



RECOMMENDED CONDITIONS OF APPROVAL:

1. Approval of this Special Use Permit is subject to the Board of Supervisors adopting an ordinance to allow for additional retail marijuana stores in Carson City (ZA-2022-0263).
2. The Applicant must sign and return the Notice of Decision for conditions for approval within 10 days of receipt of notification. If the Notice of Decision is not signed and returned within 10 days, then the item may be rescheduled for the next Planning Commission meeting for further consideration.
3. All development must be substantially in accordance with the development plans approved with this application, except as otherwise modified by these conditions of approval.
4. All on- and off-site improvements must conform to City standards and requirements.
5. All on- and off-site improvements must conform to NRS and NAC 453A and the Adopted Regulations of the Division of Public and Behavioral Health of the Department of Health and Human Services, as applicable at the time of development.
6. The use for which this permit is approved shall commence within 12 months of the date of final approval. A single, one-year extension of time may be requested in writing to the Planning Division of the Community Development Department 30 days prior to the one-year expiration date. If this permit is not initiated (obtain a Building Permit) within one year and no extension granted, the permit becomes null and void.
7. The Applicant shall maintain a State of Nevada license to operate an adult use cannabis dispensary at the subject location. Failure to maintain a state license will render this Special Use Permit null and void.
8. The Applicant shall obtain and maintain a valid Carson City Business License for the operation of a retail marijuana store.

THE FOLLOWING CONDITIONS SHALL APPLY AT THE TIME OF BUILDING PERMIT:

9. The Applicant shall submit a copy of the Notice of Decision and conditions of approval, signed by the applicant and owner, with any Building Permit application.
10. The existing warehouse/storage building, and the small shed must be demolished. Additionally, the existing billboard, located on-site, must either be removed or relocated if determined to be allowed by the Carson City Municipal Code.
11. The project must contribute to the pro rata share for the construction of a traffic signal at S. Carson Street and Appion Way through the execution of a Development Agreement, prior to a building permit being issued.
12. The intersection of Chochise Street and west Appion Way must be converted into an all-way stop intersection with the off-site improvement plans for this project.

13. A right turn lane must be added to the east leg of the intersection of Cochise Street and West Appion Way with the off-site improvement plans for this project.
14. Cochise Street must be reconstructed with half-street improvements from the intersection of Roland Street to Junction Drive and must have a minimum width to accommodate two-way traffic.
15. Junction Drive must be reconstructed with half-street improvements from Cochise Street to the entrance on Junction Drive and must have a minimum width to accommodate two-way traffic.
16. Bennett Avenue must be reconstructed with half-street improvements from junction drive to the west property line and must have a minimum width to accommodate two-way traffic.
17. The project must meet all Carson City Development Standards and Standard Details including but not limited to the following:
 - A. Water and sewer mains must be extended to serve the project.
 - B. The water main must be looped with a pressure reducing valve vault.
 - C. A water main analysis must be submitted for the new mains.

THE FOLLOWING CONDITIONS SHALL APPLY THROUGHOUT THE LIFE OF THE PROJECT:

18. The Special Use Permit for this retail marijuana store is only valid at the location specified in this application for this Applicant. The Special Use Permit approval becomes null and void if the Applicant loses or otherwise forfeits his or her State approval. This Special Use Permit is non-transferable between operators and locations within Carson City.
19. Consumption of marijuana or marijuana-infused products must not occur on the premises of this retail marijuana store, including the parking lot and surrounding area.
20. Outdoor display and sales of marijuana merchandise is prohibited.
21. Hours of operation are limited from 8:00 a.m. to 10:00 p.m., seven days per week.
22. Marijuana products must not be visible from outside the store at any time.
23. The Applicant shall ensure that any offensive marijuana product odors are not discharged from the building at any time. The detection of marijuana odors in the vicinity may result in code enforcement action and possible revocation of this Special Use Permit.
24. This Special Use Permit does not include the approval of signage. All signage must be consistent with Carson City Development Standards Division 1.20(1)(h) and requires approval of a sign permit.
25. If the separately proposed ordinance allowing curbside pickup services (ZA-2022-0292) is adopted by the Board of Supervisors, curbside pickup services may be

provided as part of this operation, consistent with the adopted ordinance.

26. This Special Use Permit does not include the approval of drive through services. Drive through services are prohibited.

LEGAL REQUIREMENTS: CCMC 18.02.050 (Review); 18.02.080 (Special Use Permit); 18.04.135 (General Commercial); CCDS Division 1.20

MASTER PLAN DESIGNATION: Community / Regional Commercial

ZONING DISTRICT: General Commercial (GC)

KEY ISSUES: Will the use be compatible with the surrounding neighborhood and be in keeping with the standards of the Carson City Municipal Code?

SURROUNDING ZONING AND LAND USE INFORMATION:

NORTH: General Commercial / vacant

EAST: General Commercial / S Carson Street

WEST: General Commercial / single family residence

SOUTH: General Commercial / Hwy 50 W

ENVIRONMENTAL INFORMATION:

FLOOD ZONE: Zone X (minimal flood hazard)

EARTHQUAKE FAULT: Zone III (Moderate; Beyond 500 feet)

SLOPE/DRAINAGE: property drains, generally, from west to east

SITE DEVELOPMENT INFORMATION:

LOT SIZE: 1.5 +/- acres

EXISTING STRUCTURE SIZE: 2,480 square foot storage/warehouse building and 96 square foot shed.

PROPOSED STRUCTURE SIZE: 7,978 square feet (3,978 square foot marijuana retail store & 3,724 square foot future restaurant space)

VARIANCES REQUESTED: None

PREVIOUS REVIEWS:

- SUP-18-029: Special use permit to allow for continued use of billboard.
- SUP-13-012: Special use permit to allow for continued use of billboard.
- SUP-08-016: Special use permit to allow for continued use of billboard.
- U-02/03-22: Special use permit to allow for continued use of billboard.
- U-00/01-5: Special use permit to allow for outdoor display of sculptures.
- U-98/99-4: Special use permit to allow for continued use of billboard.
- U-93/94-37: Special use permit to allow for continued use of billboard.
- U-87-14: Special use permit to allow for continued use of billboard.

BACKGROUND:

In 2016, Nevada voters passed The Regulation and Taxation of Marijuana Act (codified as NRS Chapter 453D and later amended and recodified as NRS Title 56), legalizing recreational marijuana in Nevada. In 2017, the Board of Supervisors adopted an ordinance to allow for recreational marijuana establishments under certain conditions. Currently, Carson City Development Standards 1.20.1(j) limits the number of medical marijuana dispensaries to two and Carson City Development Standards 1.20.1(k) allows for a retail marijuana store to be jointly located within the same premises as an existing medical

marijuana dispensary, thereby limiting marijuana retail stores to not more than two stores.

However, NRS 678B.220(c) permits a county with a population of 55,000 or more but less than 100,000 to have a maximum of two licenses for medical marijuana dispensaries, and NRS 678B.260(c) permits a county with a population of 55,000 or more but less than 100,000 to have up to four licenses for adult-use cannabis retail stores (adult-use cannabis retail stores are stated in the proposed ordinance as retail marijuana stores).

In addition to this Special Use Permit request, the Applicant has also requested a zoning text amendment (ZA-2022-0263) to increase the number of retail marijuana stores in Carson City. The Special Use Permit is dependent upon the adoption of the ordinance to increase the number of retail marijuana stores.

DISCUSSION:

The subject property, located at 5100 S. Carson Street (APN 009-301-06) is approximately 1.5 acres and zoned General Commercial. The Applicant, concurrent with the request for a zoning code amendment referenced above, is requesting a Special Use Permit for a retail marijuana store. The proposed project includes a 7,978 square foot building, of which 3,978 square feet would house the proposed store. The remaining 3,724 square feet is proposed for a future restaurant which does not require a Special Use Permit.

Per CCMC 18.04.135, a retail marijuana store is allowed in the General Commercial zoning district subject to first obtaining a Special Use Permit and subject to Carson City Development Standards, Section 1.20, Medical Marijuana Establishments and Marijuana Establishments. The development standards and an analysis of how the proposed retail marijuana store meets them are addressed below:

1.20- Medical Marijuana Establishments and Marijuana Establishments

1. The following standards apply to all Medical Marijuana Establishments and Marijuana Establishments:

- (a) Medical Marijuana Establishments and Marijuana Establishments require the issuance of a Special Use Permit. Special Use Permits for Medical Marijuana Establishments and Marijuana Establishments are only valid at the specific location for which a person has obtained the required approval through the applicable state agency to operate as a Medical Marijuana Establishment or Marijuana Establishment. A Special Use Permit that is issued in accordance with this Division automatically expires and shall be deemed void if the Medical Marijuana Establishment or Marijuana Establishment loses or otherwise forfeits the required state approval to operate. A Special Use Permit issued in accordance with this Division is not transferable between operators and locations within Carson City. Except as otherwise provided in this Division and notwithstanding any other provision of CCMC, a separate Special Use Permit is not required for a Medical Marijuana Establishment or Marijuana Establishment that will be established in an existing location at which a Medical Marijuana Establishment or Marijuana Establishment in good standing already operates. The expansion of any location of a Medical Marijuana Establishment or Marijuana Establishment that will result in an increase of more than ten (10) percent of the space in which the Medical Marijuana Establishment or Marijuana Establishment has been approved to operate requires the issuance of an amended Special Use Permit.

The applicant is applying for the required special use permit. Staff has also recommended a condition of approval outlining these requirements (Condition 18).

- (b) The consumption of marijuana products is prohibited on the premises of any Medical Marijuana Establishment and Marijuana Establishment.

The applicant is not proposing to allow consumption on premises. Staff has also recommended a condition of approval outlining this requirement (Condition 19).

- (c) All business activities related to Medical Marijuana Establishments and any marijuana cultivation facility, marijuana testing facility, marijuana product manufacturing facility or retail marijuana store must be conducted indoors and within a permanent building. The use of an office trailer or other temporary structure is prohibited. All Medical Marijuana Establishments and Marijuana Establishments must at all times maintain an interior and exterior appearance that is professional, orderly, dignified and consistent with the traditional style of pharmacies and medical offices.

The business activities are proposed to be conducted inside the proposed building, with the exception of the curbside pickup services that the applicant will use, assuming the Board of Supervisors adopts the ordinance to allow for curbside pickup.

- (d) The outdoor display or sale of any Medical Marijuana Establishment or Marijuana Establishment merchandise or product is prohibited.

Outdoor display and sales are not proposed with this special use permit. Staff has recommended a condition of approval to address this requirement (Condition 20).

- (e) Accessory outside storage for Medical Marijuana Establishments and Marijuana Establishments must comply with the provisions of Title 18 Appendix (Carson City Development Standards), Division 1.12 (Outside Storage).

Outside storage is not proposed with this project.

- (f) Access to Medical Marijuana Establishment or Marijuana Establishment must comply with all applicable state and federal laws and regulations.

Staff has recommended a condition of approval requiring maintenance of the State License which would require compliance with all state regulations (Condition 7).

- (g) Medical Marijuana Establishment and Marijuana Establishment merchandise and products must not be visible when viewed from outside the building in which the Marijuana Establishment or Marijuana Establishment is located.

As designed, merchandise should not be visible from outside the building. Staff has recommended a condition of approval to address this requirement (Condition 22).

- (h) All signage for Medical Marijuana Establishments and Marijuana establishments must be discreet, professional and consistent with the traditional style of signage for pharmacies and medical offices. All Medical Marijuana establishments and Marijuana Establishments are limited to following signage:

- (1) A maximum of thirty (30) square feet of wall sign area.
- (2) A maximum of thirty-two (32) square feet of freestanding sign area.
- (3) The maximum freestanding sign height for Marijuana Dispensaries and Marijuana Retail Stores shall be determined by the applicable commercial or shopping center regulations of Division 4 (Signs).
- (4) The maximum freestanding sign height for all Medical Marijuana Establishments and Marijuana Establishments other than Medical Marijuana Dispensaries and Marijuana Retail Stores shall be ten (10) feet.
- (5) Where a Medical Marijuana Establishment and Marijuana Establishment are jointly located on a single property, the maximum permitted sign area applies to the property and not each type of Establishment.

Signage is not being reviewed as part of this Special Use Permit. Signage will require a sign permit with review and approval by the Planning Division prior to installation. At that time, staff will review the sign permit application for conformance with these requirements. Staff is recommending a condition of approval to address this (Condition 24).

- (i) Off-street parking must be provided for Medical Marijuana Establishments and Marijuana Establishments in accordance with the following:
 - (1) For Medical Marijuana Dispensaries and Marijuana Retail Stores, a minimum of one (1) space for every three hundred (300) square feet of gross floor area.
 - (2) For Medical Marijuana Cultivation Facilities and Marijuana Cultivation Facilities, a minimum of one (1) space for every one thousand (1,000) square feet of gross floor area.
 - (3) For Medical Marijuana Product Manufacturing Facilities and Marijuana Product Manufacturing Facilities, a minimum of one (1) space for every five hundred (500) square feet of gross floor area.
 - (4) For Medical Marijuana Testing and Marijuana Testing Facilities, a minimum of one (1) space for every four hundred (400) square feet of gross floor area.

As designed, the project will provide a total of 63 parking spaces to serve the retail marijuana store and the future tenant. Per subsection 1 above, a minimum of 13 spaces are required to serve the retail marijuana store. The Applicant has allocated 14 parking spaces for this use.

- (j) Notwithstanding any other provision of CCMC, not more than two (2) Medical Marijuana Dispensaries are allowed to operate at the same time in Carson City.

In addition to this Special Use Permit request, the Applicant has also requested a zoning text amendment (ZA-2022-0263) to increase the number of retail marijuana stores in Carson City. The Special Use Permit is dependent upon the adoption of the ordinance to increase the number of retail marijuana stores. Staff has included a condition of approval to address this (Condition 1).

- (k) A retail marijuana store may only be jointly located within the same premises of an existing Medical Marijuana Dispensary that is operating in good standing.

In addition to this Special Use Permit request, the Applicant has also requested a zoning text amendment (ZA-2022-0263) to increase the number of retail marijuana stores in Carson City. In addition to the amendment to allow for additional retail marijuana stores, the proposed

ordinance would amend this section of the existing zoning code to require medical marijuana dispensaries to be located within the same premises of an existing retail marijuana store. This change would allow for an increase in the number of retail marijuana stores but not an increase in the number of medical marijuana dispensaries. The Special Use Permit is dependent upon the adoption of this ordinance (ZA-2022-0263). Staff has included a condition of approval to address this (Condition 1).

- (l) A Medical Marijuana Establishment or Marijuana Establishment is prohibited within one thousand (1,000) feet of a public or private school that provides formal education traditionally associated with preschool or kindergarten through grade twelve (12), or within three hundred (300) feet of a facility that provides day care to children, a public park, a playground, a public swimming pool, and any other center or facility, the primary purpose of which is to provide recreational opportunities or services to children or adolescents, which already exists on the date the application for the proposed Medical Marijuana Establishment or Marijuana Establishment is submitted to the applicable state agency for approval to operate, as measured on a straight line from the property line of the nearest school or facility to the front door or primary entrance of the Medical Marijuana Establishment or Marijuana Establishment.

The Applicant has verified that the proposed store meets the minimum distance requirements outlined in this standard.

2. The following standards apply to all Medical Marijuana Dispensaries and Retail Marijuana Stores:

- (a) A single point of secure public entry must be provided and identified.

A single point of secure public entry has been identified on the floor plan. The other set of double doors will be for exit only. There is another door proposed in the south-west corner of the building which will serve as an egress for back of house employees, not the public.

- (b) Hours of operation are limited to between 8:00 a.m. and 10:00 p.m., daily.

The hours of operation will be limited per this section of the Carson City Development Standards. Staff has recommended a condition of approval to address this requirement (Condition 21).

- (c) Drive-through service is prohibited.

Based on the discussion at the June 29, 2022 Planning Commission meeting, regarding the requested zoning code amendment, the Applicant has withdrawn their request for drive-through services. Staff has recommended a condition of approval to address this requirement (Condition 26).

- (d) A Medical Marijuana Dispensary or Retail Marijuana Store is prohibited on any property, or within a shopping center with frontage, that is located on the same street on which a residentially zoned property is also located unless the dispensary or store is located more than three hundred (300) feet from the residential property, as measured on a straight line from the nearest residential property line abutting the street right-of-way to the front door of the dispensary or store.

The proposed location of the retail marijuana store is not located on the same street as a residentially zoned property. There is an existing single-family residence immediately west of the project site, however, the property is zoned General Commercial.

3. In addition to the required findings for a Special Use Permit, the following standards must also be considered in the review of a request for a Special Use Permit for a Medical Marijuana Dispensary or Marijuana Retail Store to be located within the General Industrial zoning district:

- (a) That the proposed Medical Marijuana Dispensary or Marijuana Retail Store is located where sufficient, convenient and safe access is provided to the public.
- (b) That the proposed location has adequate lighting and street improvements for a use providing public access.

The subject property is located in the General Commercial zoning district; therefore, these requirements do not apply.

PUBLIC COMMENTS:

Public notices were mailed to 46 property owners within 1500 feet of the subject site on July 14, 2020. As of the writing of this report, staff has received on public comment noting concerns with the application. Any comments that are received after this report is completed will be submitted to the Planning Commission prior to or at the meeting on July 27, 2022, depending on the date of submission of the comments to the Planning Division.

OTHER CITY DEPARTMENTS OR OUTSIDE AGENCY COMMENTS:

Plans were routed to commenting agencies, and the following comments were received. Comments have been incorporated into the conditions of approval, as appropriate.

Engineering Division

Development Engineering has no preference or objection to the special use request provided that the following conditions are met:

- The project must contribute to the pro rata share for the construction of a traffic signal at S. Carson St and Appion Way through the execution of a Development Agreement, prior to a building permit being issued.
- The intersection of Cochise Street and West Appion Way must be converted into an all-way stop intersection with the off-site improvement plans for this project.
- A right turn lane must be added to the east leg of the intersection of Cochise Street and West Appion Way with the off-site improvement plans for this project.
- Cochise Street must be reconstructed with half-street improvements from the intersection of Roland Street to Junction Drive and must have a minimum width to accommodate two-way traffic.
- Junction Drive must be reconstructed with half-street improvements from Cochise Street to the entrance on Junction Drive and must have a minimum width to accommodate two-way traffic.
- Bennett Avenue must be reconstructed with half-street improvements from junction drive to the west property line and must have a minimum width to accommodate two-way traffic.
- The project must meet all Carson City Development Standards and Standard Details including but not limited to the following:
 - o Water and sewer mains must be extended to serve the project.

- o The water main must be looped with a pressure reducing valve vault.
- o A water main analysis must be submitted for the new mains.

Development Engineering has reviewed the application within the areas of purview relative to adopted standards and practices and to the provisions of CCMC 18.02.080, Conditional Uses. Development Engineering offers the following discussion:

CCMC 18.02.080(5)(a) - Master Plan

The request is not in conflict with any Engineering Master Plans.

CCMC 18.02.080(5)(b) – Use, Peaceful Enjoyment, Economic Value, Compatibility

Development Engineering has no comment on this finding.

CCMC 18.02.080(5)(c) - Traffic/Pedestrians

Local intersections: The intersections impacted by the proposed development include Appion Way and South Carson Street, Appion Way at Cochise Street, Cochise Street at Roland Street, and Clearview Drive at Curry Street. The intersection of Appion Way and South Carson Street requires a pro rata share contribution for a traffic signal, similar to what has been required on other projects. The intersection of Cochise Street and Appion Way must be mitigated to accommodate the extra queueing at the intersection. Streets used to access the property will be required to be reconstructed with half-street improvements.

Parking and internal circulation: The parking area must be designed to meet Carson City Standard Details.

CCMC 18.02.080(5)(d) - Public Services

Water and sewer mains must be extended to serve this site and must meet Carson City Standards. There is extra capacity available in the NDOT stormwater detention basin which can be used to serve this site, alternatively stormwater can be detained on-site.

CCMC 18.02.080(5)(e) – Title 18 Standards

Development Engineering has no comment on this finding.

CCMC 18.02.080(5)(f) – Public health, Safety, Convenience, and Welfare

The project meets will meet engineering standards for health and safety if conditions are met.

CCMC 18.02.080(5)(g) – Material Damage or Prejudice to Other Property

Development Engineering has no comment on this finding.

CCMC 18.02.080(5)(h) – Adequate Information

The plans and reports provided were adequate for this analysis.

Fire Department Comments

1. The project shall comply with the 2018 International Fire Code.
2. The project shall comply with the 2018 Northern Nevada Amendments.
3. All access roads shall be not less than 26 feet clear width.
4. All access roads shall meet the minimum turn radius per the 2018 International Fire Code.

5. All buildings shall be accessible to the Fire Department within 150 feet.
6. Fire Hydrants shall be provided per Carson City Municipal Code and the 2018 International Fire Code.

Environmental Control Authority Comments

1. An asbestos assessment is required on all applicable materials being demolished, per CCMC 12.12.065 and 40 CFR Part 61.
2. After receiving results back from the asbestos assessment, complete Carson City's Acknowledgement of Asbestos Assessment Form. Submit a copy of this form along with a copy of the asbestos assessment at the Carson City Building Department, per CCMC 12.12.065.
3. An EPA 10 Day Notification is required. EPA requires a NESHAP 10 Day Notification on both a commercial facility and a residential building being demolished that will become a commercial property. Submit a completed copy of this document to the Carson City Building Department along with proof that the Notification was sent to EPA Region IX, per CCMC 12.12.065.
4. Please note: if any asbestos containing material is to be taken to the Carson City Landfill for disposal, an Industrial Waste Manifest must first be obtained from the ECA Department before this material will be allowed to enter the landfill, per CCMC 12.12.050. If any asbestos containing material is to be taken to the Lockwood Landfill for disposal, Carson City's Environmental Control Authority (ECA) will require a copy of the receipt issued from Lockwood to be submitted to the Carson City Building Department.
5. Connection to the City sewer system is required for this project.
6. All floor sinks in kitchen and food prep areas where grease and/or solids result from food preparation are required to connect to a properly sized gravity grease interceptor, per CCMC 12.06.245.
7. Submit calculations used in the sizing of the grease interceptor.
8. Submit a plumbing plan that clearly delineates all connections to both sanitary sewer and grease interceptor.
9. A trash enclosure servicing a commercial kitchen will require connection either to its own grease interceptor or, if adequate fall can be obtained, can connect to the commercial kitchen grease interceptor. See CCMC Development Standard Appendix 18 Division 15.5 for trash enclosure details.

FINDINGS:

Staff's recommendation is based upon the findings as required by CCMC Section 18.02.080 (Special Use Permits) enumerated below and substantiated in the public record for the project.

1. Will be consistent with the objectives of the Master Plan elements.

The subject property is zoned General Commercial and has a master plan designation of Community / Regional Commercial (C/RC). The C/RC master plan designation anticipates general retail uses. A new retail marijuana store is consistent with the anticipated uses.

2. Will not be detrimental to the use, peaceful enjoyment, economic value, or development of surrounding properties or the general neighborhood; and is compatible with and preserves the character and integrity of adjacent development and neighborhoods or includes improvements or modifications either on-site or within the public right-of-way to mitigate development related to adverse impacts such as noise, vibrations, fumes, odors, dust, glare or physical activity.

The project will not be detrimental to the use, peaceful enjoyment, economic value, or development of surrounding properties or the general neighborhood. The subject property is surrounded by similarly zoned parcels to the north and west and S. Carson Street and Hwy 50 W. to the east and south. A retail marijuana store at this location is consistent with other similar use in the same zoning district. The nature of the business is in line with a retail use and is not expected to cause objectionable noise, vibrations, fumes, odors, dust, glare or physical activity.

3. Will have little or no detrimental effect on vehicular or pedestrian traffic.

A traffic impact study was completed and provided to staff for review with the Special Use Permit application. The study concluded that the intersections that would be impacted include Appion Way and South Carson Street, Appion Way at Cochise Street, Cochise Street at Roland Street, and Clearview Drive at Curry Street. To mitigate these impacts, staff is recommending a condition of approval requiring a pro rata share contribution for a traffic signal, similar to what has been required on other projects, for the intersection of Appion Way and South Carson Street. The intersection of Cochise Street and Appion Way must be mitigated to accommodate the extra queueing at the intersection. To address this, staff is recommending a condition of approval requiring a right turn lane to be added to the east leg of the intersection of Cochise Street and West Appion Way with the off-site improvement plans for this project. Additionally, streets used to access the property will be required to be reconstructed with half-street improvements. With the proposed conditions of approval, impacts to vehicular and pedestrian traffic will be mitigated.

4. Will not overburden existing public services and facilities, including schools, police and fire protection, water, sanitary sewer, public roads, storm drainage, and other public improvements.

The proposed addition will not overburden existing public services and facilities. Water and sewer mains must be extended to serve this site and must meet Carson City Standards. There is extra capacity available in the NDOT stormwater detention basin which can be used to serve this site, alternatively stormwater can be detained on-site. The Fire Department currently serves this site. The building permit will be reviewed for compliance with the Carson City Fire Code, Northern Nevada Amendments (2018 IFC). The Sheriff's Office has indicated that they have no reason to object to another dispensary as they have not experienced any marked challenges with the existing operations.

5. *Meets the definition and specific standards set forth elsewhere in this Title for such particular use and meets the purpose statement of that district.*

In addition to this special use request, the Applicant has also requested a zoning text amendment (ZA-2022-0263) to increase the number of retail marijuana stores allowed in Carson City. In addition to the amendment to allow for additional retail marijuana stores, the proposed ordinance would amend this section of the existing zoning code to require medical marijuana dispensaries to be located within the same premises of an existing retail marijuana store. This change would allow for an increase in the number of retail marijuana stores but not an increase in the number of medical marijuana dispensaries. The Special Use Permit is dependent upon the adoption of this ordinance (ZA-2022-0263). Per CCMC 18.04.135 the use may only be established subject to a Special Use Permit. As outlined above in the detailed analysis of compliance with Division 1.20, the Special Use Permit will comply with the specific standards set forth in Title 18.

6. *Will not be detrimental to the public health, safety, convenience and welfare.*

The existing dispensary locations have not been found to be detrimental to public health, safety, convenience and welfare. The proposed location will be visible from Hwy 50 W. and S. Carson Street. As proposed, the business will operate in a way that is consistent with other retail businesses in similar zoning districts. Moreover, staff has recommended conditions of approval to ensure that the business will operate consistent with the requirements of Division 1.20 of the Carson City Development Standards.

7. *Will not result in material damage or prejudice to other property in the vicinity, as a result of proposed mitigation measures.*

The project is not anticipated to result in material damage or prejudice to other property in the vicinity. The subject property is surrounded by similarly zoned parcels to the north and west and S. Carson Street and Hwy 50 W. to the east and south. The proposed retail marijuana store will operate much like other retail businesses in similar zoning districts. The project will operate consistent with Division 1.20 of the Carson City Development Standards as well as state law.

Attachments:

Public comment
Application LU-2022-0262

Date: 5/25/22

Project Justification Letter

Property: APN: 00-930-106
5100 S. Carson St. Carson City, NV 89701

Item: **Special Use Permit Application** - Proposed Retail Building – Restaurant & MMJ Dispensary
References: None

Zone: Community
Land Use: GC – General Commercial

PAD Area: (1.519 Acres 6,206 SF) comprises subject APN land parcel
Building Coverage – Entire Acreage (7,978 SF / 66,206 = 12.05%)
Building F.A.R. – Entire Acreage (7,978 SF / 66,206 = .1205)

Building Area: 7,978 SF (enclosed area), 1 Floor Level, with an outdoor seating patio.
(2) Two Tenants: Restaurant & Retail MMJ Dispensary

Building Ht.: Allowed – 35'-0". Proposed Ht. – 35'-0".

The scope of work for proposed subject project is to design / construct a single, free standing, 1 story, multi-lease commercial retail building.

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|-------------------------------------|---|
| - Parking Stalls Required: | Retail Dispensary: 1/300 SF = 3,978 / 3.33 = 14 Stalls |
| | Retail Restaurant:** 10/1,000 SF = 4,916 / 10 = 49 Stalls |
| | TOTAL Stalls Req'd: 63 Stalls |
| - Proposed Parking Stalls Provided: | 63 Stalls |

1. Project Intent:

Landlord proposes to construct (1) free standing, single story, commercial retail restaurant & MMJ Dispensary building as part of this application. The intent is to have a (2) suite, multi-lease commercial building with a drive thru component for the MMJ Dispensary tenant. The site development is to comply with Carson City, NV adopted Title 18 land use development requirements.

Please reference the submitted drawing exhibits accompanying this application. The proposed "Use" is compliant with Title 18 requirements for this parcel – General Commercial (Section 18.04.135). The building area & land coverage is compliant with Title 18 allowances. The proposed building height is compliant with Title 18 requirements. The required parking requirements are compliant.

Landscape percentage provided and planting materials proposed are also compliant with Title 18 requirements. Ancillary requirements such as delivery "loading" space(s), trash enclosure & snow area for plowing has been provided.

The proposed aesthetic design of the building is contemporary. Given the property's location at the northwest intersection of Hwy 580 and Hwy 395, the visibility will be enhanced from both roadways due to the elevated terrain of the property. The contemporary aesthetic will provide a higher level of design appeal than most commercial retail projects and this aspect of the project should be taken under consideration when the project is being reviewed.

The architectural quality of the proposed building enhances the curb appeal of the development and hopefully drives more traffic to the property. The proposed design's shape/form, material & color selections do blend in with the surrounding high desert landscape and the proposed covered outdoor patio and fireplace features will be an amenity for the restaurant tenant. The drive thru component has been located away from the primary street (Junction Drive) and placed behind the building thus providing a more visual pleasing appearance of the project from the primary public right-of-way.

The retail dispensary tenant complies with the Nevada State Tax Authorities requirements for addressing entry and egress separation from a retail outlet. The building will also have enhanced security accoutrements which will be compliant with the NSTA requirements.

The JADE brand / logo is comprised of various trapezoid shapes composed in a collage format. This brand/logo is incorporated into the building's exterior design, but in a non-descript manner. That being, the brand / logo occurs in a recessed wall plane at that tenant's entrance and exit location only. The recessed wall plane location helps to mitigate the overall appearance from the road / parking lot, while allowing end users familiar with the brand to identify the area of the building where that tenant is located.

**** Footnote to Required/Provided Parking:**

Title 18 lists required parking calculation of 10 parking stalls per 1,000 SF of Restaurant Use if the assigned building area is a "Fast Food" end user. Title 18 lists required parking calculation of 1 stall per 4 seats if the Restaurant Use is a "sit-down" restaurant.

Applicant has not yet derived a space plan for the restaurant use suite. It is intended to be a "sit-down" restaurant suite. Nonetheless, it is not yet determined how many seats it will hold. Roughly half the restaurant area will be dedicated to kitchen space / BOH space. $4,916 \text{ SF} / 2 = 2,458 \text{ SF}$. Of that area – placing tables and circulation space will equate into roughly 65 SF per 4 person table = 150 seats. $150 / 4 = 37.5$ (38 stalls). Rather than speculate on industry formula without a space plan, applicant will utilize 10 stalls / 1,000 SF of Gross Area which is a standard equation utilized in many jurisdictions throughout the U.S.A.

Applicant will address the existing Billboard Sign on subject property via a separate special use application.

Given the aforementioned, we believe the proposed development project is compliant with Title 18 and thus subject to approval.

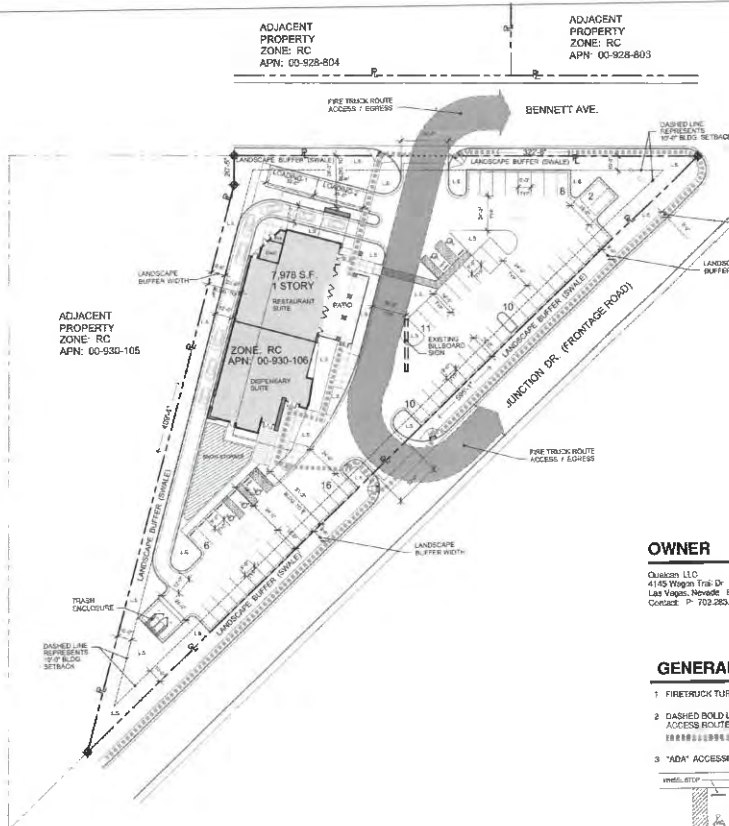
End of Project Summary.

Regards,

Todd Vedelago, AIA, NCARB, LEED AP BD+C

E: tvedelago@vpa-lv.com

W: www.vpa-lv.com



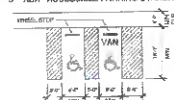
SITE PLAN
SCALE 1"=30'-0"

OWNER

Chalken, LLC
4115 Virgin Trail Dr
Las Vegas, Nevada 89118
Contact: P-702.283.2633 E: info@chalken.com

GENERAL NOTES

- FIRETRUCK TURNING RADIUS, TYP.
- DASHED BOLD LINE TYPE REPRESENTS "ADA" ACCESS ROUTE, TYP.
- "ADA" ACCESSIBLE PARKING STANDARD



SITE INFORMATION

ASSESSORS PARCEL NUMBER (APN)	00-930-106
SITE ADDRESS	5100 S. CARSON ST.
CURRENT ZONING	RC - COMMUNITY / REGIONAL COMMERCIAL
PROPOSED ZONING	RC
SITE AREA	41,531 ACRES 66,208 S.F.
SETBACKS FROM PROPERTY LINE:	
FRONT	0'-0"
SIDE (INT.)	0'-0"
SIDE (STREET)	0'-0"
REAR	0'-0"
BUILDING AREA	7,978 S.F.
PATIO AREA	1,196 S.F.
RESTAURANT TENANT SUITE (R.D.C. AREA)	3,324 S.F.
OUTDOOR PATIO AREA	1,196 S.F.
MMJ RETAIL DISPENSARY SUITE	2,578 S.F.
COMMON AREA - ANNUAL UTILITY ROOMS	276 S.F.
	9,170 S.F.
COVERAGE	12.08%
REQUIRED PARKING	
RESTAURANT TENANT SUITE	107,000 S.F. = 4,816 S.F. x 10 = 49
MMJ RETAIL DISPENSARY SUITE	3,324 S.F. = 3,324 S.F. x 3.33 = 14
TOTAL STALLS REQUIRED	63 STALLS
PARKING STALLS PROVIDED	63 STALLS
ACCESSIBLE STALLS REQUIRED	3 STALLS
ACCESSIBLE STALLS PROVIDED	5 STALLS (2 OF WHICH ARE VAN)
DRIVE THRU STACKING	222' 0" PROVIDED
LOADING SPACES REQUIRED	1
LOADING SPACES PROVIDED	2
LANDSCAPE AREA REQUIRED	13,942 S.F.
	20%
LANDSCAPE AREA PROVIDED:	
OFF SITE AREA & ON SITE AREA COMBINED	21,810 S.F.
	32.84%
OFF SITE AREA LANDSCAPED	19,224 S.F.
	29%

VICINITY MAP

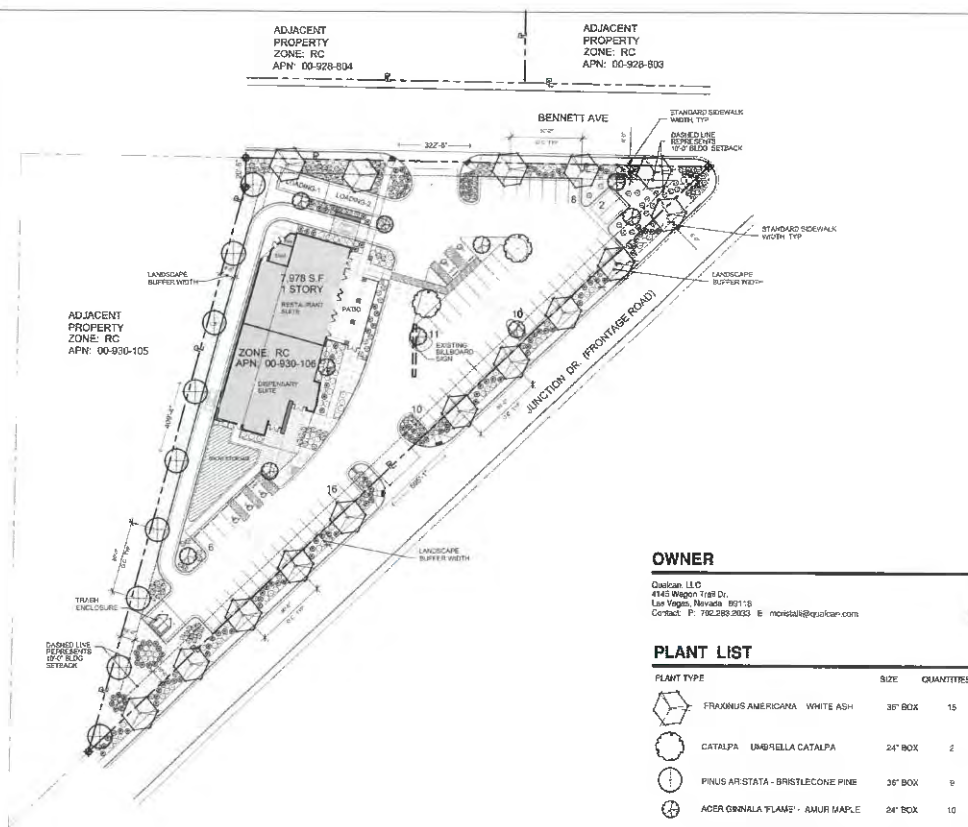


NORTH



JADE DISPENSARY, CARSON CITY, NV
5100 SOUTH CARSON STREET, 89101, CARSON CITY, NV
SITE PLAN
ARTIST/ARCHITECT: CHALKEN, LLC 1114 WAGON TRAIL DR LAS VEGAS, NV 89118

PROJECT: 2021
DATE: 04/16/22
SCALE: 1" = 30'
SHEET NO: A1



LANDSCAPE PLAN

SCALE 1"=30'-0"

OWNER

Qualcan, LLC
4145 Wagon Trail Dr.
Las Vegas, Nevada 89115
Contact: P: 702.255.2022 E: mrods@qualcan.com

PLANT LIST

PLANT TYPE	SIZE	QUANTITIES
FRAXINUS AMERICANA - WHITE ASH	36" BOX	15
CATALPA - UMBRELLA CATALPA	24" BOX	2
PINUS ARIZATA - BRISTLECONE PINE	36" BOX	9
ACER ORNATA 'FLAME' - AMUR MAPLE	24" BOX	10
GRASSY LEAVED SWEET FLAG	1 GAL	150
ACHILLEA MILLEFOLIUM - YOGURT YARROW	1 GAL	150
ACHILLEA - LITTLE MOONSHINE YARROW	1 GAL	150
LANDSCAPE AREA - GROUND	21,610 S.F.	

