137

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1720	0	0	2034	0	0	3235	4102	1017	3068	4135	852
Stage 1	-	-	-	-	-	-	2338	2338	-	1747	1747	-
Stage 2	-	-	-	-	-	-	897	1764	-	1321	2388	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	364	-	-	274	-	-	4	2	235	~ 5	~ 2	303
Stage 1	-	-	-	-	-	-	37	69	-	89	138	-
Stage 2	-	-	-	-	-	-	301	136	-	165	65	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	364	-	-	274	-	-	-	1	235	~ 3	~ 1	303
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	1	-	~ 3	~ 1	-
Stage 1	-	-	-	-	-	-	19	35	-	46	127	-
Stage 2	-	-	-	-	-	-	149	125	-	73	33	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.9	0.2		$ 976.5
HCM LOS			-	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	235	364	-	-	274	-	-	3	53
HCM Lane V/C Ratio	-	0.143	0.487	-	-	0.079	-	-	2.174	2.625
HCM Control Delay (s)	-	22.9	23.9	-	-	19.3	-		$ 2584.3	$ 901.1
HCM Lane LOS	-	C	C	-	-	C	-	-	F	F
HCM 95th %tile Q(veh)	-	0.5	2.6	-	-	0.3	-	-	1.8	14.4

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	179	130	0
Future Vol, veh/h	0	0	0	179	130	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	195	141	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	336	141	141	0	-	0
Stage 1	141	-	-	-	-	-
Stage 2	195	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	659	907	1442	-	-	-
Stage 1	886	-	-	-	-	-
Stage 2	838	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	659	907	1442	-	-	-
Mov Cap-2 Maneuver	693	-	-	-	-	-
Stage 1	886	-	-	-	-	-
Stage 2	838	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1442	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	2	2	213	131	2
Future Vol, veh/h	4	2	2	213	131	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	2	2	232	142	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	379	143	144	0	-	0
Stage 1	143	-	-	-	-	-
Stage 2	236	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	623	905	1438	-	-	-
Stage 1	884	-	-	-	-	-
Stage 2	803	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	622	905	1438	-	-	-
Mov Cap-2 Maneuver	665	-	-	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	803	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1438	-	729	-	-
HCM Lane V/C Ratio	0.002	-	0.009	-	-
HCM Control Delay (s)	7.5	-	10	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	471	119	24	624	152	74
Future Vol, veh/h	471	119	24	624	152	74
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	512	129	26	678	165	80

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	641	0	968	321
Stage 1	-	-	-	-	577	-
Stage 2	-	-	-	-	391	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	939	-	251	675
Stage 1	-	-	-	-	525	-
Stage 2	-	-	-	-	653	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	939	-	244	675
Mov Cap-2 Maneuver	-	-	-	-	372	-
Stage 1	-	-	-	-	525	-
Stage 2	-	-	-	-	635	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	18.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	372	675	-	-	939	-
HCM Lane V/C Ratio	0.444	0.119	-	-	0.028	-
HCM Control Delay (s)	22.2	11.1	-	-	8.9	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	2.2	0.4	-	-	0.1	-

2025 Opening Year with Project Traffic Analysis

Intersection	
Int Delay, s/veh	30.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	151	1171	45	8	1100	18	12	3	10	6	7	231
Future Vol, veh/h	151	1171	45	8	1100	18	12	3	10	6	7	231
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	100	100	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	164	1273	49	9	1196	20	13	3	11	7	8	251

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1216	0	0	1322	0	0	2246	2860	661	2180	2864	598
Stage 1	-	-	-	-	-	-	1626	1626	-	1214	1214	-
Stage 2	-	-	-	-	-	-	620	1234	-	966	1650	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	569	-	-	519	-	-	23	17	405	26	16	445
Stage 1	-	-	-	-	-	-	106	159	-	193	253	-
Stage 2	-	-	-	-	-	-	442	247	-	273	155	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	569	-	-	519	-	-	~ 4	12	405	16	11	445
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 4	12	-	16	11	-
Stage 1	-	-	-	-	-	-	75	113	-	137	249	-
Stage 2	-	-	-	-	-	-	183	243	-	184	110	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	0.1	$ 1339.9	198.5
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	4	47	569	-	-	519	-	-	16	206
HCM Lane V/C Ratio	3.261	0.301	0.288	-	-	0.017	-	-	0.408	1.256
HCM Control Delay (s)	$ 2670.4	111.7	13.9	-	-	12.1	-	-	$ 339.7	194.9
HCM Lane LOS	F	F	B	-	-	B	-	-	F	F
HCM 95th %tile Q(veh)	2.8	1	1.2	-	-	0.1	-	-	1.1	13.7

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	23	24	138	249	10
Future Vol, veh/h	10	23	24	138	249	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	25	26	150	271	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	479	277	282	0	-	0
Stage 1	277	-	-	-	-	-
Stage 2	202	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	545	762	1280	-	-	-
Stage 1	770	-	-	-	-	-
Stage 2	832	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	534	762	1280	-	-	-
Mov Cap-2 Maneuver	603	-	-	-	-	-
Stage 1	755	-	-	-	-	-
Stage 2	832	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	1.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1280	-	706	-	-
HCM Lane V/C Ratio	0.02	-	0.051	-	-
HCM Control Delay (s)	7.9	-	10.4	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	26	26	114	248	20
Future Vol, veh/h	17	26	26	114	248	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	28	28	124	270	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	461	281	292	0	-	0
Stage 1	281	-	-	-	-	-
Stage 2	180	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	559	758	1270	-	-	-
Stage 1	767	-	-	-	-	-
Stage 2	851	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	547	758	1270	-	-	-
Mov Cap-2 Maneuver	610	-	-	-	-	-
Stage 1	750	-	-	-	-	-
Stage 2	851	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	1.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1270	-	692	-	-
HCM Lane V/C Ratio	0.022	-	0.068	-	-
HCM Control Delay (s)	7.9	-	10.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	991	241	41	318	95	28
Future Vol, veh/h	991	241	41	318	95	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1077	262	45	346	103	30

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1339	0	1471	670
Stage 1	-	-	-	-	1208	-
Stage 2	-	-	-	-	263	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	511	-	118	399
Stage 1	-	-	-	-	246	-
Stage 2	-	-	-	-	757	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	511	-	108	399
Mov Cap-2 Maneuver	-	-	-	-	200	-
Stage 1	-	-	-	-	246	-
Stage 2	-	-	-	-	690	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	34.9
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	200	399	-	-	511	-
HCM Lane V/C Ratio	0.516	0.076	-	-	0.087	-
HCM Control Delay (s)	40.8	14.8	-	-	12.7	-
HCM Lane LOS	E	B	-	-	B	-
HCM 95th %tile Q(veh)	2.6	0.2	-	-	0.3	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	204	1778	93	20	1567	20	3	4	31	10	6	169
Future Vol, veh/h	204	1778	93	20	1567	20	3	4	31	10	6	169
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	100	100	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	222	1933	101	22	1703	22	3	4	34	11	7	184

