CLARK COUNTY

STADIUM DISTRICT

DEVELOPMENT PLAN // 2021

APPENDIX

APPENDIX A

Public Engagement Summaries
complete in-depth summaries of all public stakeholder engagement events and input collected

Contents

1. Introduction

The Stadium District will transform the community and economy of the surrounding area, as well as affect the entire Las Vegas Valley and its many visitors. It is critical that affected transportation be suitably managed to ensure safety, quality of life, and sustainability. Effectively engaging and soliciting meaningful feedback from partner agencies, stakeholders, and the public was essential to the success of the Stadium District Plan. This Appendix summarizes the objectives of the public and stakeholder engagement, target audience, engagement strategy and activities, and feedback obtained during this study.

2. Public and Stakeholder Outreach and Engagement Objectives

The Public Information (PI) Plan created at the initiation of the study intended to encourage active and transparent two-way communication and build public confidence on the study and its recommendations. The plan identified the following public and stakeholder objectives:

- Gather input from the surrounding community regarding their desires and vision for the Stadium District with emphasis in the following categories:
    - Overall Concept and Landscaping
    - Pedestrian and Overall Safety
    - Public Transit Options
    - Land Use and Economic Development
- Educate and engage the community early, and to maintain ongoing two-way communication about the progress of the study.
- Listen, acknowledge, and respond promptly to public questions and concerns.

3. Target Audience

To gain well-rounded feedback, both stakeholders and the public were actively engaged throughout the planning process.

Stakeholders, for the purposes of this study, are defined as any individual or entity that may be directly or indirectly impacted by the Stadium District. The term also includes those who represent or have an interest in the project including elected officials who represent constituents within the project area and neighborhood businesses or property and land owners.

Members of the public include: visitors, commuters, bicyclists, pedestrians, and transit riders in the Las Vegas area who will ultimately be visiting the Stadium District. Members of the public were engaged through the survey, pop-up meetings, the project website, and social media.

Stadium District stakeholders and public include, but are not limited to:

Level	Category	Name
Primary	Partner Agencies	Clark County RTC
Primary	Other Agencies	Nevada Department of Transportation (NDOT) Las Vegas Metropolitan Police Department (LVMPD) Union Pacific Railroad (UPRR) McCarran International Airport Clark County Fire
Primary	Elected Officials	Clark County Commissioners RTC Board
Secondary	Groups & Professional Organizations	NAIOP Tropicana Business & Community Coalition
Secondary	Businesses, Property & Land Owners	
Secondary	Neighborhood & Homeowner Associations (HOAs)	
General	Public	Tourists Commuters Bicyclists Pedestrians Transit Riders

3.1. Stakeholder Advisory Committee

A Stakeholder Advisory Committee (SAC) was convened to help guide and participate in the development of the Stadium District Plan to ensure the community's goals are met. In total 55 stakeholders participated in SAC meetings.

Members of the SAC included representatives from Clark County Department of Comprehensive Planning, Clark County Department of Public Works, Clark County Department of Aviation, Regional Transportation Commission of Southern Nevada (RTC), Nevada Department of Transportation (NDOT), members of Town Advisory Boards, and area property and land owners and coalitions collectively representing them such as the Tropicana Business and Community Coalition and NAIOP.

4. Engagement Activities

Project stakeholders and the public were encouraged to participate in the project early in the process. The planning process for the development of the Stadium District Plan included five phases of engagement that have been identified in the figure below.

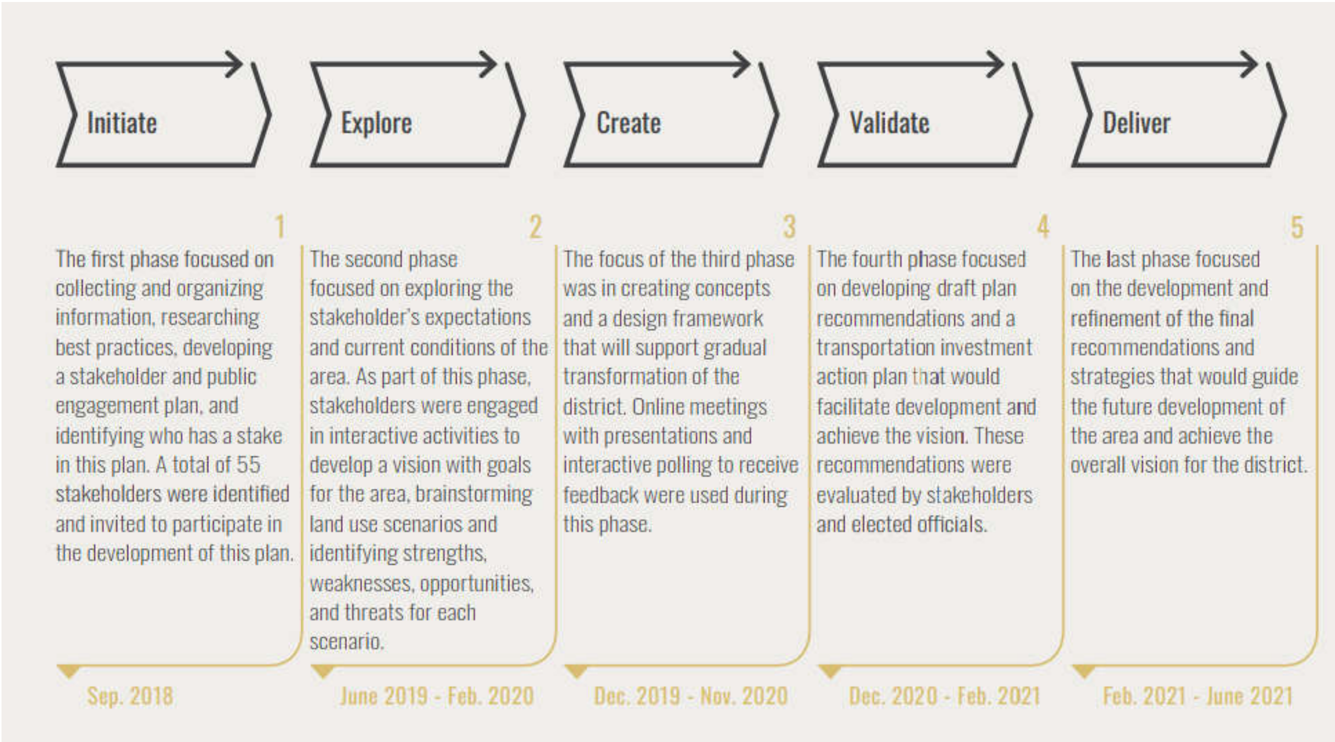


Figure 1. Planning Process

The public and stakeholder engagement activities facilitated participation and feedback on each phase of the planning process.

A variety of methods were used to engage public and stakeholders including:

- Open house
- Presentations to business associations
- Presentations to professional associations
- Stakeholder survey
- Stakeholders workshops
- Public pop-up meeting
- Public survey
- Commission District “A” newsletter
- E-mail blast
- Website and social media posts
- Public hearings

Due to implementation of these methods the study team was able to:

- Capture 764 surveys
- Collect 1,000 e-mails
- Conduct four (4) stakeholder meetings/workshops
- Conduct one (1) pop-up meeting
- Present and participate at four (4) professional business and professional associations meetings

The following activities were conducted throughout the process:

Kick-Off Meeting, September 28, 2018, Commission Chambers

Nevada Chapter of American Planning Association State Conference, October 8, 2018, Location: UNLV Greenspun Auditorium

Tropicana Business and Community Coalition Meeting, January 9, 2019, McMullan's Irish Pub

American Council of Engineering Companies of Nevada Luncheon, February 27, 2019, Gold Coast Resort Hotel

NAIOP Government Affairs Committee, April 4, 2019, 3993 Howard Hughes Parkway, CBRE Conference Room, 7th Floor

Metropolitan Planning Subcommittee Presentation, May 14, 2019, Regional Transportation Commission of Southern Nevada

Technical Advisory Committee Meeting #1, August 20, 2019, Regional Transportation Commission of Southern Nevada, Conference Room 108

Pop-Up Meeting #1, October 5, 2019, UNLV Football Game – Sam Boyd Stadium

Technical Advisory Committee Meeting #2, December 12, 2019, Regional Transportation Commission of Southern Nevada, Conference Room 108

Technical Advisory Committee Meeting #3 (Part 1), September 3, 2020, Virtual Meeting via Microsoft Teams

Technical Advisory Committee Meeting #3 (Part 2), November 18, 2020, Virtual Meeting via Microsoft Teams

5. Attachments

The following documents are included attached:

Stadium District Survey Results

Stadium District Survey Open Ended Responses

Visual Preference Survey Results

Kick-Off Meeting, September 28, 2018 - Presentation

Technical Advisory Committee Meeting #1, August 20, 2019 - Presentation

Technical Advisory Committee Meeting #1, August 20, 2019 - Summary

Technical Advisory Committee Meeting #2, December 12, 2019 - Presentation

Technical Advisory Committee Meeting #2, December 12, 2019 – Summary

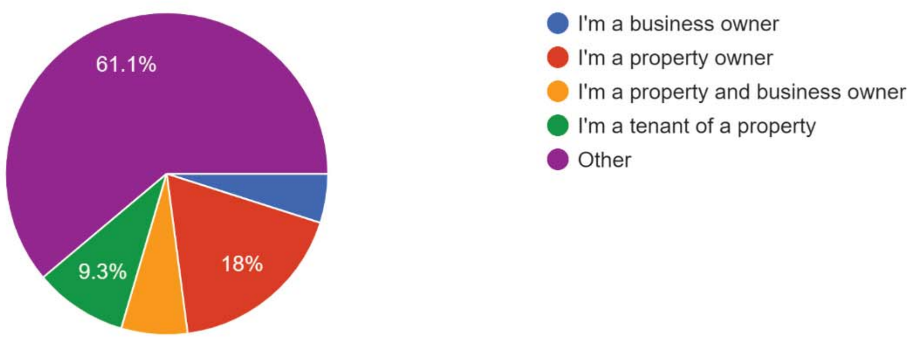
Technical Advisory Committee Meeting #3 (Part 1), September 3, 2020 - Presentation

Technical Advisory Committee Meeting #3 (Part 2), November 18, 2020 – Presentation

589 total responses

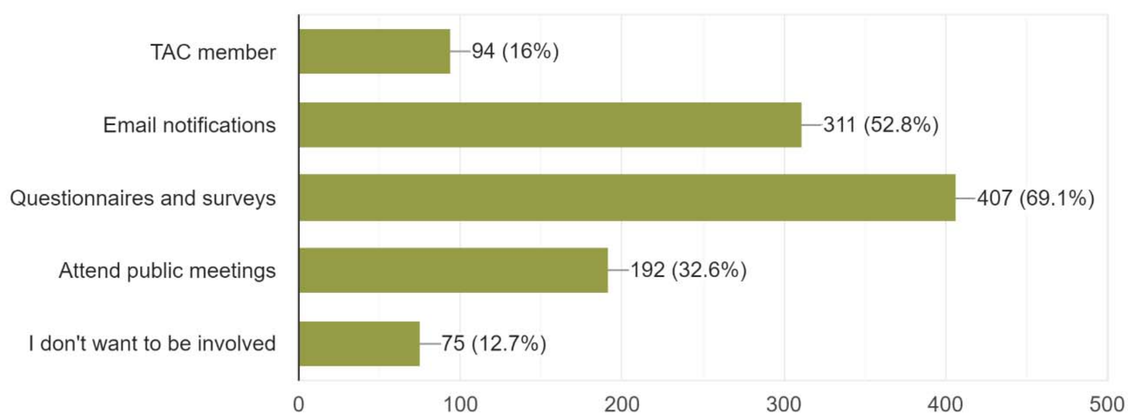
How are you a part of the stadium district?

589 responses



How would you like to be involved during the planning process?

589 responses



Contact Info

Name
589 responses

Email
553 responses

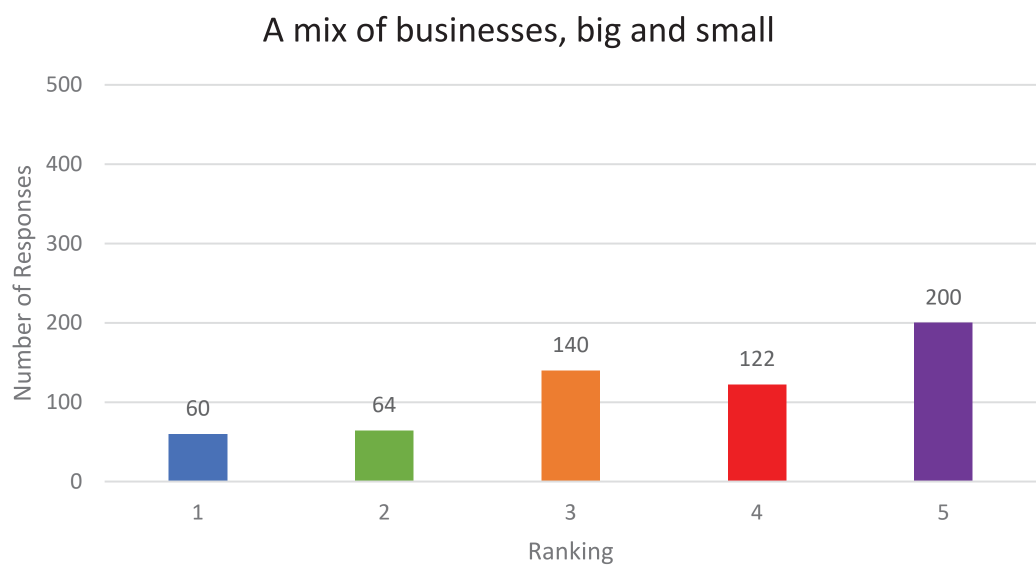
Mailing Address
504 responses

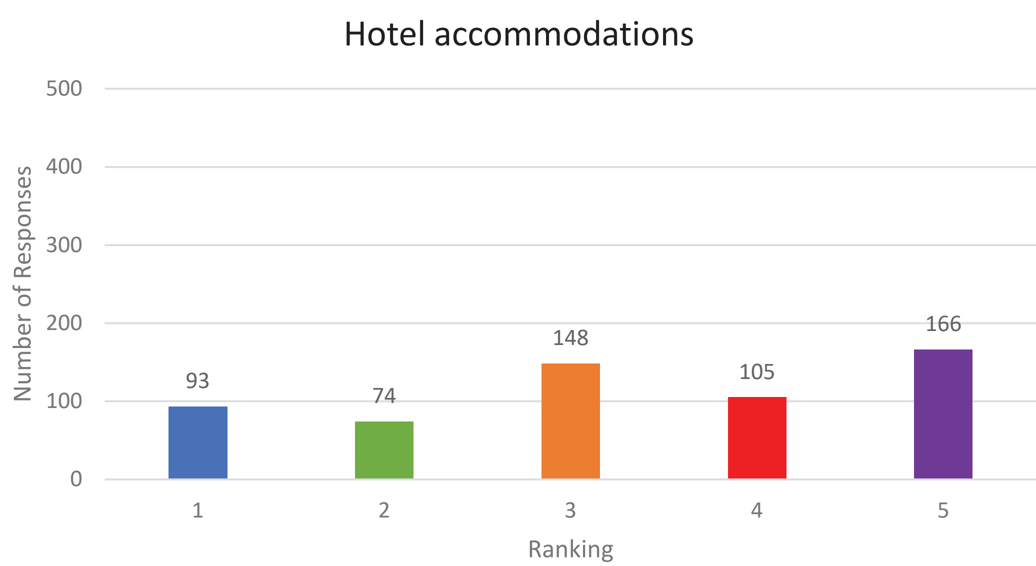
List your top three favorite sports stadium neighborhoods. What makes them great?

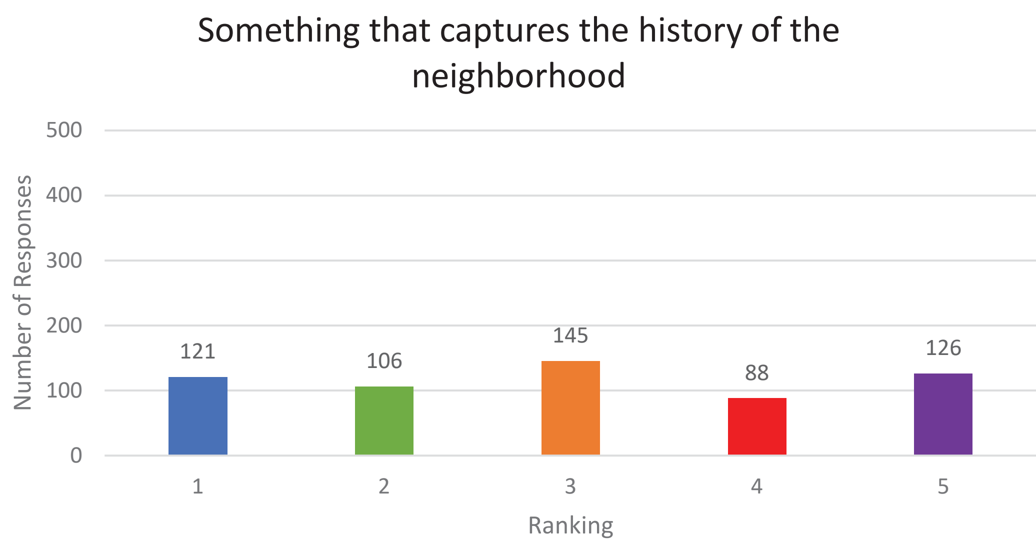
305 responses

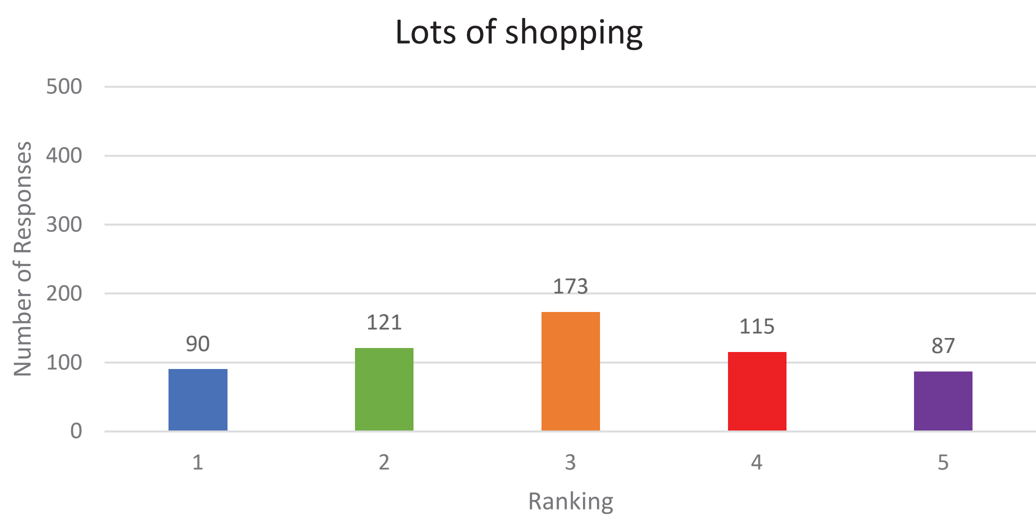
See back of summary for list of responses to question.

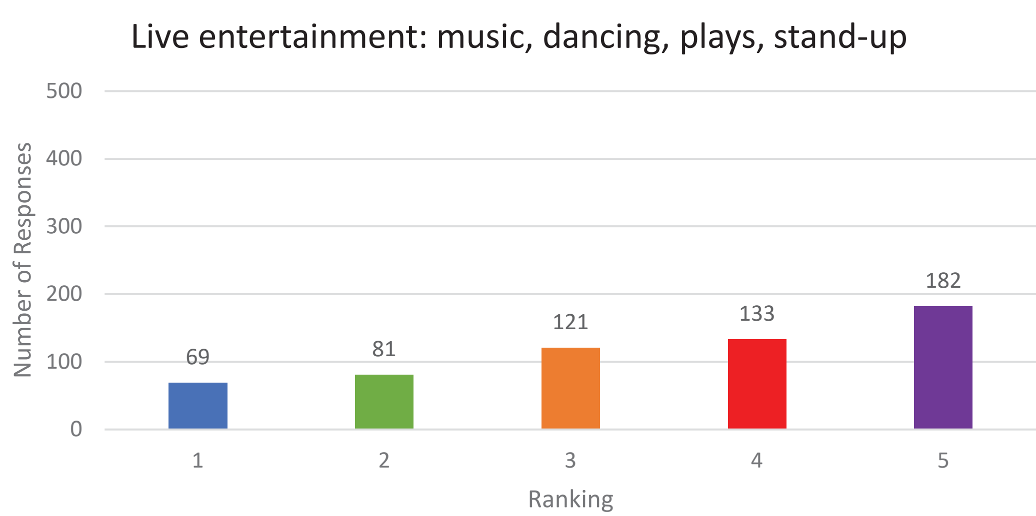
Regarding **economic vitality**, what do you think makes a great stadium district? *Rank each between 1 and 5. 1 being the lowest and 5 being the highest.*

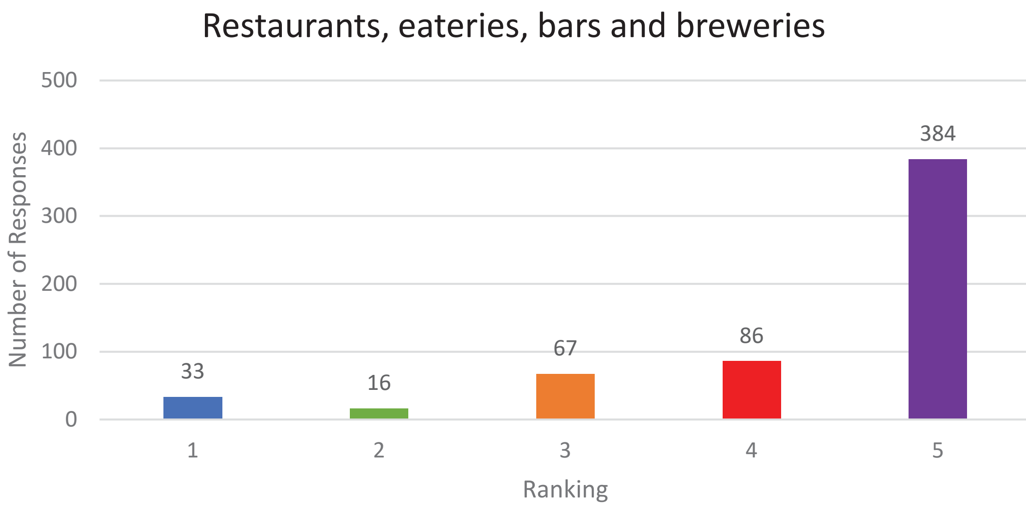


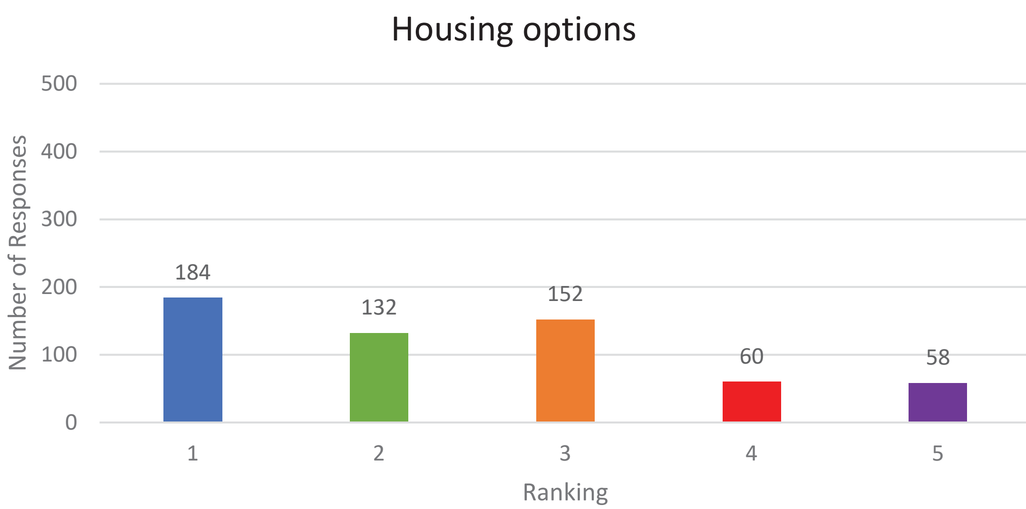


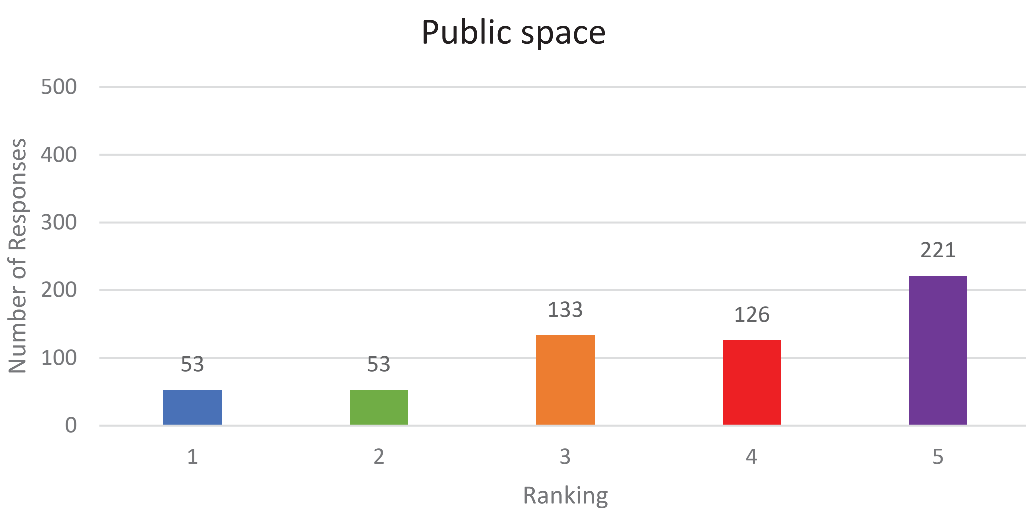

Something that captures the history of the neighborhood
Number of Responses
500
400
300
200
100
0
121
106
145
88
126
1
2
3
4
5
Ranking


Lots of shopping
Number of Responses
500
400
300
200
100
0
90
121
173
115
87
1
2
3
4
5
Ranking

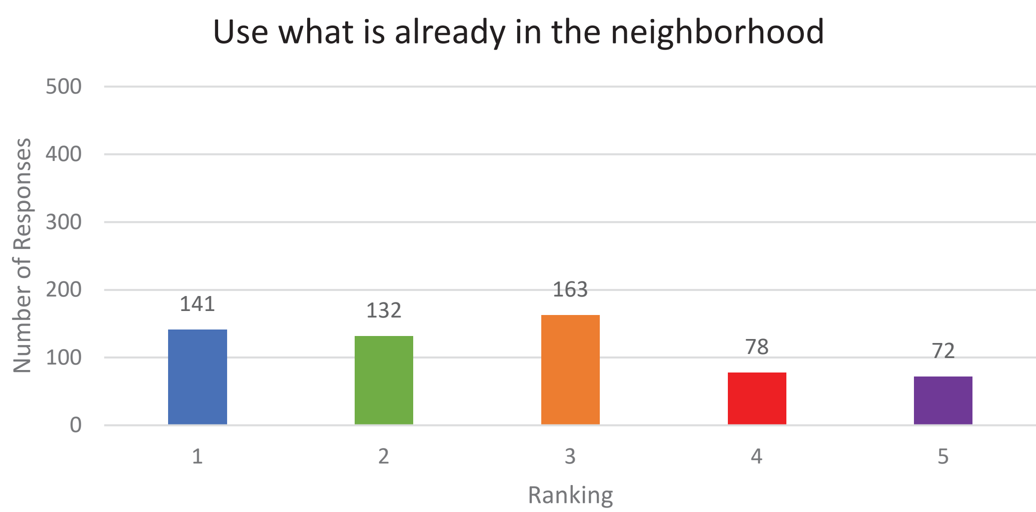

Live entertainment: music, dancing, plays, stand-up
Number of Responses
500
400
300
200
100
0
69
81
121
133
182
1
2
3
4
5
Ranking

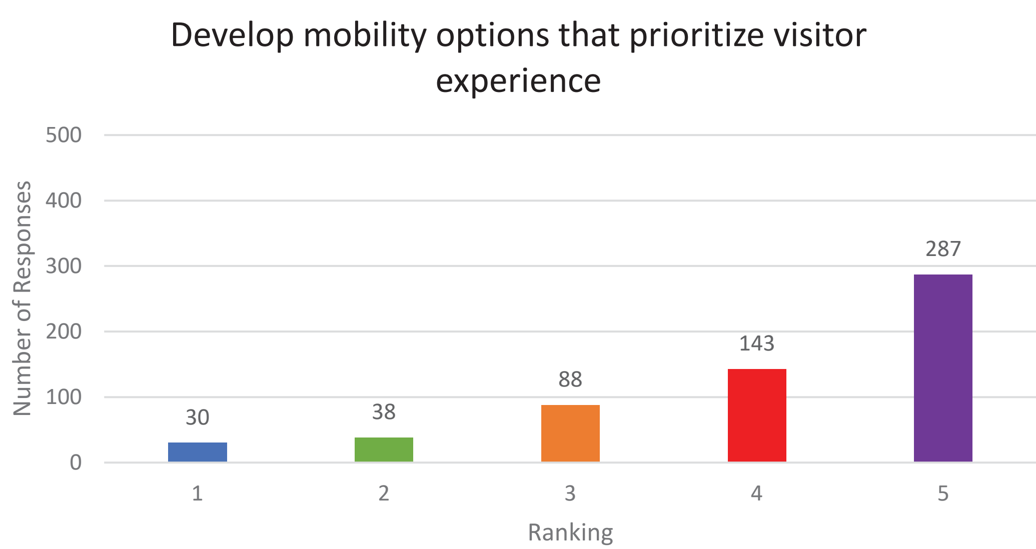

Restaurants, eateries, bars and breweries
500
400
300
200
100
0
Number of Responses
33
16
67
86
384
1
2
3
4
5
Ranking

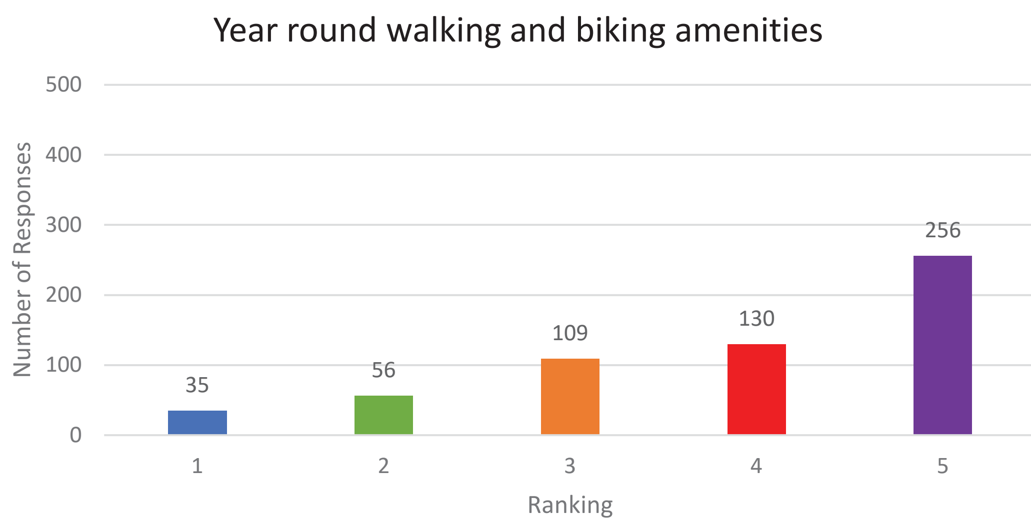

Housing options
500
400
300
200
100
0
Number of Responses
184
132
152
60
58
1
2
3
4
5
Ranking

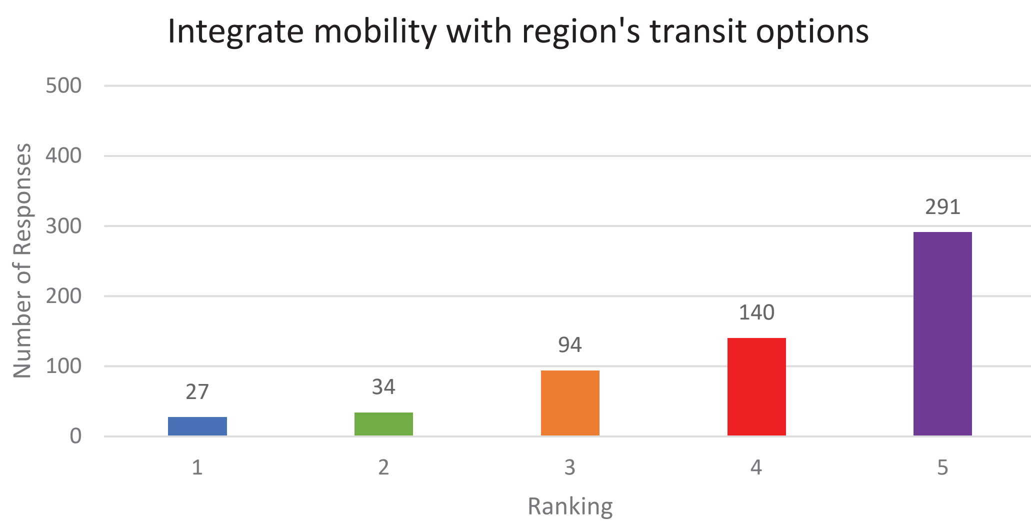

Public space
500
400
300
200
100
0
Number of Responses
53
53
133
126
221
1
2
3
4
5
Ranking

Regarding **mobility and activity**, what do you think makes a great stadium district? *Rank each between 1 and 5. 1 being the lowest and 5 being the highest.*

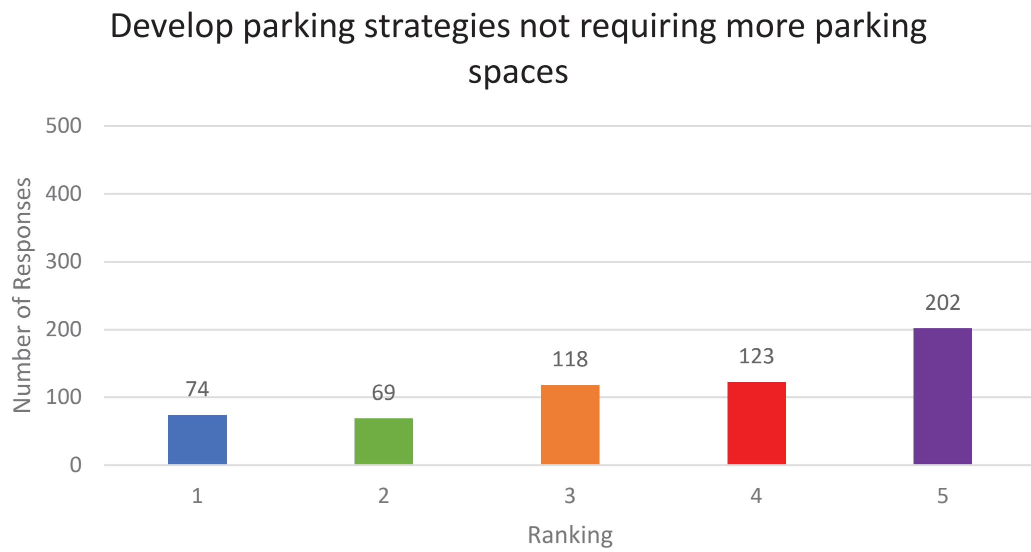


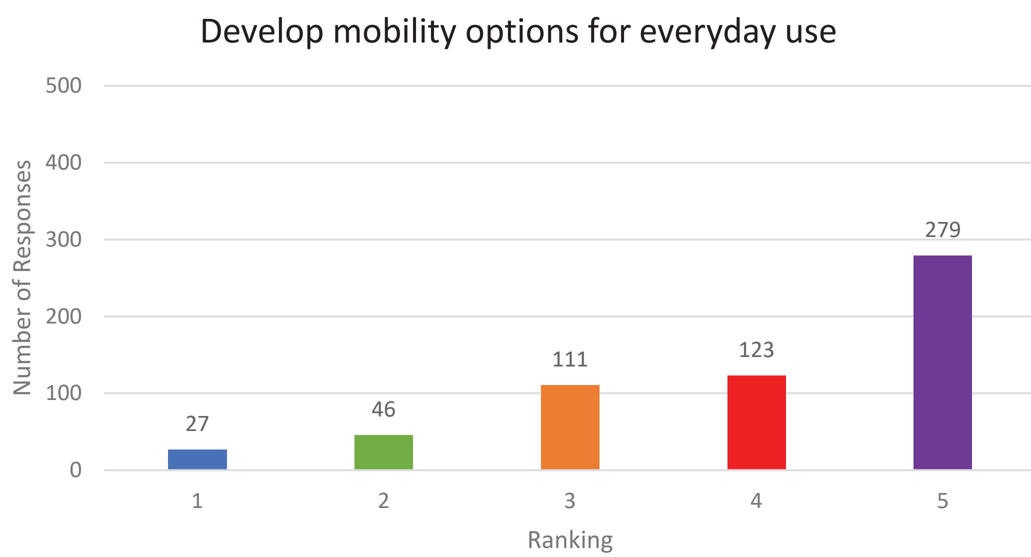



Year round walking and biking amenities
Number of Responses
500
400
300
200
100
0
35
56
109
130
256
1
2
3
4
5
Ranking

