

RECOMMENDED CONDITIONS OF APPROVAL:

1. This Special Use Permit shall not become effective until October 1, 2022, the effective date of Ordinance 2022-19 which increases the total number of allowable marijuana retail stores to 4 and allows for drive-through services.
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. The billboard shown on the site plan has already been removed.
11. Bill No. 117, Ordinance 2022-18 was adopted by the Board of Supervisors on September 15, 2022 to allow for curbside services. The plans submitted with the building permit shall demonstrate compliance with the requirements of curbside service as outlined in Ordinance 2022-18.
12. 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.

13. 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.
14. 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.
15. 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.
16. 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.
17. 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.
18. 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:

19. 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.
20. 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.
21. Outdoor display and sales of marijuana merchandise is prohibited.
22. Hours of operation are limited from 8:00 a.m. to 10:00 p.m., seven days per week.
23. Marijuana products must not be visible from outside the store at any time.
24. 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.
25. 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.

26. The drive- through shall be equipped with visible operable security surveillance system.

LEGAL REQUIREMENTS: Carson City Municipal Code (“CCMC”) 18.02.050 (Review); 18.02.080 (Special Use Permit); 18.04.135 (General Commercial); Cason City Development Standards (“CCDS”) Division 1.20

MASTER PLAN DESIGNATION: Community / Regional Commercial

ZONING DISTRICT: General Commercial

KEY ISSUES: Will the use be compatible with the surrounding neighborhood and be in keeping with the standards of the CCMC?

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: SUP to allow for continued use of billboard.
- SUP-13-012: SUP to allow for continued use of billboard.
- SUP-08-016: SUP to allow for continued use of billboard.
- U-02/03-22: SUP to allow for continued use of billboard.
- U-00/01-5: SUP to allow for outdoor display of sculptures.
- U-98/99-4: SUP to allow for continued use of billboard.
- U-93/94-37: SUP to allow for continued use of billboard.
- U-87-14: SUP 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, CCDS 1.20.1(j) limits the number of medical marijuana dispensaries to two and CCDS 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).

The Applicant has also requested a zoning text amendment (ZA-2022-0263) to increase the number of retail marijuana stores in Carson City and allow for drive-through services. On September 15, 2022, the Board of Supervisors approved the request and adopted Bill No. 118 Ordinance 2022-19. The ordinance will go into effect on October 1, 2022.

This matter was continued from the July 27, 2022 Planning Commission meeting to allow for time for the Board of Supervisors to make their decision regarding the requested zoning text amendment (ZA-2022-0263).

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 is requesting a SUP 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 marijuana retail store. The remaining 3,724 square feet will be vacant tenant space which may ultimately be filled by a restaurant which does not require a SUP.

Per CCMC 18.04.135, a retail marijuana store is allowed in the General Commercial zoning district subject to first obtaining a SUP and subject to CCDS Section 1.20, Medical Marijuana Establishments and Marijuana Establishments, as amended on September 15, 2022, with the adoption of Bill No. 118, Ordinance 2022-19. 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 19).

- (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 20). Moreover, Carson City has adopted regulations to prohibit the issuance of

- (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.

- (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 21).

- (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 23).

- (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 25).

- (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 2 Medical Marijuana Dispensaries and 4 Marijuana Retail Stores are allowed to operate at the same time in Carson City.

Bill No. 118, Ordinance No. 2022-19 was adopted by the Board of Supervisors on September 15, 2022, increasing the allowable number of marijuana retail stores in Carson City to 4. This request would allow for the construction and operation of the third marijuana retail store within the city. While the ordinance has been approved, it will not become effective until October 1, 2022. Staff has included a condition of approval to address this (Condition 1).

(k) A Medical Marijuana Dispensary may only be jointly located within the same premises of a Marijuana Retail Store that is operating in good standing.

The applicant is proposing a new marijuana retail store that does not have a medical marijuana component.

- (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, and staff has substantiated, 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 22).

- (c) Drive-through service is permitted.

The applicant has requested drive-through services with their special use permit. The Staff has recommended a condition of approval requiring the drive-through be equipped with visible operable security surveillance system (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.

- (e) Curbside pickup service may be authorized pursuant to a Special Use Permit. A Special Use Permit that is issued for curbside pickup service must expressly state that such service:
 - (1) Must be provided only through a customer appointment basis.
 - (2) Must be conducted in a manner which does not increase ordinary onsite or offsite vehicle traffic congestion, including, without limitation, an increase in parked or unparked vehicles awaiting curbside pickup service in any area outside the immediate premises of the property on which the Medical Marijuana Dispensary or Retail Marijuana Store is located.
 - (3) Must be provided in an area immediately adjacent to the Medical Marijuana Dispensary or Retail Marijuana Store.
 - (4) Must be provided in an area that is visible on an operable security surveillance system.
 - (5) Must not be provided on any property other than the private property on which the Medical Marijuana Dispensary or Retail Marijuana Store is located.
 - (6) Must not be provided in front of or adjacent to any other business in a manner that is disruptive to the other business.
 - (7) Must not be provided in any designated fire lane.
 - (8) Must not be facilitated through the use of any directional sign or shade structure that contains commercial advertisement for the Medical Marijuana Dispensary or Retail Marijuana Store.

Curbside services have been allowed with the adoption of Bill No. 117, Ordinance 2022-18. Staff has recommended a condition of approval requiring the plans for the building permit to demonstrate compliance with the requirements of this section.

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 September 15, 2022. As of the writing of this report, staff has received six written public comments noting concerns with the application (attached). Any comments that are received after this report is completed will be submitted to the Planning Commission prior to or at the meeting on September 28, 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.

Development Engineering

The Carson City Public Works Department Development Engineering Group (“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:
 - Water and sewer mains must be extended to serve the project.
 - The water main must be looped with a pressure reducing valve vault.
 - 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.

Carson City 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.

Carson City Environmental Control Authority (“ECA”) 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 Building Division of the Carson City Community Development Department (“Building Division”), per CCMC 12.12.065.
3. An EPA 10 Day Notification is required. The Environmental Protections Agency (“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 Building Division 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 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, ECA

will require a copy of the receipt issued from Lockwood to be submitted to the Building Division.

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 CCDS 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. CCDS Division 1.20 outlines requirements for operating a medical marijuana dispensary and marijuana retail store, including but not limited to, no on-site consumption, no outdoor display of merchandise, requiring the interior and exterior of the facility to be maintained in a professional manner consistent with the traditional styles of pharmacies and medical offices, and limited hours of operation. 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 as conditioned 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 SUP 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 Carson City 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 Carson City 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. Staff has recommended conditions of approval to ensure safety and security at the drive-through.

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 also requested a zoning text amendment (ZA-2022-0263) to increase the number of retail marijuana stores allowed in Carson City and allow for drive-through services. In addition to the amendment to allow for additional retail marijuana stores, the ordinance amended 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. Bill No. 118, Ordinance 2022-19 was adopted by the Board of Supervisors on September 15, 2022 and will become effective on October 1, 2022. Per CCMC 18.04.135 the use may only be established in the General Commercial zoning district subject to a Special Use Permit. As outlined above in the detailed analysis of compliance with Division 1.20, the SUP 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 CCDS Division 1.20.

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 CCDS Division 1.20 as well as state law.

Attachments:

Public comment

Application LU-2022-0262

Date: 5/25/22

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.

- | | | |
|-------------------------------------|----------------------|--|
| - Parking Stalls Required: | Retail Dispensary: | $1/300 \text{ SF} = 3,978 / 3.33 = 14 \text{ Stalls}$ |
| | Retail Restaurant:** | $10/1,000 \text{ SF} = 4,916 / 10 = 49 \text{ Stalls}$ |
| | 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.

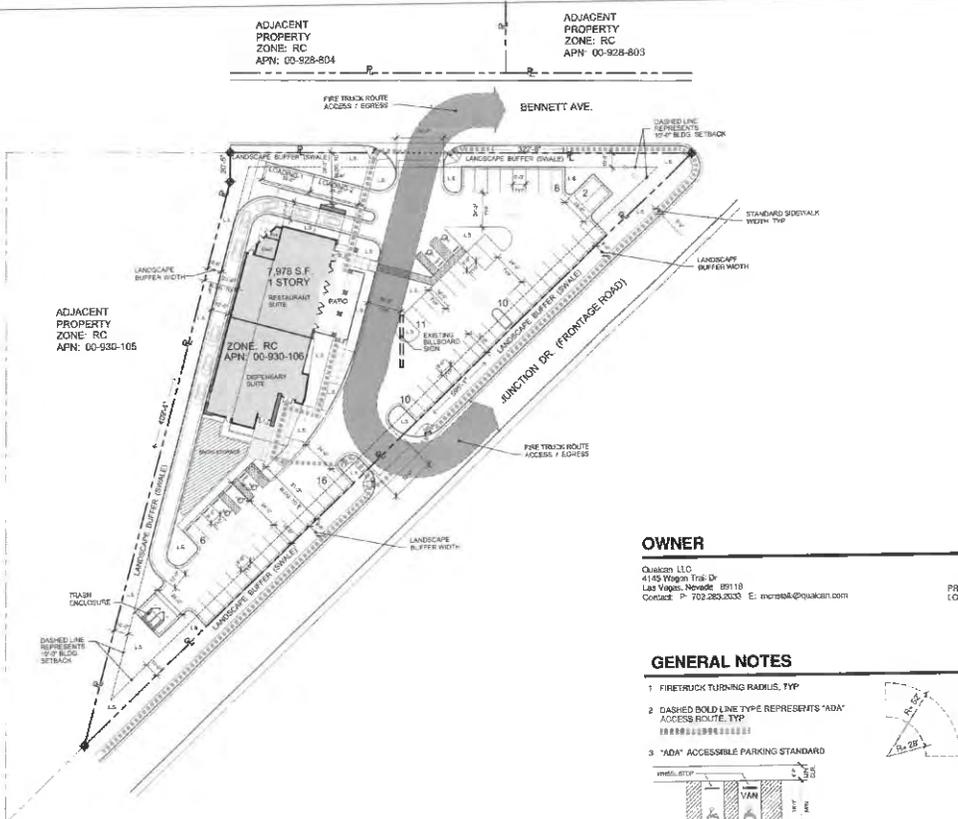
End of Project Summary.

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"

ADJACENT
PROPERTY
ZONE: RC
APN: 00-928-804

ADJACENT
PROPERTY
ZONE: RC
APN: 00-928-803

ADJACENT
PROPERTY
ZONE: RC
APN: 00-930-105

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 41,151.81 ACRES 66,205 F.S.F.
 SETBACKS FROM PROPERTY LINE: FRONT 0'-0"
 ** FOOTNOTES 7 & 8 (TITLE 16) SIDE (INT): 0'-0"
 PROVIDE 10' SETBACK ADJ. SIDE (STREET): 0'-0"
 TO RESIDENTIAL REAR: 0'-0"

BUILDING AREA 7,978 S.F.
 PATIO AREA 1,196 S.F.
 RESTAURANT TENANT SUITE (R/DG AREA) 3,324 S.F.
 OUTDOOR PATIO AREA 1,192 S.F.
 MMJ RETAIL DISPENSARY SUITE 3,321 S.F.
 COMMON AREA - ANCILLARY UTILITY ROOMS 276 S.F.
 9,970 S.F.

COVERAGE 12.00%

REQUIRED PARKING
 - RESTAURANT TENANT SUITE 107,000 S.F. = 4,816 S.F. x 10 = 49
 - MMJ RETAIL DISPENSARY SUITE 3,321,000 SF = 3,978 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%

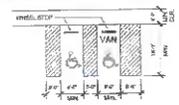
LANDSCAPE AREA PROVIDED:
 - OFF SITE AREA & ON SITE AREA COMBINED 21,810 S.F.
 32.84%
 - OFF SITE AREA LANDSCAPED 19,204 S.F.
 29%

OWNER

Quakon LLC
 4115 Wagon Trail Dr
 Las Vegas, Nevada 89118
 Contact: P- 702-280-2633 E: everest@quakon.com

GENERAL NOTES

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



VICINITY MAP



JADE DISPENSARY CARSON CITY
 5100 SOUTH CARSON STREET, 89101, CARSON CITY, NV
 SITE PLAN
 PREPARED BY: JADE DISPENSARY, LLC 1414 WAGON TRAIL DR. LAS VEGAS, NV 89118
 PROJECT NO: 2021-01
 DATE: 04/16/21
 SCALE: 1" = 30'
 SHEET NO: A1

ADJACENT
PROPERTY
ZONE: RC
APN: 00-928-804

ADJACENT
PROPERTY
ZONE: RC
APN: 00-928-803

LANDSCAPE INFORMATION

ASSESSOR'S PARCEL NUMBER (APN) 00-930-105
 SITE ADDRESS 5100 S. CARSON ST.
 CURRENT ZONING RC - COMMUNITY / RESIDENTIAL, COMMERCIAL
 PROPOSED ZONING RC
 SITE AREA ± 1.519 ACRES 66,205.7 SF.
 SETBACKS FROM PROPERTY LINE:
 ** FOOTNOTES 7 & 8 (TITLE 18)
 PROVIDE 10'-0" SETBACK AHEAD OF RESIDENTIAL TO RESIDENTIAL.
 FRONT: 0'-0"
 SIDE (INT): 0'-0"
 SIDE (STREET): 0'-0"
 REAR: 0'-0"

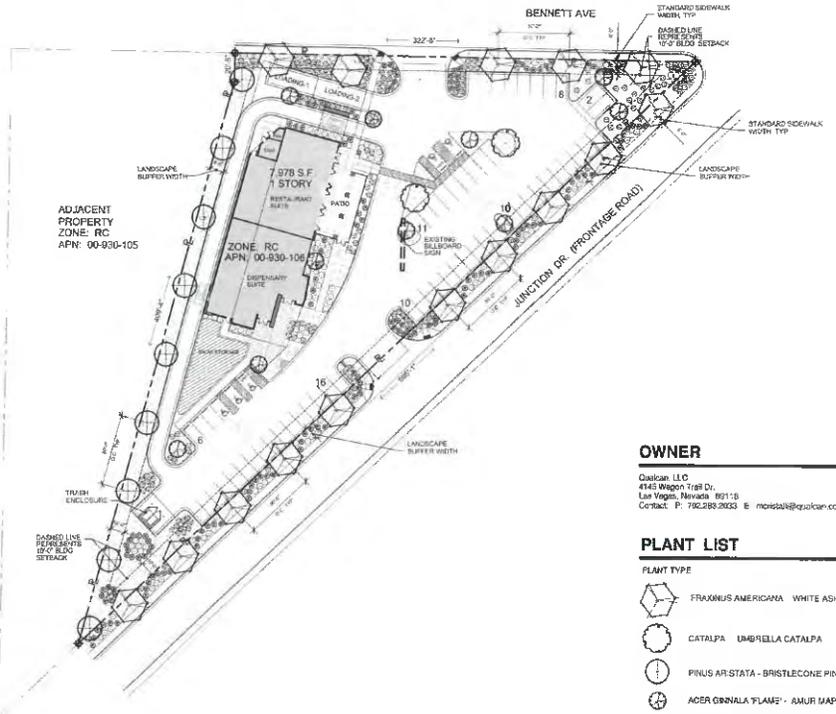
BUILDING AREA 7,978 S.F.
 PATIO AREA 1,192 S.F.
 - RESTAURANT TENANT SUITE (BLDG. AREA) 3,274 S.F.
 - OUTDOOR PATIO AREA 1,192 S.F.
 - MAIN RETAIL DISPENSARY SUITE 3,906 S.F.
 - COMMON AREA - AUXILIARY UTILITY ROOMS 236 S.F.
 9,170 S.F.

COVERAGE 12.05%

LANDSCAPE AREA REQUIRED: 18,042 S.F. 26%

LANDSCAPE AREA PROVIDED:

- OFF SITE AREA & ON SITE AREA COMBINED 23,810 S.F. 35.94%
- OFF SITE AREA LANDSCAPED 18,224 S.F. 27.5%



LANDSCAPE PLAN
SCALE 1"=30'-0"

OWNER

Qualcan, LLC
 4143 Wagon Trail Dr,
 Las Vegas, Nevada 89115
 Contact: P: 702.258.2923 E: mrobert@qualcan.com

PLANT LIST

PLANT TYPE	SIZE	QUANTITIES
FRAXINUS AMERICANA WHITE ASH	36" BOX	15
CATALPA UMBRIFOLIA CATALPA	24" BOX	2
PINUS ARSTATATA BRISTLECONE PINE	36" BOX	9
ACER ORNATA 'PLAME' AMUR MAPLE	24" BOX	10
GRASSY LEAVED SWEET FLAG	1 GAL	130
ACHILLEA MILEFOLIUM VOLUNTEER YARROW	1 GAL	150
ACHILLEA - LITTLE MOONSHINE YARROW	1 GAL	150
LANDSCAPE AREA - GROUND		21,810 S.F.

VICINITY MAP



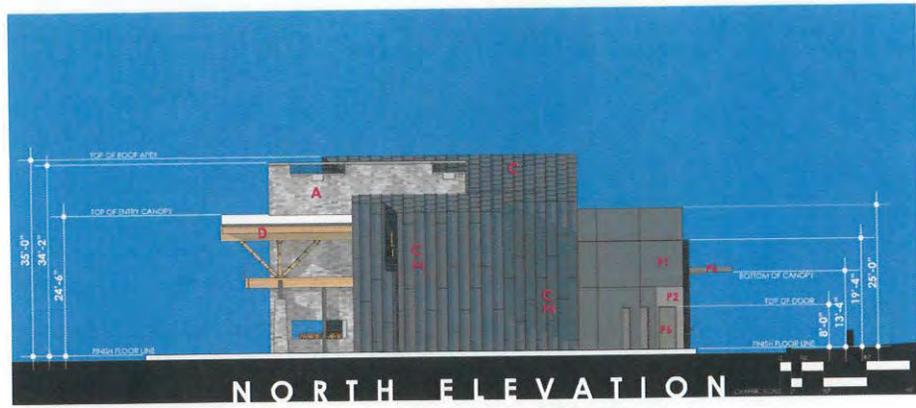
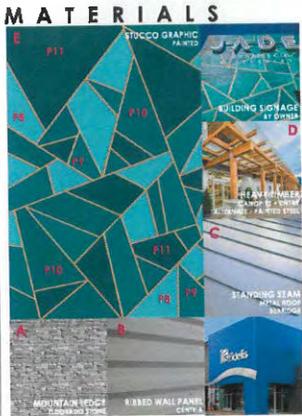
- VERLAGE ARCHITECTS
 3103 BALBOA AVENUE, SUITE 100
 LAS VEGAS, NEVADA 89102
 TEL: 702.735.1111
 WWW.VERLAGEARCHITECTS.COM

CONTACT: MICHAEL FERRELLI / 702.735.1111

JADE DISPENSARY CARSON CITY
 5100 SOUTH CARSON STREET - 89701, CARSON CITY, NV
LANDSCAPE PLAN
 APPLICANT: QUALCAN, LLC, 4143 WAGON TRAIL DR., LAS VEGAS, NV 89115

PROJECT: 20211
 DATE: 04/18/20
 SCALE: 1" = 30'
 SHEET NO.

A2

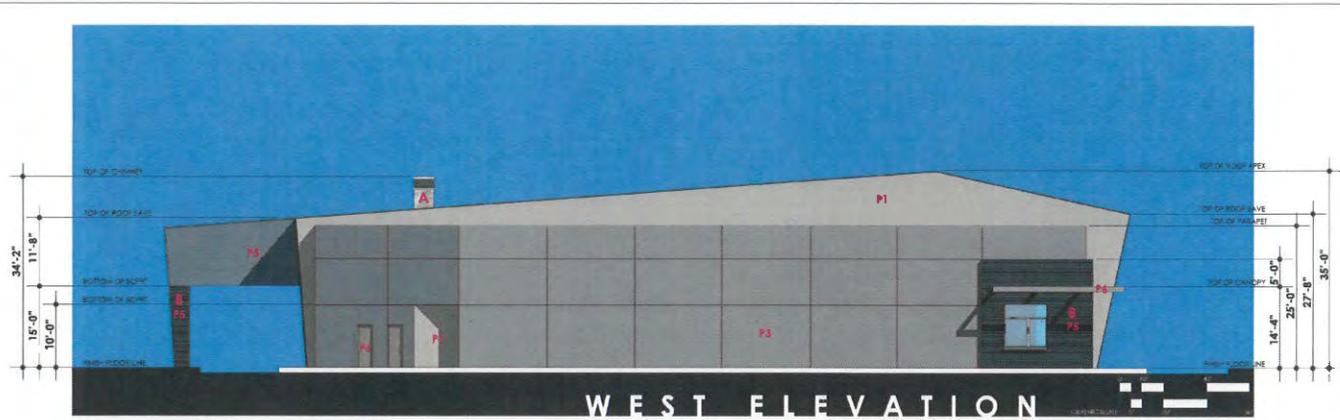


PAIN T LEGEND

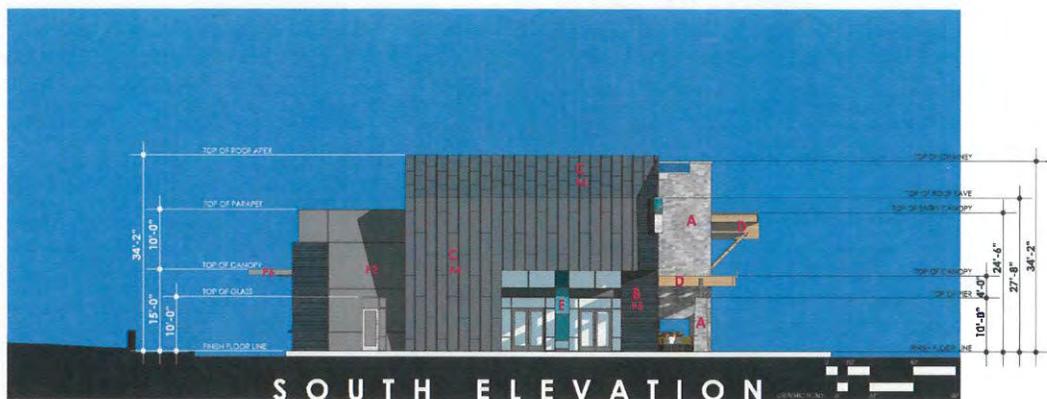
P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12
SW 7077 ORIGINAL WHITE SHEEN: MATT	SW 7071 ON THE ROCKS SHEEN: MATT	SW 9182 LET IT RAIN SHEEN: MATT	SW 6257 GREATER SHEEN: MATT	SW 6251 OUTRIGGER SHEEN: MATT	SW 7129 JADE OASIS SHEEN: MATT	SW 4395 ALUMINIUM SHEEN: MATT	SW 4768 MARINE SHEEN: MATT	SW 6940 ESCAP SHEEN: MATT	SW 4481 GATEWAY SHEEN: MATT	SW 2810 SAND GREY SHEEN: MATT	SW 9476 NIGHTMARE SHEEN: MATT

WIDEORBIT PERCH
3035 MacArthur Boulevard, Suite 200
Charlotte, NC 28217
Tel: 704.366.1100
www.wideorbit.com

JADE DISPENSARY CARSON CITY
5100 SOUTH CARSON STREET, 89701, CARSON CITY, NV
EXTERIOR ELEVATIONS
APPLICANT: SHALOM, LLC - THE WAGON TRAIL OF CARSON CITY, NV 89701
SHEET NO. 04/15/2021
SCALE: 1" = 8'-0"
A4



MATERIALS



PAINT LEGEND

P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12
SW 7077 OFFICIAL WHITE LUSTRE UTM 50	SW 7471 ON THE BRINK JUBILEE UTM 50	SW 9132 OFF 7 PAKE JUBILEE UTM 50	SW 4257 SARACENS LUSTRE UTM 50	SW 4251 SUBSTANCE LUSTRE UTM 50	SW 7127 HARD DIVISION LUSTRE UTM 50	SW 4295 FLORISSANT LUSTRE UTM 50	SW 4744 MANTRE LUSTRE UTM 50	SW 6940 ALICAT LUSTRE UTM 50	SW 4481 GREEN BAY LUSTRE UTM 50	SW 2810 SAGE GREEN LUSTRE UTM 50	SW 9475 WEDLAGO LUSTRE UTM 50