LANDSCAPE INFORMATION

ASSessor's PARCEL NUMBER (APN)	00-930-105
SITE ADDRESS	5160 S. CARSON ST.
CURRENT ZONING	RC - COMMUNITY / REGIONAL COMMERCIAL
PROPOSED ZONING	RC
SITE AREA	1.519 ACRES 66,205.7 S.F.
SETBACKS FROM PROPERTY LINE:	
FOOTNOTES 7 & 8 (TITLE 18)	FRONT: 0'-0"
PROVIDE 10'-0" SETBACK ACD.	SIDE (INT): 0'-0"
TO RESIDENTIAL	SIDE (STREET): 0'-0"
	REAR: 0'-0"
BUILDING AREA	7,978 S.F.
PATIO AREA	1,192 S.F.
RESTAURANT TENANT SUITE (BLDG. AREA)	3,724 S.F.
OUTDOOR PATIO AREA	1,192 S.F.
MAIL RETAIL DISPENSARY SUITE	5,976 S.F.
COMMON AREA - AUXILIARY UTILITY ROOMS	276 S.F.
	9,170 S.F.
COVERAGE	12.05%
LANDSCAPE AREA REQUIRED:	13,842 S.F.
	20%
LANDSCAPE AREA PROVIDED:	
OFF SITE AREA & ON SITE AREA COMBINED	21,610 S.F.
	32.94%
OFF SITE AREA LANDSCAPED	15,224 S.F.
	23%

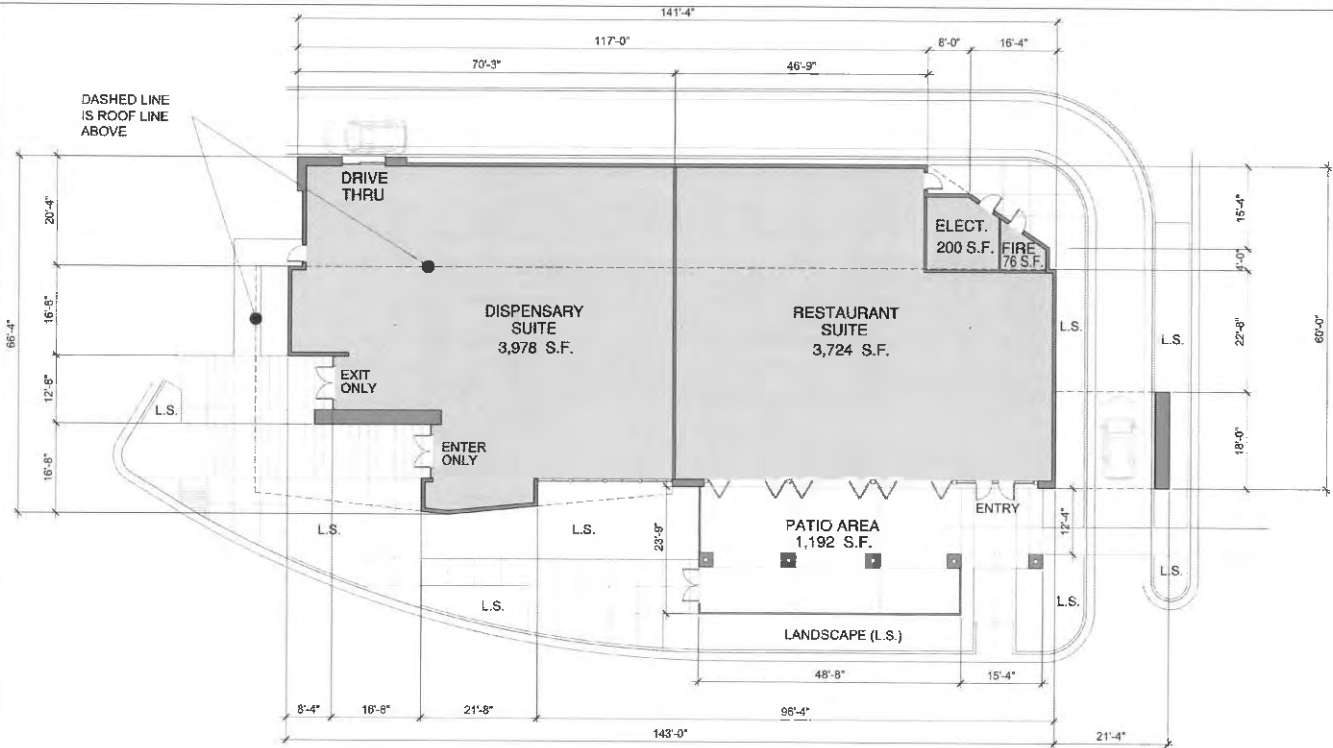
VICINITY MAP



NORTH



DASHED LINE
IS ROOF LINE
ABOVE



FLOOR PLAN

SCALE 1/8" = 1'-0"

BUILDING AREA PATIO AREA

- RESTAURANT TENANT SUITE (BLDG. AREA)
- OUTDOOR PATIO AREA
- MMJ RETAIL DISPENSARY SUITE
- COMMON AREA - ANCILLARY UTILITY ROOMS

7,978 S.F.
1,192 S.F.
3,724 S.F.
1,192 S.F.
3,978 S.F.
276 S.F.
9,170 S.F.

NORTH



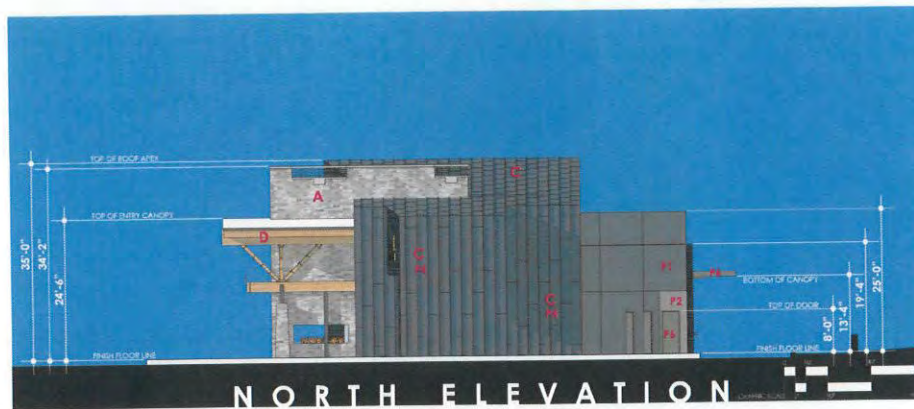
VIRILLAGIO PITCH
3351 Nevada, Las Vegas, NV
June 20
August 2018
100 000 000

JADE DISPENSARY CARSON CITY
5100 SOUTH CARSON STREET, 89701, CARSON CITY, NV
FLOOR PLAN
APPLICANT: QUALCAN, LLC, 4148 WAGON TRAIL DR, LAS VEGAS, NV 89121
CONTACT: MICHAEL PRINCE, 702.734.7474

PROJECT: 20211
DATE: 04/18/20
SCALE: 1/8" = 1'-0"

SHEET NO:

A3



PAINT LEGEND

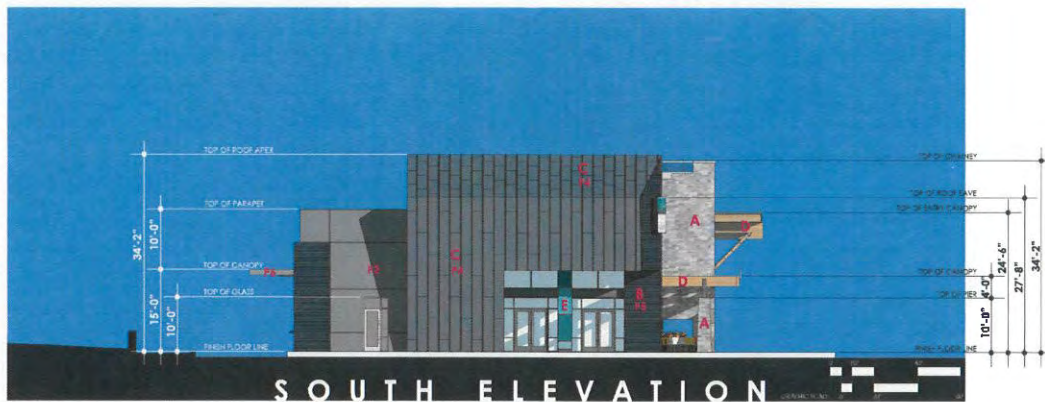
P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12
SW 707 ORIGINAL WHITE primer tinted	SW 707 ON THE ROCKS primer tinted	SW 9182 LET IT RAIN primer tinted	SW 6257 GREATER primer tinted	SW 6251 OUTRAGES primer tinted	SW 7129 JADE DRAGON primer tinted	SW 4395 ALUMINUM primer tinted	SW 4768 MAINTENANCE primer tinted	SW 6940 RECYCLE primer tinted	SW 4481 GREEN BAY primer tinted	SW 2810 SAGE GREEN primer tinted	SW 9676 KIDNEY primer tinted



MATERIALS

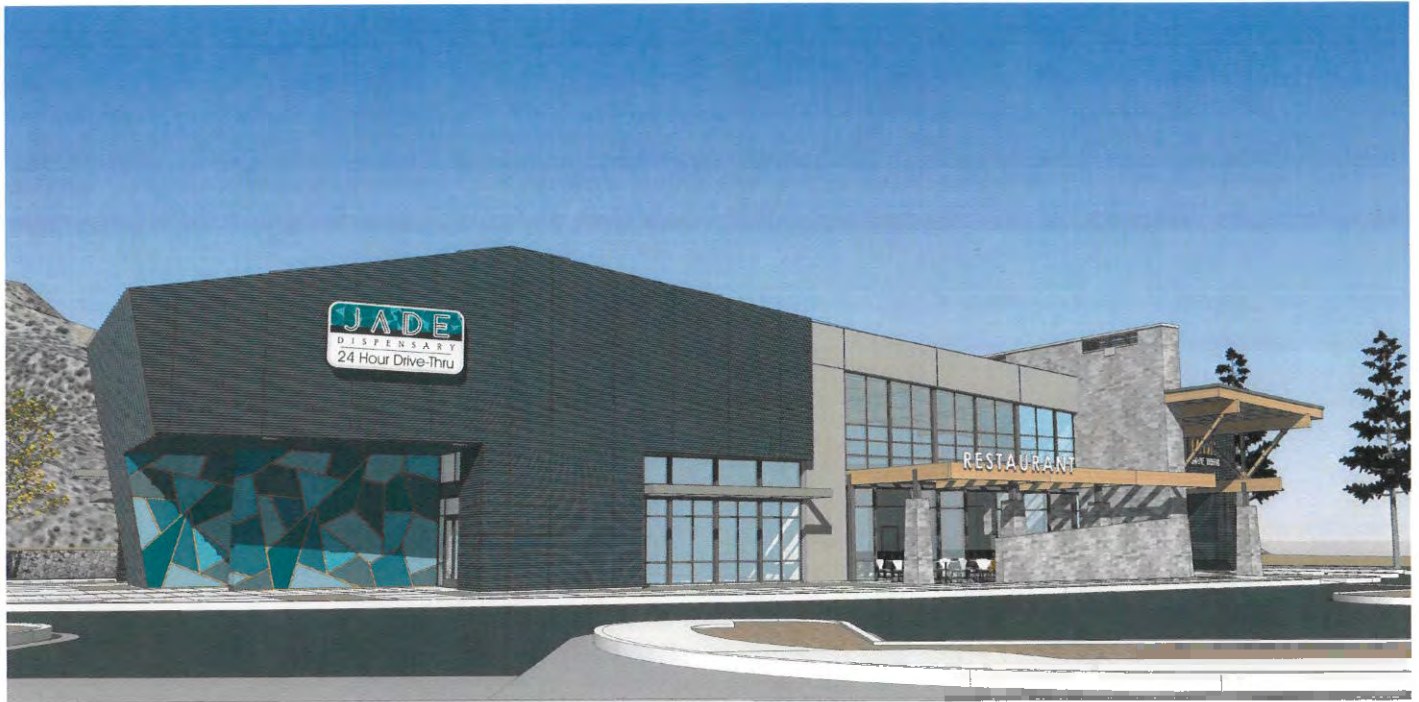


PAINT LEGEND





VIEW LOOKING NORTHWEST



VIEW LOOKING WEST



VIEW LOOKING SOUTHWEST

+VIRILAGO ARCH. SERVICES+
 3430 South Valley Boulevard, Suite 200
 Las Vegas, NV 89103
 Tel: 702.733.0000
 Fax: 702.733.0000
 www.virilago.com

JADE DISPENSARY CARSON CITY
 5100 SOUTH CARSON STREET, 89701, CARSON CITY, NV
PROJECT IMAGES
 APPLICANT: QUADAGEN, LLC - 1111 WAGON TRAIL DR. LAS VEGAS, NV 89111
 CONSULT: VIRILAGO ARCHITECTS, LLC
 SPECIAL USE PERMIT

PROJECT: 202111
 DATE: 04/18/2021
 SCALE: 1" = 8'-0"
 SHEET NO:

A8



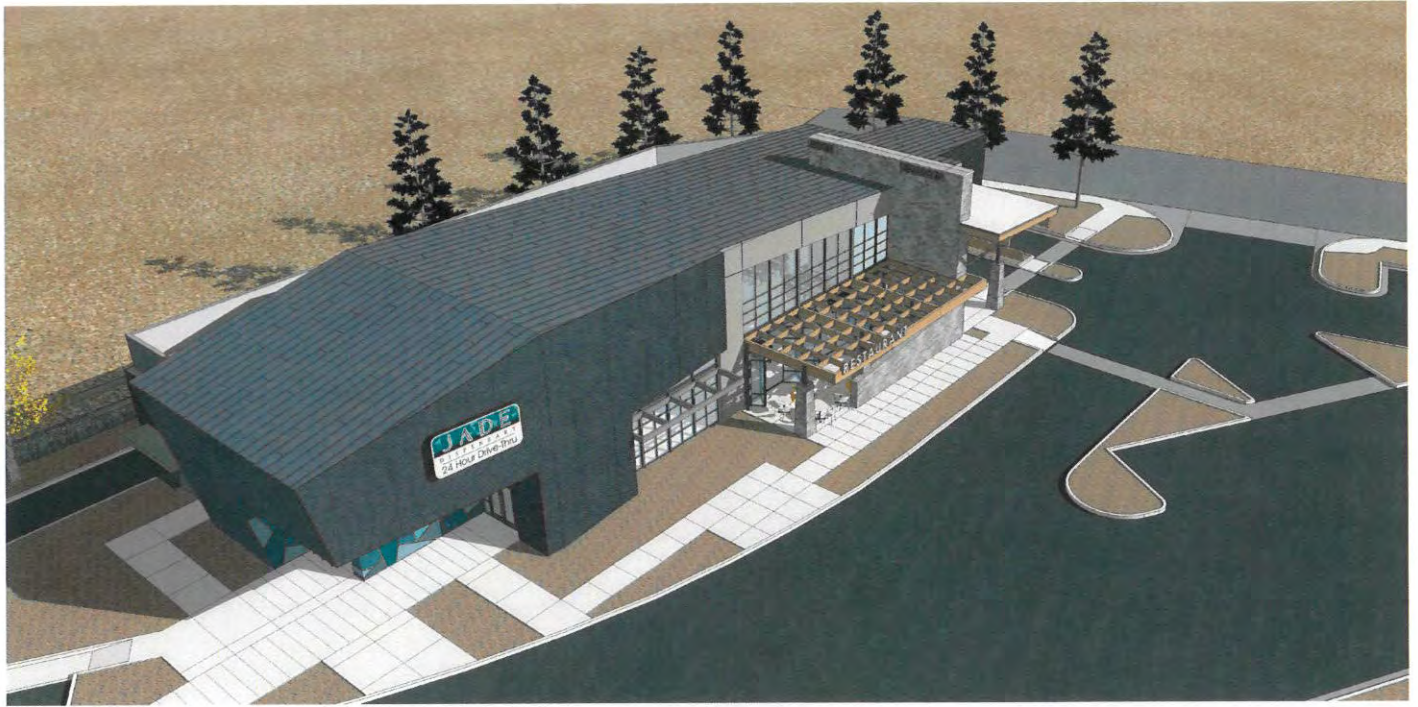
AERIAL VIEW LOOKING SOUTHWEST

+MELISSA PEDON
 2023
 1000 1000
 1000 1000
 1000 1000

JADE DISPENSARY, CARSON CITY
 5100 SOUTH CARSON STREET, 89701, CARSON CITY, NV
 PROJECT IMAGES
 APPLICANT: QUALCAN, LLC, 1145 WAGON TRAIL DR, LAS VEGAS, NV 89115
 CONTACT: MICHAEL KENDALL (702) 832-0022

PROJECT: 2023
 DATE: 04/18/21
 SCALE: 1" = 8'
 SHEET NO:

A10



AERIAL VIEW LOOKING NORTHWEST

VERLAGE ARCHITECTS
3331 Madison Avenue
Suite 210
Denver, CO 80202
Phone: 303.733.8888

JADE DISPENSARY CARSON CITY
5100 SOUTH CARSON STREET, 89701, CARSON CITY, NV
PROJECT IMAGES

PROJECT: 202
DATE: 04/15/
SCALE: 1"=1'-0"
SHEET NO: A1



AERIAL VIEW LOOKING NORTHEAST



DETAIL VIEW OF DRIVE-THRU LOOKING NORTH

+VIRILAGO DESIGN
 3331 MacArthur Blvd.
 Suite 200
 Irvine, CA 92614
 Tel: 949.451.1000

JADE DISPENSARY CARSON CITY, NV
 5100 SOUTH CARSON STREET, 89701, CARSON CITY, NV
 PROJECT IMAGES

PROJECT: 202
 DATE: 04/15/
 SCALE: 1" =
 SHEET NO.:
A1

Master Plan Policy Checklist

Special Use Permits & Major Project Reviews & Administrative Permits

PURPOSE

The purpose of a development checklist is to provide a list of questions that address whether a development proposal is in conformance with the goals and objectives of the 2006 Carson City Master Plan that are related to non-residential and multi-family residential development. This checklist is designed for developers, staff, and decision-makers and is intended to be used as a guide only.

Development Name: Jade Dispensary (Case # SUP-2022-0262)

Reviewed By: _____

Date of Review: _____

DEVELOPMENT CHECKLIST

The following five themes are those themes that appear in the Carson City Master Plan and which reflect the community's vision at a broad policy level. Each theme looks at how a proposed development can help achieve the goals of the Carson City Master Plan. A check mark indicates that the proposed development meets the applicable Master Plan policy. The Policy Number is indicated at the end of each policy statement summary. Refer to the Comprehensive Master Plan for complete policy language.

CHAPTER 3: A BALANCED LAND USE PATTERN



The Carson City Master Plan seeks to establish a balance of land uses within the community by providing employment opportunities, a diverse choice of housing, recreational opportunities, and retail services.

Is or does the proposed development:

- ☐ Meet the provisions of the Growth Management Ordinance (1.1d, Municipal Code 18.12)?
- ☒ Use sustainable building materials and construction techniques to promote water and energy conservation (1.1e, f)?
- ☐ Located in a priority infill development area (1.2a)?
- ☒ Provide pathway connections and easements consistent with the adopted Unified Pathways Master Plan and maintain access to adjacent public lands (1.4a)?

- ☐ Protect existing site features, as appropriate, including mature trees or other character-defining features (1.4c)?
- ☐ At adjacent county boundaries or adjacent to public lands, coordinated with the applicable agency with regards to compatibility, access and amenities (1.5a, b)?
- ☐ In identified Mixed-Use areas, promote mixed-use development patterns as appropriate for the surrounding context consistent with the land use descriptions of the applicable Mixed-Use designation, and meet the intent of the Mixed-Use Evaluation Criteria (2.1b, 2.2b, 2.3b, Land Use Districts, Appendix C)?
- ☒ Meet adopted standards (e.g. setbacks) for transitions between non-residential and residential zoning districts (2.1d)?
- ☐ Protect environmentally sensitive areas through proper setbacks, dedication, or other mechanisms (3.1b)?
- ☒ Sited outside the primary floodplain and away from geologic hazard areas or follows the required setbacks or other mitigation measures (3.3d, e)?
- ☒ Provide for levels of services (i.e. water, sewer, road improvements, sidewalks, etc.) consistent with the Land Use designation and adequate for the proposed development (Land Use table descriptions)?
- ☐ If located within an identified Specific Plan Area (SPA), meet the applicable policies of that SPA (Land Use Map, Chapter 8)?

CHAPTER 4: EQUITABLE DISTRIBUTION OF RECREATIONAL OPPORTUNITIES



The Carson City Master Plan seeks to continue providing a diverse range of park and recreational opportunities to include facilities and programming for all ages and varying interests to serve both existing and future neighborhoods.

Is or does the proposed development:

- ☐ Provide park facilities commensurate with the demand created and consistent with the City's adopted standards (4.1b)?
- ☐ Consistent with the Open Space Master Plan and Carson River Master Plan (4.3a)?

CHAPTER 5: ECONOMIC VITALITY



The Carson City Master Plan seeks to maintain its strong diversified economic base by promoting principles which focus on retaining and enhancing the strong employment base, include a broader range of retail services in targeted areas, and include the roles of technology, tourism, recreational amenities, and other economic strengths vital to a successful community.

Is or does the proposed development:



- ☐ Encourage a citywide housing mix consistent with the labor force and non-labor force populations (5.1j)
- ☐ Encourage the development of regional retail centers (5.2a)
- ☒ Encourage reuse or redevelopment of underused retail spaces (5.2b)?
- ☐ Support heritage tourism activities, particularly those associated with historic resources, cultural institutions and the State Capitol (5.4a)?
- ☐ Promote revitalization of the Downtown core (5.6a)?
- ☐ Incorporate additional housing in and around Downtown, including lofts, condominiums, duplexes, live-work units (5.6c)?

CHAPTER 6: LIVABLE NEIGHBORHOODS AND ACTIVITY CENTERS



The Carson City Master Plan seeks to promote safe, attractive and diverse neighborhoods, compact mixed-use activity centers, and a vibrant, pedestrian-friendly Downtown.

Is or does the proposed development:

- ☒ Use durable, long-lasting building materials (6.1a)?
- ☒ Promote variety and visual interest through the incorporation of varied building styles and colors, garage orientation and other features (6.1b)?
- ☒ Provide variety and visual interest through the incorporation of well-articulated building facades, clearly identified entrances and pedestrian connections, landscaping and other features consistent with the Development Standards (6.1c)?
- ☒ Provide appropriate height, density and setback transitions and connectivity to surrounding development to ensure compatibility with surrounding development for infill projects or adjacent to existing rural neighborhoods (6.2a, 9.3b 9.4a)?
- ☐ If located in an identified Mixed-Use Activity Center area, contain the appropriate mix, size and density of land uses consistent with the Mixed-Use district policies (7.1a, b)?
- ☐ If located Downtown:
 - ☐ Integrate an appropriate mix and density of uses (8.1a, e)?
 - ☐ Include buildings at the appropriate scale for the applicable Downtown Character Area (8.1b)?
 - ☐ Incorporate appropriate public spaces, plazas and other amenities (8.1d)?
- ☐ Incorporate a mix of housing models and densities appropriate for the project location and size (9.1a)?

CHAPTER 7: A CONNECTED CITY



The Carson City Master Plan seeks promote a sense of community by linking its many neighborhoods, employment areas, activity centers, parks, recreational

amenities and schools with an extensive system of interconnected roadways, multi-use pathways, bicycle facilities, and sidewalks.

Is or does the proposed development:

- ☐ Promote transit-supportive development patterns (e.g. mixed-use, pedestrian-oriented, higher density) along major travel corridors to facilitate future transit (11.2b)?
- ☐ Maintain and enhance roadway connections and networks consistent with the Transportation Master Plan (11.2c)?
- ☐ Provide appropriate pathways through the development and to surrounding lands, including parks and public lands, consistent with the Unified Pathways Master Plan (12.1a, c)?

ACKNOWLEDGMENT OF APPLICANT

I certify that the forgoing statements are true and correct to the best of my knowledge and belief. I agree to fully comply with all conditions as established by the Planning Commission. I am aware that this permit becomes null and void if the use is not initiated within one-year of the date of the Planning Commission's approval; and I understand that this permit may be revoked for violation of any of the conditions of approval. I further understand that approval of this application does not exempt me from all City code requirements.



Applicant's Signature



Print Name



Date

Carson City Planning Division
108 E. Proctor Street • Carson City NV 89701
Phone: (775) 887-2180 • E-mail: planning@carson.org

FOR OFFICE USE ONLY:

CCMC 18.02.080

SPECIAL USE PERMIT

**FEE*: \$2,450.00 MAJOR
\$2,200.00 MINOR (Residential
zoning districts)**

+ noticing fee

***Due after application is deemed complete by
staff**

**SUBMITTAL PACKET – 4 Complete Packets (1 Unbound
Original and 3 Copies) including:**

Application Form
Detailed Written Project Description
Site Plan
Building Elevation Drawings and Floor Plans
Special Use Permit Findings
Master Plan Policy Checklist
Applicant's Acknowledgment Statement
Documentation of Taxes Paid-to-Date
Project Impact Reports (Engineering)

CD or USB DRIVE with complete application in PDF

Application Received and Reviewed By:

**Submission Deadline: Planning Commission application
submission schedule.**

**Note: Submittals must be of sufficient clarity and detail for
all departments to adequately review the request. Additional
information may be required.**

FILE #

APPLICANT **PHONE #**
Qualcan LLC 702-960-7778

MAILING ADDRESS, CITY, STATE, ZIP
4145 Wagon Trail Ave. Las Vegas, NV 89118

EMAIL ADDRESS
mcristalli@qualcan.com

PROPERTY OWNER **PHONE #**
Craig E Zager Living Trust

MAILING ADDRESS, CITY, STATE, ZIP
PO Box 10051 Zephyr Cove, NV 89448

EMAIL ADDRESS
robertsonb@naialliance.com

APPLICANT AGENT/REPRESENTATIVE **PHONE #**
Michael Cristalli 702-283-2033

MAILING ADDRESS, CITY STATE, ZIP
4145 Wagon Trail Ave. Las Vegas, NV 89118

EMAIL ADDRESS
mcristalli@qualcan.com

Project's Assessor Parcel Number(s): **Street Address**
00-930-106 5100 S Carson St. Carson City, NV 89701

Project's Master Plan Designation **Project's Current Zoning** **Nearest Major Cross Street(s)**
COM GC General Commercial N Hwy 395 / Hwy 580

Please provide a brief description of your proposed project and/or proposed use below. Provide additional pages to describe your request in more detail.
Construct a single story, +/-9,170 SF commercial retail building with a mmj retail suite and a restaurant suite. A drive thru component for the mmj retail
tenant is included.

PROPERTY OWNER'S AFFIDAVIT

I, Craig E. Zager, being duly deposed, do hereby affirm that I am the record owner of the subject property, and that I have
knowledge of, and I agree to, the filing of this application.


Signature

PO Box 10051 Zephyr Cover, NV 89448
Address

04/28/2022
Date

Use additional page(s) if necessary for additional owners.

STATE OF NEVADA)
COUNTY)

On _____, 2_____, personally appeared before me, a notary public,
personally known (or proved) to me to be the person whose name is subscribed to the foregoing document and who acknowledged to me that he/she
executed the foregoing document.

Notary Public

NOTE: If your project is located within the Historic District or airport area, it may need to be scheduled before the Historic Resources Commission or the
Airport Authority in addition to being scheduled for review by the Planning Commission. Planning staff can help you make this determination.

**PLEASE SEE ATTACHED
CALIFORNIA**

☐ JURAT

☒ ACKNOWLEDGMENT

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of San Diego

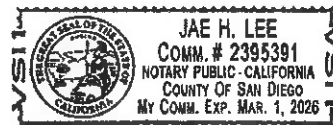
On APR 29, 2022 before me, JAE H. LEE, A Notary Public
(insert name and title of the officer)

personally appeared CRAIG E. ZAGER,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are
subscribed to the within instrument and acknowledged to me that he/she/they executed the same in
his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the
person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing
paragraph is true and correct.

WITNESS my hand and official seal.

Signature Lee, Jae H. (Seal)





May 31, 2022

Heather Ferris
Planning Manager
Carson City Planning Division
108 E. Proctor Street
Carson City, Nevada 89701

RE: Jade Dispensary (Case # SUP-2022-0262)

Dear Heather,

The purpose of this letter is to address comments presented in your May 23, 2022 email related to the Jade Dispensary Special Use Permit (SUP) request (case # SUP-2022-0262). Specifically, comment # 6 requests that the SUP findings included in the Carson City Municipal Code be addressed. These findings are listed below and addressed in **bold face** type.

Findings. Findings from a preponderance of evidence must indicate that the proposed use:

- a. Will be consistent with the objectives of the Master Plan elements.*

The restaurant and dispensary retail projects are consistent with the objectives of the Master Plan elements identified below by redeveloping a currently underdeveloped site at the corner of Junction Drive and Bennett Avenue. The retail development will encourage reuse of an underdeveloped site, and the proposed new building, parking, and enhanced landscaping will serve to further enhance the streetscape.

"Goal 1.1e – Sustainable Construction Techniques. Encourage the use of sustainable building materials and construction techniques, through programs such as the US Green Building Council's LEED (Leadership in Energy Efficiency and Design) program which provides voluntary national standards and certification for a range of new construction types to promote the development of energy efficient, sustainable buildings."

"Goal 5.2b – Encourage Reuse/Redevelopment of Underused Retail Spaces. Encourage the redevelopment and reuse of underutilized retail spaces along major gateway corridors (such as the vacant K-Mart building on North Carson Street, the Eagle Station and Southgate Shopping Centers on South Carson Street, and the Downtown central business district) with tenants that will serve the broader community..."

“Goal 6.1(a-c) – Promote High Quality Development. Carson City will project a positive image for the community by promoting a high standard of design and the use of durable long-lasting materials for all development and by ensuring that infill and redevelopment is of a scale and character that is compatible with and enhances the surrounding development context.”

“Goal 6.2a—Neighborhood Compatibility. Ensure that infill and redevelopment is of a scale and character that is compatible with and enhances the surrounding development context through the use of appropriate height and density transitions, similar setbacks and lot coverage, garage and loading area location and configuration, connectivity to surrounding development, and other neighborhood specific design considerations.”

- b. *Will not be detrimental to the use, peaceful enjoyment, economic value, or development of surrounding properties or the general neighborhood; and is compatible with and preserves the character and integrity of adjacent development and neighborhoods or includes improvements or modifications either on site or within the public right-of-way to mitigate development related to adverse impacts such as noise, vibrations, fumes, odors, dust, flare or physical activity.*

The retail building is proposed to replace an existing vacant building surrounded by vacant undeveloped land. The proposed landscaping and screening along the western boundary will be increased to shield the existing residence from lights, noise, or impacts from the drive-thru and building. Minimal impacts during construction are anticipated given surrounding uses and will only be temporary. The proposed landscape and new building improvements will provide additional amenities, which will provide a benefit to the immediate vicinity.

- c. *Will have little or no detrimental effect on vehicular or pedestrian traffic.*

According to the Institute of Transportation Engineers (ITE 11th Edition), the traffic for a Marijuana Dispensary and High Turnover Restaurant Establishment Use (ITE Code 882 and 932) for the proposed development (restaurant at 3,724 square feet and dispensary at 3,978 square feet) is 78 AM peak hour trips and 110 PM peak hour trips, with 1,240 average daily trips (ADT). This level of additional traffic is higher than the previous use that occupied the site and a Traffic Impact Analysis (TIA) was prepared in May 2022 and is included with the SUP application. With the recommendations suggested within the TIA, the existing street network that surrounds the property can adequately accommodate the anticipated traffic and is expected to have no significant negative impacts. Recommendations include:

- For the Carson City to require all mandatory signage and striping to be shown on the project's civil engineering drawings and that they conform to the Carson City and MUTCD standards.
- For the proposed driveways on Bennett Drive and Junction Drive be constructed per Carson City standards.
- For “Stop” signs (R1-1) be installed on the east and west legs of the intersection of Roland Street at Cochise Street.
- For the Developer to contribute 5.7% toward the construction of a traffic signal at Appion Way and S. Carson Street.

Sidewalks will be added to the project site as well, providing pedestrian walkways and connections to adjacent properties.

- d. *Will not overburden existing public services and facilities, including schools, police and fire protection, water, sanitary sewer, public roads, storm drainage and other public improvements.*

The retail development is proposed in an area already served by police and fire protection. Additionally, the building will be electronically securitized and controlled and monitored for safety. The site is served by existing water, sanitary sewer, public roads, and storm drainage facilities. There is no expected impact on the school district. The proposed use will not overburden existing public services and facilities.

- e. *Meets the definition of specific standards set forth elsewhere in Title 18 for such particular use and meets the purpose statement of that district.*

The new retail building adheres to building height, setback, parking, and landscape requirements set forth in Title 18. The project meets the purpose statement of the General Commercial zoning district (Section 18.04.135) by providing retail use that is compliant with the zone amendment designation proposed concurrently with this application.

- f. *Will not be detrimental to the public health, safety, convenience and welfare.*

The proposed development will not be detrimental to the public health, safety, convenience and welfare but rather will provide a new enhanced use on a parcel that currently includes a vacant building, which will be a benefit to the community. In addition, the project proposes extensive building and landscape improvements that will enhance the streetscape and overall aesthetics of the area as well as providing food and beverage amenities to the surrounding area.

- g. *Will not result in material damage or prejudice to other property in the vicinity, as a result of proposed mitigation measures.*

The proposed use will not result in material damage or prejudice to other properties in the vicinity, as a result of the proposed mitigation measures. The enhanced design for the new building and site improvements will enhance the visual character of the area.

I look forward to working with you and your team on the Jade Dispensary SUP. Please do not hesitate to contact me at mike@christynv.com or (775) 502-8552 ext. 107 with any questions, concerns, or if you should require any supplemental information. Thank you.

Sincerely,



Mike Railey
Planning Manager



May 31, 2022

Nancy Paulson
City Manager, Carson City
201 N. Carson Street, Suite 2
Carson City, NV 89701

Dear Ms. Paulson,

On behalf of Qualcan and Mystic LLC, we would like to submit the following text amendments for review and consideration. A special use permit application has been submitted for the corresponding project, to be named "Jade Carson City."

"1.20(1)(j) Notwithstanding any other provision of CCMC, not more than ~~two (2)~~ **three (3)** Medical Marijuana Dispensaries **or Marijuana Establishments** are allowed to operate at the same time in Carson City."

"1.20(2)(c) Drive-through service is ~~prohibited~~ allowed and shall meet all CCMC Land Use and Site Design standards."

Justification for Text Amendments

(1) That the proposed amendments are in substantial compliance with and support the goals and policies of the master plan

- The proposed amendment is in substantial compliance with and supports the goals and policies of the master plan. We believe this project will deliver much-needed development to the area, improvements to shared infrastructure, and a sizable tax dollar infusion to the city.

(2) That the proposed amendments will provide for land uses compatible with existing adjacent land uses and will not have detrimental impacts to other properties in the vicinity

- The proposed amendments will provide for land uses compatible with existing adjacent land uses and will not have detrimental impacts to other properties in the vicinity. Qualcan, through our representatives, will continue working with surrounding landowners to ensure this.

(3) That the proposed amendments will not negatively impact existing or planned public services or facilities and will not adversely impact the public health, safety, and welfare.

- The proposed amendments will not negatively impact existing or planned public services or facilities and will not adversely impact the public health, safety, and welfare. Through talks with law enforcement and other stakeholders we are confident this amendment and project will be



in alignment with the health and welfare interests of the public, as well as surrounding businesses and property owners.

We look forward to the opportunity to continue to work with and in Carson City and are always available to answer any questions and address any concerns. Thank you.

Regards,

Michael Cristalli, CEO
Qualcan
mcristalli@qualcan.com



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Traffic Impact Analysis for JADE DISPENSARY

Carson City, Nevada

May 2022

Prepared For:

**Vedelago Petsch Architects
3535 Executive Terminal Drive
Henderson, NV 89052**

Project No. 221098



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- A. Carson City TIA Scope**
- B. 15-Minute Volume Counts**
- C. Intersection Level of Service**
- D. Driveway Analysis**
- E. Left-Turn Storage Analysis**
- F. Pro-Rata Share Worksheet**

EXECUTIVE SUMMARY

The proposed commercial development is located on the southwest corner of Bennett Avenue and Junction Drive in Carson City, Nevada. This site is currently addressed as 5100 S. Carson Street. The proposed improvements to this site shall consist of a 3,724 square foot high turnover restaurant and a 3,978 square foot MMJ retail dispensary. The project is anticipated to generate the following vehicle trips during the AM and PM peak hours:

TRIP GENERATION SUMMARY							
ITE CODE	LAND USE DESCRIPTION		AM PEAK HOUR		PM PEAK HOUR		WEEKDAY
			ENTER	EXIT	ENTER	EXIT	
882	Marijuana Dispensary	3,978 Sq. Ft.	22	20	38	38	840
932	High Turnover Restaurant	3,724 Sq. Ft.	20	16	21	13	400
	Total		42	36	59	51	1,240

To offset traffic impacts that are anticipated with the completion of the project, the following recommendations have been made:

- *For the Carson City to require all mandatory signage and striping to be shown on the project's civil engineering drawings and that they conform to the Carson City and MUTCD standards.*
- *For the proposed driveways on Bennett Drive and Junction Drive be constructed per Carson City standards.*
- *For "Stop" signs (R1-1) be installed on the east and west legs of the intersection of Roland Street at Cochise Street.*
- *For the Developer to contribute 5.7% toward the construction of a traffic signal at Appion Way and S. Carson Street.*

A. SITE AND STUDY AREA BOUNDARIES

The proposed commercial development is located on the southwest corner of Bennett Avenue and Junction Drive in Carson City, Nevada. This site is currently addressed as 5100 S. Carson Street. Refer to Figure 1 for the vicinity map.