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1725	0	0	2034	0	0	3327	4197	1017	3160	4225	852
Stage 1	-	-	-	-	-	-	2428	2428	-	1747	1747	-
Stage 2	-	-	-	-	-	-	899	1769	-	1413	2478	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	362	-	-	274	-	-	~ 3	~ 2	235	~ 4	~ 2	303
Stage 1	-	-	-	-	-	-	33	62	-	89	138	-
Stage 2	-	-	-	-	-	-	300	135	-	145	58	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	362	-	-	274	-	-	-	~ 1	235	-	~ 1	303
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 1	-	-	~ 1	-
Stage 1	-	-	-	-	-	-	13	24	-	34	127	-
Stage 2	-	-	-	-	-	-	103	124	-	39	22	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.9	0.2		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	8	362	-	-	274	-	-	-	27
HCM Lane V/C Ratio	-	4.755	0.613	-	-	0.079	-	-	-	7.045
HCM Control Delay (s)	$	2594.9	29.5	-	-	19.3	-	-	-	$ 3006
HCM Lane LOS	-	F	D	-	-	C	-	-	-	F
HCM 95th %tile Q(veh)	-	6.1	3.9	-	-	0.3	-	-	-	23.4

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	27	26	201	154	11
Future Vol, veh/h	12	27	26	201	154	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	29	28	218	167	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	447	173	179	0	-	0
Stage 1	173	-	-	-	-	-
Stage 2	274	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	569	871	1397	-	-	-
Stage 1	857	-	-	-	-	-
Stage 2	772	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	558	871	1397	-	-	-
Mov Cap-2 Maneuver	620	-	-	-	-	-
Stage 1	840	-	-	-	-	-
Stage 2	772	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	0.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1397	-	775	-	-
HCM Lane V/C Ratio	0.02	-	0.055	-	-
HCM Control Delay (s)	7.6	-	9.9	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	26	24	225	142	17
Future Vol, veh/h	20	26	24	225	142	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	28	26	245	154	18

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	460	163	172	0	-	0
Stage 1	163	-	-	-	-	-
Stage 2	297	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	559	882	1405	-	-	-
Stage 1	866	-	-	-	-	-
Stage 2	754	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	548	882	1405	-	-	-
Mov Cap-2 Maneuver	612	-	-	-	-	-
Stage 1	850	-	-	-	-	-
Stage 2	754	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1405	-	740	-	-
HCM Lane V/C Ratio	0.019	-	0.068	-	-
HCM Control Delay (s)	7.6	-	10.2	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	3.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	471	138	31	624	172	82
Future Vol, veh/h	471	138	31	624	172	82
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	512	150	34	678	187	89

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	662	0	994	331
Stage 1	-	-	-	-	587	-
Stage 2	-	-	-	-	407	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	922	-	242	665
Stage 1	-	-	-	-	519	-
Stage 2	-	-	-	-	641	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	922	-	233	665
Mov Cap-2 Maneuver	-	-	-	-	362	-
Stage 1	-	-	-	-	519	-
Stage 2	-	-	-	-	617	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	20.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	362	665	-	-	922	-
HCM Lane V/C Ratio	0.516	0.134	-	-	0.037	-
HCM Control Delay (s)	25.1	11.3	-	-	9.1	-
HCM Lane LOS	D	B	-	-	A	-
HCM 95th %tile Q(veh)	2.8	0.5	-	-	0.1	-

2030 Future Year Traffic Analysis

Intersection	
Int Delay, s/veh	30.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	126	1293	49	9	1214	15	13	0	11	4	5	214
Future Vol, veh/h	126	1293	49	9	1214	15	13	0	11	4	5	214
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	100	100	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	137	1405	53	10	1320	16	14	0	12	4	5	233

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1336	0	0	1458	0	0	2389	3062	729	2317	3072	660
Stage 1	-	-	-	-	-	-	1706	1706	-	1340	1340	-
Stage 2	-	-	-	-	-	-	683	1356	-	977	1732	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	512	-	-	460	-	-	18	12	365	20	12	406
Stage 1	-	-	-	-	-	-	95	145	-	161	220	-
Stage 2	-	-	-	-	-	-	405	216	-	269	141	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	512	-	-	460	-	-	~ 3	9	365	15	9	406
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 3	9	-	15	9	-
Stage 1	-	-	-	-	-	-	70	106	-	118	215	-
Stage 2	-	-	-	-	-	-	165	211	-	191	103	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0.1	$ 2086.9	170.9
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	3	365	512	-	-	460	-	-	15	202
HCM Lane V/C Ratio	4.71	0.033	0.267	-	-	0.021	-	-	0.29	1.178
HCM Control Delay (s)	$ 3839.9	15.2	14.6	-	-	13	-	-	$ 323.6	168.1
HCM Lane LOS	F	C	B	-	-	B	-	-	F	F
HCM 95th %tile Q(veh)	3.1	0.1	1.1	-	-	0.1	-	-	0.8	12

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	130	253	0
Future Vol, veh/h	0	0	0	130	253	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	141	275	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	416	275	275	0	-	0
Stage 1	275	-	-	-	-	-
Stage 2	141	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	593	764	1288	-	-	-
Stage 1	771	-	-	-	-	-
Stage 2	886	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	593	764	1288	-	-	-
Mov Cap-2 Maneuver	642	-	-	-	-	-
Stage 1	771	-	-	-	-	-
Stage 2	886	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1288	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	7	7	115	263	7
Future Vol, veh/h	5	7	7	115	263	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	8	8	125	286	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	431	290	294	0	-	0
Stage 1	290	-	-	-	-	-
Stage 2	141	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	581	749	1268	-	-	-
Stage 1	759	-	-	-	-	-
Stage 2	886	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	578	749	1268	-	-	-
Mov Cap-2 Maneuver	630	-	-	-	-	-
Stage 1	754	-	-	-	-	-
Stage 2	886	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.3	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1268	-	694	-	-
HCM Lane V/C Ratio	0.006	-	0.019	-	-
HCM Control Delay (s)	7.9	-	10.3	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1094	247	38	351	87	23
Future Vol, veh/h	1094	247	38	351	87	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1189	268	41	382	95	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1457	0	1596	729
Stage 1	-	-	-	-	1323	-
Stage 2	-	-	-	-	273	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	460	-	97	365
Stage 1	-	-	-	-	213	-
Stage 2	-	-	-	-	748	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	460	-	~ 88	365
Mov Cap-2 Maneuver	-	-	-	-	175	-
Stage 1	-	-	-	-	213	-
Stage 2	-	-	-	-	681	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	40.8
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	175	365	-	-	460	-
HCM Lane V/C Ratio	0.54	0.068	-	-	0.09	-
HCM Control Delay (s)	47.4	15.6	-	-	13.6	-
HCM Lane LOS	E	C	-	-	B	-
HCM 95th %tile Q(veh)	2.8	0.2	-	-	0.3	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	17.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	180	1963	102	22	1730	17	4	0	34	7	3	139
Future Vol, veh/h	180	1963	102	22	1730	17	4	0	34	7	3	139
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	100	100	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	196	2134	111	24	1880	18	4	0	37	8	3	151