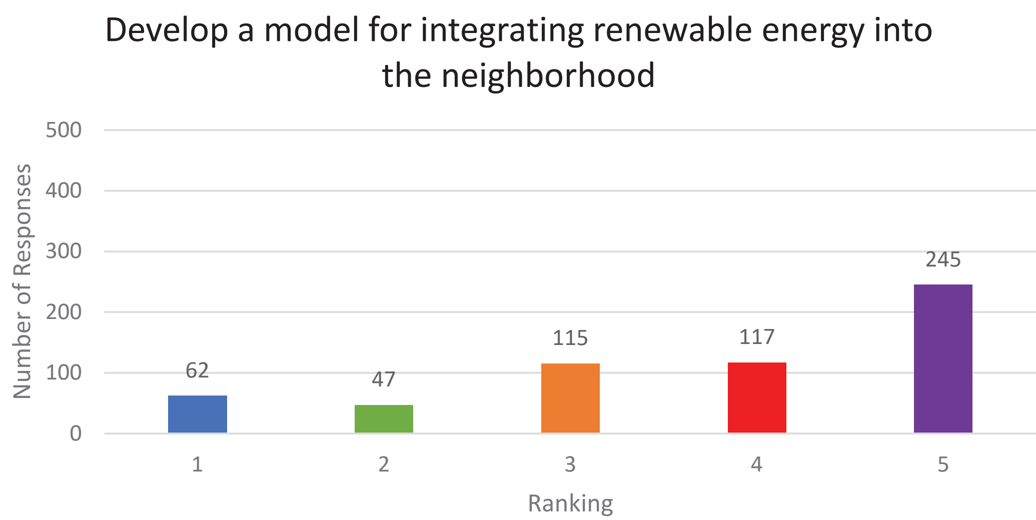

Integrate mobility with region's transit options
Number of Responses
500
400
300
200
100
0
27
34
94
140
291
1
2
3
4
5
Ranking

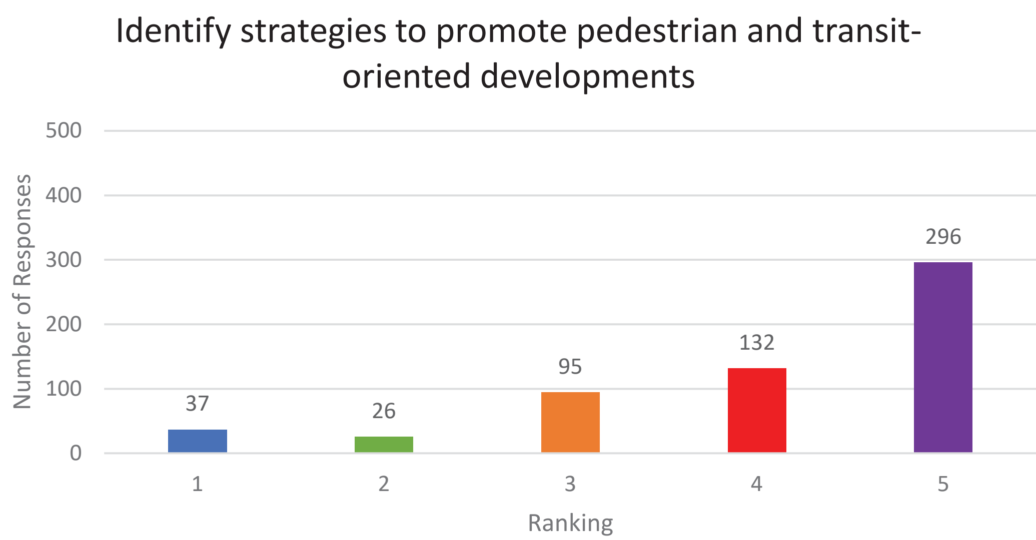

Increase parking availability
Number of Responses
500
400
300
200
100
0
38
23
96
100
329
1
2
3
4
5
Ranking

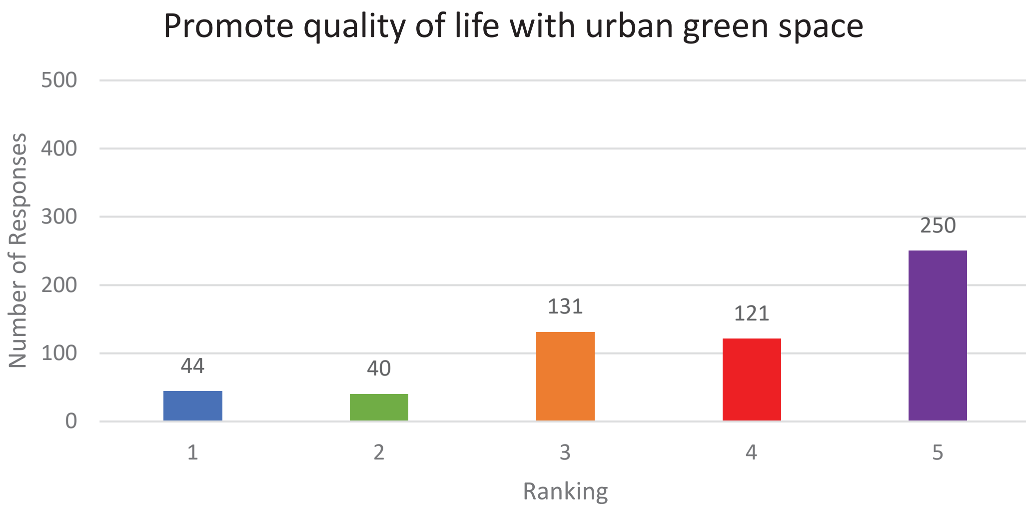

Develop parking strategies not requiring more parking spaces
Number of Responses
500
400
300
200
100
0
74
69
118
123
202
1
2
3
4
5
Ranking

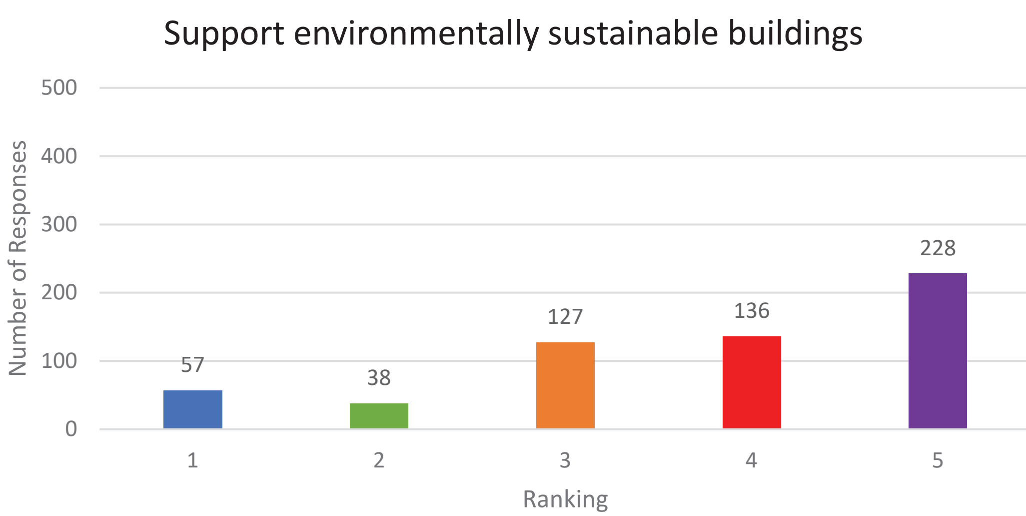

Develop mobility options for everyday use
Number of Responses
500
400
300
200
100
0
27
46
111
123
279
1
2
3
4
5
Ranking

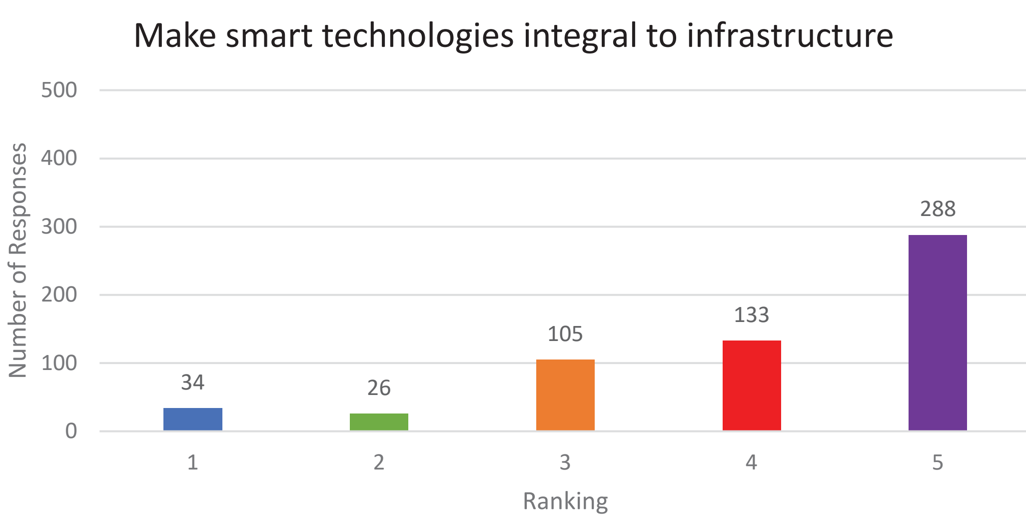
Regarding **energy and environment**, what do you think makes a great stadium district? *Rank each between 1 and 5. 1 being the lowest and 5 being the highest.*






Promote quality of life with urban green space
Number of Responses
500
400
300
200
100
0
44
40
131
121
250
1
2
3
4
5
Ranking


Support environmentally sustainable buildings
Number of Responses
500
400
300
200
100
0
57
38
127
136
228
1
2
3
4
5
Ranking


Make smart technologies integral to infrastructure
Number of Responses
500
400
300
200
100
0
34
26
105
133
288
1
2
3
4
5
Ranking

Please state any additional elements for a great stadium district.

236 responses

See back of summary for list of responses to question.

Stadium District Survey Free Responses Summary

Green and Open Space

- Green space for kids and gathering areas for game and non-game day
- Well lit areas at night
- Public art and lots of open space
- A lot of shaded areas, outdoor covered space, shaded walkways through parking lots
- Vegetation, and water features
- Park spanning I-15 between Russel and Harmon

Energy and Environment

- Water reclamation
- Green energy
- Solar panels/ Photovoltaic power generation
- Sustainable and resilient structure

Land Use and Policies

- Restriction on non-local vendors and chain restaurants
- Allow bitcoin ATM
- Family oriented uses
- Mixed use including retail, business, and residential that ensures area to thrive year around
- Allow space for small businesses to set up tables and offer sales and services similar to First Friday
- Strategies to help small businesses compete and current businesses survive the change and expand
- Educational resources, employment opportunities
- Less warehouses more shopping
- Business hub for the whole area

Quality of Life

- Strong safety and security measures with CCTV , police presence and satellite police stations
- Live music, entertainment, great food
- Clean safe and family oriented not adult entertainment
- Beautiful architecture, lounges – bars and family friendly attractions
- Bring fine arts into the picture
- Affordable dining and shopping such as independent bookstores, record stores, import shops, mobile food ordering.
- Clean public restrooms
- Vibrant, fun walkable
- Separate building but yet connected to Raiders to tell the history of the franchise

Transportation/Transit

- Trams, light rail, or monorail systems.

- Expand Monorail to Mandalay Bay
    - Connect Monorail to the stadium and airport
    - Tram system that travels on the Strip and ends at Stadium
    - Underground electric rail
- Plenty of public transportation options
- Commuter train system
- Shuttle system/buses from surrounding neighborhoods

Walkability

- People movers
- Nice sidewalks, signage and wayfinding
- Pedestrian walkways from the strip
    - Walking bridge across I-15 to casino and monorail
    - Sky bridge or tunnel from Stadium to T-Mobile arena
- Make walking feel like an experience
- Superior lighting and marked crosswalks and stop signs to regulate speed
- Allow scooters and other

Access

- Easy access and easy to navigate
- More access to freeway
- More access to transportation options
- ADA accessibility
- Efficient ingress & egress for fans

Parking

- A lot of parking
- Parking garage
- On-site/across the street parking for tailgating
- Parking closer than a mile away
- Discourage parking

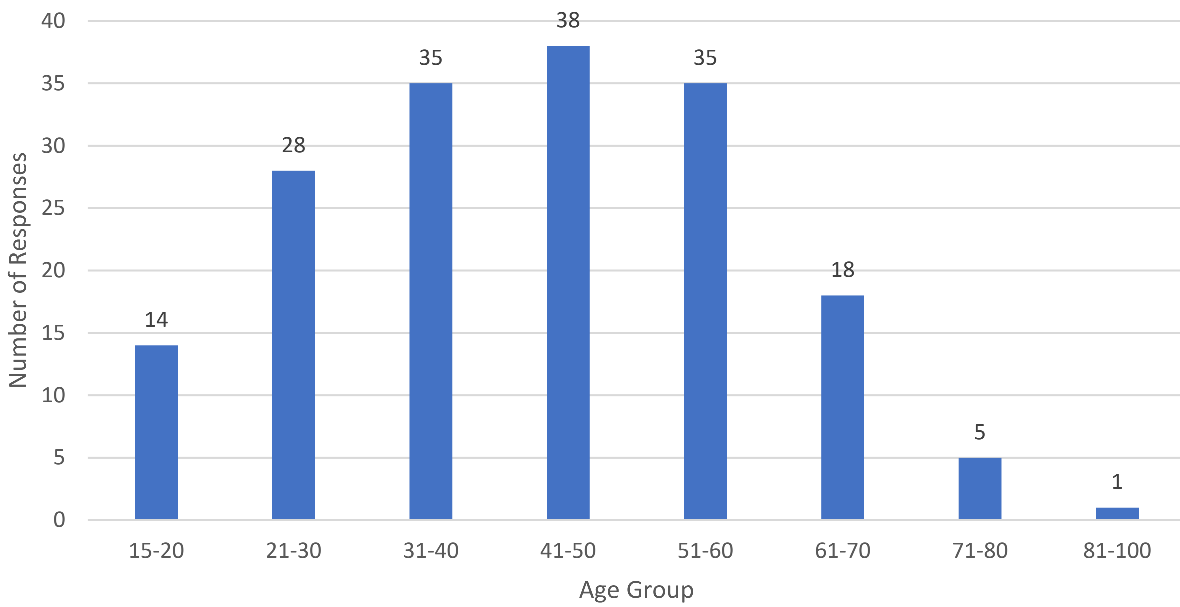
Roadways

- Improve roadways to handle traffic increase and for residents to have access to their homes and shopping
- Minimize vehicle traffic in surrounding main streets so residents are not impacted on event days
- Keep area from congestion during games
- Traffic flow has a big impact on casino workers during event days. Do not block routes to and from work
- Efficient traffic lights
- Adequate transportation options to minimize congestion
- Set up a park and ride
- Designate pick-up and drop-off areas for uber/lyft

175 total responses

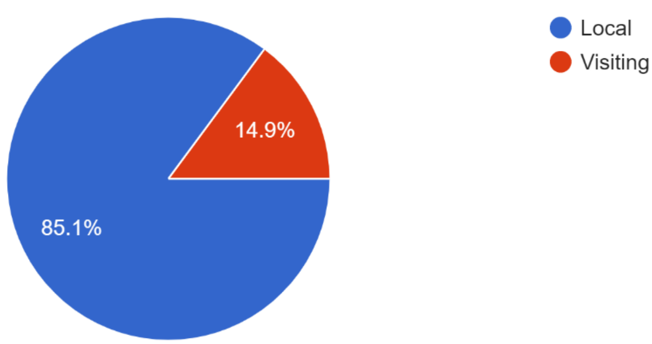
What is your age?

174 responses



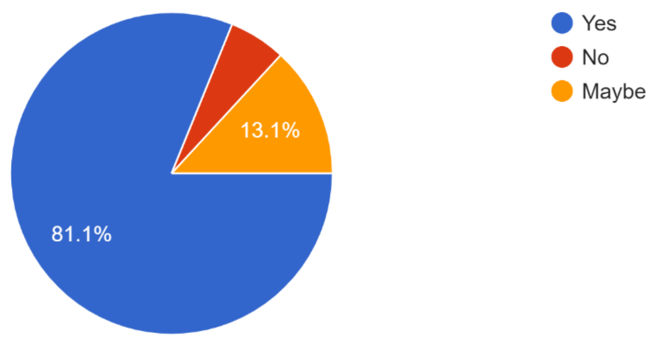
Are you a local or visiting?

175 responses

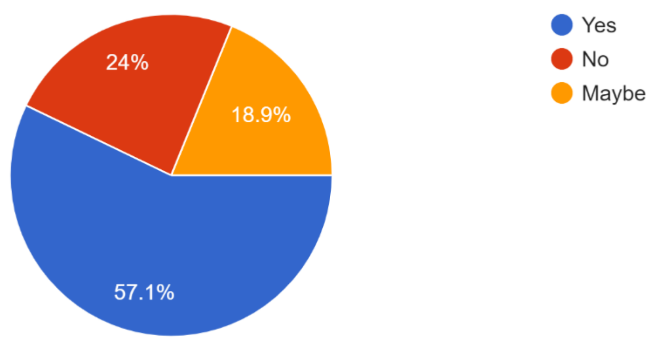


Yes, No or Maybe

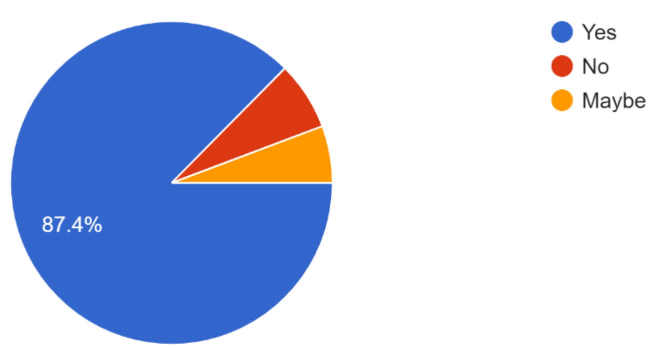
Public Open Space
175 responses



Retail/Grocery
175 responses

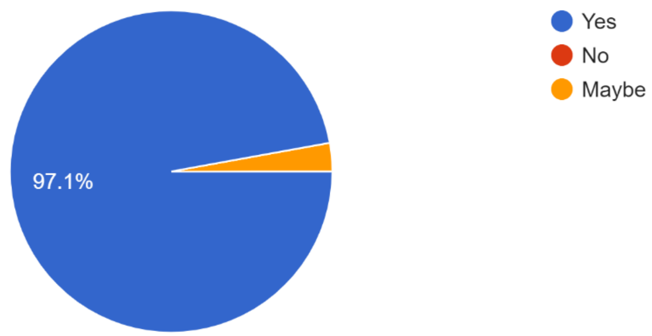


Connections to Public Transit
175 responses



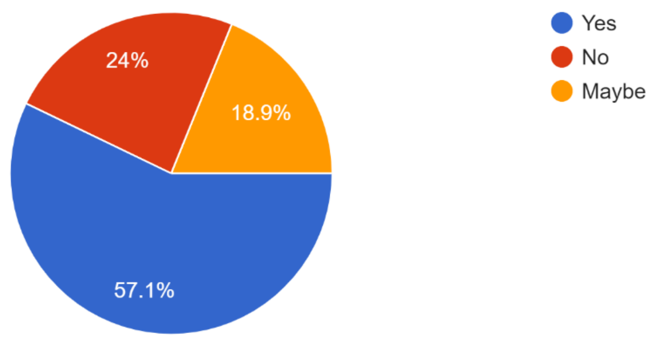
Food and Beverage

175 responses



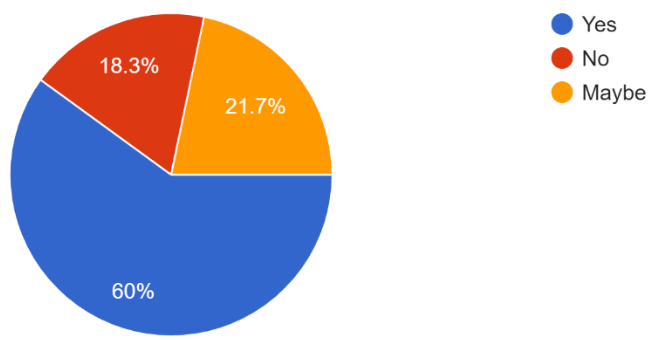
Bicycle-Friendly

175 responses



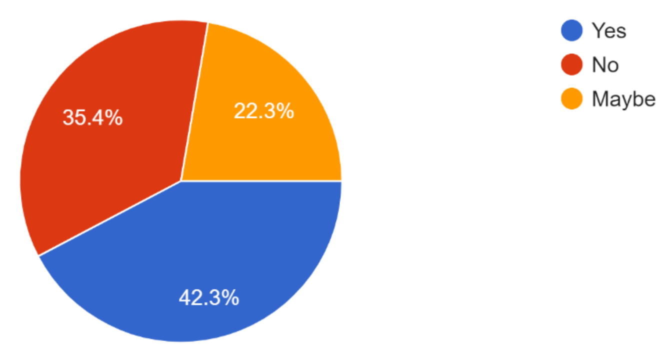
Jobs/Businesses

175 responses



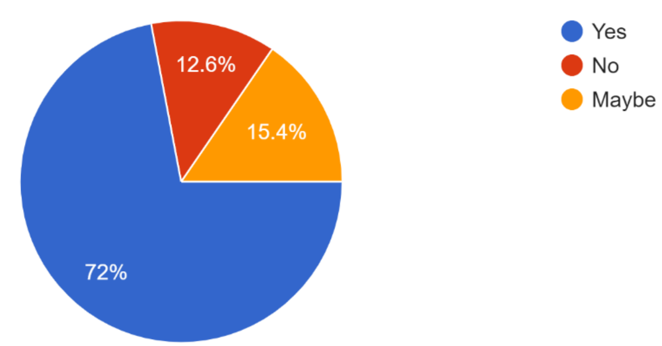
Housing Options

175 responses



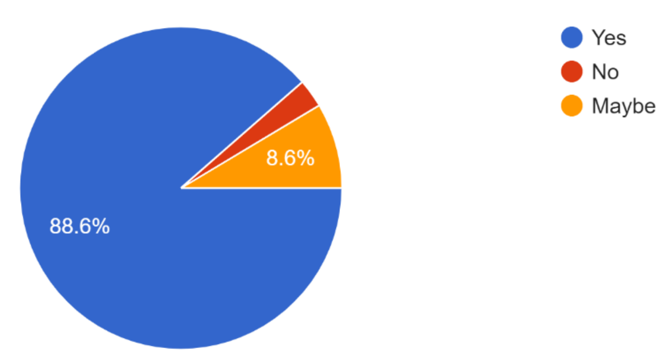
Public Art

175 responses



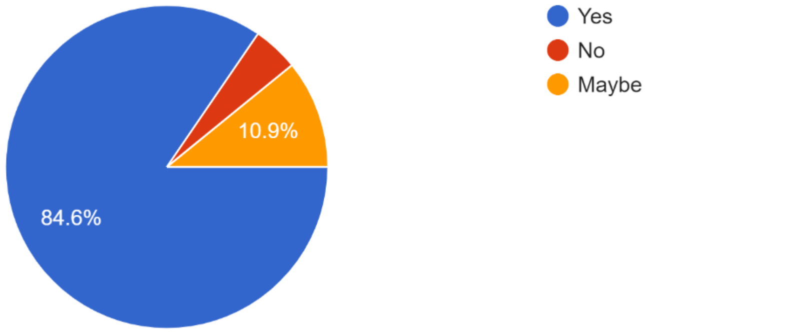
Parking

175 responses



Connections to Las Vegas Strip

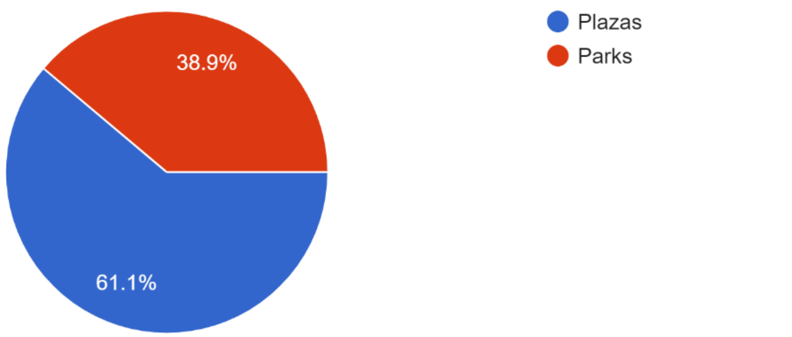
175 responses



Preferences

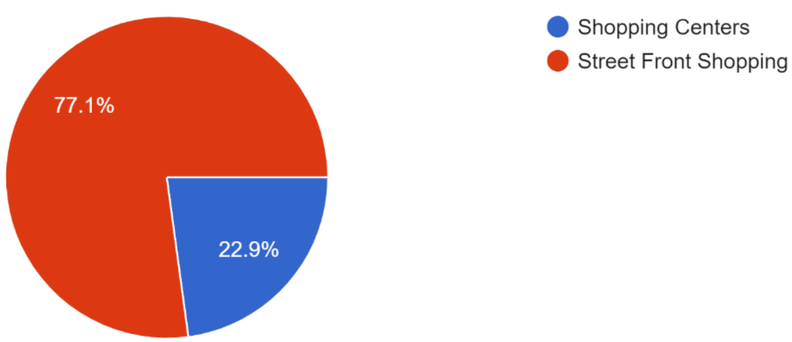
Public Open Space

175 responses



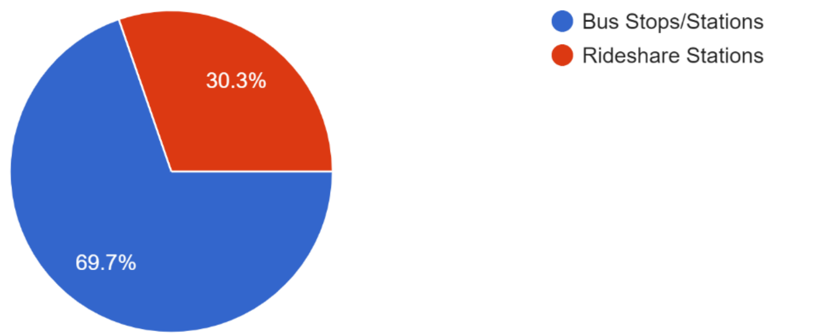
Retail/Grocery

175 responses



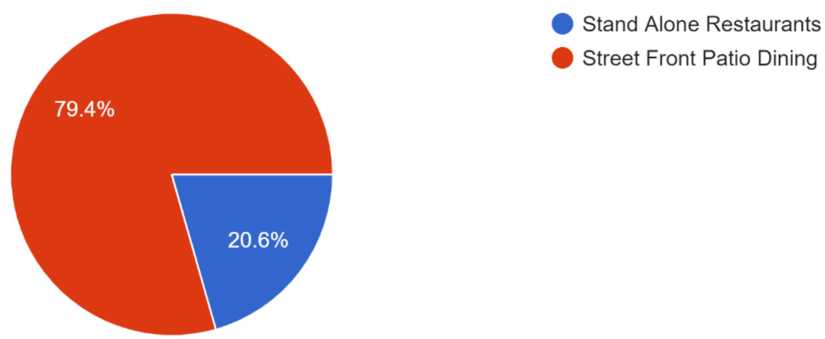
Connections to Public Transit

175 responses



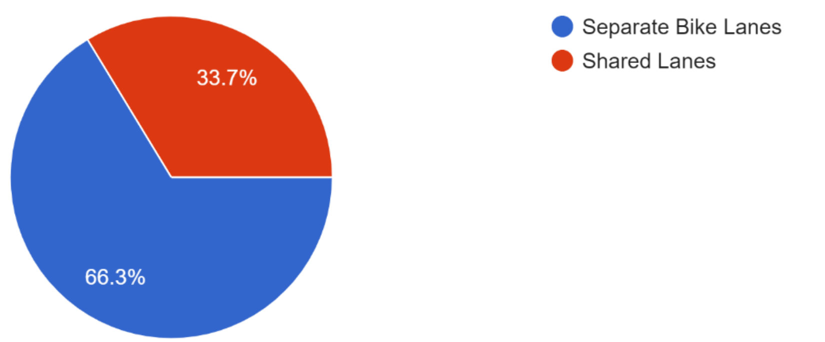
Food and Beverage

175 responses



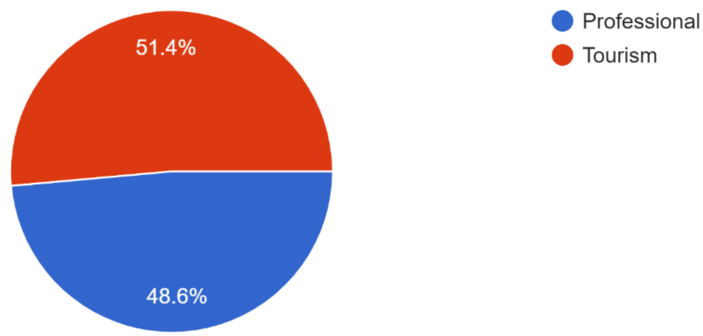
Bicycle-Friendly

175 responses



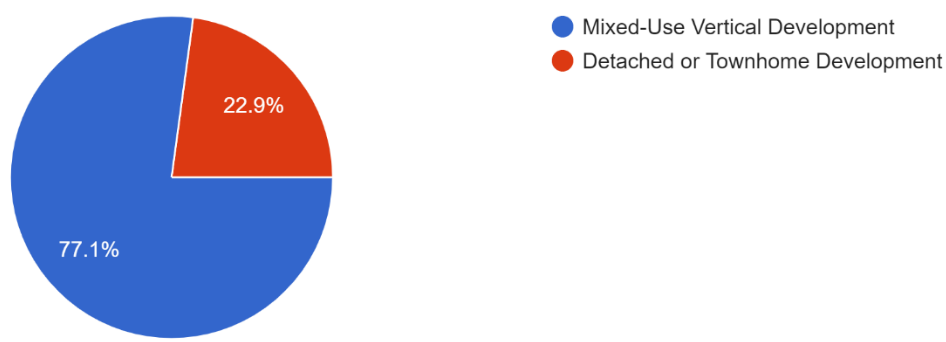
Jobs/Businesses

175 responses



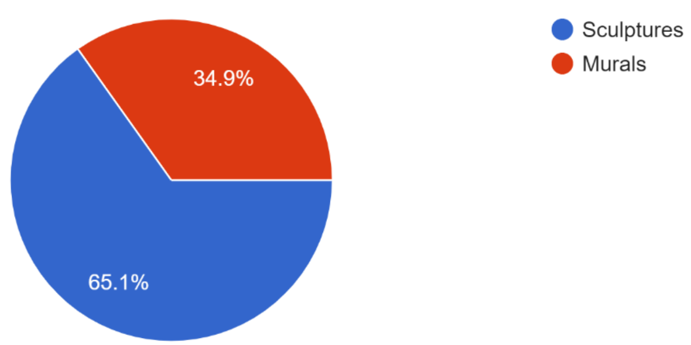
Housing Options

175 responses



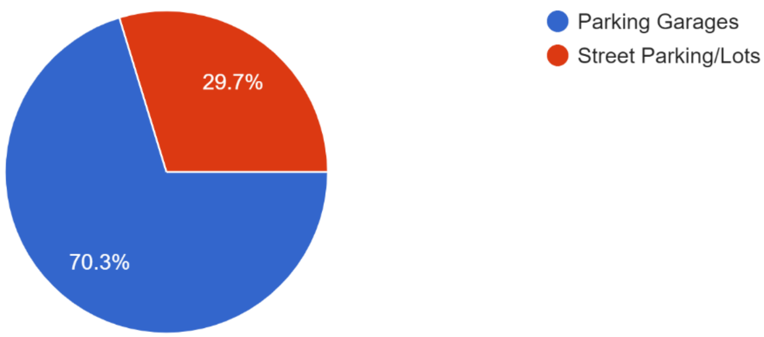
Public Art

175 responses



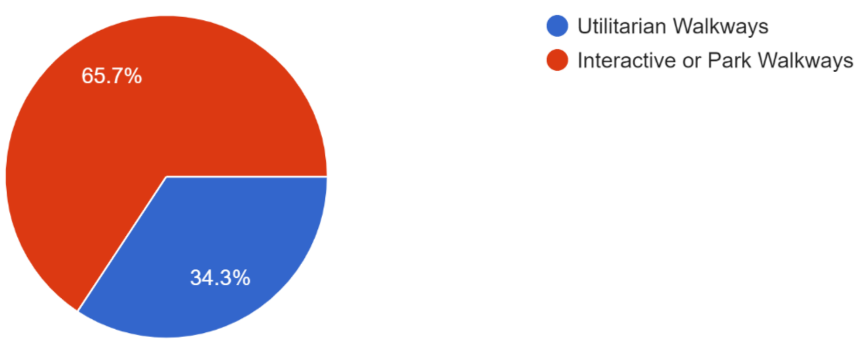
Parking

175 responses



Connections to Las Vegas Strip

175 responses



Contact Info

Name

133 responses

Phone Number

120 responses

Email

129 responses

Stadium District Master Plan

KICK-OFF MEETING 9.28.18

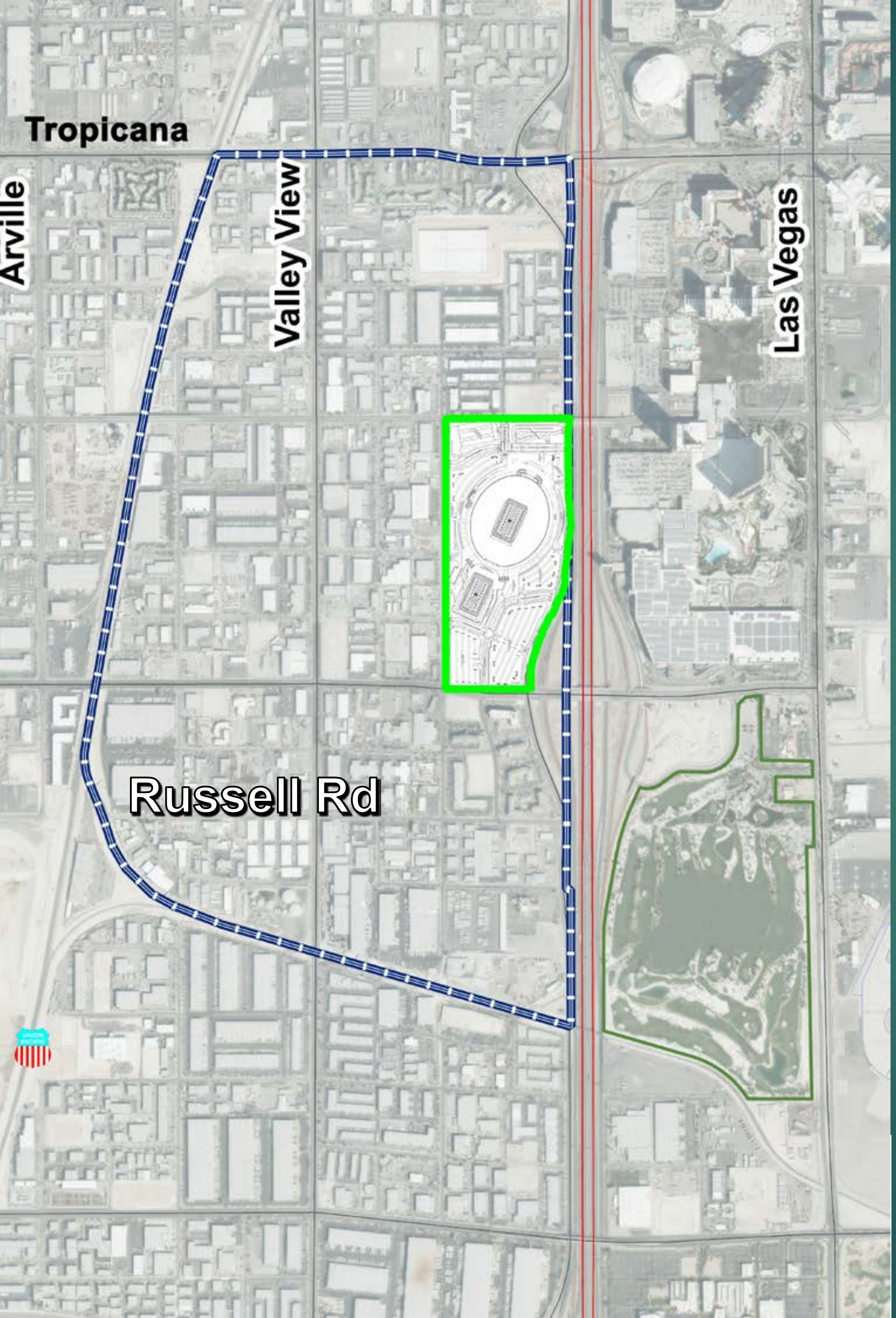
Agenda

- Introductions
  - Clark County, RAFI, UNLV
- Scope
- Stadium District Boundaries
- Examples of other Areas
- Vision
- Projected Land Use
- Feedback
- Engagement