In discussions with representatives from Carson City, it was decided that this report would analyze the following intersections:

Appion Way at South Carson Street
Appion Way at Cochise Street
Cochise Street at Roland Street
Clearview Drive at Curry Street

The analysis shall include level of service, left-turn storage, and driveway analysis. Refer to Appendix A for the Carson City traffic impact analysis scope.

B. EXISTING AND PROPOSED USES OF THE SITE

The proposed project is to be located one parcel identified by the assessor's parcel number (A.P.N.) 00-930-106. Currently this location consists of a vacant commercial building.

The proposed improvements to this site shall consist of a 3,724 square foot high turnover restaurant and a 3,978 square foot MMJ retail dispensary. The project site plan is enclosed with this report. The project is anticipated to be completed in one phase without future phases.

C. EXISTING AND PROPOSED USES IN THE VICINITY OF THE SITE

East of the project site is Junction Drive and S. Carson Street and adjacent to these roadways are vacant parcels.

North of the project site is Bennett Avenue and adjacent to this roadway are vacant parcels.

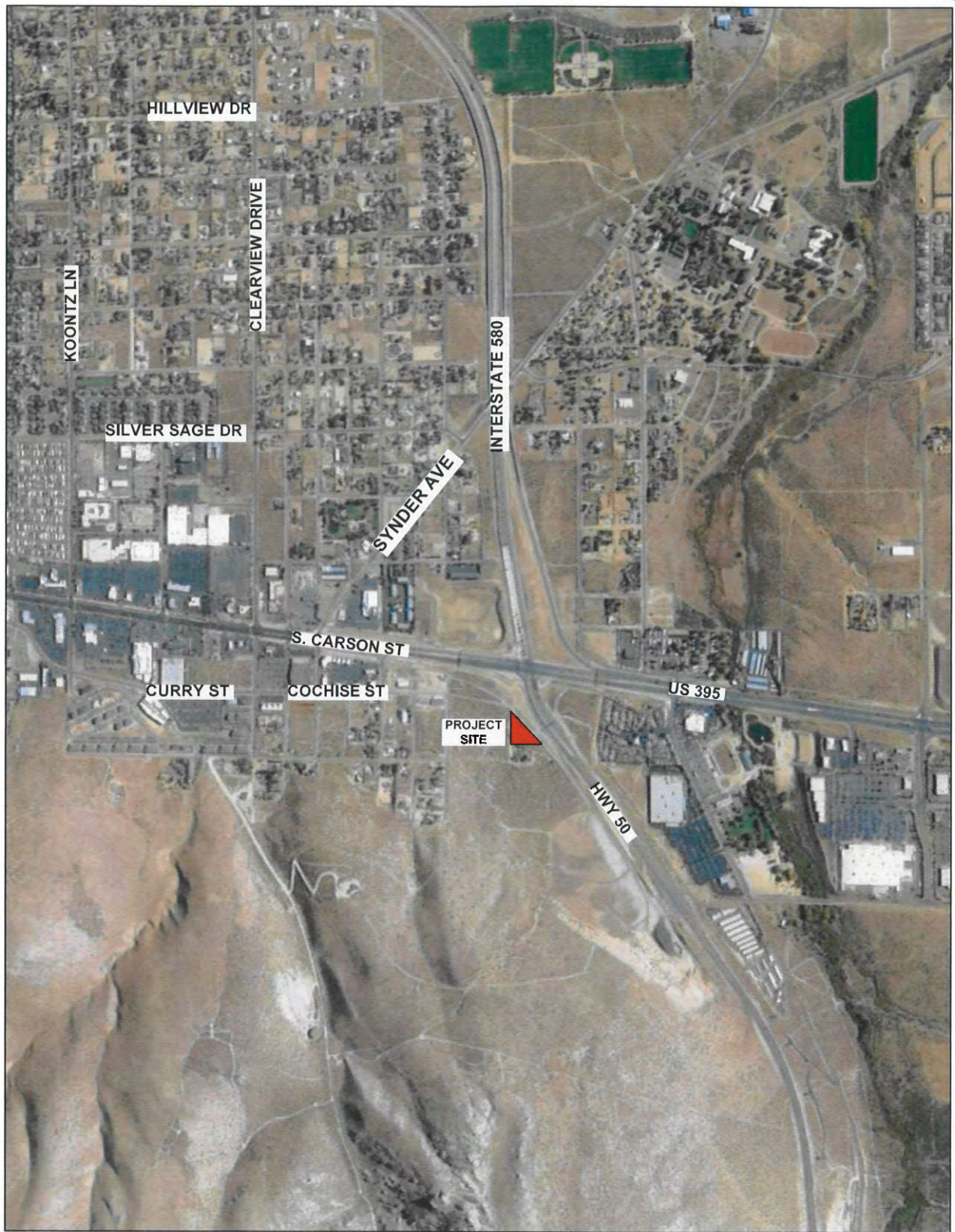
South of the project site is Highway 50 and adjacent to this roadway are vacant parcels.

West of the project site is a single family residence and a vacant parcel.

D. EXISTING ROADWAYS AND INTERSECTIONS

Appion Way

This east-west roadway consists of one lane in each direction. The speed limit is 25 miles per hour and on-street parking is permitted. Between Cochise Street and S. Carson Street this



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roadway is fully developed with pavement, curb, gutter, and sidewalk. West of Cochise Street this roadway is partially developed with pavement only.

South Carson Street

This north-south roadway consists of three lanes in each direction separated by a raised median island. The speed limit is 45 miles per hour and on-street parking is not permitted. The roadway is fully developed with pavement, curb, and gutter. The east side of the roadway includes an attached sidewalk and the west side of the roadway consists of a detached multi-use trail.

Clearview Drive

East of Cochise Street/Curry Street this roadway consists of one lane in each direction separated by a two way left turn lane. West of Cochise Street/Curry Street this roadway consists of one lane in each direction. The speed limit is 25 miles per hour and on-street parking is permitted west of Cochise Street/Curry Street. The roadway is fully developed with pavement, curb, and gutter from S. Carson Street to Cochise Street/Curry Street and generally west of the Cochise Street/Curry Street. Sidewalk is present along the roadway except for a portion on the north side of Clearview Drive east of Cochise Street/Curry Street.

Cochise Street/Curry Street

This north-south roadway is designated Cochise Street south of Clearview Drive and Curry Street north of Clearview Drive. North of Clearview Drive, this roadway consists of one travel lane and one bicycle lane in each direction separated by a two way left turn lane. South of Clearview Drive this roadway consists of one lane in each direction. The speed limit is 25 miles per hour and on-street parking is permitted south of Clearview Drive. North of Overland Street this roadway consists of pavement, curb, gutter and sidewalk. South of Overland Street to Roland Street, this roadway is partially developed with pavement and only curb, gutter, and sidewalk on the east side of the street. South of Roland Street, this roadway is partially developed with pavement only.

Roland Street

This east-west roadway consists of one lane in each direction. The speed limit is 25 miles per hour and on-street parking is permitted. This roadway is partially developed with pavement only.

Appion Way at South Carson Street

This three leg intersection is currently stop controlled on the west leg. The north leg consists of three through lanes and one exclusive right turn lane. The south leg consists of one exclusive left turn lane and three through lanes. The west leg consists of one exclusive right turn lane.

Appion Way at Cochise Street

This four leg intersection is currently stop controlled on the north and south legs. All four legs consist of a combined left turn/through/right turn lane.

Cochise Street at Roland Street

This four leg intersection currently does not have posted traffic control signage. All four legs consist of a combined left turn/through/right turn lane.

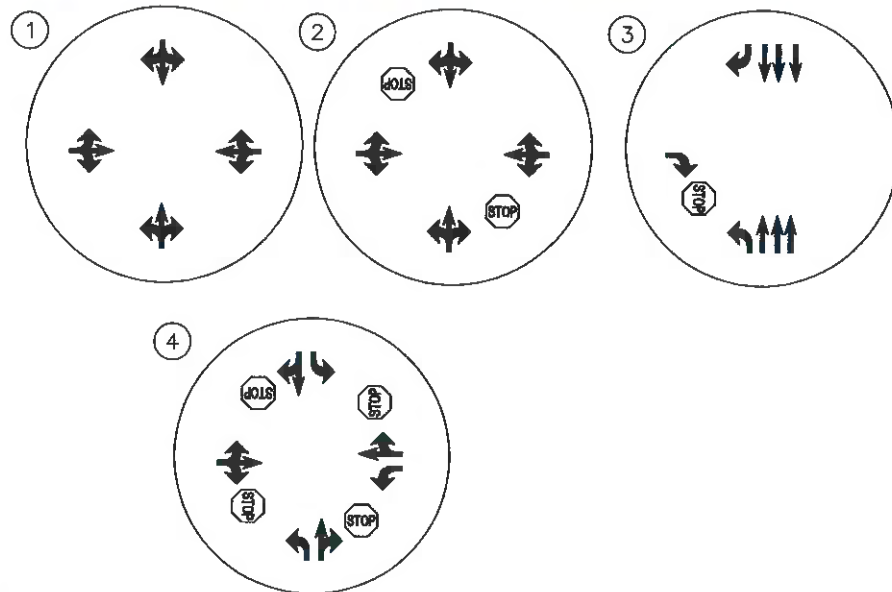
Clearview Drive at Curry Street

This four leg intersection currently is stop controlled on all four legs. The east, north, and south legs consists of one exclusive left turn lane and a combined through/right turn lane. The west leg consists of a combined left turn/through/right turn lane.

Refer to Figure 2 for existing lane configurations.

E. TRIP GENERATION RATES

Trip generation rates for the proposed development were obtained from the Institute of Transportation Engineers publication entitled *Trip Generation* (11th Edition). The independent variable used for the trip generation equations was the square footage for the building. The trip generation calculations are as follows:



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EXISTING INTERSECTION
CONFIGURATIONS
FIGURE 2

JADE DISPENSARY

TRIP GENERATION ITE CODE 882 MARIJUANA DISPENSARY 3,978 SQUARE FEET	
AM PEAK HOUR	
Average Rate = 10.54 Trips per 1,000 Square Feet T = 10.54 (3.978) T = 41.92 or 42 Trips	
<u>52% Entering</u> 22 Trips	<u>48% Exiting</u> 20 Trips
PM PEAK HOUR	
Average Rate = 18.93 Trips per 1,000 Square Feet T = 18.93 (3.978) T = 75.30 or 76 Trips	
<u>50% Entering</u> 38 Trips	<u>50% Exiting</u> 38 Trips
WEEKDAY	
Average Rate = 211.12 Trips per 1,000 Square Feet T = 211.12 (3.978) T = 839.83 or 840 Trips	

TRIP GENERATION ITE CODE 932 HIGH TURNOVER (SIT-DOWN) RESTAURANT 3,724 SQUARE FEET	
AM PEAK HOUR	
Average Rate = 9.57 Trips per 1,000 Square Feet T = 9.57 (3.724) T = 35.63 or 36 Trips	
<u>55% Entering</u> 20 Trips	<u>45% Exiting</u> 16 Trips
PM PEAK HOUR	
Average Rate = 9.05 Trips per 1,000 Square Feet T = 9.05 (3.724) T = 33.70 or 34 Trips	
<u>61% Entering</u> 21 Trips	<u>39% Exiting</u> 13 Trips
WEEKDAY	
Average Rate = 107.20 Trips per 1,000 Square Feet T = 107.20 (3.724) T = 399.21 or 400 Trips	

TRIP GENERATION SUMMARY							
ITE CODE	LAND USE DESCRIPTION		AM PEAK HOUR		PM PEAK HOUR		WEEKDAY
			ENTER	EXIT	ENTER	EXIT	
882	Marijuana Dispensary	3,978 Sq. Ft.	22	20	38	38	840
932	High Turnover Restaurant	3,724 Sq. Ft.	20	16	21	13	400
	Total		42	36	59	51	1,240

F. TRIP DISTRIBUTION AND TRIP ASSIGNMENTS

The trip distribution was based upon site location, existing traffic patterns, and the roadway system within the study area. Refer to Figure 3 for trip distribution.

Trip assignments were calculated using the trip distribution and trip generation information. Refer to Figure 4 for the total trip assignment.

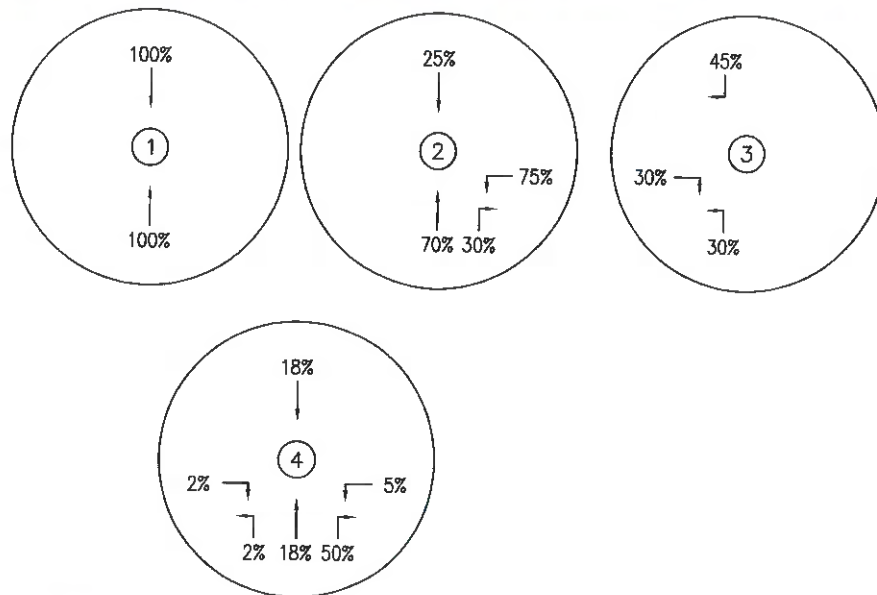
G. EXISTING AND PROJECTED TRAFFIC VOLUMES

Traffic volumes at each subject intersection were recorded on the following dates:

Appion Way at S. Carson Street	Tuesday, May 10, 2022
Appion Way at Cochise Street	Tuesday, May 10, 2022
Cochise Street at Roland Street	Wednesday, May 11, 2022
Clearview Drive at Curry Street	Wednesday, May 11, 2022

The volumes were recorded in 15-minute intervals between the hours of 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. The 15-minute volume counts are contained in Appendix B. Refer to Figure 5 for observed existing volumes. Projected trips generated by adjacent approved projects were added to the existing volumes. The project trips from *Appion Way Commercial Center TIA and the Clearview Ridge TIA*, both prepared by Solaegui Engineers, LTD, were added to the observed existing volumes. Refer to Figure 6 for the existing volumes with background studies volumes. The anticipated project trips were then combined with the existing volumes. Refer to Figure 7 for the existing with project volumes.

As required by Carson City, the study intersections were analyzed in regards to the long-term 2050 transportation model. The growth rate was calculated based on the reviewing the transportation model's average daily volumes (ADT) for 2020 and 2050. Utilizing the calculated ADT volumes in these models a growth rate was calculated. The growth rate was calculated separate for S. Carson Street and the study area west of S. Carson Street. A separate growth rate was used due to the large difference in current ADT on S. Carson Street in relation to the other study roadways. The mainline volumes on S. Carson Street have a calculated 30 year growth rate is 0.5%. The calculated 30 growth rate for the study area west of S. Carson Street was calculated to be 2.7%. The existing intersection volumes were

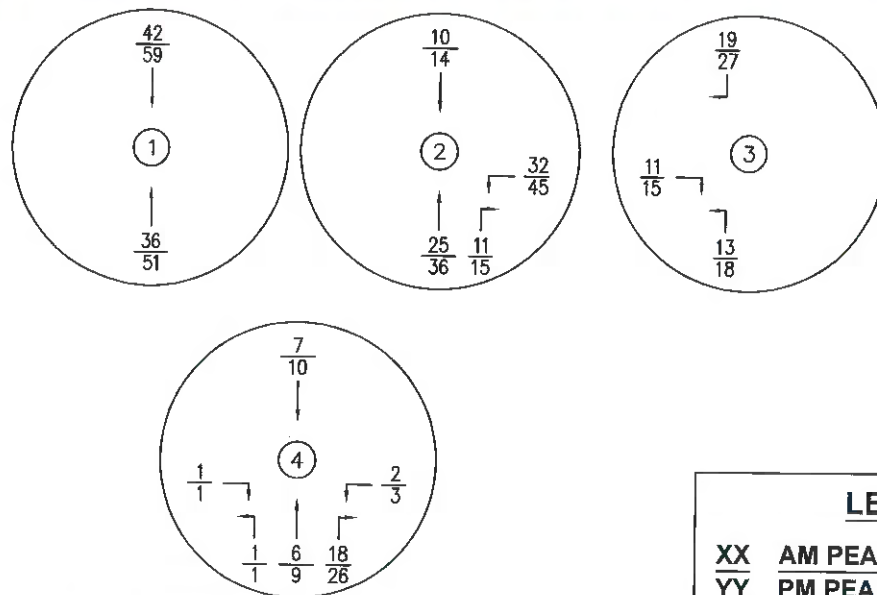


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TRIP
DISTRIBUTION
FIGURE 3

JADE DISPENSARY



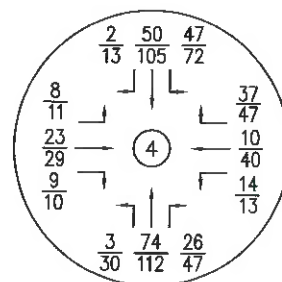
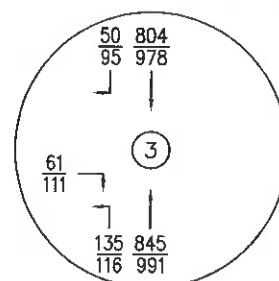
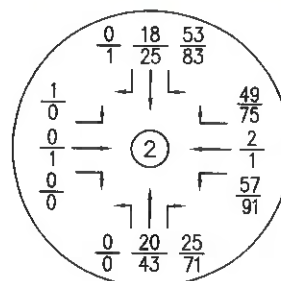
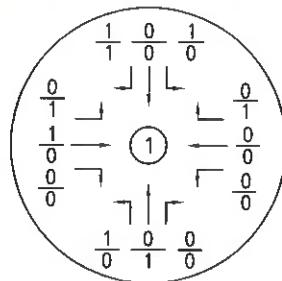
LEGEND	
XX	AM PEAK HOUR VOLUMES
YY	PM PEAK HOUR VOLUMES

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TRIP
ASSIGNMENT
FIGURE 4

JADE DISPENSARY



LEGEND

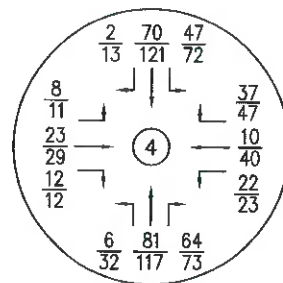
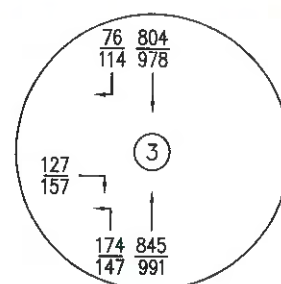
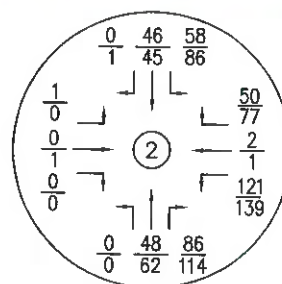
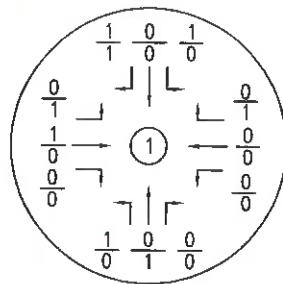
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EXISTING
VOLUMES
FIGURE 5

JADE DISPENSARY



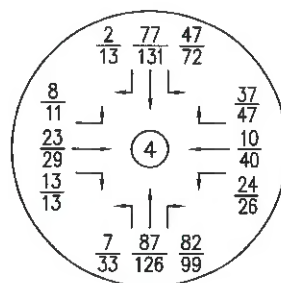
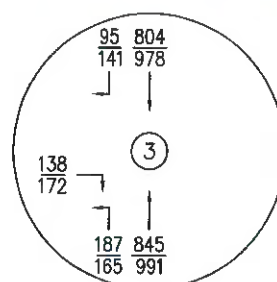
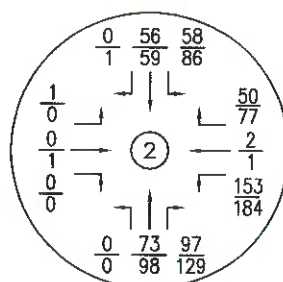
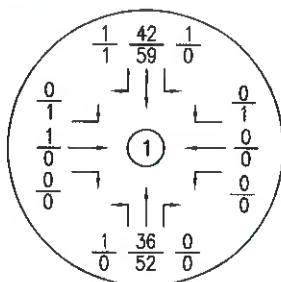
LEGEND	
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EXISTING VOLUMES
W/ BKGRD STUDIES
FIGURE 6

JADE DISPENSARY



LEGEND

XX AM PEAK HOUR VOLUMES
YY PM PEAK HOUR VOLUMES

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EXISTING VOLUMES
w/ PROJECT
FIGURE 7

JADE DISPENSARY

multiplied by the growth rate to arrive at the 2050 background volumes. Refer to Figure 8 for the 2050 background volumes. The anticipated project trips were combined with the background volumes. Refer to Figure 9 for 2050 background with project volumes.

H. INTERSECTION ANALYSIS

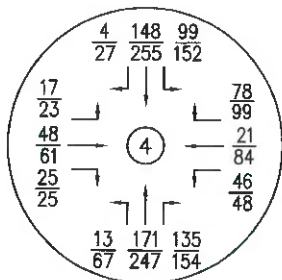
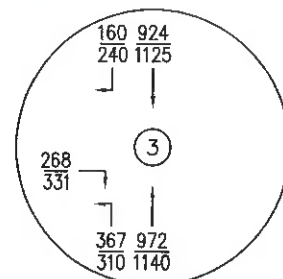
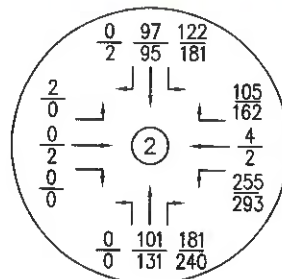
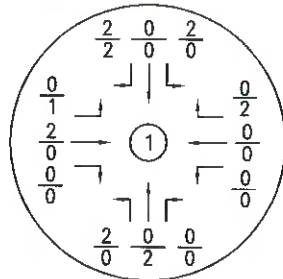
Based upon the preceding information, a level of service analysis was performed for each intersection. Techniques presented in the Transportation Research Board publication entitled *Highway Capacity Manual – Seventh Edition* were utilized for this analysis. The analysis worksheets are provided in Appendix C.

UNSIGNALIZED INTERSECTION APPION WAY AT S. CARSON STREET					
		EXISTING VOLUMES		EXISTING VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
EASTBOUND RIGHT	Level of Service	C	C	C	C
	Average Delay (Sec)	15.9	19.3	16.3	20.3
NORTHBOUND LEFT	Level of Service	A	A	A	A
	Average Delay (Sec)	3.9	3.6	4.6	4.6

UNSIGNALIZED INTERSECTION APPION WAY AT S. CARSON STREET					
		2050 BACKGROUND VOLUMES		2050 BKGRD VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
EASTBOUND RIGHT	Level of Service	D	F	D	F
	Average Delay (Sec)	31.2	72.5	33.3	83.4
NORTHBOUND LEFT	Level of Service	F	F	F	F
	Average Delay (Sec)	58.6	61.2	69.8	77.6

Appion Way at S. Carson Street

The conflicting and stop controlled minor movements at this intersection currently experiences acceptable delays and level of service during the AM and PM peak hours. Due to the projected volumes increase due to the background growth rate, movements at this intersection are anticipated to experience unacceptable delays in the 2050 background and 2050 background with project scenarios.



LEGEND

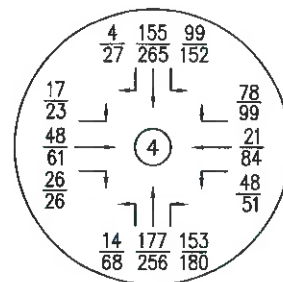
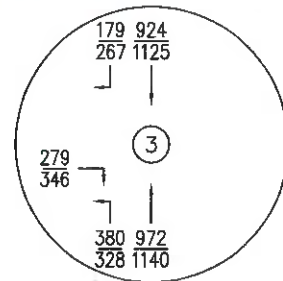
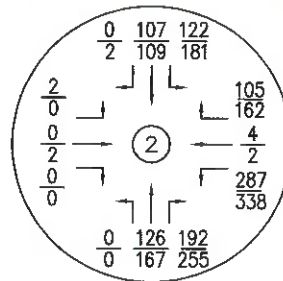
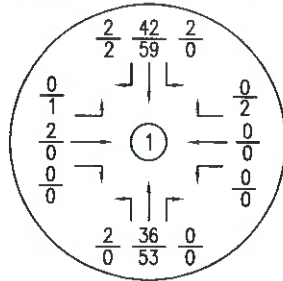
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2050 BACKGROUND
VOLUMES
FIGURE 8

JADE DISPENSARY



LEGEND	
XX	AM PEAK HOUR VOLUMES
YY	PM PEAK HOUR VOLUMES

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UNSIGNALIZED INTERSECTION APPION WAY AT COCHISE STREET					
		EXISTING VOLUMES		EXISTING VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
EASTBOUND LEFT	Level of Service	A	A	A	A
	Average Delay (Sec)	7.3	0.0	7.3	0.0
WESTBOUND LEFT	Level of Service	A	A	A	A
	Average Delay (Sec)	5.4	5.1	5.8	5.6
NORTHBOUND	Level of Service	B	B	B	B
	Average Delay (Sec)	10.6	11.5	12.1	14.6
SOUTHBOUND	Level of Service	B	C	C	D
	Average Delay (Sec)	14.3	18.0	17.3	28.1

UNSIGNALIZED INTERSECTION APPION WAY AT COCHISE STREET					
		2050 BACKGROUND VOLUMES		2050 BKGRD VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
EASTBOUND LEFT	Level of Service	A	A	A	A
	Average Delay (Sec)	7.5	0.0	7.5	0.0
WESTBOUND LEFT	Level of Service	A	A	A	A
	Average Delay (Sec)	5.8	5.7	6.1	6.0
NORTHBOUND	Level of Service	C	E	D	F
	Average Delay (Sec)	20.1	48.2	31.9	163.0
SOUTHBOUND	Level of Service	F	F	F	F
	Average Delay (Sec)	191.8	1,140.0	447.4	35,182.0

Appion Way at Cochise Street

The conflicting and stop controlled minor movements at this intersection currently experiences acceptable delays and level of service during the AM and PM peak hours. Due to the projected volumes increase due to the background growth rate, movements at this intersection are anticipated to experience unacceptable delays in the 2050 background and 2050 background with project scenarios.

UNSIGNALIZED INTERSECTION COCHISE STREET AT ROLAND STREET					
		EXISTING VOLUMES		EXISTING VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
EASTBOUND	Level of Service	-	-	B	B
	Average Delay (Sec)	-	-	10.6	10.9
WESTBOUND	Level of Service	-	-	-	A
	Average Delay (Sec)	-	-	-	9.1
NORTHBOUND LEFT	Level of Service	-	-	A	A
	Average Delay (Sec)	-	-	0.2	0.0
SOUTHBOUND LEFT	Level of Service	-	-	A	A
	Average Delay (Sec)	-	-	0.2	0.0

UNSIGNALIZED INTERSECTION COCHISE STREET AT ROLAND STREET					
		2050 BACKGROUND VOLUMES		2050 BKGRD VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
EASTBOUND	Level of Service	A	A	B	B
	Average Delay (Sec)	9.2	8.6	10.7	11.0
WESTBOUND	Level of Service	-	A	-	A
	Average Delay (Sec)	-	8.4	-	9.1
NORTHBOUND LEFT	Level of Service	A	A	A	A
	Average Delay (Sec)	7.2	0.0	0.4	0.0
SOUTHBOUND LEFT	Level of Service	A	A	A	A
	Average Delay (Sec)	3.6	0.0	0.4	0.0

Cochise Street at Roland Street

The approach legs at this intersection are currently not controlled, as such a delay analysis of the existing intersection operations could not be performed. Per the TIA scope, a warrant analysis for stop control was analyzed. The analysis was based upon the criteria presented in section 2B.04, Right of Way at Intersections, as published in the *Manual of Uniform Traffic Control Devices*. This section has three criteria to establish intersection control for three or more leg intersections. The recommended criteria is as follows:

1. The combined volumes for all modes of transportation be above 2,000 units per day.
2. The ability of the road user to see conflicting traffic on an approach in order to stop or yield in compliance with normal rules of the road.
3. The number of recorded accidents indicate that five or more accidents are a result of failure to yield the right of way over a three year period.

Applying this criteria, the intersection is not anticipated to experience over 2,000 units per day utilizing the intersection upon completion of the project and there are no recorded accidents at this intersection. The sight distance to see traffic on an opposing approach is restricted for the north and west legs due to an existing building on the northwest corner of the intersection. With the increase in through volumes on Cochise Street, it would be recommended that the east and west legs of the intersection be signed with a stop sign to control these approaches. The level of service analysis assumed stop control for the east and west legs.

The conflicting and stop controlled minor movements at this intersection currently experiences acceptable delays and level of service during the AM and PM peak hours. These acceptable delays are anticipated to continue in the 2050 year scenarios.

UNSIGNALIZED INTERSECTION CLEARVIEW DRIVE AT CURRY STREET					
		EXISTING VOLUMES		EXISTING VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
EASTBOUND	Level of Service	A	A	A	A
	Average Delay (Sec)	8.7	9.2	8.8	9.4
WESTBOUND	Level of Service	A	A	A	A
	Average Delay (Sec)	8.2	8.9	8.3	9.1
NORTHBOUND	Level of Service	A	A	A	A
	Average Delay (Sec)	8.8	9.4	8.1	9.9
SOUTHBOUND	Level of Service	A	A	A	A
	Average Delay (Sec)	8.5	9.2	8.7	9.4
INTERSECTION	Level of Service	A	A	A	A
	Average Delay (Sec)	8.6	9.2	8.8	9.5

UN SIGNALIZED INTERSECTION CLEARVIEW DRIVE AT CURRY STREET					
		2050 BACKGROUND VOLUMES		2050 BKGRD VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
EASTBOUND	Level of Service	B	B	B	B
	Average Delay (Sec)	11.0	12.8	11.2	13.1
WESTBOUND	Level of Service	B	B	B	B
	Average Delay (Sec)	10.3	13.4	10.5	13.7
NORTHBOUND	Level of Service	B	C	C	D
	Average Delay (Sec)	15.0	22.8	16.4	28.1
SOUTHBOUND	Level of Service	B	C	B	C
	Average Delay (Sec)	11.0	15.4	11.3	16.3
INTERSECTION	Level of Service	B	C	B	C
	Average Delay (Sec)	12.5	17.6	13.2	20.1

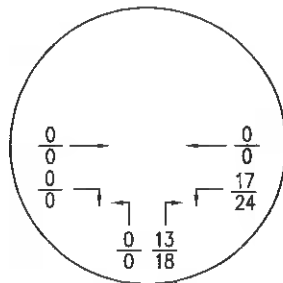
Clearview Drive at Curry Street

This intersection currently experiences acceptable delays during the AM and PM peak hours in the existing and the 2050 year scenarios.

I. DRIVEWAY ANALYSIS

The proposed project site shall have access to the local roadway network via one driveway on Bennett Avenue and one driveway on Junction Drive. The driveway on Bennett Avenue is located approximately 145 feet west of the intersection of Junction Drive at Bennett Avenue. This driveway shall allow full ingressing and egressing movements. The driveway on Junction Drive is located approximately 240 feet south of Bennett Drive. This driveway shall allow full ingressing and egressing movements. Both roadways are classified as local roadways and per the Carson City code requirements (Table 12.12), the minimum centerline driveway spacing between driveways is 50 feet. The minimum intersection commercial driveway distance from an intersection corner is 85 feet for a stop controlled sign condition as per Carson City code requirements (Table 12.13). As illustrated in the site plan the driveways meet the current spacing requirements.

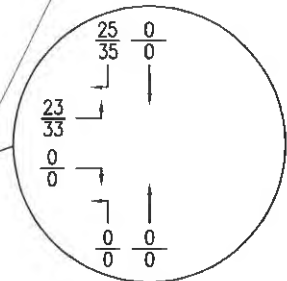
A level of service analysis was performed for each driveway intersection. Refer to Figure 10 for the driveway volumes. Techniques presented in the Transportation Research Board publication entitled *Highway Capacity Manual – Seventh Edition* were utilized for this analysis. Refer to Appendix D for the analysis worksheets. The results of the analysis is as follows:



BENNETT AVENUE

PROJECT SITE

JUNCTION DRIVE



LEGEND

XX AM PEAK HOUR VOLUMES
YY PM PEAK HOUR VOLUMES

T:\CAD\221098\DRAWINGS\TRAFFIC\221098-TRAFFIC.DWG



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DRIVEWAY
VOLUMES
FIGURE 10

JADE DISPENSARY

UNSIGNALIZED INTERSECTION DRIVEWAY ON BENNETT AVENUE			
		EXISTING VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK
WESTBOUND LEFT	Level of Service	A	A
	Average Delay (Sec)	7.3	7.3
NORTHBOUND	Level of Service	A	A
	Average Delay (Sec)	8.4	8.4

UNSIGNALIZED INTERSECTION DRIVEWAY ON JUNCTION DRIVE			
		EXISTING VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK
EASTBOUND	Level of Service	A	A
	Average Delay (Sec)	8.7	8.8
NORTHBOUND LEFT	Level of Service	A	A
	Average Delay (Sec)	7.3	7.3

J. LEFT-TURN STORAGE ANALYSIS

As required by Carson City, the left-turn storage bays at the study intersections and the driveways were analyzed for storage length requirements. The left turn analysis was based on a two-minute storage for unsignalized intersections. Refer to Appendix E for analysis worksheets. The results are as follows:

LEFT TURN STORAGE ANALYSIS			
	REQUIRED MINIMUM STORAGE LENGTH		EXISTING STORAGE LENGTH
	AM PEAK HOUR	PM PEAK HOUR	
Appion Way at S. Carson Street South Leg	175 feet	150 feet	350 feet
Appion Way at Cochise Street East Leg	150 feet	175 feet	N/A
Cochise Street at Clearview Dr. East Leg	25 feet	25 feet	125 feet
Cochise Street at Clearview Dr. South Leg	25 feet	50 feet	50 feet
Driveway at Bennett Avenue East Leg	25 feet	25 feet	N/A

K. PEDESTRIAN & BICYCLE FACILITIES

Reviewing the Carson City Unified Pathways Master Plan, the project site is near some existing and planned facilities. Currently in the vicinity of the project, there is a shared off-street multi-use trails that runs along the west side of S. Carson Street from Appion Way to I-580. According to the plan, Junction Drive adjacent to the project site and Cochise Street south of Roland Street is intended to operate as a shared street. This will provide connection to the wider pathway network north of the project site and on S. Carson Street. Due to the limited size of the project and location, it is not anticipated that the project will generate significant number of pedestrians or bicyclists.

L. PRO-RATA SHARE ANALYSIS

As required by Carson City, contributions are required for the signalization of the intersection of Appion Way at S. Carson Street. The contribution for this intersection was calculated as a percentage of the existing traffic volumes and the anticipated project trips at the intersection. The methodology for this calculation was based upon a review of the calculation presented in the *Clearview Ridge TIA* by Solaegui Engineers, LTD. The current trip assignment for the project was based upon the current traffic conditions, no eastbound left turn permitted. For this analysis, it was assumed that the eastbound left turn distribution were the same percentage of generated trips as the southbound right turn distribution. The study assumed that 45% of generated trips utilize S. Carson Street north of Appion Way. Based upon this calculation the anticipated proportional share for this project was determined to be 5.7%. Refer to Appendix F for the calculation worksheets.

M. RECOMMENDATIONS

To offset traffic impacts that are anticipated with the completion of the project, the following recommendations have been made:

- *For the Carson City to require all mandatory signage and striping to be shown on the project's civil engineering drawings and that they conform to the Carson City and MUTCD standards.*
- *For the proposed driveways on Bennett Drive and Junction Drive be constructed per Carson City standards.*
- *For "Stop" signs (R1-1) be installed on the east and west legs of the intersection of Roland Street at Cochise Street.*
- *For the Developer to contribute 5.7% toward the construction of a traffic signal at Appion Way and S. Carson Street.*

APPENDIX A

CARSON CITY TIA SCOPE

Assuming the trips generated meet the required threshold:

1) Please evaluate:

- Existing Conditions:
- Existing Conditions Plus Project
- Long-Term Transportation Model. Carson City has adopted the 2050 Regional Transportation plan and model. Information in PDF form can be pickup from Public Works. Please let me know and I can provide you a flash drive with the information.

Please also consider other nearby developments approved but not yet fully operational:

- 4,200 square foot retail shopping center (completed) APN 00-928-208
- 4,801 square foot fast food, Chick fil A (completed) APN 00-928-207
- 4,100 square foot fast food, Panera (planned) APN 00-928-209

- 2) Please discuss any project phasing and timing of proposed and anticipated future development, if applicable.
- 3) Please show the location, separation distance, and number of proposed driveways and intersections. Driveways should be spaced in conformance with our Code. Please review sight triangles at each driveway and please review if the driveway access will require left or right-turn lanes.
- 4) Please analyze the LOS for the following intersections at each approach and the overall for each condition above:
- Appion Way / S Carson Street
 - Appion Way / Cochise Street
 - Cochise Street / Roland Street
 - Clearview Drive / Curry Street

Please evaluate the intersection the Cochise Street / Roland Street intersection control, i.e. Stop Warrant in addition to the standard LOS requirements.