VIEW LOOKING NORTHWEST

PROJECT: 20211
DATE: 04/15/2021
SCALE: 1" = 8'
SHEET NO: A6

JADE DISPENSARY CARSON CITY
5100 SOUTH CARSON STREET, 89701, CARSON CITY, NV
PROJECT IMAGES
APPRECIATE QUALCART, LLC, 4145 WAGON TRAIL DR., LAS VEGAS, NV 89118
CONTACT: MICHAEL PEREZ/PAUL TERRY/FRANK BUCKLEY

• VIKI RAGO FETICH
3333 HUNTERS LANE, SUITE 210
LAS VEGAS, NV 89118
TEL: 702.735.1100



VIEW LOOKING WEST

CHICAGO, ILLINOIS
3033 SOUTH CARSON STREET
CHICAGO, ILLINOIS 60643
TEL: 773.931.1000

JADE DISPENSARY CARSON CITY
3100 SOUTH CARSON STREET, CARSON CITY, NV
PROJECT IMAGES

PROJECT: **JD**
DATE: **04/15/**
SCALE: **1" =**
SHEET NO:
A7



VIEW LOOKING SOUTHWEST

WILLAGO ARCHITECTS
3000 North Central Expressway
Suite 200
Ft. Worth, TX 76109
Tel: 817.711.0000
www.willago.com

JADE DISPENSARY CARSON CITY
5100 SOUTH CARSON STREET, 89701, CARSON CITY, NV
PROJECT IMAGES
APPLICABLE: SINALCAN, LLC - 1515 WAGON TRAIL DR. LAS VEGAS, NV 89111
CONSULT: BUREAU OF ARCHITECTURE
SPECIAL USE PERMIT

PROJECT: 202111
DATE: 04/18/2021
SCALE: 1" = 8'-0"
SHEET NO:
A8



VIEW LOOKING SOUTH

ARIZONA ARCHITECTURE
2019 210 SOUTH WASHINGTON
SUITE 1000
PHOENIX, AZ 85004
TEL: 602.955.1234
WWW.AZARCHITECTURE.COM

JADE DISPENSARY CARSON CITY
3100 SOUTH CARSON STREET, 89701, CARSON CITY, NV
PROJECT IMAGES
APPLICANT: CHALCEN, LLC, THE WAGON TRAIL DR., LAS VEGAS, NV 89118
CONTACT: MICHAEL@AZARCHITECTURE.COM

PROJECT: 20211
DATE: 04/18/21
SCALE: 1" = 8'

SHEET NO:
A9



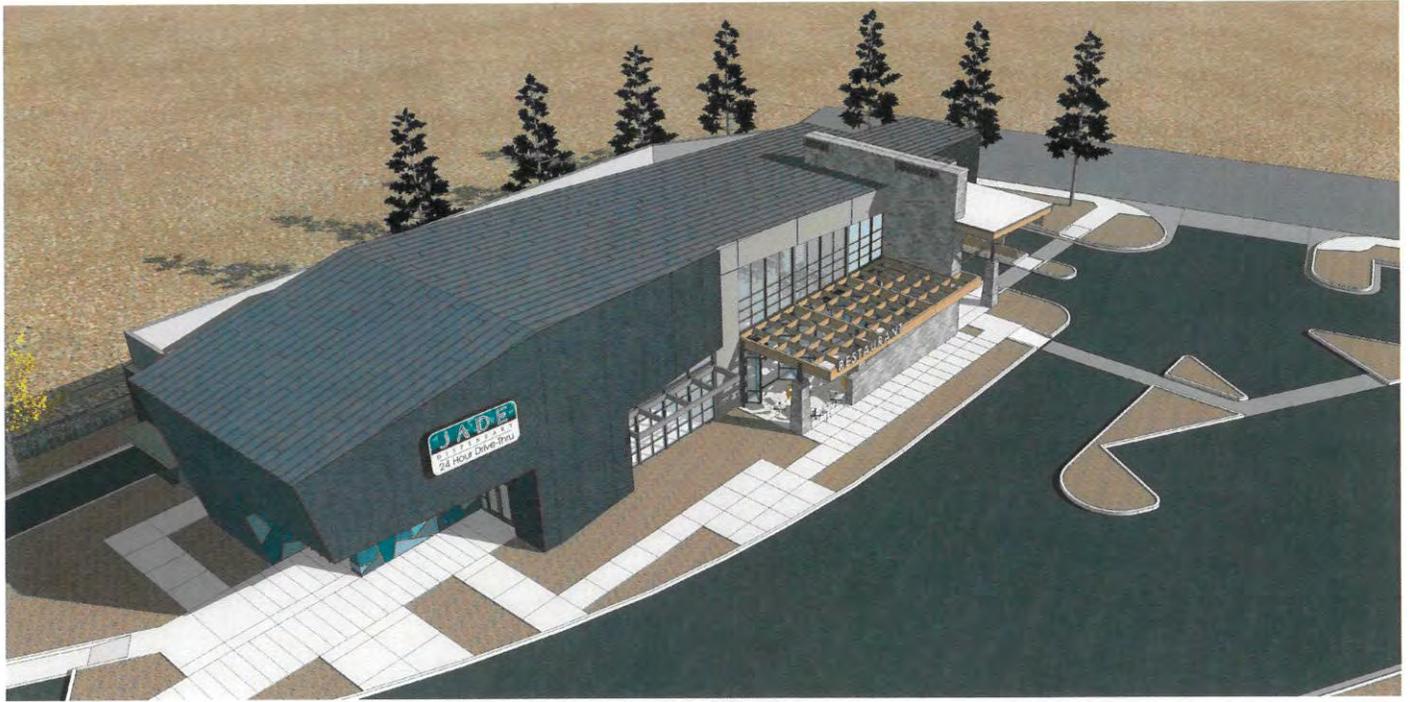
AERIAL VIEW LOOKING SOUTHWEST

CHICAGO PEDON
2021
11/18/2021

JADE DISPENSARY, CARSON CITY, NV
510 SOUTH CARSON STREET, 89701, CARSON CITY, NV
PROJECT IMAGES
APPLICANT: QUALCAN, LLC, 145 WAGON TRAIL DR., LAS VEGAS, NV 89118
CONTACT: MICHAEL KERRILL, (702) 413-3323

PROJECT: 2021
DATE: 04/18/21
SCALE: 1" = 8'
SHEET NO:





AERIAL VIEW LOOKING NORTHWEST

VERDELAGO ARCHITECTURE
3301 JEFFERSON AVENUE, SUITE 200
DENVER, CO 80202
TEL: 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'
SHEET NO: A1



AERIAL VIEW LOOKING NORTHEAST

VERDELAGO ARCHITECTS
300 South Carson Street, Suite 200
Carson City, NV 89701
702.885.1000
www.verdelago.com

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

PROJECT: 2021
DATE: 04/16/21
SCALE: 1" = 1'

AL



DETAIL VIEW OF DRIVE-THRU LOOKING NORTH

• VEDRAGO PERCH
355 1st Ave, Lombard, IL
60148-2107
Tel: 708.933.8800
www.vedrago.com

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

PROJECT: 202
DATE: 04/15/
SCALE: 1" =

AS

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 to promote a sense of community by linking its many neighborhoods, employment areas, activity centers, parks, recreational

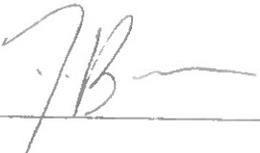
amenities and schools with an extensive system of interconnected roadways, multi-use pathways, bicycle facilities, and sidewalks.

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

Green Wagon LLC

Print Name

5/23/2022

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 submittal 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

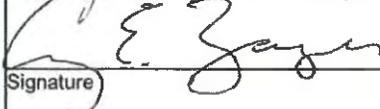
Project's Assessor Parcel Number(s): 00-930-106 Street Address: 5100 S Carson St. Carson City, NV 89701

Project's Master Plan Designation: COM Project's Current Zoning: GC General Commercial Nearest Major Cross Street(s): 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 _____, 20____, 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 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

[X] 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

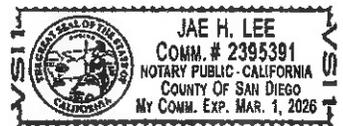
On APR 29, 20 22 before me, JAE H. LEE, A Notary Public
(insert name and title of the officer)

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



T 702-365-9312 | F 702-365-9317

6345 S Jones Blvd, Suite 100
Las Vegas, NV 89118

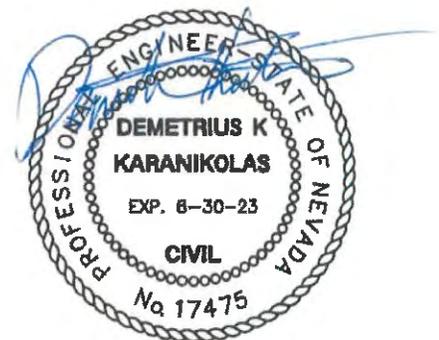
Traffic Impact Analysis for JADE DISPENSARY

Carson City, Nevada

May 2022

Prepared For:

Vedelago Petsch Architects
3535 Executive Terminal Drive
Henderson, NV 89052



6/23/22

Project No. 221098

www.lochsa.com | Las Vegas | Boise | Denver

TABLE OF CONTENTS

	<u>PAGE</u>
EXECUTIVE SUMMARY	
A. SITE AND STUDY AREA BOUNDARIES.....	1
B. EXISTING AND PROPOSED USES OF THE SITE	1
C. EXISTING AND PROPOSED USES IN THE VICINITY OF THE SITE	1
D. EXISTING ROADWAYS AND INTERSECTIONS	1 through 3
E. TRIP GENERATION RATES	3 through 5
F. TRIP DISTRIBUTION AND TRIP ASSIGNMENTS	5
G. EXISTING AND PROJECTED TRAFFIC VOLUMES	5 and 6
H. INTERSECTION ANALYSIS.....	6 through 10
I. DRIVEWAY ANALYSIS	10 and 11
J. LEFT-TURN STORAGE ANALYSIS	11
K. PEDESTRIAN & BICYCLE FACILITIES	12
L. PRO-RATA SHARE ANALYSIS	13
M. RECOMMENDATIONS	12

APPENDICES

- 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.

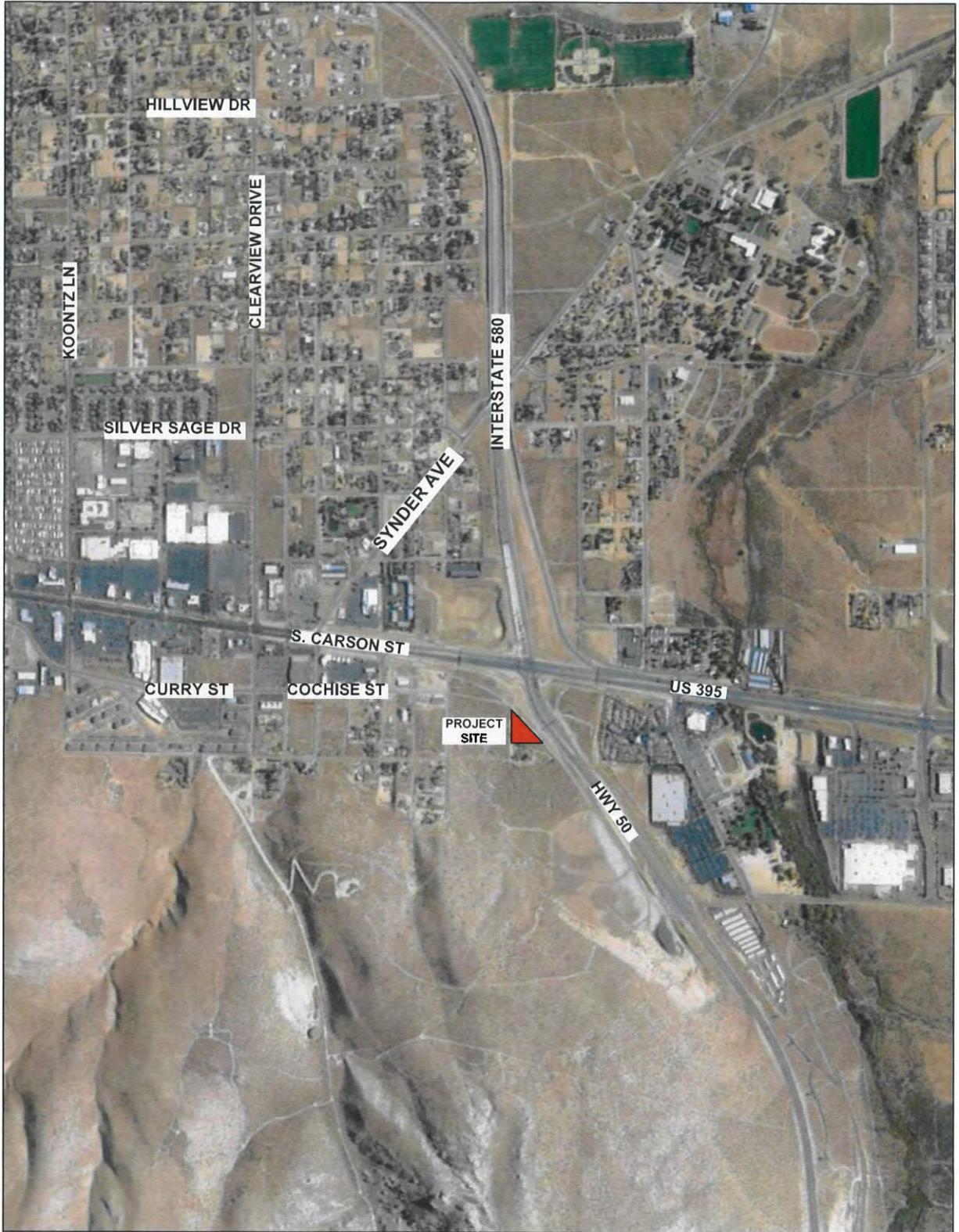
South of the project site is Highway 50 and adjacent to this roadway are vacant parcels.

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



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

Lochsa
engineering
8345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
Phone (702) 385-8312 - Fax (702) 385-9317 - www.lochsa.com

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.

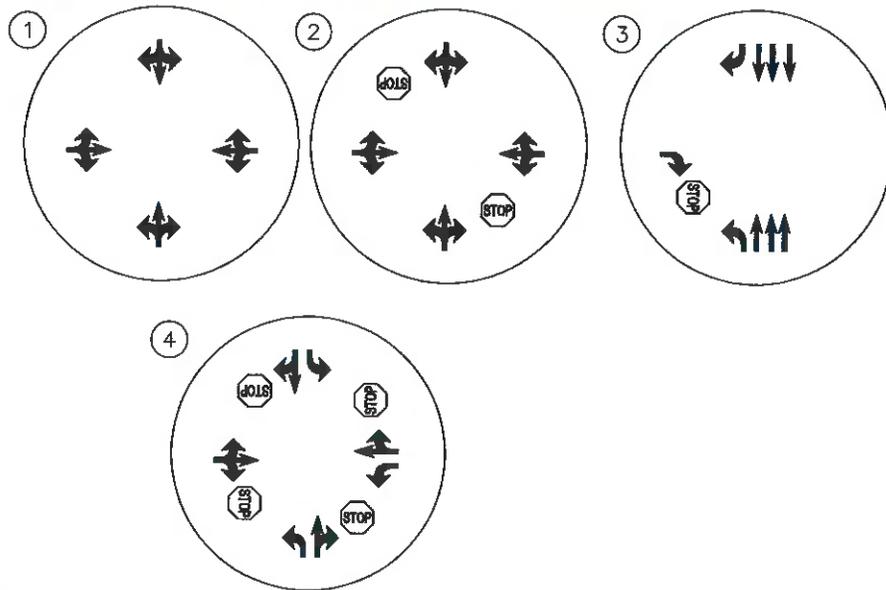
Clearview Drive at Curry Street

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:



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

Lochsa
 engineering
 6345 South Jones Blvd, Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

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) RESTARUANT 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.

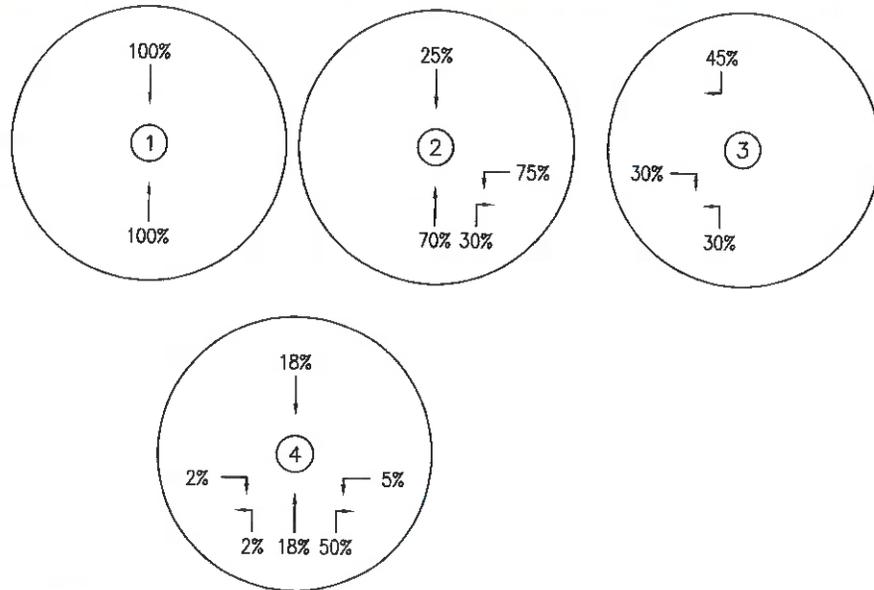
G. EXISTING AND PROJECTED TRAFFIC VOLUMES

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 Solaequi 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

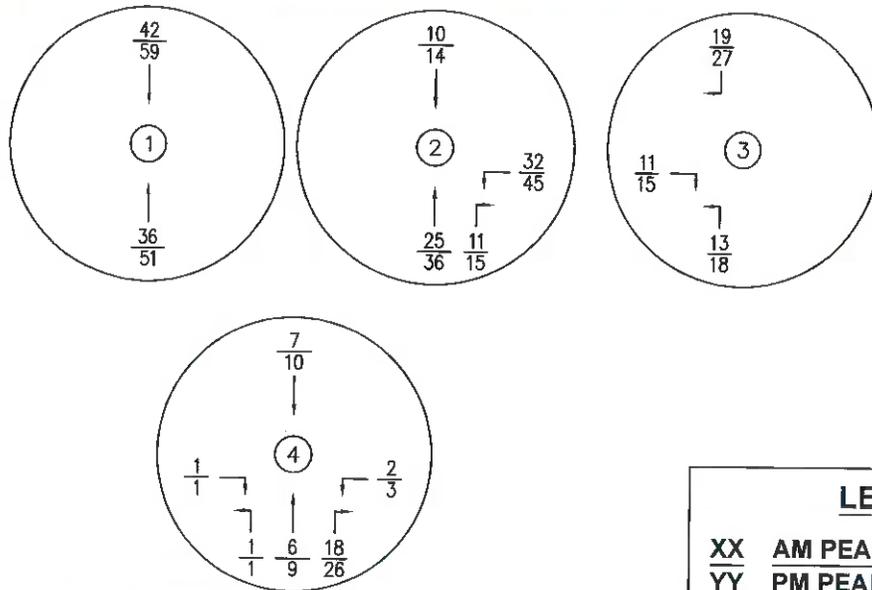


T:\CAD\21098\DRAWINGS\TRAFFIC\21098-TRAFFIC.DWG

Lochsa
engineering
 6345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

TRIP
 DISTRIBUTION
 FIGURE 3

JADE DISPENSARY



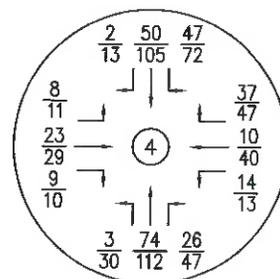
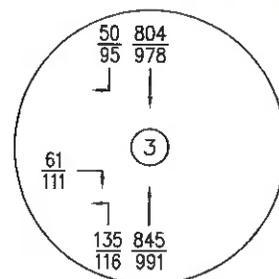
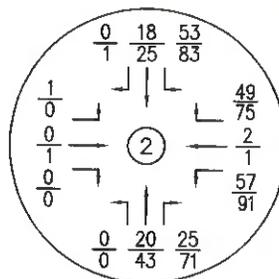
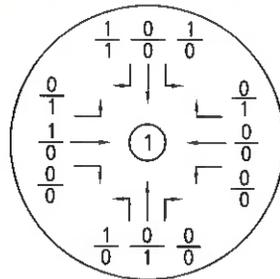
LEGEND	
XX	AM PEAK HOUR VOLUMES
YY	PM PEAK HOUR VOLUMES

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

Lochsa
engineering
 6345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

TRIP
 ASSIGNMENT
 FIGURE 4

JADE DISPENSARY



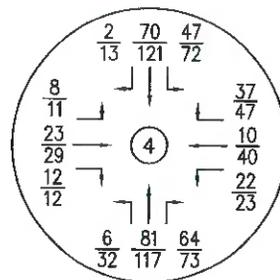
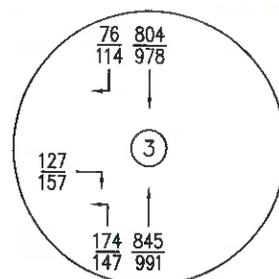
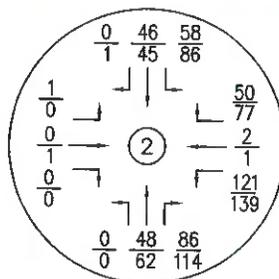
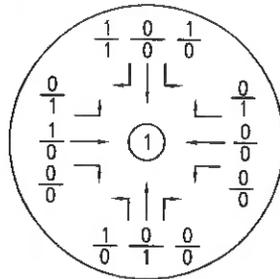
LEGEND	
XX	AM PEAK HOUR VOLUMES
YY	PM PEAK HOUR VOLUMES

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

Lochsa
engineering
 6345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

EXISTING
 VOLUMES
 FIGURE 5

JADE DISPENSARY



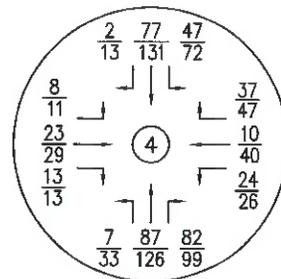
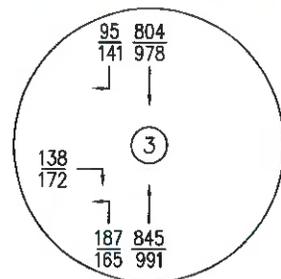
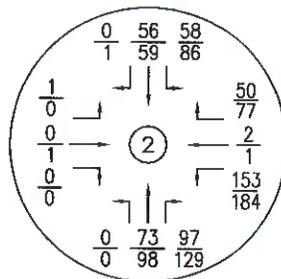
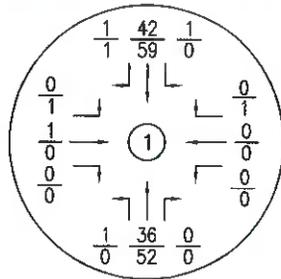
LEGEND	
XX	AM PEAK HOUR VOLUMES
YY	PM PEAK HOUR VOLUMES

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

Lochsa
engineering
 8345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

**EXISTING VOLUMES
 W/ BKGRD STUDIES
 FIGURE 6**

JADE DISPENSARY



LEGEND	
XX	AM PEAK HOUR VOLUMES
YY	PM PEAK HOUR VOLUMES

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

Lochsa
engineering
 8345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

**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

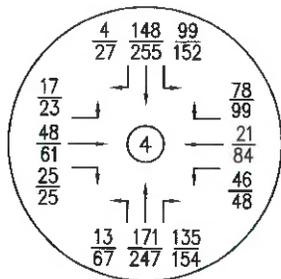
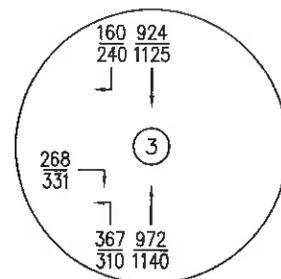
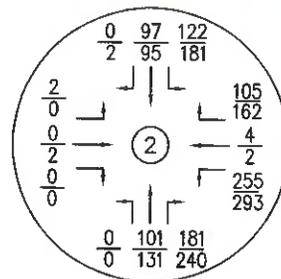
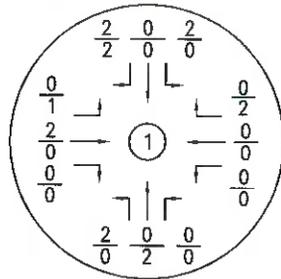
Based upon the preceding information, a level of service analysis was performed for each intersection. Techniques presented in the Transportation Research Board publication entitled *Highway Capacity Manual – Seventh Edition* were utilized for this analysis. The analysis worksheets are provided in Appendix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

UN SIGNALIZED 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

UN SIGNALIZED 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.