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1898	0	0	2245	0	0	3572	4528	1123	3387	4565	940
Stage 1	-	-	-	-	-	-	2582	2582	-	1928	1928	-
Stage 2	-	-	-	-	-	-	990	1946	-	1459	2637	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	310	-	-	227	-	-	~ 2	1	200	~ 3	~ 1	265
Stage 1	-	-	-	-	-	-	26	51	-	68	112	-
Stage 2	-	-	-	-	-	-	264	110	-	136	48	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	310	-	-	227	-	-	0	0	200	~ 1	0	265
Mov Cap-2 Maneuver	-	-	-	-	-	-	0	0	-	~ 1	0	-
Stage 1	-	-	-	-	-	-	10	19	-	25	100	-
Stage 2	-	-	-	-	-	-	98	98	-	41	18	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.8	0.3		$ 452.6
HCM LOS			-	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	200	310	-	-	227	-	-	1	265
HCM Lane V/C Ratio	-	0.185	0.631	-	-	0.105	-	-	7.609	0.582
HCM Control Delay (s)	-	27	34.5	-	-	22.7	-		$ 8904.7	35.9
HCM Lane LOS	-	D	D	-	-	C	-	-	F	E
HCM 95th %tile Q(veh)	-	0.7	4	-	-	0.3	-	-	2.2	3.4

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	198	144	0
Future Vol, veh/h	0	0	0	198	144	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	215	157	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	372	157	157	0	-	0
Stage 1	157	-	-	-	-	-
Stage 2	215	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	629	889	1423	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	821	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	629	889	1423	-	-	-
Mov Cap-2 Maneuver	672	-	-	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	821	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1423	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	3	3	235	145	3
Future Vol, veh/h	5	3	3	235	145	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	3	3	255	158	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	421	160	161	0	-	0
Stage 1	160	-	-	-	-	-
Stage 2	261	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	589	885	1418	-	-	-
Stage 1	869	-	-	-	-	-
Stage 2	783	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	588	885	1418	-	-	-
Mov Cap-2 Maneuver	641	-	-	-	-	-
Stage 1	867	-	-	-	-	-
Stage 2	783	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1418	-	715	-	-
HCM Lane V/C Ratio	0.002	-	0.012	-	-
HCM Control Delay (s)	7.5	-	10.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	3.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	520	131	26	689	168	82
Future Vol, veh/h	520	131	26	689	168	82
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	565	142	28	749	183	89

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	707	0	1067	354
Stage 1	-	-	-	-	636	-
Stage 2	-	-	-	-	431	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	887	-	217	642
Stage 1	-	-	-	-	489	-
Stage 2	-	-	-	-	623	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	887	-	210	642
Mov Cap-2 Maneuver	-	-	-	-	341	-
Stage 1	-	-	-	-	489	-
Stage 2	-	-	-	-	603	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	22
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	341	642	-	-	887	-
HCM Lane V/C Ratio	0.536	0.139	-	-	0.032	-
HCM Control Delay (s)	27.1	11.5	-	-	9.2	-
HCM Lane LOS	D	B	-	-	A	-
HCM 95th %tile Q(veh)	3	0.5	-	-	0.1	-

2030 Future Year with Project Traffic Analysis

Intersection	
Int Delay, s/veh	44.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	163	1293	49	9	1214	19	13	3	11	7	8	251
Future Vol, veh/h	163	1293	49	9	1214	19	13	3	11	7	8	251
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	100	100	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	177	1405	53	10	1320	21	14	3	12	8	9	273

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1341	0	0	1458	0	0	2471	3147	729	2398	3152	660
Stage 1	-	-	-	-	-	-	1786	1786	-	1340	1340	-
Stage 2	-	-	-	-	-	-	685	1361	-	1058	1812	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	510	-	-	460	-	-	15	11	365	17	11	406
Stage 1	-	-	-	-	-	-	84	132	-	161	220	-
Stage 2	-	-	-	-	-	-	404	215	-	240	128	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	510	-	-	460	-	-	-	7	365	8	~ 7	406
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	7	-	8	~ 7	-
Stage 1	-	-	-	-	-	-	55	86	-	105	215	-
Stage 2	-	-	-	-	-	-	124	210	-	146	84	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.7	0.1		$ 497.8
HCM LOS			-	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	31	510	-	-	460	-	-	8	147
HCM Lane V/C Ratio	-	0.491	0.347	-	-	0.021	-	-	0.951	1.915
HCM Control Delay (s)	-	203.5	15.8	-	-	13	-	-	$ 883	$ 487.4
HCM Lane LOS	-	F	C	-	-	B	-	-	F	F
HCM 95th %tile Q(veh)	-	1.6	1.5	-	-	0.1	-	-	1.7	21.7

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	23	24	150	273	10
Future Vol, veh/h	10	23	24	150	273	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	25	26	163	297	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	518	303	308	0	-	0
Stage 1	303	-	-	-	-	-
Stage 2	215	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	518	737	1253	-	-	-
Stage 1	749	-	-	-	-	-
Stage 2	821	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	507	737	1253	-	-	-
Mov Cap-2 Maneuver	583	-	-	-	-	-
Stage 1	733	-	-	-	-	-
Stage 2	821	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1253	-	682	-	-
HCM Lane V/C Ratio	0.021	-	0.053	-	-
HCM Control Delay (s)	7.9	-	10.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	27	27	125	273	21
Future Vol, veh/h	18	27	27	125	273	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	29	29	136	297	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	503	309	320	0	-	0
Stage 1	309	-	-	-	-	-
Stage 2	194	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	528	731	1240	-	-	-
Stage 1	745	-	-	-	-	-
Stage 2	839	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	516	731	1240	-	-	-
Mov Cap-2 Maneuver	588	-	-	-	-	-
Stage 1	728	-	-	-	-	-
Stage 2	839	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.8	1.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1240	-	666	-	-
HCM Lane V/C Ratio	0.024	-	0.073	-	-
HCM Control Delay (s)	8	-	10.8	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	3.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1094	264	45	351	103	30
Future Vol, veh/h	1094	264	45	351	103	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1189	287	49	382	112	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1476	0	1622	738
Stage 1	-	-	-	-	1333	-
Stage 2	-	-	-	-	289	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	452	-	~ 94	360
Stage 1	-	-	-	-	211	-
Stage 2	-	-	-	-	735	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	452	-	~ 84	360
Mov Cap-2 Maneuver	-	-	-	-	172	-
Stage 1	-	-	-	-	211	-
Stage 2	-	-	-	-	656	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	48.8
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	172	360	-	-	452	-
HCM Lane V/C Ratio	0.651	0.091	-	-	0.108	-
HCM Control Delay (s)	58.3	16	-	-	13.9	-
HCM Lane LOS	F	C	-	-	B	-
HCM 95th %tile Q(veh)	3.7	0.3	-	-	0.4	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	33.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	221	1963	102	22	1730	21	4	4	34	11	7	182
Future Vol, veh/h	221	1963	102	22	1730	21	4	4	34	11	7	182
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	100	100	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	240	2134	111	24	1880	23	4	4	37	12	8	198