As additional background, Carson City has a project to construct signalized intersection at Appion Way / S Carson St. This project will be required to provide a pro-rata share toward the construction of the traffic signal.

- 5) Please review all existing and planned bicycle and pedestrian facilities and discuss how this project may affect those modes, as applicable.
- 6) Trip Generation and Distribution
- Please provide trip generation for average daily trips (ADT), a.m. and p.m. peak hour trips (including in and out traffic split), and p.m. peak hour trips (including in and out traffic split) per ITE.

- Provide traffic counts for a typical day, when school is in session; include dates, times, and weather conditions. Traffic counts shall not be more than twelve (12) months old. Also, when you collect counts, consider the impacts of COVID and determine if adjustments are needed.
 - Describe trip distribution and methodology for a.m. and p.m. peak periods, and existing and future scenarios evaluated in the traffic study.
- 7) Please preform the impact analysis and provide any recommended mitigations per CCMC.
- 8) Other:

None.

APPENDIX B

15-MINUTE VOLUME COUNTS

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Start Date : 5/10/2022

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Start Time	S. Carson Street From North				S. Carson Street From South				Appion Way From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	9	140	0	0	0	183	29	0	14	0	0	0	375
07:15 AM	13	179	0	0	0	203	36	0	9	0	0	0	440
07:30 AM	9	185	0	0	0	233	45	0	15	0	0	0	487
07:45 AM	8	232	0	0	0	228	45	2	17	0	0	0	532
Total	39	736	0	0	0	847	155	2	55	0	0	0	1834
08:00 AM	19	191	0	0	0	176	28	0	19	0	0	0	433
08:15 AM	14	196	0	0	0	208	17	0	10	0	0	0	445
08:30 AM	11	120	0	0	0	184	23	0	17	0	0	0	355
08:45 AM	10	109	0	0	0	137	31	0	12	0	0	0	299
Total	54	616	0	0	0	705	99	0	58	0	0	0	1532
*** BREAK ***													
04:00 PM	19	198	0	0	0	223	31	0	33	0	0	0	504
04:15 PM	27	246	0	0	0	229	28	0	38	0	0	0	568
04:30 PM	25	262	0	0	0	268	23	0	21	0	0	0	599
04:45 PM	24	272	0	0	0	271	34	0	19	0	0	0	620
Total	95	978	0	0	0	991	116	0	111	0	0	0	2291
05:00 PM	29	174	0	0	0	181	40	0	46	0	0	1	471
05:15 PM	25	208	0	0	0	227	53	0	36	0	0	0	549
05:30 PM	28	203	0	0	0	272	52	0	28	0	0	0	583
05:45 PM	33	186	0	0	0	251	42	0	20	0	0	0	532
Total	115	771	0	0	0	931	187	0	130	0	0	1	2135
Grand Total	303	3101	0	0	0	3474	557	2	354	0	0	1	7792
Apprch %	8.9	91.1	0	0	0	86.1	13.8	0	99.7	0	0	0.3	
Total %	3.9	39.8	0	0	0	44.6	7.1	0	4.5	0	0	0	

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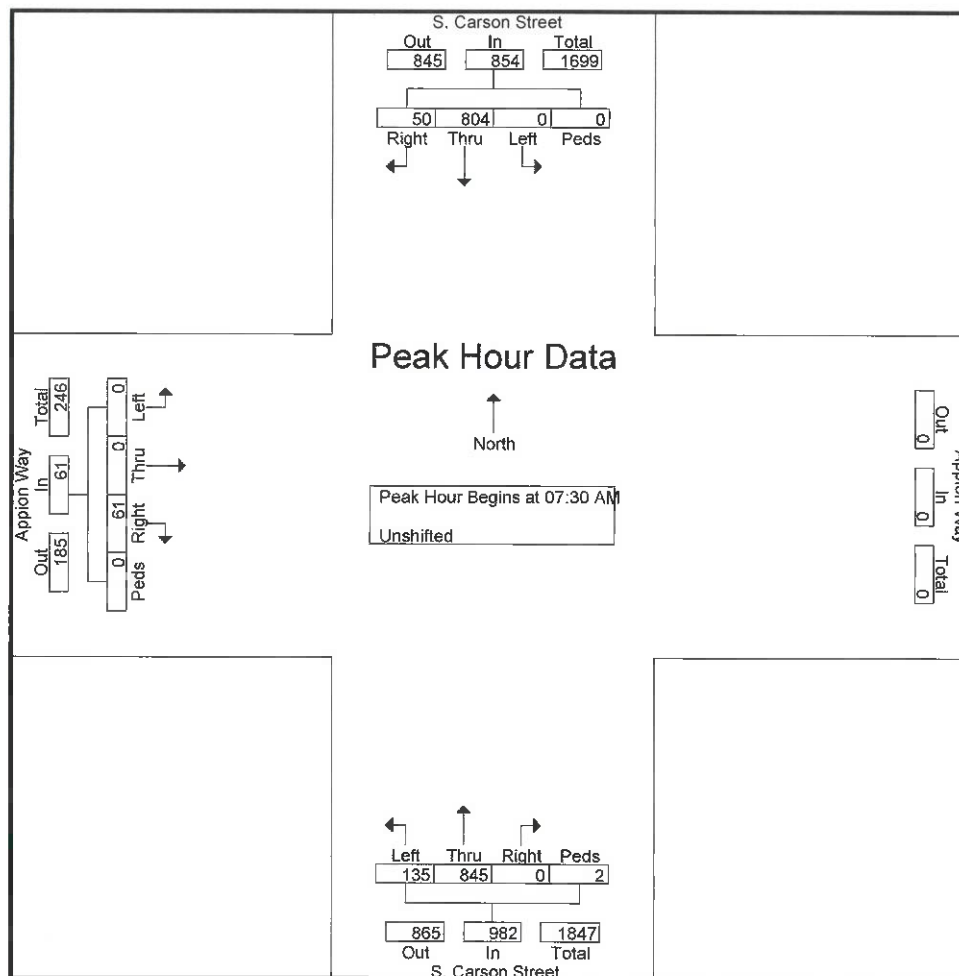
File Name : Carson-Appion

Site Code : 00000000

Start Date : 5/10/2022

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	S. Carson Street From North					From East	S. Carson Street From South					Appion Way From West					
Start Time	Right	Thru	Left	Peds	App. Total	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	9	185	0	0	194	0	0	233	45	0	278	15	0	0	0	15	487
07:45 AM	8	232	0	0	240	0	0	228	45	2	275	17	0	0	0	17	532
08:00 AM	19	191	0	0	210	0	0	176	28	0	204	19	0	0	0	19	433
08:15 AM	14	196	0	0	210	0	0	208	17	0	225	10	0	0	0	10	445
Total Volume	50	804	0	0	854	0	0	845	135	2	982	61	0	0	0	61	1897
% App. Total	5.9	94.1	0	0			0	86	13.7	0.2		100	0	0	0		
PHF	.658	.866	.000	.000	.890	.000	.000	.907	.750	.250	.883	.803	.000	.000	.000	.803	.891



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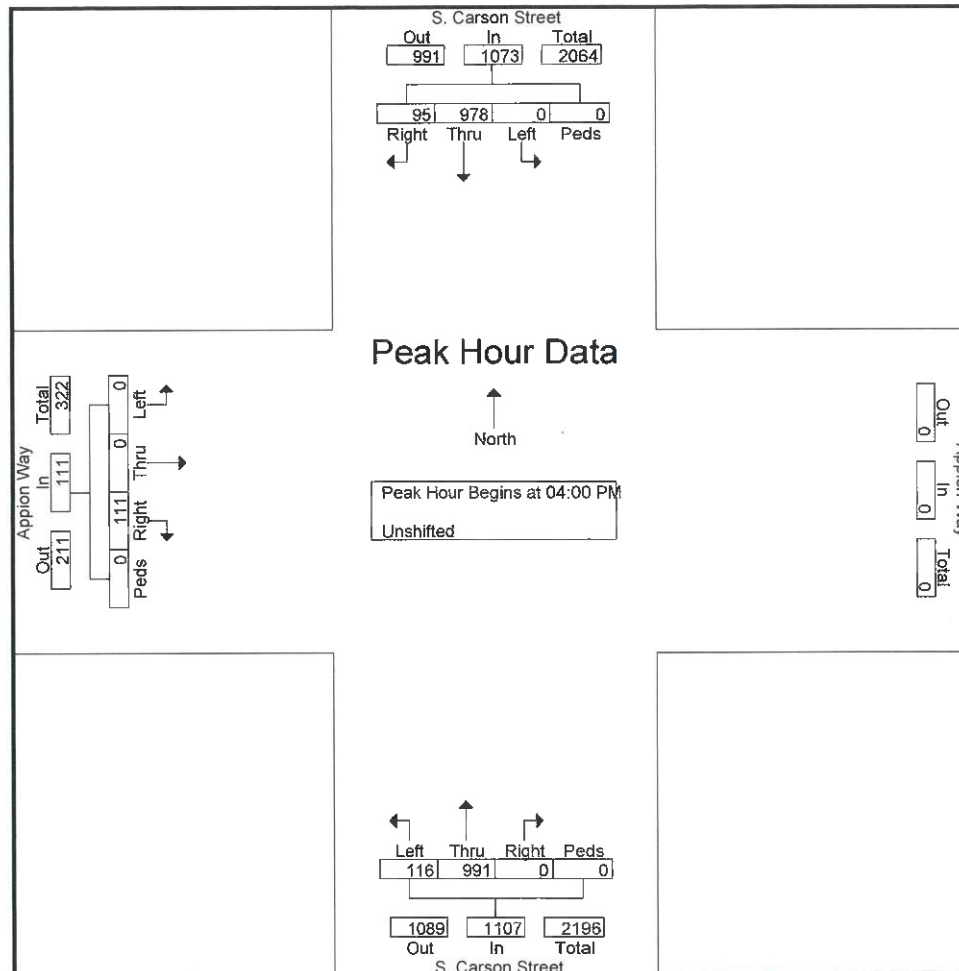
File Name : Carson-Appion

Site Code : 00000000

Start Date : 5/10/2022

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	S. Carson Street From North					From East	S. Carson Street From South					Appion Way From West					
Start Time	Right	Thru	Left	Peds	App. Total	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	19	198	0	0	217	0	0	223	31	0	254	33	0	0	0	33	504
04:15 PM	27	246	0	0	273	0	0	229	28	0	257	38	0	0	0	38	568
04:30 PM	25	262	0	0	287	0	0	268	23	0	291	21	0	0	0	21	599
04:45 PM	24	272	0	0	296	0	0	271	34	0	305	19	0	0	0	19	620
Total Volume	95	978	0	0	1073	0	0	991	116	0	1107	111	0	0	0	111	2291
% App. Total	8.9	91.1	0	0			0	89.5	10.5	0		100	0	0	0		
PHF	.880	.899	.000	.000	.906	.000	.000	.914	.853	.000	.907	.730	.000	.000	.000	.730	.924



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Start Time	Cochise Street From North				Appion Way From East				Cochise Street From South				Appion Way From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	1	10	0	14	0	9	0	5	3	0	0	0	0	0	0	42
07:15 AM	0	3	14	0	17	1	7	0	3	3	0	0	0	0	0	0	48
07:30 AM	0	3	16	0	13	0	12	0	4	2	0	0	0	0	0	0	50
07:45 AM	0	5	13	0	17	0	8	0	4	4	0	0	0	0	0	0	51
Total	0	12	53	0	61	1	36	0	16	12	0	0	0	0	0	0	191
08:00 AM	0	7	13	0	11	1	11	0	3	4	0	0	0	0	0	0	50
08:15 AM	0	3	14	0	16	0	15	0	7	8	0	0	0	0	0	0	63
08:30 AM	0	4	15	0	11	1	14	0	8	6	0	0	0	0	1	0	60
08:45 AM	0	4	11	0	11	0	17	0	7	2	0	0	0	0	0	0	52
Total	0	18	53	0	49	2	57	0	25	20	0	0	0	0	1	0	225
*** BREAK ***																	
04:00 PM	0	5	23	0	18	1	14	0	11	10	0	0	0	0	0	0	82
04:15 PM	0	2	25	0	22	0	21	0	20	8	0	0	0	0	0	0	98
04:30 PM	0	4	20	0	14	1	17	0	14	7	0	0	0	0	0	0	77
04:45 PM	1	4	19	0	21	0	20	0	15	11	0	0	0	1	0	0	92
Total	1	15	87	0	75	2	72	0	60	36	0	0	0	1	0	0	349
05:00 PM	0	7	26	0	20	1	26	0	21	8	0	0	0	0	0	0	109
05:15 PM	0	7	21	0	24	0	24	0	19	10	0	0	0	0	0	0	105
05:30 PM	0	7	17	0	10	0	21	0	16	14	0	0	0	0	0	0	85
05:45 PM	1	3	13	0	17	1	16	0	10	14	0	0	0	0	0	0	75
Total	1	24	77	0	71	2	87	0	66	46	0	0	0	0	0	0	374
Grand Total	2	69	270	0	256	7	252	0	167	114	0	0	0	1	1	0	1139
Apprch %	0.6	20.2	79.2	0	49.7	1.4	48.9	0	59.4	40.6	0	0	0	50	50	0	
Total %	0.2	6.1	23.7	0	22.5	0.6	22.1	0	14.7	10	0	0	0	0.1	0.1	0	

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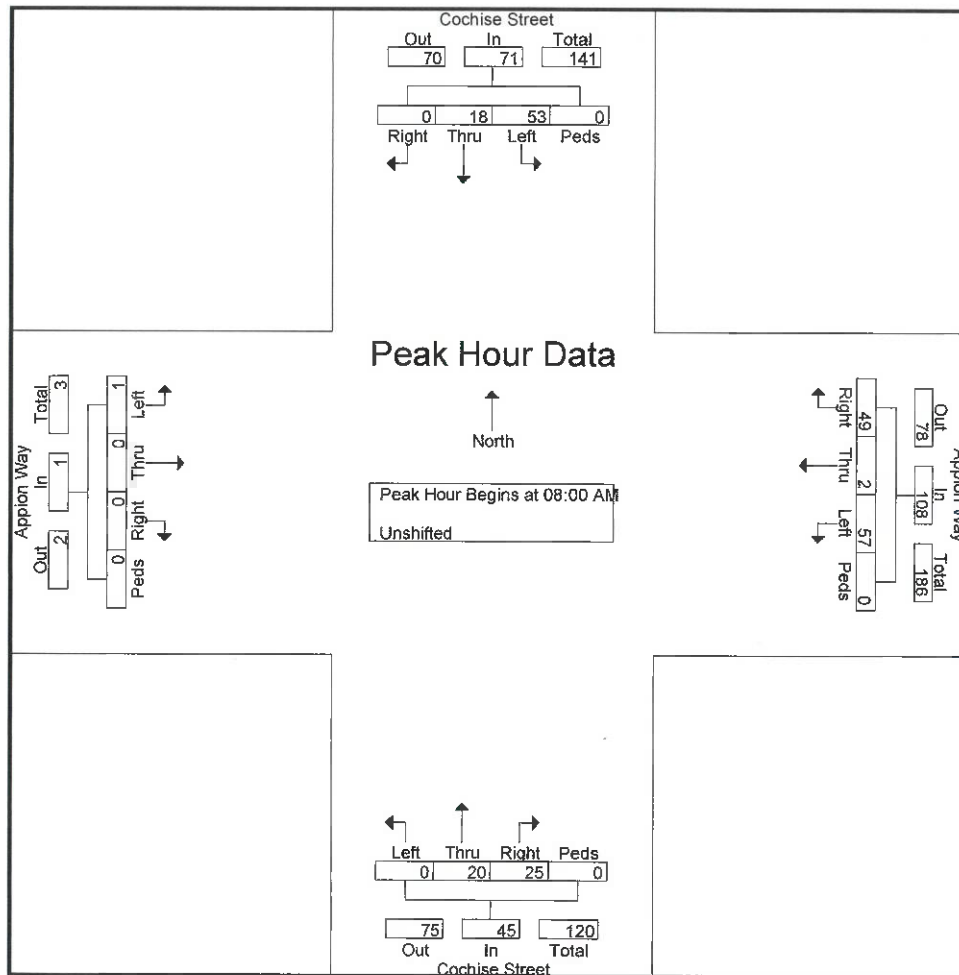
File Name : Cochise-Appion

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	Cochise Street From North					Appion Way From East					Cochise Street From South					Appion Way From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	7	13	0	20	11	1	11	0	23	3	4	0	0	7	0	0	0	0	0	50
08:15 AM	0	3	14	0	17	16	0	15	0	31	7	8	0	0	15	0	0	0	0	0	63
08:30 AM	0	4	15	0	19	11	1	14	0	26	8	6	0	0	14	0	0	1	0	1	60
08:45 AM	0	4	11	0	15	11	0	17	0	28	7	2	0	0	9	0	0	0	0	0	52
Total Volume	0	18	53	0	71	49	2	57	0	108	25	20	0	0	45	0	0	1	0	1	225
% App. Total	0	25.4	74.6	0		45.4	1.9	52.8	0		55.6	44.4	0	0		0	0	100	0		
PHF	.000	.643	.883	.000	.888	.766	.500	.838	.000	.871	.781	.625	.000	.000	.750	.000	.000	.250	.000	.250	.893



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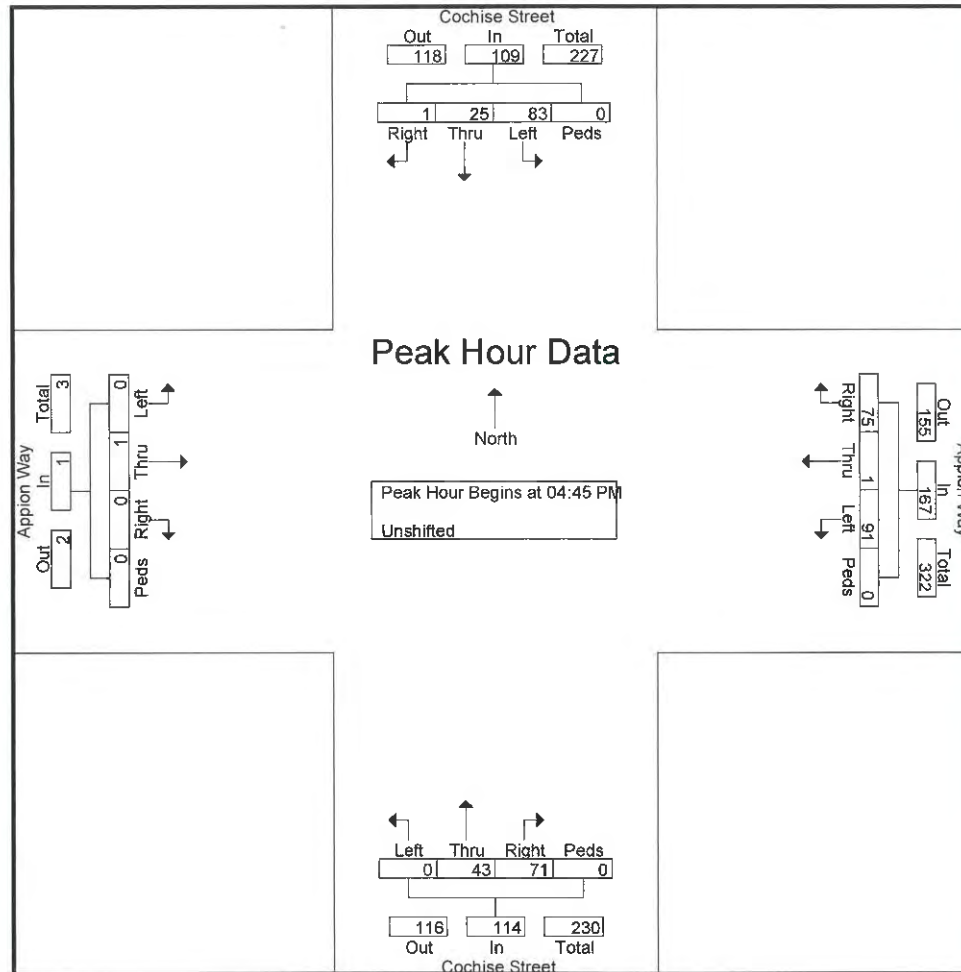
File Name : Cochise-Appion

Site Code : 00000000

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	Cochise Street From North					Appion Way From East					Cochise Street From South					Appion Way From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	1	4	19	0	24	21	0	20	0	41	15	11	0	0	26	0	1	0	0	1	92
05:00 PM	0	7	26	0	33	20	1	26	0	47	21	8	0	0	29	0	0	0	0	0	109
05:15 PM	0	7	21	0	28	24	0	24	0	48	19	10	0	0	29	0	0	0	0	0	105
05:30 PM	0	7	17	0	24	10	0	21	0	31	16	14	0	0	30	0	0	0	0	0	85
Total Volume	1	25	83	0	109	75	1	91	0	167	71	43	0	0	114	0	1	0	0	1	391
% App. Total	0.9	22.9	76.1	0		44.9	0.6	54.5	0		62.3	37.7	0	0		0	100	0	0		
PHF	.250	.893	.798	.000	.826	.781	.250	.875	.000	.870	.845	.768	.000	.000	.950	.000	.250	.000	.000	.250	.897



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Page No : 1

Groups Printed- Unshifted

	Cochise Street From North				Roland Street From East				Cochise Street From South				Roland Street From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
*** BREAK ***																	
07:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																	
Total	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																	
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
*** BREAK ***																	
08:45 AM	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	3
Total	1	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	4
*** BREAK ***																	
04:00 PM	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	3
*** BREAK ***																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	1	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	4
*** BREAK ***																	
05:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																	
Total	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	3	1	1	0	1	0	0	0	0	1	1	0	0	1	1	0	10
Apprch %	60	20	20	0	100	0	0	0	0	50	50	0	0	50	50	0	
Total %	30	10	10	0	10	0	0	0	0	10	10	0	0	10	10	0	

Locks Engineering

6345 S. Jones Boulevard, Suite 100
Las Vegas, NV 89118

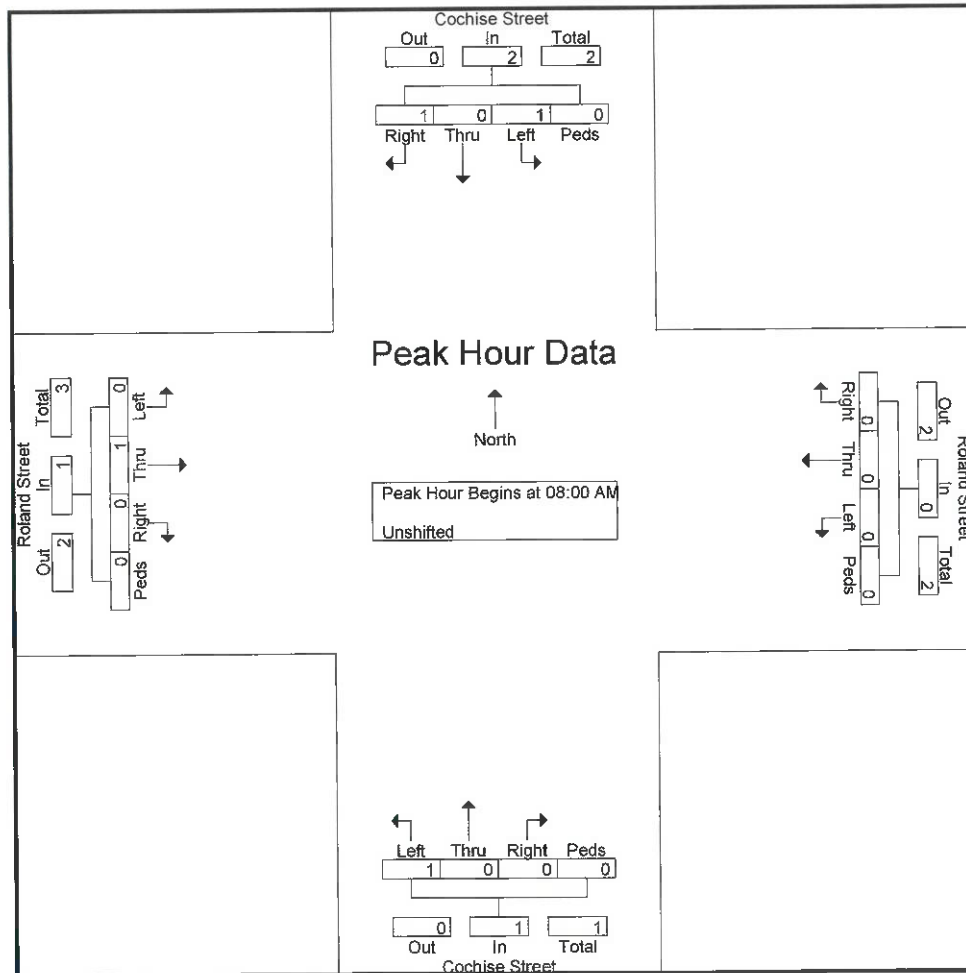
File Name : Cochise-Roland

Site Code : 00000000

Start Date : 5/11/2022

Page No : 2

	Cochise Street From North					Roland Street From East					Cochise Street From South					Roland Street From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	1	0	1	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	3
Total Volume	1	0	1	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	4
% App. Total	50	0	50	0		0	0	0	0		0	0	100	0		0	100	0	0		
PHF	.250	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.000	.000	.250	.333



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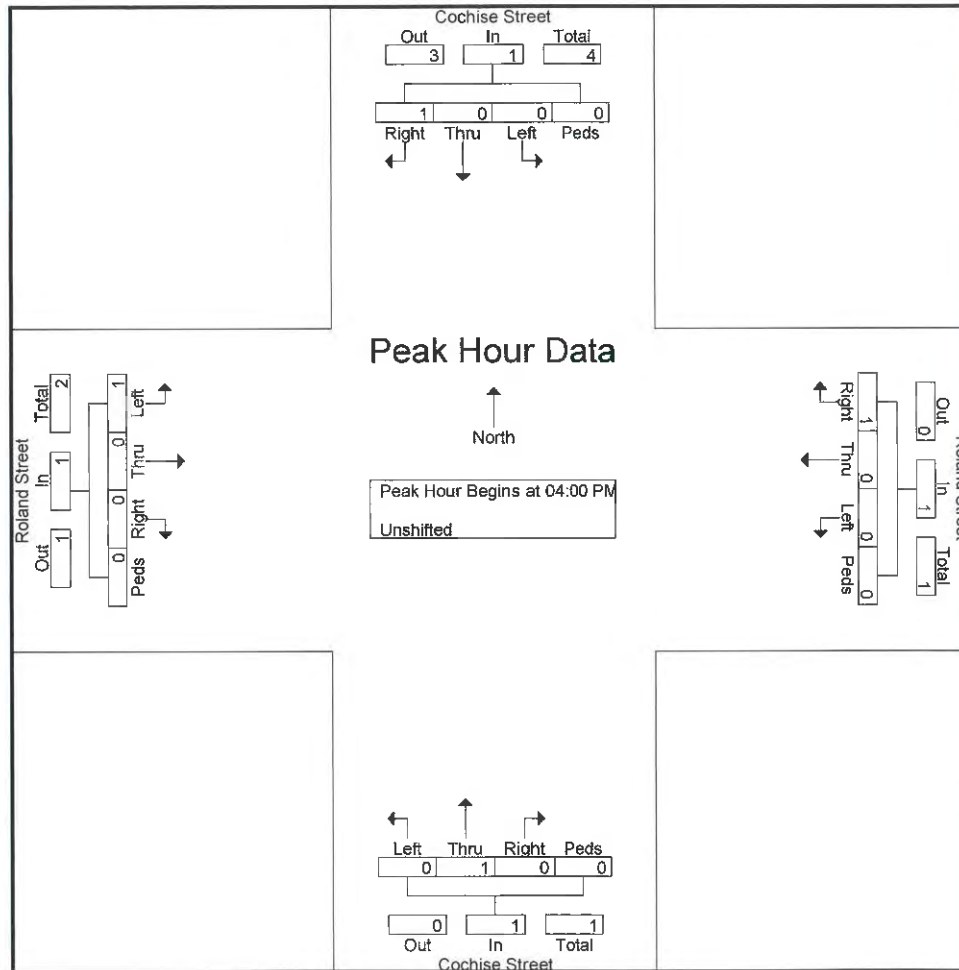
File Name : Cochise-Roland

Site Code : 00000000

Start Date : 5/11/2022

Page No : 3

	Cochise Street From North					Roland Street From East					Cochise Street From South					Roland Street From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	1	0	0	0	1	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	3
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	1	0	0	0	1	1	0	0	0	1	0	1	0	0	1	0	0	1	0	1	4
% App. Total	100	0	0	0		100	0	0	0		0	100	0	0		0	0	100	0		
PHF	.250	.000	.000	.000	.250	.250	.000	.000	.000	.250	.000	.250	.000	.000	.250	.000	.000	.250	.000	.250	.333



Locks Engineering

6345 S. Jones Boulevard, Suite 100
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File Name : Cochise-Clearwater

Site Code : 00000000

Start Date : 5/11/2022

Page No : 1

Groups Printed- Unshifted

	Curry Street From North				Clearwater Drive From East				Cochise Street From South				Clearwater Drive From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	2	10	8	0	5	3	3	0	4	16	1	0	3	5	3	0	63
07:15 AM	0	9	9	0	5	2	2	0	4	16	2	0	3	2	4	0	58
07:30 AM	2	13	10	0	6	4	6	0	5	15	0	0	2	5	5	0	73
07:45 AM	0	16	7	0	9	3	4	0	4	11	2	0	2	5	0	0	63
Total	4	48	34	0	25	12	15	0	17	58	5	0	10	17	12	0	257
08:00 AM	0	12	6	0	7	2	2	0	5	13	0	0	1	6	4	0	58
08:15 AM	1	14	16	0	6	2	2	0	4	15	1	0	2	4	0	0	67
08:30 AM	0	13	9	0	9	4	6	1	8	26	2	0	5	7	2	0	92
08:45 AM	1	11	16	0	15	2	4	0	9	20	0	0	1	6	2	0	87
Total	2	50	47	0	37	10	14	1	26	74	3	0	9	23	8	0	304
*** BREAK ***																	
04:00 PM	2	26	10	0	10	8	3	1	7	12	5	0	1	5	5	0	95
04:15 PM	2	21	17	0	9	11	2	0	9	21	4	0	2	7	1	0	106
04:30 PM	4	31	19	0	6	9	3	0	12	20	2	0	1	8	2	0	117
04:45 PM	3	23	24	0	9	9	2	0	11	32	8	0	3	8	4	0	136
Total	11	101	70	0	34	37	10	1	39	85	19	0	7	28	12	0	454
05:00 PM	2	37	16	0	6	8	6	0	15	29	9	0	1	7	4	0	140
05:15 PM	4	26	13	0	15	10	2	0	13	30	7	0	1	5	1	0	127
05:30 PM	4	19	19	0	17	13	3	0	8	21	6	0	5	9	2	0	126
05:45 PM	2	18	11	0	11	7	4	0	14	22	5	0	2	6	1	0	103
Total	12	100	59	0	49	38	15	0	50	102	27	0	9	27	8	0	496
Grand Total	29	299	210	0	145	97	54	2	132	319	54	0	35	95	40	0	1511
Apprch %	5.4	55.6	39	0	48.7	32.6	18.1	0.7	26.1	63.2	10.7	0	20.6	55.9	23.5	0	
Total %	1.9	19.8	13.9	0	9.6	6.4	3.6	0.1	8.7	21.1	3.6	0	2.3	6.3	2.6	0	

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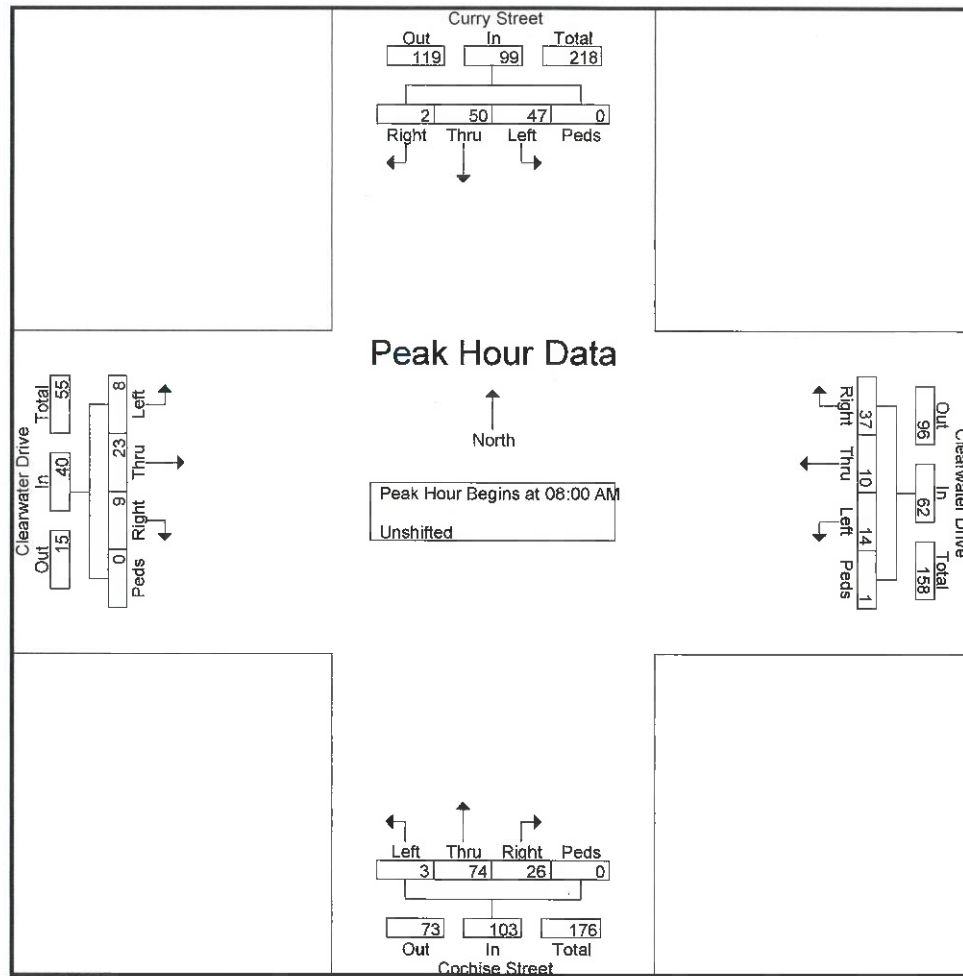
File Name : Cochise-Clearwater

Site Code : 00000000

Start Date : 5/11/2022

Page No : 2

	Curry Street From North					Clearwater Drive From East					Cochise Street From South					Clearwater Drive From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	12	6	0	18	7	2	2	0	11	5	13	0	0	18	1	6	4	0	11	58
08:15 AM	1	14	16	0	31	6	2	2	0	10	4	15	1	0	20	2	4	0	0	6	67
08:30 AM	0	13	9	0	22	9	4	6	1	20	8	26	2	0	36	5	7	2	0	14	92
08:45 AM	1	11	16	0	28	15	2	4	0	21	9	20	0	0	29	1	6	2	0	9	87
Total Volume	2	50	47	0	99	37	10	14	1	62	26	74	3	0	103	9	23	8	0	40	304
% App. Total	2	50.5	47.5	0		59.7	16.1	22.6	1.6		25.2	71.8	2.9	0		22.5	57.5	20	0		
PHF	.500	.893	.734	.000	.798	.617	.625	.583	.250	.738	.722	.712	.375	.000	.715	.450	.821	.500	.000	.714	.826



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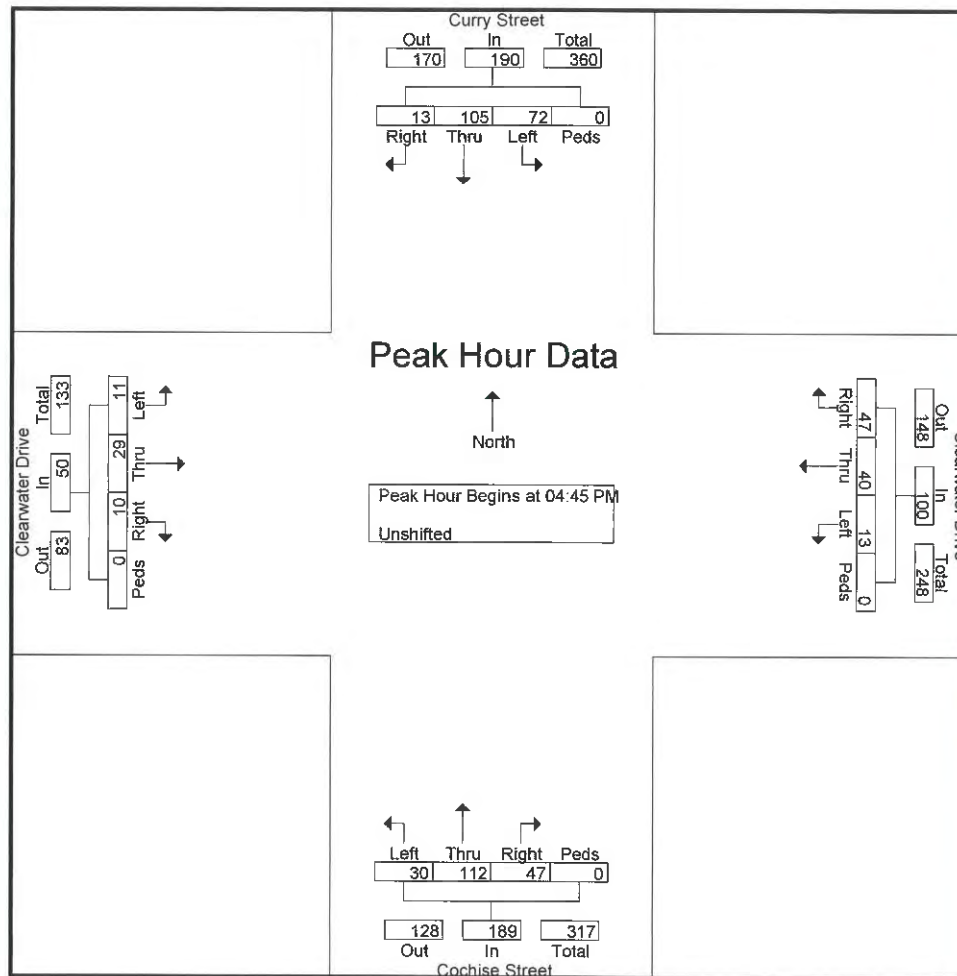
File Name : Cochise-Clearwater