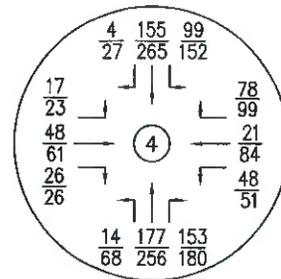
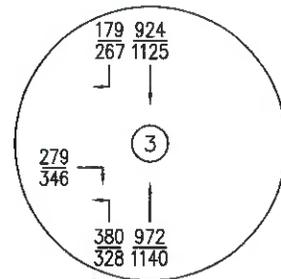
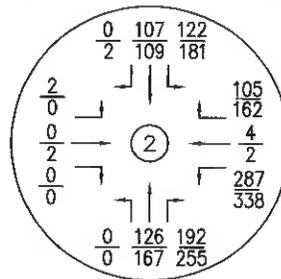
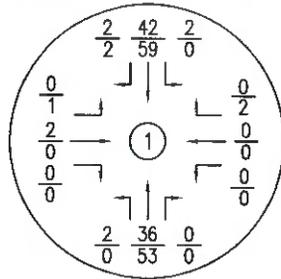
LEGEND	
XX	AM PEAK HOUR VOLUMES
YY	PM PEAK HOUR VOLUMES

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

Lochsa
 engineering
 6345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

2050 BACKGROUND
 VOLUMES
 FIGURE 8

JADE DISPENSARY



LEGEND	
XX	AM PEAK HOUR VOLUMES
YY	PM PEAK HOUR VOLUMES

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

UN SIGNALIZED 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

UN SIGNALIZED 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.

UN SIGNALIZED 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

UN SIGNALIZED 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

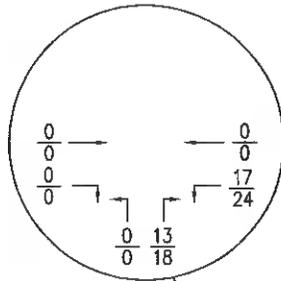
Clearview Drive at Curry Street

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.

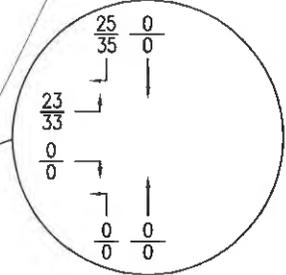
A level of service analysis was performed for each driveway intersection. Refer to Figure 10 for the driveway volumes. Techniques presented in the Transportation Research Board publication entitled *Highway Capacity Manual – Seventh Edition* were utilized for this analysis. Refer to Appendix D for the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



6345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

DRIVEWAY
 VOLUMES
 FIGURE 10

JADE DISPENSARY

UN SIGNALIZED 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

UN SIGNALIZED 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.

Jades Dispensary TIS: APN 00-930-106

- 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

Lochs Engineering

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

File Name : Carson-Appion
Site Code : 00000000
Start Date : 5/10/2022
Page No : 1

Groups Printed- Unshifted

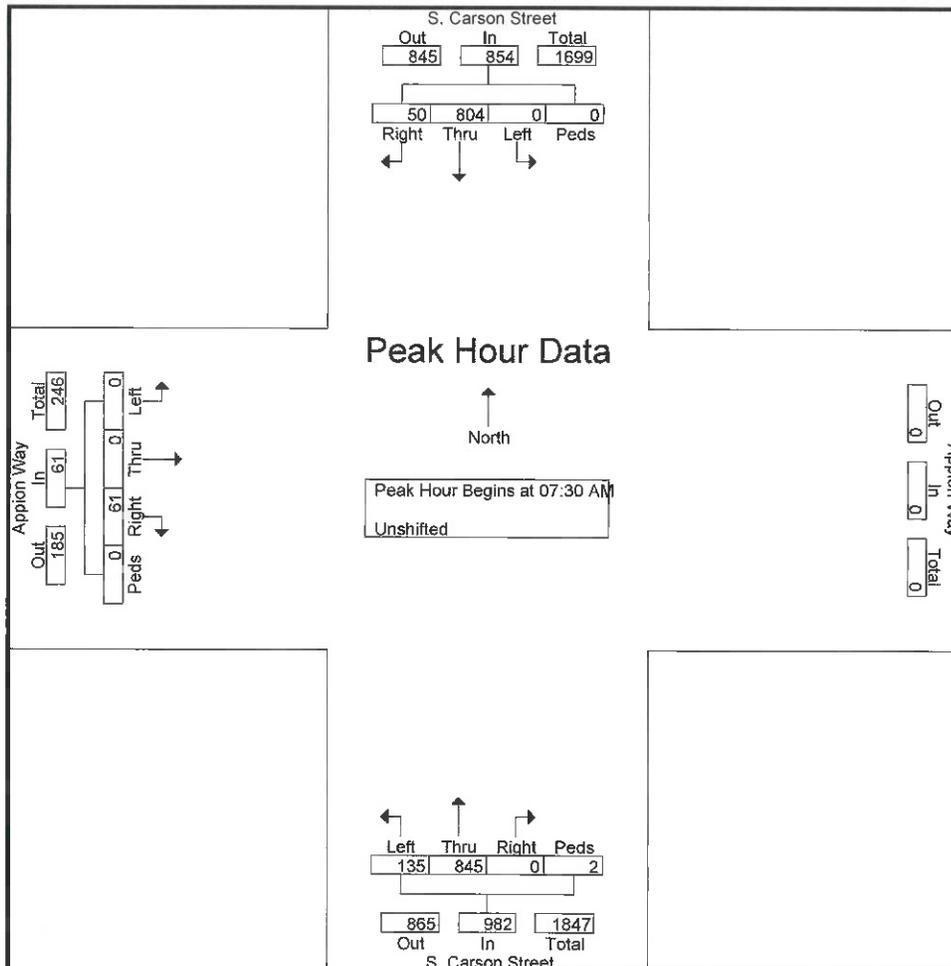
Start Time	S. Carson Street From North				S. Carson Street From South				Appion Way From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	9	140	0	0	0	183	29	0	14	0	0	0	375
07:15 AM	13	179	0	0	0	203	36	0	9	0	0	0	440
07:30 AM	9	185	0	0	0	233	45	0	15	0	0	0	487
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	

Locks a Engineering

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

File Name : Carson-Appion
Site Code : 00000000
Start Date : 5/10/2022
Page No : 2

Start Time	S. Carson Street From North					From East	S. Carson Street From South					Appion Way From West					Int. Total
	Right	Thru	Left	Peds	App. Total		App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	
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

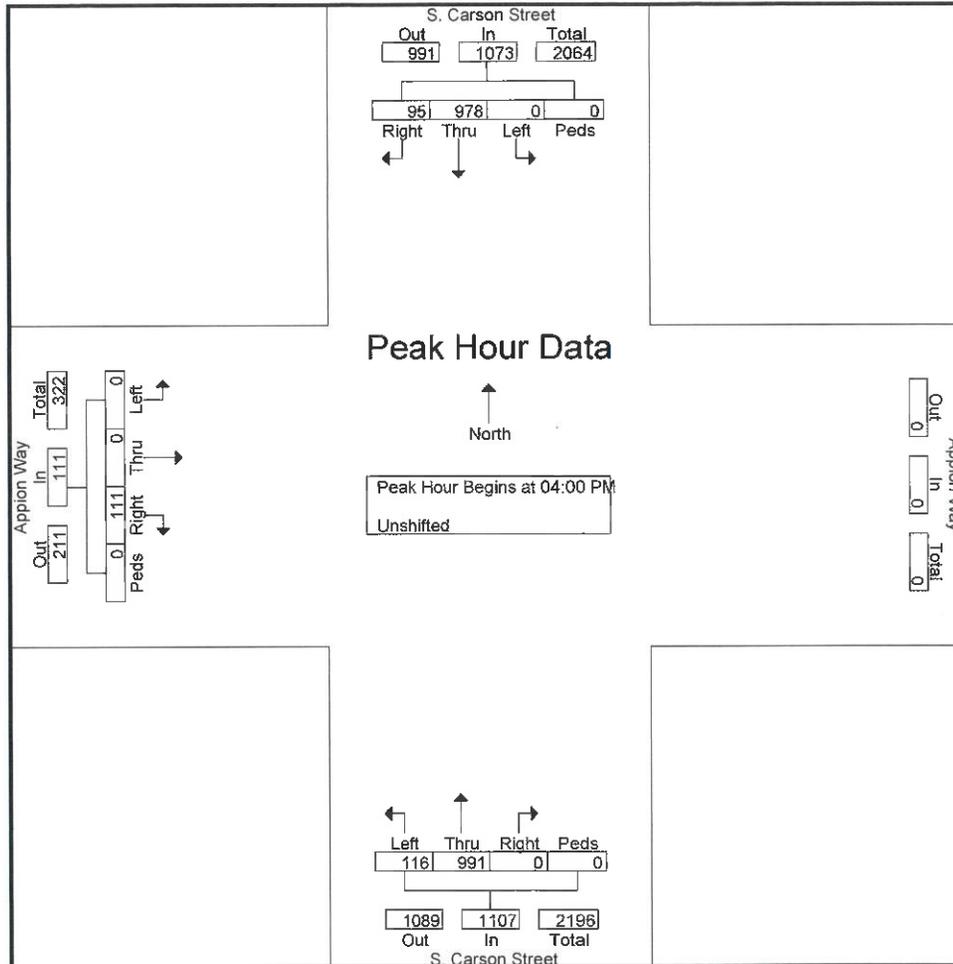


Lachs Engineering

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

File Name : Carson-Appion
Site Code : 00000000
Start Date : 5/10/2022
Page No : 3

Start Time	S. Carson Street From North					From East	S. Carson Street From South					Appion Way From West					Int. Total
	Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. 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



Locks a Engineering

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

File Name : Cochise-Appion
Site Code : 00000000
Start Date : 5/10/2022
Page No : 1

Groups Printed- Unshifted

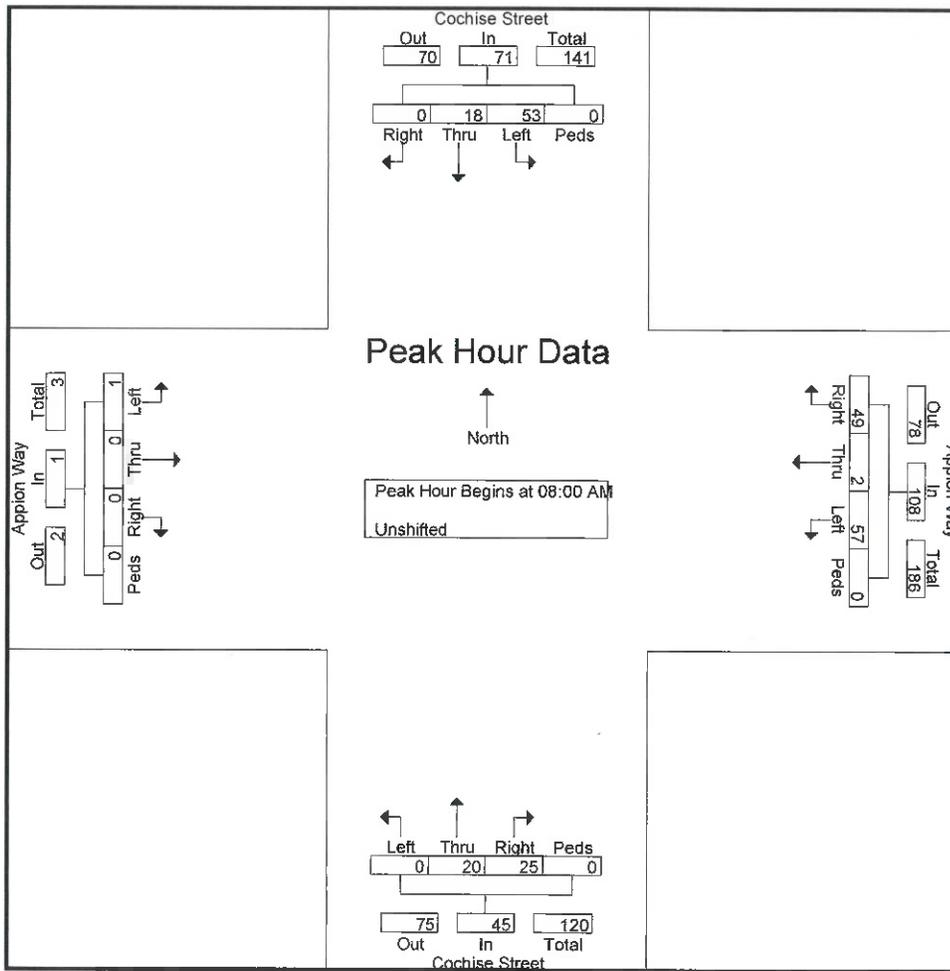
Start Time	Cochise Street From North				Appion Way From East				Cochise Street From South				Appion Way From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	1	10	0	14	0	9	0	5	3	0	0	0	0	0	0	42
07:15 AM	0	3	14	0	17	1	7	0	3	3	0	0	0	0	0	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	

Locks a Engineering

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

File Name : Cochise-Appion
Site Code : 00000000
Start Date : 5/10/2022
Page No : 2

Start Time	Cochise Street From North					Appion Way From East					Cochise Street From South					Appion Way From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
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

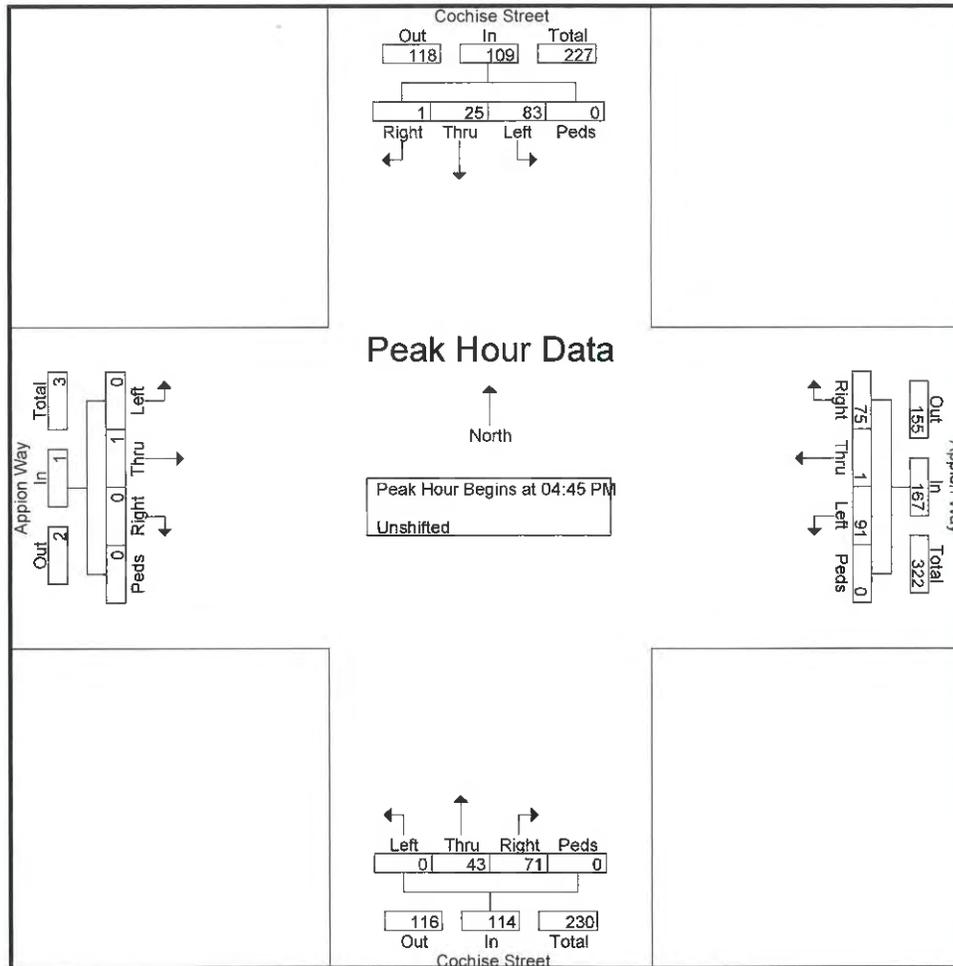


Lochs Engineering

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

File Name : Cochise-Appion
Site Code : 00000000
Start Date : 5/10/2022
Page No : 3

Start Time	Cochise Street From North					Appion Way From East					Cochise Street From South					Appion Way From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
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



Locks a 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 : 1

Groups Printed- Unshifted

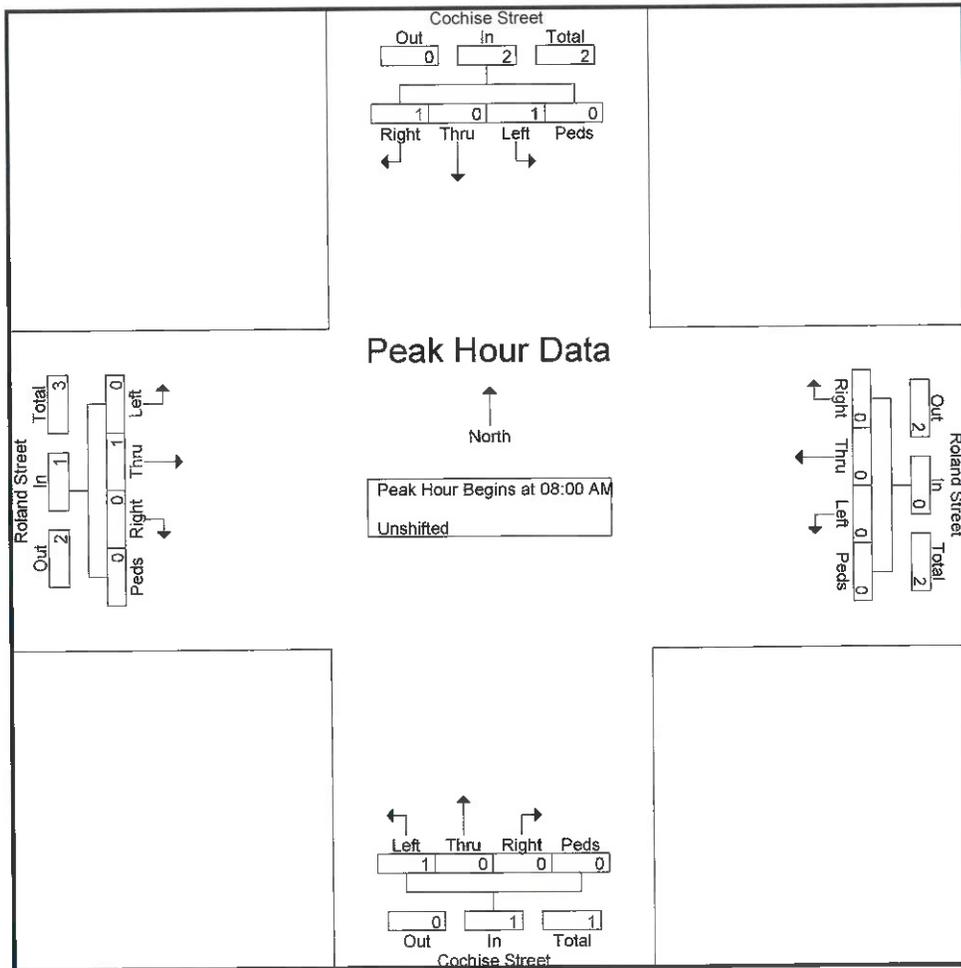
Start Time	Cochise Street From North				Roland Street From East				Cochise Street From South				Roland Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
*** BREAK ***																	
07:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																	
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

Start Time	Cochise Street From North					Roland Street From East					Cochise Street From South					Roland Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
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	0	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	1	0	0	0	1
% 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

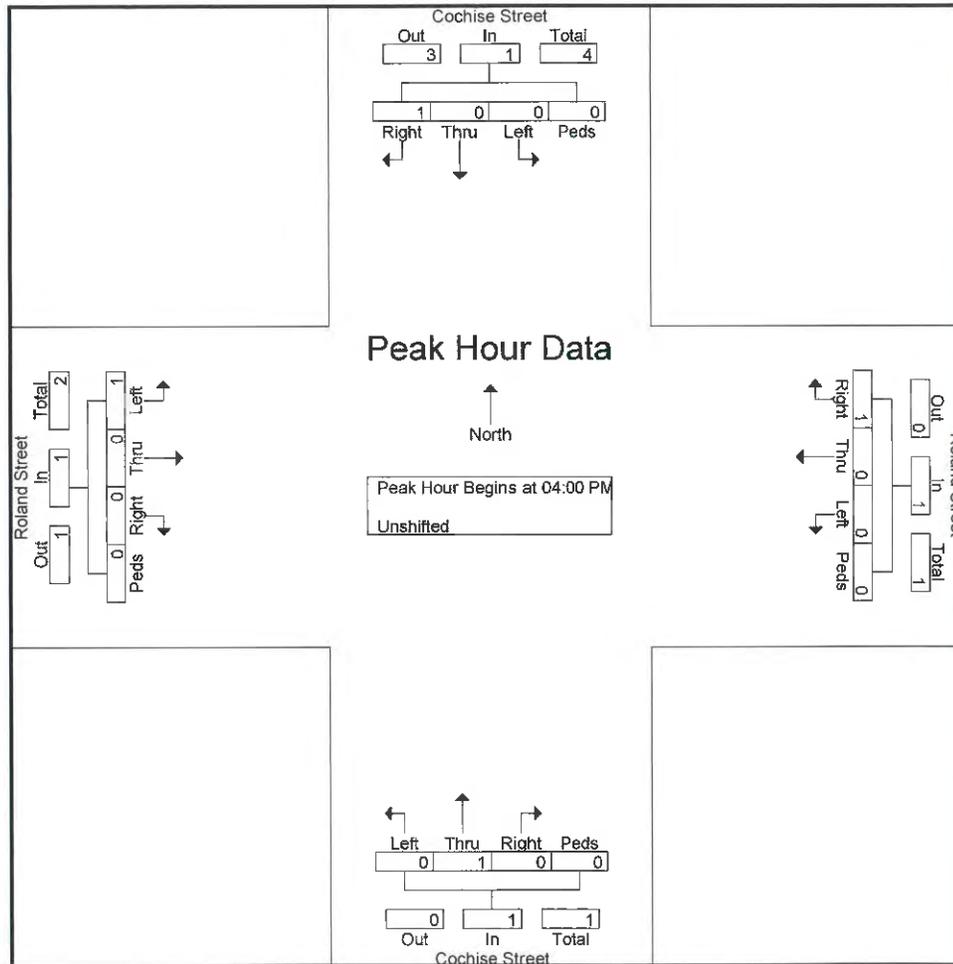


Lochs Engineering

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

File Name : Cochise-Roland
Site Code : 00000000
Start Date : 5/11/2022
Page No : 3