Scope

- Prepare a Stadium District Master Plan as a recommendation to guide future land use

- Co-creating a community-driven vision for the Stadium District
- Master planning for land use improvements to support vision
- Making recommendations for the future



District Boundaries

North boundary is Tropicana

West and South is the Railroad

East is I-15

1.23 square miles

787 acres

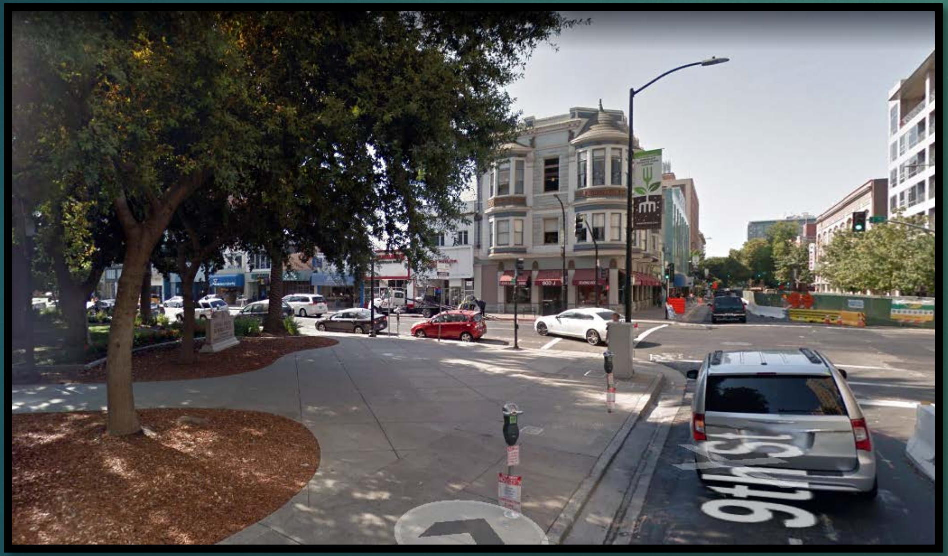
STADIUM DISTRICT

Examples of other Arenas & Stadium designs reviewed

Sacramento, CA	Glendale, AZ	Minneapolis,MN	Philadelphia, PA
Arlington, TX	Detroit, MI	St Louis, MO	Kansas City, MO
	Denver, CO	Boston, MA	

Golden 1

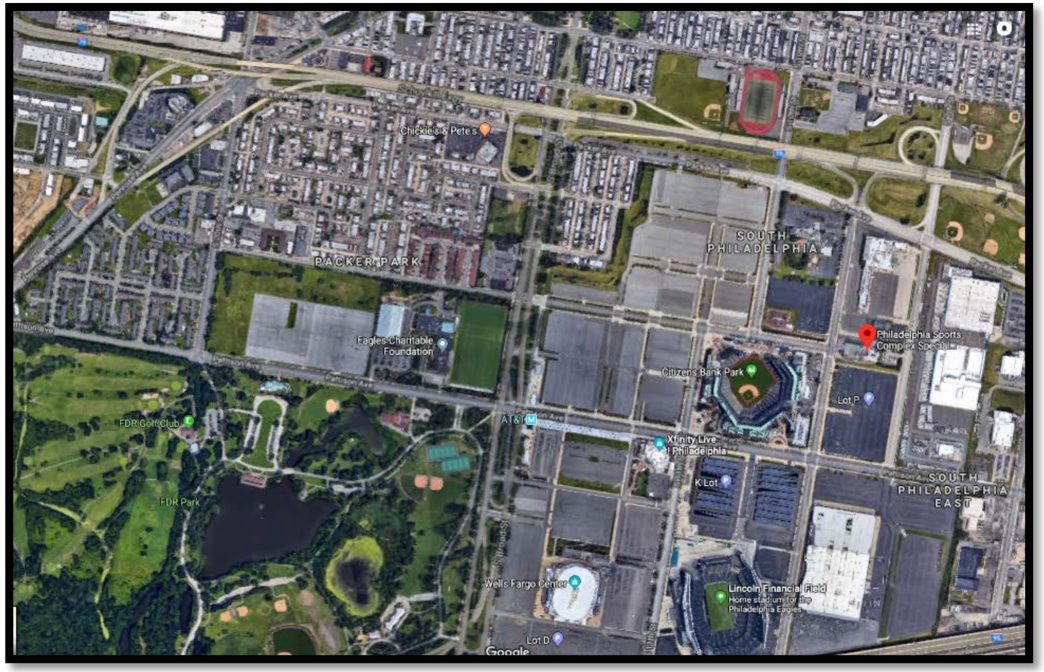
Golden 1

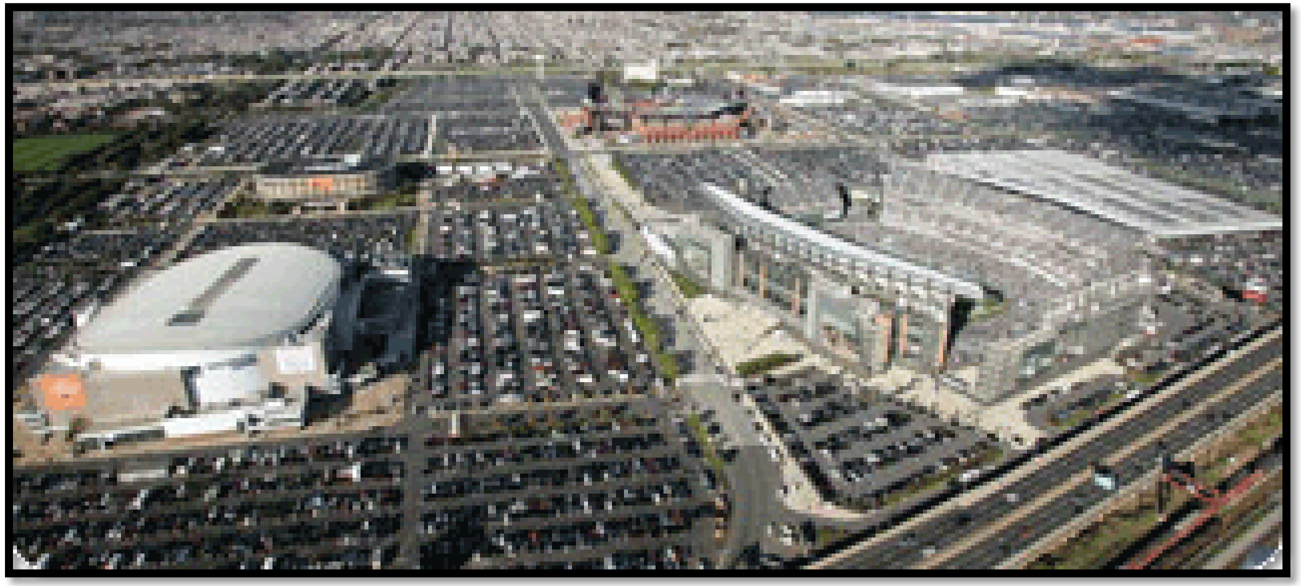

9th St

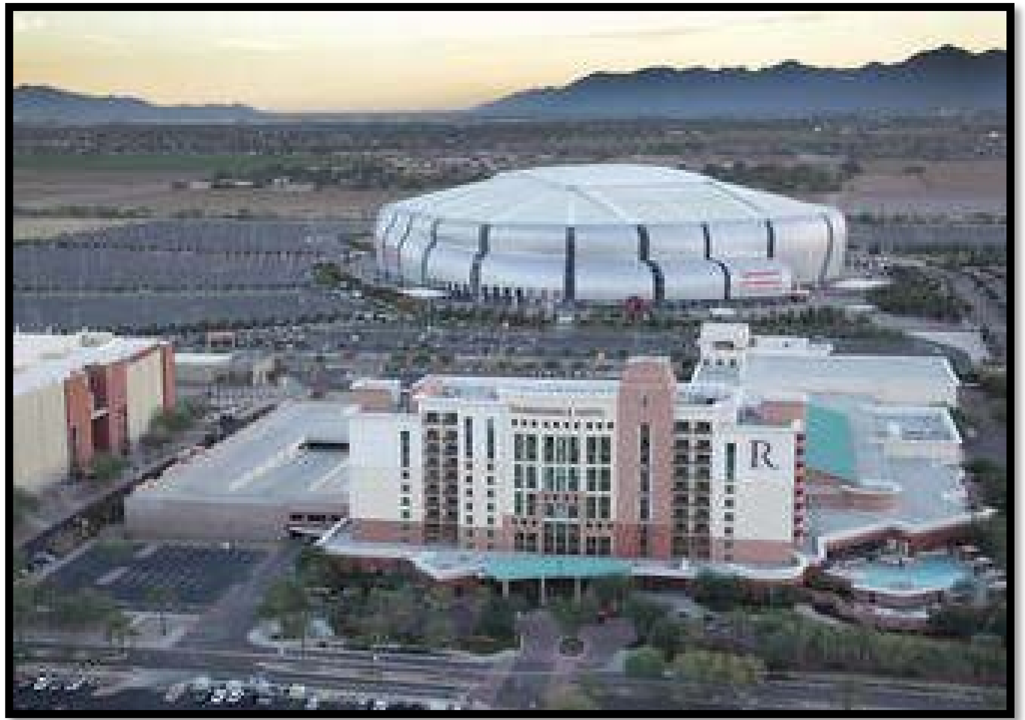

St Rose of Lima Park Station (EB)
Rite Aid
Sacramento Central Library
Starbucks
8th & H Station (NB)
The Citizen Hotel, Autograph Collection
6 min
every 8 min
Cesar Chavez Plaza
Sacramento City Hall
950 J Street
J St
10th St
Improv Alley
Google

Denver

Philadelphia Sports Complex

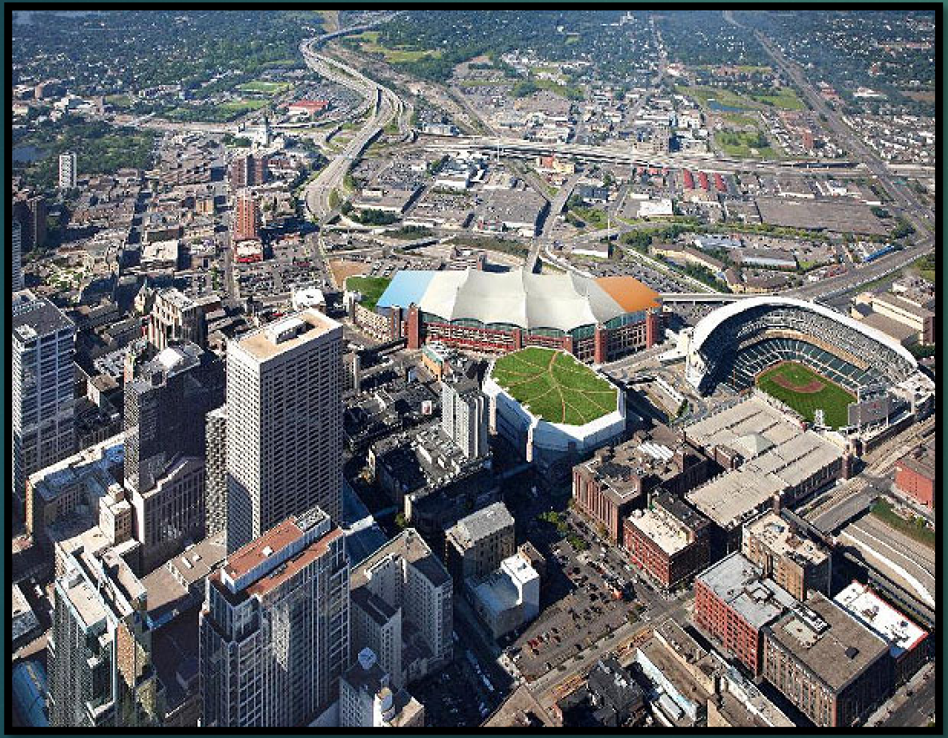


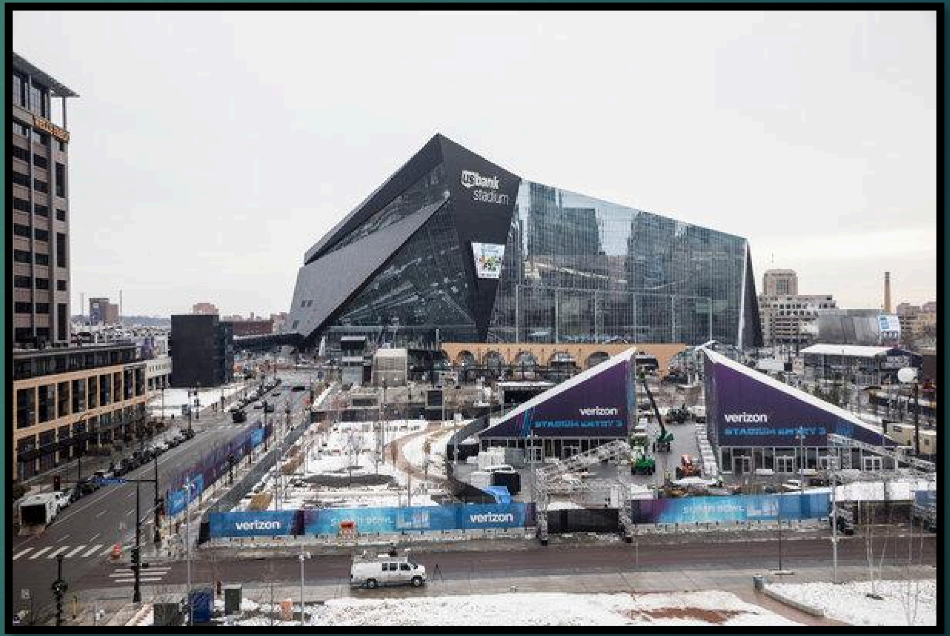




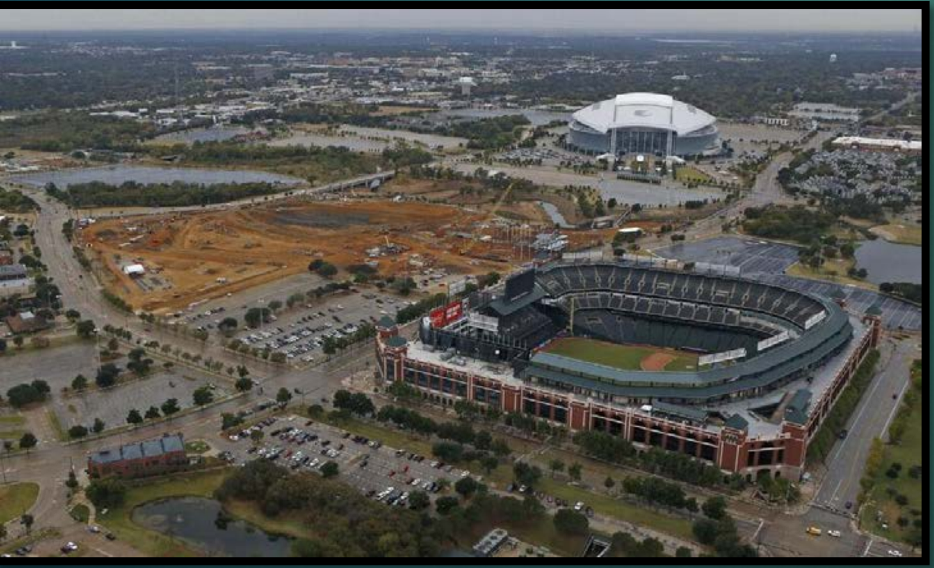
University of Phoenix

U.S. Bank Stadium

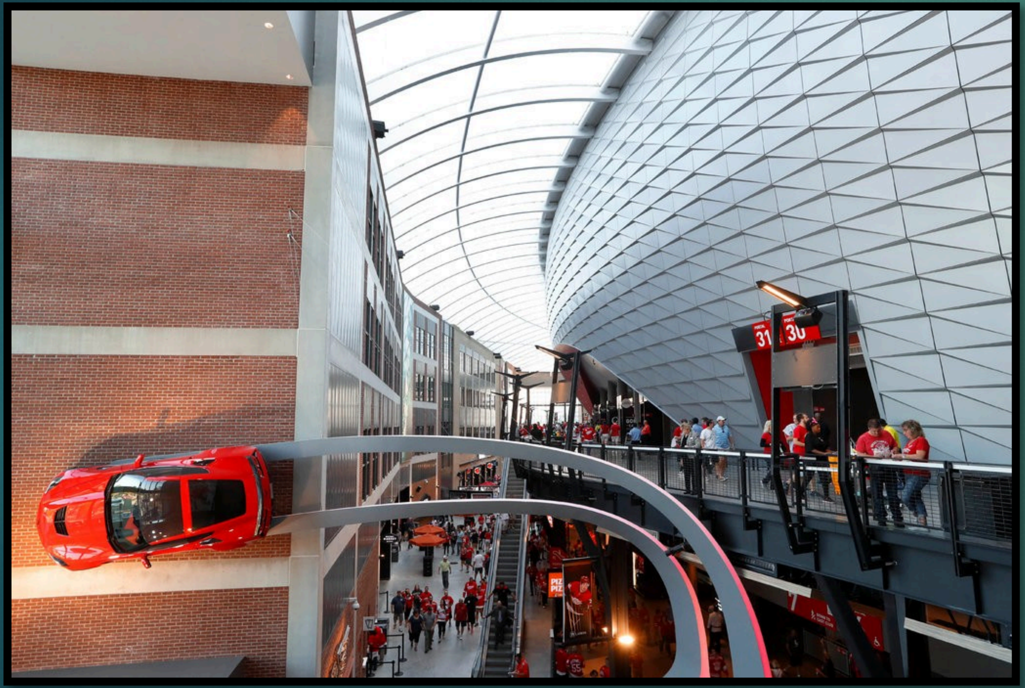


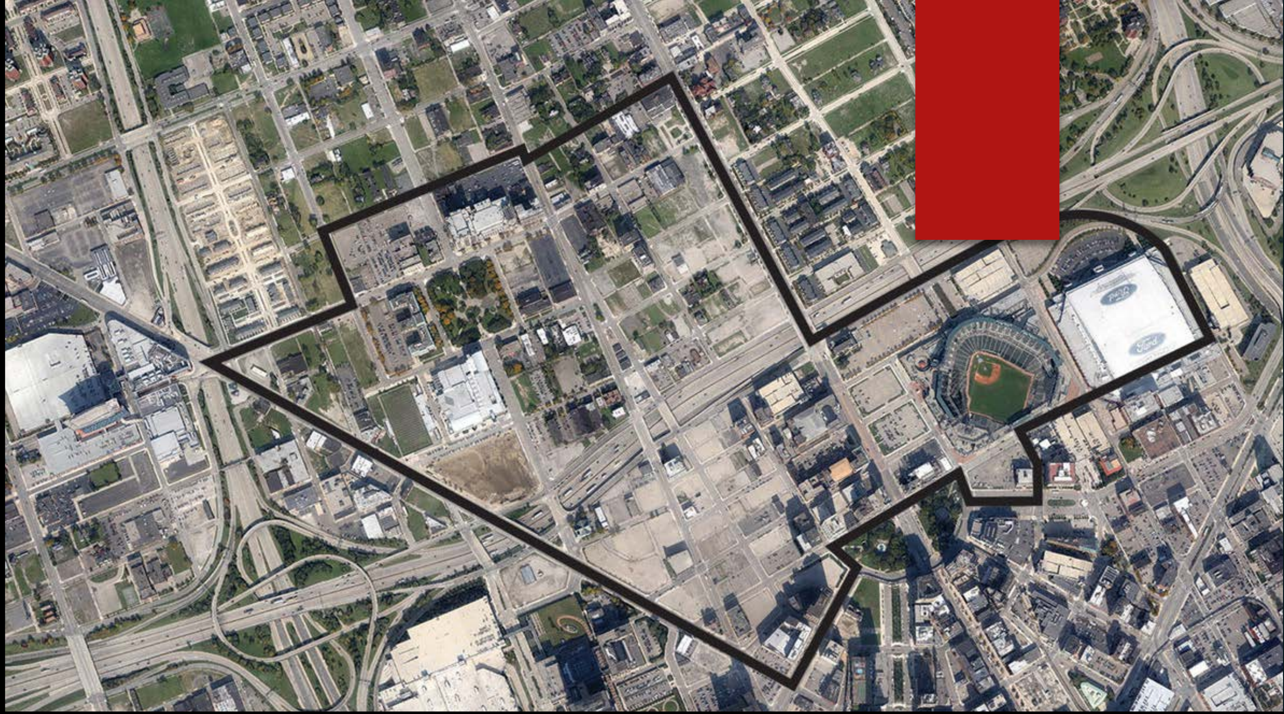


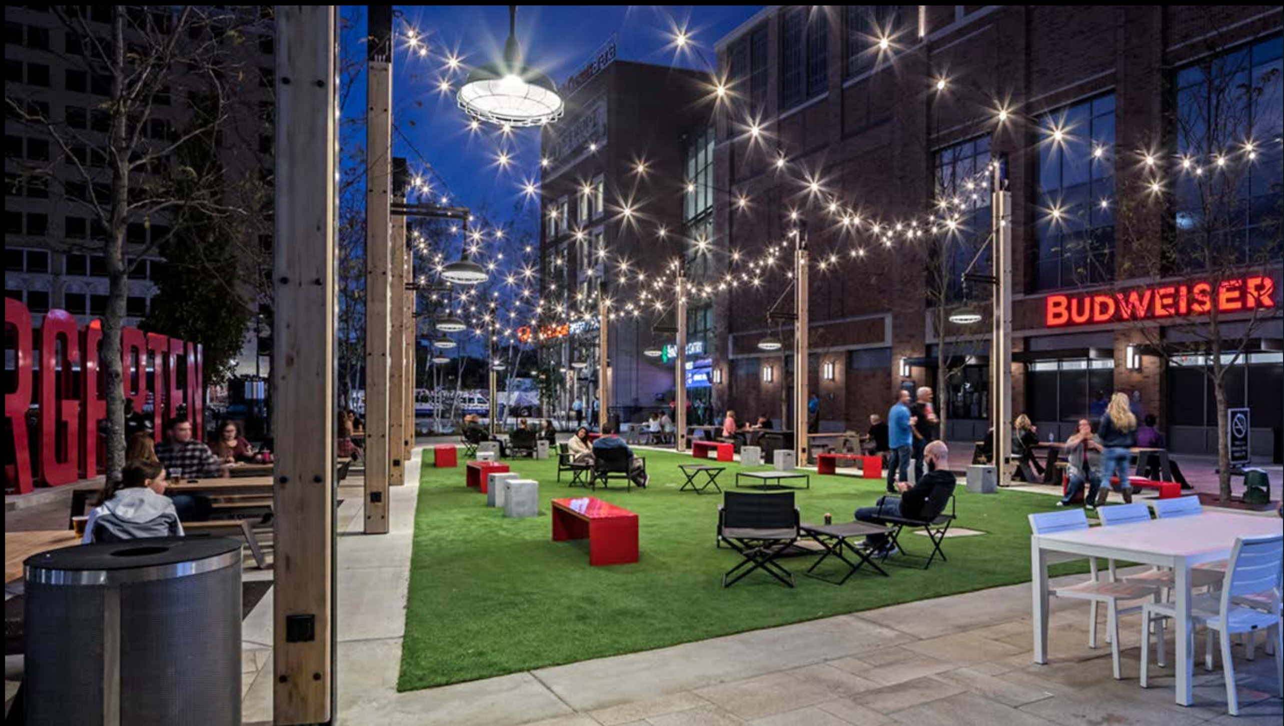
AT&T and Texas Live!



The District in Detroit







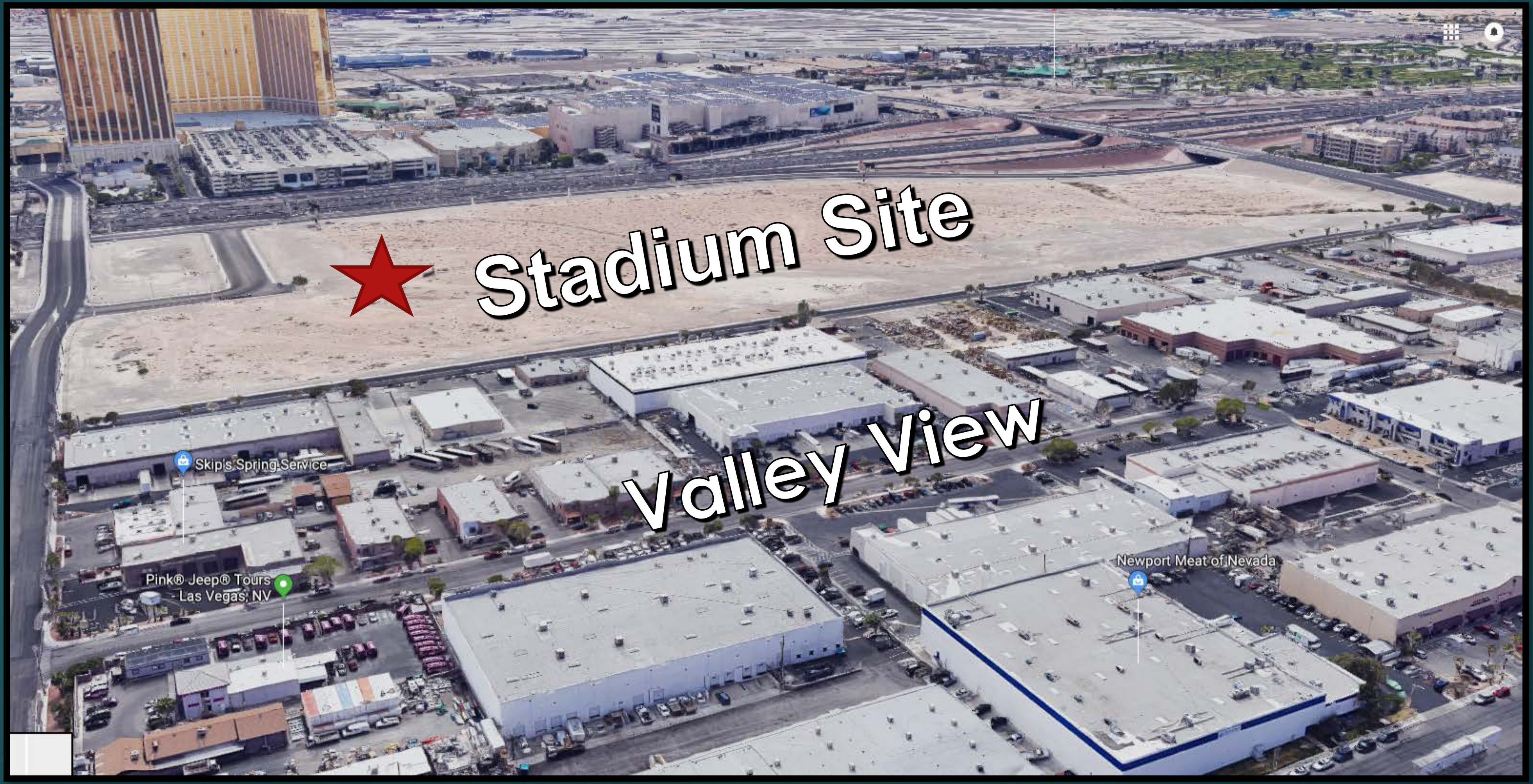
Kauffman Stadium

St. Louis Ballpark Village

Images of the District currently

URBAN FORM AND STREET NETWORK

STADIUM DISTRICT


Stadium Site
Valley View
Skip's Spring Service
Pink® Jeep® Tours Las Vegas, NV
Newport Meat of Nevada


Stadium Site
Tropicana
Railroad

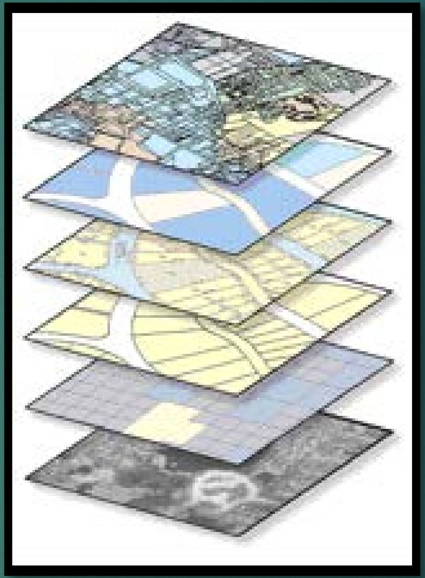

Tropicana
Valley View
Pink® Jeep® Tours - Las Vegas, NV
Google
2D
Google Camera: 1,032 m 36°05'46"N 115°10'38"W 654 m


Stadium Site
I-15
Google


Valley View
Railroad
BB Recycling
Logo Infusion
Google

Vision

Community

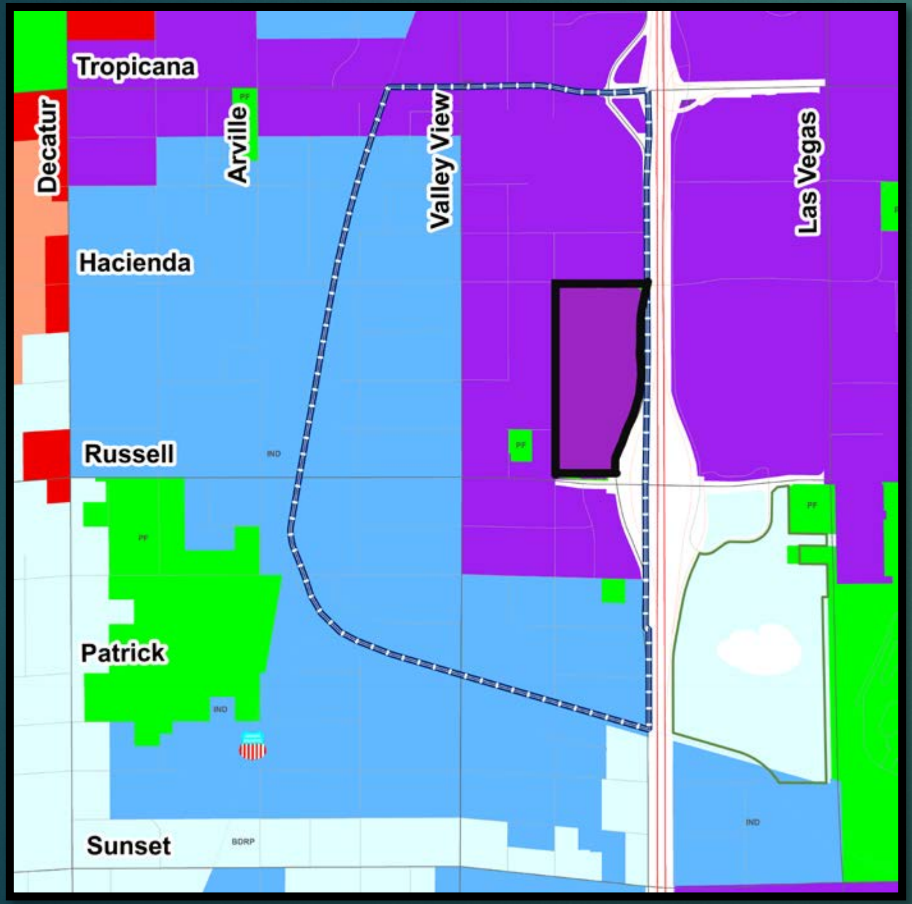


Planning Tools

Vision Draft

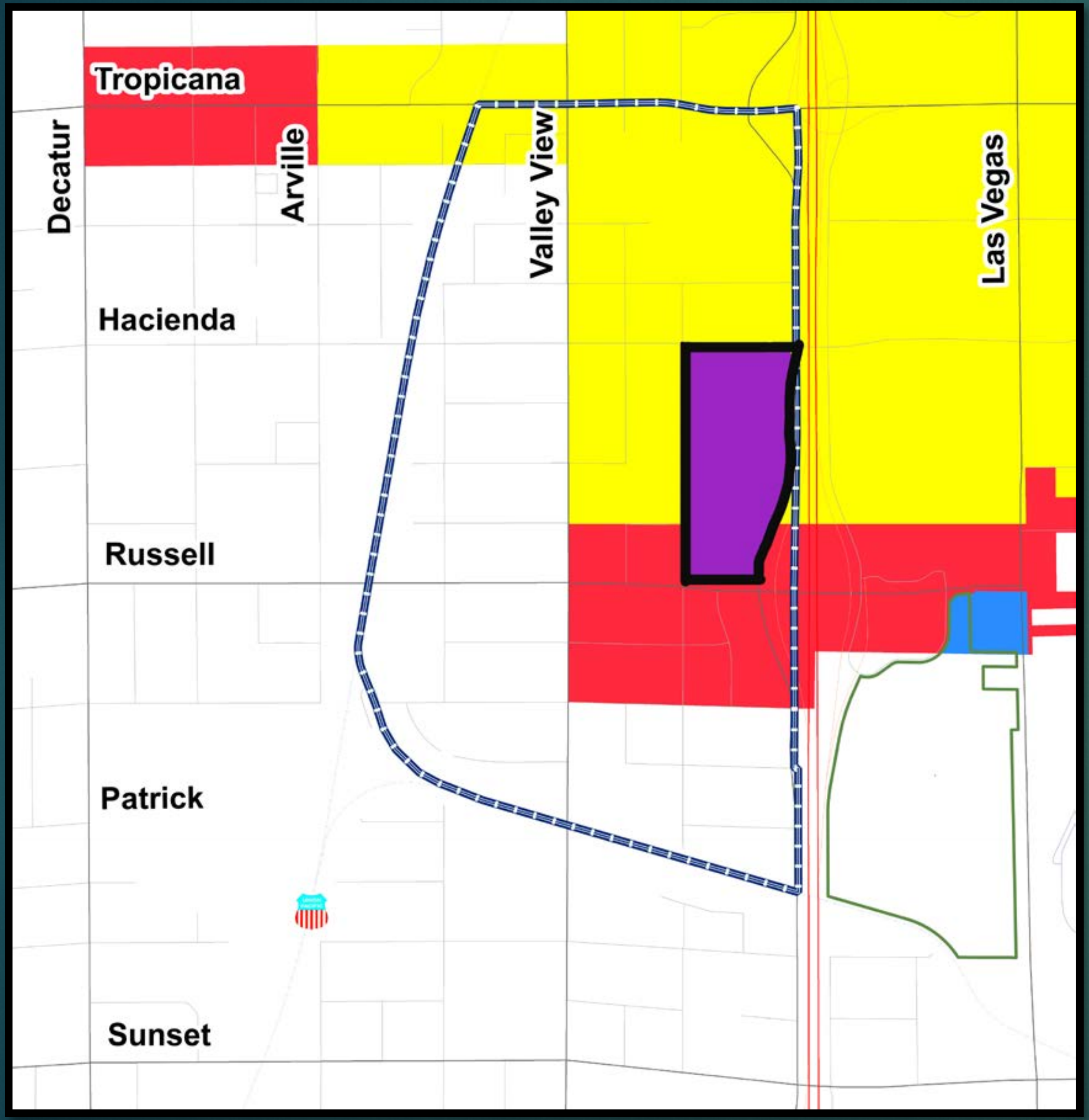
A unique, high quality living and visitor experience within a comprehensive mix of land uses that advances Clark County as a global community and world attraction for entertainment, hospitality, business and sports.