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1903	0	0	2245	0	0	3662	4621	1123	3477	4653	940
Stage 1	-	-	-	-	-	-	2670	2670	-	1928	1928	-
Stage 2	-	-	-	-	-	-	992	1951	-	1549	2725	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	309	-	-	227	-	-	~ 2	~ 1	200	~ 2	~ 1	265
Stage 1	-	-	-	-	-	-	23	46	-	68	112	-
Stage 2	-	-	-	-	-	-	264	109	-	119	43	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	309	-	-	227	-	-	0	0	200	~ 1	0	265
Mov Cap-2 Maneuver	-	-	-	-	-	-	0	0	-	~ 1	0	-
Stage 1	-	-	-	-	-	-	5	10	-	15	100	-
Stage 2	-	-	-	-	-	-	55	97	-	12	10	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.6	0.3		$ 661.8
HCM LOS			-	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	200	309	-	-	227	-	-	1	265
HCM Lane V/C Ratio	-	0.207	0.777	-	-	0.105	-	-	11.957	0.775
HCM Control Delay (s)	-	27.6	47.7	-	-	22.7	-	$ 1	1114.7	53.4
HCM Lane LOS	-	D	E	-	-	C	-	-	F	F
HCM 95th %tile Q(veh)	-	0.8	6.1	-	-	0.3	-	-	2.9	5.8

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	27	26	220	168	11
Future Vol, veh/h	12	27	26	220	168	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	29	28	239	183	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	484	189	195	0	-	0
Stage 1	189	-	-	-	-	-
Stage 2	295	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	542	853	1378	-	-	-
Stage 1	843	-	-	-	-	-
Stage 2	755	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	531	853	1378	-	-	-
Mov Cap-2 Maneuver	601	-	-	-	-	-
Stage 1	826	-	-	-	-	-
Stage 2	755	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1378	-	756	-	-
HCM Lane V/C Ratio	0.021	-	0.056	-	-
HCM Control Delay (s)	7.7	-	10	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	27	25	247	156	18
Future Vol, veh/h	21	27	25	247	156	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	29	27	268	170	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	502	180	190	0	-	0
Stage 1	180	-	-	-	-	-
Stage 2	322	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	529	863	1384	-	-	-
Stage 1	851	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	518	863	1384	-	-	-
Mov Cap-2 Maneuver	590	-	-	-	-	-
Stage 1	834	-	-	-	-	-
Stage 2	735	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1384	-	718	-	-
HCM Lane V/C Ratio	0.02	-	0.073	-	-
HCM Control Delay (s)	7.7	-	10.4	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	4.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	520	150	33	689	188	90
Future Vol, veh/h	520	150	33	689	188	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	565	163	36	749	204	98

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	728	0	1094	364
Stage 1	-	-	-	-	647	-
Stage 2	-	-	-	-	447	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	871	-	208	633
Stage 1	-	-	-	-	483	-
Stage 2	-	-	-	-	611	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	871	-	~ 199	633
Mov Cap-2 Maneuver	-	-	-	-	331	-
Stage 1	-	-	-	-	483	-
Stage 2	-	-	-	-	586	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	25.4
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	331	633	-	-	871	-
HCM Lane V/C Ratio	0.617	0.155	-	-	0.041	-
HCM Control Delay (s)	31.9	11.7	-	-	9.3	-
HCM Lane LOS	D	B	-	-	A	-
HCM 95th %tile Q(veh)	3.9	0.5	-	-	0.1	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

THE ECONOMIC IMPACT OF HOTEL DEVELOPMENT BY: ALAN SUZUKI
Presented by: Alan Suzuki, Senior Consultant – Pinnacle Advisory Group

Hotels are considered an important economic component to any community. In some cases, cities and municipalities will offer incentives in order to stimulate hotel development. These incentives can be in the form of tax breaks, favorable land leases, or assistance with financing. Prior to establishing incentives for hotel development, a city or municipality should conduct an economic impact study to estimate the economic benefits that results from the development. This assessment should evaluate the economic benefits of the initial investment both in the short term and over the long-term. The economic impact to local and regional economies from hotel development is typically separated into four categories: direct, fiscal, indirect, and induced.

Direct Impact

Direct impact includes all projected revenues that will be generated from consumers at the new hotel. This will include all rooms revenues, food and beverage revenues from restaurants and banqueting, as well as other potential revenue sources such as spa or parking. Direct impact also includes total payroll paid out to employees hired at the hotel as well as all payroll paid out to temporary construction workers who construct the hotel.

Fiscal Impact

Fiscal impact refers to all federal, state, and local taxes that will be collected from the development and operations of the new hotel. Taxes include all sales taxes collected in association with the hotel generated revenues, as well as all payroll related taxes collected from full-time hotel employees and temporary construction workers. Local governments will also collect new property taxes from the operation of the hotel. Many local governments will also collect revenues through lodging taxes.

Indirect Impact

In addition to local governments and hotel owners/employees, contractors and suppliers to a newly developed hotel will also benefit. Indirect impact includes all jobs and income generated by businesses that supply goods and services to the hotel. Examples of businesses that will indirectly benefit from the development of a hotel include suppliers of rooms related goods (housekeeping supplies, room amenities, etc), telecommunication vendors (internet, cable, etc.), utility companies, food and beverage suppliers, and other hotel related vendors.

Induced Impact

Induced impact refers to economic effects generated when employees (full-time and temporary) and suppliers re-spend their wages on local consumer purchases. For example, an employee may purchase gas for their car on their way home from work.

Calculation of Impact

Pinnacle Advisory Group has conducted several economic impact studies as a result of hotel development. In most cases, direct and fiscal impacts can be calculated with relative confidence and accuracy. A hotel pro-forma will calculate the revenues in direct impact, while full-time and temporary payroll projections can be calculated from the preparation of staffing schedules combined with knowledge of local wages.

Indirect and induced impact, on the other hand involves a certain degree of subjectivity. While expenditures of goods and services can be estimated, it is difficult to accurately calculate how much of those expenditures will be generated from contractors and suppliers from the local area. Induced impact, which results from the re-spending of wages on local consumer products, is also difficult to estimate. Several complex models have been created by various economists that recommend multipliers that can be applied to total direct impact dollars. In general, depending on several factors including the size and economic diversity of the regional economy, multipliers typically range between 1.1 to 2 of total direct impacts.

A hotel's impact to the local community is often more than just job creation and additional tax revenue. When all economic considerations are accounted for, the calculation of total direct, fiscal, indirect, and induced impact can give the public a more universal understanding of a hotel development's impact.

PLANNING COMMISSION STAFF REPORT

To: Kaysville City Planning Commission
From: Dan Jessop, Zoning Administrator
Date: July 7, 2023
Agenda Item #7: Public Hearing for a text amendment to Title 17 Chapter 31 Provisions Applying to Particular Uses Section 14 Firework Stands, Christmas Tree Stands, and Temporary or Seasonal Retail Sales

Meeting Date	July 13, 2023
Application Type	Fire Works Text Amendment
Applicant	TNT Fireworks | Cameron Talbot
Chapter | Title | Section	17-31-14 Firework Stands, Christmas Tree Stands, and Temporary or Seasonal Retail Sales

1. BACKGROUND

Cameron Talbot submitted a Title 17 Planning and Zoning/Land Use Code Text Amendment application to allow the sale of fireworks on zones other than Commercial zone areas along Main Street or 200 North Street. This ordinance is intended to authorize the sale of fireworks at Davis High without creating a nuisance.