Start Time	Cochise Street From North					Roland Street From East					Cochise Street From South					Roland Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
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 a Engineering

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

File Name : Cochise-Clearwater
Site Code : 00000000
Start Date : 5/11/2022
Page No : 1

Groups Printed- Unshifted

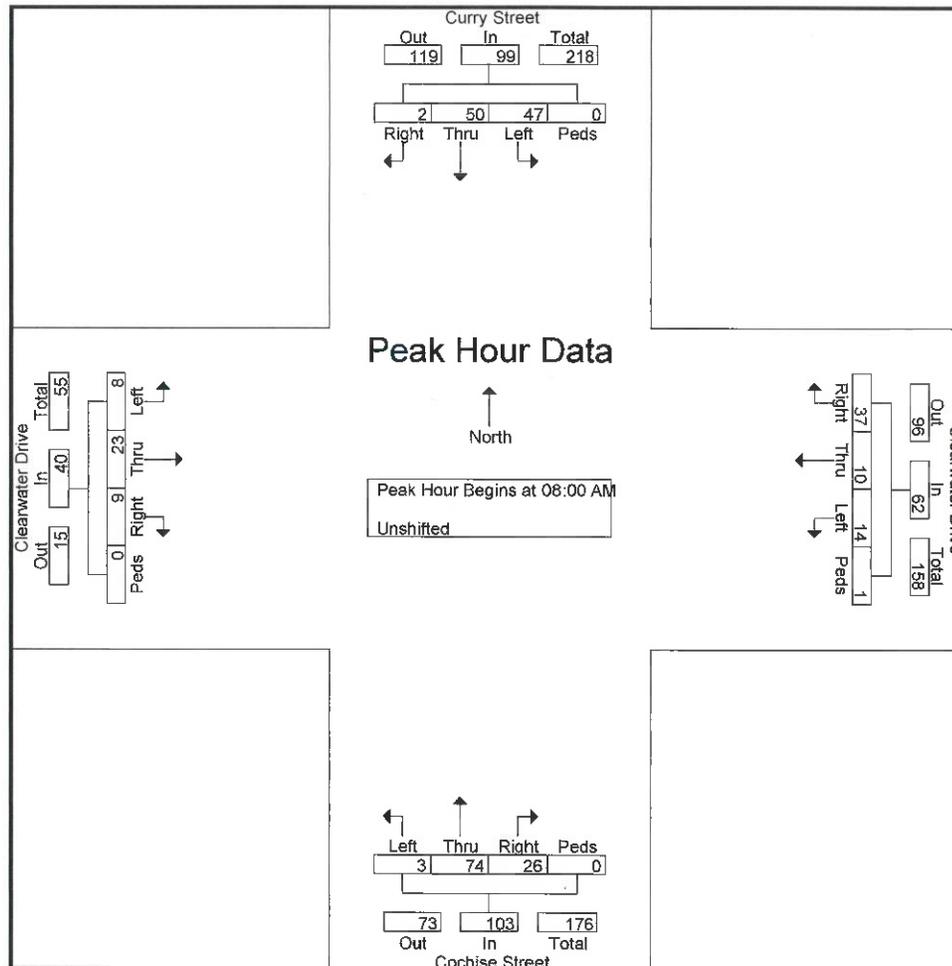
Start Time	Curry Street From North				Clearwater Drive From East				Cochise Street From South				Clearwater Drive From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	2	10	8	0	5	3	3	0	4	16	1	0	3	5	3	0	63
07:15 AM	0	9	9	0	5	2	2	0	4	16	2	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	

Locks Engineering

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

File Name : Cochise-Clearwater
Site Code : 00000000
Start Date : 5/11/2022
Page No : 2

Start Time	Curry Street From North					Clearwater Drive From East					Cochise Street From South					Clearwater Drive From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
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

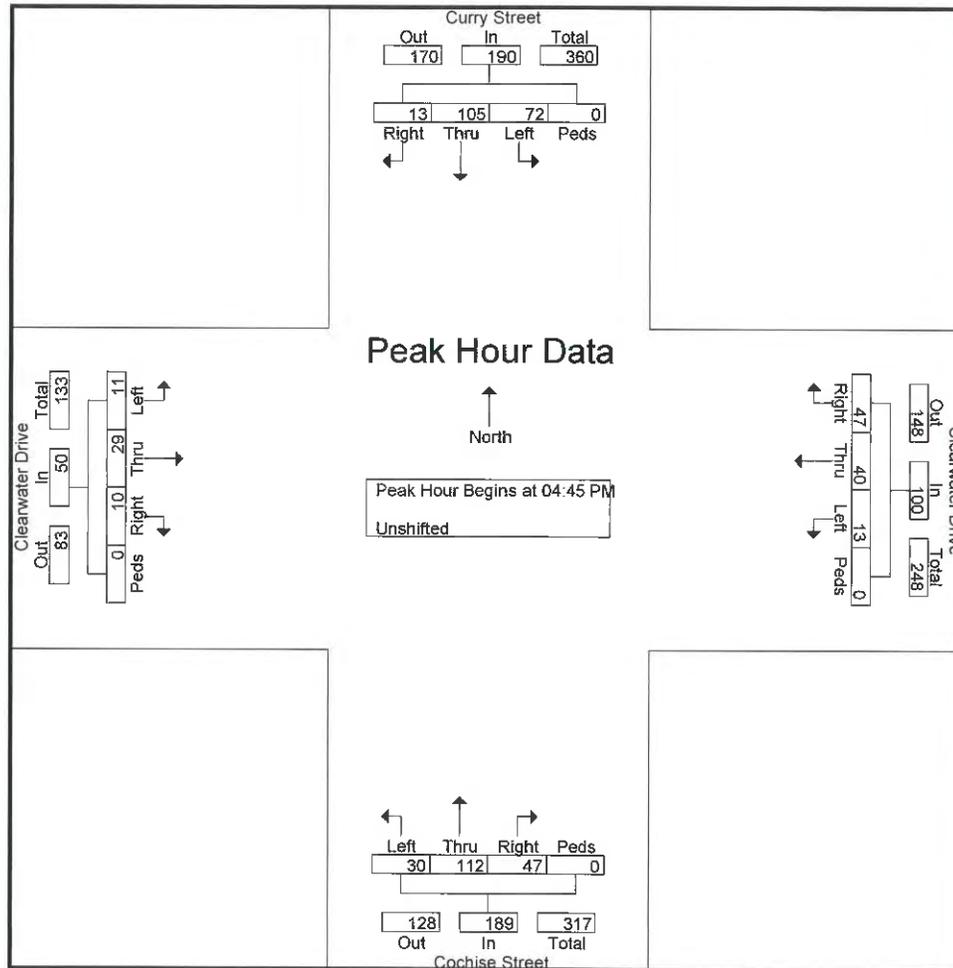


Locks Engineering

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

File Name : Cochise-Clearwater
Site Code : 00000000
Start Date : 5/11/2022
Page No : 3

Start Time	Curry Street From North					Clearwater Drive From East					Cochise Street From South					Clearwater Drive From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
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		4.7	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

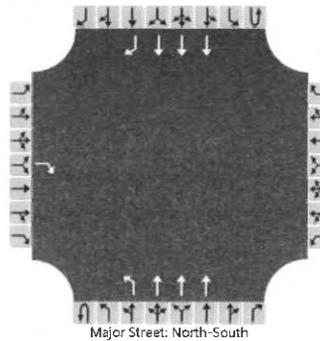
General Information

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				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
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				

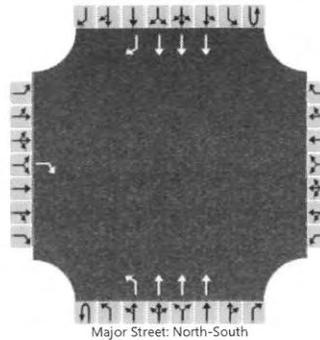
Delay, Queue Length, and Level of Service

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		Site Information	
Analyst	DKK	Intersection	Appion Way at S. Carson Street
Agency/Co.	Lochsa Engineering	Jurisdiction	Carson City
Date Performed	5/19/2022	East/West Street	Appion Way
Analysis Year	2022	North/South Street	S. Carson Street
Time Analyzed	Existing PM Peak Hour	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			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
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				

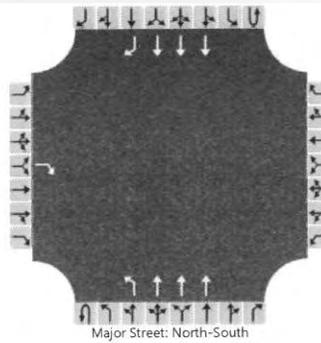
Delay, Queue Length, and Level of Service

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		Site Information	
Analyst	DKK	Intersection	Appion Way at S. Carson Street
Agency/Co.	Lochsa Engineering	Jurisdiction	Carson City
Date Performed	5/19/2022	East/West Street	Appion Way
Analysis Year	2022	North/South Street	S. Carson Street
Time Analyzed	Ex AM Pk Hour w/ Project	Peak Hour Factor	0.89
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description			

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	10U	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							

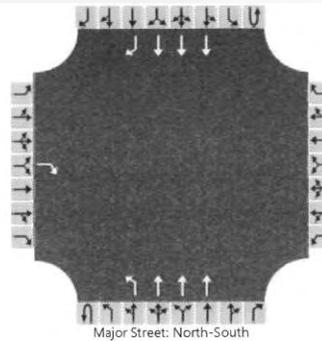
Delay, Queue Length, and Level of Service

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				Site Information			
Analyst	DKK			Intersection	Appion Way at S. Carson Street		
Agency/Co.	Lochsa Engineering			Jurisdiction	Carson City		
Date Performed	5/19/2022			East/West Street	Appion Way		
Analysis Year	2022			North/South Street	S. Carson Street		
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					
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Movement																		
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				

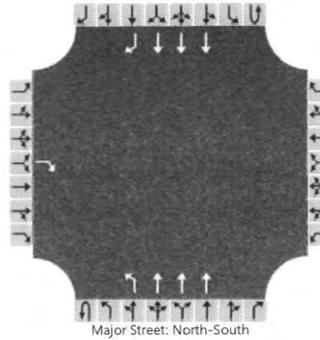
Delay, Queue Length, and Level of Service

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		Site Information	
Analyst	DKK	Intersection	Appion Way at S. Carson Street
Agency/Co.	Lochsa Engineering	Jurisdiction	Carson City
Date Performed	5/19/2022	East/West Street	Appion Way
Analysis Year	2050	North/South Street	S. Carson Street
Time Analyzed	Bkgrd AM Peak Hour	Peak Hour Factor	0.89
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description			

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound					
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Movement																		
Priority		10	11	12		7	8	9	10U	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)				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

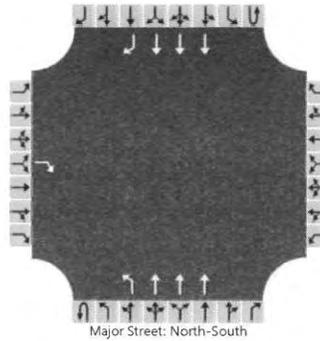
General Information

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				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
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

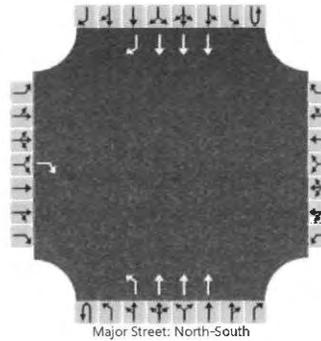
General Information

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			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
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				

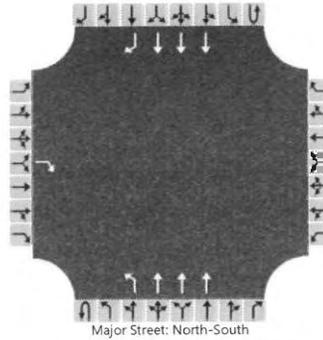
Delay, Queue Length, and Level of Service

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				Site Information			
Analyst	DKK			Intersection	Appion Way at S. Carson Street		
Agency/Co.	Lochsa Engineering			Jurisdiction	Carson City		
Date Performed	5/19/2022			East/West Street	Appion Way		
Analysis Year	2050			North/South Street	S. Carson Street		
Time Analyzed	Bkgrd PM Pk Hr 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				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
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							

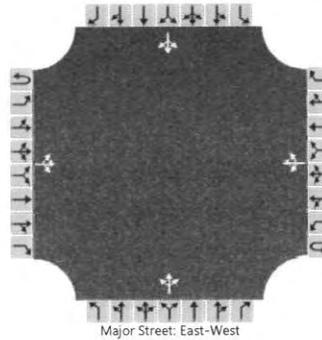
Delay, Queue Length, and Level of Service

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		Site Information	
Analyst	DKK	Intersection	Cochise Street at Appion Way
Agency/Co.	Lochsa Engineering	Jurisdiction	Carson City
Date Performed	5/19/2022	East/West Street	Appion Way
Analysis Year	2022	North/South Street	Cochise Street
Time Analyzed	Existing AM Peak Hour	Peak Hour Factor	0.89
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description			

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Priority																	
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

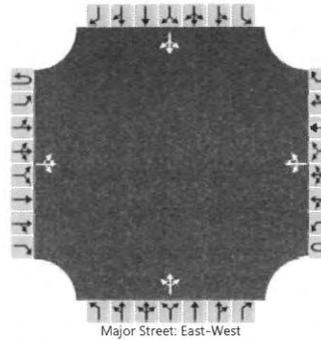
General Information

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			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
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

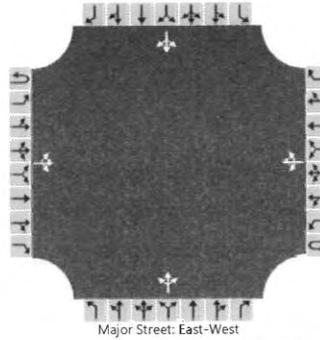
Delay, Queue Length, and Level of Service

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				Site Information			
Analyst	DKK			Intersection	Cochise Street at Appion Way		
Agency/Co.	Lochsa Engineering			Jurisdiction	Carson City		
Date Performed	5/19/2022			East/West Street	Appion Way		
Analysis Year	2022			North/South Street	Cochise Street		
Time Analyzed	Ex AM Pk Hour w/ Project			Peak Hour Factor	0.89		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description							

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Priority																	
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

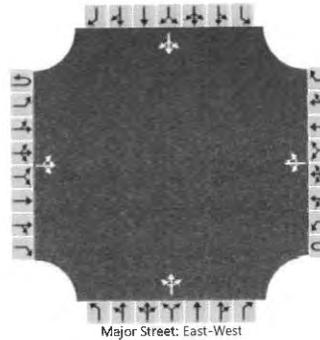
Delay, Queue Length, and Level of Service

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		Site Information	
Analyst	DKK	Intersection	Cochise Street at Appion Way
Agency/Co.	Lochsa Engineering	Jurisdiction	Carson City
Date Performed	5/19/2022	East/West Street	Appion Way
Analysis Year	2022	North/South Street	Cochise Street
Time Analyzed	Ex PM Pk Hour w/ Project	Peak Hour Factor	0.89
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description			

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
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

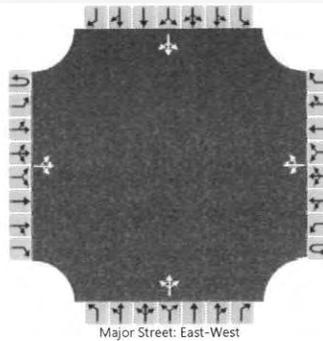
Delay, Queue Length, and Level of Service

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				Site Information			
Analyst	DKK			Intersection	Cochise Street at Appion Way		
Agency/Co.	Lochsa Engineering			Jurisdiction	Carson City		
Date Performed	5/19/2022			East/West Street	Appion Way		
Analysis Year	2050			North/South Street	Cochise Street		
Time Analyzed	Bkgrd AM Peak Hour			Peak Hour Factor	0.89		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description							

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Priority																	
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

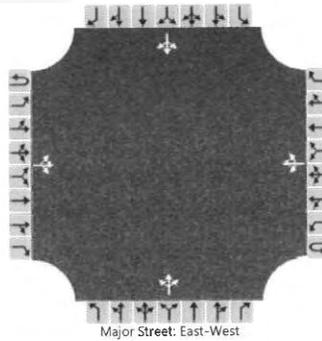
Delay, Queue Length, and Level of Service

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				Site Information			
Analyst	DKK			Intersection	Cochise Street at Appion Way		
Agency/Co.	Lochsa Engineering			Jurisdiction	Carson City		
Date Performed	5/19/2022			East/West Street	Appion Way		
Analysis Year	2050			North/South Street	Cochise Street		
Time Analyzed	Bkgrd PM Peak Hour			Peak Hour Factor	0.89		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description							

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
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

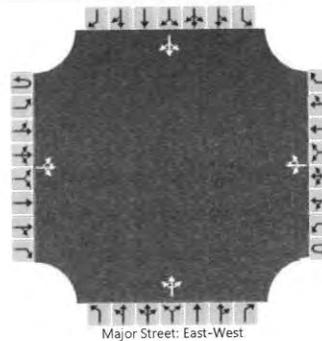
Delay, Queue Length, and Level of Service

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		Site Information	
Analyst	DKK	Intersection	Cochise Street at Appion Way
Agency/Co.	Lochsa Engineering	Jurisdiction	Carson City
Date Performed	5/19/2022	East/West Street	Appion Way
Analysis Year	2050	North/South Street	Cochise Street
Time Analyzed	Bkgrd AM Pk Hr w/ Project	Peak Hour Factor	0.89
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description			

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
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

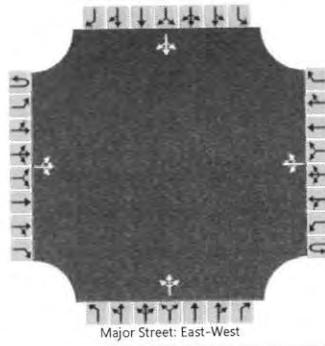
Delay, Queue Length, and Level of Service

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		Site Information	
Analyst	DKK	Intersection	Cochise Street at Appion Way
Agency/Co.	Lochsa Engineering	Jurisdiction	Carson City
Date Performed	5/19/2022	East/West Street	Appion Way
Analysis Year	2050	North/South Street	Cochise Street
Time Analyzed	Bkgrd PM Pk Hr w/ Project	Peak Hour Factor	0.89
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description			

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Priority																	
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

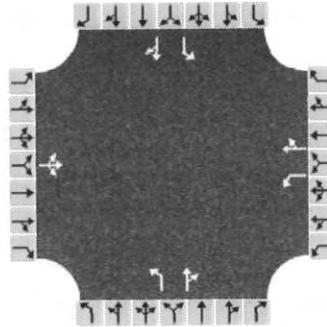
Delay, Queue Length, and Level of Service

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		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	2022	North/South Street	Curry Street
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.83
Time Analyzed	Existing AM Peak Hour		
Project Description			

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
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	

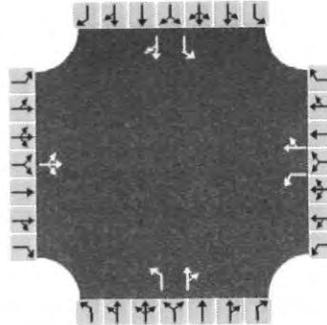
Capacity, Delay and Level of Service

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		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	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		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
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	

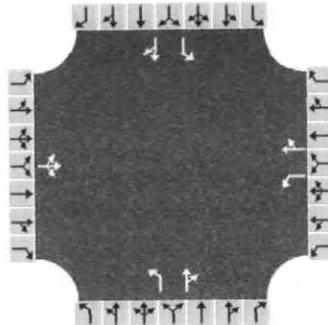
Capacity, Delay and Level of Service

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		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	2022	North/South Street	Curry Street
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.83
Time Analyzed	Ex AM Pk Hour w/ Project		
Project Description			

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
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	

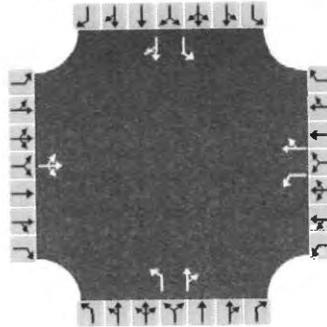
Capacity, Delay and Level of Service

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		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	2022	North/South Street	Curry Street
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.95
Time Analyzed	Ex PM Pk Hour w/ Project		
Project Description			

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
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	

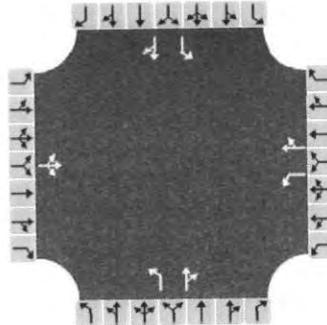
Capacity, Delay and Level of Service

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		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	0.83
Time Analyzed	Bkgd AM Peak Hour		
Project Description			

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
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	

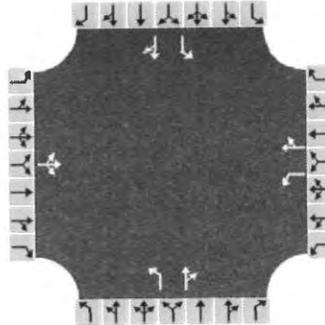
Capacity, Delay and Level of Service

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		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 Peak Hour		
Project Description			

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
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	

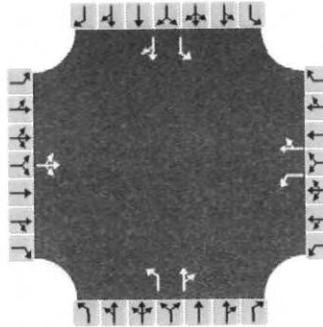
Capacity, Delay and Level of Service

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		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	0.83
Time Analyzed	Bkgrd AM Pk Hr w/ Project		
Project Description			

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
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	

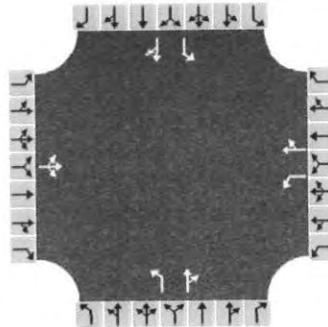
Capacity, Delay and Level of Service

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		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
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	

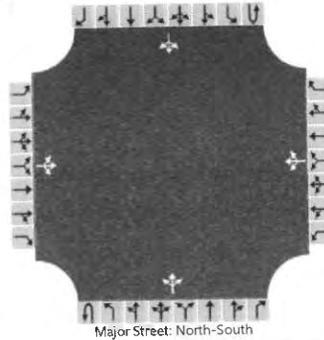
Capacity, Delay and Level of Service

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		Site 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	2022	North/South Street	Cochise Street
Time Analyzed	Ex 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				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
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

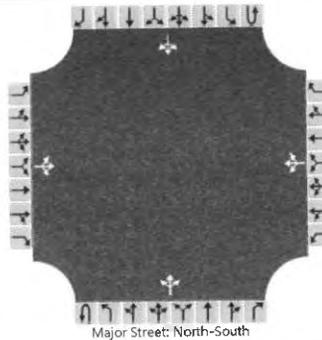
Delay, Queue Length, and Level of Service

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				
Approach LOS		B										A				

HCS Two-Way Stop-Control Report

General Information		Site 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	2022	North/South Street	Cochise Street
Time Analyzed	Ex PM 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				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
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

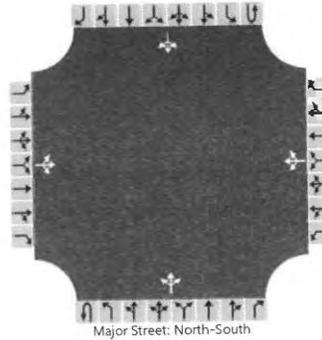
Delay, Queue Length, and Level of Service

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		Site 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 Peak Hour	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			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
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		