Planned Land Use



Legend

- Commercial Tourist
- Commercial General
- Industrial
- Public Facilities
- Residential High
- Business & Design Research Park



STADIUM DISTRICT

Mixed Use District (current)

Density as approved

Up to 50 du/ac

Up to 32 du/ac

Stay connected!

Please fill out one of our paper forms for providing any input today!
Your voice will ensure the successful creation of the Stadium District Master Plan!

For more information,

and to share your comments, please visit us online:

https://tinyurl.com/ycrzonu5

CLARK COUNTY NEVADA

STADIUM DISTRICT

RAFI ARCHITECTURE | DESIGN

Homework Assignment

- If you wish us to **contact your tenant** or anyone else, please provide us with their email info and/or give them our web site info, and have them contact us!
- How would you like to **craft this vision?** What matters to you?
- What would you like to **name** the District?

Thank you for your attendance.

Stay involved so we can build a vision together!

CLARK COUNTY DEPARTMENT OF COMPREHENSIVE PLANNING

STADIUM DISTRICT PLAN

TAC MEETING No.1

August 20, 2019

RTC

CLARK COUNTY NEVADA

STADIUM DISTRICT

WELCOME AND INTRODUCTIONS

STUDY OVERVIEW

RESEARCH SUMMARY

VISIONING

STRENGTHS, WEAKNESSES, OPPORTUNITIES, THREATS

NEXT STEPS

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RESEARCH SUMMARY

VISIONING

STRENGTHS, WEAKNESSES, OPPORTUNITIES, THREATS

NEXT STEPS

PLANNING TEAM

RAFI

Architecture | Design

ATKINS

Member of the SNC-Lavalin Group

Kimley»Horn

The JABarrett Company

INTELLIGENTLY FORWARD. FASTER.

ea

ERICKA AVILES

CONSULTING

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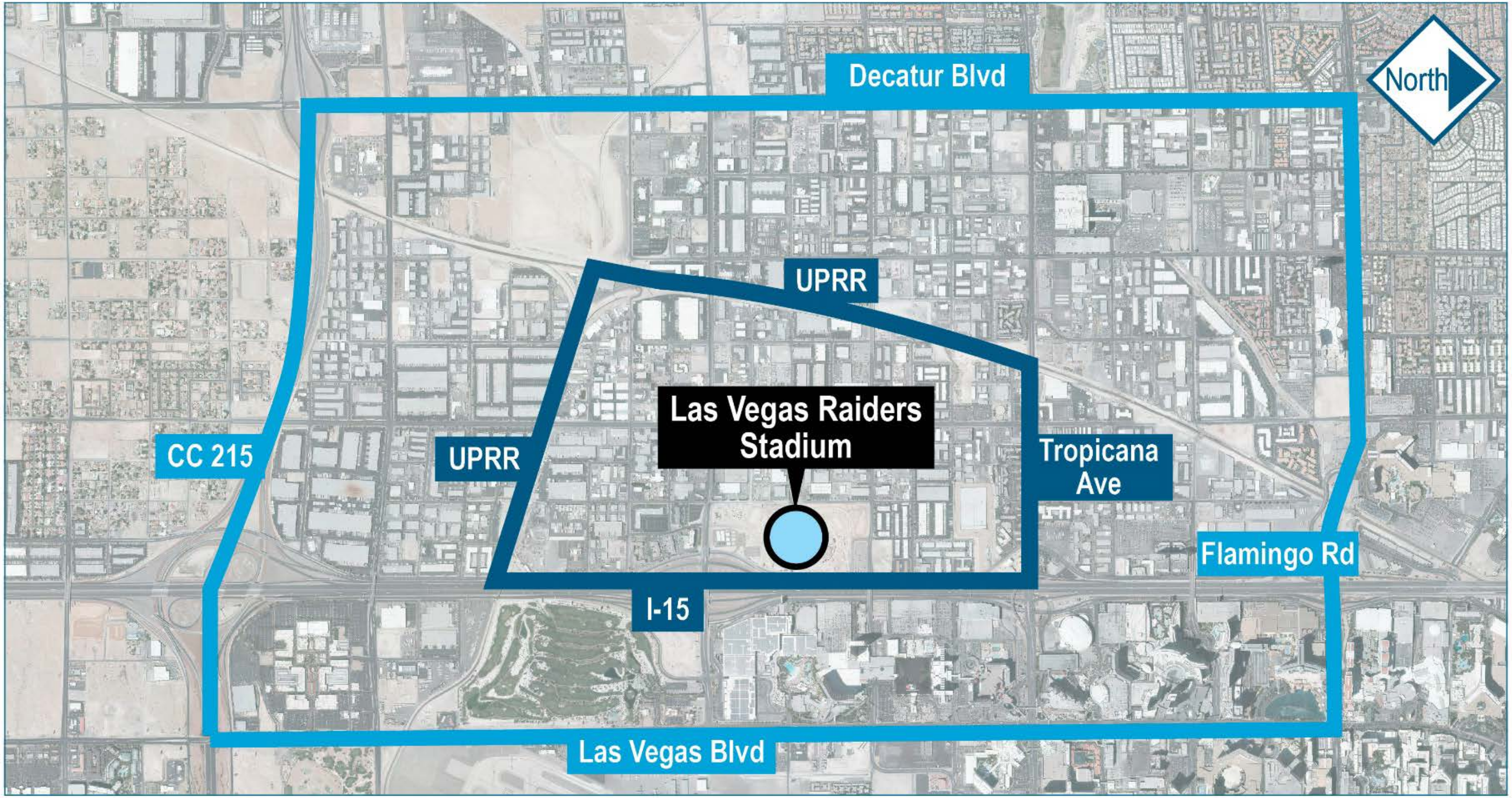

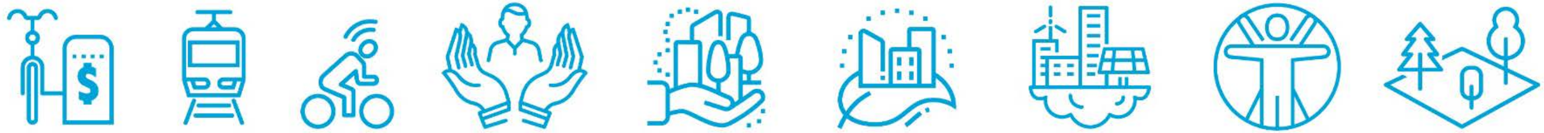

MULTIMODAL TRAVEL CHOICES • QUALITY OF LIFE • ENVIRONMENTAL QUALITY • PROMOTE ECONOMY • PEDESTRIAN FRIENDLY

GOALS OF THE STUDY

- DEVELOP AN OVERALL VISION FOR THE DISTRICT
- DEVELOP A TOOLBOX OF SOLUTIONS THAT WILL GUIDE THE IMPLEMENTATION OF THE VISION
- DEVELOP AN ACTION PLAN
- IDENTIFY POTENTIAL INVESTMENTS

PLANNING PROCESS

STAKEHOLDER AND COMMUNITY ENGAGEMENT

SAC/TAC

Meetings

Surveys

Social Media

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KEY LEARNINGS: ECONOMIC VITALITY

SEATTLE

DENVER

INDIANAPOLIS, BOSTON, DETROIT, ST. LOUIS, ARLINGTON

KEY LEARNINGS: MOBILITY & ACTIVITY

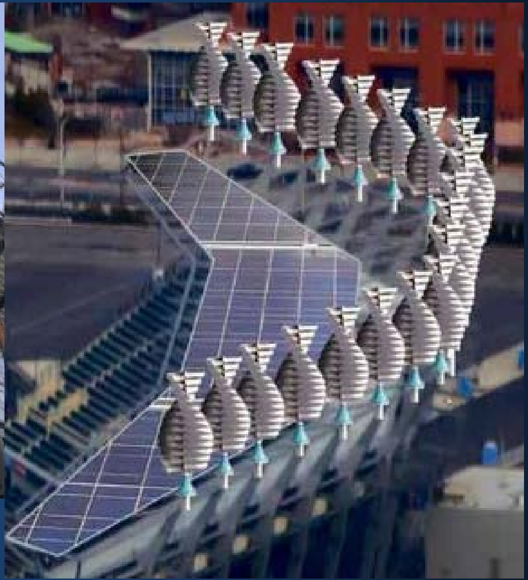
CHARLOTTE

DENVER

CHICAGO

ATLANTA, PITTSBURGH, CLEVELAND, NASHVILLE, SEATTLE, SACRAMENTO

KEY LEARNINGS: ENERGY & ENVIRONMENT

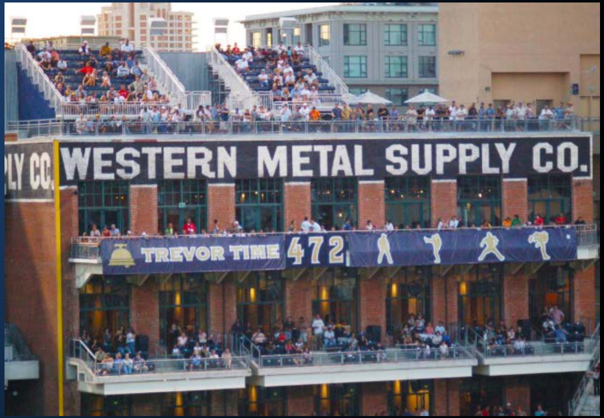


PHILADELPHIA

SAN FRANCISCO, DC, SEATTLE, ST. LOUIS, SAN DIEGO, SACRAMENTO

CITIES REVIEWED

LOUISVILLE : KANSAS CITY : SEATTLE : DENVER : PITTSBURGH : PHILADELPHIA : DC : COLUMBUS : INDIANAPOLIS : ARLINGTON : INGLEWOOD : OAKLAND : GREEN BAY : SAN FRANCISCO : DETROIT : SAN DIEGO : SAN FRANCISCO : BALTIMORE : BOSTON : HOUSTON : SACRAMENTO : LOS ANGELES : SANTA CLARA : NASHVILLE : ATLANTA : ST. LOUIS : CHICAGO : MIAMI : TAMPA : NASHVILLE : NEW ORLEANS : SACRAMENT0 : CINCINNATI : KANSAS CITY : BROOKLYN :



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VISIONING SCENARIOS

Scenario 1

Scenario 2

Scenario 3

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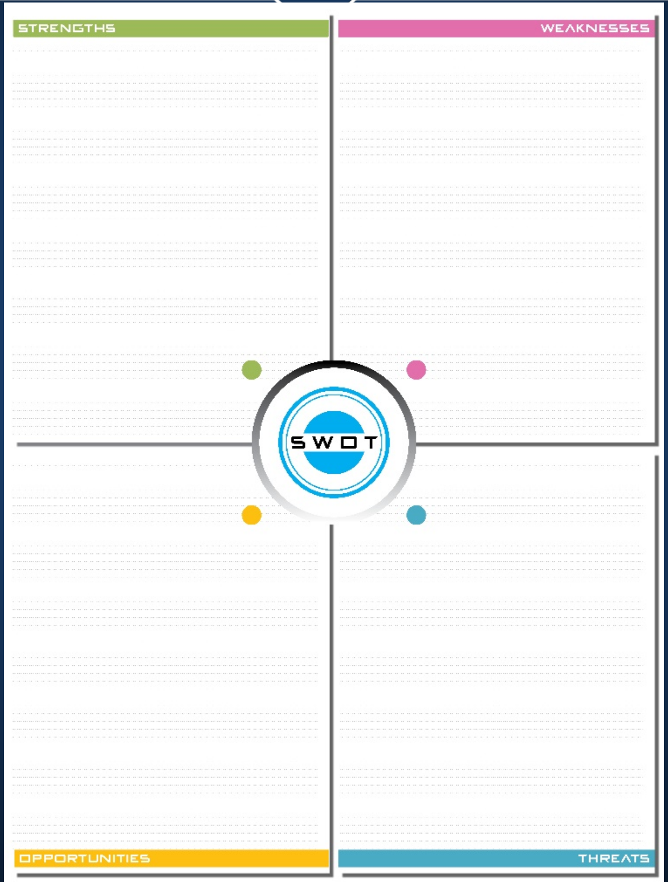
SWOT Analysis



WELCOME AND INTRODUCTIONS

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STRENGTHS, WEAKNESSES, OPPORTUNITIES, THREATS

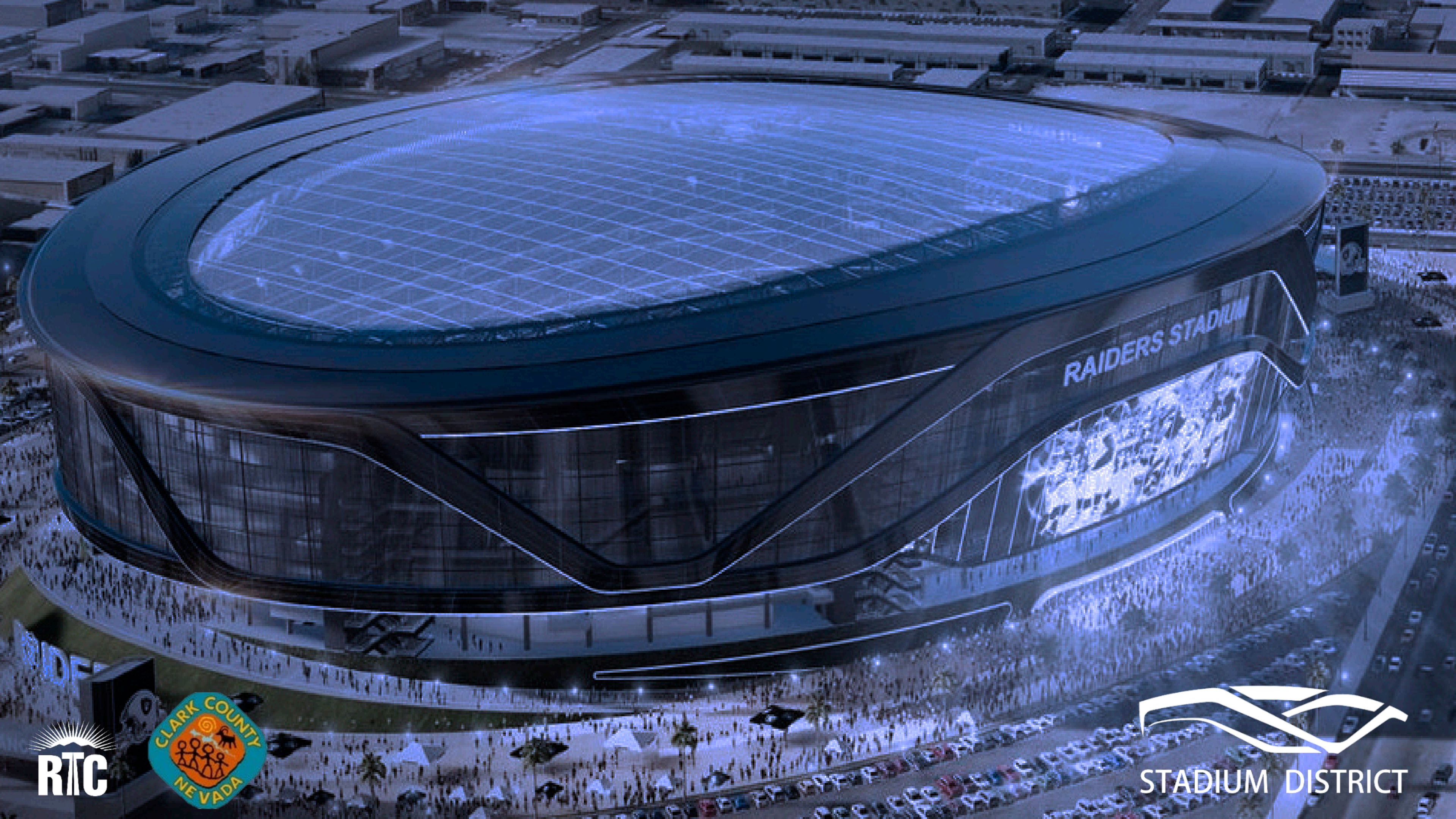
NEXT STEPS

NEXT STEPS

Summarize Results

Pop-up Meeting

Existing Conditions


RAIDERS STADIUM
RTC
CLARK COUNTY
NEVADA
STADIUM DISTRICT

TAC Meeting 1 Summary

Vision for the Stadium District

The most commonly preferred elements identified by TAC Members include:

Land Use

- Mixed-use community
- Low-crime/safe environment
- Amenities and entertainment that create a self-sustaining community
- Family-friendly area that provides entertainment options for fans of all ages
- Environmentally friendly, with green/open space

Transportation

- Parking with walking paths or transportation to the stadium
- Cohesive infrastructure and coordination among businesses
- Walkability/pedestrian-friendly community
- Multimodal transportation/micro transit

Land Use and Transportation

The team developed three scenarios to help stakeholders brainstorm what type of land uses, transportation modes and infrastructure they would like to see within the Stadium District. For each scenario, stakeholders in breakout groups identified potential land uses using the color palettes shown below, demonstrated preferred building heights using Legos, and highlighted potential transportation connectivity route with stickers.

Scenario 1 – Industry and Events District

Scenario 1 presented a Stadium District that maintains its industrial land use. Parking would be available through a parking garage, and food trucks and popup restaurants would make up a vibrant street life. In Scenario 1, there would be no housing immediately adjacent to the stadium, but some condos and apartments would be located within a mile of the stadium. Transportation within the district would be provided year-round via transit service.

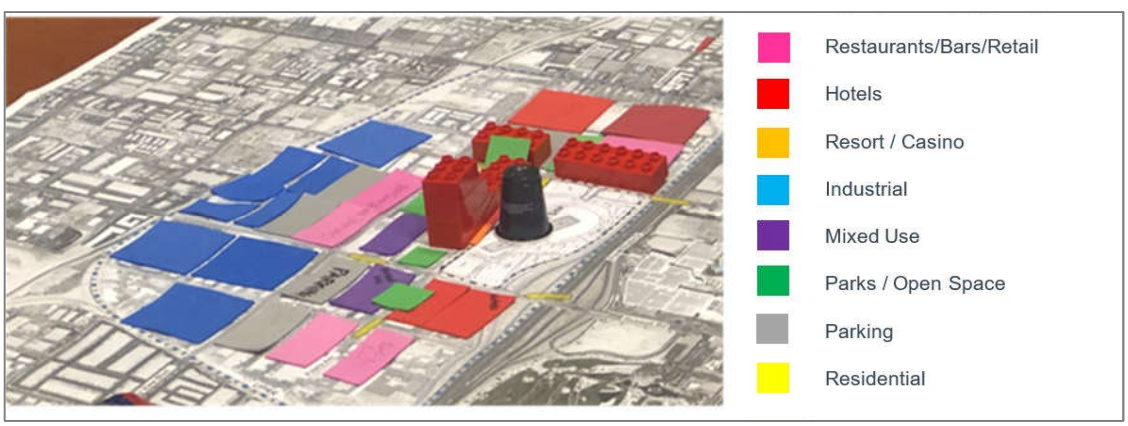


Figure 1. Stakeholders' Vision for Scenario 1

Below is a summary of the key components of scenario 1 that stakeholders liked and disliked.

LIKES	DISLIKES
Land Use	**Land Use**
• Keep land use primarily industrial and bring additional industrial • Keep distributors and suppliers co-located	• Entertainment should be concentrated along Hacienda due to the current pedestrian bridge and likelihood of concentrated foot traffic and because of safety concerns

<u>Scenario 2 – Mixed Use Industrial District</u>

Scenario 2 described a Stadium District with reuse and redevelopment of the existing buildings and warehouses. Hotels, bars, and restaurants would be found throughout the district. Added green space and walking paths throughout the District would be paired with increased mobility options such as transit, micro-transit, ride-sharing, scooters, and bikes. The northeast corner of the district would include mega tourist and entertainment areas. The rest of the District would incorporate flexible businesses, training, educational, and arts and crafts spaces, year-round indoor food markets, and warehouse lofts/housing.

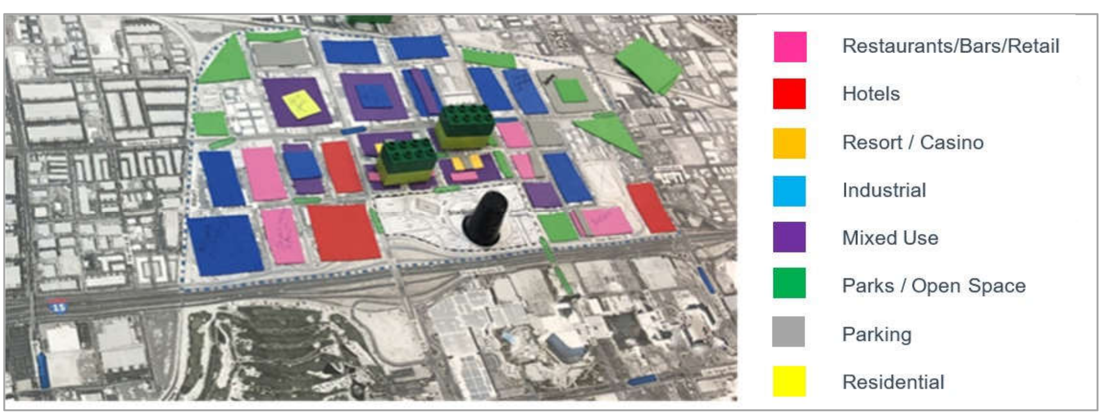


Figure 2. Stakeholders' Vision for Scenario 2

Below is a summary of the key components of scenario 2 that stakeholders liked and disliked.

LIKES	DISLIKES
Land Use	**Land Use**
• Mixed-use opportunities • Entertainment options that will draw and keep people in the District • Additional businesses	• Existing adult entertainment is not good in a residential area; adding additional adult entertainment is not preferred
Transportation	**Transportation**
• A walkable, pedestrian-friendly area • Transit and micro-transit options • Safe transportation	• There is a general lack of parking • Pedestrian scooters (micro-transit) are left everywhere by riders

<u>Scenario 3 – Sports and Entertainment District</u>
Scenario 3 described a complete redevelopment of the District, with new buildings and uses. Hotels, casinos, indoor/outdoor shopping districts, restaurants, nightclubs, and multi-family residential are proposed new uses in this scenario. The District would also include community pocket parks and gathering spaces. Upgraded pedestrian infrastructure would help cars and people share the road safely, with some roads being pedestrian-only on game days.

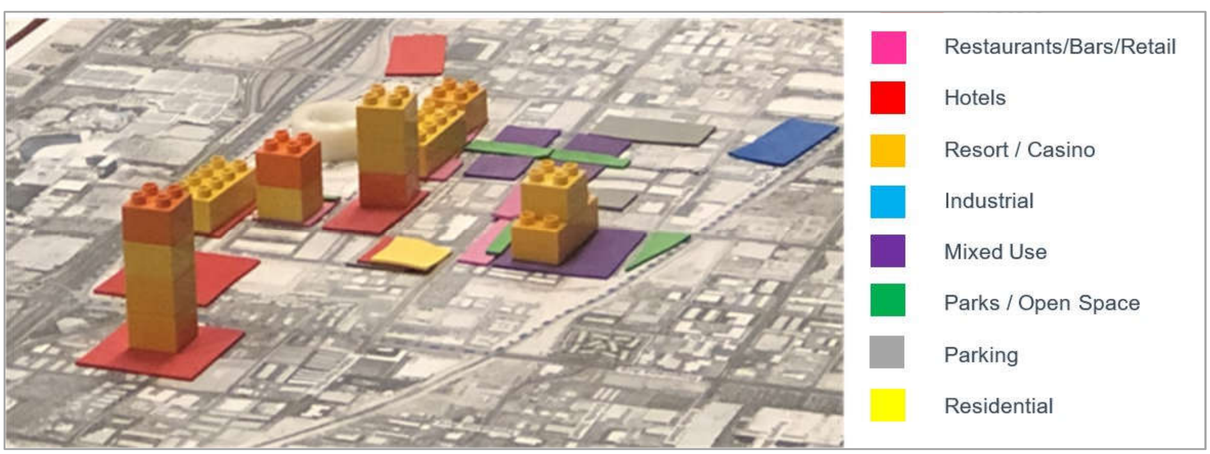


Figure 3. Stakeholders' Vision for Scenario 3

Below is a summary of the key components of scenario 3 that stakeholders liked and disliked.

LIKES	DISLIKES
Land Use	**Land Use**
• Mixed-use opportunities • Development of a diverse economy with the goal of creating a self-sustaining community	• Existing adult entertainment is not good in a residential area; adding additional adult entertainment is not preferred
Transportation	**Transportation**
• A walkable, pedestrian-friendly area • Transit and micro-transit options • Safe transportation	• The freeway and the railroad are barriers that prevent additional access and mobility to the area

SWOT (Strengths, Weaknesses, Opportunities, Threats) Analysis

Following the land use activity, each team did a SWOT analysis for their specific scenario and the land use model that they created during the activity. Tables 1-4 display the strengths, weaknesses, opportunities, and threats that each group came up with pertaining to their scenario.

STRENGTHS	WEAKNESSES
General • Existing district improvements may create united meaningful or historical connections • Ability to develop smaller parcels as industrial • Development types that would be beneficial to the Stadium • Mixed-use close to stadium • Mid-rise residential options • Economic benefits for businesses, and exponential growth in property values • Parks and open spaces are preferred • Green space near parking could facilitate pre-gaming/ tailgating ***Transportation and Infrastructure*** • Valley View could be a hub area for development • Proximity to freeway and several main thoroughfares that connect to hospitality corridor and community • Walkability and walkable parking • Russell & Hacienda bridge across the UPRR allow vehicles to the area	***General*** • Uncertainty of size and number of stadium events – must have critical mass for rest of year • Fragmented visions among property owners. Lots of property owners and small parcels. • Lack of incentives envisioned to realize district-wide goals • Limits of existing building stock and industrial yards for repurposing for stadium related activities • Very difficult and costly to redevelop. Some properties would be very expensive to replace and some of existing uses are entrenched in area. • Need thousands of living units – uncertainly regarding pricing of units, and whether the units/area would attract enough tenants? • Ensuring entertainment options • Public safety and security are a concern and the District might not be safe for residential development • Lack of open space near the stadium • Mixed use concentrated mostly west of venue • Lack of clear vertical relationship between uses (example: mixed use to include industrial) ***Transportation and Infrastructure*** • Capacity of current freeway and other transportation facilities is an issue, especially with added congestion on game days • Need improved options for transit • Ease of access - UPRR is a barrier to connectivity • Not enough parking within walking distance • Pedestrian access – lack of sidewalks • Existing utility infrastructure in area may not support size of development • Not enough lighting

OPPORTUNITIES	THREATS
General • Las Vegas level of 'Event Cycle' driver of high district activity • Positive Fan experience • Property owners can self-organize • Cohesive development • Reassessment and diversification of land use and increase of district density • Creation of more livable space • Repurposing/replacement of existing facilities • Residential near bars/restaurants/retail • Economic development, business growth • Redeveloping into a vibrant area, exciting new possibilities • To be among most desirable neighborhoods in Las Vegas and the world (not just residential; a well-rounded city) • Environmental benefits ***Transportation and Infrastructure*** • Complete streets with emphasis on pedestrian-only promenades with access/egress to stadium area • Emphasizing major corridors and creating gateways and main street experiences • Incorporation of transportation options • Transit-oriented development • Railroad corridor for commuter rail (Boulder City)	***General*** • Competition for redevelopment and increase in redevelopment • Industrial tenancy may get expensive • Too many landlords to get a cohesive plan • Hard boundaries and size of district too big • Equity concerns • Outside visiting crowds • Noise • Limited heights for buildings due to FAA restrictions for McCarran airport • Security concerns and safety of pedestrians ***Transportation and Infrastructure*** • Concerns whether existing utilities such as water, power, sewer can handle the load • Limited access and egress points • Threats to mobility • UPRR creates issue with mobility • Access • Hard to get to Valley View (no exit from 215 Beltway)

CLARK COUNTY DEPARTMENT OF COMPREHENSIVE PLANNING

STADIUM DISTRICT PLAN

TAC MEETING No. 2

December 12, 2019

WELCOME AND INTRODUCTIONS

BROWNFIELD REVITALIZATION PROGRAM

SUMMARY OF LAST WORKSHOP AND PUBLIC INPUT

VISION AND GOALS

LAND USE PLAN

NEXT STEPS

WELCOME AND INTRODUCTIONS

BROWNFIELD REVITALIZATION PROGRAM

SUMMARY OF LAST WORKSHOP AND PUBLIC INPUT

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LAND USE PLAN

NEXT STEPS

Maryland Parkway Corridor Brownfields Assessment Project

Stadium District Technical Advisory Committee

December 12, 2019

EPA Brownfield Grant Program

- What is the EPA Brownfields Program?
- What *exactly* is a Brownfield?

Funding: $500K EPA Brownfield Assessment Grant

Coalition Partners:
- Clark County
- City of Las Vegas
- Regional Transportation Commission

Grant Time Period: October 1, 2015 – October 31, 2020

Brownfield Project Goals

- Catalyze reinvestment and redevelopment
- Provide information for redevelopment and reuse
- Prioritize sites
- Assess for potential environmental contaminants
- Encourage redevelopment
- Develop reuse/cleanup plans
- Assist in search for funding opportunities

EPA Brownfield Grant Expansion Area

- How does this affect properties adjacent to and near the Allegiant Stadium Site?
- What are the benefits to property owners?

Environmental Site Assessment (ESA)

Phase I ESA:

- Research site use
- Review environmental records
- Conduct site inspection
- Deliver report on recognized environmental conditions
- *Est. Value: $5,000*
- *Est. Timeline: 1-2 months*

Phase II ESA:

- Collect soil and groundwater samples to evaluate nature, extent and concentration of contamination (if any), and estimate cleanup scope and costs
- *Est. Value: $25,000*
- *Est. Timeline: 2-3 months*

Project Benefits to Approved Participants

- Investigate site history and potential for site to be contaminated at no cost.
- Evaluate levels of contamination or confirm that the site has no contamination at no cost.
- If contamination is found, cleanup planning may be available at no cost. Assistance to identify sources of clean-up funding will be provided.
- An evaluation of the highest and best use for the site may be available at no cost.
- All of the above will increase the marketability of the site and/or fulfill a lender requirement for site assessment.

Property Owner Participation

- Participation is voluntary.
- If a property owner chooses to participate, the following two forms are required:
  - Site Nomination Form
  - Permit of Entry Form
- Property access must be provided for a site visit and interview with property owner and/or authorized representative.
- A copy of the Environmental Site Assessment report will be provided to the property owner.

Application Process, Procedures & Criteria

- If you have a property owner that may be a good candidate, either have them contact us or we can contact them
- We will schedule a preliminary meeting and provide informational materials and site application
- After the property owner provides the application we will make a determination based on redevelopment potential
- If the site is selected, we will seek approval from EPA to move forward

WELCOME AND INTRODUCTIONS

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SUMMARY OF LAST WORKSHOP AND PUBLIC INPUT

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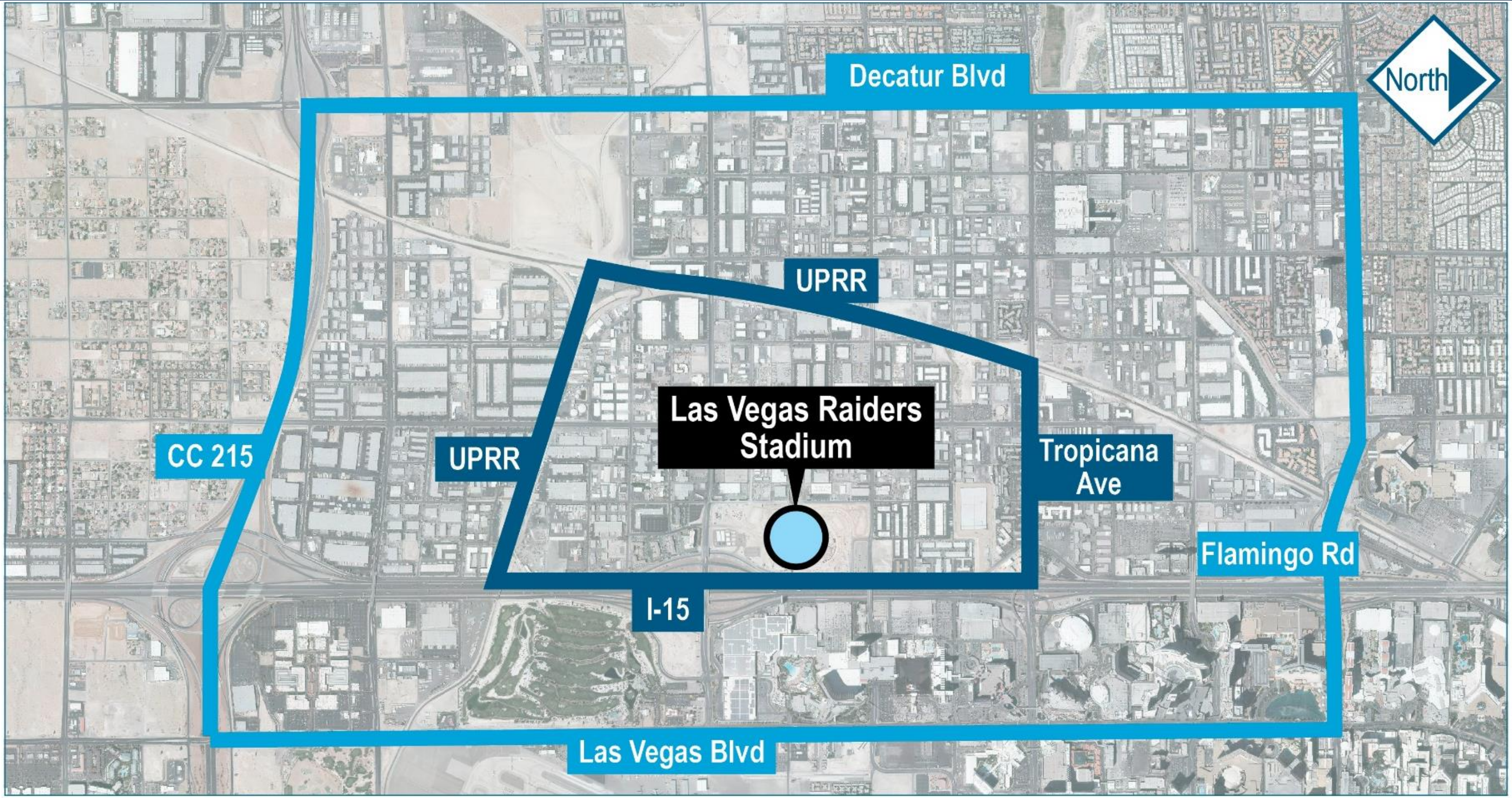
LAND USE PLAN