Site Code : 00000000

Start Date : 5/11/2022

Page No : 3

	Curry Street From North					Clearwater Drive From East					Cochise Street From South					Clearwater Drive From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	3	23	24	0	50	9	9	2	0	20	11	32	8	0	51	3	8	4	0	15	136
05:00 PM	2	37	16	0	55	6	8	6	0	20	15	29	9	0	53	1	7	4	0	12	140
05:15 PM	4	26	13	0	43	15	10	2	0	27	13	30	7	0	50	1	5	1	0	7	127
05:30 PM	4	19	19	0	42	17	13	3	0	33	8	21	6	0	35	5	9	2	0	16	126
Total Volume	13	105	72	0	190	47	40	13	0	100	47	112	30	0	189	10	29	11	0	50	529
% App. Total	6.8	55.3	37.9	0		4.7	4.0	1.3	0		24.9	59.3	15.9	0		2.0	5.8	2.2	0		
PHF	.813	.709	.750	.000	.864	.691	.769	.542	.000	.758	.783	.875	.833	.000	.892	.500	.806	.688	.000	.781	.945



APPENDIX C

INTERSECTION LEVEL OF SERVICE

HCS Two-Way Stop-Control Report

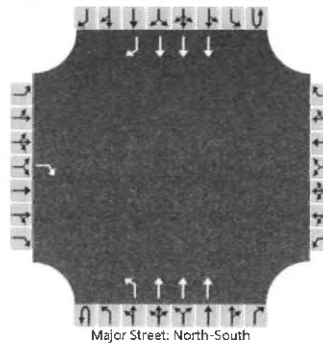
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2022
Time Analyzed	Existing AM Peak Hour
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Appion Way at S. Carson Street
Jurisdiction	Carson City
East/West Street	Appion Way
North/South Street	S. Carson Street
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	1	3	0	0	0	3	1
Configuration				R						L	T				T	R
Volume (veh/h)				127					0	174	845				804	76
Percent Heavy Vehicles (%)				3					3	3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No												No			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)				7.1						5.3						
Critical Headway (sec)				7.16						5.36						
Base Follow-Up Headway (sec)				3.9						3.1						
Follow-Up Headway (sec)				3.93						3.13						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				143						196						
Capacity, c (veh/h)				473						393						
v/c Ratio				0.30						0.50						
95% Queue Length, Q ₉₅ (veh)				1.3						2.7						
Control Delay (s/veh)				15.9						22.9						
Level of Service (LOS)				C						C						
Approach Delay (s/veh)	15.9								3.9							
Approach LOS	C								A							

HCS Two-Way Stop-Control Report

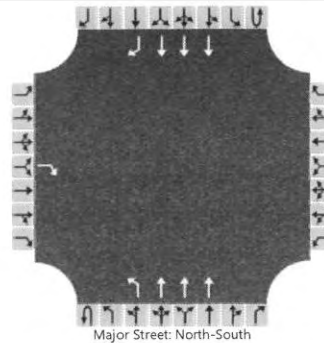
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2022
Time Analyzed	Existing PM Peak Hour
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Appion Way at S. Carson Street
Jurisdiction	Carson City
East/West Street	Appion Way
North/South Street	S. Carson Street
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	1	3	0	0	0	3	1
Configuration				R						L	T				T	R
Volume (veh/h)				157					0	147	991				978	114
Percent Heavy Vehicles (%)				3					3	3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No												No			
Median Type Storage					Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)				7.1						5.3						
Critical Headway (sec)				7.16						5.36						
Base Follow-Up Headway (sec)				3.9						3.1						
Follow-Up Headway (sec)				3.93						3.13						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				171						160						
Capacity, c (veh/h)				419						315						
v/c Ratio				0.41						0.51						
95% Queue Length, Q ₉₅ (veh)				1.9						2.7						
Control Delay (s/veh)				19.3						27.6						
Level of Service (LOS)				C						D						
Approach Delay (s/veh)	19.3								3.6							
Approach LOS	C								A							

HCS Two-Way Stop-Control Report

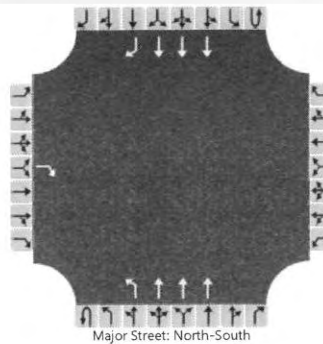
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2022
Time Analyzed	Ex AM Pk Hour w/ Project
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Appion Way at S. Carson Street
Jurisdiction	Carson City
East/West Street	Appion Way
North/South Street	S. Carson Street
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	1	3	0	0	0	3	1
Configuration				R						L	T				T	R
Volume (veh/h)				138					0	187	845				804	95
Percent Heavy Vehicles (%)				3					3	3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No												No			
Median Type Storage					Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)				7.1						5.3						
Critical Headway (sec)				7.16						5.36						
Base Follow-Up Headway (sec)				3.9						3.1						
Follow-Up Headway (sec)				3.93						3.13						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				155						210						
Capacity, c (veh/h)				473						384						
v/c Ratio				0.33						0.55						
95% Queue Length, Q ₉₅ (veh)				1.4						3.2						
Control Delay (s/veh)				16.3						25.1						
Level of Service (LOS)				C						D						
Approach Delay (s/veh)	16.3								4.6							
Approach LOS	C								A							

HCS Two-Way Stop-Control Report

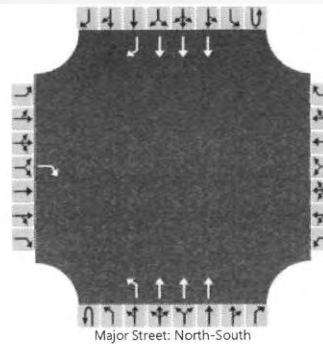
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2022
Time Analyzed	Ex PM Pk Hour w/ Project
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Appion Way at S. Carson Street
Jurisdiction	Carson City
East/West Street	Appion Way
North/South Street	S. Carson Street
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	1	3	0	0	0	3	1
Configuration				R						L	T				T	R
Volume (veh/h)				172					0	165	991				978	141
Percent Heavy Vehicles (%)				3					3	3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No												No			
Median Type Storage					Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)				7.1						5.3						
Critical Headway (sec)				7.16						5.36						
Base Follow-Up Headway (sec)				3.9						3.1						
Follow-Up Headway (sec)				3.93						3.13						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				187						179						
Capacity, c (veh/h)				419						305						
v/c Ratio				0.45						0.59						
95% Queue Length, Q ₉₅ (veh)				2.2						3.5						
Control Delay (s/veh)				20.3						32.4						
Level of Service (LOS)				C						D						
Approach Delay (s/veh)	20.3								4.6							
Approach LOS	C								A							

HCS Two-Way Stop-Control Report

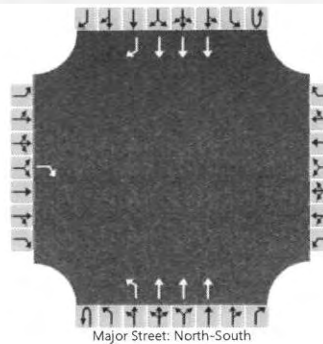
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2050
Time Analyzed	Bkgrd AM Peak Hour
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Appion Way at S. Carson Street
Jurisdiction	Carson City
East/West Street	Appion Way
North/South Street	S. Carson Street
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	10	1	2	3	4	4	5	6
Number of Lanes		0	0	1		0	0	0	0	1	3	0	0	0	3	1
Configuration				R						L	T				T	R
Volume (veh/h)				268					0	367	972				924	160
Percent Heavy Vehicles (%)				3					3	3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No												No			
Median Type Storage					Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)				7.1						5.3						
Critical Headway (sec)				7.16						5.36						
Base Follow-Up Headway (sec)				3.9						3.1						
Follow-Up Headway (sec)				3.93						3.13						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				301						412						
Capacity, c (veh/h)				427						304						
v/c Ratio				0.70						1.36						
95% Queue Length, Q ₉₅ (veh)				5.3						20.9						
Control Delay (s/veh)				31.2						213.7						
Level of Service (LOS)				D						F						
Approach Delay (s/veh)	31.2								58.6							
Approach LOS	D								F							

HCS Two-Way Stop-Control Report

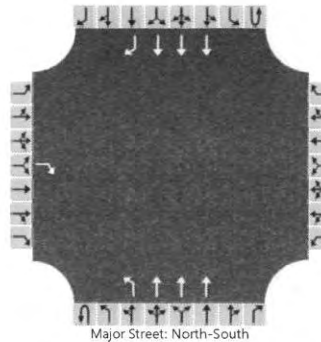
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2050
Time Analyzed	Bkgrd PM Peak Hour
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Appion Way at S. Carson Street
Jurisdiction	Carson City
East/West Street	Appion Way
North/South Street	S. Carson Street
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	1	3	0	0	0	3	1
Configuration				R						L	T				T	R
Volume (veh/h)				331					0	310	1140				1125	240
Percent Heavy Vehicles (%)				3					3	3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No												No		
Median Type Storage				Undivided												

Critical and Follow-up Headways

Base Critical Headway (sec)				7.1						5.3						
Critical Headway (sec)				7.16						5.36						
Base Follow-Up Headway (sec)				3.9						3.1						
Follow-Up Headway (sec)				3.93						3.13						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				360						337						
Capacity, c (veh/h)				372						225						
v/c Ratio				0.97						1.50						
95% Queue Length, Q ₉₅ (veh)				10.9						20.3						
Control Delay (s/veh)				72.5						286.3						
Level of Service (LOS)				F						F						
Approach Delay (s/veh)		72.5								61.2						
Approach LOS		F								F						

HCS Two-Way Stop-Control Report

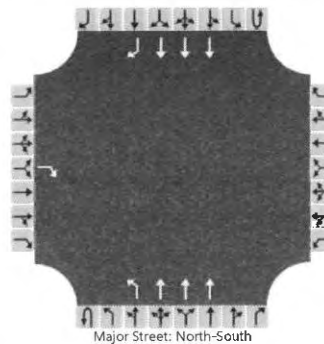
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2050
Time Analyzed	Bkgrd AM Pk Hr w/ Project
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Appion Way at S. Carson Street
Jurisdiction	Carson City
East/West Street	Appion Way
North/South Street	S. Carson Street
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	1	3	0	0	0	3	1
Configuration				R						L	T				T	R
Volume (veh/h)				279					0	380	972				924	179
Percent Heavy Vehicles (%)				3					3	3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No												No			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)				7.1						5.3						
Critical Headway (sec)				7.16						5.36						
Base Follow-Up Headway (sec)				3.9						3.1						
Follow-Up Headway (sec)				3.93						3.13						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				313						427						
Capacity, c (veh/h)				427						297						
v/c Ratio				0.73						1.44						
95% Queue Length, Q ₉₅ (veh)				5.9						23.2						
Control Delay (s/veh)				33.3						248.3						
Level of Service (LOS)				D						F						
Approach Delay (s/veh)	33.3								69.8							
Approach LOS	D								F							

HCS Two-Way Stop-Control Report

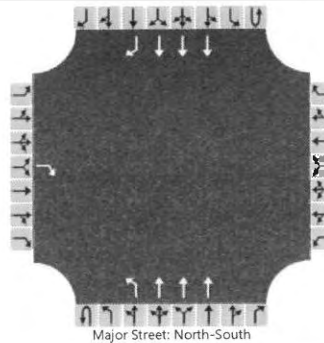
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2050
Time Analyzed	Bkgrd PM Pk Hr w/ Project
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Appion Way at S. Carson Street
Jurisdiction	Carson City
East/West Street	Appion Way
North/South Street	S. Carson Street
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	1	3	0	0	0	3	1
Configuration				R						L	T				T	R
Volume (veh/h)				346					0	328	1140				1125	267
Percent Heavy Vehicles (%)				3					3	3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No												No			
Median Type Storage					Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)				7.1						5.3						
Critical Headway (sec)				7.16						5.36						
Base Follow-Up Headway (sec)				3.9						3.1						
Follow-Up Headway (sec)				3.93						3.13						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				376						357						
Capacity, c (veh/h)				372						217						
v/c Ratio				1.01						1.64						
95% Queue Length, Q ₉₅ (veh)				12.1						23.2						
Control Delay (s/veh)				83.4						347.2						
Level of Service (LOS)				F						F						
Approach Delay (s/veh)	83.4								77.6							
Approach LOS	F								F							

HCS Two-Way Stop-Control Report

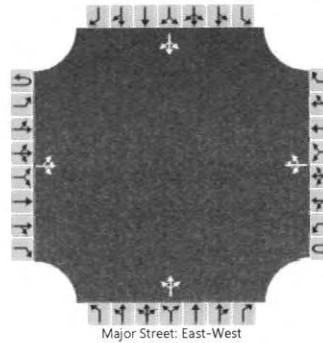
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2022
Time Analyzed	Existing AM Peak Hour
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Cochise Street at Appion Way
Jurisdiction	Carson City
East/West Street	Appion Way
North/South Street	Cochise Street
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		1	0	0		121	2	50		0	48	86		58	46	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage					Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		1				136					151				117	
Capacity, c (veh/h)		1539				1617					791				502	
v/c Ratio		0.00				0.08					0.19				0.23	
95% Queue Length, Q ₉₅ (veh)		0.0				0.3					0.7				0.9	
Control Delay (s/veh)		7.3	0.0	0.0		7.4	0.7	0.7			10.6				14.3	
Level of Service (LOS)		A	A	A		A	A	A			B				B	
Approach Delay (s/veh)	7.3				5.4				10.6				14.3			
Approach LOS	A				A				B				B			

HCS Two-Way Stop-Control Report

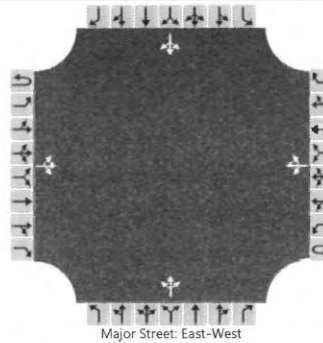
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2022
Time Analyzed	Existing PM Peak Hour
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Cochise Street at Appion Way
Jurisdiction	Carson City
East/West Street	Appion Way
North/South Street	Cochise Street
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	1	0		139	1	77		0	62	114		86	45	1
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				156					198					148
Capacity, c (veh/h)		1502				1615					751					424
v/c Ratio		0.00				0.10					0.26					0.35
95% Queue Length, Q ₉₅ (veh)		0.0				0.3					1.1					1.5
Control Delay (s/veh)		7.4	0.0	0.0		7.5	0.8	0.8			11.5					18.0
Level of Service (LOS)		A	A	A		A	A	A			B					C
Approach Delay (s/veh)	0.0				5.1				11.5				18.0			
Approach LOS	A				A				B				C			

HCS Two-Way Stop-Control Report

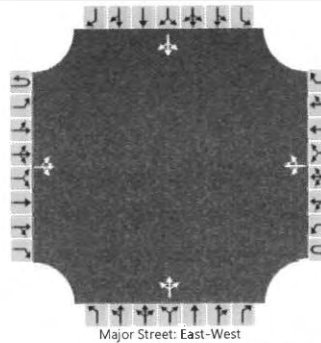
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2022
Time Analyzed	Ex AM Pk Hour w/ Project
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Cochise Street at Appion Way
Jurisdiction	Carson City
East/West Street	Appion Way
North/South Street	Cochise Street
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		1	0	0		153	2	50		0	73	97		58	56	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		1				172					191				128	
Capacity, c (veh/h)		1539				1617					698				419	
v/c Ratio		0.00				0.11					0.27				0.31	
95% Queue Length, Q ₉₅ (veh)		0.0				0.4					1.1				1.3	
Control Delay (s/veh)		7.3	0.0	0.0		7.5	0.8	0.8			12.1				17.3	
Level of Service (LOS)		A	A	A		A	A	A			B				C	
Approach Delay (s/veh)	7.3				5.8				12.1				17.3			
Approach LOS	A				A				B				C			

HCS Two-Way Stop-Control Report

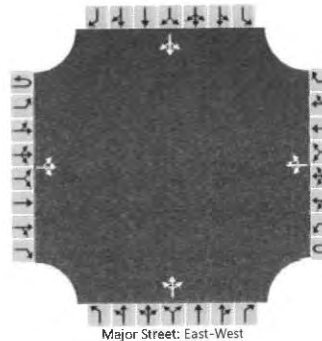
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2022
Time Analyzed	Ex PM Pk Hour w/ Project
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Cochise Street at Appion Way
Jurisdiction	Carson City
East/West Street	Appion Way
North/South Street	Cochise Street
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	1	0		184	1	77		0	98	129		86	59	1
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage					Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				207					255				164	
Capacity, c (veh/h)		1502				1615					629				316	
v/c Ratio		0.00				0.13					0.41				0.52	
95% Queue Length, Q ₉₅ (veh)		0.0				0.4					2.0				2.8	
Control Delay (s/veh)		7.4	0.0	0.0		7.6	1.0	1.0			14.6				28.1	
Level of Service (LOS)		A	A	A		A	A	A			B				D	
Approach Delay (s/veh)	0.0				5.6				14.6				28.1			
Approach LOS	A				A				B				D			

HCS Two-Way Stop-Control Report

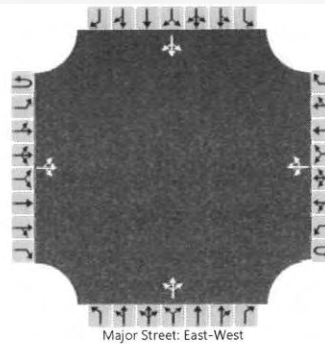
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2050
Time Analyzed	Bkgrd AM Peak Hour
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Cochise Street at Appion Way
Jurisdiction	Carson City
East/West Street	Appion Way
North/South Street	Cochise Street
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		2	0	0		255	4	105		0	101	181		122	97	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2				287					317				246	
Capacity, c (veh/h)		1459				1617					549				198	
v/c Ratio		0.00				0.18					0.58				1.24	
95% Queue Length, Q ₉₅ (veh)		0.0				0.6					3.6				13.0	
Control Delay (s/veh)		7.5	0.0	0.0		7.7	1.5	1.5			20.1				191.8	
Level of Service (LOS)		A	A	A		A	A	A			C				F	
Approach Delay (s/veh)	7.5				5.8				20.1				191.8			
Approach LOS	A				A				C				F			

HCS Two-Way Stop-Control Report

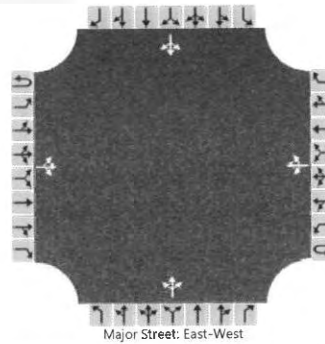
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2050
Time Analyzed	Bkgrd PM Peak Hour
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Cochise Street at Appion Way
Jurisdiction	Carson City
East/West Street	Appion Way
North/South Street	Cochise Street
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	2	0		293	2	162		0	131	240		181	95	2
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				329					417				312	
Capacity, c (veh/h)		1384				1613					467				94	
v/c Ratio		0.00				0.20					0.89				3.32	
95% Queue Length, Q ₉₅ (veh)		0.0				0.8					9.8				31.1	
Control Delay (s/veh)		7.6	0.0	0.0		7.8	1.8	1.8			49.2				1140.0	
Level of Service (LOS)		A	A	A		A	A	A			E				F	
Approach Delay (s/veh)	0.0				5.7				49.2				1140.0			
Approach LOS	A				A				E				F			

HCS Two-Way Stop-Control Report

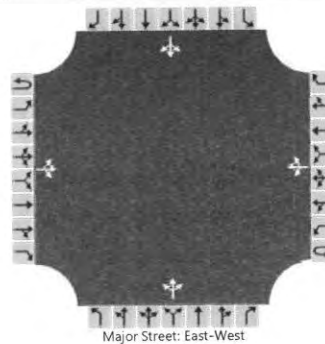
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2050
Time Analyzed	Bkgrd AM Pk Hr w/ Project
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Cochise Street at Appion Way
Jurisdiction	Carson City
East/West Street	Appion Way
North/South Street	Cochise Street
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		2	0	0		287	4	105		0	126	192		122	107	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage					Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2				322					357				257	
Capacity, c (veh/h)		1459				1617					477				142	
v/c Ratio		0.00				0.20					0.75				1.82	
95% Queue Length, Q ₉₅ (veh)		0.0				0.7					6.3				19.4	
Control Delay (s/veh)		7.5	0.0	0.0		7.8	1.7	1.7			31.9				447.4	
Level of Service (LOS)		A	A	A		A	A	A			D				F	
Approach Delay (s/veh)	7.5				6.1				31.9				447.4			
Approach LOS	A				A				D				F			

HCS Two-Way Stop-Control Report

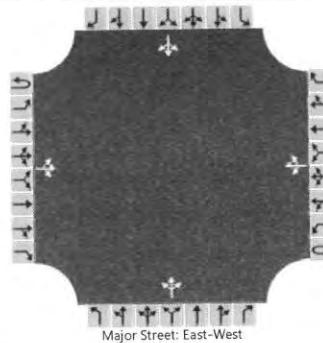
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2050
Time Analyzed	Bkgrd PM Pk Hr w/ Project
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Cochise Street at Appion Way
Jurisdiction	Carson City
East/West Street	Appion Way
North/South Street	Cochise Street
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	2	0		338	2	162		0	167	255		181	109	2
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				380					474				328	
Capacity, c (veh/h)		1384				1613					379				4	
v/c Ratio		0.00				0.24					1.25				75.51	
95% Queue Length, Q ₉₅ (veh)		0.0				0.9					20.5				43.3	
Control Delay (s/veh)		7.6	0.0	0.0		7.9	2.1	2.1			163.0				35182.0	
Level of Service (LOS)		A	A	A		A	A	A			F				F	
Approach Delay (s/veh)	0.0				6.0				163.0				35182.0			
Approach LOS	A				A				F				F			

HCS All-Way Stop Control Report

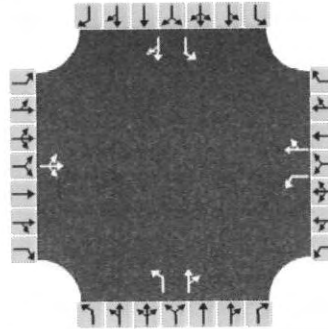
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2022
Analysis Time Period (hrs)	0.25
Time Analyzed	Existing AM Peak Hour
Project Description	

Site Information

Intersection	Curry Street at Clearview Drive
Jurisdiction	Carson City
East/West Street	Clearview Drive
North/South Street	Curry Street
Peak Hour Factor	0.83

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	8	23	9	22	10	37	6	81	64	47	70	2
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			L	TR		L	TR		L	TR	
Flow Rate, v (veh/h)	48			27	57		7	175		57	87	
Percent Heavy Vehicles	2			2	2		2	2		2	2	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20	3.20		3.20	3.20		3.20	3.20	
Initial Degree of Utilization, x	0.043			0.024	0.050		0.006	0.155		0.050	0.077	
Final Departure Headway, hd (s)	5.32			5.86	4.81		5.52	4.71		5.54	5.02	
Final Degree of Utilization, x	0.071			0.043	0.076		0.011	0.229		0.087	0.121	
Move-Up Time, m (s)	2.0			2.3	2.3		2.3	2.3		2.3	2.3	
Service Time, ts (s)	3.32			3.56	2.51		3.22	2.41		3.24	2.72	

Capacity, Delay and Level of Service

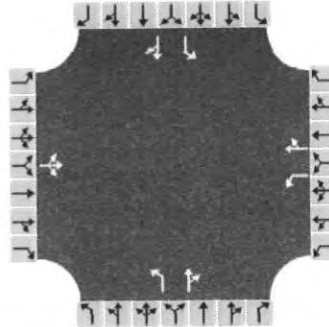
Flow Rate, v (veh/h)	48			27	57		7	175		57	87	
Capacity	677			614	749		652	764		650	718	
95% Queue Length, Q ₉₅ (veh)	0.2			0.1	0.2		0.0	0.9		0.3	0.4	
Control Delay (s/veh)	8.7			8.8	7.9		8.3	8.8		8.8	8.4	
Level of Service, LOS	A			A	A		A	A		A	A	
Approach Delay (s/veh)	8.7			8.2			8.8			8.5		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh LOS	8.6						A					

HCS All-Way Stop Control Report

General Information

Analyst	DKK	Intersection	Curry Street at Clearview Drive
Agency/Co.	Lochsa Engineering	Jurisdiction	Carson City
Date Performed	5/19/2022	East/West Street	Clearview Drive
Analysis Year	2022	North/South Street	Curry Street
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.95
Time Analyzed	Existing PM Peak Hour		
Project Description			

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	11	29	12	23	40	47	32	117	73	72	121	13
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			L	TR		L	TR		L	TR	
Flow Rate, v (veh/h)	55			24	92		34	200		76	141	
Percent Heavy Vehicles	2			2	2		2	2		2	2	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20	3.20		3.20	3.20		3.20	3.20	
Initial Degree of Utilization, x	0.049			0.022	0.081		0.030	0.178		0.067	0.125	
Final Departure Headway, hd (s)	5.67			6.19	5.31		5.74	4.97		5.74	5.17	
Final Degree of Utilization, x	0.086			0.042	0.135		0.054	0.276		0.121	0.203	
Move-Up Time, m (s)	2.0			2.3	2.3		2.3	2.3		2.3	2.3	
Service Time, ts (s)	3.67			3.89	3.01		3.44	2.67		3.44	2.87	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	55			24	92		34	200		76	141	
Capacity	634			581	677		627	724		627	696	
95% Queue Length, Q ₉₅ (veh)	0.3			0.1	0.5		0.2	1.1		0.4	0.8	
Control Delay (s/veh)	9.2			9.2	8.8		8.8	9.6		9.2	9.2	
Level of Service, LOS	A			A	A		A	A		A	A	
Approach Delay (s/veh)	9.2			8.9			9.4			9.2		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh LOS	9.2						A					

HCS All-Way Stop Control Report

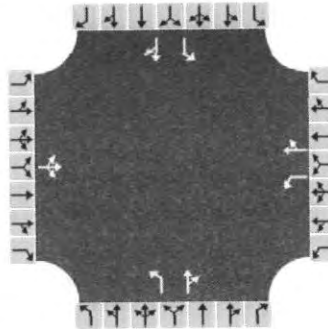
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2022
Analysis Time Period (hrs)	0.25
Time Analyzed	Ex AM Pk Hour w/ Project
Project Description	

Site Information

Intersection	Curry Street at Clearview Drive
Jurisdiction	Carson City
East/West Street	Clearview Drive
North/South Street	Curry Street
Peak Hour Factor	0.83

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	8	23	13	24	10	37	7	87	82	47	77	2
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			L	TR		L	TR		L	TR	
Flow Rate, v (veh/h)	53			29	57		8	204		57	95	
Percent Heavy Vehicles	2			2	2		2	2		2	2	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20	3.20		3.20	3.20		3.20	3.20	
Initial Degree of Utilization, x	0.047			0.026	0.050		0.007	0.181		0.050	0.085	
Final Departure Headway, hd (s)	5.36			5.96	4.91		5.56	4.71		5.59	5.07	
Final Degree of Utilization, x	0.079			0.048	0.077		0.013	0.267		0.088	0.134	
Move-Up Time, m (s)	2.0			2.3	2.3		2.3	2.3		2.3	2.3	
Service Time, ts (s)	3.36			3.66	2.61		3.26	2.41		3.29	2.77	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	53			29	57		8	204		57	95	
Capacity	671			604	734		648	764		644	710	
95% Queue Length, Q ₉₅ (veh)	0.3			0.2	0.3		0.0	1.1		0.3	0.5	
Control Delay (s/veh)	8.8			9.0	8.0		8.3	9.1		8.8	8.6	
Level of Service, LOS	A			A	A		A	A		A	A	
Approach Delay (s/veh)	8.8			8.3			9.1			8.7		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh LOS	8.8						A					

HCS All-Way Stop Control Report

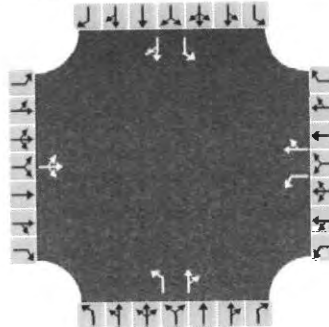
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2022
Analysis Time Period (hrs)	0.25
Time Analyzed	Ex PM Pk Hour w/ Project
Project Description	

Site Information

Intersection	Curry Street at Clearview Drive
Jurisdiction	Carson City
East/West Street	Clearview Drive
North/South Street	Curry Street
Peak Hour Factor	0.95

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	11	29	13	26	40	47	33	126	99	72	131	13
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			L	TR		L	TR		L	TR	
Flow Rate, v (veh/h)	56			27	92		35	237		76	152	
Percent Heavy Vehicles	2			2	2		2	2		2	2	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20	3.20		3.20	3.20		3.20	3.20	
Initial Degree of Utilization, x	0.050			0.024	0.081		0.031	0.211		0.067	0.135	
Final Departure Headway, hd (s)	5.78			6.31	5.43		5.78	4.97		5.80	5.24	
Final Degree of Utilization, x	0.090			0.048	0.138		0.056	0.327		0.122	0.221	
Move-Up Time, m (s)	2.0			2.3	2.3		2.3	2.3		2.3	2.3	
Service Time, ts (s)	3.78			4.01	3.13		3.48	2.67		3.50	2.94	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	56			27	92		35	237		76	152	
Capacity	622			571	663		623	725		620	687	
95% Queue Length, Q ₉₅ (veh)	0.3			0.2	0.5		0.2	1.4		0.4	0.8	
Control Delay (s/veh)	9.4			9.3	9.0		8.8	10.1		9.3	9.4	
Level of Service, LOS	A			A	A		A	B		A	A	
Approach Delay (s/veh)	9.4			9.1			9.9			9.4		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh LOS	9.5						A					

HCS All-Way Stop Control Report

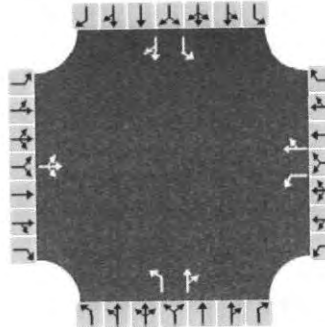
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2050
Analysis Time Period (hrs)	0.25
Time Analyzed	Bkgrd AM Peak Hour
Project Description	

Site Information

Intersection	Curry Street at Clearview Drive
Jurisdiction	Carson City
East/West Street	Clearview Drive
North/South Street	Curry Street
Peak Hour Factor	0.83

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	17	48	25	46	21	78	13	171	135	99	148	4
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			L	TR		L	TR		L	TR	
Flow Rate, v (veh/h)	108			55	119		16	369		119	183	
Percent Heavy Vehicles	2			2	2		2	2		2	2	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20	3.20		3.20	3.20		3.20	3.20	
Initial Degree of Utilization, x	0.096			0.049	0.106		0.014	0.328		0.106	0.163	
Final Departure Headway, hd (s)	6.48			7.03	5.98		6.35	5.54		6.42	5.90	
Final Degree of Utilization, x	0.195			0.108	0.198		0.028	0.567		0.213	0.300	
Move-Up Time, m (s)	2.0			2.3	2.3		2.3	2.3		2.3	2.3	
Service Time, ts (s)	4.48			4.73	3.68		4.05	3.24		4.12	3.60	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	108			55	119		16	369		119	183	
Capacity	556			512	602		567	650		561	610	
95% Queue Length, Q ₉₅ (veh)	0.7			0.4	0.7		0.1	3.6		0.8	1.3	
Control Delay (s/veh)	11.0			10.6	10.2		9.2	15.2		10.8	11.1	
Level of Service, LOS	B			B	B		A	C		B	B	
Approach Delay (s/veh)	11.0			10.3			15.0			11.0		
Approach LOS	B			B			B			B		
Intersection Delay, s/veh LOS	12.5						B					

HCS All-Way Stop Control Report

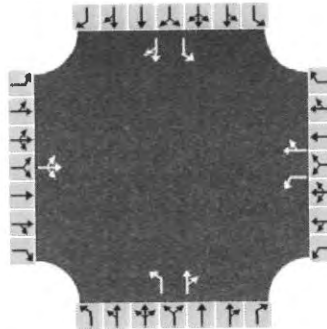
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2050
Analysis Time Period (hrs)	0.25
Time Analyzed	Bkgrd PM Peak Hour
Project Description	

Site Information

Intersection	Curry Street at Clearview Drive
Jurisdiction	Carson City
East/West Street	Clearview Drive
North/South Street	Curry Street
Peak Hour Factor	0.95

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	23	61	25	48	84	99	67	247	154	152	255	27
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			L	TR		L	TR		L	TR	
Flow Rate, v (veh/h)	115			51	193		71	422		160	297	
Percent Heavy Vehicles	2			2	2		2	2		2	2	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20	3.20		3.20	3.20		3.20	3.20	
Initial Degree of Utilization, x	0.102			0.045	0.171		0.063	0.375		0.142	0.264	
Final Departure Headway, hd (s)	7.49			7.89	7.00		7.09	6.31		7.13	6.56	
Final Degree of Utilization, x	0.239			0.111	0.375		0.139	0.739		0.317	0.541	
Move-Up Time, m (s)	2.0			2.3	2.3		2.3	2.3		2.3	2.3	
Service Time, ts (s)	5.49			5.59	4.70		4.79	4.01		4.83	4.26	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	115			51	193		71	422		160	297	
Capacity	480			456	514		508	571		505	549	
95% Queue Length, Q ₉₅ (veh)	0.9			0.4	1.7		0.5	6.3		1.3	3.2	
Control Delay (s/veh)	12.8			11.6	13.8		10.9	24.8		13.1	16.7	
Level of Service, LOS	B			B	B		B	C		B	C	
Approach Delay (s/veh)	12.8			13.4			22.8			15.4		
Approach LOS	B			B			C			C		
Intersection Delay, s/veh LOS	17.6						C					

HCS All-Way Stop Control Report

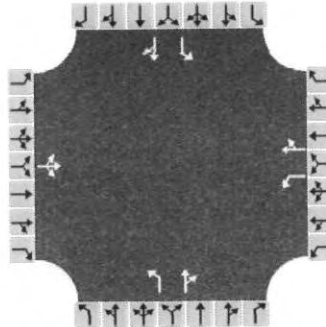
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2050
Analysis Time Period (hrs)	0.25
Time Analyzed	Bkgrd AM Pk Hr w/ Project
Project Description	

Site Information

Intersection	Curry Street at Clearview Drive
Jurisdiction	Carson City
East/West Street	Clearview Drive
North/South Street	Curry Street
Peak Hour Factor	0.83

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	17	48	26	48	21	78	14	177	153	99	155	4
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			L	TR		L	TR		L	TR	
Flow Rate, v (veh/h)	110			58	119		17	398		119	192	
Percent Heavy Vehicles	2			2	2		2	2		2	2	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20	3.20		3.20	3.20		3.20	3.20	
Initial Degree of Utilization, x	0.097			0.051	0.106		0.015	0.353		0.106	0.170	
Final Departure Headway, hd (s)	6.59			7.15	6.09		6.40	5.56		6.49	5.97	
Final Degree of Utilization, x	0.201			0.115	0.202		0.030	0.615		0.215	0.318	
Move-Up Time, m (s)	2.0			2.3	2.3		2.3	2.3		2.3	2.3	
Service Time, ts (s)	4.59			4.85	3.79		4.10	3.26		4.19	3.67	

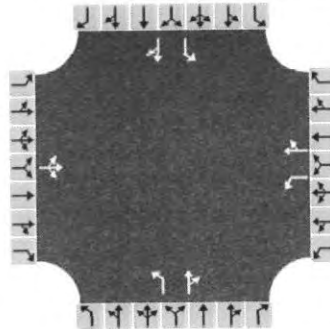
Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	110			58	119		17	398		119	192	
Capacity	546			504	591		563	647		554	603	
95% Queue Length, Q ₉₅ (veh)	0.7			0.4	0.7		0.1	4.2		0.8	1.4	
Control Delay (s/veh)	11.2			10.8	10.3		9.3	16.7		11.0	11.4	
Level of Service, LOS	B			B	B		A	C		B	B	
Approach Delay (s/veh)	11.2			10.5			16.4			11.3		
Approach LOS	B			B			C			B		
Intersection Delay, s/veh LOS	13.2						B					

HCS All-Way Stop Control Report

General Information		Site Information	
Analyst	DKK	Intersection	Curry Street at Clearview Drive
Agency/Co.	Lochsa Engineering	Jurisdiction	Carson City
Date Performed	5/19/2022	East/West Street	Clearview Drive
Analysis Year	2050	North/South Street	Curry Street
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.95
Time Analyzed	Bkgrd PM Pk Hr w/ Project		
Project Description			

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	23	61	26	51	84	99	67	256	180	152	265	27
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			L	TR		L	TR		L	TR	
Flow Rate, v (veh/h)	116			54	193		71	459		160	307	
Percent Heavy Vehicles	2			2	2		2	2		2	2	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20	3.20		3.20	3.20		3.20	3.20	
Initial Degree of Utilization, x	0.103			0.048	0.171		0.063	0.408		0.142	0.273	
Final Departure Headway, hd (s)	7.65			8.04	7.15		7.15	6.35		7.24	6.67	
Final Degree of Utilization, x	0.246			0.120	0.383		0.140	0.810		0.322	0.569	
Move-Up Time, m (s)	2.0			2.3	2.3		2.3	2.3		2.3	2.3	
Service Time, ts (s)	5.65			5.74	4.85		4.85	4.05		4.94	4.37	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	116			54	193		71	459		160	307	
Capacity	471			448	504		503	567		497	540	
95% Queue Length, Q ₉₅ (veh)	1.0			0.4	1.8		0.5	8.0		1.4	3.5	
Control Delay (s/veh)	13.1			11.8	14.2		11.0	30.7		13.3	17.8	
Level of Service, LOS	B			B	B		B	D		B	C	
Approach Delay (s/veh)	13.1			13.7			28.1			16.3		
Approach LOS	B			B			D			C		
Intersection Delay, s/veh LOS	20.1						C					