Last year the City mistakenly issued a business license for TNT Fireworks and they sold Fireworks at Davis High Parking lot which is zoned R-1-8. The City did not receive any complaints as a result of the sales.

The applicant submitted Clearfield city's ordinance as a model for the text amendment. Staff has modified that ordinance to better fit Kaysville city.

2. PUBLIC NOTICING AND PUBLIC COMMENT

A Public Hearing Noticed was posted on July 2, 2023. To date, no comments have been received.

3. RECOMMENDATION

Based on the findings below, staff recommends the Planning Commission send a recommendation of approval to the City Council to the Text amendment to 17-31-4 as provided in the attached draft ordinance.

a) Staff analysis finds the sale of fireworks and other seasonal items in approved locations minor arterials and collector streets would provide retail services to the community.
b) After General Plan review we found nothing that was contradictive to the proposed text amendments.
c) Other findings the Planning Commission may want to add.

Attachments:

1. Draft Ordinance 17-31-4
2. Fire works ordnance text proposal from applicant

June 21, 2022

American Promotional Events
Attn: Carson Anderson
2120 Milwaukee Way
Tacoma, WA 98421

Dear American Promotional Events aka TNT Fireworks,

It has come to our attention that the City made an error when we approved a business license application for your location at 325 S. Main Street in Kaysville, Utah. The firework stand is located in an R-1-8 Single Family Residential District and therefor is not compliant for commercial sales.

Because we made the mistake and the shortness of the firework sales tent, we will not be issuing a Cease and Desist letter for this location. However, in the future we will not approve a license in this location as commercial activities are not allowed in this zone.

We apologize for the error and feel free to contact us with any questions.

Best regards,

Mindi Edstrom

Kaysville City Community Development
Business License Officer
Office: 801-497-7019
Email: medstrom@kaysville.gov

cc: Davis County School District

Davis High School

Community Development
55 South State Street
Clearfield, Utah 84015
P: 801.525.2780
F: 801.525.2865

September 14, 2022

File Number: ZTA 2022-080059
Ordinance Change: Firework Stands, Temporary or Seasonal Merchant Regulations
Decision Date: Tuesday, September 13, 2022

To Whom it May Concern,

This notice of decision is in response to the zoning text amendment referenced above. The zoning text amendment request was recommended for approval by the Planning Commission on August 17, 2022, and approved by the Clearfield City Council on Tuesday, September 13, 2022. The City Council approved the following changes to the land use ordinance.

11-13-26: FIREWORKS STAND, TEMPORARY OR SEASONAL MERCHANT:

Fireworks stands, and temporary or seasonal merchants shall be subject to the following regulations:

A. Location Specified; Location Restrictions:

1. Each license shall specify the location where the business is approved to operate. No operation shall occur at locations other than the approved site.

2. Licenses issued under this section shall be limited to the following street corridors:

a. ~~Main Street, State Street~~ SR 126 (North Main Street & State Street), 1700 South (Antelope Drive), SR 193 (700 South), 200 South, and 300 North (excluding properties east of SR 126), if located outside of Freeport Center or Freeport West. All fireworks stands, temporary or seasonal merchants, shall not occupy more than twenty percent (20%) of the parking stalls on the lot where the business has been approved.

b. No location restrictions are imposed by the City if locating inside Freeport Center or Freeport West.

~~c. No location restrictions are imposed by the City if locating on future developed property at SR-193 and 2000 East and Legend Hills.~~

~~d. Fireworks stands are not allowed on property at SR-193 and 2000 East nor at Legend Hills (refer to map held at the City).~~

~~e.~~ c. Licenses may only be issued on non-residential properties (such as businesses, schools, churches, etc.) along the identified corridors within the city. ~~the following zoning: C-1, C-2, MU, C-R, D-R, and M-1.~~

Community Development
55 South State Street
Clearfield, Utah 84015
P: 801.525.2780
F: 801.525.2865

B. Maintenance: The area around a fireworks stand, temporary or seasonal merchant shall be kept clean and orderly. A trash receptacle shall be provided for patrons. The licensee shall promptly clean up all trash, litter, spills, etc., within a minimum twenty-foot (20') radius of the business.

C. Appearance: All fireworks stands, temporary or seasonal merchants structures and display areas shall have a professional appearance, and may not appear tattered, torn, frayed, faded, have chipped or peeling paint or otherwise be in disrepair. All equipment associated with the use shall be maintained in a new or near new condition. All retail items shall be displayed in a neat and orderly fashion. All displays, merchandise, and debris associated with the use shall be contained within the confines of the use and be cleaned at the end of each business day. A business license will not be issued or may be revoked if structures, display areas and/or equipment are not properly kept and maintained.

D. Impervious Surface: Each fireworks stand, temporary or seasonal merchant shall be located on an impervious, all-weather surface with no portion of the business located in a landscaped or unimproved area.

E. Setbacks: Each fireworks stand, temporary or seasonal merchant shall be located a minimum of ten feet (10') behind the inside edge of a public sidewalk, or fifteen feet (15') from the edge of the street right-of-way if no sidewalk exists; five feet (5') from combustible walls, roof eave lines, awnings, etc.; ten feet (10') from any building openings (i.e., doors, windows, vents, etc.); and five feet (5') from a fire hydrant, driveway, handicapped parking space or loading area.

F. Traffic Safety: No fireworks stand, temporary or seasonal merchant shall impede auto and/or pedestrian traffic or create auto/pedestrian conflicts. Private sidewalk clear widths shall not be reduced below five feet (5'), and no fireworks stand, temporary or seasonal merchant shall interfere with the internal parking lot circulation.

G. Parking: The site shall have adequate parking to accommodate the primary use(s) on site as well as any area used by the fireworks stand, temporary or seasonal merchant. No part of the fireworks stand, temporary or seasonal merchant shall occupy required parking stalls for the primary use(s) of the site. A minimum of two (2) on-site parking stalls are required for each fireworks stand, temporary or seasonal merchant.

H. Business Conduct: A fireworks stand, temporary or seasonal merchant shall not solicit or conduct business with persons in motor vehicles or use any flashing lights, noise, sound or other motion producing devices to attract attention to its operation. A fireworks stand, temporary or seasonal merchant located in or adjacent to a residential zone, shall not operate prior to eight o'clock (8:00) AM or after ten o'clock (10:00) PM.

I. Fireworks Stand Limitation: To promote public safety, a fireworks stand located within a one-thousand-foot (1,000') radius (as measured from property line to property line) of the Clearfield City 4th of July event at Fisher Park shall not operate after 2pm ~~four (4) hours prior to, during, and four (4) hours following~~ said event.