NEXT STEPS



MULTIMODAL TRAVEL CHOICES • QUALITY OF LIFE • ENVIRONMENTAL QUALITY • PROMOTE ECONOMY • PEDESTRIAN FRIENDLY

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VISIONING SCENARIOS

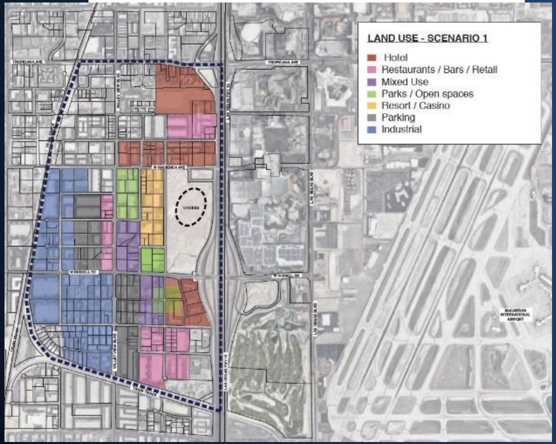
Scenario 1

Scenario 2

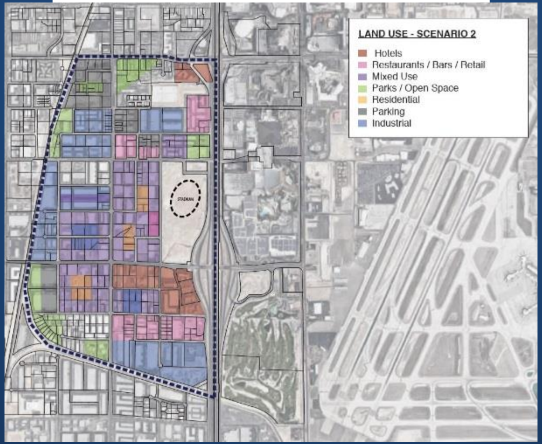
Scenario 3

VISIONING SCENARIOS

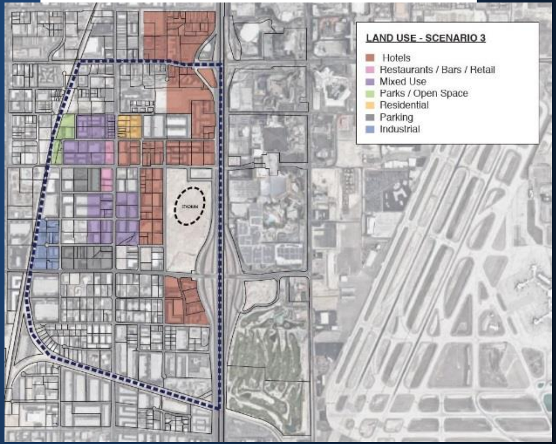
Scenario 1



Scenario 2



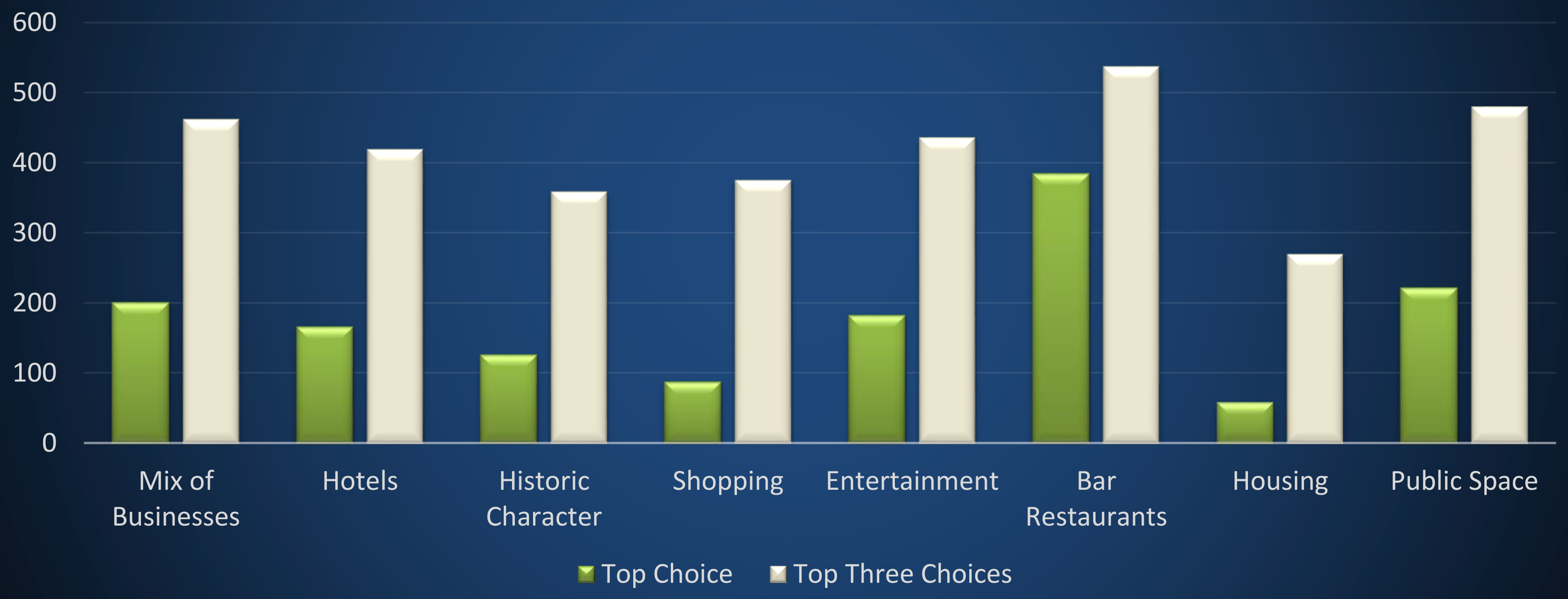
Scenario 3



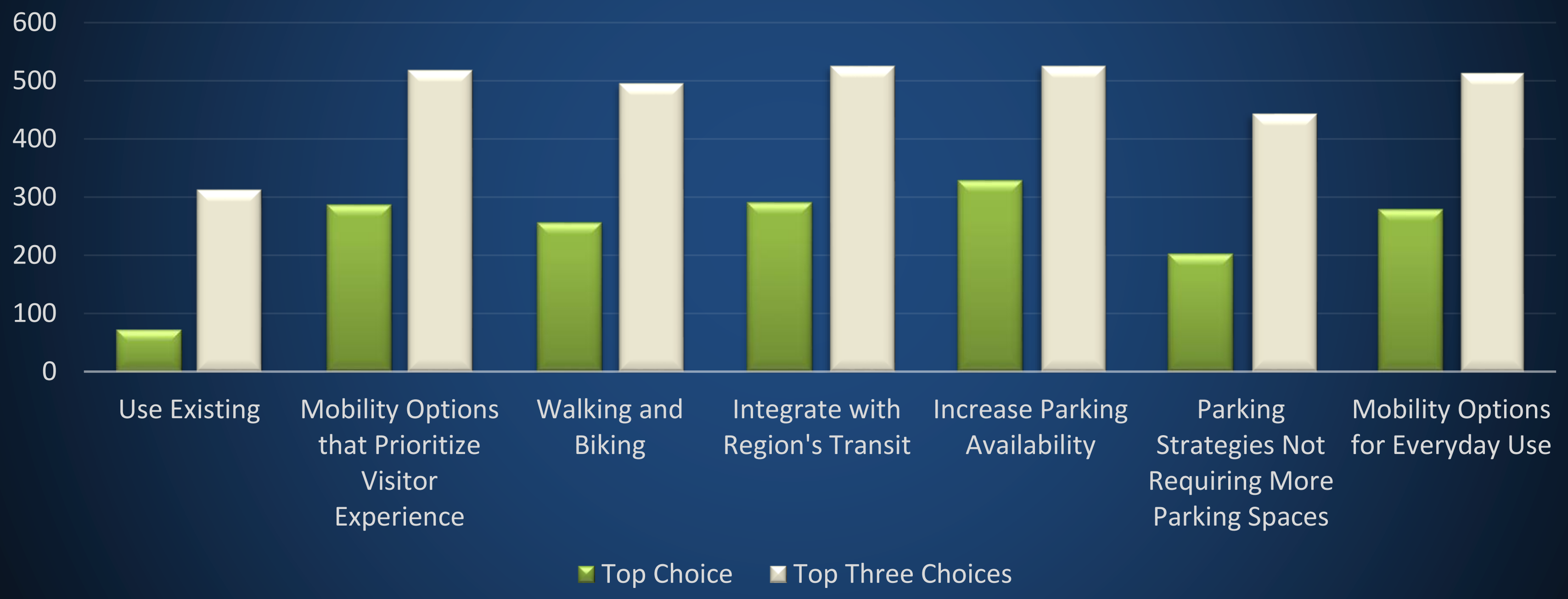
PUBLIC AND STAKEHOLDER SURVEY

589 Responses

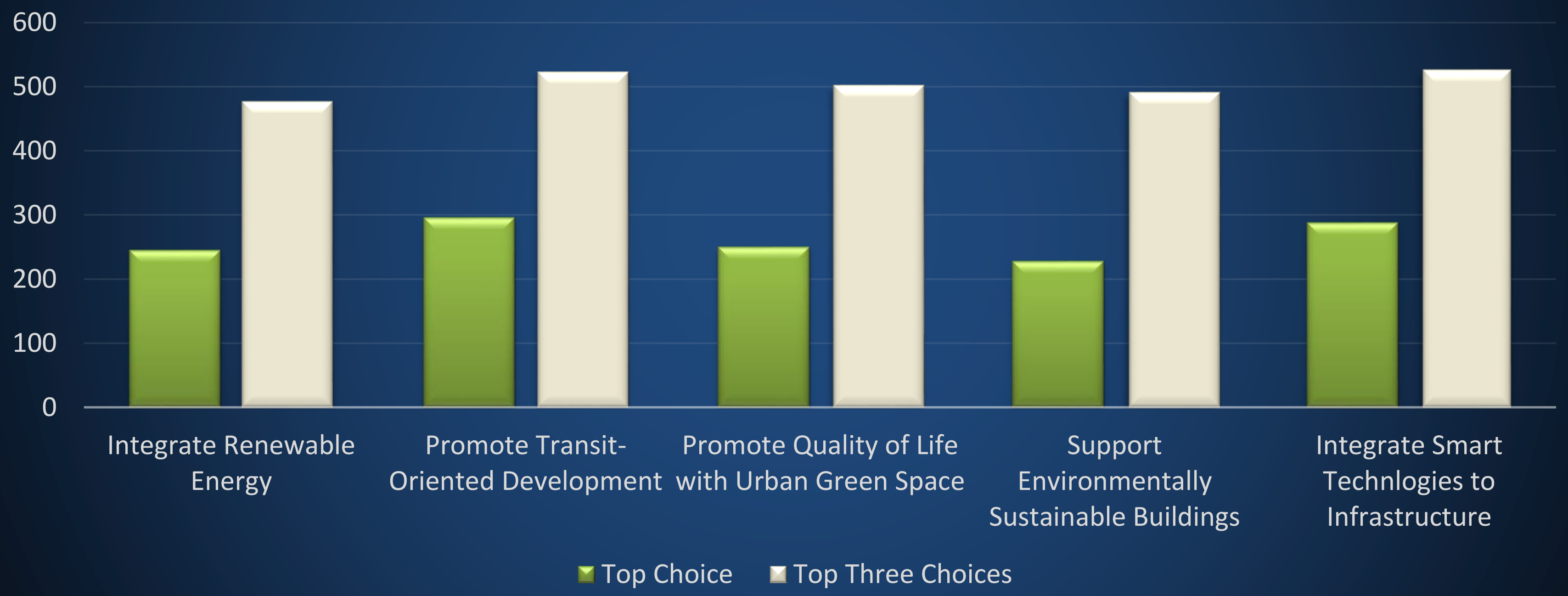
ECONOMIC VITALITY



MOBILITY AND ACTIVITY



ENERGY AND ENVIRONMENT



WHAT MAKES A GREAT STADIUM NEIGHBORHOOD

Family oriented uses – no adult entertainment

Mixed-use and local small businesses, not chains and big businesses

Affordable entertainment and great food

Strong safety and security measures

WHAT MAKES A GREAT STADIUM NEIGHBORHOOD

Public transportation options

Pedestrian walkways across I-15

Parking

Easy access

Lots of open green space, gathering areas, public art

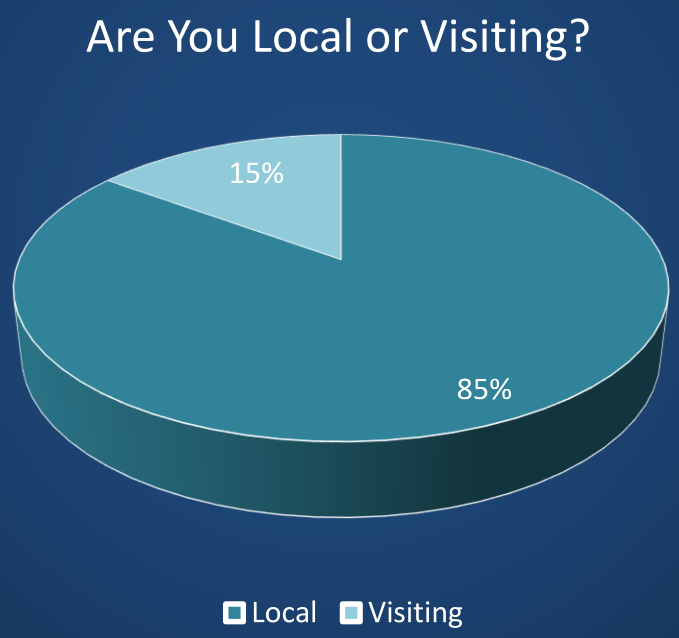
Water reclamation and green energy

PUBLIC RESPONSE

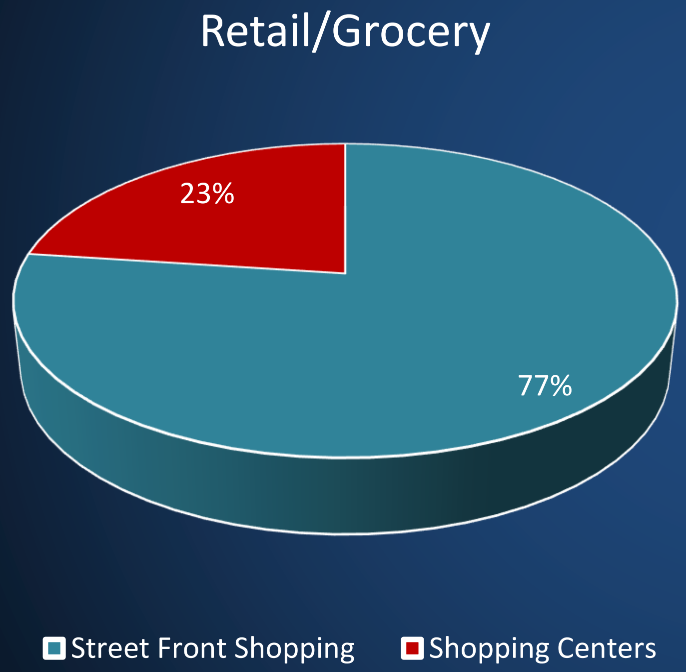
Pop-Up Meeting and Visual Survey

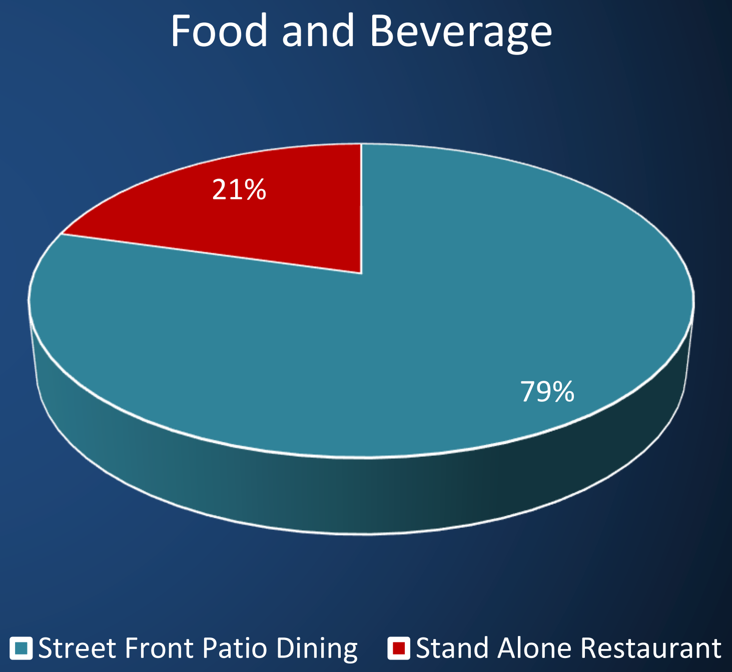
175 responses

VISUAL PREFERENCE SURVEY

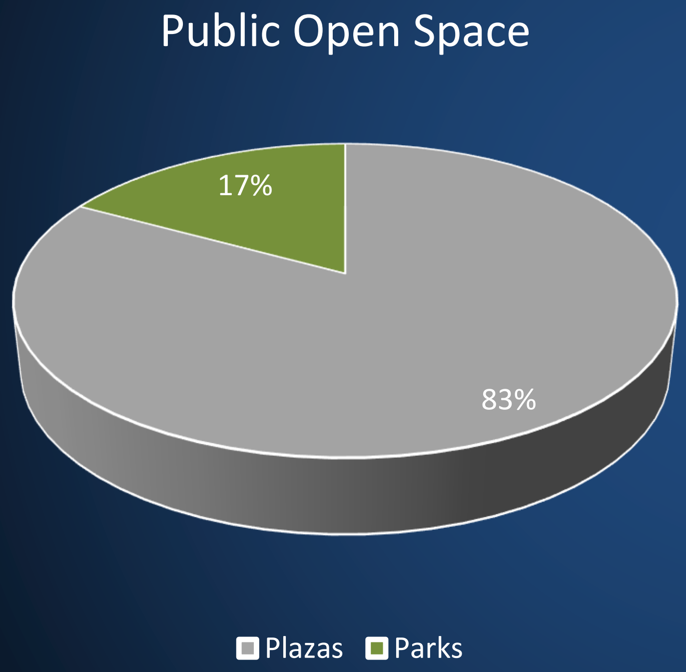


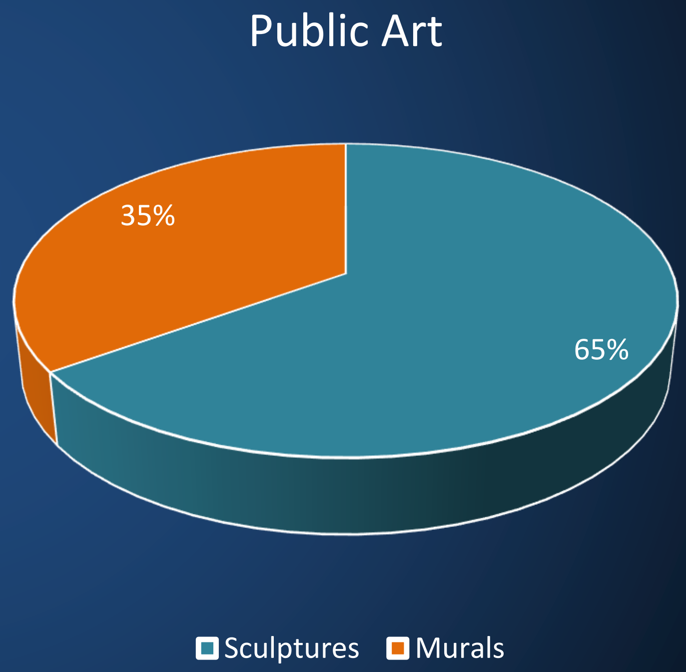
LAND USE


Retail/Grocery
23%
77%
Street Front Shopping
Shopping Centers


Food and Beverage
21%
79%
Street Front Patio Dining
Stand Alone Restaurant

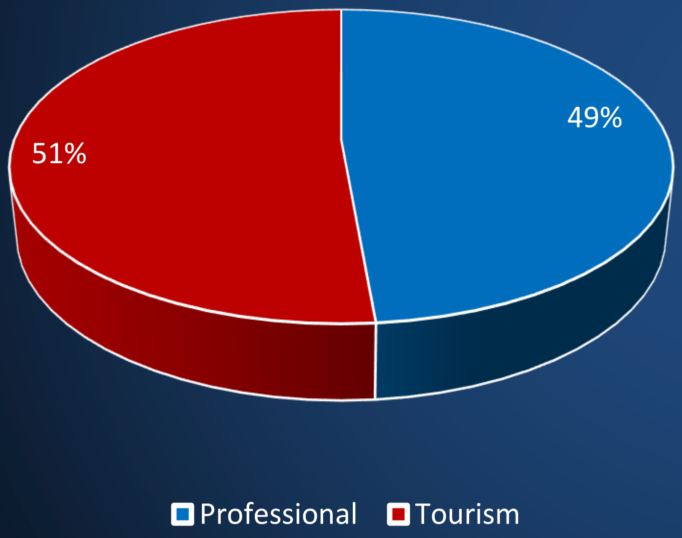
PUBLIC ART AND OPEN SPACE



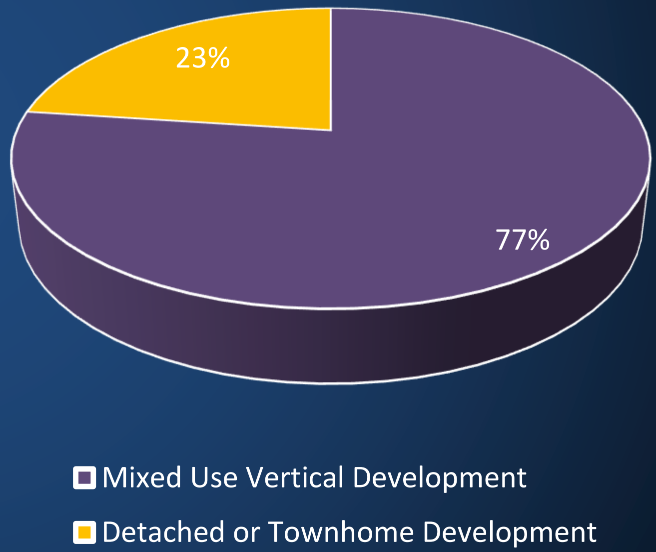


HOUSING AND ECONOMIC DEVELOPMENT

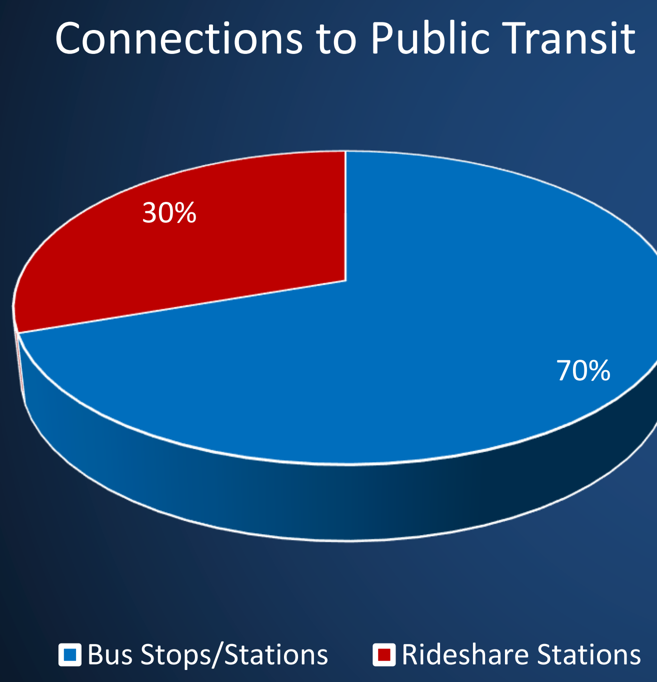
Jobs/Businesses

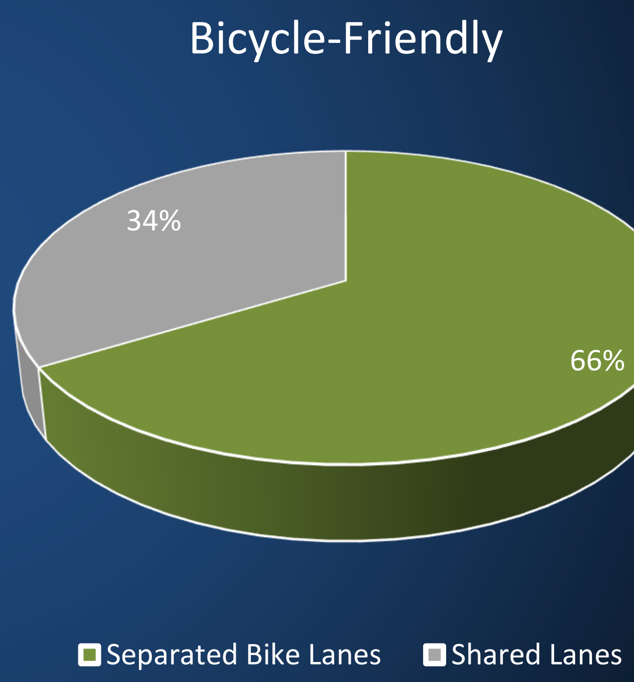


Housing Options

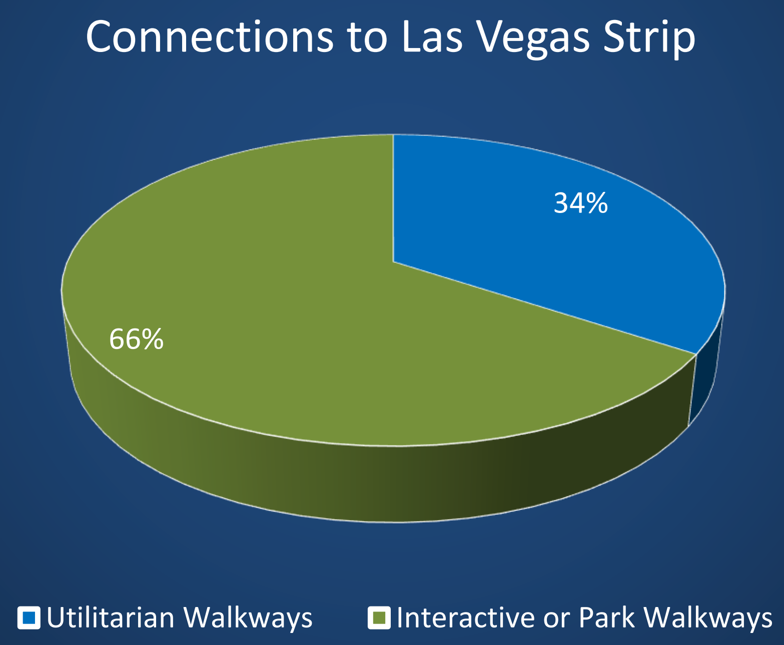


TRANSPORTATION

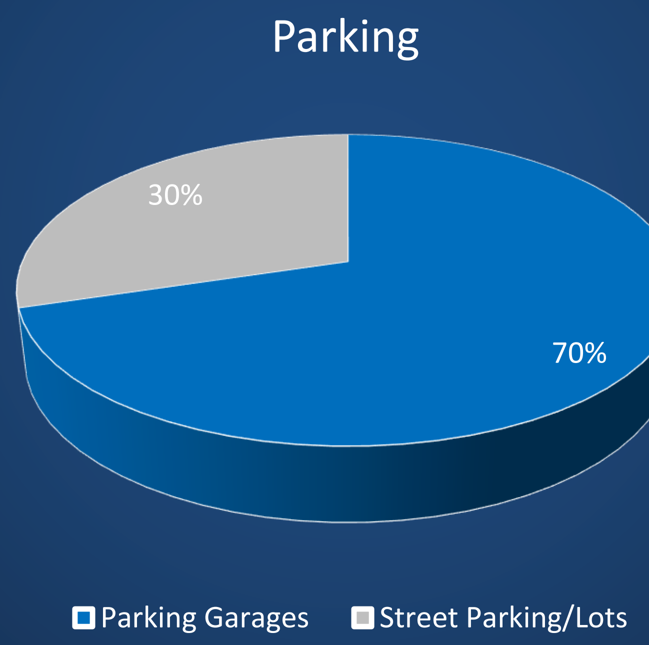




CONNECTIVITY TO LAS VEGAS STRIP



PARKING



WELCOME AND INTRODUCTIONS

BROWNFIELD REVITALIZATION PROGRAM

SUMMARY OF LAST WORKSHOP AND PUBLIC INPUT

VISION AND GOALS

LAND USE PLAN

NEXT STEPS

VISION STATEMENT

"Create a dynamic district with a comprehensive mix of uses that supports the continuation of current businesses while providing opportunities to transition into a thriving destination for entertainment, hospitality, business, and sports"

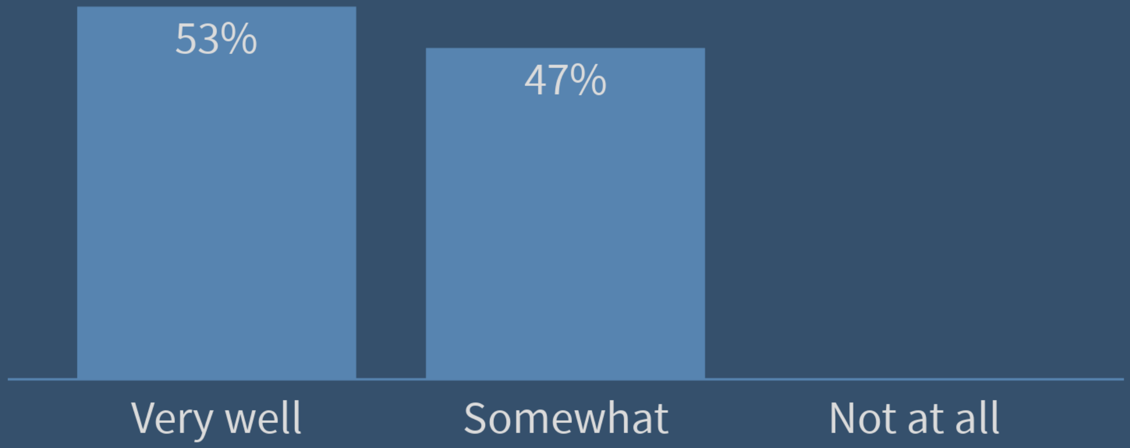
Question 1

How well does this Vision statement align with how you imagine the future of the Stadium District?

- Very well
- Somewhat
- Not at all

Poll locked. Responses not accepted.

How well does this Vision statement align with how you imagine the future of the Stadium District?



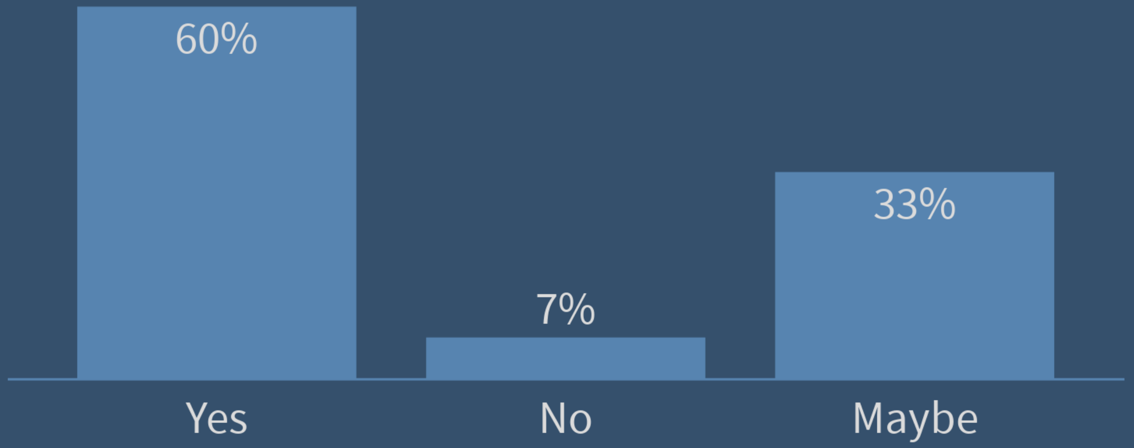
Question 2

Does this Vision statement reflect how you think others imagine the future of the Stadium District?

- Yes
- No
- Maybe

Poll locked. Responses not accepted.

Does this Vision statement reflect how you think others imagine the future of the Stadium District?



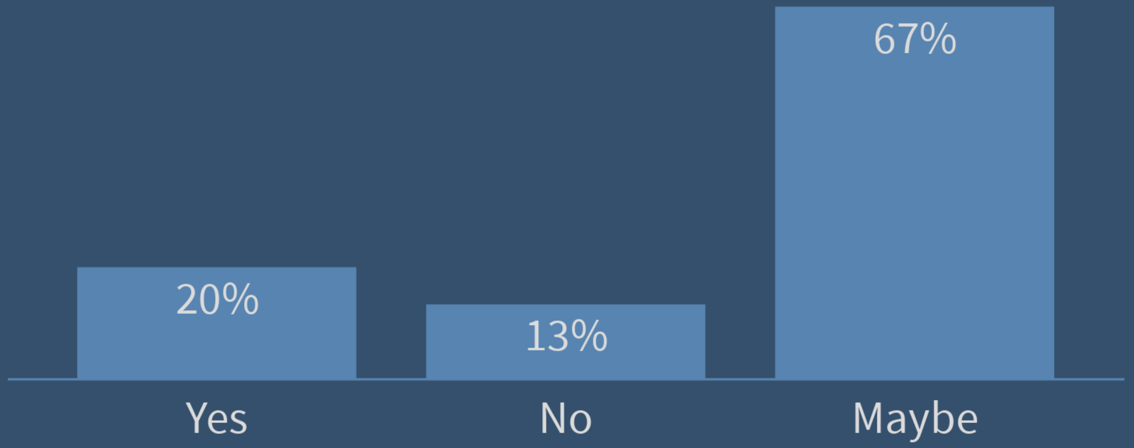
Question 3

Do you feel that the Vision statement will inspire action to develop a dynamic future Stadium District?

- Yes
- No
- Maybe

Poll locked. Responses not accepted.

Do you feel that the Vision statement will inspire action to develop a dynamic future Stadium District?



GOALS

Goal 1: Enhance quality of life by creating a vibrant district with best practices for urban design.

Goal 2: Promote a vibrant economy by enabling multiple options that support individual property and business owners’ intentions to remain or transition to new uses.

Goal 3: Promote flexibility within the built environment to accommodate both event day and non-event day functions.

Goal 4: Provide connectivity and access to and throughout the district to improve mobility by encouraging the use of alternative modes of transportation.

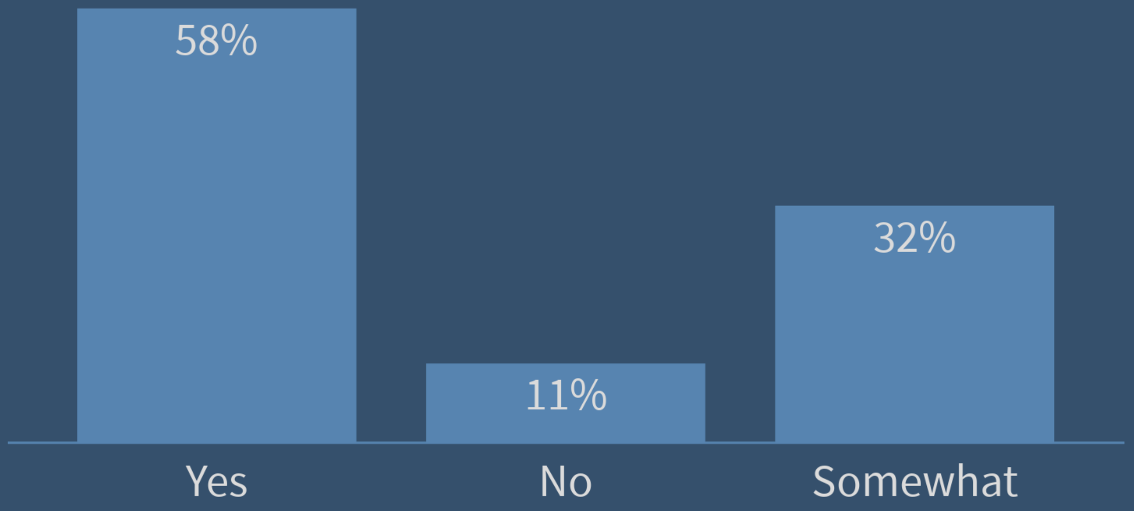
Goal 1

Is Goal 1 understandable and actionable?

- Yes
- No
- Somewhat

Poll locked. Responses not accepted.

Is Goal 1 understandable and actionable?



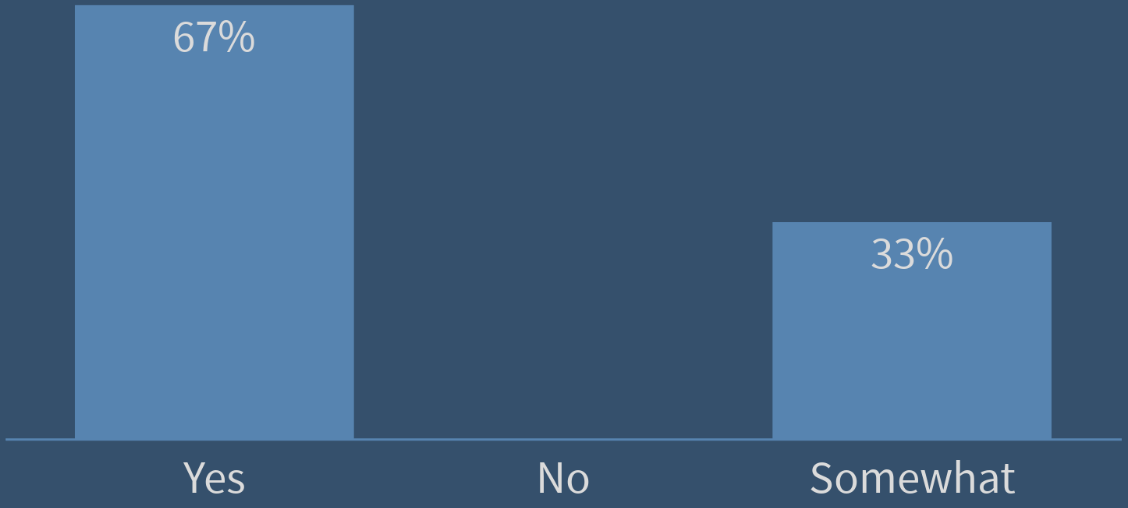
Goal 1

Does Goal 1align with the Vision?