HCS Two-Way Stop-Control Report

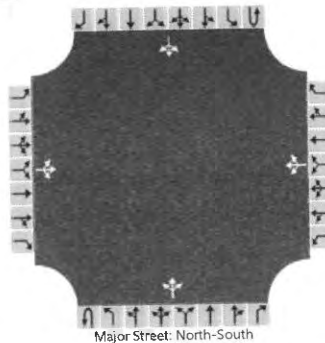
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2022
Time Analyzed	Ex AM Pk Hr w/ Project
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Roland Street at Cochise Street
Jurisdiction	Carson City
East/West Street	Roland Street
North/South Street	Cochise Street
Peak Hour Factor	0.33
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	1	0		0	0	0		1	36	0		1	42	1
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			3				0			3				3		
Capacity, c (veh/h)			648				0			1449				1475		
v/c Ratio			0.00							0.00				0.00		
95% Queue Length, Q ₉₅ (veh)			0.0							0.0				0.0		
Control Delay (s/veh)			10.6							7.5	0.0	0.0		7.4	0.0	0.0
Level of Service (LOS)			B							A	A	A		A	A	A
Approach Delay (s/veh)	10.6								0.2				0.2			
Approach LOS	B								A				A			

HCS Two-Way Stop-Control Report

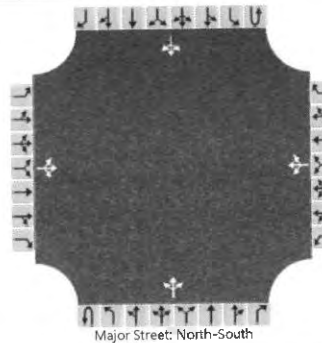
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2022
Time Analyzed	Ex PM Pk Hr w/ Project
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Roland Street at Cochise Street
Jurisdiction	Carson City
East/West Street	Roland Street
North/South Street	Cochise Street
Peak Hour Factor	0.33
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		1	0	0		0	0	1		0	51	0		0	59	1
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			3				3			0				0		
Capacity, c (veh/h)			615				889			1387				1420		
v/c Ratio			0.00				0.00			0.00				0.00		
95% Queue Length, Q ₉₅ (veh)			0.0				0.0			0.0				0.0		
Control Delay (s/veh)			10.9				9.1			7.6	0.0	0.0		7.5	0.0	0.0
Level of Service (LOS)			B				A			A	A	A		A	A	A
Approach Delay (s/veh)	10.9				9.1				0.0				0.0			
Approach LOS	B				A				A				A			

HCS Two-Way Stop-Control Report

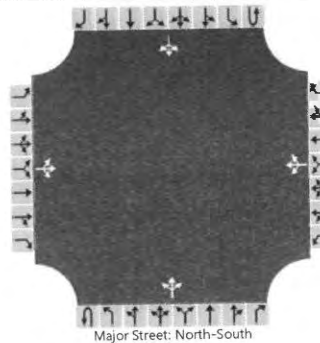
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2050
Time Analyzed	Bkgrd AM Peak Hour
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Roland Street at Cochise Street
Jurisdiction	Carson City
East/West Street	Roland Street
North/South Street	Cochise Street
Peak Hour Factor	0.33
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	2	0		0	0	0		2	0	0		2	0	2
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			6				0			6				6		
Capacity, c (veh/h)			857				0			1608				1617		
v/c Ratio			0.01							0.00				0.00		
95% Queue Length, Q ₉₅ (veh)			0.0							0.0				0.0		
Control Delay (s/veh)			9.2							7.2	0.0	0.0		7.2	0.0	0.0
Level of Service (LOS)			A							A	A	A		A	A	A
Approach Delay (s/veh)	9.2								7.2				3.6			
Approach LOS	A								A				A			

HCS Two-Way Stop-Control Report

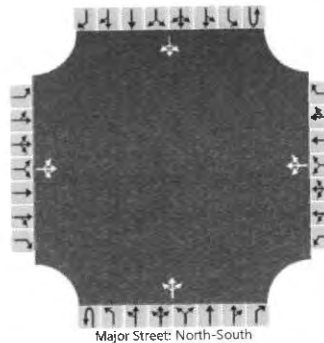
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2050
Time Analyzed	Bkgrd PM Peak Hour
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Roland Street at Cochise Street
Jurisdiction	Carson City
East/West Street	Roland Street
North/South Street	Cochise Street
Peak Hour Factor	0.33
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		2	0	0		0	0	2		0	2	0		0	0	2
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

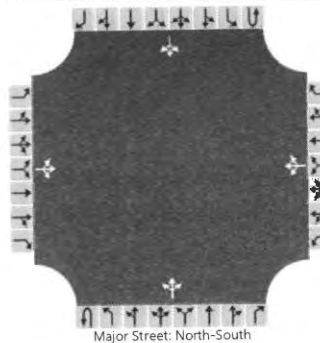
Flow Rate, v (veh/h)			6				6			0				0		
Capacity, c (veh/h)			1001				1074			1608				1608		
v/c Ratio			0.01				0.01			0.00				0.00		
95% Queue Length, Q ₉₅ (veh)			0.0				0.0			0.0				0.0		
Control Delay (s/veh)			8.6				8.4			7.2	0.0	0.0		7.2	0.0	0.0
Level of Service (LOS)			A				A			A	A	A		A	A	A
Approach Delay (s/veh)	8.6				8.4				0.0				0.0			
Approach LOS	A				A				A				A			

HCS Two-Way Stop-Control Report

General Information

Analyst	DKK	Intersection	Roland Street at Cochise Street
Agency/Co.	Lochsa Engineering	Jurisdiction	Carson City
Date Performed	5/19/2022	East/West Street	Roland Street
Analysis Year	2050	North/South Street	Cochise Street
Time Analyzed	Bkgrd AM Pk Hr w/ Project	Peak Hour Factor	0.33
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description			

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	2	0		0	0	0		2	36	0		2	42	2
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			6				0			6				6		
Capacity, c (veh/h)			634				0			1445				1475		
v/c Ratio			0.01							0.00				0.00		
95% Queue Length, Q ₉₅ (veh)			0.0							0.0				0.0		
Control Delay (s/veh)			10.7							7.5	0.0	0.0		7.5	0.0	0.0
Level of Service (LOS)			B							A	A	A		A	A	A
Approach Delay (s/veh)	10.7								0.4				0.4			
Approach LOS	B								A				A			

HCS Two-Way Stop-Control Report

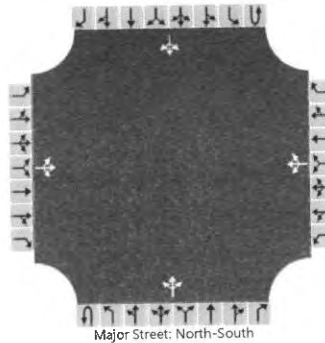
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2050
Time Analyzed	Bkgrd PM Pk Hr w/ Project
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Roland Street at Cochise Street
Jurisdiction	Carson City
East/West Street	Roland Street
North/South Street	Cochise Street
Peak Hour Factor	0.33
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		2	0	0		0	0	2		0	53	0		0	59	2
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			6			6				0				0		
Capacity, c (veh/h)			606			882				1384				1412		
v/c Ratio			0.01			0.01				0.00				0.00		
95% Queue Length, Q ₉₅ (veh)			0.0			0.0				0.0				0.0		
Control Delay (s/veh)			11.0			9.1				7.6	0.0	0.0		7.5	0.0	0.0
Level of Service (LOS)			B			A				A	A	A		A	A	A
Approach Delay (s/veh)	11.0				9.1				0.0				0.0			
Approach LOS	B				A				A				A			

APPENDIX D

DRIVEWAY ANALYSIS

HCS Two-Way Stop-Control Report

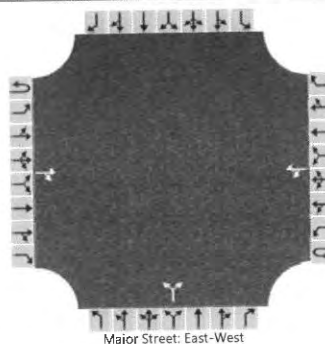
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/20/2022
Analysis Year	2022
Time Analyzed	Ex AM Pk Hour w/ Project
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Driveway at Bennett Avenue
Jurisdiction	Carson City
East/West Street	Bennett Avenue
North/South Street	Driveway
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			0	0		17	0			0		13				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type Storage					Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)					4.1				7.1		6.2					
Critical Headway (sec)					4.13				6.43		6.23					
Base Follow-Up Headway (sec)					2.2				3.5		3.3					
Follow-Up Headway (sec)					2.23				3.53		3.33					

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)					18					14						
Capacity, c (veh/h)					1617					1082						
v/c Ratio					0.01					0.01						
95% Queue Length, Q ₉₅ (veh)					0.0					0.0						
Control Delay (s/veh)					7.3	0.1				8.4						
Level of Service (LOS)					A	A				A						
Approach Delay (s/veh)					7.3				8.4							
Approach LOS					A				A							

HCS Two-Way Stop-Control Report

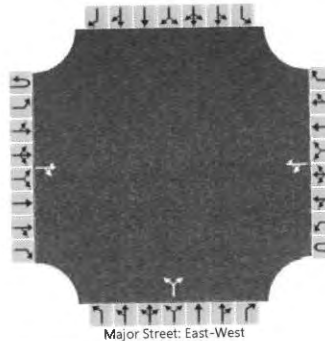
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/20/2022
Analysis Year	2022
Time Analyzed	Ex PM Pk Hour w/ Project
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Driveway at Bennett Avenue
Jurisdiction	Carson City
East/West Street	Bennett Avenue
North/South Street	Driveway
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			0	0		24	0			0		18				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type Storage					Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)					4.1					7.1		6.2				
Critical Headway (sec)					4.13					6.43		6.23				
Base Follow-Up Headway (sec)					2.2					3.5		3.3				
Follow-Up Headway (sec)					2.23					3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)					26					20						
Capacity, c (veh/h)					1617					1082						
v/c Ratio					0.02					0.02						
95% Queue Length, Q ₉₅ (veh)					0.0					0.1						
Control Delay (s/veh)					7.3	0.1				8.4						
Level of Service (LOS)					A	A				A						
Approach Delay (s/veh)					7.3				8.4							
Approach LOS					A				A							

HCS Two-Way Stop-Control Report

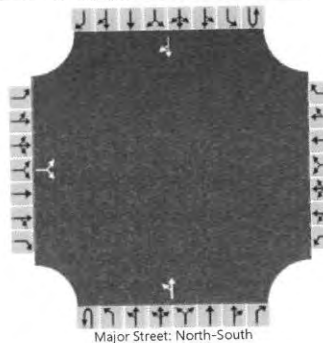
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/20/2022
Analysis Year	2022
Time Analyzed	Ex AM Pk Hour w/ Project
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Driveway at Junction Drive
Jurisdiction	Carson City
East/West Street	Driveway
North/South Street	Junction Drive
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		23		0						0	0				0	25
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage					Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

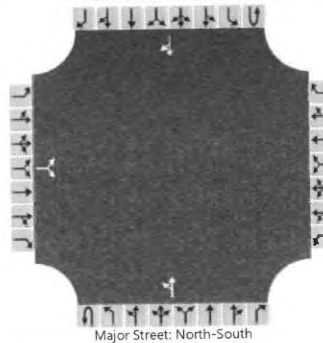
Flow Rate, v (veh/h)			25							0						
Capacity, c (veh/h)			1003							1580						
v/c Ratio			0.02							0.00						
95% Queue Length, Q ₉₅ (veh)			0.1							0.0						
Control Delay (s/veh)			8.7							7.3	0.0					
Level of Service (LOS)			A							A	A					
Approach Delay (s/veh)	8.7															
Approach LOS	A															

HCS Two-Way Stop-Control Report

General Information

Analyst	DKK	Intersection	Driveway at Junction Drive
Agency/Co.	Lochsa Engineering	Jurisdiction	Carson City
Date Performed	5/20/2022	East/West Street	Driveway
Analysis Year	2022	North/South Street	Junction Drive
Time Analyzed	Ex PM Pk Hour w/ Project	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description			

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		33		0						0	0				0	35
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			36							0						
Capacity, c (veh/h)			996							1566						
v/c Ratio			0.04							0.00						
95% Queue Length, Q ₉₅ (veh)			0.1							0.0						
Control Delay (s/veh)			8.8							7.3	0.0					
Level of Service (LOS)			A							A	A					
Approach Delay (s/veh)	8.8															
Approach LOS	A															

APPENDIX E

LEFT-TURN STORAGE ANALYSIS

•

TWO MINUTE STORAGE REQUIREMENTS ANALYSIS

Appion Way at S. Carson Street-South Leg

AM PEAK HOUR

MOVEMENT VOLUME (VPH) = 187

REQUIRED STORAGE = (TOTAL VPH) * (2 MIN) * (25 FT/VEH) / (60 MIN/HR)

REQUIRED STORAGE LENGTH = 155.8 FEET

PM PEAK HOUR

MOVEMENT VOLUME (VPH) = 165

REQUIRED STORAGE = (TOTAL VPH) * (2 MIN) * (25 FT/VEH) / (60 MIN/HR)

REQUIRED STORAGE LENGTH = 137.5 FEET

TWO MINUTE STORAGE REQUIREMENTS ANALYSIS

Appion Way at Cochise Street-East Leg

AM PEAK HOUR

MOVEMENT VOLUME (VPH) = 153

REQUIRED STORAGE = (TOTAL VPH) * (2 MIN) * (25 FT/VEH) / (60 MIN/HR)

REQUIRED STORAGE LENGTH = 127.5 FEET

PM PEAK HOUR

MOVEMENT VOLUME (VPH) = 184

REQUIRED STORAGE = (TOTAL VPH) * (2 MIN) * (25 FT/VEH) / (60 MIN/HR)

REQUIRED STORAGE LENGTH = 153.3 FEET

TWO MINUTE STORAGE REQUIREMENTS ANALYSIS

Cochise Street at Clearview Drive-East Leg

AM PEAK HOUR

MOVEMENT VOLUME (VPH) = 24

REQUIRED STORAGE = (TOTAL VPH) * (2 MIN) * (25 FT/VEH) / (60 MIN/HR)

REQUIRED STORAGE LENGTH = 20 FEET

PM PEAK HOUR

MOVEMENT VOLUME (VPH) = 26

REQUIRED STORAGE = (TOTAL VPH) * (2 MIN) * (25 FT/VEH) / (60 MIN/HR)

REQUIRED STORAGE LENGTH = 21.67 FEET

TWO MINUTE STORAGE REQUIREMENTS ANALYSIS

Cochise Street at Clearview Drive-South Leg

AM PEAK HOUR

MOVEMENT VOLUME (VPH) = 7

REQUIRED STORAGE = (TOTAL VPH) * (2 MIN) * (25 FT/VEH) / (60 MIN/HR)

REQUIRED STORAGE LENGTH = 5.833 FEET

PM PEAK HOUR

MOVEMENT VOLUME (VPH) = 33

REQUIRED STORAGE = (TOTAL VPH) * (2 MIN) * (25 FT/VEH) / (60 MIN/HR)

REQUIRED STORAGE LENGTH = 27.5 FEET

TWO MINUTE STORAGE REQUIREMENTS ANALYSIS

Driveway at Bennett Avenue-East Leg

AM PEAK HOUR

MOVEMENT VOLUME (VPH) = 17

REQUIRED STORAGE = (TOTAL VPH) * (2 MIN) * (25 FT/VEH) / (60 MIN/HR)

REQUIRED STORAGE LENGTH = 14.17 FEET

PM PEAK HOUR

MOVEMENT VOLUME (VPH) = 24

REQUIRED STORAGE = (TOTAL VPH) * (2 MIN) * (25 FT/VEH) / (60 MIN/HR)

REQUIRED STORAGE LENGTH = 20 FEET

APPENDIX F

PRO-RATA SHARE WORKSHEET

PROJECT HOUR TRAFFIC VOLUMES ASSIGNMENT TO APPION WAY & S. CARSON STREET IMPROVEMENTS

Project	Eastbound Left		Eastbound Right		Northbound Left		Westbound Left		Westbound Right		Southbound Left	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Existing Traffic Volumes	0	0	91	166	140	132	47	90	38	32	22	34
Cochise MF	0	0	11	7	3	12	0	0	0	0	0	0
RC Zone Hotel	15	22	16	23	21	21	0	0	0	0	0	0
Comm Pad (Fast Food)	20	16	20	16	23	17	0	0	0	0	0	0
Appion Commerical Center	123	79	73	64	95	60	0	0	0	0	0	0
Clearview Ridge	0	0	5	3	1	2	0	0	0	0	0	0
Roland Street Townhomes	0	0	0	0	0	0	9	5	4	2	1	4
Jade Dispensary	16	23	11	15	13	18	0	0	0	0	0	0
Total	174	140	227	294	296	262	56	95	42	34	23	38

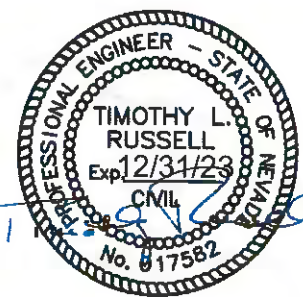
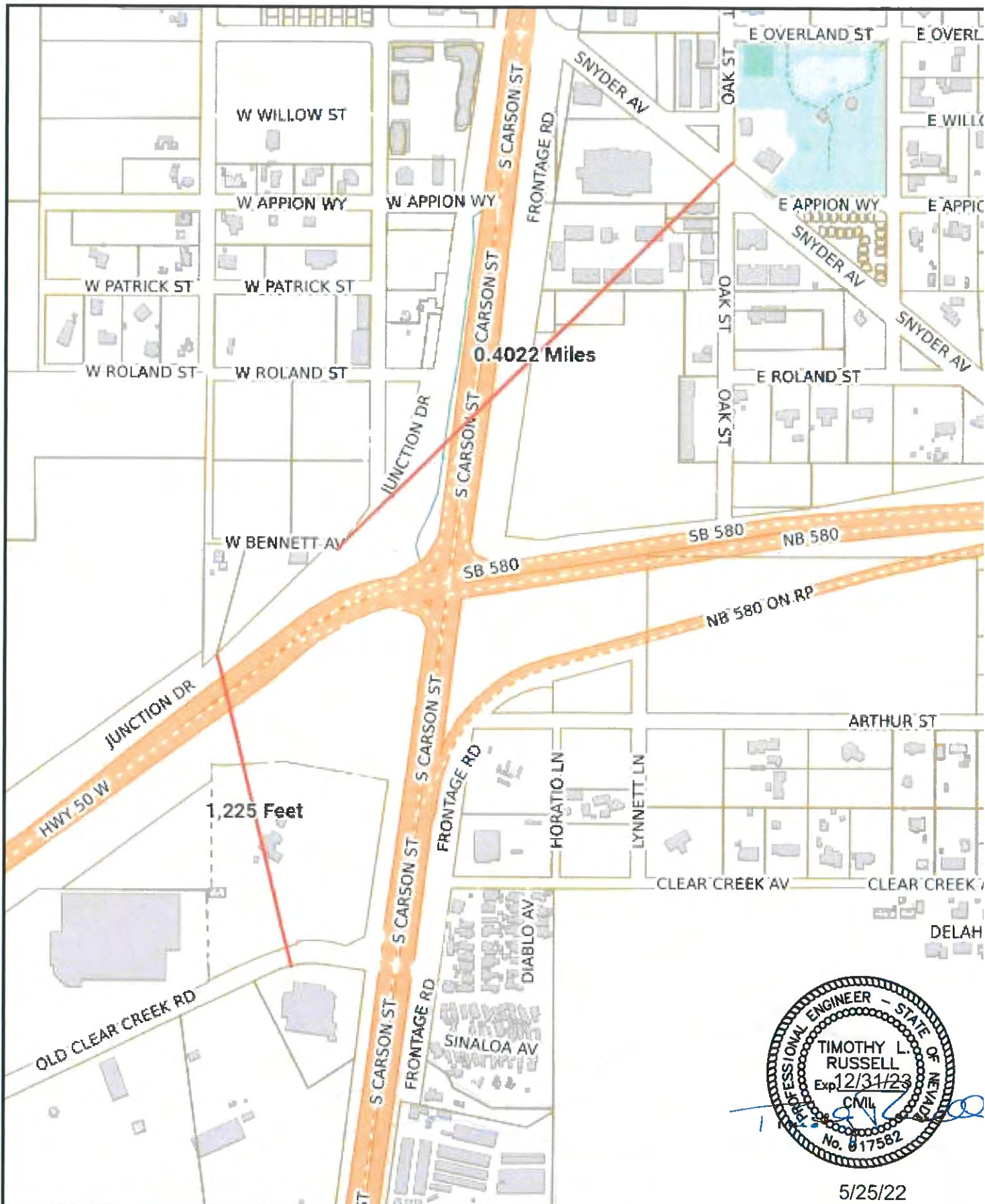
Assumption: The future project eastbound left turn volumes is assumed to be equal percentage of generated traffic as southbound right turn movement (45%)

Intersection Total	
AM	PM
338	454
14	19
52	66
63	49
291	203
6	5
14	11
40	56
818	863

Intersection Total

1681

Project	AM	PM	Average
Existing Traffic Volumes	41.3%	52.6%	47.0%
Cochise MF	1.7%	2.2%	2.0%
RC Zone Hotel	6.4%	7.6%	7.0%
Comm Pad (Fast Food)	7.7%	5.7%	6.7%
Appion Commerical Center	35.6%	23.5%	29.5%
Clearview Ridge	0.7%	0.6%	0.7%
Roland Street Townhomes	1.7%	1.3%	1.5%
Jade Dispensary	4.9%	6.5%	5.7%
Total	100.0%	100.0%	100.0%



5/25/22

LUMOS
& ASSOCIATES
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CARSON CITY, NEVADA 89703
PH. (775) 883-7077 | INFO@LUMOSINC.COM

DISTANCES TAKEN FROM CC MAP GEO PARCEL
EDGE TO PARCEL EDGE
Property Distance Figure

Carson City

Nevada

12/31/23
Date: 5-25-2022
Scale: XXXX
Job No: NA
FIGURE 1

June 21, 2022

Mr. Stephen Pottey, P.E.
Senior Project Manager
Carson City Public Works
108 E. Proctor Street
Carson City, NV 89701

Subject: 5100 S. Carson Street (Jade Dispensary)
LEN 221098

Dear Mr. Pottey,

Lochsa Engineering is in receipt of your comment letter for the above referenced project. In response to your comments the following information is provided:

Comment 1: Please speak to how the traffic volume was incorporated, if at all, of the of "Appion Commercial Center Traffic Analysis", dated March 2017 (document provided with original scope of work). The scope of work outlined the approved development of a fast food restaurant, Panera.

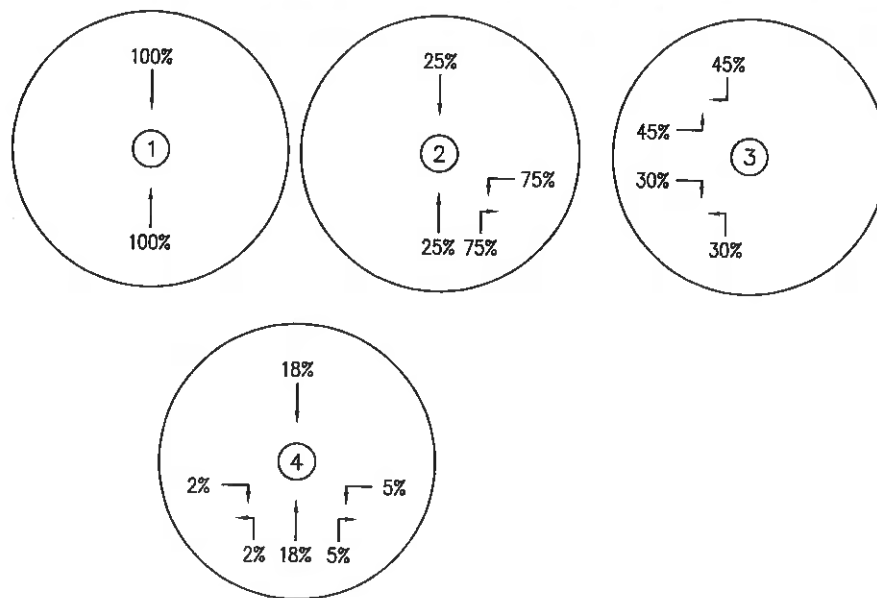
Response 1: The traffic study for the Appion Commercial Center was reviewed and a portion of the traffic volumes were incorporated into the traffic study for this project. The study for the Appion Commercial Center site included three building of which two are currently occupied and open, Chick Fil-A and a retail building with three tenants. As such the traffic volumes at nearby intersections recorded for this study already include the traffic generated by these existing buildings. Based upon the land use and building sizes the study generated traffic volumes for the Panera building of this site were determined and added to the recorded intersection volumes.

Comment 2: Evaluation of the Appion / S Carson intersection will need to include the movements based on it being signalized. A proper contribution of the pro-rata share cannot be determined based on the evaluation provided. Please update distribution percentages based on the Appion / S Carson being signalized.

Response 2: The pro-rata share was based on the intersection being signalized. Reviewing the worksheet generated traffic from the project were added to both the eastbound left turn and right turn movements. A trip distribution and trip assignment figure assuming a signalized intersection has been enclosed.

Comment 3: Per the scope of work, provide analysis of sight triangles for each driveway of the proposed development.

Response 3: A site plan has been included with these sight triangles. The sight triangle was based on the dimensions provided on Table 12.2. The speed limit was assumed to be 25 miles per hour and the minimum intersection sight distance was based on stop sign controlled 2-3 lane roadway.

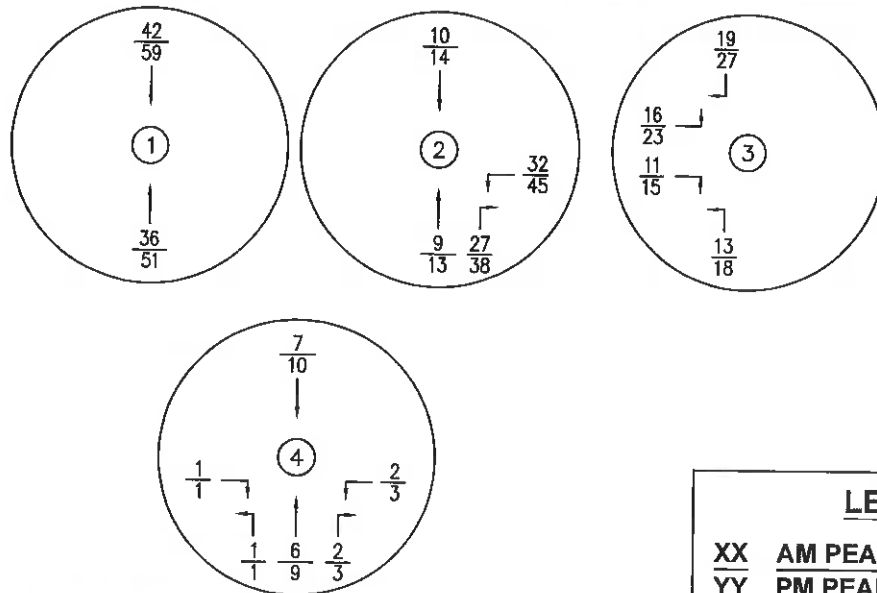


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TRIP
DISTRIBUTION
FIGURE 1

JADE DISPENSARY



LEGEND

XX AM PEAK HOUR VOLUMES
 YY PM PEAK HOUR VOLUMES

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TRIP
 ASSIGNMENT
 FIGURE 2

JADE DISPENSARY

Comment 4: Provide table numbers for each of the tables listed in the report.

Response 4: Table numbers have been added to the tables within the report. Please refer revised report with table numbers included.

Comment 5: The second table on page 7 of 12 outlines a 9-hour delay for the southbound 2050 background volumes with project. Please check this calculation or provide a mitigation for the failing LOS.

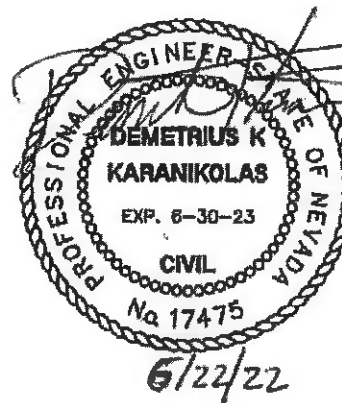
Response 5: Converting the two way stop control intersection to all-way stop control intersection would reduce the delays experienced on the north and south legs of the intersection. The results of the analysis of the mitigation measure is as follows:

TABLE 1 UNSIGNALIZED INTERSECTION APPION WAY AT COCHISE STREET			
		2050 BKGRD VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK
EASTBOUND	Level of Service	A	B
	Average Delay (Sec)	9.9	11.4
WESTBOUND	Level of Service	C	F
	Average Delay (Sec)	20.4	62.2
NORTHBOUND	Level of Service	B	D
	Average Delay (Sec)	14.4	32.8
SOUTHBOUND	Level of Service	B	C
	Average Delay (Sec)	13.4	21.8
INTERSECTION	Level of Service	C	E
	Average Delay (Sec)	16.7	42.2

If you have any additional questions or comments please contact our office at your convenience,

Sincerely,
Lochsa Engineering


Demetrius Karanikolas, P.E., PTOE
Principal



APPENDIX A

REVISED REPORT

A. SITE AND STUDY AREA BOUNDARIES

The proposed commercial development is located on the southwest corner of Bennett Avenue and Junction Drive in Carson City, Nevada. This site is currently addressed as 5100 S. Carson Street. Refer to Figure 1 for the vicinity map.

In discussions with representatives from Carson City, it was decided that this report would analyze the following intersections:

Appion Way at South Carson Street
Appion Way at Cochise Street
Cochise Street at Roland Street
Clearview Drive at Curry Street

The analysis shall include level of service, left-turn storage, and driveway analysis. Refer to Appendix A for the Carson City traffic impact analysis scope.

B. EXISTING AND PROPOSED USES OF THE SITE

The proposed project is to be located one parcel identified by the assessor's parcel number (A.P.N.) 00-930-106. Currently this location consists of a vacant commercial building.

The proposed improvements to this site shall consist of a 3,724 square foot high turnover restaurant and a 3,978 square foot MMJ retail dispensary. The project site plan is enclosed with this report. The project is anticipated to be completed in one phase without future phases.

C. EXISTING AND PROPOSED USES IN THE VICINITY OF THE SITE

East of the project site is Junction Drive and S. Carson Street and adjacent to these roadways are vacant parcels.

North of the project site is Bennett Avenue and adjacent to this roadway are vacant parcels.

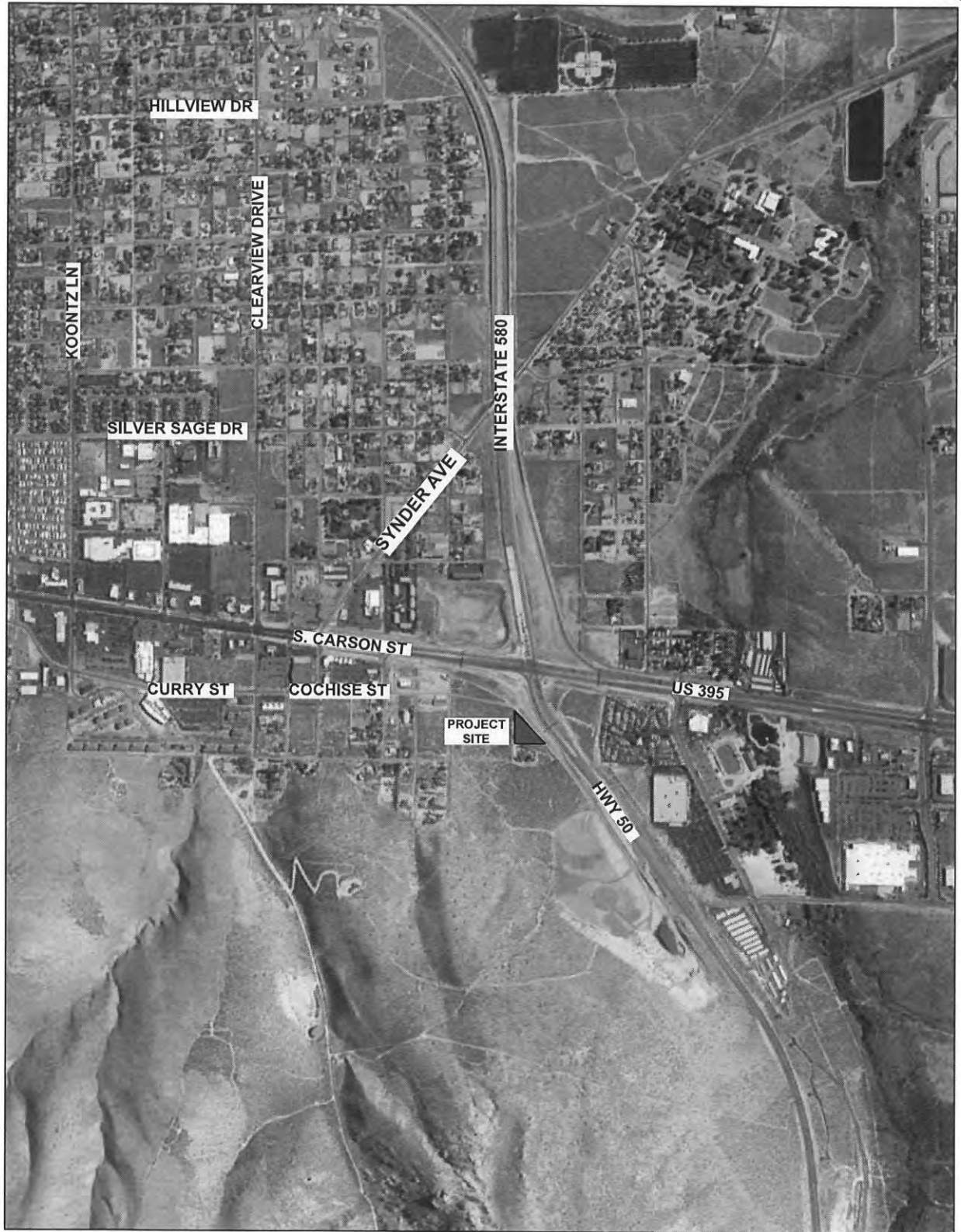
South of the project site is Highway 50 and adjacent to this roadway are vacant parcels.

West of the project site is a single family residence and a vacant parcel.

D. EXISTING ROADWAYS AND INTERSECTIONS

Appion Way

This east-west roadway consists of one lane in each direction. The speed limit is 25 miles per hour and on-street parking is permitted. Between Cochise Street and S. Carson Street this



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VICINITY MAP
FIGURE 1

JADE DISPENSARY

roadway is fully developed with pavement, curb, gutter, and sidewalk. West of Cochise Street this roadway is partially developed with pavement only.

South Carson Street

This north-south roadway consists of three lanes in each direction separated by a raised median island. The speed limit is 45 miles per hour and on-street parking is not permitted. The roadway is fully developed with pavement, curb, and gutter. The east side of the roadway includes an attached sidewalk and the west side of the roadway consists of a detached multi-use trail.

Clearview Drive

East of Cochise Street/Curry Street this roadway consists of one lane in each direction separated by a two way left turn lane. West of Cochise Street/Curry Street this roadway consists of one lane in each direction. The speed limit is 25 miles per hour and on-street parking is permitted west of Cochise Street/Curry Street. The roadway is fully developed with pavement, curb, and gutter from S. Carson Street to Cochise Street/Curry Street and generally west of the Cochise Street/Curry Street. Sidewalk is present along the roadway except for a portion on the north side of Clearview Drive east of Cochise Street/Curry Street.

Cochise Street/Curry Street

This north-south roadway is designated Cochise Street south of Clearview Drive and Curry Street north of Clearview Drive. North of Clearview Drive, this roadway consists of one travel lane and one bicycle lane in each direction separated by a two way left turn lane. South of Clearview Drive this roadway consists of one lane in each direction. The speed limit is 25 miles per hour and on-street parking is permitted south of Clearview Drive. North of Overland Street this roadway consists of pavement, curb, gutter and sidewalk. South of Overland Street to Roland Street, this roadway is partially developed with pavement and only curb, gutter, and sidewalk on the east side of the street. South of Roland Street, this roadway is partially developed with pavement only.

Roland Street

This east-west roadway consists of one lane in each direction. The speed limit is 25 miles per hour and on-street parking is permitted. This roadway is partially developed with pavement only.

Appion Way at South Carson Street

This three leg intersection is currently stop controlled on the west leg. The north leg consists of three through lanes and one exclusive right turn lane. The south leg consists of one exclusive left turn lane and three through lanes. The west leg consists of one exclusive right turn lane.

Appion Way at Cochise Street

This four leg intersection is currently stop controlled on the north and south legs. All four legs consist of a combined left turn/through/right turn lane.

Cochise Street at Roland Street

This four leg intersection currently does not have posted traffic control signage. All four legs consist of a combined left turn/through/right turn lane.

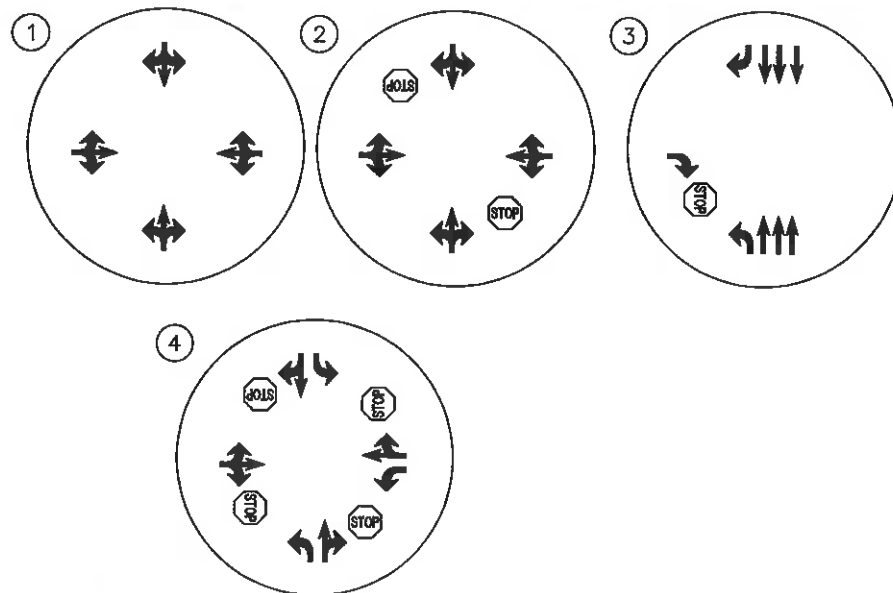
Clearview Drive at Curry Street

This four leg intersection currently is stop controlled on all four legs. The east, north, and south legs consists of one exclusive left turn lane and a combined through/right turn lane. The west leg consists of a combined left turn/through/right turn lane.