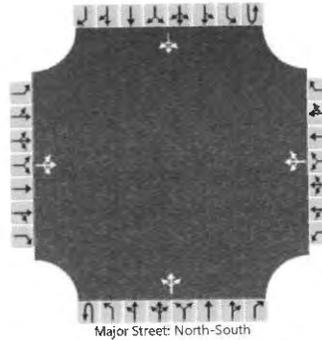
Delay, Queue Length, and Level of Service

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		Site 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 PM Peak Hour	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			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement									1U	1	2	3	4U	4	5	6
Priority		10	11	12		7	8	9								
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		

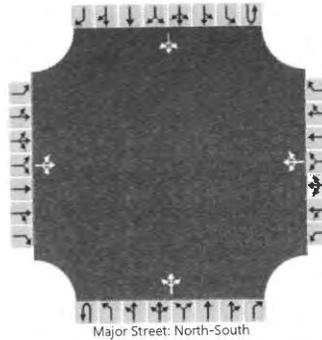
Delay, Queue Length, and Level of Service

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		Site 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				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
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		

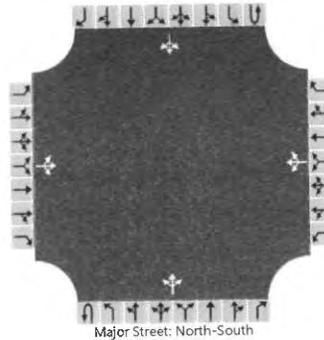
Delay, Queue Length, and Level of Service

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		Site 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 PM 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				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
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			

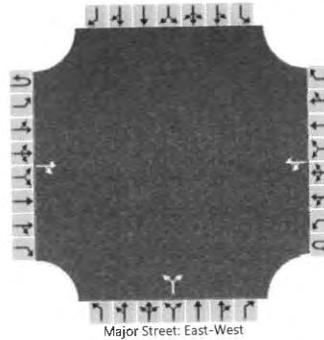
APPENDIX D

DRIVEWAY ANALYSIS

HCS Two-Way Stop-Control Report

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

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
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			

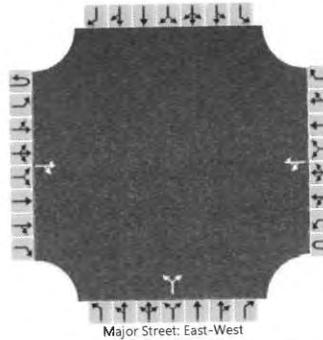
Delay, Queue Length, and Level of Service

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

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
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			

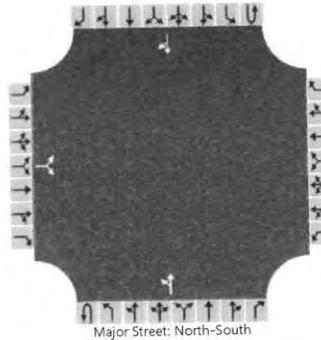
Delay, Queue Length, and Level of Service

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		Site 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 AM 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					
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Movement																		
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							

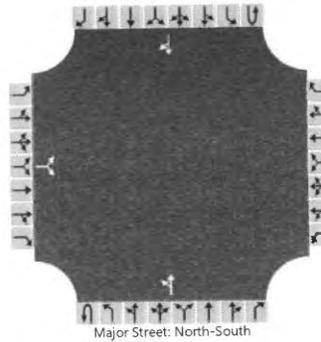
Delay, Queue Length, and Level of Service

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		Site 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				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
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

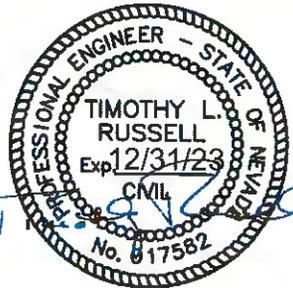
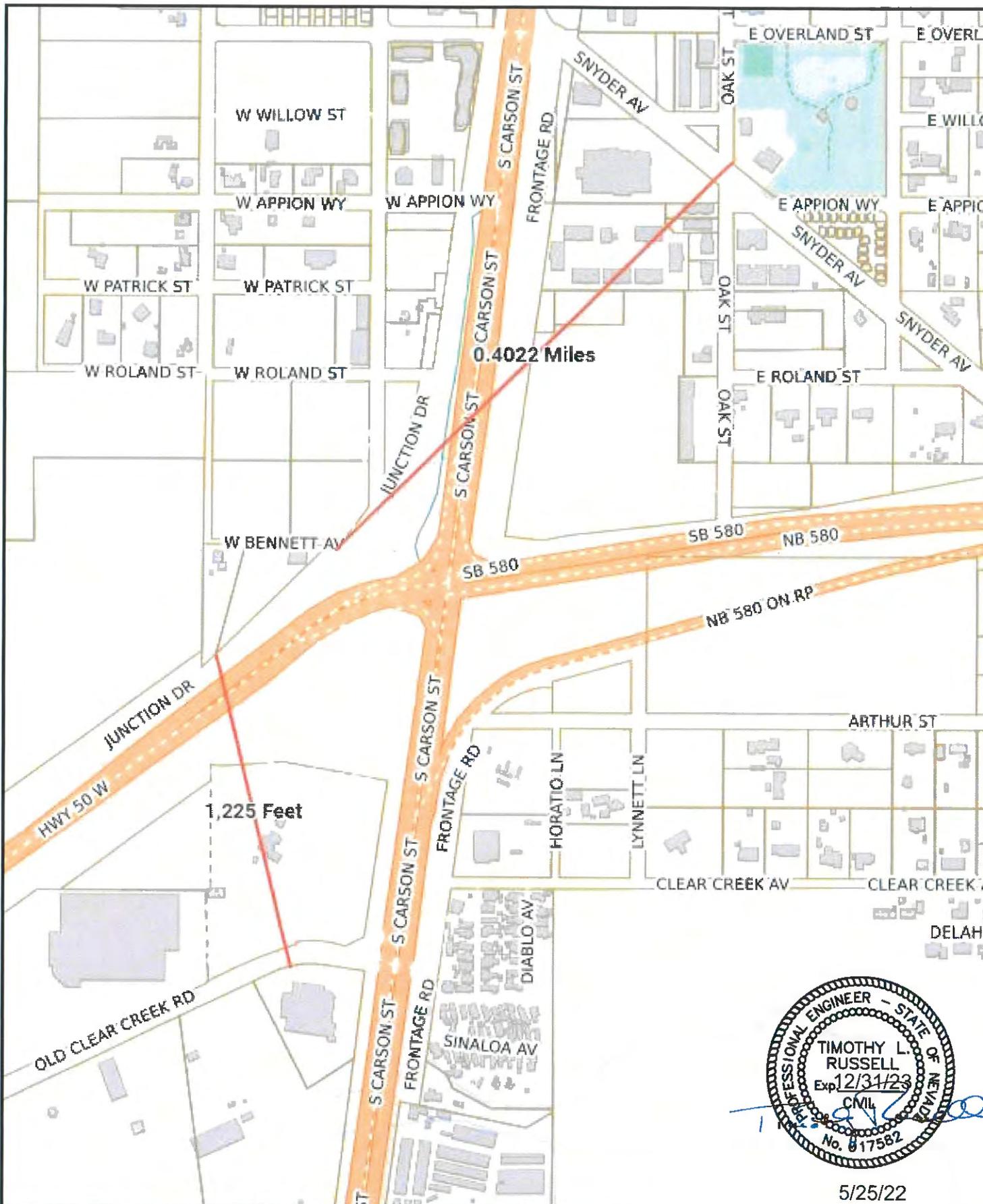
Intersection Total	
AM	PM
338	454
14	19
52	66
63	49
291	203
6	5
14	11
40	56
818	863

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

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
 308 N. CURRY STREET, SUITE 200
 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

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.

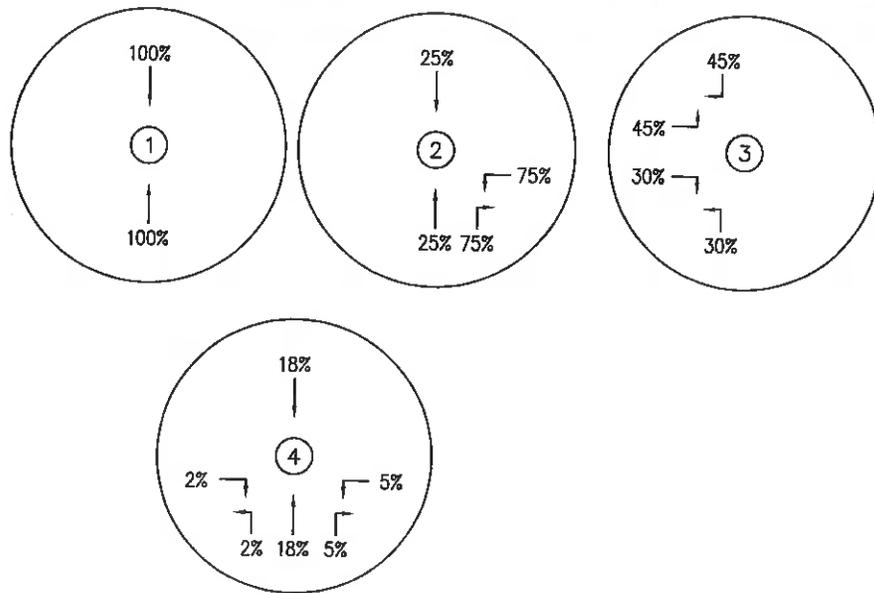
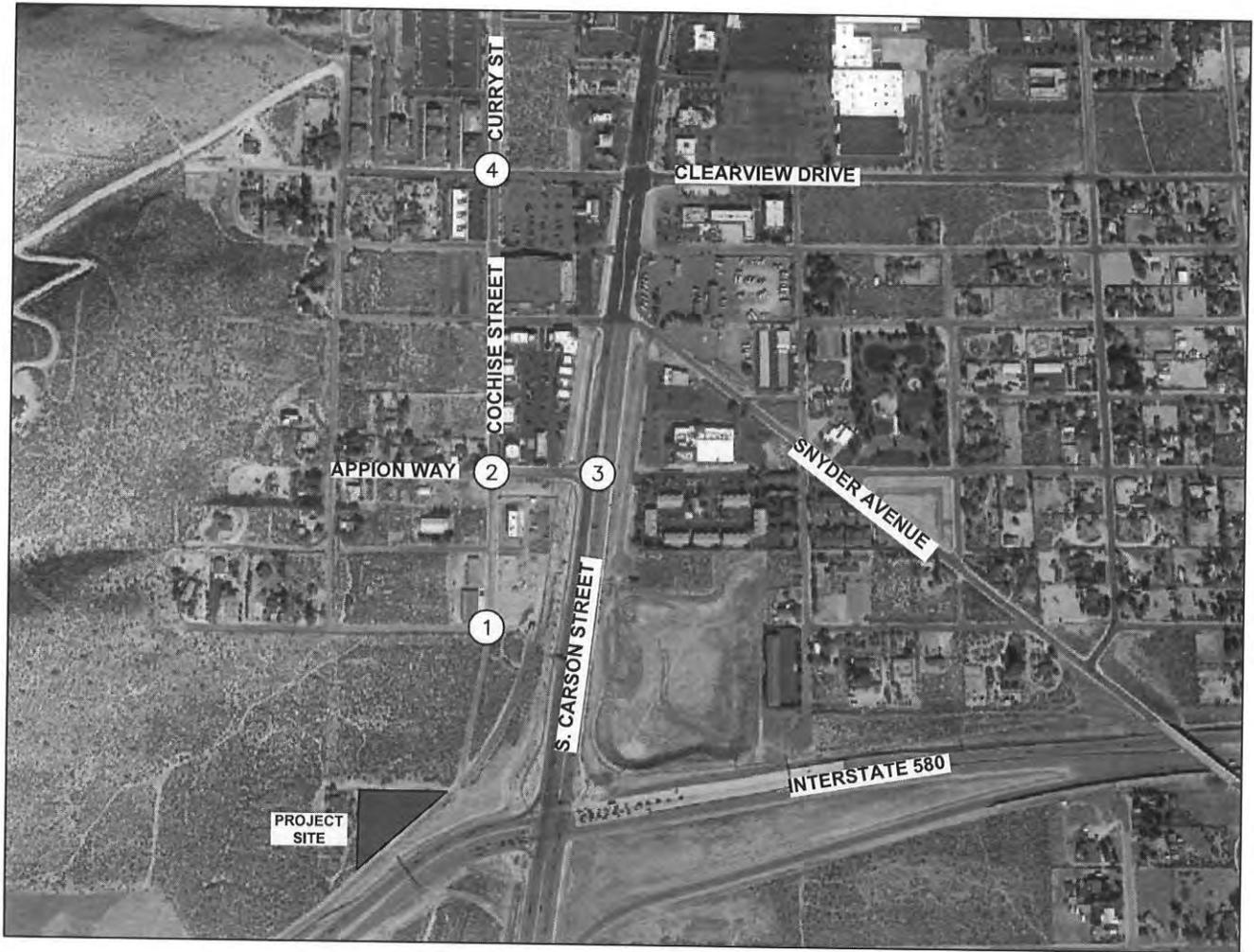
Response 1: The traffic study for the Appion Commercial Center was reviewed and a portion of the traffic volumes were incorporated into the traffic study for this project. The study for the Appion Commercial Center site included three building of which two are currently occupied and open, Chick Fil-A 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.

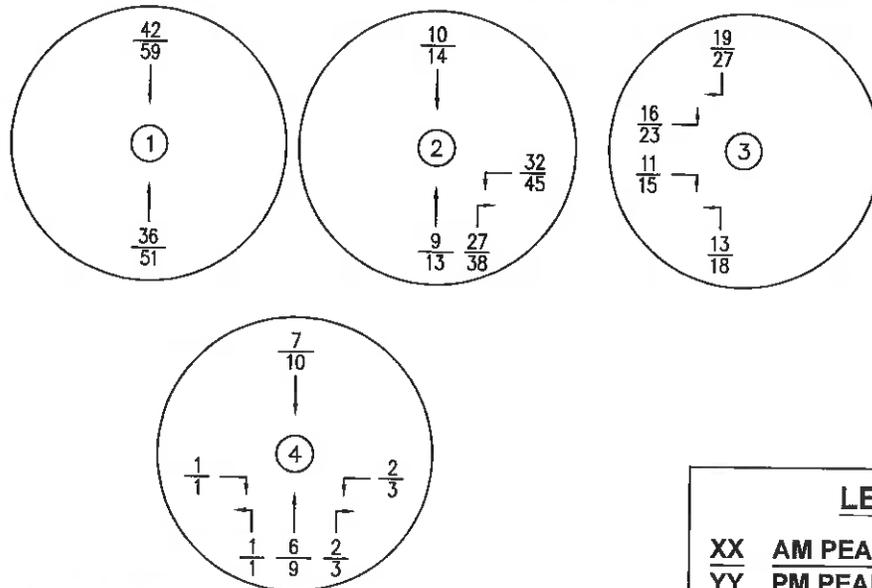
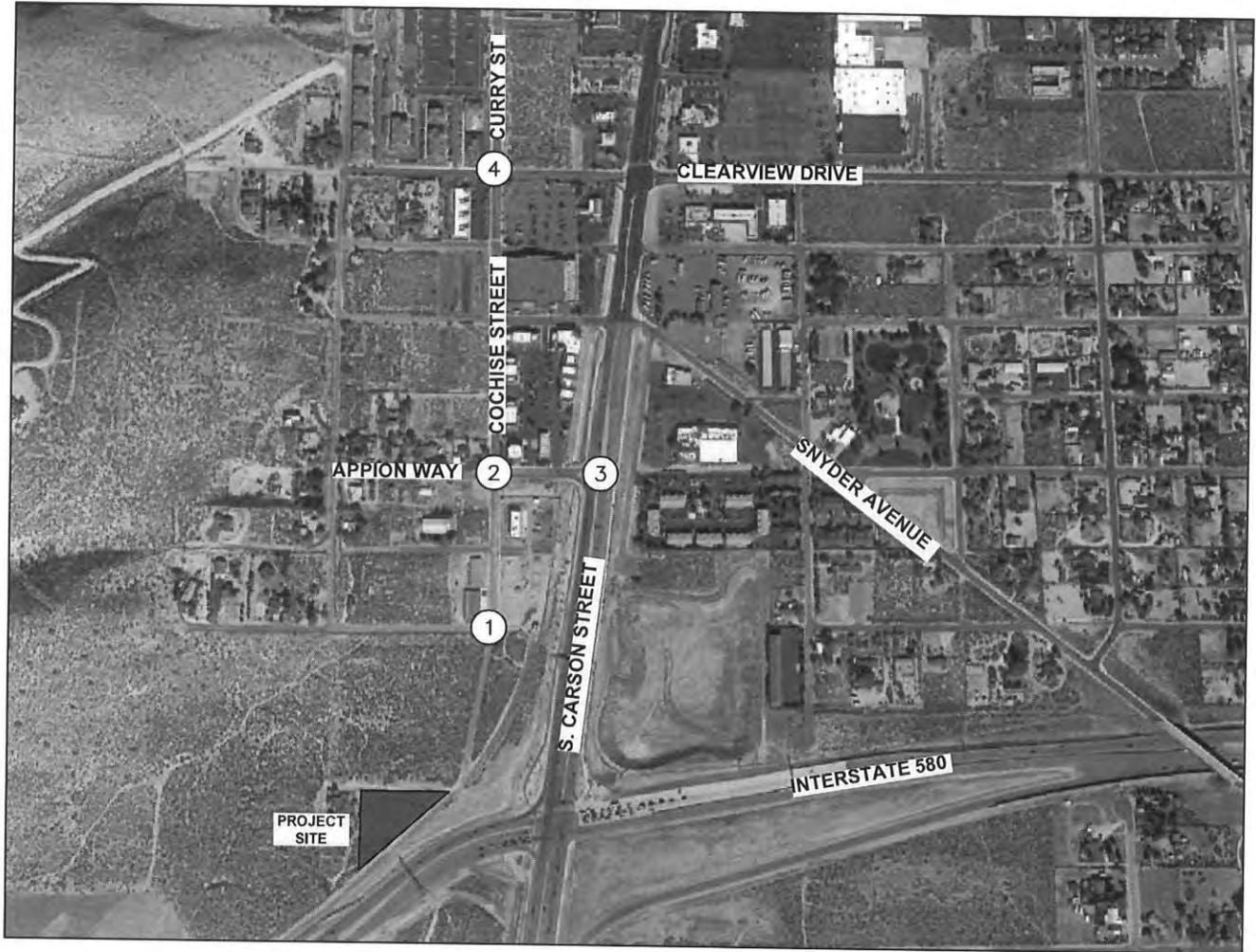


T:\CAD\221098\DRAWINGS\TRAFFIC\221098-TRAFFIC.DWG

Lochsa
engineering
 6345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

TRIP
 DISTRIBUTION
 FIGURE 1

JADE DISPENSARY



LEGEND	
XX	AM PEAK HOUR VOLUMES
YY	PM PEAK HOUR VOLUMES

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

Lochsa
engineering
 6345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

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.

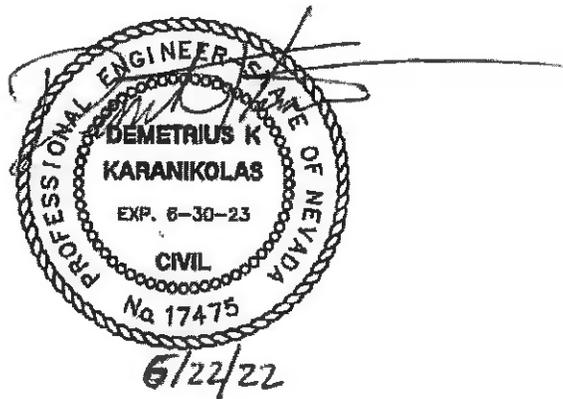
Response 5: Converting the two way stop control intersection to all-way stop control intersection would reduce the delays experienced on the north and south legs of the intersection. The results of the analysis of the mitigation measure is as follows:

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



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

Lochsa
engineering
6345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

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.

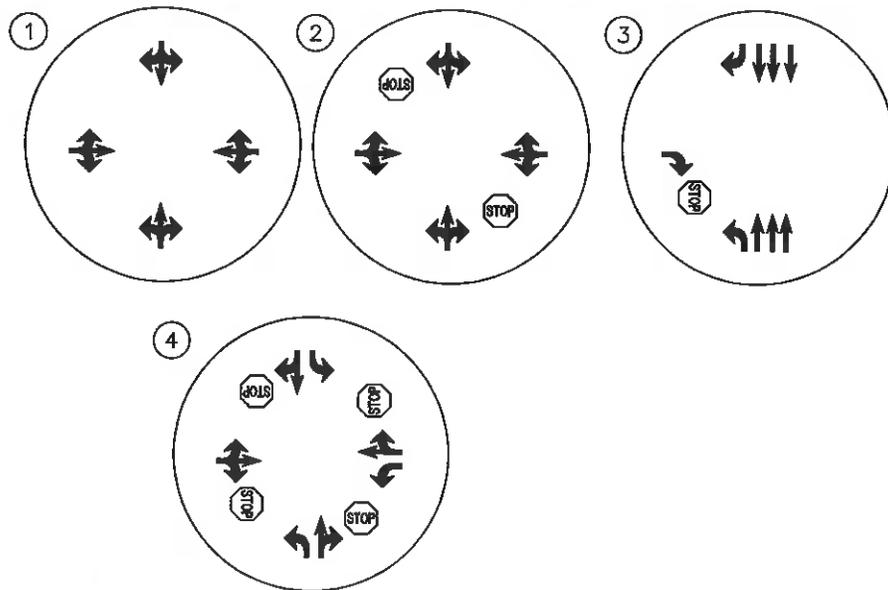
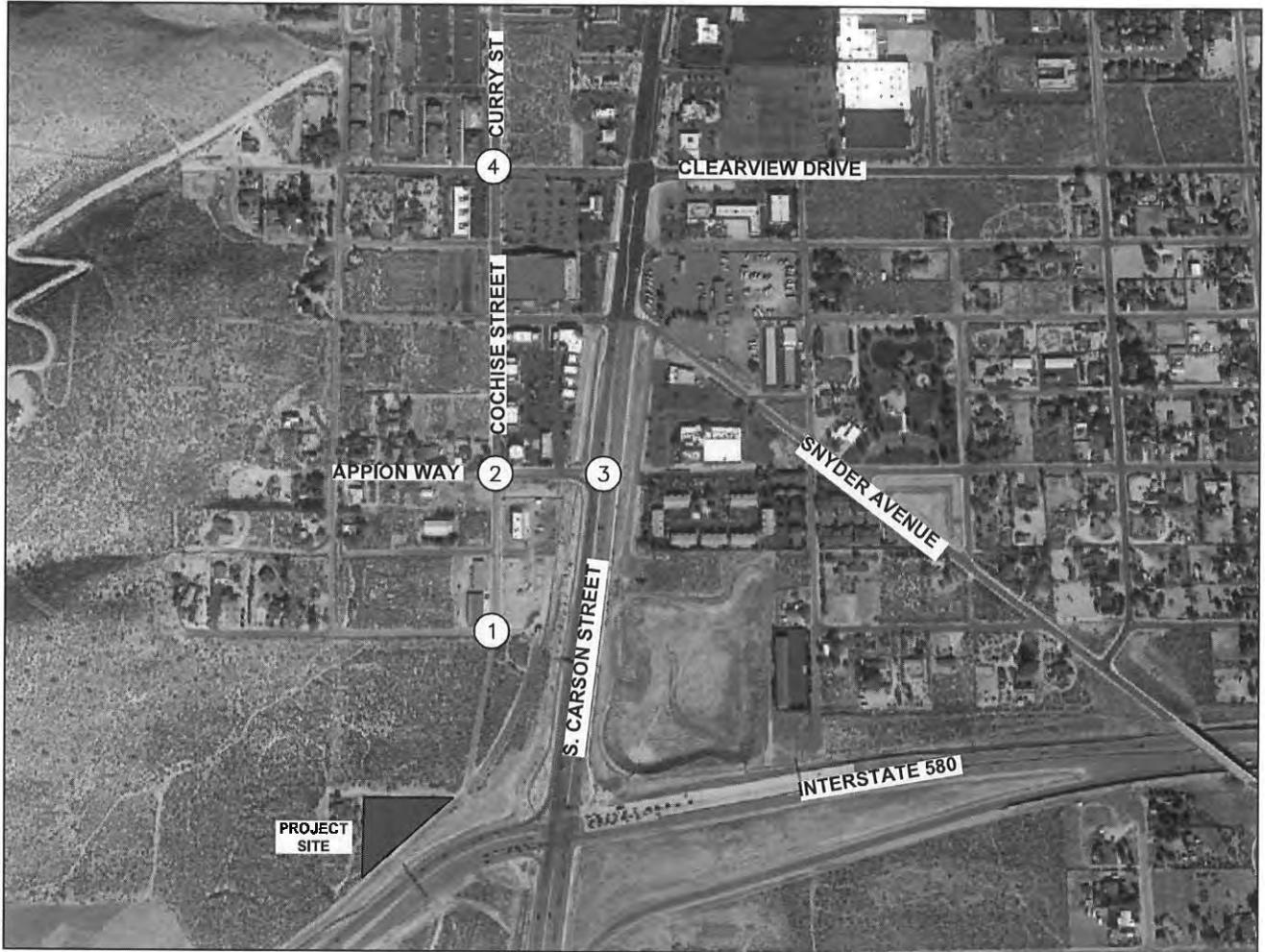
Clearview Drive at Curry Street

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:



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

Lochsa
engineering
 6345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

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.