Community Development
55 South State Street
Clearfield, Utah 84015
P: 801.525.2780
F: 801.525.2865

~~I.~~J. Minimum Separation Required: No temporary or seasonal merchant shall be located within two hundred feet (200') of the primary public entrance of an existing retail store which sells similar products as its primary business.

~~J.~~K. Signs: Each fireworks stand, temporary or seasonal merchant shall be limited to one on premises sign, which shall not exceed eight (8) square feet in size. Signs shall not be internally illuminated or make use of flashing or intermittent lighting or animation devices. Pennants, streamers, lawn banners and other temporary signs shall be prohibited.

~~K.~~L. Fire Extinguisher Required: A portable fire extinguisher, Type 2A-10 BC minimum, must be mounted within easy reach of each fireworks stand, temporary or seasonal merchant.

~~L.~~M. City Sponsored Event Or Activity: This section shall not apply to fireworks stands, temporary or seasonal merchants participating in a City sponsored event or activity.

Any questions related to this ordinance text amendment may be addressed by contacting me either at (801) 525-2784 or brad.mcilrath@clearfieldcity.org.

Sincerely,

Brad McIlrath, Senior Planner

cc: Spencer Brimley, Community Development Director *(via email)*
Nancy Dean, City Recorder *(via email)*

Clearfield City

11-13-26: FIREWORKS STAND, TEMPORARY OR SEASONAL MERCHANT:

Fireworks stands, and temporary or seasonal merchants shall be subject to the following regulations:

A. Location Specified; Location Restrictions:

1. Each license shall specify the location where the business is approved to operate. No operation shall occur at locations other than the approved site.

2. Licenses issued under this section shall be limited to the following street corridors:

a. (SR) 126 (North Main Street & State Street), 1700 South (Antelope Drive), State Route (SR) 193 (700 South), 200 South, and 300 North (excluding properties east of SR 126), if located outside of Freeport Center or Freeport West. All fireworks stands, temporary or seasonal merchants, shall not occupy more than twenty percent (20%) of the parking stalls on the lot where the business has been approved.

b. No location restrictions are imposed by the city if locating inside Freeport Center or Freeport West.

c. Licenses may only be issued on non-residential properties (such as businesses, schools, churches, etc.) along the identified corridors within the city.

B. Maintenance: The area around a fireworks stand, temporary or seasonal merchant shall be kept clean and orderly. A trash receptacle shall be provided for patrons. The licensee shall promptly clean up all trash, litter, spills, etc., within a minimum twenty-foot (20') radius of the business.

C. Appearance: All fireworks stands, temporary or seasonal merchants structures and display areas shall have a professional appearance, and may not appear tattered, torn, frayed, faded, have chipped or peeling paint or otherwise be in disrepair. All equipment associated with the use shall be maintained in a new or near new condition. All retail items shall be displayed in a neat and orderly fashion. All displays, merchandise, and debris associated with the use shall be contained within the confines of the use and be cleaned at the end of each business day. A business license will not be issued or may be revoked if structures, display areas and/or equipment are not properly kept and maintained.

D. Impervious Surface: Each fireworks stand, temporary or seasonal merchant shall be located on an impervious, all-weather surface with no portion of the business located in a landscaped or unimproved area.

E. Setbacks: Each fireworks stand, temporary or seasonal merchant shall be located a minimum of ten feet (10') behind the inside edge of a public sidewalk, or fifteen feet (15') from the edge of the street right-of-way if no sidewalk exists; five feet (5') from combustible walls, roof eave lines, awnings, etc.; ten feet (10') from any building openings (i.e., doors, windows, vents, etc.); and five feet (5') from a fire hydrant, driveway, handicapped parking space or loading area.

F. Traffic Safety: No fireworks stand, temporary or seasonal merchant shall impede auto and/or pedestrian traffic or create auto/pedestrian conflicts. Private sidewalk clear widths shall not be reduced below five feet (5'), and no fireworks stand, temporary or seasonal merchant shall interfere with the internal parking lot circulation.

G. Parking: The site shall have adequate parking to accommodate the primary use(s) on site as well as any area used by the fireworks stand, temporary or seasonal merchant. No part of the fireworks stand, temporary or seasonal merchant shall occupy required parking stalls for the primary use(s) of the site. A minimum of two (2) on-site parking stalls are required for each fireworks stand, temporary or seasonal merchant.

H. Business Conduct: A fireworks stand, temporary or seasonal merchant shall not solicit or conduct business with persons in motor vehicles or use any flashing lights, noise, sound or other motion producing devices to attract attention to its operation. A fireworks stand, temporary or seasonal merchant located in or adjacent to a residential zone, shall not operate prior to eight o’clock (8:00) AM or after ten o’clock (10:00) PM.

I. Fireworks Stand Limitation: To promote public safety, a fireworks stand located within a one-thousand-foot (1,000’) radius (as measured from property line to property line) of the Clearfield City 4th of July event at Fisher Park shall not operate after two o’clock (2:00) PM.

J. Minimum Separation Required: No temporary or seasonal merchant shall be located within two hundred feet (200') of the primary public entrance of an existing retail store which sells similar products as its primary business.

K. Signs: Each fireworks stand, temporary or seasonal merchant shall be limited to one on premises sign, which shall not exceed eight (8) square feet in size. Signs shall not be internally illuminated or make use of flashing or intermittent lighting or animation devices. Pennants, streamers, lawn banners and other temporary signs shall be prohibited.

L. Fire Extinguisher Required: A portable fire extinguisher, Type 2A-10 BC minimum, must be mounted within easy reach of each fireworks stand, temporary or seasonal merchant.

M. City Sponsored Event Or Activity: This section shall not apply to fireworks stands, temporary or seasonal merchants participating in a City sponsored event or activity.

KCC Draft Ordinance

17-31-14 Fireworks Stands, Christmas Tree Stands and Temporary or Seasonal Retail Sales
Fireworks stands, Christmas tree stands and temporary or seasonal merchants shall be subject to the following regulations.

1. Locations and Allowed Properties
Fireworks stands, Christmas tree stands and temporary or seasonal retail sales are permitted uses on properties zoned CC, GC, LI or on non-residential properties (such as schools, churches, etc.) along the City's designated Minor Arterial Streets and Collector Streets as defined in KCC 8-3-2 Existing And Proposed Streets Designated As Arterial, Collector, Or Significant Local Streets.

2. Site Plan Required
All applications shall submit a site plan demonstrating compliance with regulations outlined in this section, including location of temporary structure, setbacks of temporary structure, parking, location of garbage receptacles, fire extinguisher, access points, etc.