Refer to Figure 2 for existing lane configurations.

E. TRIP GENERATION RATES

Trip generation rates for the proposed development were obtained from the Institute of Transportation Engineers publication entitled *Trip Generation* (11th Edition). The independent variable used for the trip generation equations was the square footage for the building. The trip generation calculations are as follows:



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EXISTING INTERSECTION
CONFIGURATIONS
FIGURE 2

JADE DISPENSARY

TABLE 1 TRIP GENERATION ITE CODE 882 MARIJUANA DISPENSARY 3,978 SQUARE FEET	
AM PEAK HOUR	
Average Rate = 10.54 Trips per 1,000 Square Feet $T = 10.54 (3.978)$ $T = 41.92$ or 42 Trips	
<u>52% Entering</u> 22 Trips	<u>48% Exiting</u> 20 Trips
PM PEAK HOUR	
Average Rate = 18.93 Trips per 1,000 Square Feet $T = 18.93 (3.978)$ $T = 75.30$ or 76 Trips	
<u>50% Entering</u> 38 Trips	<u>50% Exiting</u> 38 Trips
WEEKDAY	
Average Rate = 211.12 Trips per 1,000 Square Feet $T = 211.12 (3.978)$ $T = 839.83$ or 840 Trips	

TABLE 2 TRIP GENERATION ITE CODE 932 HIGH TURNOVER (SIT-DOWN) RESTAURANT 3,724 SQUARE FEET	
AM PEAK HOUR	
Average Rate = 9.57 Trips per 1,000 Square Feet $T = 9.57 (3.724)$ $T = 35.63$ or 36 Trips	
<u>55% Entering</u> 20 Trips	<u>45% Exiting</u> 16 Trips
PM PEAK HOUR	
Average Rate = 9.05 Trips per 1,000 Square Feet $T = 9.05 (3.724)$ $T = 33.70$ or 34 Trips	
<u>61% Entering</u> 21 Trips	<u>39% Exiting</u> 13 Trips
WEEKDAY	
Average Rate = 107.20 Trips per 1,000 Square Feet $T = 107.20 (3.724)$ $T = 399.21$ or 400 Trips	

TABLE 3 TRIP GENERATION SUMMARY							
ITE CODE	LAND USE DESCRIPTION		AM PEAK HOUR		PM PEAK HOUR		WEEKDAY
			ENTER	EXIT	ENTER	EXIT	
882	Marijuana Dispensary	3,978 Sq. Ft.	22	20	38	38	840
932	High Turnover Restaurant	3,724 Sq. Ft.	20	16	21	13	400
	Total		42	36	59	51	1,240

F. TRIP DISTRIBUTION AND TRIP ASSIGNMENTS

The trip distribution was based upon site location, existing traffic patterns, and the roadway system within the study area. Refer to Figure 3 for trip distribution.

Trip assignments were calculated using the trip distribution and trip generation information. Refer to Figure 4 for the total trip assignment.

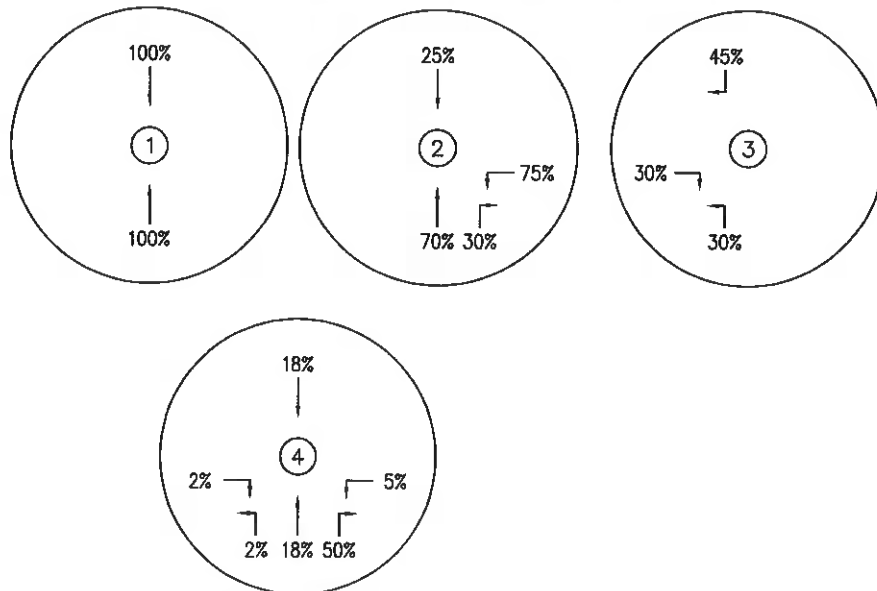
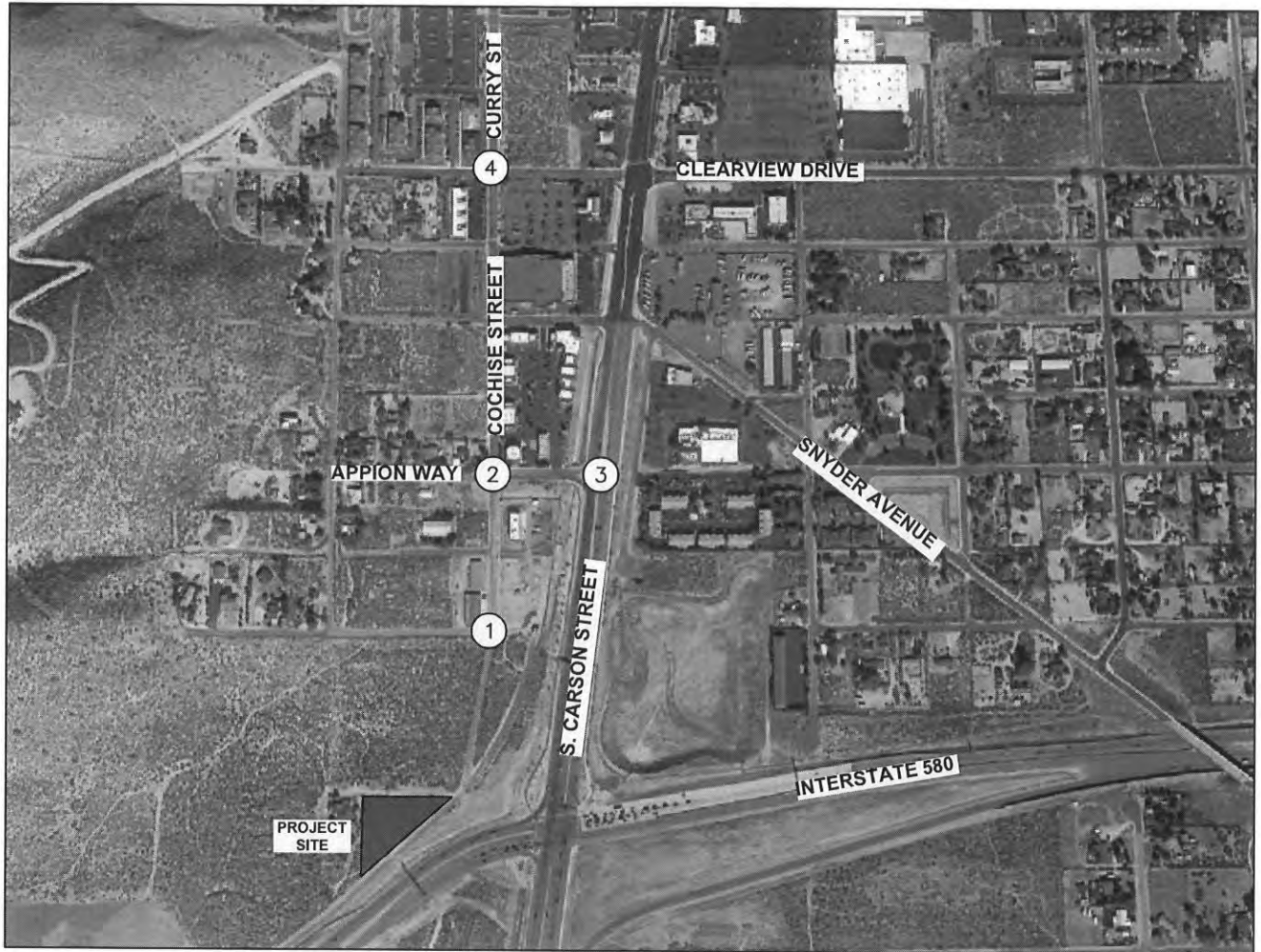
G. EXISTING AND PROJECTED TRAFFIC VOLUMES

Traffic volumes at each subject intersection were recorded on the following dates:

Appion Way at S. Carson Street	Tuesday, May 10, 2022
Appion Way at Cochise Street	Tuesday, May 10, 2022
Cochise Street at Roland Street	Wednesday, May 11, 2022
Clearview Drive at Curry Street	Wednesday, May 11, 2022

The volumes were recorded in 15-minute intervals between the hours of 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. The 15-minute volume counts are contained in Appendix B. Refer to Figure 5 for observed existing volumes. Projected trips generated by adjacent approved projects were added to the existing volumes. The project trips from *Appion Way Commercial Center TIA* and the *Clearview Ridge TIA*, both prepared by Solaegui Engineers, LTD, were added to the observed existing volumes. Refer to Figure 6 for the existing volumes with background studies volumes. The anticipated project trips were then combined with the existing volumes. Refer to Figure 7 for the existing with project volumes.

As required by Carson City, the study intersections were analyzed in regards to the long-term 2050 transportation model. The growth rate was calculated based on the reviewing the transportation model's average daily volumes (ADT) for 2020 and 2050. Utilizing the calculated ADT volumes in these models a growth rate was calculated. The growth rate was calculated separate for S. Carson Street and the study area west of S. Carson Street. A separate growth rate was used due to the large difference in current ADT on S. Carson Street in relation to the other study roadways. The mainline volumes on S. Carson Street have a calculated 30 year growth rate is 0.5%. The calculated 30 growth rate for the study area west of S. Carson Street was calculated to be 2.7%. The existing intersection volumes were

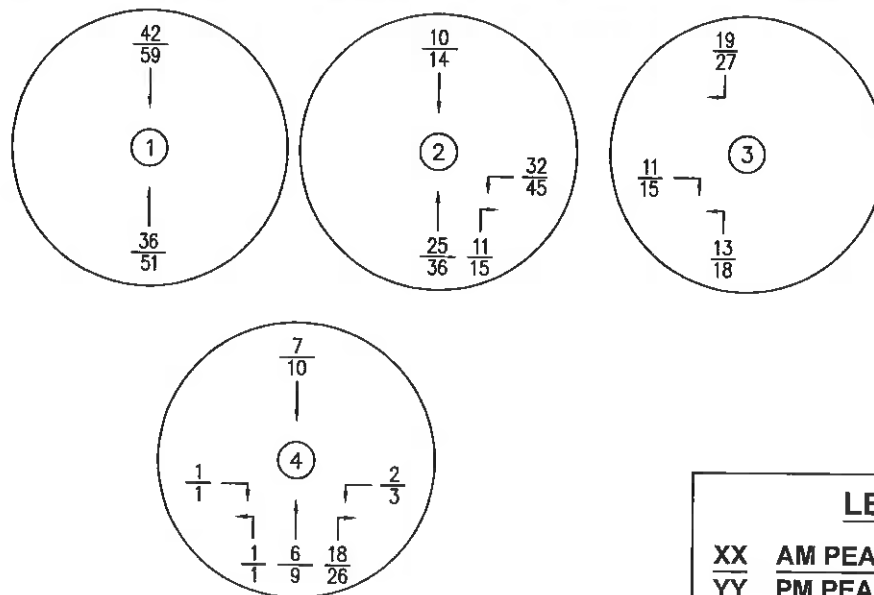
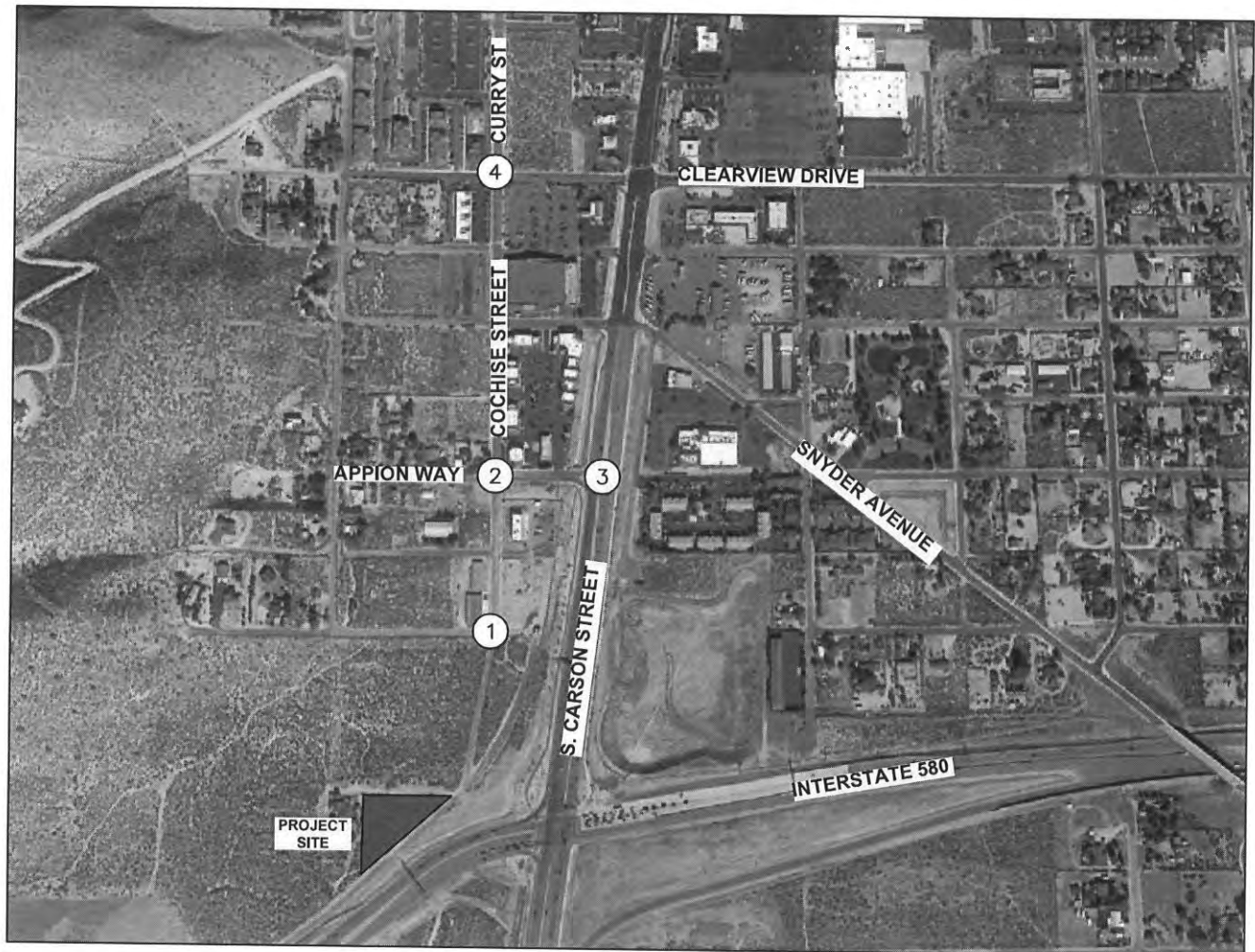


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TRIP
DISTRIBUTION
FIGURE 3

JADE DISPENSARY



LEGEND

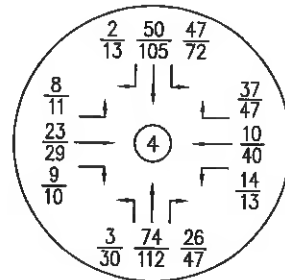
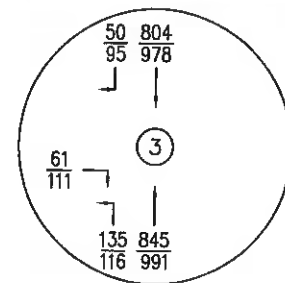
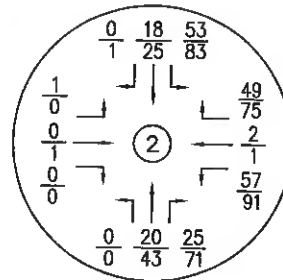
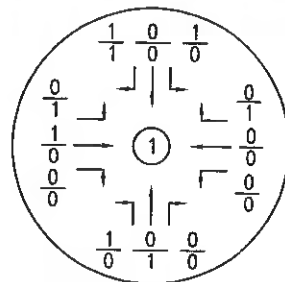
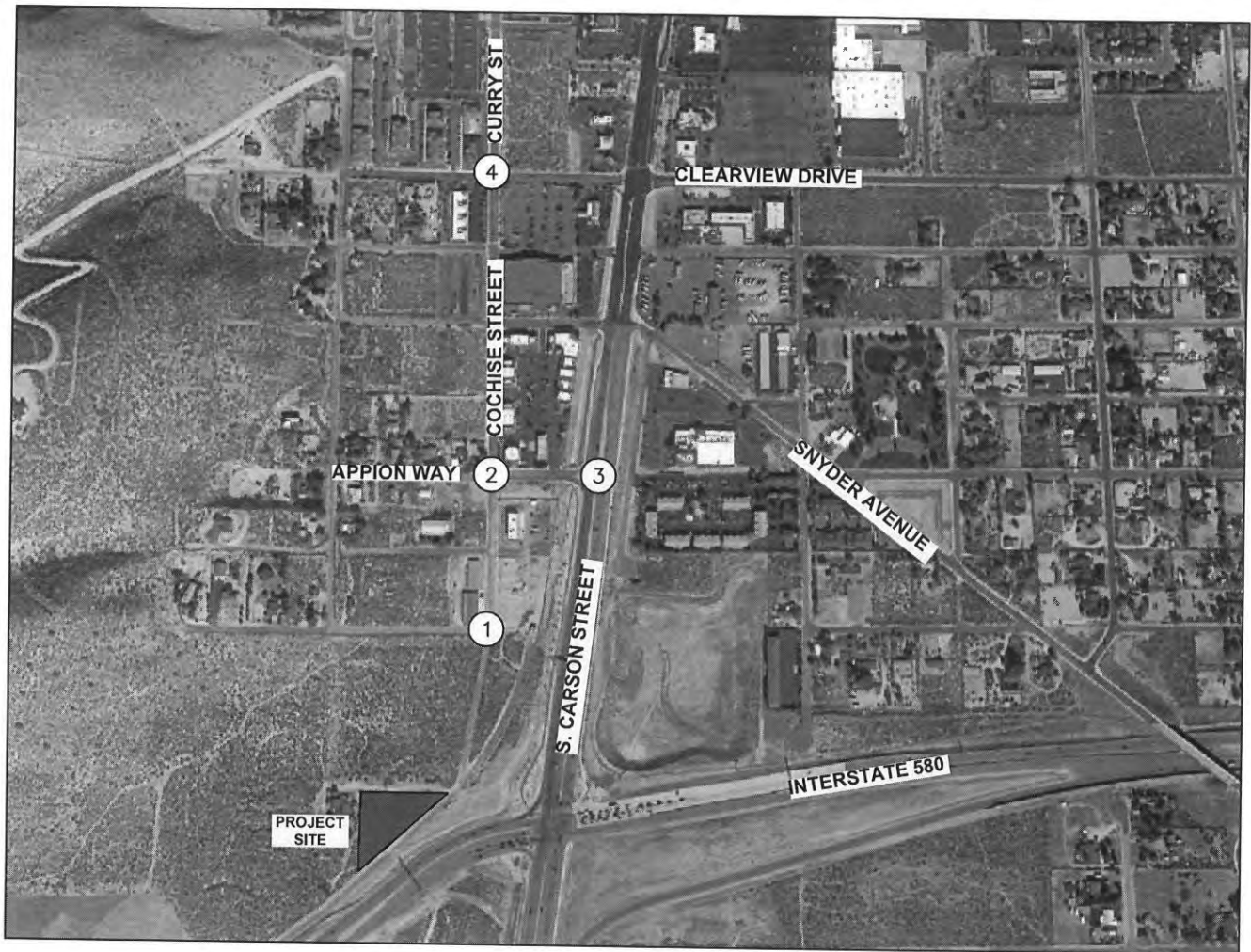
XX AM PEAK HOUR VOLUMES
YY PM PEAK HOUR VOLUMES

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TRIP
ASSIGNMENT
FIGURE 4

JADE DISPENSARY



LEGEND

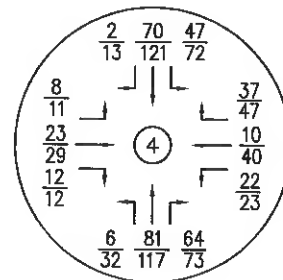
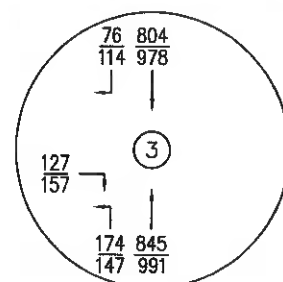
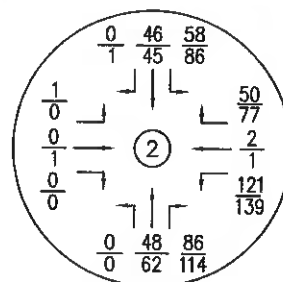
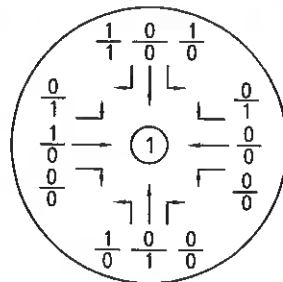
XX AM PEAK HOUR VOLUMES
YY PM PEAK HOUR VOLUMES

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EXISTING
VOLUMES
FIGURE 5

JADE DISPENSARY



LEGEND

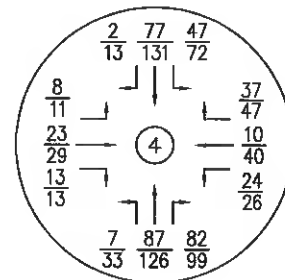
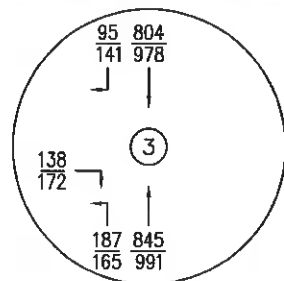
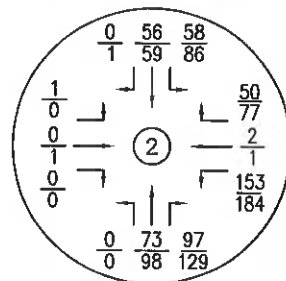
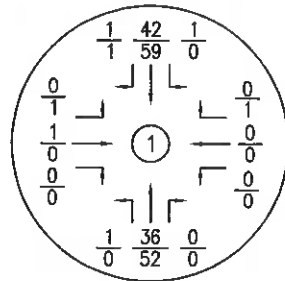
XX AM PEAK HOUR VOLUMES
YY PM PEAK HOUR VOLUMES

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EXISTING VOLUMES
W/ BKGRD STUDIES
FIGURE 6

JADE DISPENSARY



LEGEND	
XX	AM PEAK HOUR VOLUMES
YY	PM PEAK HOUR VOLUMES

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EXISTING VOLUMES
w/ PROJECT
FIGURE 7

JADE DISPENSARY

multiplied by the growth rate to arrive at the 2050 background volumes. Refer to Figure 8 for the 2050 background volumes. The anticipated project trips were combined with the background volumes. Refer to Figure 9 for 2050 background with project volumes.

H. INTERSECTION ANALYSIS

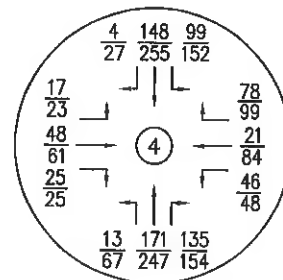
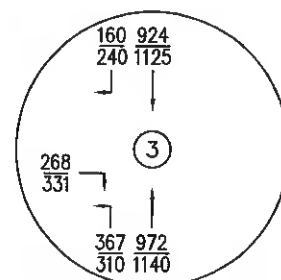
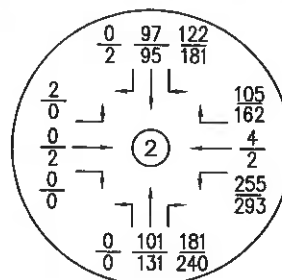
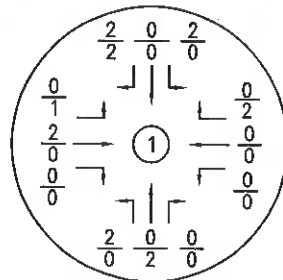
Based upon the preceding information, a level of service analysis was performed for each intersection. Techniques presented in the Transportation Research Board publication entitled *Highway Capacity Manual – Seventh Edition* were utilized for this analysis. The analysis worksheets are provided in Appendix C.

TABLE 4 UNSIGNALIZED INTERSECTION APPION WAY AT S. CARSON STREET					
		EXISTING VOLUMES		EXISTING VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
EASTBOUND RIGHT	Level of Service	C	C	C	C
	Average Delay (Sec)	15.9	19.3	16.3	20.3
NORTHBOUND LEFT	Level of Service	A	A	A	A
	Average Delay (Sec)	3.9	3.6	4.6	4.6

TABLE 5 UNSIGNALIZED INTERSECTION APPION WAY AT S. CARSON STREET					
		2050 BACKGROUND VOLUMES		2050 BKGRD VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
EASTBOUND RIGHT	Level of Service	D	F	D	F
	Average Delay (Sec)	31.2	72.5	33.3	83.4
NORTHBOUND LEFT	Level of Service	F	F	F	F
	Average Delay (Sec)	58.6	61.2	69.8	77.6

Appion Way at S. Carson Street

The conflicting and stop controlled minor movements at this intersection currently experiences acceptable delays and level of service during the AM and PM peak hours. Due to the projected volumes increase due to the background growth rate, movements at this intersection are anticipated to experience unacceptable delays in the 2050 background and 2050 background with project scenarios.



LEGEND

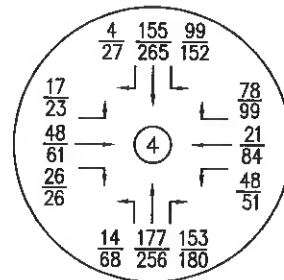
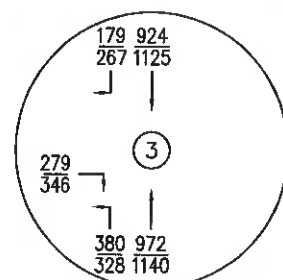
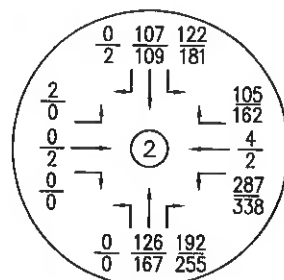
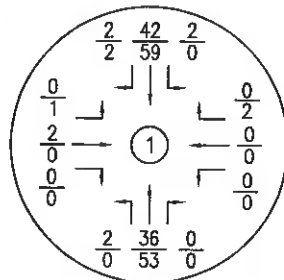
XX AM PEAK HOUR VOLUMES
YY PM PEAK HOUR VOLUMES

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2050 BACKGROUND
VOLUMES
FIGURE 8

JADE DISPENSARY



LEGEND

XX AM PEAK HOUR VOLUMES
YY PM PEAK HOUR VOLUMES

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2050 BACKGROUND
VOLUMES w/ PROJECT
FIGURE 9

JADE DISPENSARY

TABLE 6 UNSIGNALIZED INTERSECTION APPION WAY AT COCHISE STREET					
		EXISTING VOLUMES		EXISTING VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
EASTBOUND LEFT	Level of Service	A	A	A	A
	Average Delay (Sec)	7.3	0.0	7.3	0.0
WESTBOUND LEFT	Level of Service	A	A	A	A
	Average Delay (Sec)	5.4	5.1	5.8	5.6
NORTHBOUND	Level of Service	B	B	B	B
	Average Delay (Sec)	10.6	11.5	12.1	14.6
SOUTHBOUND	Level of Service	B	C	C	D
	Average Delay (Sec)	14.3	18.0	17.3	28.1

TABLE 7 UNSIGNALIZED INTERSECTION APPION WAY AT COCHISE STREET					
		2050 BACKGROUND VOLUMES		2050 BKGRD VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
EASTBOUND LEFT	Level of Service	A	A	A	A
	Average Delay (Sec)	7.5	0.0	7.5	0.0
WESTBOUND LEFT	Level of Service	A	A	A	A
	Average Delay (Sec)	5.8	5.7	6.1	6.0
NORTHBOUND	Level of Service	C	E	D	F
	Average Delay (Sec)	20.1	48.2	31.9	163.0
SOUTHBOUND	Level of Service	F	F	F	F
	Average Delay (Sec)	191.8	1,140.0	447.4	35,182.0

Appion Way at Cochise Street

The conflicting and stop controlled minor movements at this intersection currently experiences acceptable delays and level of service during the AM and PM peak hours. Due to the projected volumes increase due to the background growth rate, movements at this intersection are anticipated to experience unacceptable delays in the 2050 background and 2050 background with project scenarios.

TABLE 8 UNSIGNALIZED INTERSECTION COCHISE STREET AT ROLAND STREET					
		EXISTING VOLUMES		EXISTING VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
EASTBOUND	Level of Service	-	-	B	B
	Average Delay (Sec)	-	-	10.6	10.9
WESTBOUND	Level of Service	-	-	-	A
	Average Delay (Sec)	-	-	-	9.1
NORTHBOUND LEFT	Level of Service	-	-	A	A
	Average Delay (Sec)	-	-	0.2	0.0
SOUTHBOUND LEFT	Level of Service	-	-	A	A
	Average Delay (Sec)	-	-	0.2	0.0

TABLE 9 UNSIGNALIZED INTERSECTION COCHISE STREET AT ROLAND STREET					
		2050 BACKGROUND VOLUMES		2050 BKGRD VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
EASTBOUND	Level of Service	A	A	B	B
	Average Delay (Sec)	9.2	8.6	10.7	11.0
WESTBOUND	Level of Service	-	A	-	A
	Average Delay (Sec)	-	8.4	-	9.1
NORTHBOUND LEFT	Level of Service	A	A	A	A
	Average Delay (Sec)	7.2	0.0	0.4	0.0
SOUTHBOUND LEFT	Level of Service	A	A	A	A
	Average Delay (Sec)	3.6	0.0	0.4	0.0

Cochise Street at Roland Street

The approach legs at this intersection are currently not controlled, as such a delay analysis of the existing intersection operations could not be performed. Per the TIA scope, a warrant analysis for stop control was analyzed. The analysis was based upon the criteria presented in section 2B.04, Right of Way at Intersections, as published in the *Manual of Uniform Traffic Control Devices*. This section has three criteria to establish intersection control for three or more leg intersections. The recommended criteria is as follows:

1. The combined volumes for all modes of transportation be above 2,000 units per day.
2. The ability of the road user to see conflicting traffic on an approach in order to stop or yield in compliance with normal rules of the road.

3. The number of recorded accidents indicate that five or more accidents are a result of failure to yield the right of way over a three year period.

Applying this criteria, the intersection is not anticipated to experience over 2,000 units per day utilizing the intersection upon completion of the project and there are no recorded accidents at this intersection. The sight distance to see traffic on an opposing approach is restricted for the north and west legs due to an existing building on the northwest corner of the intersection. With the increase in through volumes on Cochise Street, it would be recommended that the east and west legs of the intersection be signed with a stop sign to control these approaches. The level of service analysis assumed stop control for the east and west legs.

The conflicting and stop controlled minor movements at this intersection currently experiences acceptable delays and level of service during the AM and PM peak hours. These acceptable delays are anticipated to continue in the 2050 year scenarios.

TABLE 10 UNSIGNALIZED INTERSECTION CLEARVIEW DRIVE AT CURRY STREET					
		EXISTING VOLUMES		EXISTING VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
EASTBOUND	Level of Service	A	A	A	A
	Average Delay (Sec)	8.7	9.2	8.8	9.4
WESTBOUND	Level of Service	A	A	A	A
	Average Delay (Sec)	8.2	8.9	8.3	9.1
NORTHBOUND	Level of Service	A	A	A	A
	Average Delay (Sec)	8.8	9.4	8.1	9.9
SOUTHBOUND	Level of Service	A	A	A	A
	Average Delay (Sec)	8.5	9.2	8.7	9.4
INTERSECTION	Level of Service	A	A	A	A
	Average Delay (Sec)	8.6	9.2	8.8	9.5

TABLE 11 UNSIGNALIZED INTERSECTION CLEARVIEW DRIVE AT CURRY STREET					
		2050 BACKGROUND VOLUMES		2050 BKGRD VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
EASTBOUND	Level of Service	B	B	B	B
	Average Delay (Sec)	11.0	12.8	11.2	13.1
WESTBOUND	Level of Service	B	B	B	B
	Average Delay (Sec)	10.3	13.4	10.5	13.7
NORTHBOUND	Level of Service	B	C	C	D
	Average Delay (Sec)	15.0	22.8	16.4	28.1
SOUTHBOUND	Level of Service	B	C	B	C
	Average Delay (Sec)	11.0	15.4	11.3	16.3
INTERSECTION	Level of Service	B	C	B	C
	Average Delay (Sec)	12.5	17.6	13.2	20.1

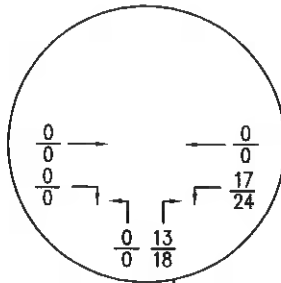
Clearview Drive at Curry Street

This intersection currently experiences acceptable delays during the AM and PM peak hours in the existing and the 2050 year scenarios.

I. DRIVEWAY ANALYSIS

The proposed project site shall have access to the local roadway network via one driveway on Bennett Avenue and one driveway on Junction Drive. The driveway on Bennett Avenue is located approximately 145 feet west of the intersection of Junction Drive at Bennett Avenue. This driveway shall allow full ingressing and egressing movements. The driveway on Junction Drive is located approximately 240 feet south of Bennett Drive. This driveway shall allow full ingressing and egressing movements. Both roadways are classified as local roadways and per the Carson City code requirements (Table 12.12), the minimum centerline driveway spacing between driveways is 50 feet. The minimum intersection commercial driveway distance from an intersection corner is 85 feet for a stop controlled sign condition as per Carson City code requirements (Table 12.13). As illustrated in the site plan the driveways meet the current spacing requirements.

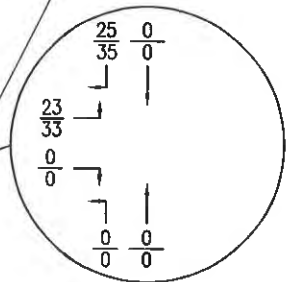
A level of service analysis was performed for each driveway intersection. Refer to Figure 10 for the driveway volumes. Techniques presented in the Transportation Research Board publication entitled *Highway Capacity Manual – Seventh Edition* were utilized for this analysis. Refer to Appendix D for the analysis worksheets. The results of the analysis is as follows:



BENNETT AVENUE

PROJECT SITE

JUNCTION DRIVE



LEGEND

XX AM PEAK HOUR VOLUMES
YY PM PEAK HOUR VOLUMES

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TABLE 12 UNSIGNALIZED INTERSECTION DRIVEWAY ON BENNETT AVENUE			
		EXISTING VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK
WESTBOUND LEFT	Level of Service	A	A
	Average Delay (Sec)	7.3	7.3
NORTHBOUND	Level of Service	A	A
	Average Delay (Sec)	8.4	8.4

TABLE 13 UNSIGNALIZED INTERSECTION DRIVEWAY ON JUNCTION DRIVE			
		EXISTING VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK
EASTBOUND	Level of Service	A	A
	Average Delay (Sec)	8.7	8.8
NORTHBOUND LEFT	Level of Service	A	A
	Average Delay (Sec)	7.3	7.3

J. LEFT-TURN STORAGE ANALYSIS

As required by Carson City, the left-turn storage bays at the study intersections and the driveways were analyzed for storage length requirements. The left turn analysis was based on a two-minute storage for unsignalized intersections. Refer to Appendix E for analysis worksheets. The results are as follows:

TABLE 14 LEFT TURN STORAGE ANALYSIS			
	REQUIRED MINIMUM STORAGE LENGTH		EXISTING STORAGE LENGTH
	AM PEAK HOUR	PM PEAK HOUR	
Appion Way at S. Carson Street South Leg	175 feet	150 feet	350 feet
Appion Way at Cochise Street East Leg	150 feet	175 feet	N/A
Cochise Street at Clearview Dr. East Leg	25 feet	25 feet	125 feet
Cochise Street at Clearview Dr. South Leg	25 feet	50 feet	50 feet
Driveway at Bennett Avenue East Leg	25 feet	25 feet	N/A

K. PEDESTRIAN & BICYCLE FACILITIES

Reviewing the Carson City Unified Pathways Master Plan, the project site is near some existing and planned facilities. Currently in the vicinity of the project, there is a shared off-street multi-use trails than runs along the west side of S. Carson Street from Appion Way to I-580. According to the plan, Junction Drive adjacent to the project site and Cochise Street south of Roland Street is intended to operate as a shared street. This will provide connection to the wider pathway network north of the project site and on S. Carson Street. Due to the limited size of the project and location, it is not anticipated that the project will generate significant number of pedestrians or bicyclists.

L. PRO-RATA SHARE ANALYSIS

As required by Carson City, contributions are required for the signalization of the intersection of Appion Way at S. Carson Street. The contribution for this intersection was calculated as a percentage of the existing traffic volumes and the anticipated project trips at the intersection. The methodology for this calculation was based upon a review of the calculation presented in the *Clearview Ridge TIA* by Solaegui Engineers, LTD. The current trip assignment for the project was based upon the current traffic conditions, no eastbound left turn permitted. For this analysis, it was assumed that the eastbound left turn distribution were the same percentage of generated trips as the southbound right turn distribution. The study assumed that 45% of generated trips utilize S. Carson Street north of Appion Way. Based upon this calculation the anticipated proportional share for this project was determined to be 5.7%. Refer to Appendix F for the calculation worksheets.