- Yes
- No
- Somewhat

Poll locked. Responses not accepted.

Does Goal 1 align with the Vision?



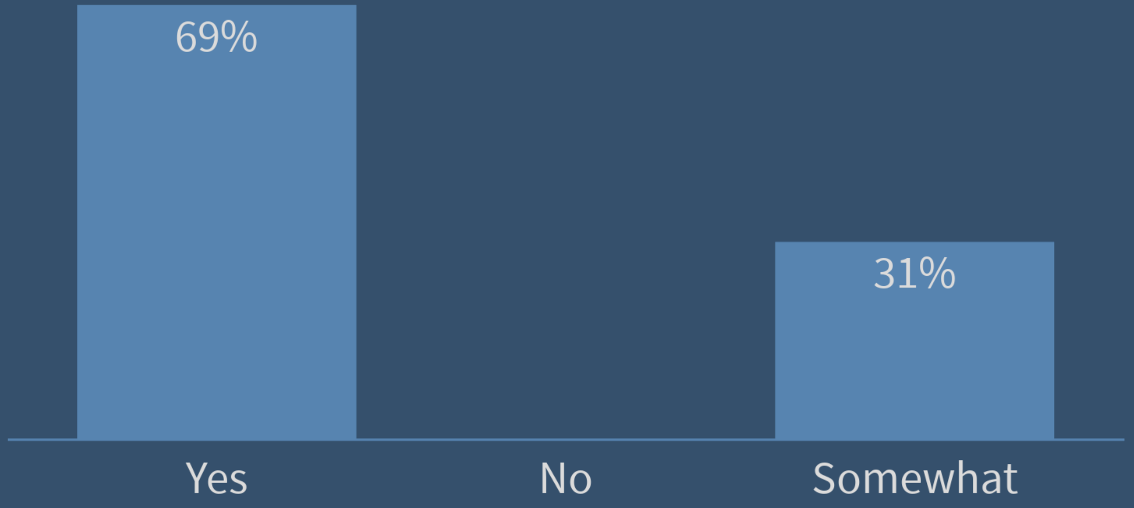
Goal 2

Is Goal 2 understandable and actionable?

- Yes
- No
- Somewhat

Poll locked. Responses not accepted.

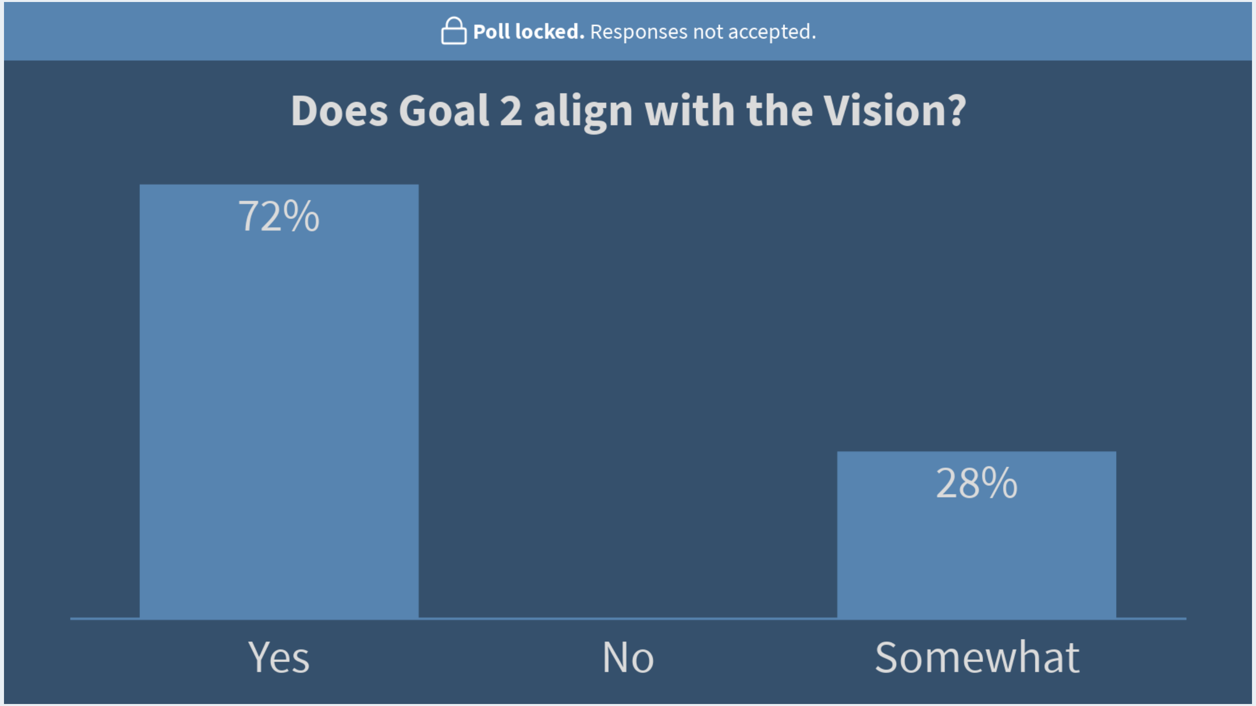
Is Goal 2 understandable and actionable?



Goal 2

Does Goal 2 align with the Vision?

- Yes
- No
- Somewhat


Poll locked. Responses not accepted.
Does Goal 2 align with the Vision?
72%
28%
Yes
No
Somewhat

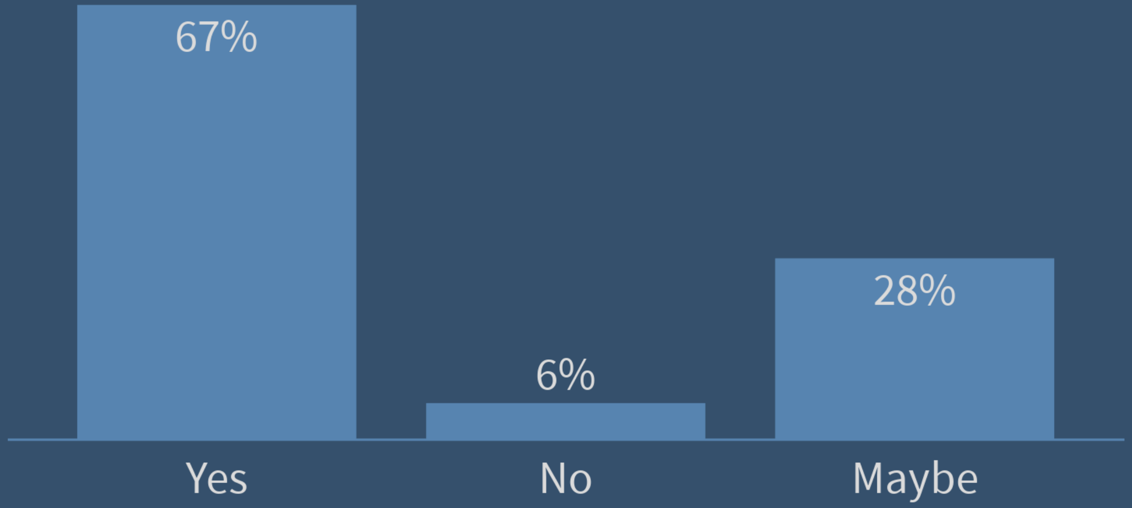
Goal 3

Is Goal 3 understandable and actionable?

- Yes
- No
- Somewhat

Poll locked. Responses not accepted.

Is Goal 3 understandable and actionable?



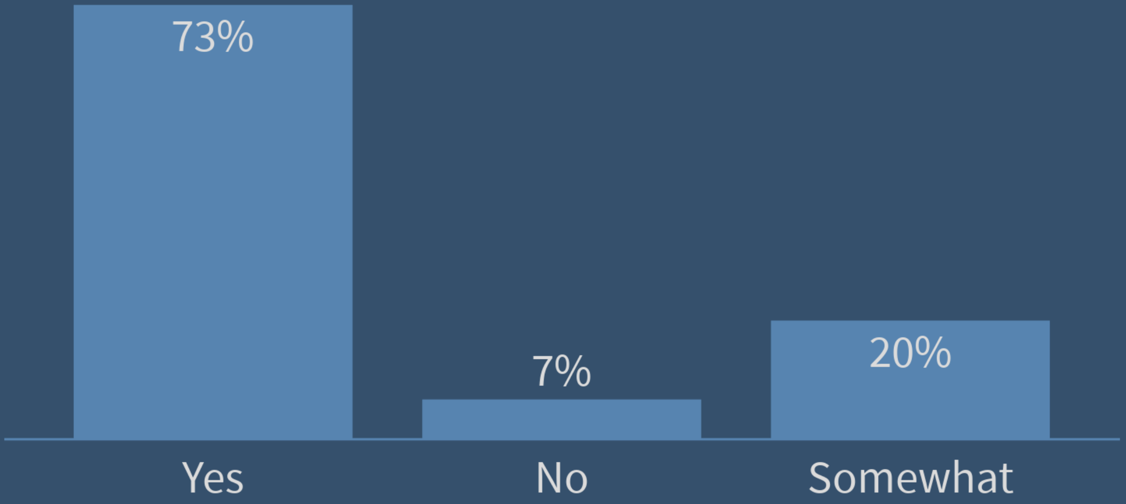
Goal 3

Does Goal 3 align with the Vision?

- Yes
- No
- Somewhat

Poll locked. Responses not accepted.

Does Goal 3 align with the Vision?



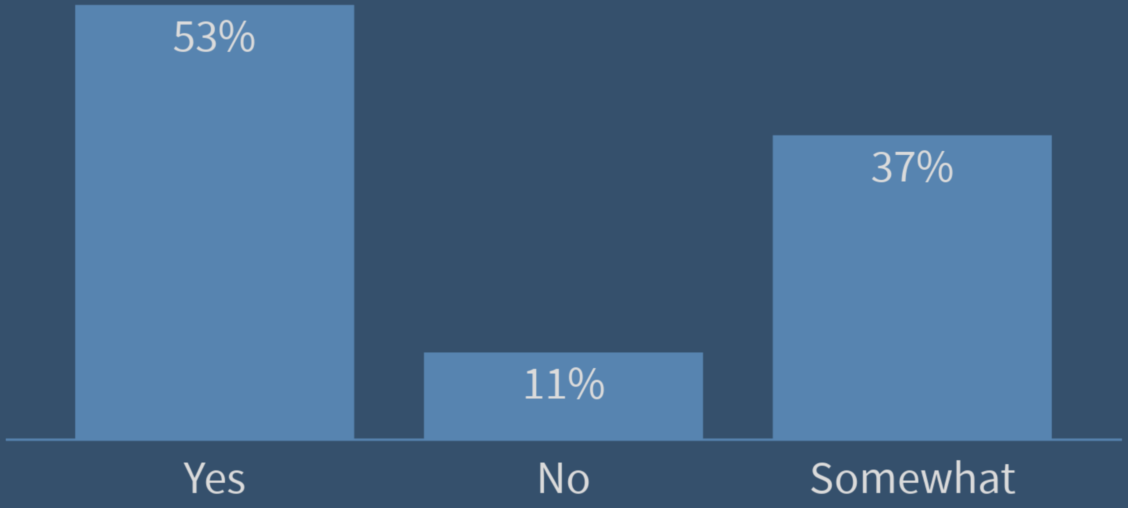
Goal 4

Is Goal 4 understandable and actionable?

- Yes
- No
- Somewhat

Poll locked. Responses not accepted.

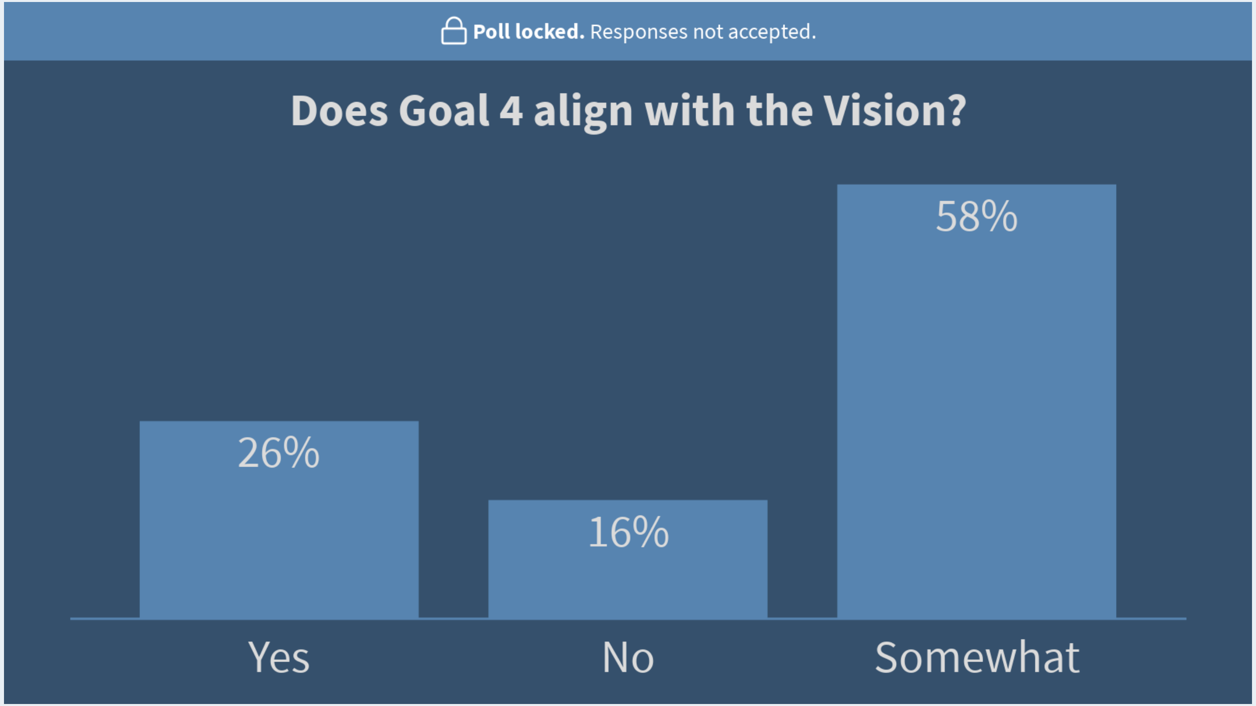
Is Goal 4 understandable and actionable?



Goal 4

Does Goal 4 align with the Vision?

- Yes
- No
- Somewhat


Poll locked. Responses not accepted.
Does Goal 4 align with the Vision?
26%
16%
58%
Yes
No
Somewhat

WELCOME AND INTRODUCTIONS

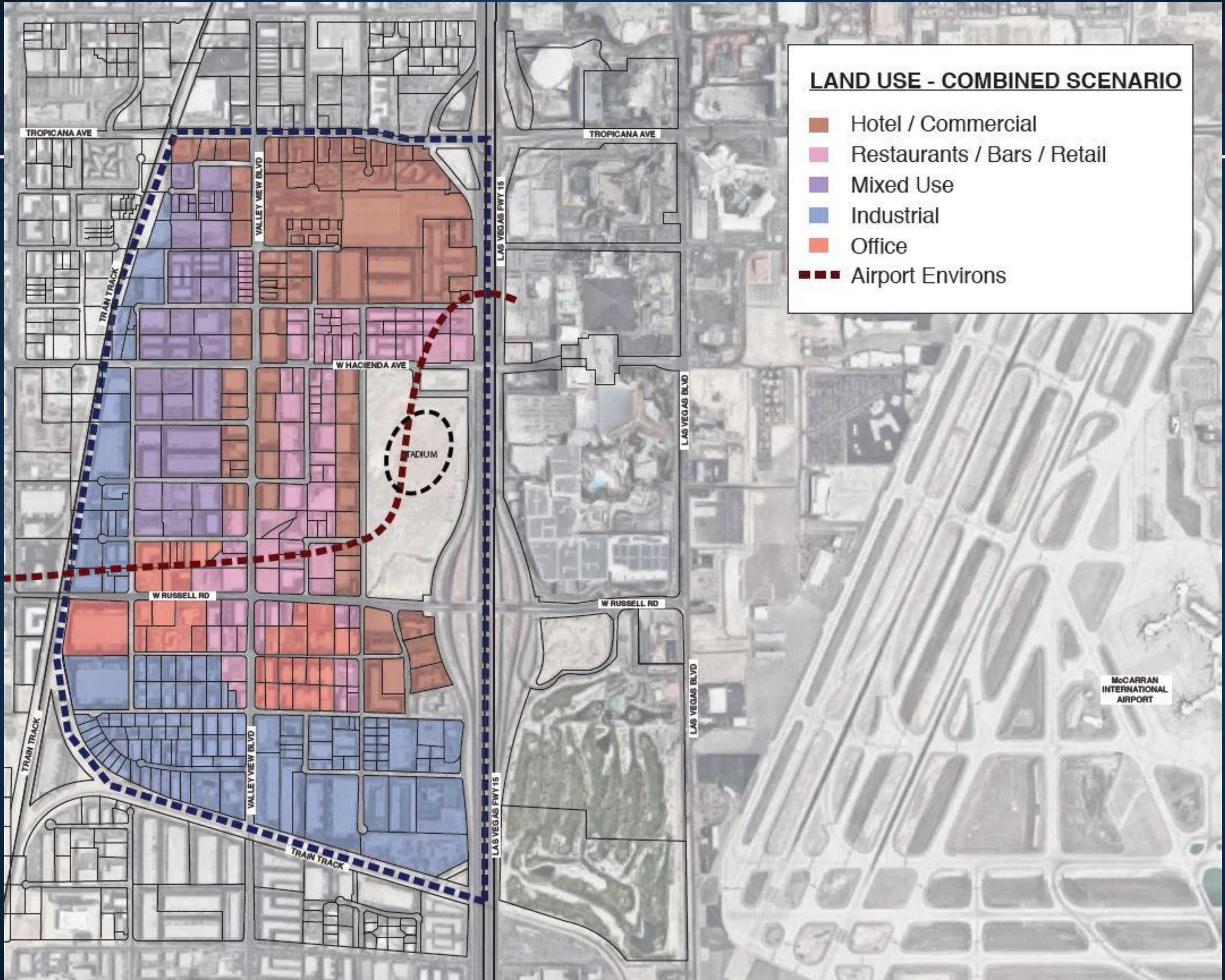
BROWNFIELD REVITALIZATION PROGRAM

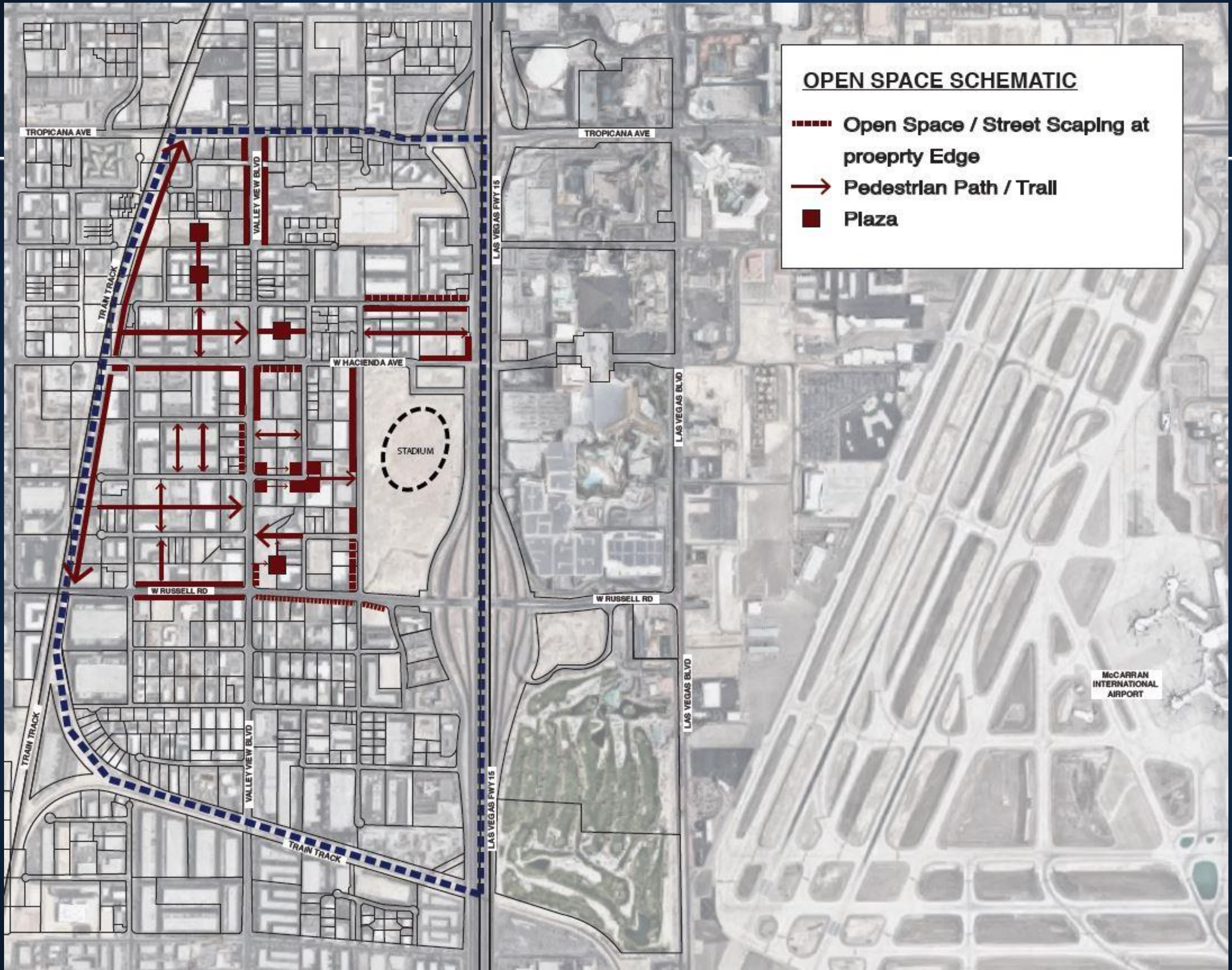
SUMMARY OF LAST WORKSHOP AND PUBLIC INPUT

VISION AND GOALS

LAND USE PLAN

NEXT STEPS


LAND USE - COMBINED SCENARIO
Hotel / Commercial
Restaurants / Bars / Retail
Mixed Use
Industrial
Office
Airport Environs
TROPICANA AVE
TROPICANA AVE
VALLEY VIEW BLVD
LAS VEGAS FWY 15
TRAIN TRACK
W HACIENDA AVE
STADIUM
LAS VEGAS BLVD
W RUSSELL RD
W RUSSELL RD
McCARRAN INTERNATIONAL AIRPORT
TRAIN TRACK
VALLEY VIEW BLVD
LAS VEGAS FWY 15
LAS VEGAS BLVD
TRAIN TRACK


OPEN SPACE SCHEMATIC
Open Space / Street Scaping at proeprty Edge
Pedestrian Path / Trail
Plaza
TROPICANA AVE
TROPICANA AVE
VALLEY VIEW BLVD
LAS VEGAS FWY 15
TRAIN TRACK
W HACIENDA AVE
STADIUM
LAS VEGAS BLVD
W RUSSELL RD
W RUSSELL RD
McCARRAN INTERNATIONAL AIRPORT
LAS VEGAS BLVD
TRAIN TRACK
VALLEY VIEW BLVD
LAS VEGAS FWY 15
TRAIN TRACK

PUBLIC ART

- Why?
  - Wayfinding
  - Vibrancy
- Where?
  - Entryways
  - Plazas
- Type of Art?
  - Mural, sculpture, utility

WELCOME AND INTRODUCTIONS

BROWNFIELD REVITALIZATION PROGRAM

SUMMARY OF LAST WORKSHOP AND PUBLIC INPUT

VISION AND GOALS

LAND USE PLAN

NEXT STEPS

NEXT STEPS

Transportation Charrette


allegiant stadium
allegiant stadium
RAIDERS
VS
CHARGERS
5:15 PM/PT
SOUTH WEST GATE
RTC
CLARK COUNTY
NEVADA

TAC Meeting 2 Summary

Focus Area: Stadium District Plan, Vision and Goals
Meeting Location: RTC Meeting Room 108

Purpose of Meeting

This is the second meeting of the Technical Advisory Committee (TAC). In this session, the committee will review outcomes of the first TAC meeting, as well as public input collected via two surveys. This committee will also collaborate to refine a **Vision** for the Stadium District along with the **Goals** that will inform the **Toolbox** for the area surrounding the Stadium.

Key Objectives

- Summarize TAC #1 meeting outcome and public survey results
- Learn about EPA Brownfields Grant from guest presenter, Bill Marion
- Develop Goals and Initial Vision
- Refine the land use plan and toolbox of strategies and recommendations

Meeting Minutes

ITEM	DESCRIPTION	RESPONSIBLE
1	**Welcome and Introductions**	Clark County
2	**Brownfield Revitalization Program** • EPA Brownfields Grant Program Overview • Goals, Assessments, Environmental Site Assessment (ESA) • Property Owner Participation • Application Process • Project Benefits to Approved Participants: • Investigate site history and potential for site to be contaminated at no cost.	Bill Marion

- Evaluate levels of contamination or confirm that the site has no contamination at no cost.
- If contamination is found, cleanup planning may be available at no cost. Assistance to identify sources of clean-up funding will be provided.
- An evaluation of the highest and best use for the site may be available at no cost.
- All of the above will increase the marketability of the site and/or fulfill a lender requirement for site assessment.
- For more information, contact Bill Marion at Bill@purduemarion.com

---

3 **Summary of TAC Workshop #1 and Public Survey** — Jared Tasko, Susan Berkley

See TAC #2 Presentation on the Clark County Stadium District website .

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4 **Stadium District Vision and Goals** — LJ Spina

Participants voted on current Vision and Goals with the results below.

Vision - *Create a dynamic district with a comprehensive mix of uses that supports the continuation of current businesses while providing opportunities to transition into a thriving destination for entertainment, hospitality, business, and sports*

- Q1 How well does this Vision statement align with how you imagine the future of the Stadium District?
  A: Very Well 53%
  B: Somewhat 47%
  C: Not at all -
- Q2 Does this Vision statement reflect how you think others imagine the future of the Stadium District?
  A: Yes 60%
  B: No 7%
  C: Maybe 33%
- Q3 Do you feel that the Vision statement will inspire action to develop a dynamic future Stadium District?
  A: Yes 20%

B: No 13%
C: Maybe 67%

Goal 1 - Enhance quality of life by creating a vibrant district with best practices for urban design.

- Q1 Is Goal 1 understandable and actionable?
  A: Yes 58%
  B: No 11%
  C: Somewhat 32%
- Q2 Does Goal 1 align with the Vision?
  A: Yes 67%
  B: No -
  C: Somewhat 33%

Goal 2 - Promote a vibrant economy by enabling multiple options that support individual property and business owners' intentions to remain or transition to new uses.

- Is Goal 2 understandable and actionable?
  A: Yes 69%
  B: No -
  C: Somewhat 31%
- Does Goal 2 align with the Vision?
  A: Yes 72%
  B: No -
  C: Somewhat 28%

Goal 3 - Promote flexibility within the built environment to accommodate both event day and non-event day functions.

- Is Goal 3 understandable and actionable?
  A: Yes 67%
  B: No 6%
  C: Somewhat 28%
- Does Goal 3 align with the Vision?
  A: Yes 73%
  B: No 7%
  C: Somewhat 20%

Goal 4 - Provide connectivity and access to and throughout the district to improve mobility by encouraging the use of alternative modes of transportation.

- Is Goal 4 understandable and actionable?
  - A: Yes 53%
  - B: No 11%
  - C: Somewhat 37%
- Does Goal 4 align with the Vision?
  - A: Yes 26%
  - B: No 15%
  - C: Somewhat 58%

Feedback on Vision Statement

Suggestions: Incorporate key words sustainability, transportation, access, stewardship

Game day or Non-Game day, the area should always be populated (locals).

Other comments: safety, security, lighting, shade shelters, protection from heat. Incorporate into design for safety

Focus on people and pedestrian spaces, pathways and plazas. Take Denver and Cincinnati stadiums as an example. Stadiums surrounded with parking – the worst. Surround with pedestrian-focused areas

The Stadium needs a critical mass that will always be there, potential development needs to be always in use.

---

5 Preferred Land Use Scenario — LJ Spina

Attendees reviewed a draft Land Use scenario for the future; This scenario is a product of the exercises conducted at TAC #1 as well as community input via public survey. Refer to the Land Use Scenario map in the TAC #2 Presentation on the Clark County Stadium District website for more details.

Suggestions:

- Restaurant/bar/retail vs hotel –Blend the 2 categories.
- A more general category could make it easier to sell to property owners and allow more flexibility.
- 70% of flights come through airport environs. Plan ahead to keep in mind constraints.
- NE corner that has restaurants right along Hacienda, consider Mixed Use between I-15 and Valley View. The area could benefit more from having mixed use.

Questions/Comments from Attendees:

- Do you anticipate density boosts or parking reductions implemented?
- Other overlays such as Maryland Parkway Overlay District provides development incentives in exchange to reduce the amount of required parking.
- Transit usually should reduce parking. Nevada is more car-oriented than public transportation today.
- Further discussion of alternative transportation options will happen during the next meeting.
- Consider classifying Restaurant/Bars/Commercial as Mixed Use, creating an idea of a walkable district.
- Provide land owners a vision to reduce complexity and give people a guide.
- People have a right to develop their property, so we have to work with people.

---

6 Open Space Map — LJ Spina

Ideas for an Open Space Map were introduced and discussed. Refer to the Open Space Map in the TAC #2 Presentation. This Map is also a product of the exercises conducted at TAC #1 as well as community input via public survey.

Questions/Comments from Attendees:

- Pedestrian experience over Hacienda, reactivated by MGM. 20 to 30 thousand will be walking from the Strip over to the stadium.
- Philosophy to walking, by design and necessity is to disperse parking to avoid congestion. Especially after the game.
- The Raiders have obtained the Frias Taxi property which can be used for parking and is an easy walk to the stadium. Discussion about a Parking Co-Op possibly being established in the neighborhood.
- 65 acres of the site is the stadium itself

- There are 3 major entrances to the stadium. The north gate is the main entrance with about half of the attendees entering here. Additional gates on the southwest and southeast side of stadium. Should look at how pedestrian pathways around neighborhood match up with stadium entrances.

Other Discussion Notes:

First stadium designed in the age of rideshare.
Rideshare will be an ever-increasing method. It is hard to predict, it is challenging to predict what all people will choose as method of transportation. People are coming from multiple directions and distances.

Designed with visitor experience in mind; Customer experience begins when customer buys ticket online or on site all the way to parking and leaving the site.

Have you contemplated doing rideshare access points on Polaris?

Comment: Maybe should consider curb pricing. Putting a price and charging rideshare companies for it.

Suggestions regarding Public Art:

- Allow opportunity - Emphasize creating unique use of **local** public art. Ex.: City Center, opportunity for small public arts.
- Art: you see it too much, it loses effect. **Rotate art, refresh art** to keep drawing people back to the district.
- Don’t be prescriptive on public art guidelines

7 Next Steps

Transportation Plan Charrette

CLARK COUNTY DEPARTMENT OF COMPREHENSIVE PLANNING

STADIUM DISTRICT PLAN

TAC MEETING No.3

September 3, 2020

RTC

CLARK COUNTY NEVADA

STADIUM DISTRICT

WELCOME AND INTRODUCTIONS

PROJECT TEAM

CLARK COUNTY NEVADA

RTC

ATKINS
Member of the SNC-Lavalin Group

Kimley»Horn

paceline consulting

ea
ERICKA AVILES
CONSULTING

RAFI Architecture | Design

VISION, GOALS and OBJECTIVES

IDENTIFIED ISSUES

NETWORK PRINCIPLES

THE CONNECTED NETWORK

STREET TYPOLOGY

NEXT STEPS

VISION, GOALS and OBJECTIVES

IDENTIFIED ISSUES

NETWORK PRINCIPLES

THE CONNECTED NETWORK

STREET TYPOLOGY

NEXT STEPS

VISION STATEMENT

"Create a **dynamic** district with a comprehensive mix of uses that supports the continuation of current businesses while providing opportunities to transition into a **thriving** destination for entertainment, hospitality, business, and sports"

GOALS

Goal 1:

Enhance quality of life by creating a vibrant district with best practices for urban design.

Goal 2:

Promote a vibrant economy by enabling multiple options that support individual property and business owners' intentions to remain or transition to new uses.

GOALS

Goal 3:

Promote flexibility within the built environment to accommodate both event day and non-event day functions.

Goal 4:

Provide connectivity and access to and throughout the district to improve mobility by encouraging the use of alternative modes of transportation.