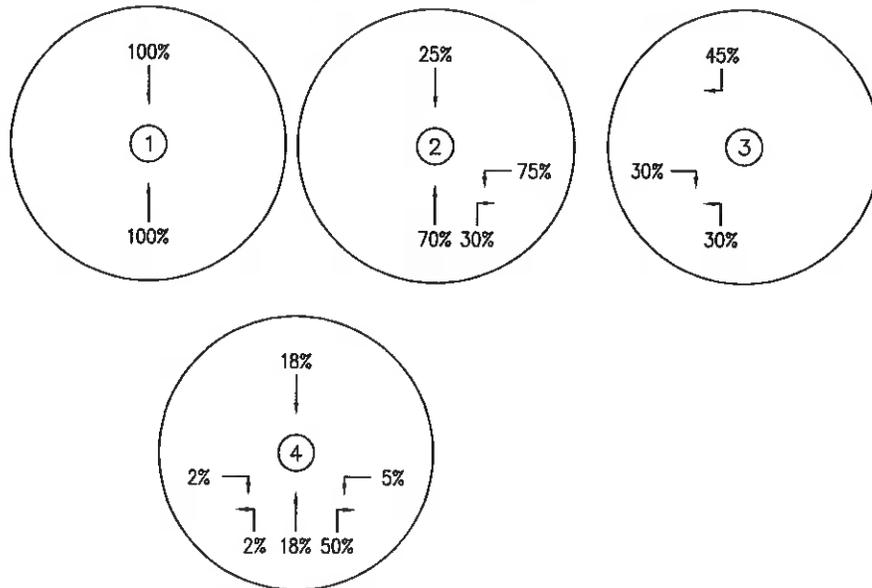
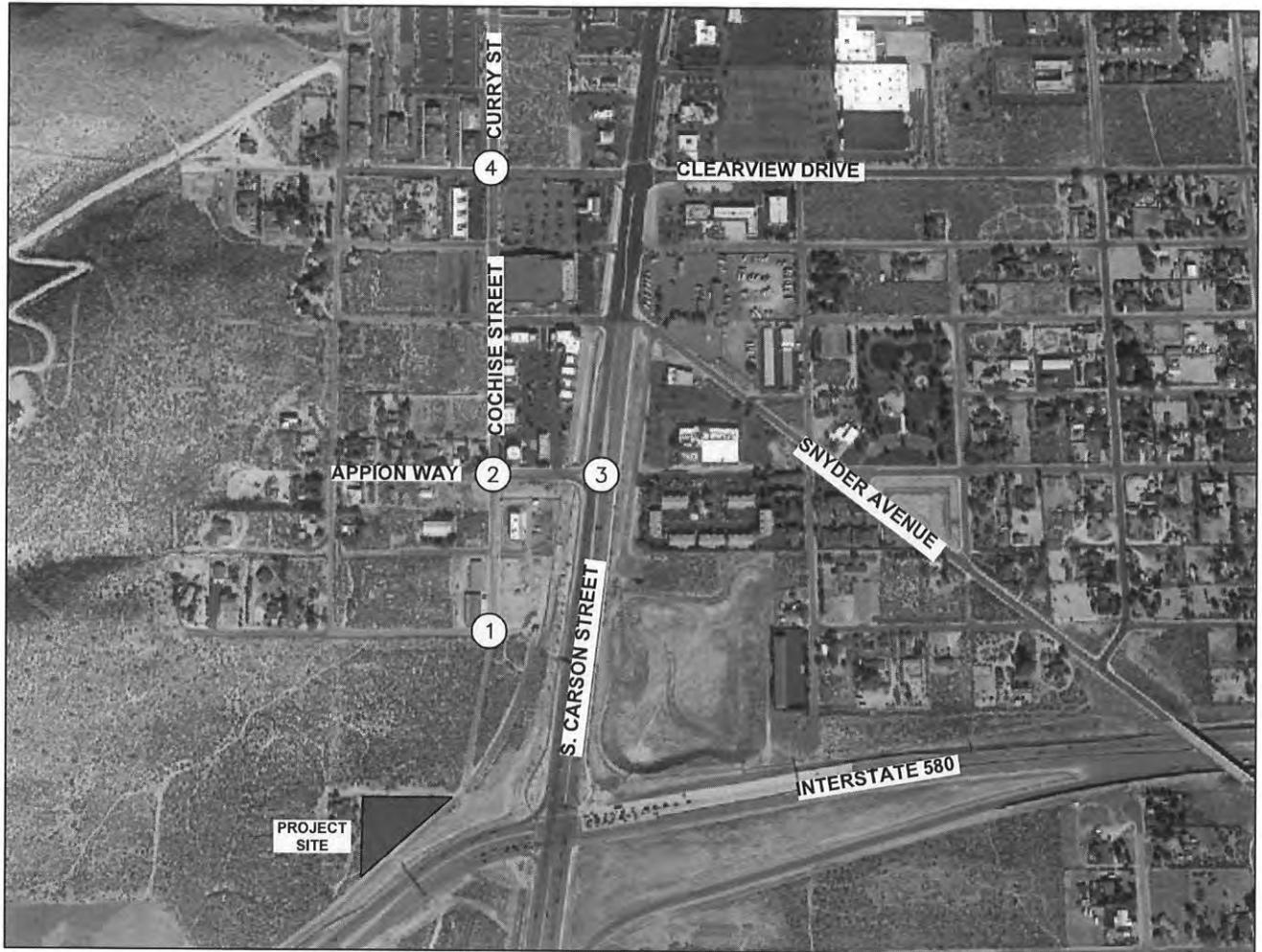
G. EXISTING AND PROJECTED TRAFFIC VOLUMES

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

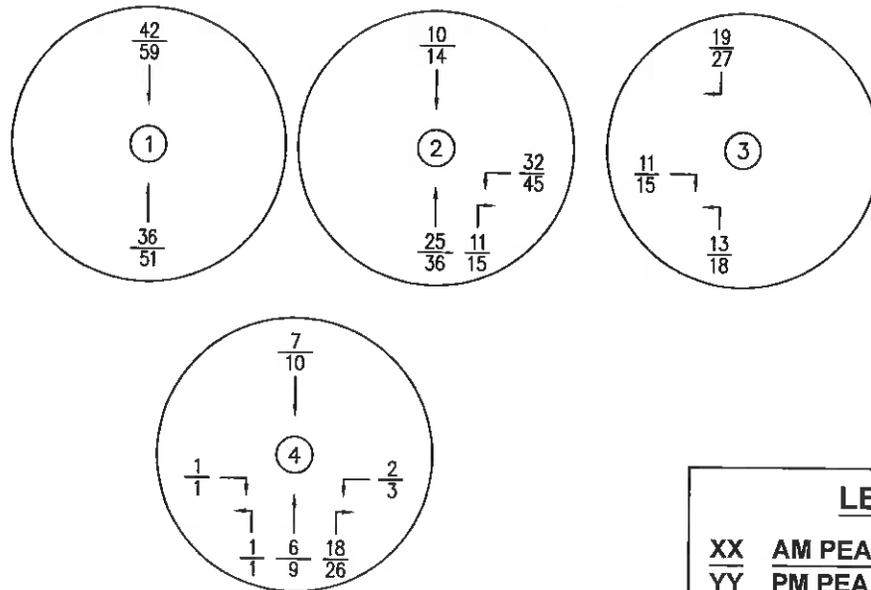


T:\CAD\221098\DRAWINGS\TRAFFIC\221098-TRAFFIC.DWG

Lochsa
engineering
 6345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

TRIP
 DISTRIBUTION
 FIGURE 3

JADE DISPENSARY



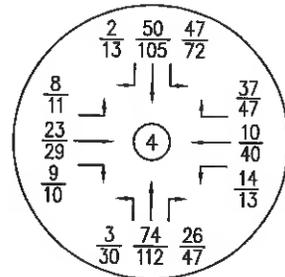
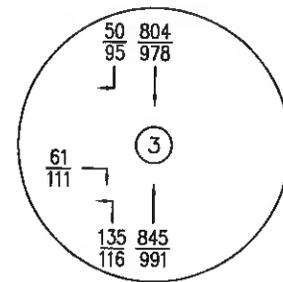
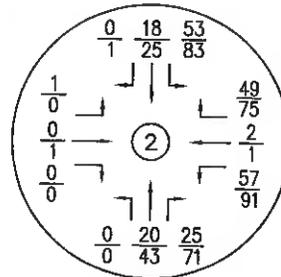
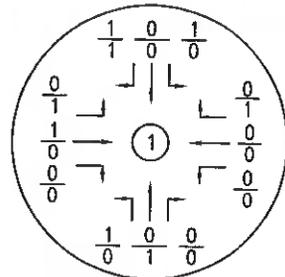
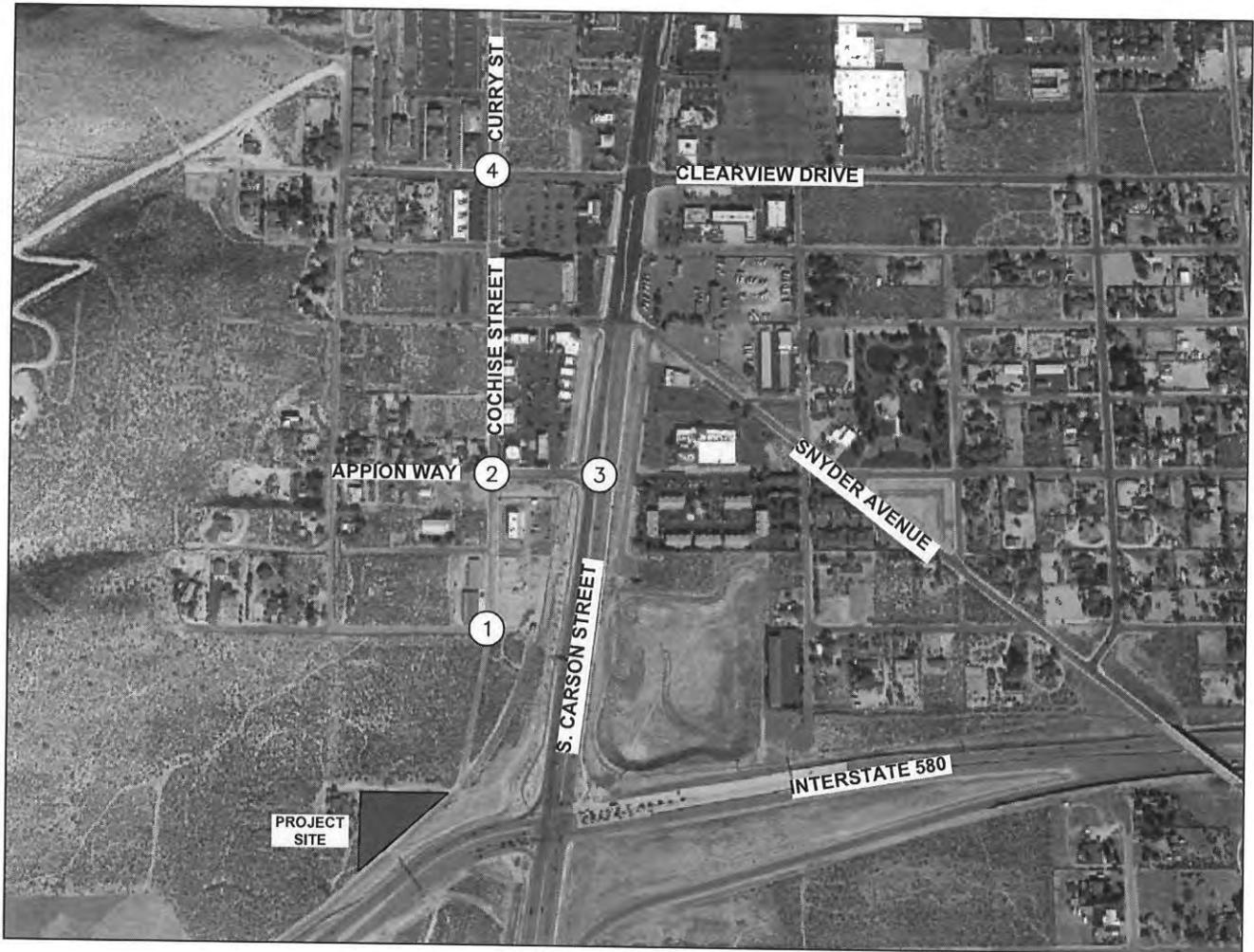
LEGEND	
XX	AM PEAK HOUR VOLUMES
YY	PM PEAK HOUR VOLUMES

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

Lochsa
 engineering
 6345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

TRIP
 ASSIGNMENT
 FIGURE 4

JADE DISPENSARY



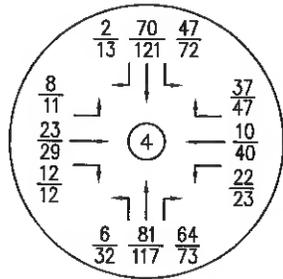
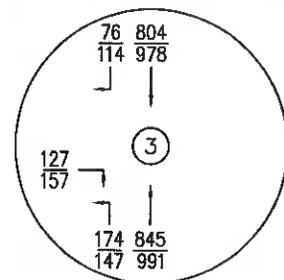
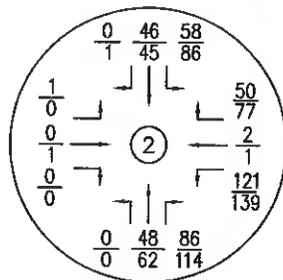
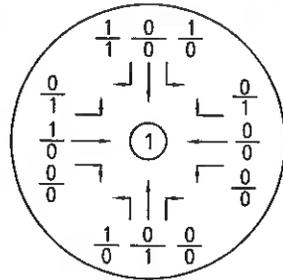
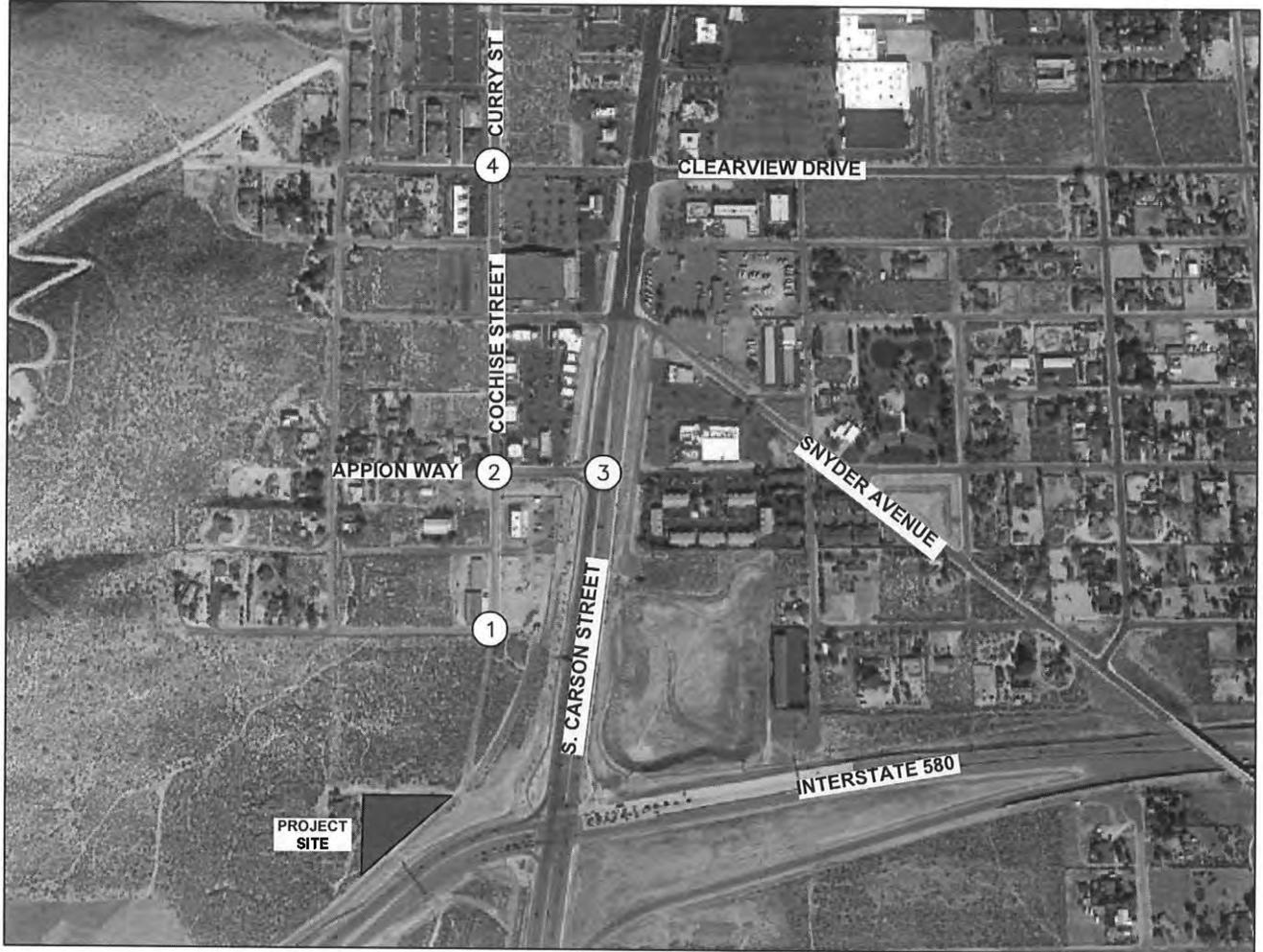
LEGEND
 XX AM PEAK HOUR VOLUMES
 YY PM PEAK HOUR VOLUMES

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

Lochsa
 engineering
 6345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

**EXISTING
 VOLUMES
 FIGURE 5**

JADE DISPENSARY



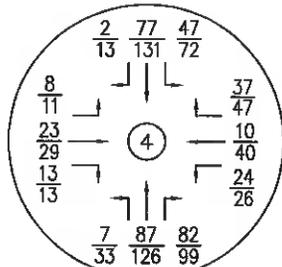
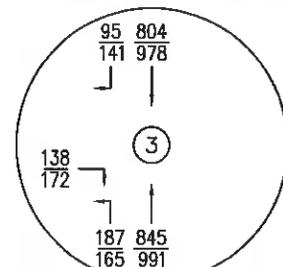
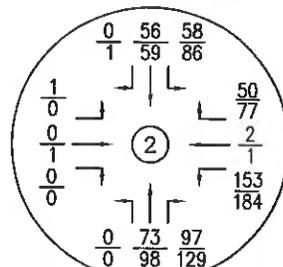
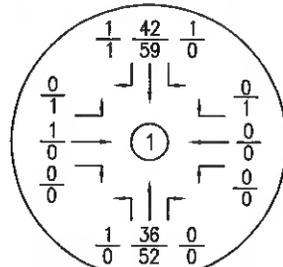
LEGEND	
XX	AM PEAK HOUR VOLUMES
YY	PM PEAK HOUR VOLUMES

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

Lochsa
 engineering
 6345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

EXISTING VOLUMES
 W/ BKGRD STUDIES
 FIGURE 6

JADE DISPENSARY



LEGEND	
XX	AM PEAK HOUR VOLUMES
YY	PM PEAK HOUR VOLUMES

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

Lochsa
engineering
 6345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

**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

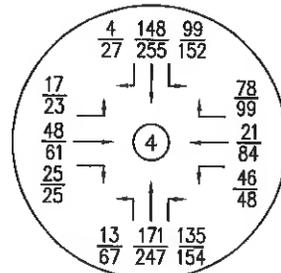
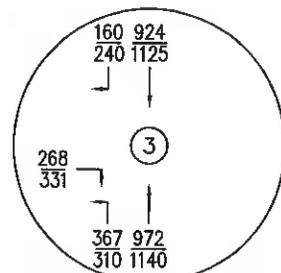
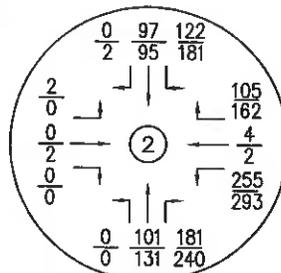
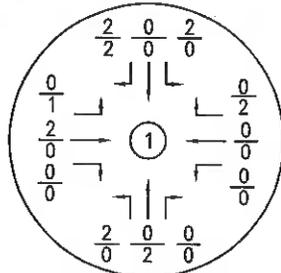
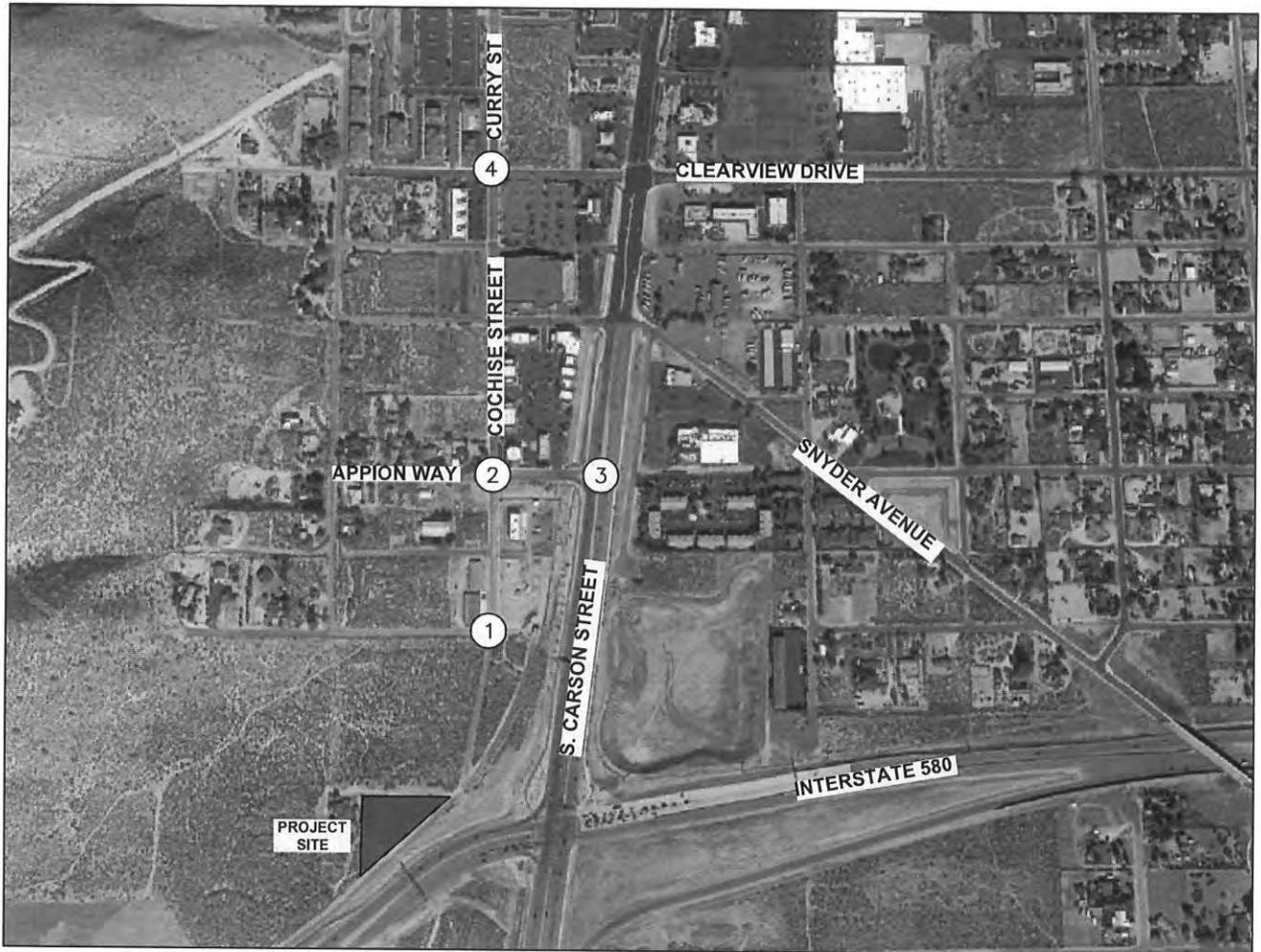
Based upon the preceding information, a level of service analysis was performed for each intersection. Techniques presented in the Transportation Research Board publication entitled *Highway Capacity Manual – Seventh Edition* were utilized for this analysis. The analysis worksheets are provided in Appendix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

TABLE 4 UN SIGNALIZED 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 UN SIGNALIZED 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.