M. RECOMMENDATIONS

To offset traffic impacts that are anticipated with the completion of the project, the following recommendations have been made:

- *For the Carson City to require all mandatory signage and striping to be shown on the project's civil engineering drawings and that they conform to the Carson City and MUTCD standards.*
- *For the proposed driveways on Bennett Drive and Junction Drive be constructed per Carson City standards.*
- *For "Stop" signs (R1-1) be installed on the east and west legs of the intersection of Roland Street at Cochise Street.*
- *For the Developer to contribute 5.7% toward the construction of a traffic signal at Appion Way and S. Carson Street.*

APPENDIX B

MITIGATION ANALYSIS

HCS All-Way Stop Control Report

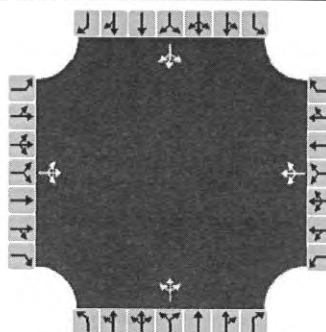
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	6/21/2022
Analysis Year	2050
Analysis Time Period (hrs)	0.25
Time Analyzed	Bkgrd AM Pk Hr w/ Project
Project Description	

Site Information

Intersection	Cochise St at Appion Way
Jurisdiction	Carson City
East/West Street	Appion Way
North/South Street	Cochise Street
Peak Hour Factor	0.89

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	2	0	0	287	4	105	0	126	192	122	107	0
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	2			445			357			257		
Percent Heavy Vehicles	2			2			2			2		

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.002			0.396			0.318			0.229		
Final Departure Headway, hd (s)	6.85			5.62			5.39			5.99		
Final Degree of Utilization, x	0.004			0.695			0.535			0.428		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, ts (s)	4.85			3.62			3.39			3.99		

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	2			445			357			257		
Capacity	525			640			668			601		
95% Queue Length, Q ₉₅ (veh)	0.0			5.6			3.2			2.1		
Control Delay (s/veh)	9.9			20.4			14.4			13.4		
Level of Service, LOS	A			C			B			B		
Approach Delay (s/veh)	9.9			20.4			14.4			13.4		
Approach LOS	A			C			B			B		
Intersection Delay, s/veh LOS	16.7						C					

HCS All-Way Stop Control Report

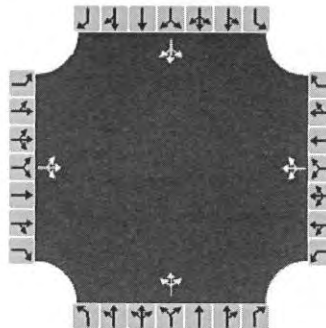
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	6/21/2022
Analysis Year	2050
Analysis Time Period (hrs)	0.25
Time Analyzed	Bkgrd PM Pk Hr w/ Project
Project Description	

Site Information

Intersection	Cochise St at Appion Way
Jurisdiction	Carson City
East/West Street	Appion Way
North/South Street	Cochise Street
Peak Hour Factor	0.89

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	0	2	0	338	2	162	0	167	255	181	109	2
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	2			564			474			328		
Percent Heavy Vehicles	2			2			2			2		

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.002			0.501			0.421			0.292		
Final Departure Headway, hd (s)	8.38			6.36			6.30			7.04		
Final Degree of Utilization, x	0.005			0.997			0.830			0.641		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, ts (s)	6.38			4.36			4.30			5.04		

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	2			564			474			328		
Capacity	429			566			571			512		
95% Queue Length, Q ₉₅ (veh)	0.0			14.4			8.6			4.5		
Control Delay (s/veh)	11.4			62.2			32.8			21.8		
Level of Service, LOS	B			F			D			C		
Approach Delay (s/veh)	11.4			62.2			32.8			21.8		
Approach LOS	B			F			D			C		
Intersection Delay, s/veh LOS	42.2						E					

July 5, 2022

Mr. Stephen Pottey, P.E.
Senior Project Manager
Carson City Public Works
108 E. Proctor Street
Carson City, NV 89701

Subject: 5100 S. Carson Street (Jade Dispensary)
LEN 221098

Dear Mr. Pottey,

Lochsa Engineering is in receipt of your comment letter for the above referenced project. In response to your comments the following information is provided:

Comment 1: Please speak to how the traffic volume was incorporated, if at all, of the of "Appion Commercial Center Traffic Analysis", dated March 2017 (document provided with original scope of work). The scope of work outlined the approved development of a fast food restaurant, Panera.

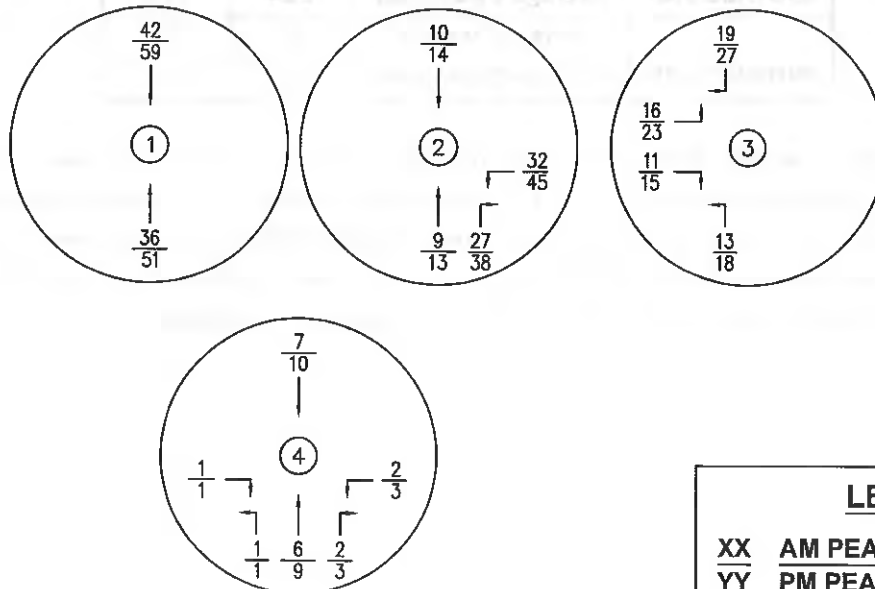
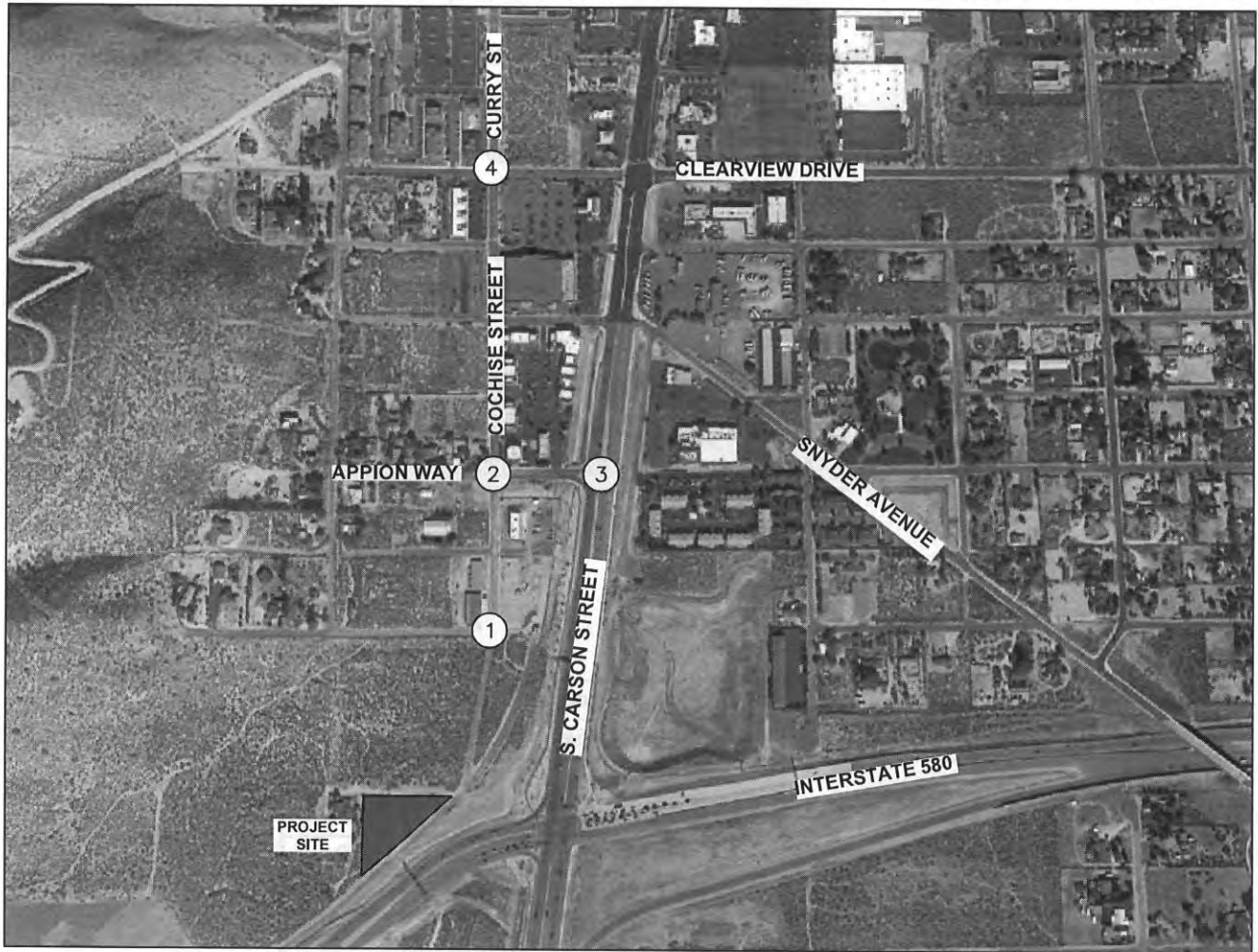
Response 1: The traffic study for the Appion Commercial Center was reviewed and a portion of the traffic volumes were incorporated into the traffic study for this project. The study for the Appion Commercial Center site included three building of which two are currently occupied and open, Chick Fil-A and a retail building with three tenants. As such the traffic volumes at nearby intersections recorded for this study already include the traffic generated by these existing buildings. Based upon the land use and building sizes the study generated traffic volumes for the Panera building of this site were determined and added to the recorded intersection volumes.

Comment 2: Evaluation of the Appion / S Carson intersection will need to include the movements based on it being signalized. A proper contribution of the pro-rata share cannot be determined based on the evaluation provided. Please update distribution percentages based on the Appion / S Carson being signalized.

Response 2: The pro-rata share was based on the intersection being signalized. Reviewing the worksheet generated traffic from the project were added to both the eastbound left turn and right turn movements. A trip distribution and trip assignment figure assuming a signalized intersection has been enclosed.

Comment 3: Per the scope of work, provide analysis of sight triangles for each driveway of the proposed development.

Response 3: A site plan has been included with these sight triangles. The sight triangle was based on the dimensions provided on Table 12.2. The speed limit was assumed to be 25 miles per hour and the minimum intersection sight distance was based on stop sign controlled 2-3 lane roadway.



LEGEND

XX AM PEAK HOUR VOLUMES
YY PM PEAK HOUR VOLUMES

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TRIP
ASSIGNMENT
FIGURE 2

JADE DISPENSARY

TABLE A-2 UNSIGNALIZED INTERSECTION (ALL-WAY STOP & WESTBOUND RIGHT TURN LANE) APPION WAY AT COCHISE STREET			
		2050 BKGRD VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK
EASTBOUND	Level of Service	A	B
	Average Delay (Sec)	10.0	11.0
WESTBOUND	Level of Service	C	D
	Average Delay (Sec)	16.8	25.5
NORTHBOUND	Level of Service	B	D
	Average Delay (Sec)	14.2	26.3
SOUTHBOUND	Level of Service	B	C
	Average Delay (Sec)	13.2	19.0
INTERSECTION	Level of Service	C	C
	Average Delay (Sec)	15.0	24.2

The addition of a right turn lane would decrease the delays in the 2050 year condition and result in an anticipated maximum queue length of 8 vehicles on the east leg. This would equate to a queue length of approximately 200 feet. The length of Appion Way from Carson Street to Cochise Street as measured from intersection corner to intersection corner is approximately 300 feet. The addition of the right turn lane on the east leg of the intersection would result in a possible future queue to be contained on Appion Way.

Based upon the volumes for the year 2022 existing with project volumes, it is not anticipated that the intersection would meet the necessary criteria for an all-way stop control upon the project completion. As such the recommended mitigation measure to be implemented by this project currently would be for the installation of the right turn lane on the east leg of the intersection. The east leg of the intersection currently has sufficient pavement width to add a right turn lane on this leg by posting no parking signs on the north side of Appion Way and adding pavement marking for a right turn lane. The intersection in the future as the area develops further should be switched to an all-way stop control from the current two-way stop control. An analysis of the two-way stop control condition with a right turn lane on the east leg has been provided for the year 2022 existing with project volumes. The results of the analysis is as follows:

A. SITE AND STUDY AREA BOUNDARIES

The proposed commercial development is located on the southwest corner of Bennett Avenue and Junction Drive in Carson City, Nevada. This site is currently addressed as 2100 S Carson Street. Refer to Figure 1 for the vicinity map.

APPENDIX A

REVISED REPORT

In discussions with representatives from Carson City, it was decided that this report would analyze the following intersections:

- Apollon Way at South Carson Street
- Apollon Way at Cochise Street
- Cochise Street at Roland Street
- Clearview Drive at Curry Street

The analysis shall include level of service, left-turn storage, and driveway analysis. Refer to Appendix A for the Carson City traffic analysis scope.

B. EXISTING AND PROPOSED USES OF THE SITE

The proposed project is to be located on a parcel identified by the assessor's parcel number (A.P.N.) 00-930-106. Currently this location consists of a vacant commercial building.

The proposed improvements to this site shall consist of a 3,754 square foot high turnover restaurant and a 3,754 square foot Mini retail dispensary. The project site plan is enclosed with this report. The project is anticipated to be completed in one phase without future phases.

C. EXISTING AND PROPOSED USES IN THE VICINITY OF THE SITE

East of the project site is Junction Drive and S Carson Street and adjacent to these roadways are vacant parcels.

North of the project site is Bennett Avenue and adjacent to this roadway are vacant parcels.

South of the project site is Highway 20 and adjacent to this roadway are vacant parcels.

West of the project site is a single family residence and a vacant parcel.

D. EXISTING ROADWAYS AND INTERSECTIONS

Apollon Way

The east-west roadway runs north-south and has a one-way traffic flow. The speed limit is 35 miles per hour and on-street parking is permitted. Between Cochise Street and S Carson Street this



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VICINITY MAP
FIGURE 1

JADE DISPENSARY

Appion Way at Cochise Street

This four leg intersection is currently stop controlled on the north and south legs. All four legs consist of a combined left turn/through/right turn lane.

Cochise Street at Roland Street

This four leg intersection currently does not have posted traffic control signage. All four legs consist of a combined left turn/through/right turn lane.

Clearview Drive at Curry Street

This four leg intersection currently is stop controlled on all four legs. The east, north, and south legs consists of one exclusive left turn lane and a combined through/right turn lane. The west leg consists of a combined left turn/through/right turn lane.

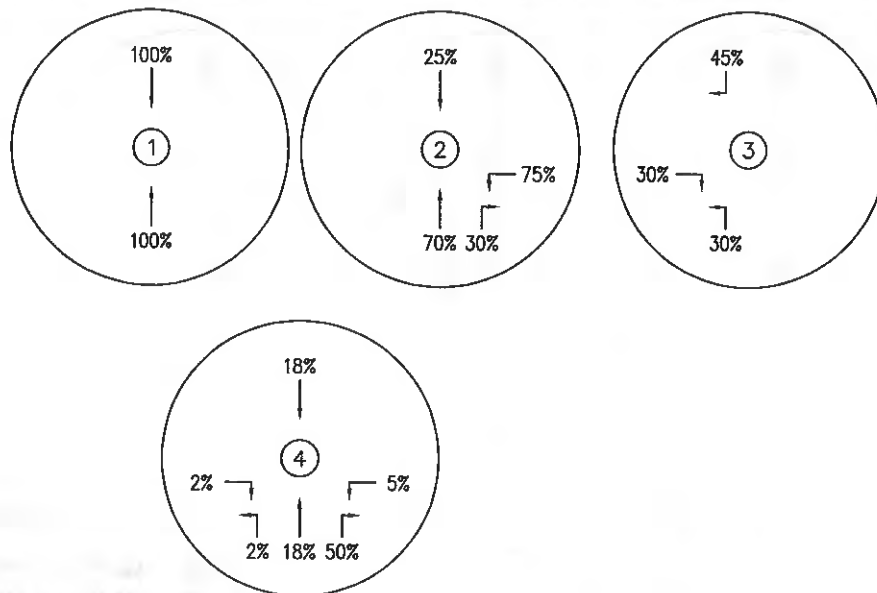
Refer to Figure 2 for existing lane configurations.

E. TRIP GENERATION RATES

Trip generation rates for the proposed development were obtained from the Institute of Transportation Engineers publication entitled *Trip Generation* (11th Edition). The independent variable used for the trip generation equations was the square footage for the building. The trip generation calculations are as follows:

TABLE 1	
TRIP GENERATION	
ITE CODE 882	
MARIJUANA DISPENSARY	
3,978 SQUARE FEET	
AM PEAK HOUR	
Average Rate = 10.54 Trips per 1,000 Square Feet	
T = 10.54 (3.978)	
T = 41.92 or 42 Trips	
<u>52% Entering</u>	<u>48% Exiting</u>
22 Trips	20 Trips
PM PEAK HOUR	
Average Rate = 18.93 Trips per 1,000 Square Feet	
T = 18.93 (3.978)	
T = 75.30 or 76 Trips	
<u>50% Entering</u>	<u>50% Exiting</u>
38 Trips	38 Trips
WEEKDAY	
Average Rate = 211.12 Trips per 1,000 Square Feet	
T = 211.12 (3.978)	
T = 839.83 or 840 Trips	

TABLE 2	
TRIP GENERATION	
ITE CODE 932	
HIGH TURNOVER (SIT-DOWN) RESTAURANT	
3,724 SQUARE FEET	
AM PEAK HOUR	
Average Rate = 9.57 Trips per 1,000 Square Feet	
T = 9.57 (3.724)	
T = 35.63 or 36 Trips	
<u>55% Entering</u>	<u>45% Exiting</u>
20 Trips	16 Trips
PM PEAK HOUR	
Average Rate = 9.05 Trips per 1,000 Square Feet	
T = 9.05 (3.724)	
T = 33.70 or 34 Trips	
<u>61% Entering</u>	<u>39% Exiting</u>
21 Trips	13 Trips
WEEKDAY	
Average Rate = 107.20 Trips per 1,000 Square Feet	
T = 107.20 (3.724)	
T = 399.21 or 400 Trips	

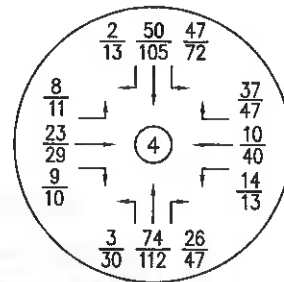
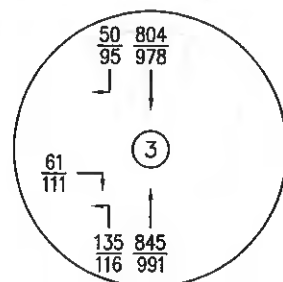
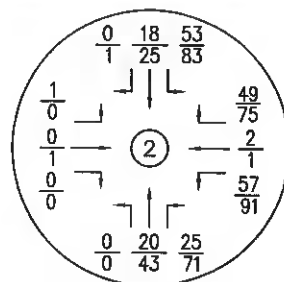
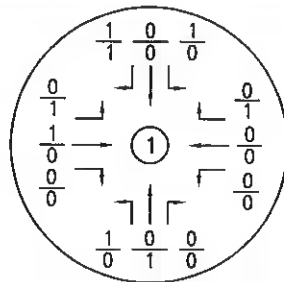


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TRIP
DISTRIBUTION
FIGURE 3

JADE DISPENSARY



LEGEND

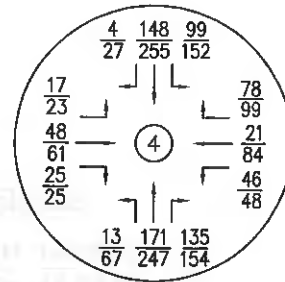
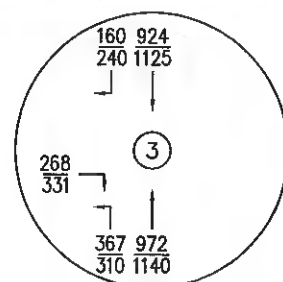
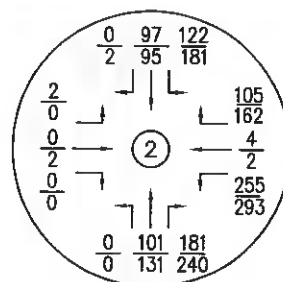
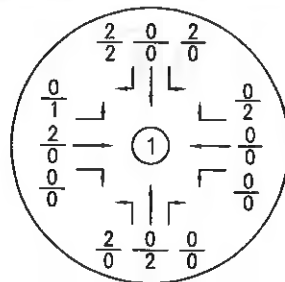
XX AM PEAK HOUR VOLUMES
YY PM PEAK HOUR VOLUMES

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EXISTING
VOLUMES
FIGURE 5

JADE DISPENSARY



LEGEND

XX AM PEAK HOUR VOLUMES
YY PM PEAK HOUR VOLUMES

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2050 BACKGROUND
VOLUMES
FIGURE 8

JADE DISPENSARY

TABLE 6 UNSIGNALIZED INTERSECTION APPION WAY AT COCHISE STREET					
		EXISTING VOLUMES		EXISTING VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
EASTBOUND LEFT	Level of Service	A	A	A	A
	Average Delay (Sec)	7.3	0.0	7.3	0.0
WESTBOUND LEFT	Level of Service	A	A	A	A
	Average Delay (Sec)	5.4	5.1	5.8	5.6
NORTHBOUND	Level of Service	B	B	B	B
	Average Delay (Sec)	10.6	11.5	12.1	14.6
SOUTHBOUND	Level of Service	B	C	C	D
	Average Delay (Sec)	14.3	18.0	17.3	28.1

TABLE 7 UNSIGNALIZED INTERSECTION APPION WAY AT COCHISE STREET					
		2050 BACKGROUND VOLUMES		2050 BKGRD VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
EASTBOUND LEFT	Level of Service	A	A	A	A
	Average Delay (Sec)	7.5	0.0	7.5	0.0
WESTBOUND LEFT	Level of Service	A	A	A	A
	Average Delay (Sec)	5.8	5.7	6.1	6.0
NORTHBOUND	Level of Service	C	E	D	F
	Average Delay (Sec)	20.1	48.2	31.9	163.0
SOUTHBOUND	Level of Service	F	F	F	F
	Average Delay (Sec)	191.8	1,140.0	447.4	35,182.0

Appion Way at Cochise Street

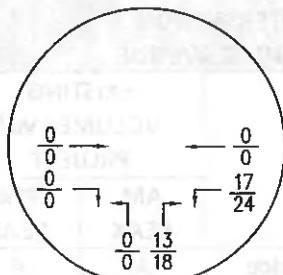
The conflicting and stop controlled minor movements at this intersection currently experiences acceptable delays and level of service during the AM and PM peak hours. Due to the projected volumes increase due to the background growth rate, movements at this intersection are anticipated to experience unacceptable delays in the 2050 background and 2050 background with project scenarios.

3. The number of recorded accidents indicate that five or more accidents are a result of failure to yield the right of way over a three year period.

Applying this criteria, the intersection is not anticipated to experience over 2,000 units per day utilizing the intersection upon completion of the project and there are no recorded accidents at this intersection. The sight distance to see traffic on an opposing approach is restricted for the north and west legs due to an existing building on the northwest corner of the intersection. With the increase in through volumes on Cochise Street, it would be recommended that the east and west legs of the intersection be signed with a stop sign to control these approaches. The level of service analysis assumed stop control for the east and west legs.

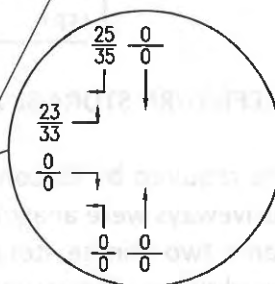
The conflicting and stop controlled minor movements at this intersection currently experiences acceptable delays and level of service during the AM and PM peak hours. These acceptable delays are anticipated to continue in the 2050 year scenarios.

TABLE 10 UNSIGNALIZED INTERSECTION CLEARVIEW DRIVE AT CURRY STREET					
		EXISTING VOLUMES		EXISTING VOLUMES W/ PROJECT	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
EASTBOUND	Level of Service	A	A	A	A
	Average Delay (Sec)	8.7	9.2	8.8	9.4
WESTBOUND	Level of Service	A	A	A	A
	Average Delay (Sec)	8.2	8.9	8.3	9.1
NORTHBOUND	Level of Service	A	A	A	A
	Average Delay (Sec)	8.8	9.4	8.1	9.9
SOUTHBOUND	Level of Service	A	A	A	A
	Average Delay (Sec)	8.5	9.2	8.7	9.4
INTERSECTION	Level of Service	A	A	A	A
	Average Delay (Sec)	8.6	9.2	8.8	9.5



BENNETT AVENUE

PROJECT SITE



JUNCTION DRIVE

LEGEND

XX	AM PEAK HOUR VOLUMES
YY	PM PEAK HOUR VOLUMES

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**DRIVEWAY
VOLUMES
FIGURE 10**

JADE DISPENSARY

TABLE 14
LEFT TURN STORAGE ANALYSIS

	REQUIRED MINIMUM STORAGE LENGTH		EXISTING STORAGE LENGTH
	AM PEAK HOUR	PM PEAK HOUR	
Appion Way at S. Carson Street South Leg	175 feet	150 feet	350 feet
Appion Way at Cochise Street East Leg	150 feet	175 feet	N/A
Cochise Street at Clearview Dr. East Leg	25 feet	25 feet	125 feet
Cochise Street at Clearview Dr. South Leg	25 feet	50 feet	50 feet
Driveway at Bennett Avenue East Leg	25 feet	25 feet	N/A

K. PEDESTRIAN & BICYCLE FACILITIES

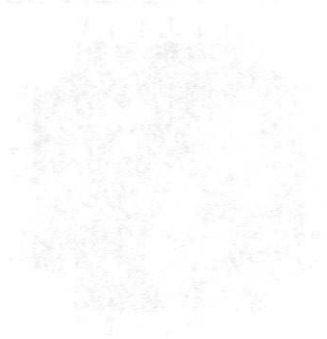
Reviewing the Carson City Unified Pathways Master Plan, the project site is near some existing and planned facilities. Currently in the vicinity of the project, there is a shared off-street multi-use trails than runs along the west side of S. Carson Street from Appion Way to I-580. According to the plan, Junction Drive adjacent to the project site and Cochise Street south of Roland Street is intended to operate as a shared street. This will provide connection to the wider pathway network north of the project site and on S. Carson Street. Due to the limited size of the project and location, it is not anticipated that the project will generate significant number of pedestrians or bicyclists.

L. PRO-RATA SHARE ANALYSIS

As required by Carson City, contributions are required for the signalization of the intersection of Appion Way at S. Carson Street. The contribution for this intersection was calculated as a percentage of the existing traffic volumes and the anticipated project trips at the intersection. The methodology for this calculation was based upon a review of the calculation presented in the *Clearview Ridge TIA* by Solaegui Engineers, LTD. The current trip assignment for the project was based upon the current traffic conditions, no eastbound left turn permitted. For this analysis, it was assumed that the eastbound left turn distribution were the same percentage of generated trips as the southbound right turn distribution. The study assumed that 45% of generated trips utilize S. Carson Street north of Appion Way. Based upon this calculation the anticipated proportional share for this project was determined to be 5.7%. Refer to Appendix F for the calculation worksheets.

APPENDIX B

MITIGATION ANALYSIS



HCS All-Way Stop Control Report

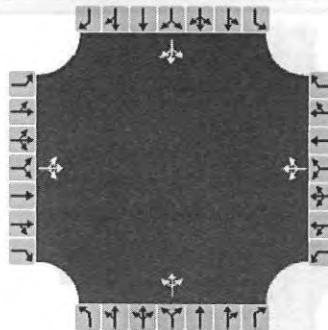
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	6/21/2022
Analysis Year	2050
Analysis Time Period (hrs)	0.25
Time Analyzed	Bkgrd PM Pk Hr w/ Project
Project Description	

Site Information

Intersection	Cochise St at Appion Way
Jurisdiction	Carson City
East/West Street	Appion Way
North/South Street	Cochise Street
Peak Hour Factor	0.89

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	0	2	0	338	2	162	0	167	255	181	109	2
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	2			564			474			328		
Percent Heavy Vehicles	2			2			2			2		

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.002			0.501			0.421			0.292		
Final Departure Headway, hd (s)	8.38			6.36			6.30			7.04		
Final Degree of Utilization, x	0.005			0.997			0.830			0.641		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, ts (s)	6.38			4.36			4.30			5.04		

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	2			564			474			328		
Capacity	429			566			571			512		
95% Queue Length, Q ₉₅ (veh)	0.0			14.4			8.6			4.5		
Control Delay (s/veh)	11.4			62.2			32.8			21.8		
Level of Service, LOS	B			F			D			C		
Approach Delay (s/veh)	11.4			62.2			32.8			21.8		
Approach LOS	B			F			D			C		
Intersection Delay, s/veh LOS	42.2						E					

HCS All-Way Stop Control Report

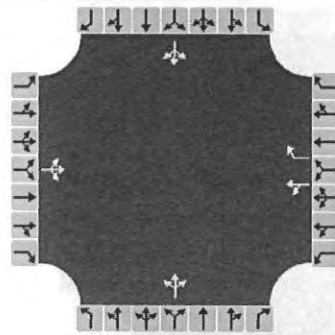
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	6/21/2022
Analysis Year	2050
Analysis Time Period (hrs)	0.25
Time Analyzed	Bkgrd PM Pk Hr w/ Project
Project Description	Right Turn Lane

Site Information

Intersection	Cochise St at Appion Way
Jurisdiction	Carson City
East/West Street	Appion Way
North/South Street	Cochise Street
Peak Hour Factor	0.89

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	0	2	0	338	2	162	0	167	255	181	109	2
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LT	R		LTR			LTR		
Flow Rate, v (veh/h)	2			382	182		474			328		
Percent Heavy Vehicles	2			2	2		2			2		

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20	3.20		3.20			3.20		
Initial Degree of Utilization, x	0.002			0.340	0.162		0.421			0.292		
Final Departure Headway, hd (s)	7.97			7.39	6.17		5.89			6.59		
Final Degree of Utilization, x	0.005			0.784	0.312		0.776			0.601		
Move-Up Time, m (s)	2.0			2.3	2.3		2.0			2.0		
Service Time, ts (s)	5.97			5.09	3.87		3.89			4.59		

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	2			382	182		474			328		
Capacity	452			487	583		611			546		
95% Queue Length, Q ₉₅ (veh)	0.0			7.1	1.3		7.3			3.9		
Control Delay (s/veh)	11.0			32.0	11.6		26.3			19.0		
Level of Service, LOS	B			D	B		D			C		
Approach Delay (s/veh)	11.0			25.5			26.3			19.0		
Approach LOS	B			D			D			C		
Intersection Delay, s/veh LOS	24.2						C					

HCS 2010 Two-Way Stop-Control Report

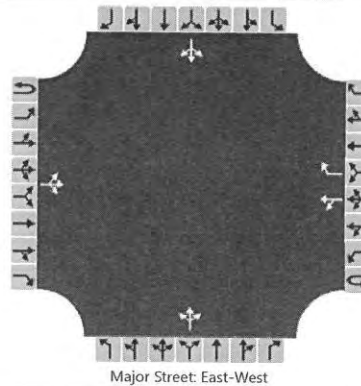
General Information

Analyst	DKK
Agency/Co.	Lochsa Engineering
Date Performed	5/19/2022
Analysis Year	2022
Time Analyzed	Ex PM Pk Hour w/ Project
Intersection Orientation	East-West
Project Description	Right Turn Lane

Site Information

Intersection	Cochise Street at Appion Way
Jurisdiction	Carson City
East/West Street	Appion Way
North/South Street	Cochise Street
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	1		0	1	0		0	1	0
Configuration			LTR			LT		R			LTR				LTR	
Volume, V (veh/h)		0	1	0		184	1	77		0	98	129		86	59	1
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No				No				No				No			
Median Type/Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				207					255					164
Capacity, c (veh/h)		1502				1615					678					336
v/c Ratio		0.00				0.13					0.38					0.49
95% Queue Length, Q ₉₅ (veh)		0.0				0.4					1.8					2.6
Control Delay (s/veh)		7.4				7.6					13.5					25.5
Level of Service, LOS		A				A					B					D
Approach Delay (s/veh)	0.0				5.3				13.5				25.5			
Approach LOS									B				D			



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Exhibit A

July 11, 2022

Mr. Michael Cristalli
Qualcan
4145 Wagon Trail Ave.
Las Vegas, Nevada 89118

RE: Property Use Survey of APN: 009-301-06, 5100 S. Carson Street, Carson City, Nevada.

Dear Mr. Cristalli,

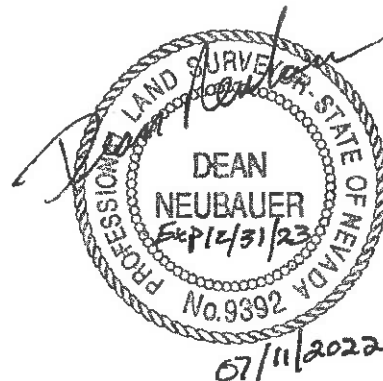
Lumos & Associates, Inc. (Lumos) has completed the Property Use Survey of the above referenced property. Per the requirements within N.R.S. 678B.250(3)(a)(2)(II) we could not find any public or private schools within 1000 feet and we could not find any Community Facilities as described in N.R.S. 678B.250(8) within 300 feet of the front door of the existing building at 5100 S. Carson Street, Carson City Nevada.

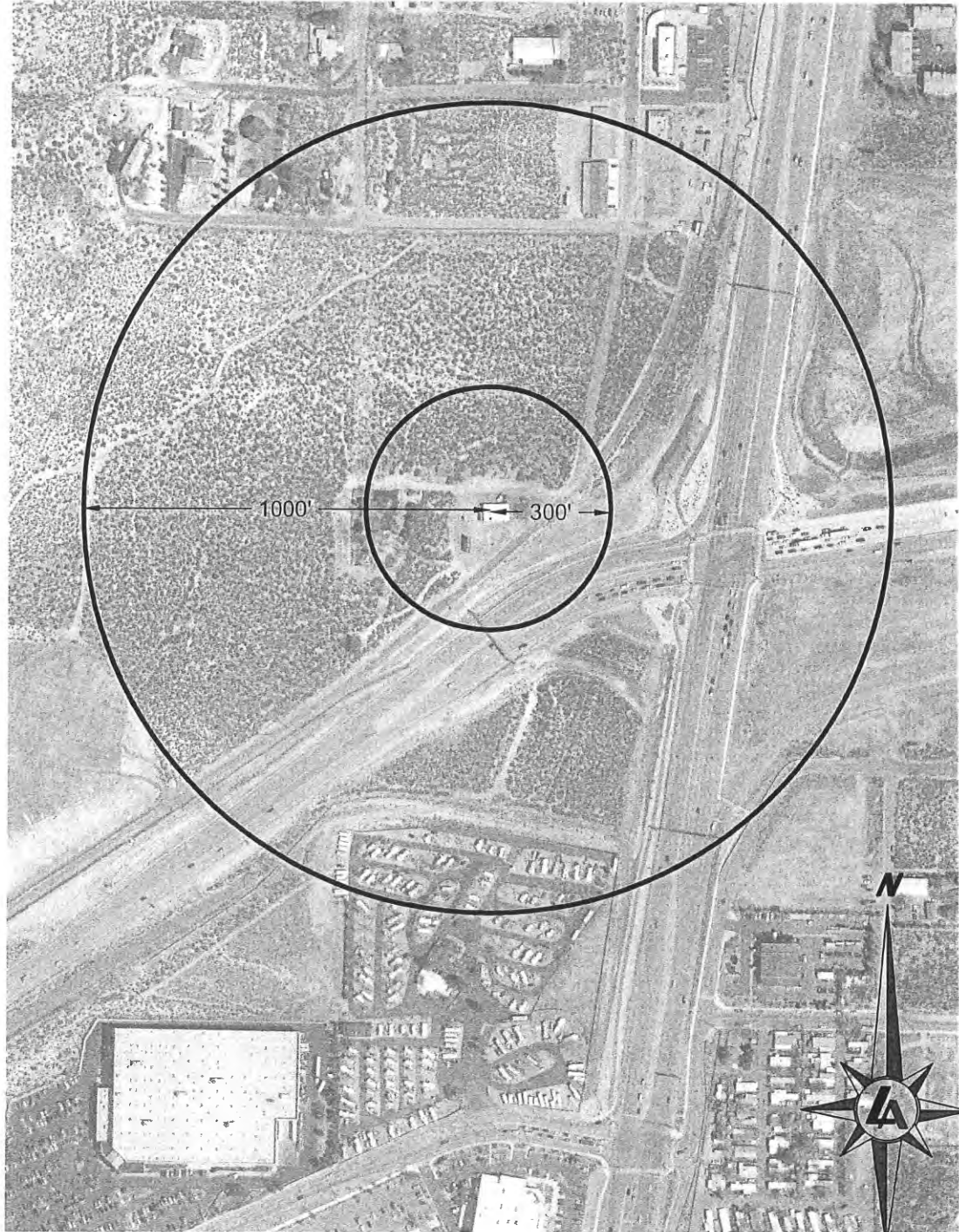
If you have any questions or require any additional information, please contact me.

Sincerely,

A handwritten signature in black ink that reads 'Dean Neubauer'.

Dean Neubauer, P.L.S., W.R.S.
Project Manager – Surveying Division
JN:LA22590





LUMOS
& ASSOCIATES
308 N. CURRY ST.,
SUITE 200
CARSON CITY, NV 89703
TEL (775) 883-7077

EXHIBIT "B"
PROPERTY USE SURVEY
5100 S. CARSON STREET

CARSON CITY

NEVADA

Date: 07/08/2022

Scale: 1" = 400'

Job No: LA22.590