3. Standards for Site and Operations
Properties to be used for fireworks stands, Christmas tree stands and temporary or seasonal merchants shall meet the following regulations:

a. Access.
   i. All lots shall have an improved drive approach or curb cut access to the property.
   ii. No merchant shall impede vehicular traffic or pedestrian traffic or interfere with public rights of way and sidewalks.
b. Parking.
   i. All parking shall be located on an impervious, all-weather surface such as concrete, asphalt or gravel.
   ii. Adequate parking for the temporary business shall be provided and a minimum of ten parking stalls shall be available for all temporary sales.
   iii. The site shall also have adequate parking to accommodate any existing use(s) on site as well as any area used by the fireworks stand, temporary or seasonal merchant.
c. Cleanliness and Maintenance.
   i. Display areas shall have a professional appearance, and shall not appear tattered, torn, frayed, faded, have chipped or peeling paint or otherwise be in disrepair. All retail items shall be displayed in a neat and orderly fashion.
   ii. A trash receptacle shall be provided for patrons and the area around the stand shall be kept clean and orderly.
   iii. All displays, merchandise, and debris associated with the use shall be contained within the confines of the use and be cleaned at the end of each business day.
   iv. The licensee shall promptly clean up all trash, litter, spills, etc.
d. Hours of Operation. A fireworks stand, temporary or seasonal merchant located in or adjacent to a residential zone, shall not operate prior to 8:00 AM or after 10:00 PM.
e. Fire Extinguisher Required.
   A minimum of one portable fire extinguisher as required by the Fire Chief shall be within easy reach of each temporary stand.

4. Setbacks

a. Each fireworks stand, temporary or seasonal merchant shall be located a minimum of 10 feet behind the inside edge of a public sidewalk, or 15 feet from the edge of the street right-of-way if no sidewalk exists.
b. A minimum 5 foot setback is required from combustible walls, roof eave lines, awnings, etc.
c. A minimum 10 foot setback is required from any building openings (i.e., doors, windows, vents, etc.).
d. A minimum 5 foot setback from a fire hydrant, driveway, ADA accessible parking space or loading area.

5. Prohibited on City Property

Fireworks stands, Christmas tree stands and temporary or seasonal retail sales are prohibited on city property unless participating in a City hosted event or activity.

PLANNING COMMISSION STAFF REPORT

To: Kaysville City Planning Commission
From: Dan Jessop, Zoning Administrator
Date: July 7, 2023
Agenda Item #8: Public Hearing for a text amendment to Title 17 Chapter 13 Special Provision Applying to Particular Uses Section 4 Beekeeping

Meeting Date	July 13, 2023
Application Type	Text Amendment
Applicant	Steve Lyon
Chapter | Title | Section	Title 17-31-4 Beekeeping

1. BACKGROUND

On June 23, 2023, Steve Lyon summited a Title 17 Planning and Zoning/Land Use Code Text Amendment application to allow for the keeping of bees. The ordnance is intended to authorize the keeping of domesticated bees within the Kaysville City limits while encouraging domestic pollination and urban farming. If adopted, the ordnance would provide for happy and healthy bee colonies in urban locations. It will require getting an appropriate license registration from State of Utah. It will provide for management of number of colonies allowing for not overpopulating so they can thrive. It will provide for proper and safe placement of hives, and prescribe hive construction with proper features to ensure happy bees. This ordinance provides for proper equipment, and conduct to promote happy healthy colonies without creating a nuisance.

The state conditions are as follows:

- Registration with state, and inspected by state
- Placed in Rear yards away from contact with humans and domestic animals
- 5’ from property lines
- Hives must have removable section frames, 6’’ above ground, and weather resistant tops.

2. PUBLIC NOTICING AND PUBLIC COMMENT

A Public Hearing Noticed was posted on June 30, 2023. To date, no comments have been received.

3. RECOMMENDATION

Based on the findings below, staff recommends the Planning Commission send a recommendation of approval to the City Council to enact KCC 17-31-4 Beekeeping as provided in the attached draft ordinance.

a) Staff and applicant analysis finds that urban bee hives encourage domestic pollination and are conducive to urban farming with the minimum requirements of this ordnance. Staff feels ordinance as written provides state requirements.
b) After General Plan Review we found nothing that was contradictive to the proposed text amendments.
c) Other findings the Planning Commission may want to add.

Attachments:

1. Draft Ordinance 17-31-4
2. Sample ordinances from Weber County, Lehi and Centerville

17-31-4: BEEKEEPING:

A. Purpose: The purpose of this section is to authorize beekeeping subject to certain requirements while encouraging the practice of keeping domesticated honeybees (*Apis Mellifera*) within Kaysville city limits while encouraging domestic pollination and urban farming.

B. Allowance. The keeping of honeybees shall be allowed as a permitted use within the Agricultural (A) and/or Residential (R) Zones. All apiaries within these zones are permitted for personal, family, and recreational enjoyment, without need of obtaining any approval or permit from the City. Apiaries may be kept for a commercial production purpose(s), which is considered an agricultural industry use.

B. Apiary/Beekeeper Registration: Each beekeeper shall be registered and maintain an active license with the Utah Department of Agriculture and Food as provided in the *Utah Bee Inspection Act* set forth in *Title 4, Chapter 11 of the Utah Code, as Amended*.

C. Beehives and Beekeeping Hives on Residential Lots:

1. As provided in this section, and notwithstanding any contrary provision in this title, an apiary, may be located on the following:
    a. ½ acre or less tract size – up to four (4) colonies
    b. Over ½ acre to 1 acre tract size – up to six (6) colonies
    c. Over 1 acre tract size – up to eight (8) colonies.
2. No beehives shall be located in a front yard.
3. A person shall not locate or keep a beehive on a property owned or occupied by another person without first obtaining property owner's written permission.
4. No beehive or group of beehives shall exceed six (6') feet in height.
5. Beehives shall be maintained either in a fenced yard or in accordance with the requirements set forth in **Subsection E** of this section.

D. Beehives:

1. Honeybee colonies shall be kept in beehives with removable frames which shall be kept in sound and usable condition.
2. Beehives shall be placed at least five feet (5') from any property line and six inches (6") above the natural grade, as measured from the ground to the lowest portion of the hive; provided, however, that this requirement may be waived in writing by the adjoining property owner.
3. Beehives shall be operated and maintained as provided in the Utah Bee Inspection Act Title 4, Chapter 11 of the Utah Code, as Amended.

E. Flyways: In each instance in which any colony is situated within twenty-five (25') feet of a public or private property line of the parcel, tract, or property upon which the apiary is situated, as measured from the nearest point on the hive to the property line, the beekeeper shall establish and maintain a flyway barrier at least six (6') feet in height consisting of a solid wall, fence, dense vegetation or combination thereof that is parallel to the property line and extends ten (10') feet beyond the colony in each direction so that all bees are forced to fly at an elevation of at least six (6') feet above ground level over the property lines in the vicinity of the apiary.

F. Water: Each beekeeper shall ensure that a convenient source of water is available to each colony continuously between March 1 and October 31 of each year. The water shall be located on the property of the owner of the beehive and in a location which minimizes any nuisance created by honeybees

seeking water on adjoining property(s) from other water sources where they may cause human, bird, or domestic pet contact.

G. Beekeeping Equipment: Each beekeeper shall ensure that no bee comb or other beekeeping equipment is left upon the grounds of an apiary site. Upon removal from a beehive, all such equipment shall promptly be disposed of in a sealed container or placed within a building or other bee-proof enclosure.