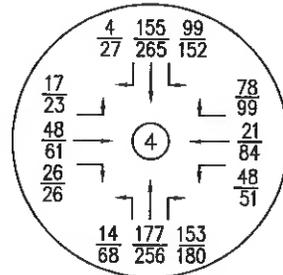
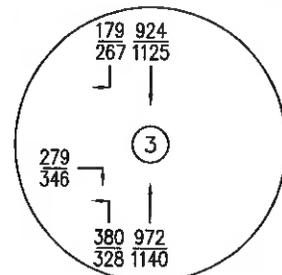
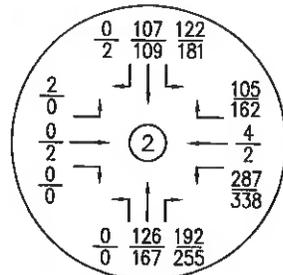
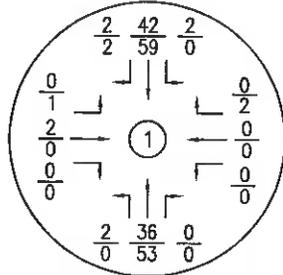
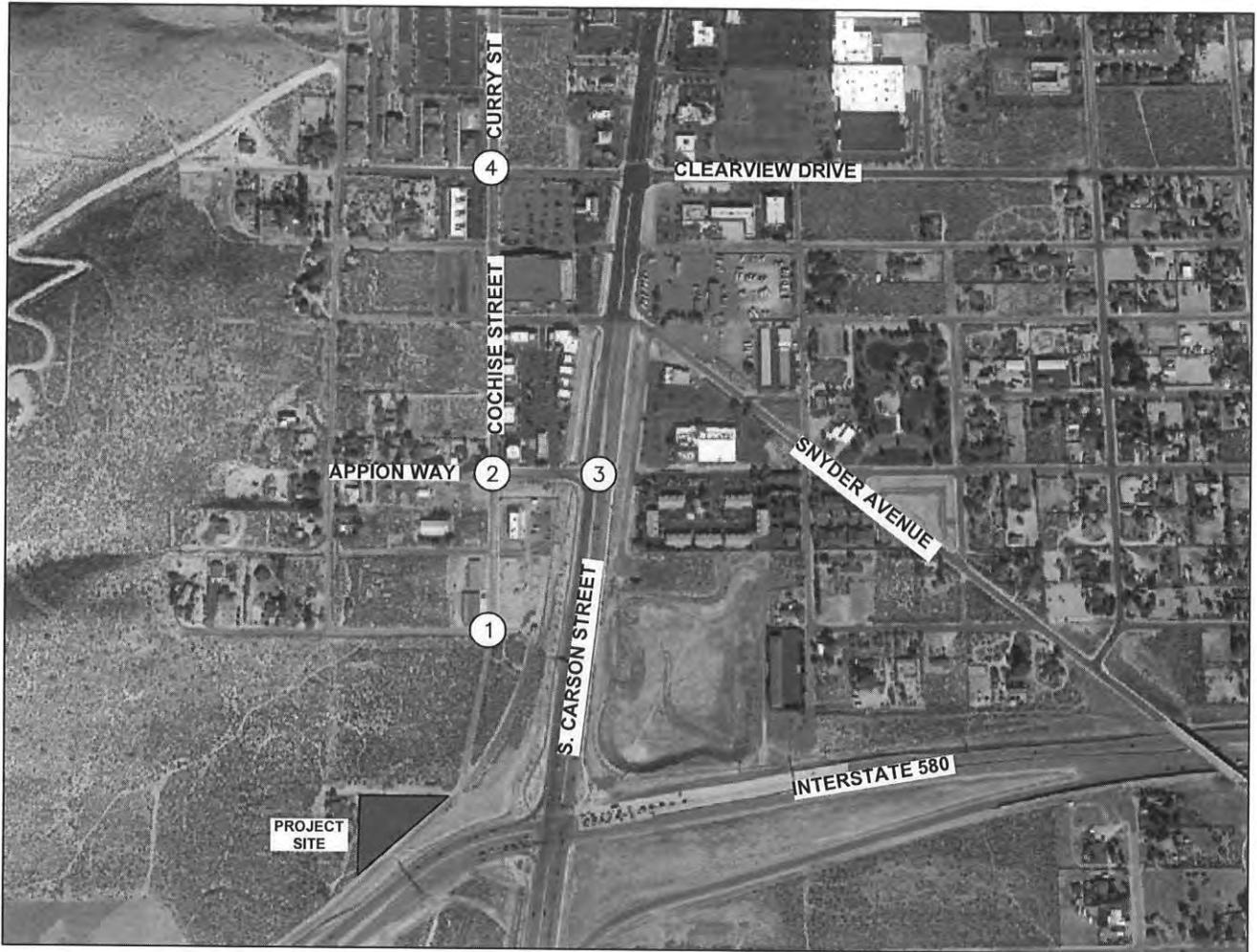
LEGEND	
XX	AM PEAK HOUR VOLUMES
YY	PM PEAK HOUR VOLUMES

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

Lochsa
engineering
 6345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

2050 BACKGROUND
 VOLUMES
 FIGURE 8

JADE DISPENSARY



LEGEND	
XX	AM PEAK HOUR VOLUMES
YY	PM PEAK HOUR VOLUMES

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

Lochsa
engineering
 6345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

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

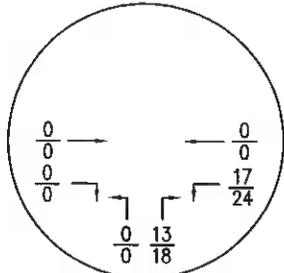
Clearview Drive at Curry Street

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

I. DRIVEWAY ANALYSIS

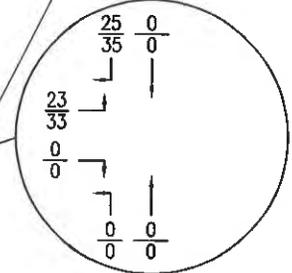
The proposed project site shall have access to the local roadway network via one driveway on Bennett Avenue and one driveway on Junction Drive. The driveway on Bennett Avenue is located approximately 145 feet west of the intersection of Junction Drive at Bennett Avenue. This driveway shall allow full 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

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

TABLE 12 UN SIGNALIZED 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 UN SIGNALIZED 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.*

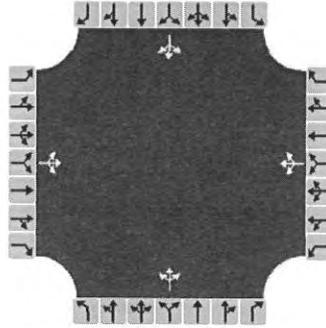
APPENDIX B

MITIGATION ANALYSIS

HCS All-Way Stop Control Report

General Information		Site Information	
Analyst	DKK	Intersection	Cochise St at Appion Way
Agency/Co.	Lochsa Engineering	Jurisdiction	Carson City
Date Performed	6/21/2022	East/West Street	Appion Way
Analysis Year	2050	North/South Street	Cochise Street
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.89
Time Analyzed	Bkgrd AM Pk Hr w/ Project		
Project Description			

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
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

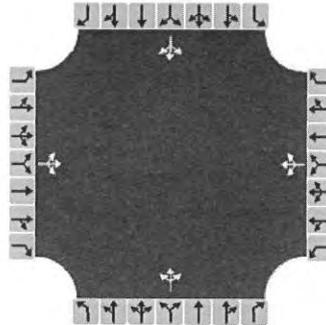
General Information

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		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
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.

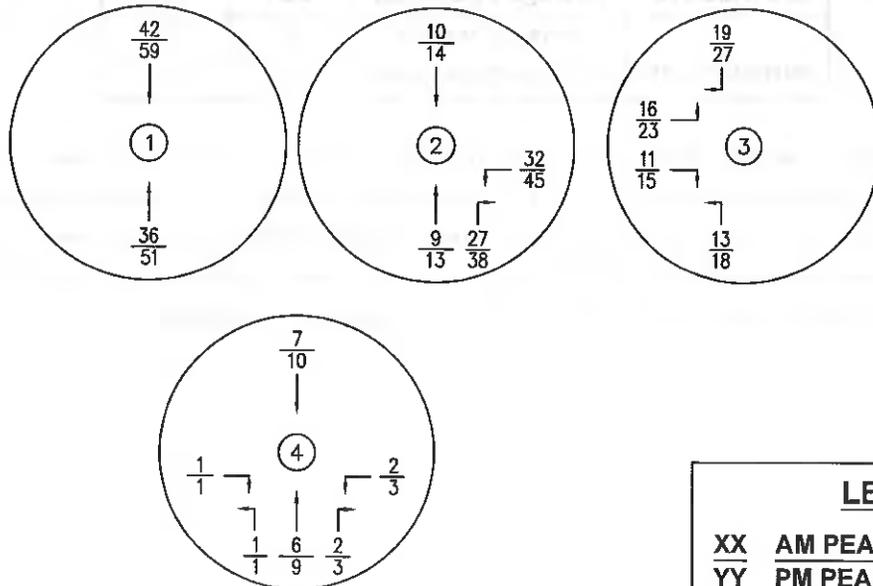
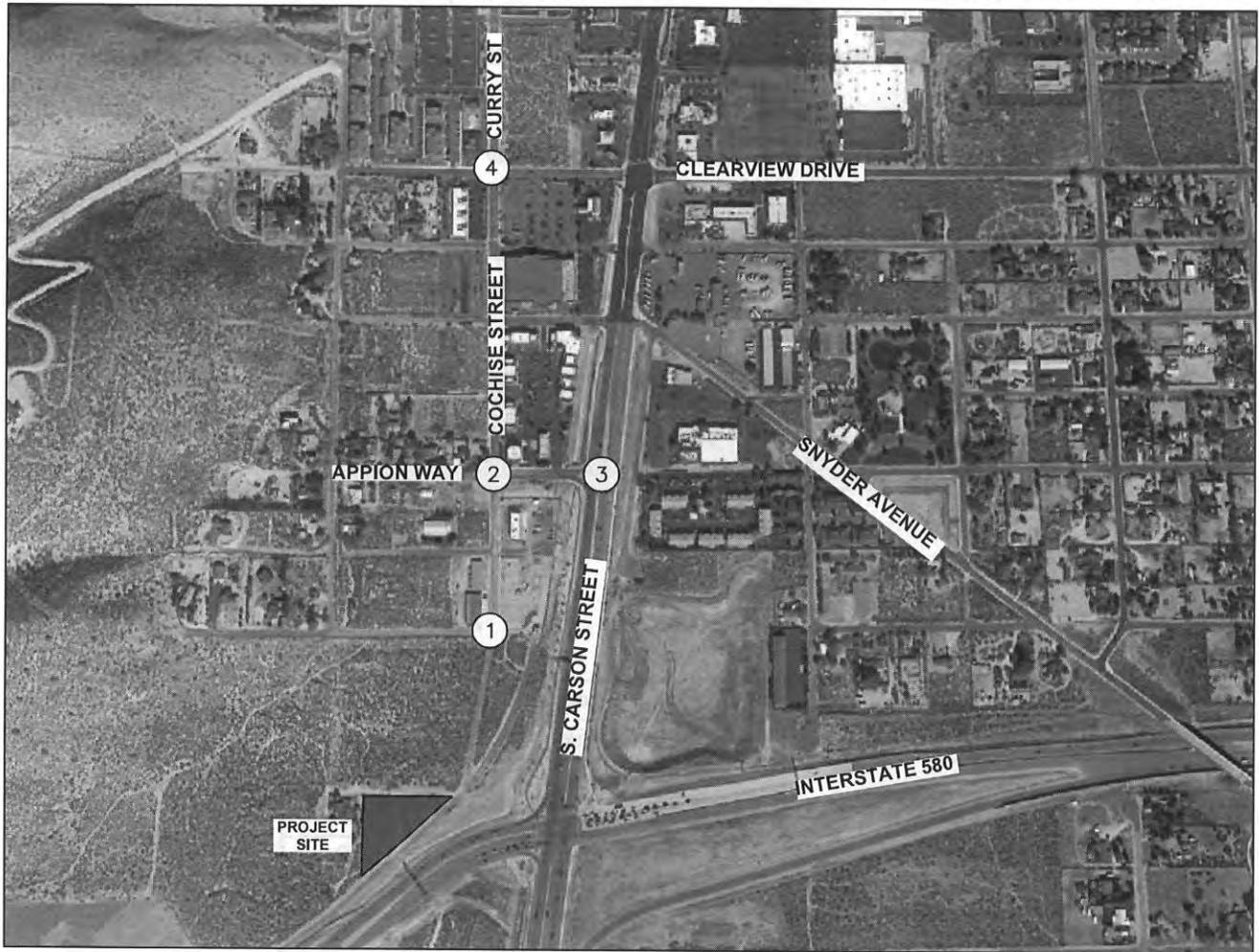
Response 1: The traffic study for the Appion Commercial Center was reviewed and a portion of the traffic volumes were incorporated into the traffic study for this project. The study for the Appion Commercial Center site included three building of which two are currently occupied and open, Chick Fil-A 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

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

Lochsa
engineering
 6345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

TRIP
 ASSIGNMENT
 FIGURE 2

JADE DISPENSARY

TABLE A-2 UN SIGNALIZED 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:

- Apqion Way at South Carson Street
- Apqion Way at Cochise Street
- Cochise Street at Roland Street
- Clearview Drive at Carson 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 on parcel identified by the assessor's parcel number (A.P.N.) 00-930-100. Currently this location consists of a vacant commercial building.

The proposed improvements to this site shall consist of a 3,734 square foot high turnover restaurant and a 3,734 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

Apqion Way

The east-west roadway consists of one lane in each direction. The speed limit is 35 miles per hour and on-street parking is permitted. Bennett Cochise Street and S Carson Street this



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

Lochsa
engineering
 6345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

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.

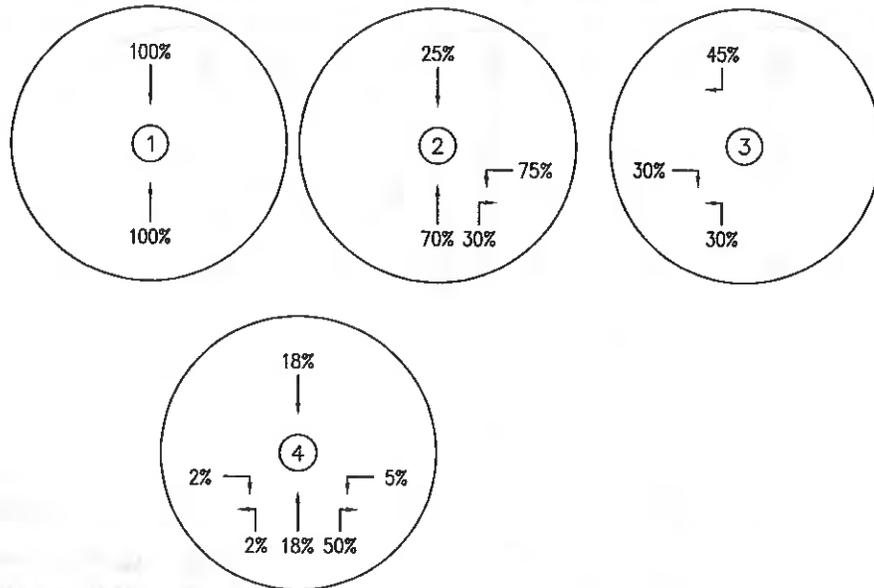
Refer to Figure 2 for existing lane configurations.

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> 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) RESTARUANT 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	

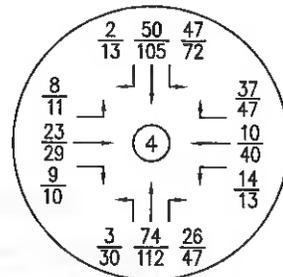
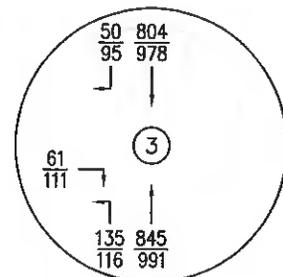
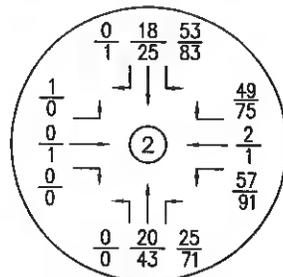
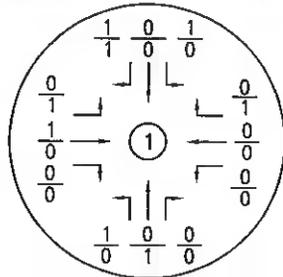


T:\CAD\221098\DRAWINGS\TRAFFIC\221098-TRAFFIC.DWG

Lochsa
engineering
 6345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

TRIP
 DISTRIBUTION
 FIGURE 3

JADE DISPENSARY



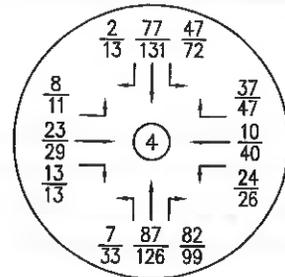
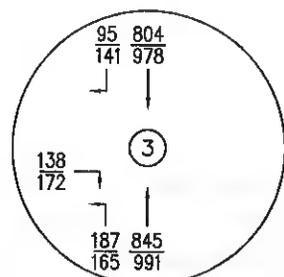
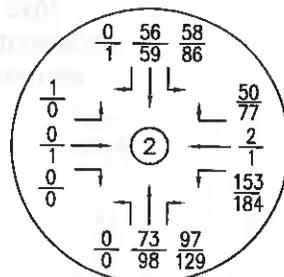
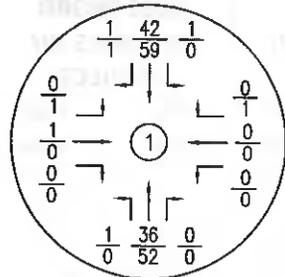
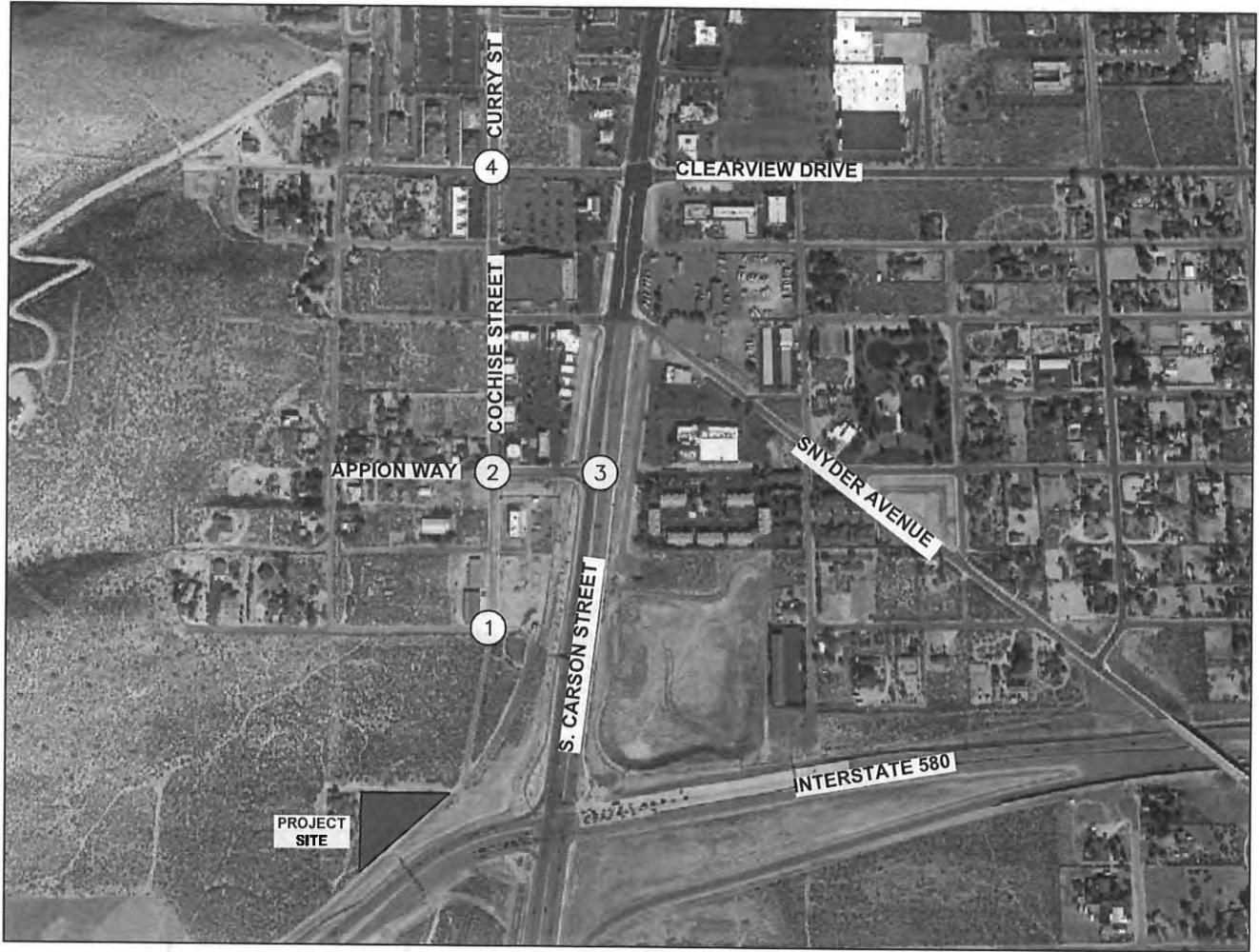
LEGEND
 XX AM PEAK HOUR VOLUMES
 YY PM PEAK HOUR VOLUMES

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

Lochsa
 engineering
 6345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

**EXISTING
 VOLUMES
 FIGURE 5**

JADE DISPENSARY



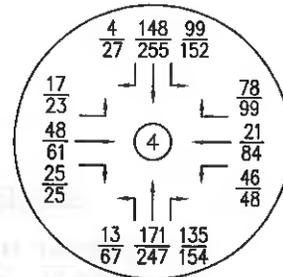
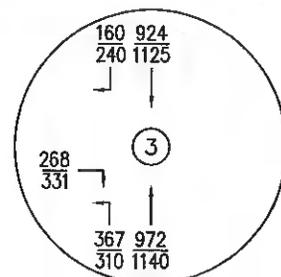
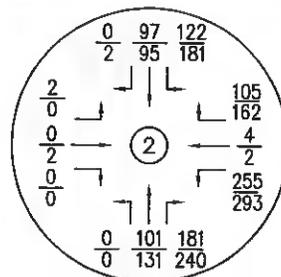
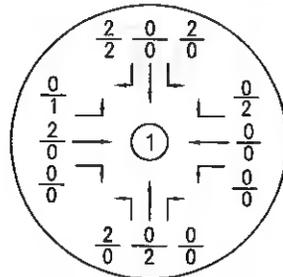
LEGEND	
XX	AM PEAK HOUR VOLUMES
YY	PM PEAK HOUR VOLUMES

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

Lochsa
engineering
 6345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

EXISTING VOLUMES
 w/ PROJECT
 FIGURE 7

JADE DISPENSARY



LEGEND	
XX	AM PEAK HOUR VOLUMES
YY	PM PEAK HOUR VOLUMES

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

Lochsa
engineering
 6345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

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

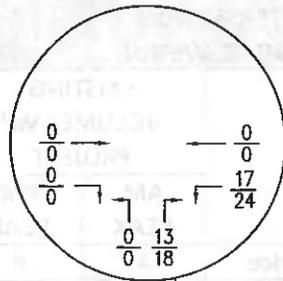
The conflicting and stop controlled minor movements at this intersection currently experiences acceptable delays and level of service during the AM and PM peak hours. Due to the projected volumes increase due to the background growth rate, movements at this intersection are anticipated to experience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

- 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.