OBJECTIVES OF THE STUDY

- DEVELOP AN OVERALL VISION FOR THE DISTRICT
- DEVELOP A TOOLBOX OF SOLUTIONS THAT WILL GUIDE THE IMPLEMENTATION OF THE VISION
- DEVELOP AN ACTION PLAN
- IDENTIFY POTENTIAL INVESTMENTS

VISION, GOALS and OBJECTIVES

IDENTIFIED ISSUES

NETWORK PRINCIPLES

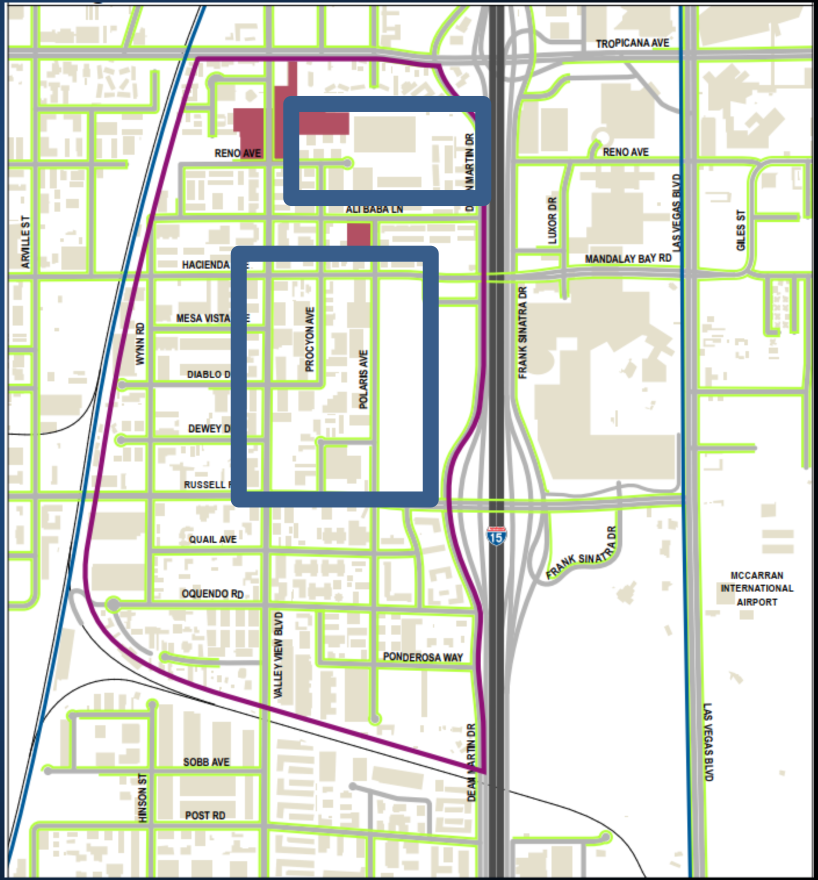
THE CONNECTED NETWORK

STREET TYPOLOGY

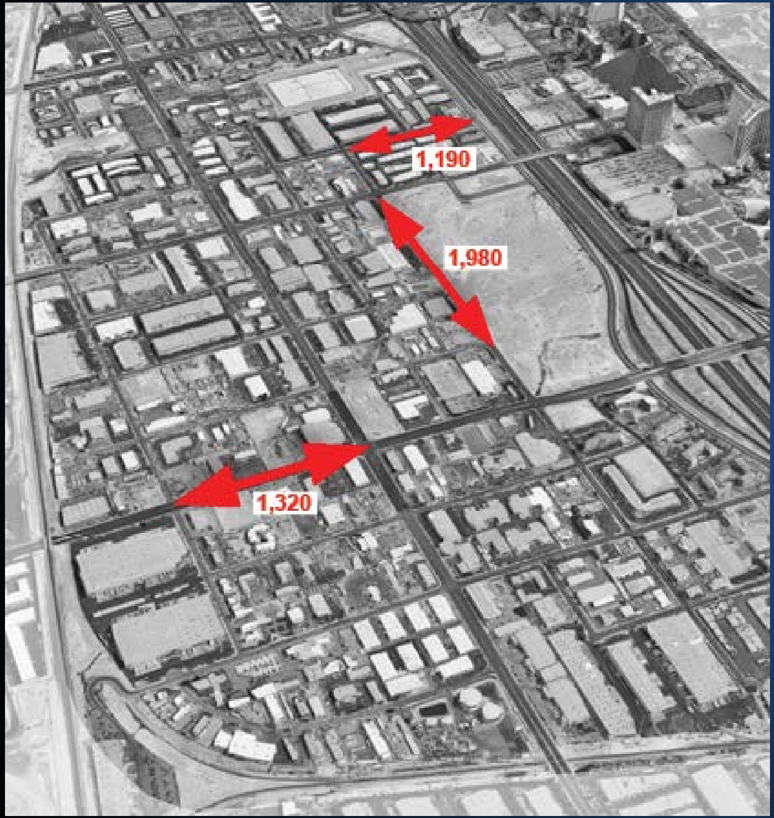
NEXT STEPS

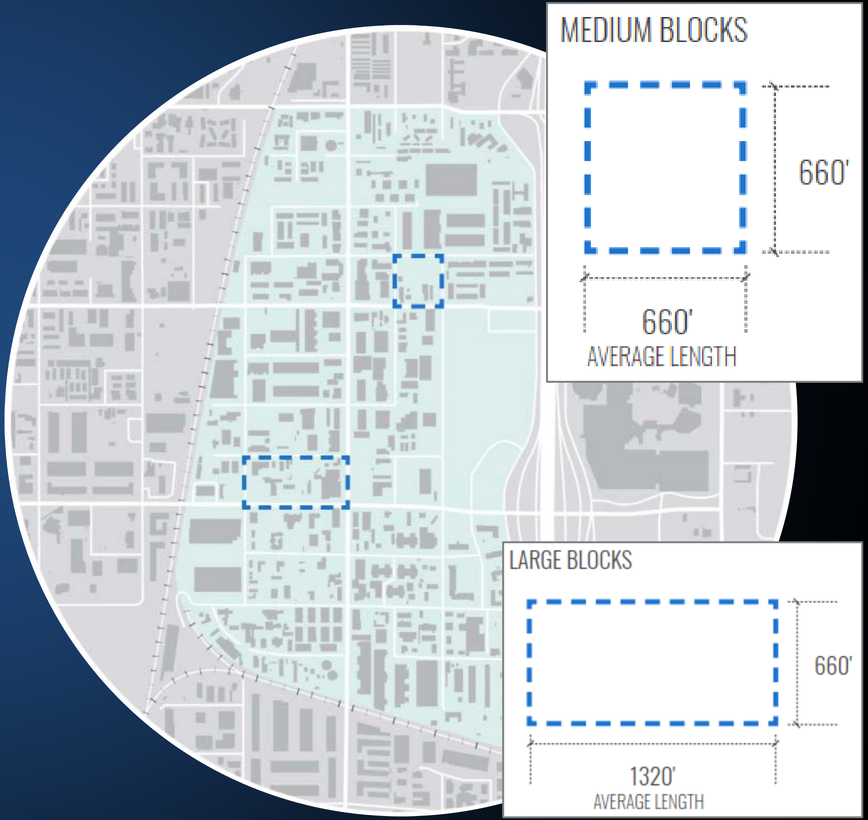
LACK OF GRID CONNECTIVITY



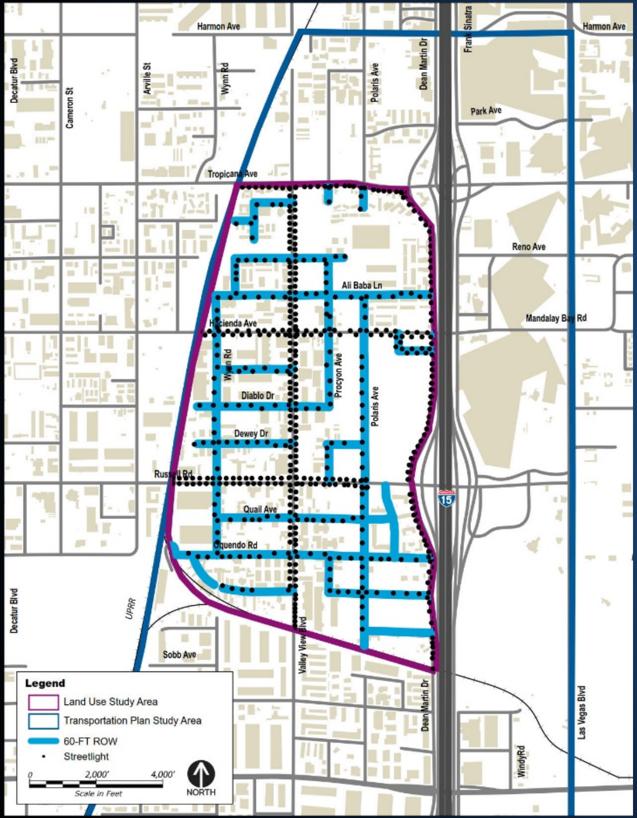



BLOCK SIZE/SCALE



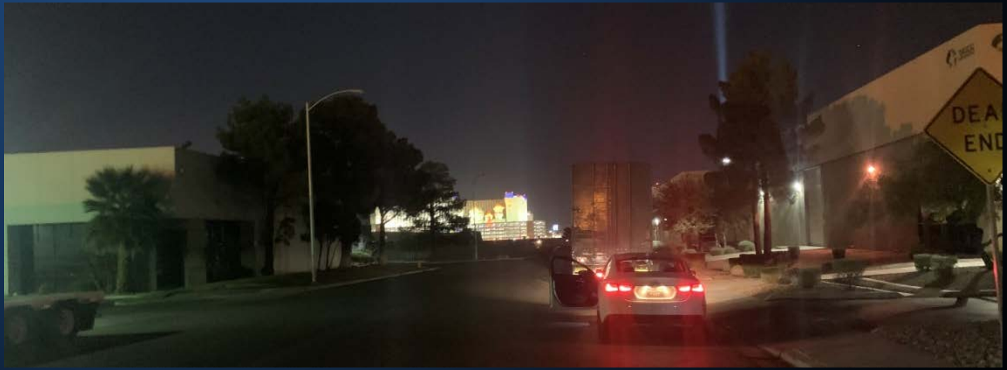


STREET LIGHTING



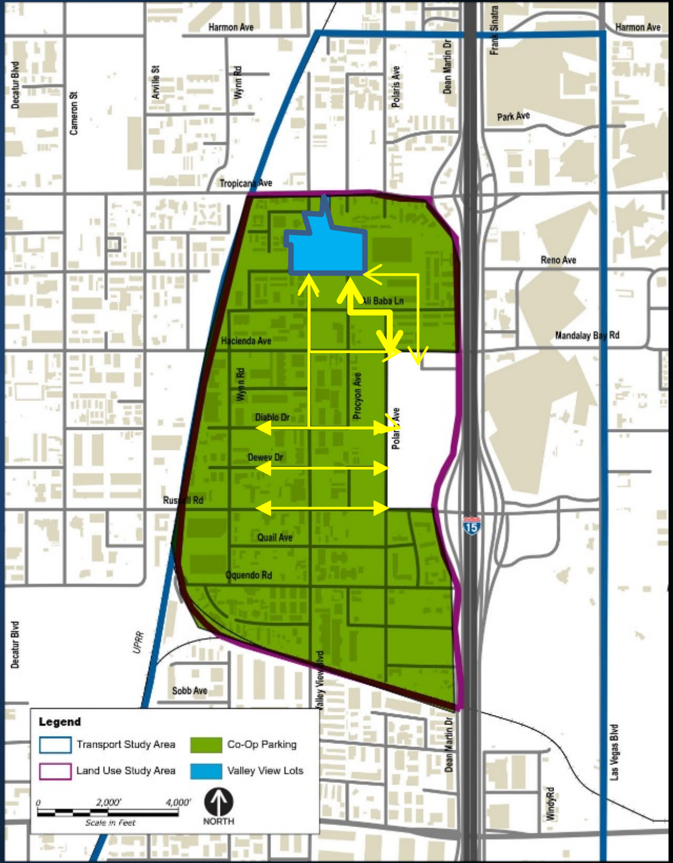
Appropriate street lighting (includes pedestrian scale) is critical to the safety and welfare of both people and assets.

For a street condition this means that there should be no dark spots creating unsafe walking conditions.



ACCESS TO PARKING LOCATIONS

- Valley View lots will provide 2,317 standard parking stalls.
- Co-Op parking could provide up to 3,750 standard parking stalls.



SAFETY AND SECURITY

Crime Prevention Through Environmental Design (CPTED)

- 4 principles: Natural surveillance, natural access control, territorial reinforcement, maintenance and management
- Strategies: Allow for clear sight lines, provide adequate lighting, promote land use mix, use activity generators, minimize isolated routes, avoid entrapment, reduce isolation, create sense of ownership, provide signage, good overall design of built environment

CHALLENGES TO THE PEDESTRIAN ENVIRONMENT

DRIVEWAY FREQUENCY

- Driveways are too frequent, creating an uneven path for pedestrians and interrupting pedestrian activity.
    - Through the creation of a buffer zone, the pedestrian is protected from vehicular traffic entering or exiting a business allowing for safe interaction.

SIDEWALKS AND ACCESSIBILITY

- Not wide enough to handle large crowds before and after large events
    - In areas of high pedestrian activity, consider wider sidewalks or a reallocation of the roadway

CHALLENGES TO THE PEDESTRIAN ENVIRONMENT

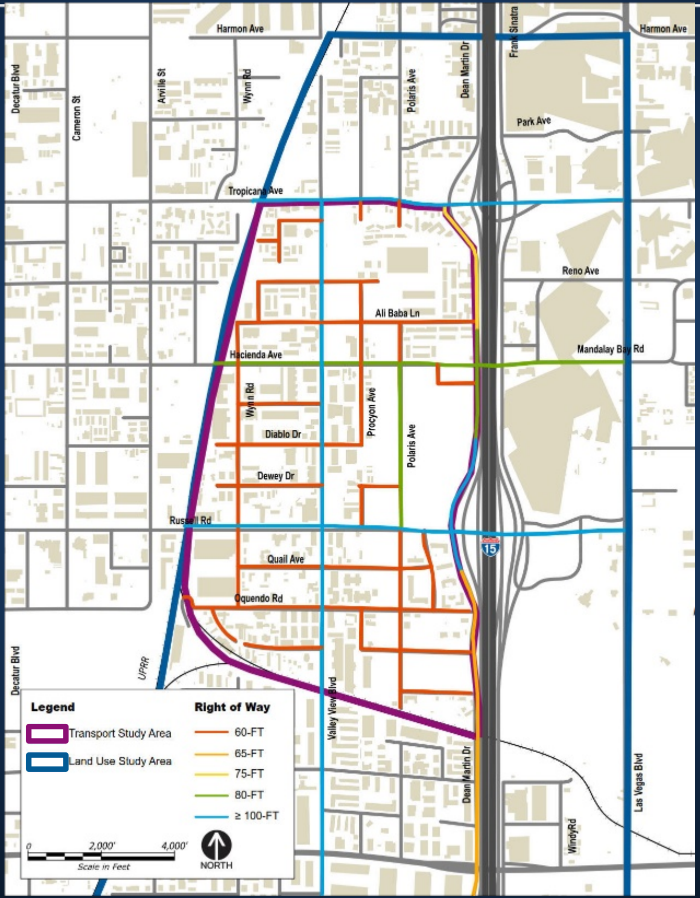
TRAFFIC COMPOSITION

- It is expected that large-size vehicles will continue to use a portion of the District
    - It is recommended to segregate these large vehicles to specific streets. This ensures a separation of uses and promotes safety for all in the District.

PEDESTRIAN CROSSINGS

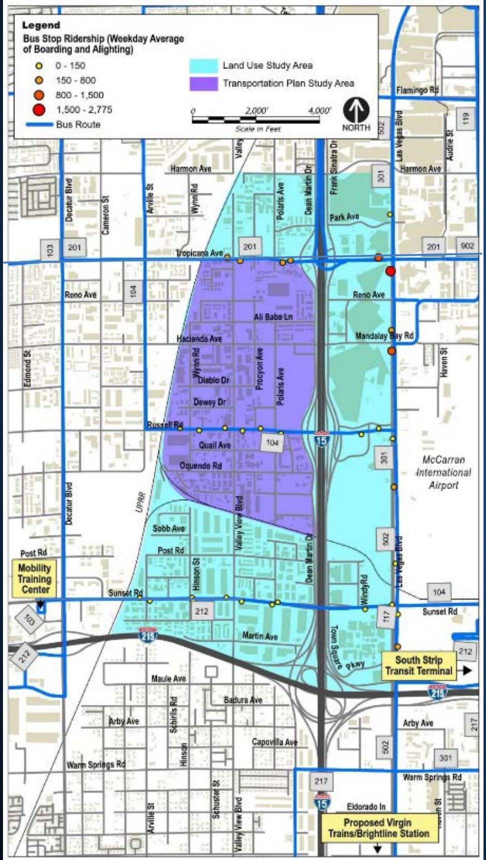
- Pedestrian crossing along adjacent arterials and collectors is limited to the signalized intersections.
    - Additional crossings will be considered so that pedestrians may access public transit stops and businesses without being forced to cross only at road intersections.

EXISTING & PROPOSED INFRASTRUCTURE ANALYZED



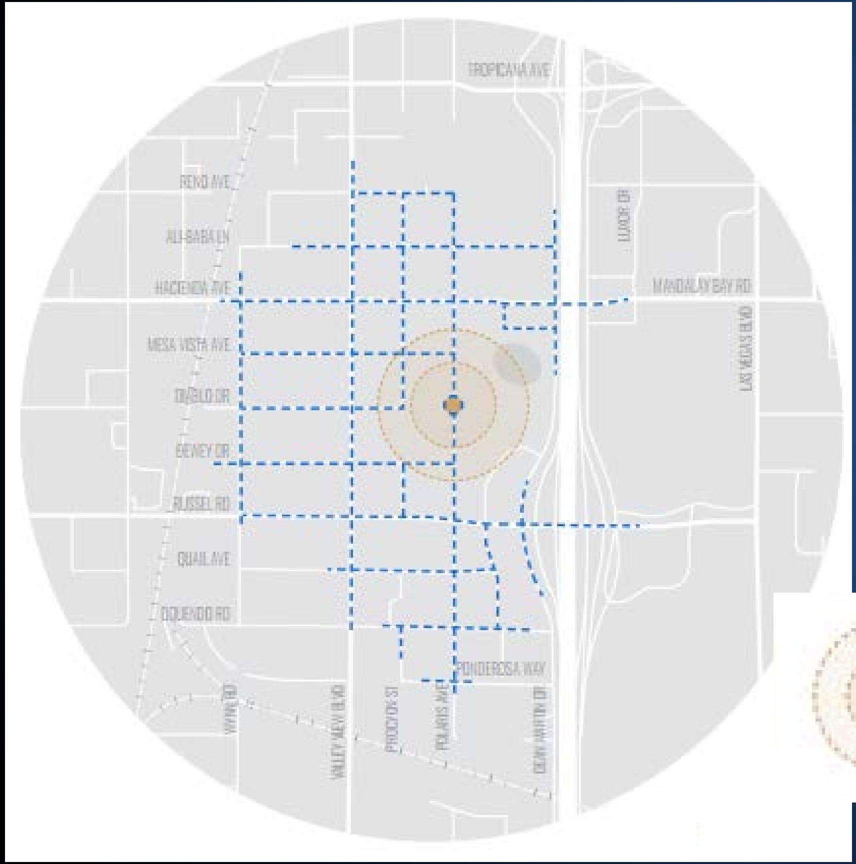
District roadway network with right-of-way (ROW) information

EXISTING & PROPOSED INFRASTRUCTURE ANALYZED



Existing and Proposed Transit Facilities with Ridership

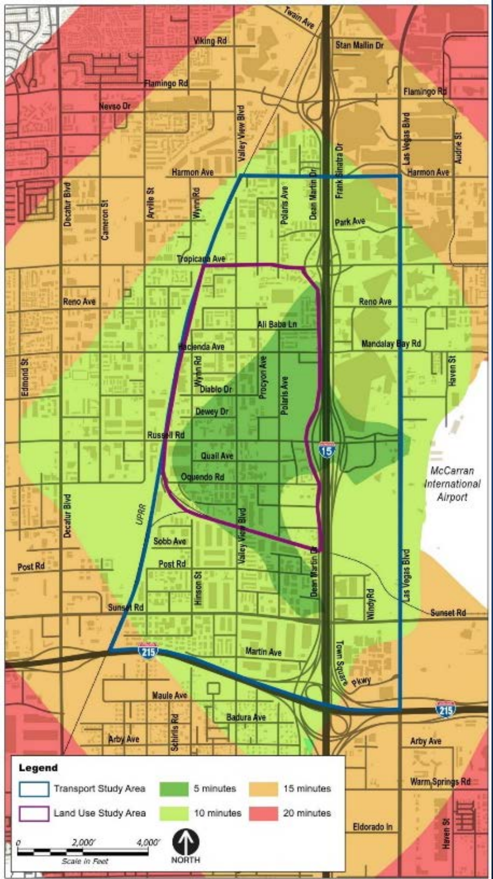
EXISTING & PROPOSED INFRASTRUCTURE ANALYZED



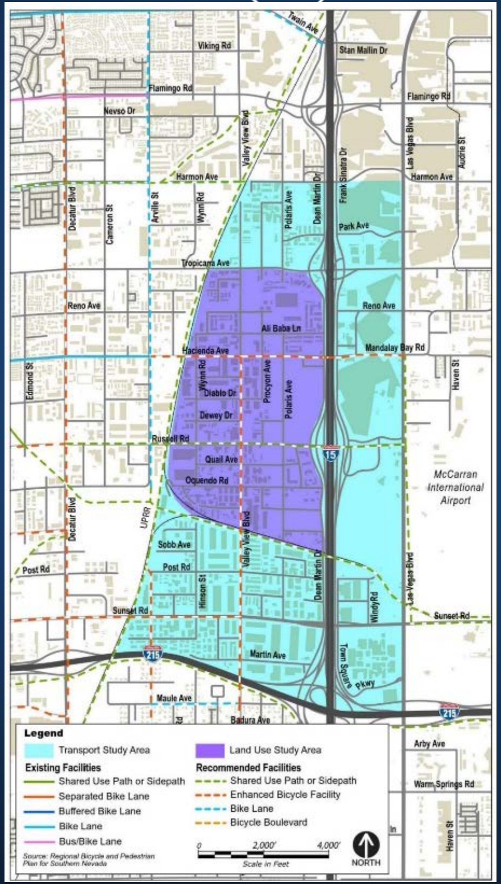
- One-Mile pedestrian walking distances
- 3 min walking radius
- 5 min walking radius

EXISTING & PROPOSED INFRASTRUCTURE ANALYZED

Bicycle Travel Time



EXISTING & PROPOSED INFRASTRUCTURE ANALYZED



Pedestrian and Bike Facilities Map

FIELD OBSERVATIONS TOUR

Hacienda Avenue Bridge Over I-15 (Looking East)

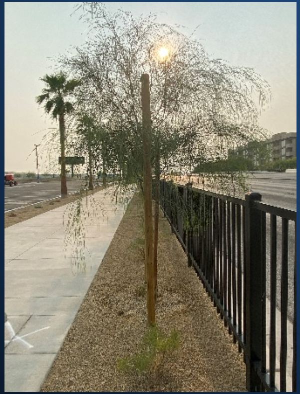

Elevated UPRR (Looking West)

Russell Road and Polaris Avenue Intersection (Looking North)


Valley View Boulevard Looking South

FIELD OBSERVATIONS TOUR

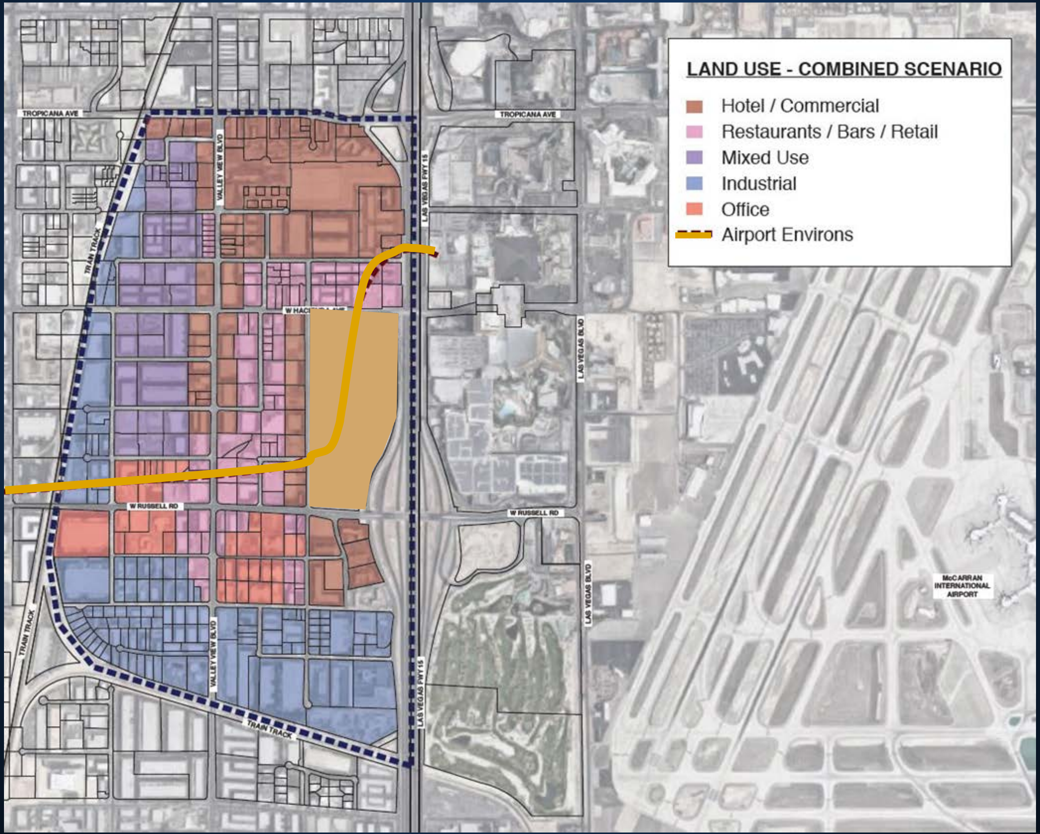
Proposed Diablo Drive Walkway from Procyon Street to Polaris Avenue



Russell Road Looking East Toward I-15 Near Dean Martin Drive

Reno Avenue near Procyon Street (Looking East)

PREFERRED LAND USE SCENARIO



GVISION, GOALS and OBJECTIVES

IDENTIFIED ISSUES

NETWORK PRINCIPLES

THE CONNECTED NETWORK

STREET TYPOLOGY

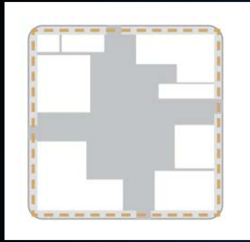
NEXT STEPS

Network Principles

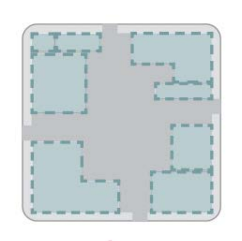
- Provide an interconnected street network that supports compact development patterns and alternative mode connectivity.
- Prioritize walking and bicycling as the primary mode of movement within the District.
- Provide safe, efficient, and comfortable routes for walking, bicycling, and public transportation to increase the use of alternative modes of transportation.
- Integrate the District's transportation network with the region's transit to maximize alternative mode choice.
- Integrate smart technologies to the District's infrastructure.
- Integrate urban open space with transportation infrastructure.

Source: Clark County Comprehensive Master Plan Transportation Element and the Regional Transportation Plan.

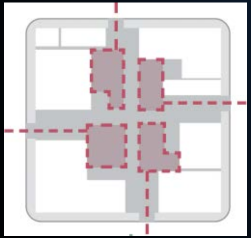
Network & Block Elements



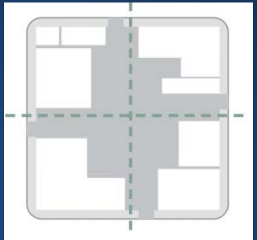

SIDEWALK + SETBACKS
Are determined by pedestrian realm zone standards.



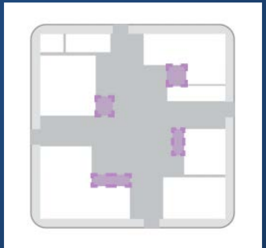

BUILDING
New buildings and additions are aligned with pedestrian corridor and street edge.




DRIVEWAYS + PARKING
Shared surface parking behind buildings and offset from drive aisles. Reduce driveways. Shift focus to prioritize pedestrian traffic.




PEDESTRIAN PATHWAYS
Increases the walkability and engagement by allowing pedestrian access to meander through the large blocks.




OPEN SPACE
Public space and entertainment areas encourage use and increase attraction.

VISION, GOALS and OBJECTIVES

IDENTIFIED ISSUES

NETWORK PRINCIPLES

THE CONNECTED NETWORK

STREET TYPOLOGY

NEXT STEPS

BUILDING A CONNECTED NETWORK

- Short walking distances
- Easy connectivity to network
- Improving access to major arterials
- Improving visibility and safety for pedestrians
- Improving access to properties
- Reducing vehicle speed

BUILDING A CONNECTED NETWORK

VISION, GOALS and OBJECTIVES

IDENTIFIED ISSUES

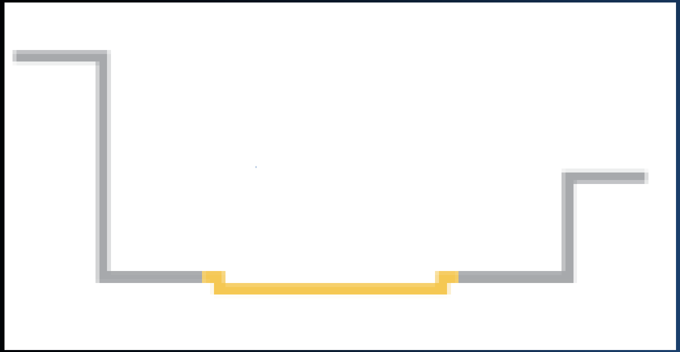
NETWORK PRINCIPLES

THE CONNECTED NETWORK

STREET TYPOLOGY

NEXT STEPS

WHAT IS STREET TYPOLOGY?



Options for various street designs that evaluate each street and balance the transportation needs within the existing context and the social and economic needs and goals.

- MULTIMODAL
- EVENT
- MAIN
- FESTIVAL
- NEIGHBORHOOD
- PEDESTRIAN PATHWAYS

Street Type		Description
Local Street	Neighborhood Street	These streets serve the Stadium District neighborhood and may or may not connect to adjoining neighborhoods. Local Streets are intended to provide direct access, safe and inviting places to walk to restaurants, offices, businesses, and other entertainment venues.
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Main Street		This street accommodates slower vehicle speeds, favors pedestrians most, and contains the highest level of streetscape features, typically dominated by retail and other commercial uses. Functions differently than other streets in that it is a destination.
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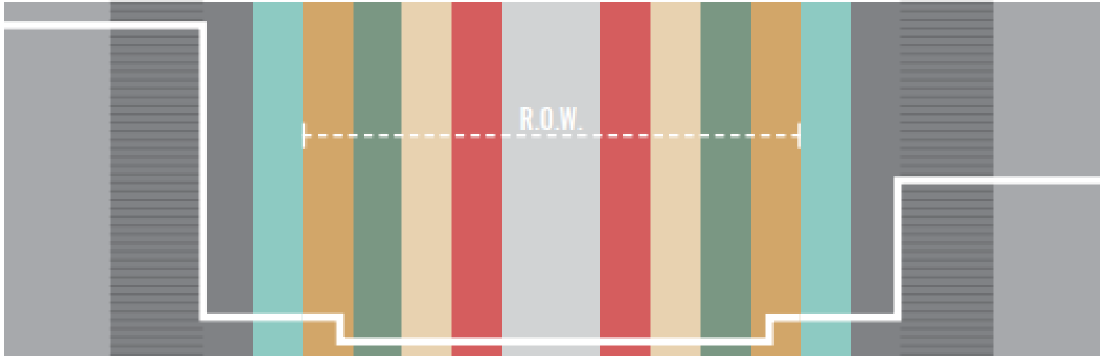
	Regional High-Speed Street	This type of street traverses and connects districts and cities, provides access to the interstate system or other principal arterials and is regional in nature.
Event Street		This street type serves major events and destination areas.

STREET TYPOLOGIES



GUIDELINE REFERENCE

TRAVEL WAY
Vehicular traffic lanes

BUS LANES

LANDSCAPE

BIKE LANE
Bicycle traffic lanes - with various types: dedicated, shared, and elevated

ATTACHED SIDEWALK
Existing sidewalk within the Right of Way (R.O.W.)

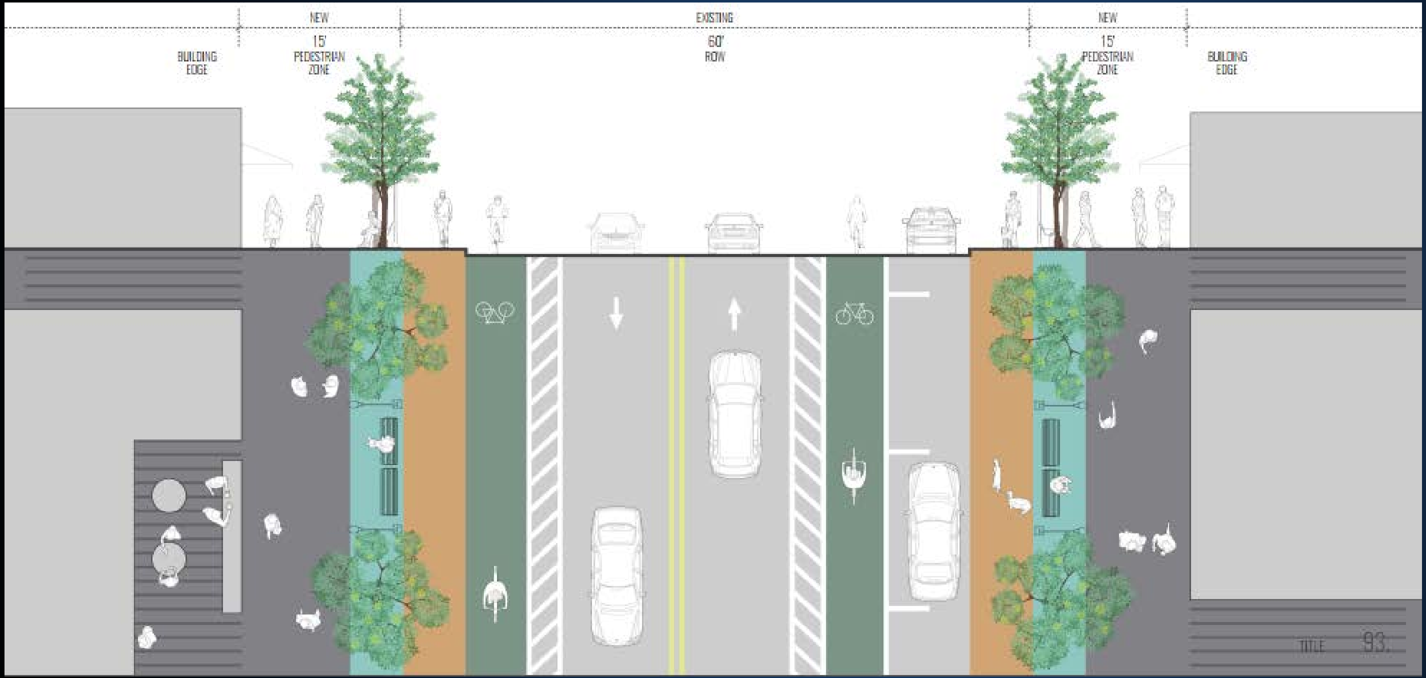
AMENITY ZONE
Primary buffer space between roadway and pedestrian pathway. Consists of varying elements depending on type: furniture, landscape, light fixtures, bollards, waste receptacles

SIDEWALK + CLEAR ZONE
Obstacle-free space for clear pedestrian through travel. This is the primary pedestrian zone walking space

BUILDING EDGE
Where the building facade and sidewalk meet. Allowable setback distance depends on design type

NOTE: curb and gutter is included within the outside lanes

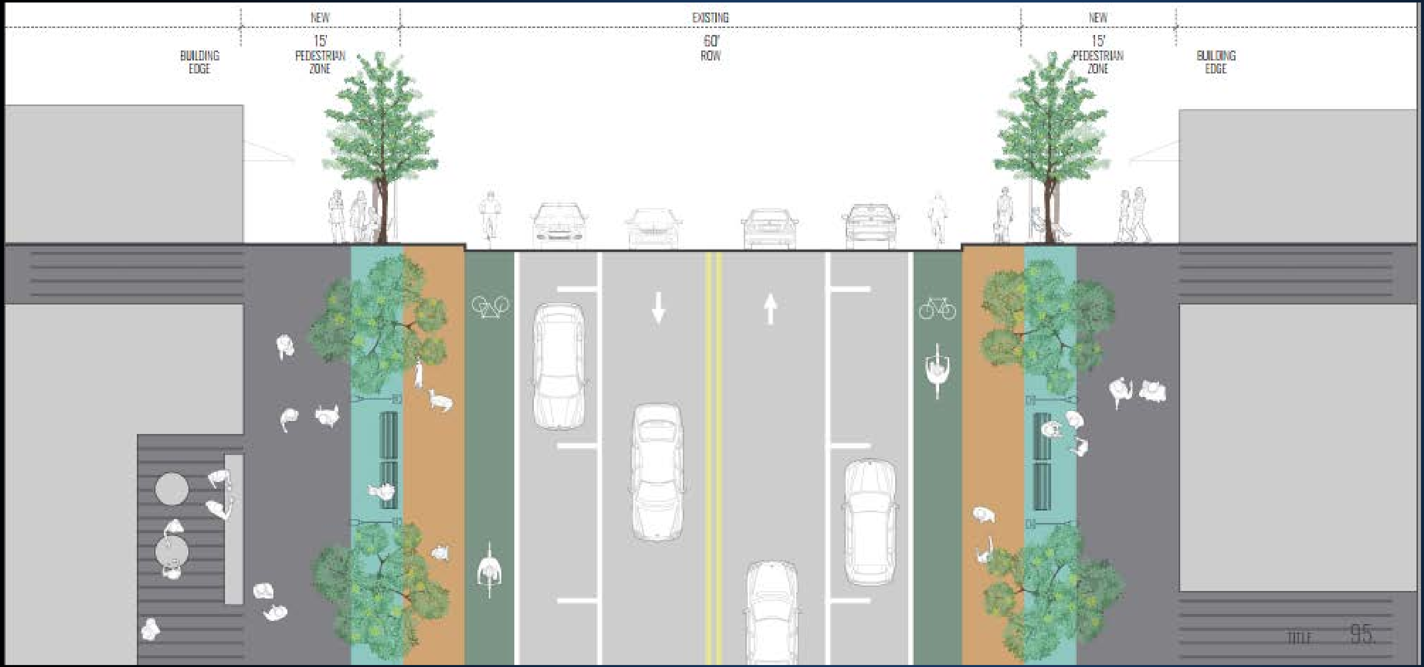
NEIGHBORHOOD STREET



- Existing sidewalk
- Pedestrian zones
- Parking one side
- Buffered Bike lanes
- 2 travel lanes

Reno Ave, Ali Baba Ln, Mesa Vista Ave, Diablo Dr, Dewey Dr, Quail Ave, Oquendo Rd, Procyon St, Polaris Ave, Ponderosa Way