H. Certain Conduct Unlawful: It shall be unlawful for any beekeepers to keep any colony or colonies in such a manner or of such disposition as to cause any unhealthy condition, interfere with the normal use and enjoyment of human or animal life of others, or interfere with the normal use and enjoyment of any public property or property of others. Beekeeping is not permissible as primary or singular use on residential lots.

I. Nuisance. It shall be unlawful for any person to keep any colony or associated beekeeping equipment in a manner contrary to the provisions of this Section. Any such violation shall be deemed a nuisance and shall be subject to enforcement procedures and/or be subject to the provisions of any other applicable enforcement procedures deemed necessary to remedy a violation.

Weber County Code Chapter 108-21 Agri-Tourism

https://weber.municipalcodeonline.com/book?type=ordinances#name=Chapter_108-21_Agri-Tourism

Sec 108-21-1 Purpose And Intent

The purpose of this chapter is to provide support and economically feasible land use alternatives to local and enterprising farm owners who are devoted to their land and are committed to providing authentic, agriculturally related products and experiences to the public. Agriculture is a very important contributor to Utah's economy and, observably, an integral and indispensable part of Weber County's rich cultural heritage; therefore, it is the county's desire to create an environment in which agriculture is not only encouraged but can thrive. It is intended to benefit farm owners and the residents of Weber County through its ability to generate supplementary farm income while promoting the preservation of agricultural open space and significantly enhancing leisure, recreational, educational, and gastronomic opportunities for those in pursuit of such experiences in a rural farmland setting.

(Ord. No. 2012-19, pt. 1(§ 46-1), 12-18-2012)

Sec 108-21-2 Applicability

The standards found in this chapter shall apply to all agri-tourism applications/operations. Also, all agri-tourism operations are subject to title 108, chapter 4 of this Land Use Code (conditional uses) which regulates the conditional use permit application and review process. This process may include, but is not limited to, a review by the Weber County Planning Division, Building Inspection Division, Engineering Division, and Sheriff's Office. Other review agencies may include the Weber-Morgan Health Department, Weber Fire District, Utah State University Cooperative Extension, and/or other various agencies. Agri-tourism events that operate outside of normal day-to-day hours and/or involve spectators in a number greater than that which can be served by existing facilities shall be subject to title 38, special events. Other ordinances, codes and/or regulations may apply; therefore, it shall be the responsibility of the applicant to know and understand all applicable standards and agency requirements.

(Ord. No. 2012-19, pt. 1(§ 46-2), 12-18-2012)

Sec 108-21-3 General Development Standards

The development standards imposed by this section do not alter, supersede or nullify any codes, ordinances, statutes, or other applicable standards which may also regulate these same uses/activities.

1. ***Primary use.*** Agriculture is the preferred use in agricultural zones; therefore, all agri-tourism uses/activities shall be complementary and clearly accessory to the primary agricultural use. To guarantee legitimacy and viability, an agri-tourism operation shall demonstrate that the subject property has been qualified under the Farmland Assessment Act or that the subject property is currently, or will be within the next growing season, producing an agricultural product in an amount that meets or exceeds the production requirement as established by the Farmland Assessment Act. A farmer, whose primary agricultural use is that of an apiary, shall be required to maintain two hives per acre with a ten-hive minimum. No more than 20 hives shall be necessary when a farm exceeds ten acres.

Centerville Utah City Zoning Code 12.55.250

https://centerville.municipalcodeonline.com/book?type=zoning#name=12.55.250_Apiaries_(Beekeeping)

12.55.250 Apiaries (Beekeeping)

The following criteria relates to the keeping of one or more colonies of bees within the City.

1. Allowance. The keeping of bees shall be allowed as a permitted use within the Agricultural–Low (A-L) or Residential–Low (R-L) Zones. All apiaries within these zones are permitted for personal, family, and recreational enjoyment, without need of obtaining any approval or permit from the City. However, such allowance does not relieve any person or entity from complying with the provisions of this Section or other applicable County or State regulations. Apiaries shall not be kept for a commercial production purpose, which is considered an agricultural industry use.
2. Unlawful Conduct. It shall be unlawful for any beekeepers to keep any colony or colonies in such a manner or of such disposition as to cause any unhealthy condition, interfere with the normal use and enjoyment of human or animal life of others, or interfere with the normal use and enjoyment of any public property or property of others.
3. Flyways. In each instance in which any colony is situated within 25 feet of a public or private property line of the parcel, tract, or property upon which the apiary is situated, as measured from the nearest point on the hive to the property line, the beekeeper shall establish and maintain a flyway barrier at least 6 feet in height consisting of a solid wall, fence, dense vegetation or combination thereof that is parallel to the property line and extends 10 feet beyond the colony in each direction so that all bees are forced to fly at an elevation of at least 6 feet above ground level over the property lines in the vicinity of the apiary.
4. Water. Each beekeeper shall ensure that a convenient source of water is available to the bees at all times during the year so that the bees will not be encouraged to congregate at swimming pools, pet watering bowls, bird baths or other water sources where they may cause human, bird or domestic pet contact.
5. Beekeeping Equipment. Each beekeeper shall ensure that no unused or abandoned bee comb or other beekeeping equipment are left upon the grounds of an apiary site. Upon removal from a colony, all such equipment shall promptly be disposed of in a sealed container or placed within a secured building or other bee proof enclosure.
6. Number of Colonies. It shall be unlawful to keep more than the following number of colonies on any parcel, tract, or property within the city, based upon the size or configuration of the tract on which the apiary is situated:
    1. ½ acre or less tract size – up to four colonies
    2. Over ½ acre to 1 acre tract size – up to six colonies
    3. Over 1 acre tract size – up to eight colonies
7. Nuisance. It shall be unlawful for any person to keep any colony or associated beekeeping equipment in a manner contrary to the provisions of this Section. Any such violation shall be deemed a nuisance and shall be subject to enforcement procedures found in CZC 12.23 (Enforcement) and/or be subject to the provisions of any other applicable enforcement procedures deemed necessary to remedy a violation.

Lehi Utah City Development Standards

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E. Beekeeping

The keeping of bees is allowed on all properties in the A-5, TH-5, A-1, RA-1, R-1-22, R-1-15, R-1-12, R-1-10, R-1-8, R-2, R-2.5, and R-3 Districts as a permitted use subject to the following requirements:

1. There is no defined maximum number of beehives or colonies.

2. Beehives shall not be located in any front yard.

3. Beehives shall be located at least six feet from any adjoining property line or public road. Hives may be located up to 16 inches from the property line or public road if a solid fence or hedge known as a "flyway barrier" of at least six feet in height is provided in front of the hive entrance.

4. A fresh supply of water shall be maintained to prevent bees from collecting at water sources in neighboring properties.

5. Beehives or any component thereof shall not exceed six feet in height.

6. Beehives shall be maintained regularly to prevent swarming. Hive owners shall follow beekeeping best management practices such as disease control, hive management, and working the hive at appropriate times. Bees and associated beehives may be ordered removed from property if they are determined to be a nuisance by the Lehi City animal control officer.

7. Each beekeeper shall register with the Utah Department of Agriculture as provided in the Utah Bee Inspection Act as set forth in Title 4, Chapter 11 of the Utah State Code.