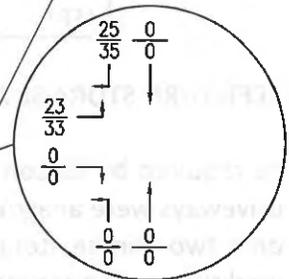
The conflicting and stop controlled minor movements at this intersection currently experiences acceptable delays and level of service during the AM and PM peak hours. These acceptable delays are anticipated to continue in the 2050 year scenarios.

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

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



6345 South Jones Blvd. Suite 100 - Las Vegas, NV 89118
 Phone (702) 365-9312 - Fax (702) 365-9317 - www.lochsa.com

**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

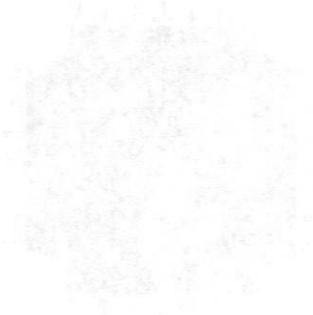
Reviewing the Carson City Unified Pathways Master Plan, the project site is near some existing and planned facilities. Currently in the vicinity of the project, there is a shared off-street multi-use trails than runs along the west side of S. Carson Street from Appion Way to I-580. According to the plan, 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

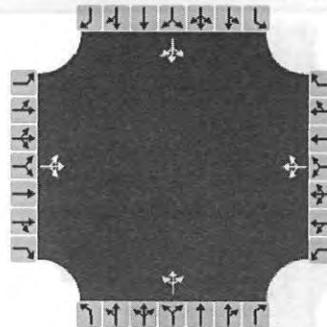
MITIGATION ANALYSIS



HCS All-Way Stop Control Report

General Information		Site Information	
Analyst	DKK	Intersection	Cochise St at Appion Way
Agency/Co.	Lochsa Engineering	Jurisdiction	Carson City
Date Performed	6/21/2022	East/West Street	Appion Way
Analysis Year	2050	North/South Street	Cochise Street
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.89
Time Analyzed	Bkgrd PM Pk Hr w/ Project		
Project Description			

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
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		

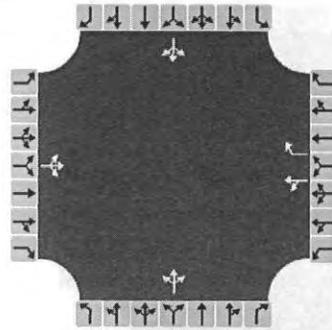
Capacity, Delay and Level of Service

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		Site Information	
Analyst	DKK	Intersection	Cochise St at Appion Way
Agency/Co.	Lochsa Engineering	Jurisdiction	Carson City
Date Performed	6/21/2022	East/West Street	Appion Way
Analysis Year	2050	North/South Street	Cochise Street
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.89
Time Analyzed	Bkgrd PM Pk Hr w/ Project		
Project Description	Right Turn Lane		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
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

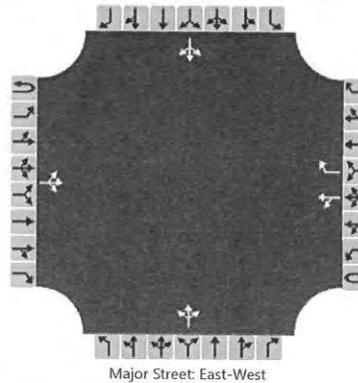
General Information

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				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Priority																	
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			



Carson City
308 N. Curry Street, Suite 200
Carson City, Nevada 89703
775.883.7077

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.

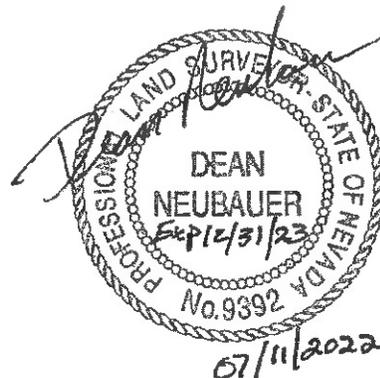
Dear Mr. Cristalli,

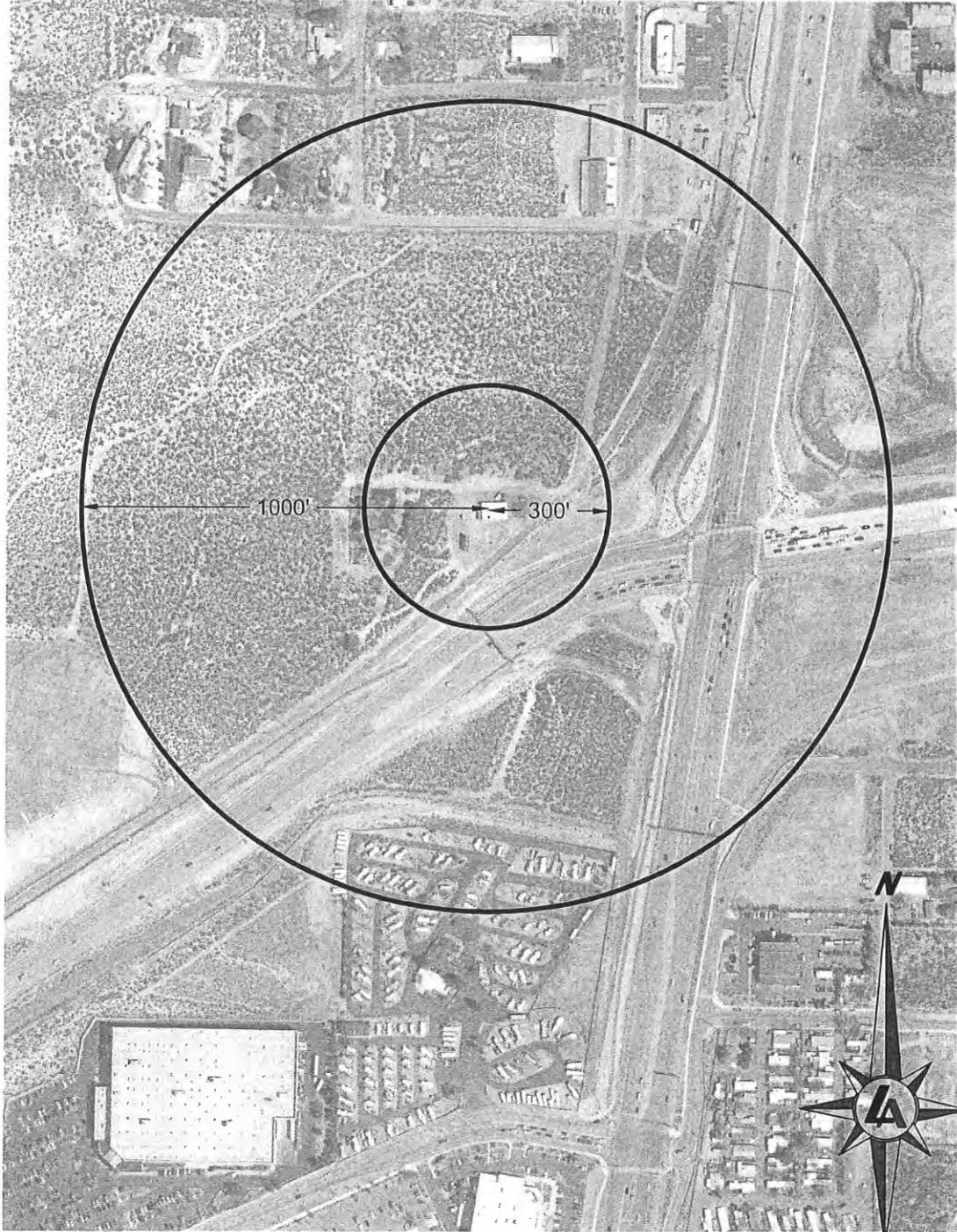
Lumos & Associates, Inc. (Lumos) has completed the Property Use Survey of the above referenced property. Per the requirements within N.R.S. 678B.250(3)(a)(2)(II) we could not find any public or private schools within 1000 feet and we could not find any Community Facilities as described in N.R.S. 678B.250(8)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

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

**PUBLIC COMMENT
RECEIVED FOR -**

JULY 27, 2022

**PLANNING
COMMISSION
MEETING DATE**

Christie Overlay

From: Jeannie White <jeanniejunction@gmail.com>
Sent: Saturday, July 23, 2022 10:12 AM
To: Christie Overlay; Planning Department
Subject: Marijuana Dispensary Development

This message originated outside of Carson City's email system. Use caution if this message contains attachments, links, or requests for information.

This is Jeannie White: 775-720-7407

No one seems to notice that our home is nextdoor to this proposed dispensary development.

We have lived here almost 30 years and no one even notified us about what they were proposing until I received a notice from the Planning commission just last week.

I called mayor Bagwell and she was amazed no one had contacted me; thanks to her Bruce Robinson called me right away.

They are proposing a drive through pick up running along our property line. A 24 hr Drive through will destroy my life. I am almost 90 years old and I don't need this. My life matters as do the lives of my family.

Sent from my iPhone

Christie Overlay

From: Tasha Couste <tashacouste@gmail.com>
Sent: Saturday, July 23, 2022 12:39 PM
To: Public Comment; Planning Department; letters@lasvegassun.com; editor@nevadaappeal.com; Adam Trumble NVAppeal
Subject: Public Comment - Proposed Qualcan Marijuana Establishment Carson City

This message originated outside of Carson City's email system. Use caution if this message contains attachments, links, or requests for information.

Respectfully, both Qualcan and our City Planners should be ashamed of themselves for allowing this to move forward in the manner that it has. My 90-year-old grandmother shares a fence line with the proposed establishment. She was only notified last week of the plans that include a 24-hour drive through window that will ultimately introduce a high amount of traffic on her peaceful property. She has worked hard and dedicated a large portion of her life cultivating the small piece of land that sits at the Carson City gateway entrance to Lake Tahoe. Both herself and her husband have devoted many hours planting gardens and orchards from nothing but sage and dust to create a serene environment that they can spend their last years enjoying. My grandmother was diagnosed with cancer recently and receives chemotherapy treatments often. Her husband is also battling health issues that prevent them both from having the energy to challenge such a large industry. The property has been their home for over 30 years; neither of them can afford the time or money it would take to influence the politics surrounding this decision. There is no moral justification that should be considered that would discount their desire to enjoy the fruits of their labors during their final days.

The little elderly woman working in the garden behind the proposed pot shop, her name is "Nana". The little old man that is limping across the yard to help her, he is "Grandpa Bruce". The two old dogs in the yard, barking hoarsely at the cars as they guard the fence; they are the "Old Night Watchmen". Their children rode horses on the hills overlooking downtown, their children's children are "Battle Born" and visit often to help with the chores. Their great grandchildren climb the trees in the yard and can be seen picking apples in the orchard as you walk by. They have lived to see the birth of their great great grandchildren.

Everything they love is tied to the property. They are beside themselves with grief as they try to imagine how they would pull up their roots and reestablish their dreams at another location. If they choose to stay, the 24-hour drive-up window being proposed will afford them very few moments of peace. They are the average grandparents who worked hard in our community, paid their taxes honestly, and helped to raise four generations of children in Nevada. They are both aging, ill, and tired. They desire nothing more than to get some rest. Their 30 years of hard work and their pride of ownership should not be minimized by the prospect of the State receiving additional tax revenue from this specific location. Their dreams are not disposable, their hard work means something, and their choices for their last years should not be discounted by the Carson City Board of Supervisors when they vote at the Carson City Planning Commission meeting on Wednesday, July 27th.

From: Dee Dee Foremaster
To: Planning Department
Subject: Please deny expansion of marijuana dispensaries!
Date: Monday, July 25, 2022 8:37:57 AM

This message originated outside of Carson City's email system. Use caution if this message contains attachments, links, or requests for information.

Dear Commissioners:

I am writing to express my fears that your expansion of the current marijuana dispensaries will cause many people who are mentally ill to exacerbate their illness by using the high THC marijuana that is available nowadays. <https://www.cbsnews.com/news/marijuana-psychosis-smoking-strong-pot-daily-increases-risk-of-psychosis-study-finds/> Must we expand the temptation? I think NOT!

I also want to express my dismay at the community planning staff, who state on their city web page that their job is to balance competing interests, but who did not even bother to talk to the 90 year old woman who has lived in the home for more than thirty years, that will be directly impacted by their poorly thought out approval of this plan.

Don't her taxes pay their salaries? But, staff could not find the time to go talk to her?

At the very least, I would think a marijuana dispensary at the junction of two very busy highways coming into Carson City sends a very wrong message! Let's keep the temptation to the two existing dispensaries. After all, one of the existing dispensaries is located **right across the street** from this terrible proposal!

Please do the right thing for the existing businesses and the citizens of Carson City and deny the expansion.

Sincerely,
Dee Dee Foremaster
205 Annapolis Way
Carson City, Nevada 89703

From: Sandra Coyle
To: Planning Department
Subject: Deny marijuana shop expansion!
Date: Monday, July 25, 2022 9:04:13 AM

This message originated outside of Carson City's email system. Use caution if this message contains attachments, links, or requests for information.

Dear Commissioners:

I am writing to express my dismay at your reckless plan to expand the marijuana dispensaries in Carson City! Two are enough! We don't need more! Especially right across the street from each other!!

Also, I want to say how callous the Carson City planning staff must be to not even make the time to speak to the two elderly, taxpaying residents who live in the only house next to the proposed expansion!! Everyone else could find them with no problem! The people who want them to move so they can build their marijuana shop.....the people who will be competing against them if they do build it! Why couldn't your staff take a moment to ask the two elderly residents whose lives and peaceful retirement will be ruined by this poorly thought out commercial venture?

Is Carson City really that desperate for tax revenue that you would sell our teens down the river for a few dollars more? Do you know that teen marijuana use rose 17% in out state when marijuana was legalized? Or that daily use can trigger mental illness? Please protect the youth and citizens of Carson City and deny this expansion!

Sandy Coyle
1359 Kim Pl
Minden, Nv 89423

Christie Overlay

From: Sandra Coyle <nevadacoyles@icloud.com>
Sent: Monday, July 25, 2022 10:33 AM
To: Planning Department
Subject: Another study proving expansion of marijuana dispensaries are a bad idea!

This message originated outside of Carson City's email system. Use caution if this message contains attachments, links, or requests for information.

<https://www.acsh.org/news/2022/07/19/one-toke-over-median-driving-stoned-16435>

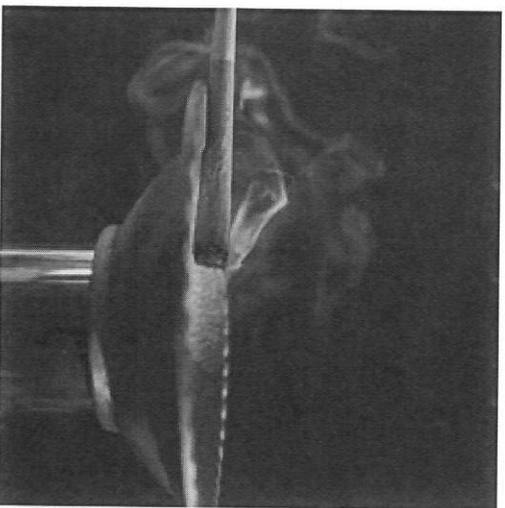
Sandy Coyle

One Toke Over The Median: Driving Stoned



(<https://www.acsh.org/profile/chuck-dinerstein-md-mba>) By Chuck Dinerstein, MD, MBA (<https://www.acsh.org/profile/chuck-dinerstein-md-mba>) — July 19, 2022

There is some truth to the urban myth that those high on marijuana tend to drive more slowly and at greater distances from other cars. Whether out of an old-time fear of being pulled over or because of some impairment of their perceptions. [1] With eighteen states (and the District of Columbia) with recreational pot sales, and an inability to determine the presence of marijuana as an intoxicant, as we do for alcohol, there is rising concern about marijuana's impact on traffic accidents and fatalities. Here is the latest data.



I last wrote (<https://www.acsh.org/news/2020/12/14/dwb-%E2%80%93-driving-while-baked-15211>) about this in December 2020; here is the gist.

- THC used by itself or with CBD resulted in a 2.33cm increase in the degree of weaving in traffic for 40-100 minutes after "lighting up," compared to placebo, but there was no difference in the two groups at 240 minutes.
- CBD by itself did not significantly increase weaving at any interval.
- Speed of driving was unaffected under all conditions.

The researchers concluded that "... impairment was modest in magnitude and similar to that seen in drivers with a 0.05% BAC." What does the new research say?

The Current Study

Image by Dad Grass from Pixabay
 (https://pixabay.com/photos/joint-blunt-smoke-ashtray-cannabis-6535558/)

Highway Administration.

Federal sources also provided estimates of the percentage of front-seat vehicle occupants wearing seat belts and annual consumption of alcohol per capita. The six remaining western states [2] were used as the controls; the researchers pooled these results because of the smaller populations and traffic fatalities over the period. Finally, since traffic accidents have a seasonality, all results were adjusted to take that into account.

Before we go on, it is essential to recognize that many variables were involved in adjusting these numbers. These covariants included unemployment rates and seat belt use, associated with fewer injuries and fatalities; population younger than 25, maximum posted speeds, percent of rural roads traveled, and per capita alcohol consumption, all associated with increased injuries and deaths.

For the six control states, there were no trends over the 11 years

- Fatal crashes were 10.6 to 13.1 per billion VMT
- Injury crash rates 488 to 544 per billion VMT

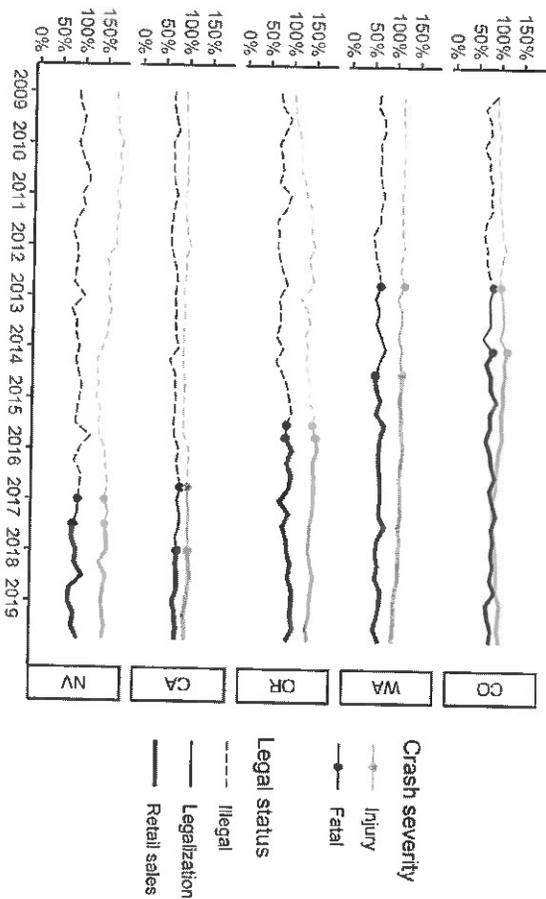
(https://www.jsad.com/doi/full/10.15288/jsad.2022.83.494) For the five study states, the results were different. At baseline, when marijuana was illegal, these states had fewer fatal accidents than the controls, but injury crash rates were higher. Legalization and retail sale of marijuana was associated with an aggregate

- 5.8% increase in injury crashes
- 4.1% increase in fatal crashes

As you might expect, the results varied by state. Four states

experienced a net increase in injury crash rates, from Colorado's 17.8% to California's 5.7%. Only two of the five states had an increase in fatalities, Colorado again, at 1.4%, and Oregon at 3.8%;

They begin by pointing out that prior studies have all found more accidents. However, the "effect size" varied because of the time frames between legalization and the collection of crash statistics. So they focused on five early-adopter states, Colorado, Washington, Oregon, California, and Nevada, and traffic statistics between 2009 and 2019. Traffic accidents came from state databases, and vehicle miles traveled (VMT) from the Federal



the remaining three saw decreases between 1.9% and 9.8%

What to conclude?

There is no apparent rhyme or reason to why some states see little change and others significant shifts. It could be the culture, more focused public service announcements, or greater law enforcement. We just don't know. We may be on firmer ground in concluding that the impairment from pot, slowing your speed, and increasing your distance from the other cars "may not be sufficient to avoid a crash, but it may be enough to reduce the severity of that crash."

The researchers provided this as a comparator,

"the estimated effect of marijuana legalization on crash rates is only slightly lower than the estimated effects of lowering the legal drinking age in the United States from 21 to 18."

[1] Tommy Chong and Cheech Marin can provide an example of that myth (<https://www.youtube.com/watch?v=r8pEKwV19tA>).

[2] Arizona, Idaho, Montana, New Mexico, Utah, and Wyoming. Alaska and Hawaii, with limited numbers of roads, were excluded.

Source: Changes in Traffic Crash Rates After Legalization of Marijuana: Results by Crash Severity Journal Of Studies On Alcohol And Drugs DOI: 10.15288/jsad.2022.83.494 (<https://www.jsad.com/doi/full/10.15288/jsad.2022.83.494>)

From: James Crance
To: Planning Department
Subject: LU-2022-0262
Date: Tuesday, July 26, 2022 7:50:30 AM

This message originated outside of Carson City's email system. Use caution if this message contains attachments, links, or requests for information.

Planning Division members,

This letter is concerning the possible development regarding the NW corner of the I580-US395-Spooner Junction.

Concern rises for the current proposed development/zoning amendment becoming a public safety issue and a distraction to drivers in what is already a dangerous and congested intersection. Responding emergency, police and fire continually fight the said intersection and it's drivers when called out.

I would like to see more City/NDOT negotiation and planning for a better solution of the said intersection. I would be more apt to agree with future "planned" development if a traffic "plan" was implemented at the I-580 US395 Spooner Junction. The proposed signal at S. Carson/Appion Way at Dutch Bros may not solve all the traffic issues.

Current development and increased traffic in the surrounding area is understood. Not necessarily desired by the few residents of the area.

I currently disagree with the planned development/zoning amendment.

I don't believe anymore distractions should be presented at this intersection, at this time.

Thank you for your consideration,

James R. Crance