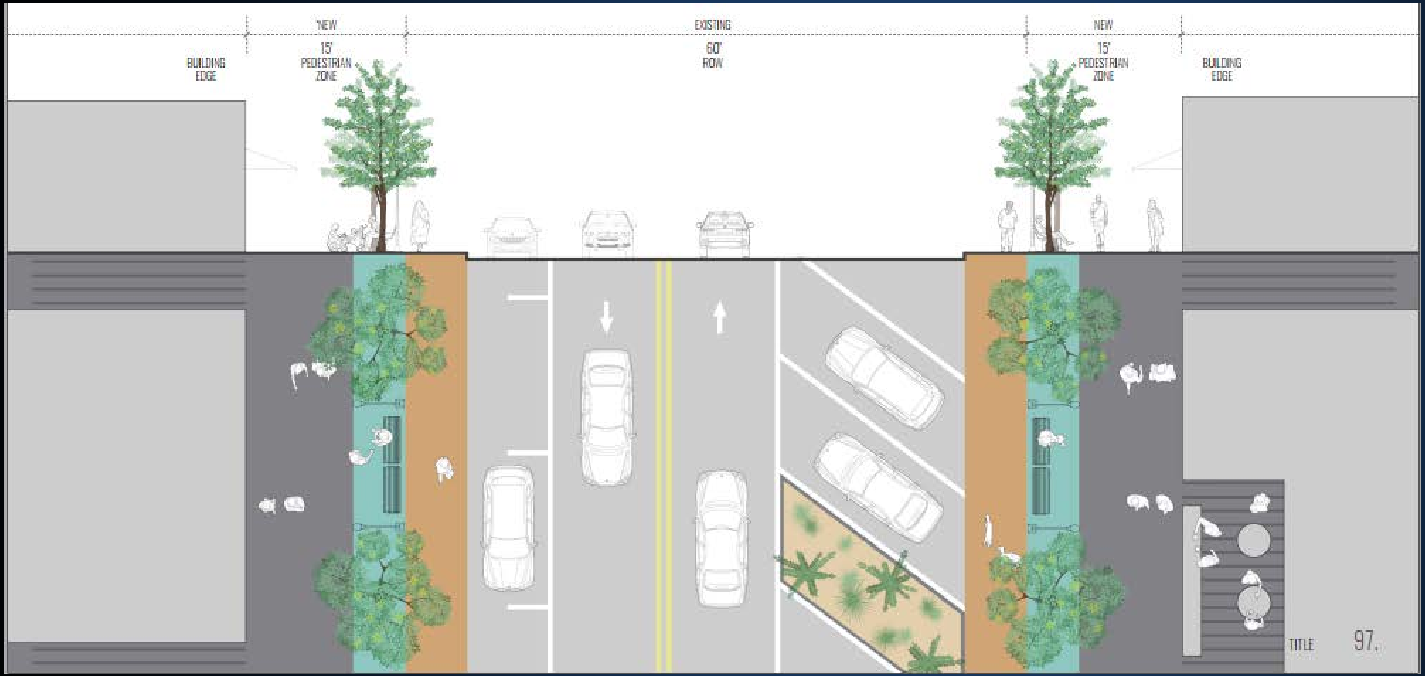
NEIGHBORHOOD STREET



- Existing sidewalk
- Pedestrian zones
- Parking
- Buffered Bike lanes
- 2 travel lanes

Reno Ave, Ali Baba Ln, Mesa Vista Ave, Diablo Dr, Dewey Dr, Quail Ave, Oquendo Rd, Procyon St, Polaris Ave, Ponderosa Way

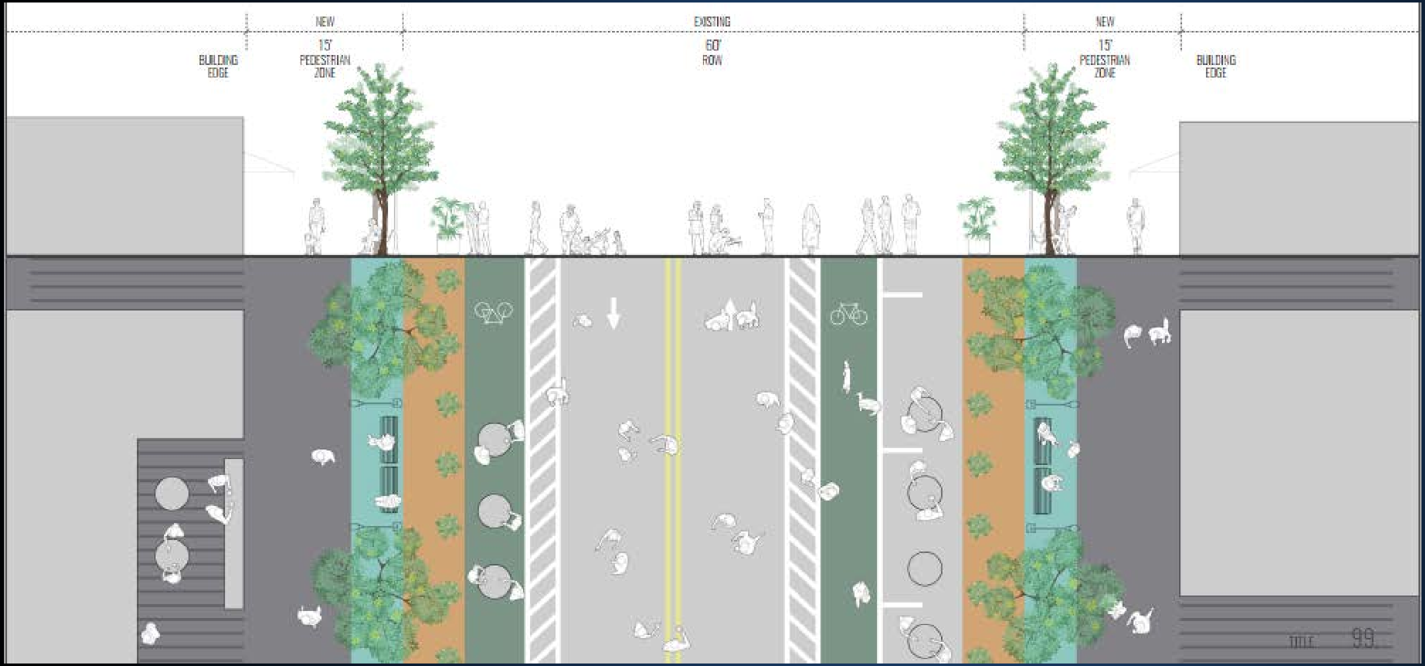
NEIGHBORHOOD STREET



- Existing sidewalk
- Pedestrian zones
- Back-in Angle Parking
- 2 travel lanes

Reno Ave, Ali Baba Ln, Mesa Vista Ave, Diablo Dr, Dewey Dr, Quail Ave, Oquendo Rd, Procyon St, Polaris Ave, Ponderosa Way

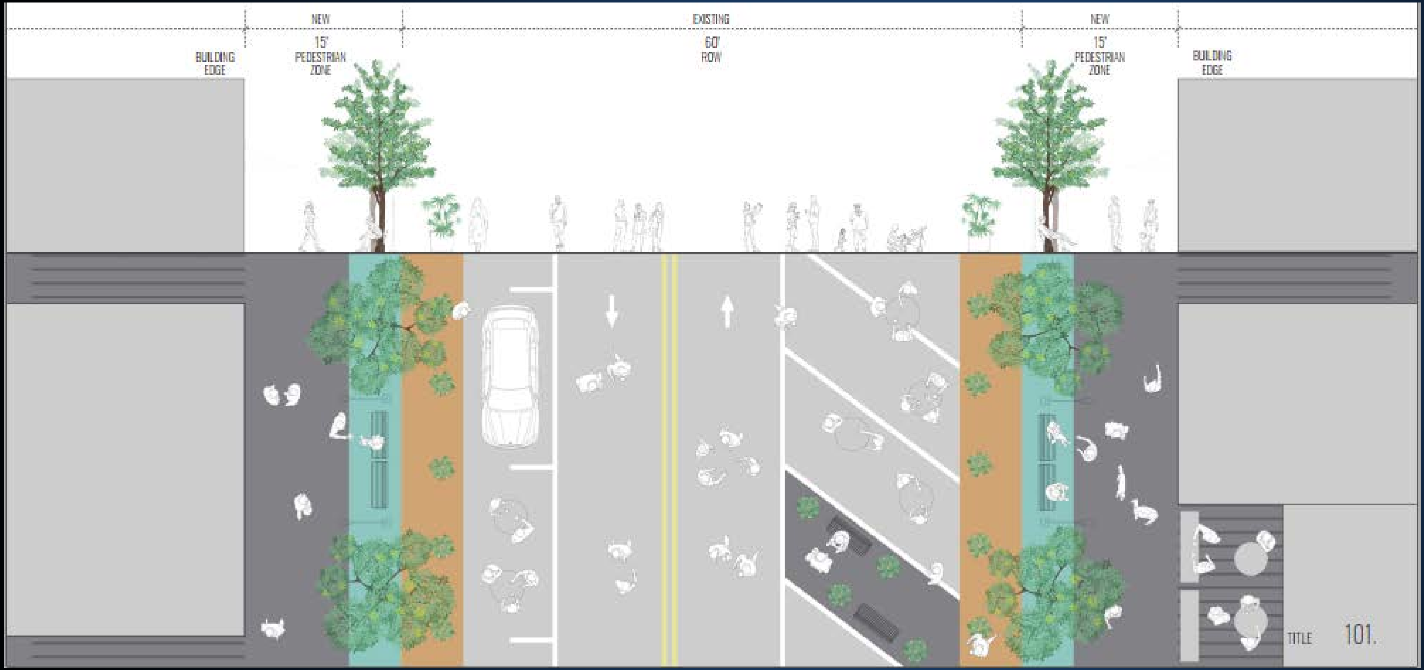
FESTIVAL STREET



- No curb
- Pedestrian zones
- Parking (non-event days)
- Buffered bike lanes
- 2 travel lanes

Ali-Baba Ln
Procyon St

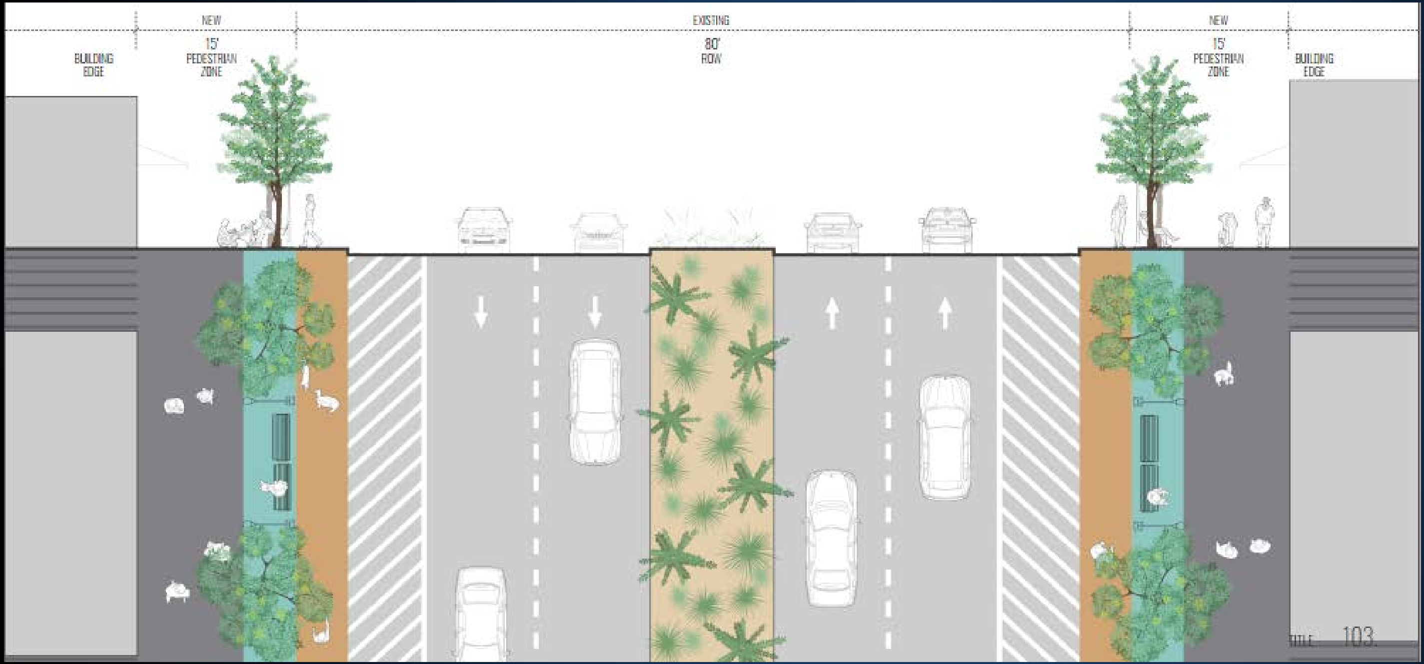
FESTIVAL STREET



- No curb
- Pedestrian zones
- Parking (non-event days)
- 2 travel lanes

Ali-Baba Ln
Procyon St

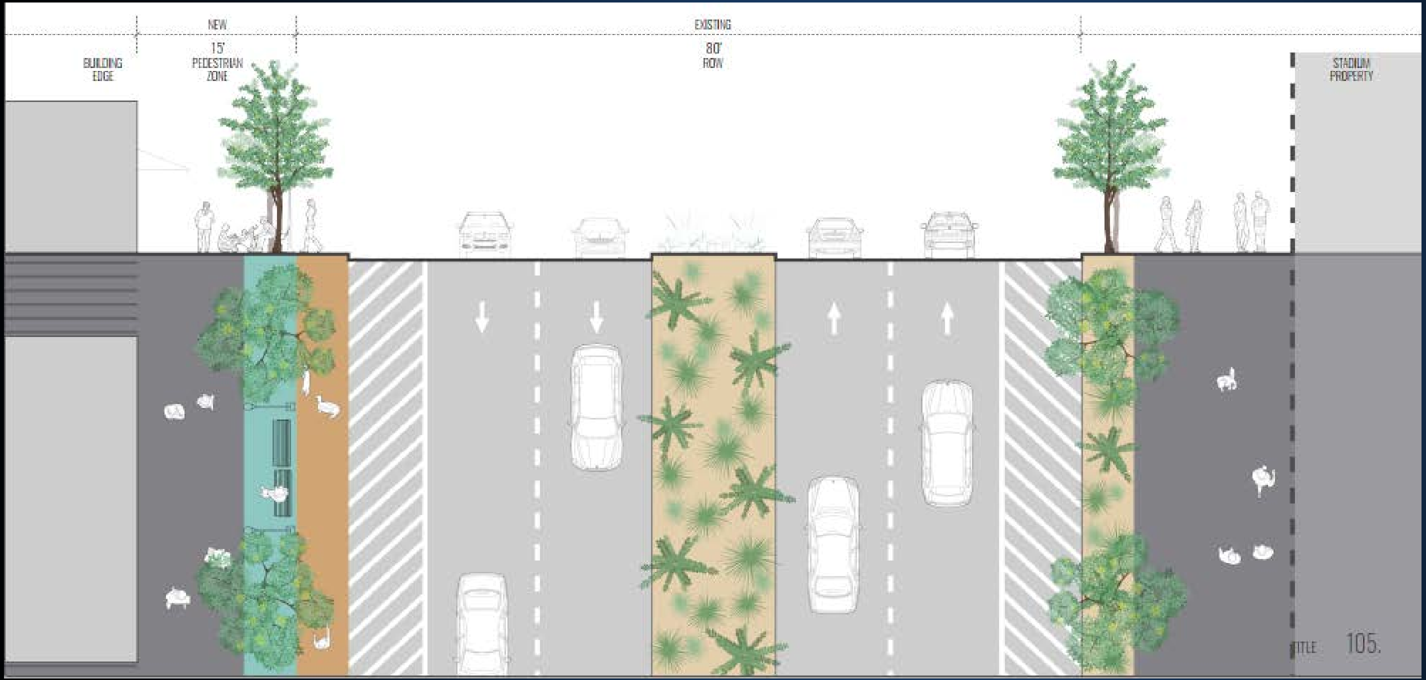
MAIN STREET



- Not stadium adjacent
- Existing curb
- Pedestrian zones
- 4 travel lanes

Hacienda Ave

MAIN STREET



- Stadium adjacent
- Existing curb
- Pedestrian zones
- 4 travel lanes

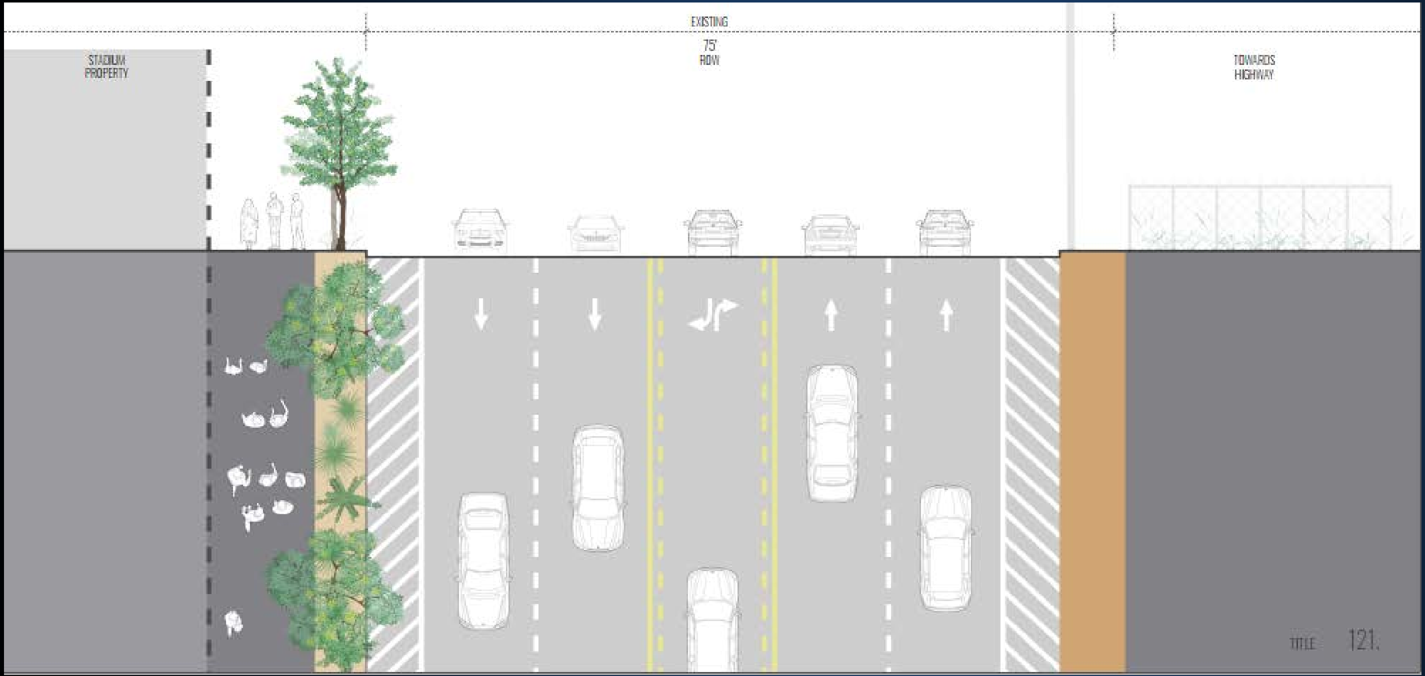
Hacienda Ave

MULTIMODAL STREET – REGIONAL HIGH SPEED

- Existing curb
- Separated bike facility
- Sidewalk
- 6 travel lanes
- Median

Russell Rd

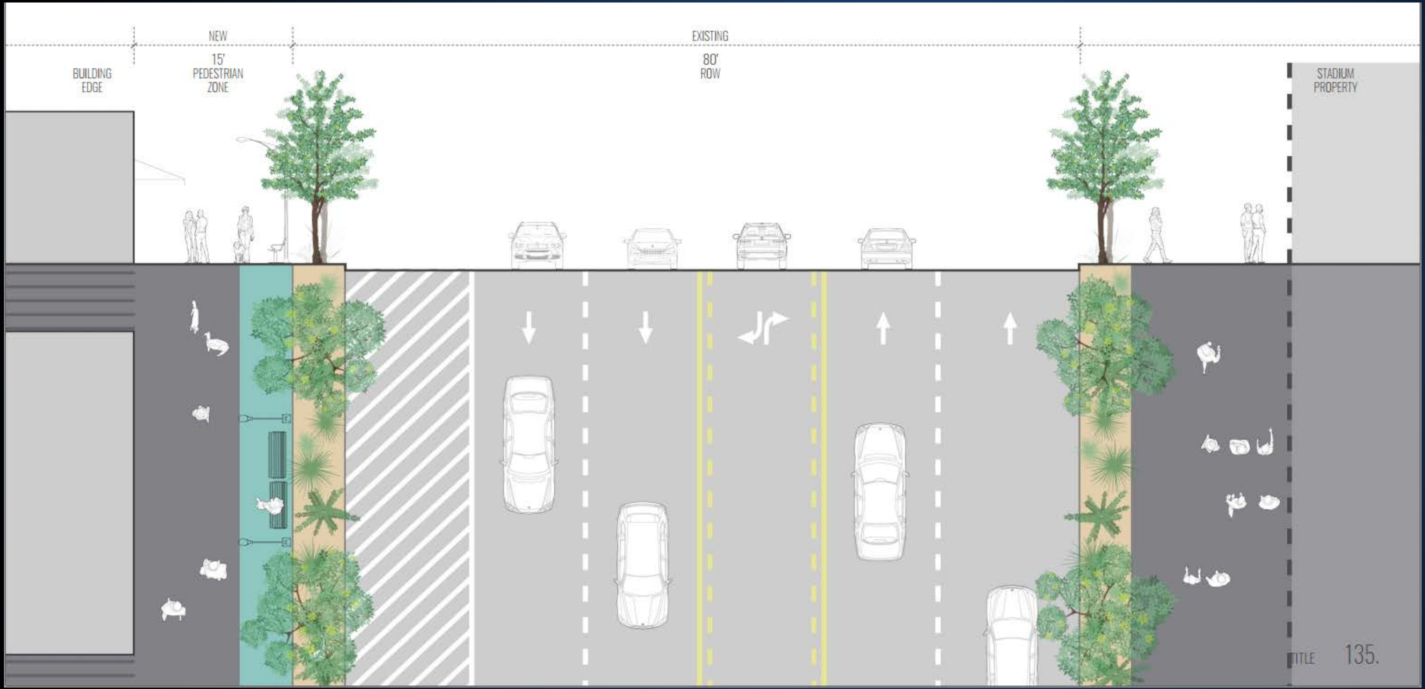
EVENT STREET



- Existing curb
- Wide pedestrian zone
- 4 travel lanes
- Turn lane

Dean Martin Drive

EVENT STREET



- Existing curb
- Wide pedestrian zone
- 4 travel lanes
- Turn lane

Polaris Ave

STREET TYPOLOGIES APPLIED

VISION, GOALS and OBJECTIVES

IDENTIFIED ISSUES

NETWORK PRINCIPLES

THE CONNECTED NETWORK

STREET TYPES

NEXT STEPS

NEXT STEPS

CLARK COUNTY DEPARTMENT OF COMPREHENSIVE PLANNING

STADIUM DISTRICT PLAN

TAC MEETING No.3b

November 18, 2020

Before we start:

- We will be asking for verbal participation throughout this meeting. If possible, please make sure you are in a quiet space with minimal background noise.
- Make sure you can see the chat box for this call on your screen.
- If you experience technical difficulties at any time, please contact SUSAN BERKLEY. She can be reached via this meeting's chat box, via email at susan.berkley@atkinsglobal.com or by phone at 702-510-1608
- Note, this meeting is being recorded for documentation purposes. This recording includes all audio, video, and chat messages.
- We will ask that participants be on mute if they are not speaking.

RTC

CLARK COUNTY NEVADA


CLARK COUNTY DEPARTMENT OF COMPREHENSIVE PLANNING
STADIUM DISTRICT PLAN
TAC MEETING No.3b
November 18, 2020
allegiant stadium
allegiant stadium
RAIDERS
VS
CHARGERS
RTC
CLARK COUNTY
NEVADA

How to Participate Today

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Code: 29 32 68 6

Look for the call's control bar in the lower, middle portion of the screen. Note, you may need to move your mouse around to have the bar appear.

Mute/unmute

Raise and lower your hand to speak

Use the chat box

See who is talking

AGENDA

WELCOME AND INTRODUCTIONS

SUMMARY OF PREVIOUS MEETINGS

STREET DESIGN

NEXT STEPS

WELCOME AND INTRODUCTIONS

SUMMARY OF PREVIOUS MEETINGS

STREET DESIGN

NEXT STEPS

PROJECT TEAM

CLARK COUNTY NEVADA

RTC

ATKINS

Member of the SNC-Lavalin Group

Kimley»Horn

paceline consulting

ea

ERICKA AVILES CONSULTING

RAFI

ARCHITECTURE | DESIGN

WELCOME AND INTRODUCTIONS

SUMMARY OF PREVIOUS MEETINGS

STREET DESIGN

NEXT STEPS

OBJECTIVES OF THE STUDY

- DEVELOP AN OVERALL VISION FOR THE DISTRICT
- DEVELOP A TOOLBOX OF SOLUTIONS THAT WILL GUIDE THE IMPLEMENTATION OF THE VISION
- DEVELOP AN ACTION PLAN
- IDENTIFY POTENTIAL INVESTMENTS


PLANNING PROCESS
We are here
Initiate
Explore
Create
Validate
Deliver


VISION STATEMENT
"Create a dynamic district with a comprehensive mix of uses that supports the continuation of current businesses while providing opportunities to transition into a thriving destination for entertainment, hospitality, business, and sports"

GOALS

Goal 1

Enhance quality of life by creating a vibrant district with best practices for urban design.

Goal 2

Promote a vibrant economy by enabling multiple options that support individual property and business owners' intentions to remain or transition to new uses.

GOALS

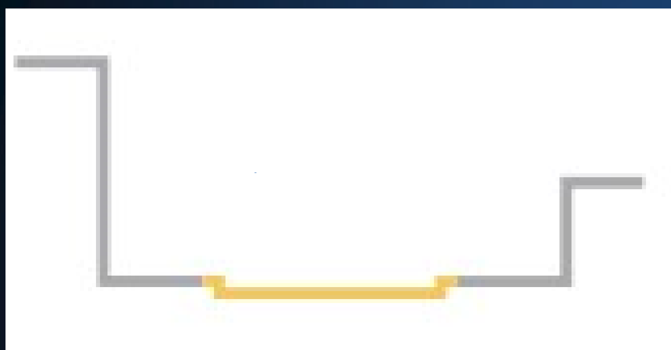
Goal 3

Promote flexibility within the built environment to accommodate both event day and non-event day functions.

Goal 4

Provide connectivity and access to and throughout the district to improve mobility by encouraging the use of alternative modes of transportation.

WHAT IS STREET TYPOLOGY?



Options for various street designs that evaluate each street and balance the transportation needs within the existing context and the social and economic needs and goals.

MULTIMODAL

EVENT

MAIN

FESTIVAL

NEIGHBORHOOD

PEDESTRIAN PATHWAYS

STREET TYPOLOGIES APPLIED

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WELCOME AND INTRODUCTIONS

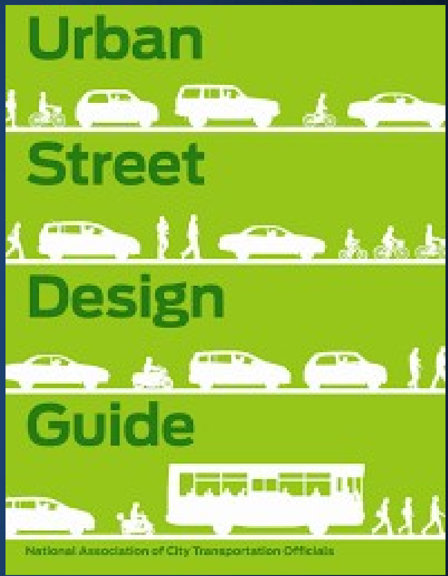
SUMMARY PREVIOUS MEETINGS

STREET DESIGN

NEXT STEPS

DESIGN GUIDELINES

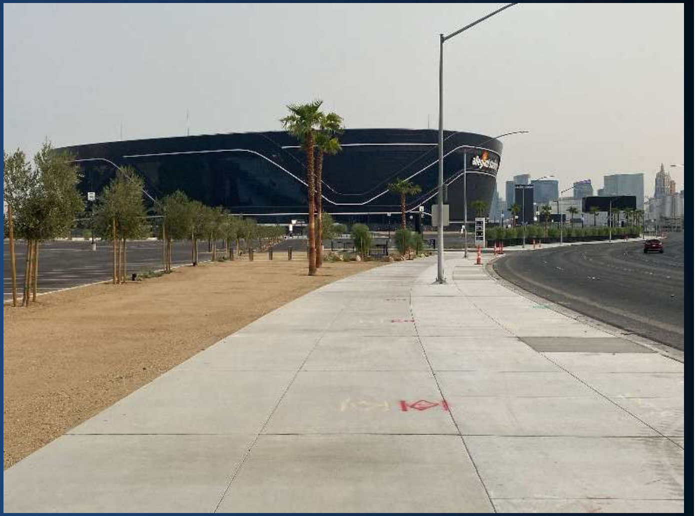
- Incorporate Complete Street Principles

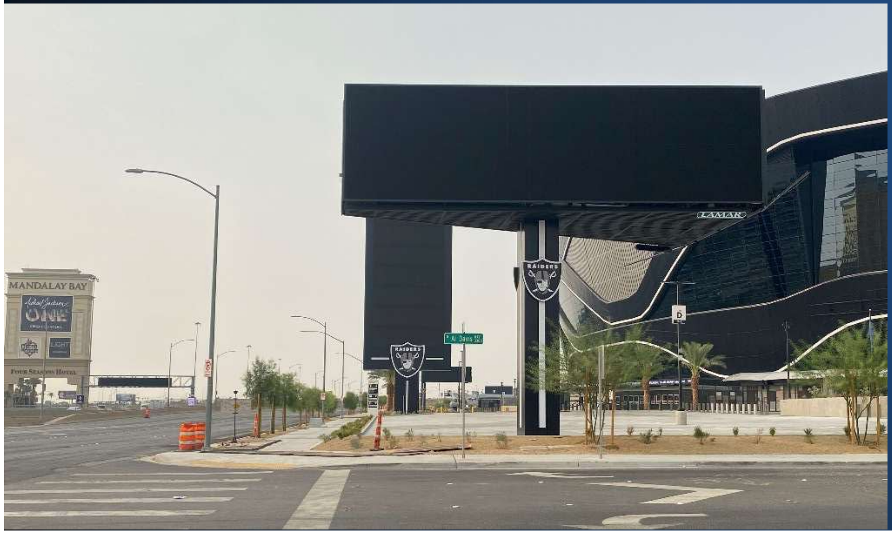


- Prioritize pedestrian and bicycle activity

DESIGN GUIDELINES

- Integrate public and private ROW





- Minimize need for major improvements

DESIGN GUIDELINES

- Introduce opportunities for street furniture, amenities, and outdoor sitting areas

LOCAL STREETS

NEIGHBORHOOD STREETS

FESTIVAL STREETS

NEIGHBORHOOD STREET DESIGN

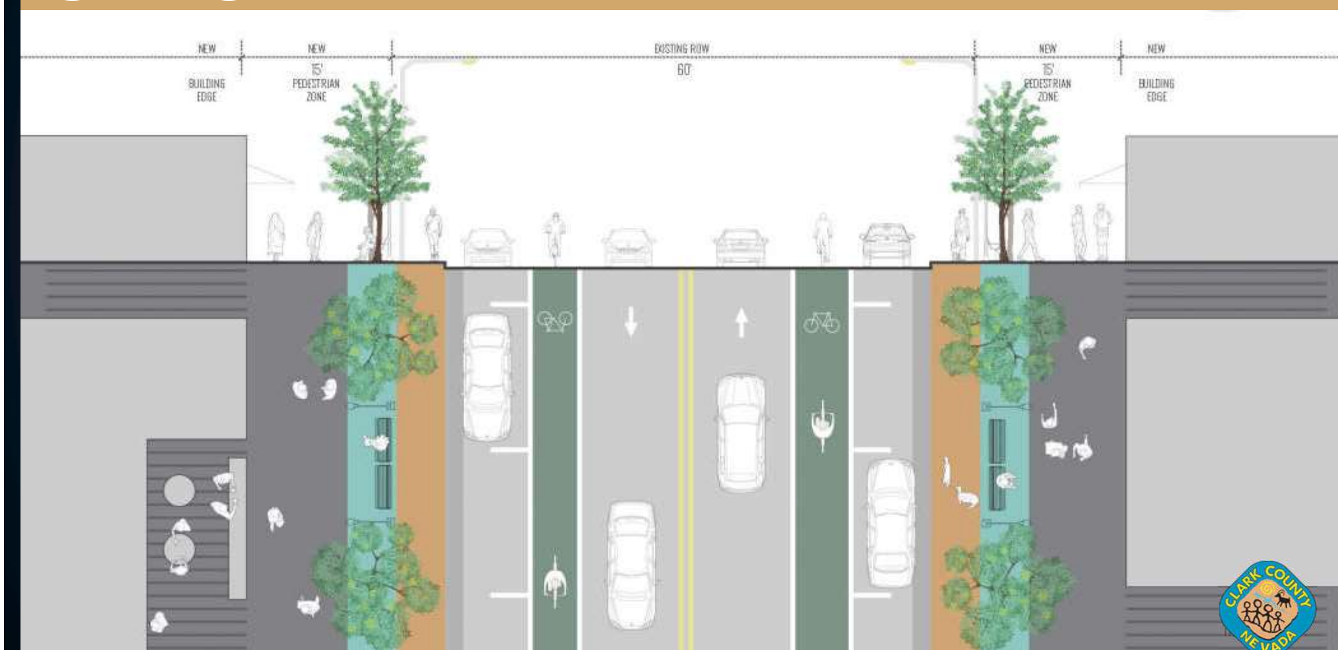
Design Features

- Speed Limit 25 mph
- Wide sidewalks/Pedestrian Zones
- Curb extensions
- Raised crosswalks
- Two travel lanes
- Bike lanes
- Parking options
- Furniture zone

Reno Ave, Ali Baba Ln, Mesa Vista Ave, Diablo Dr, Dewey Dr, Quail Ave, Oquendo Rd, Procyon St, Polaris Ave, Ponderosa Way

NEIGHBORHOOD STREET

OPTION 1

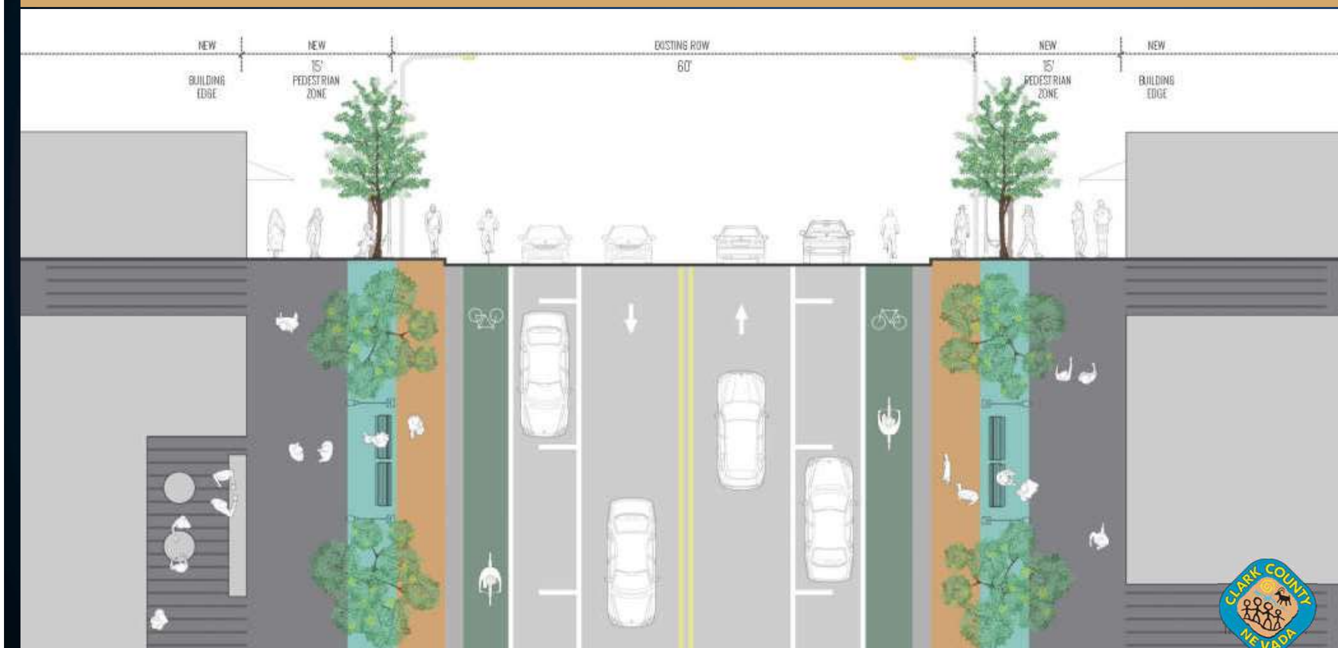


Design Elements and Criteria

- **ROW—60 feet**
- **Lane width 11 feet**
- **No median**
- **Bicycle lane 4 feet**
- **Street / pedestrian lighting**
- **Parking lane 8 feet**
- **Curb extension in lieu of parking**

NEIGHBORHOOD STREET

OPTION 2

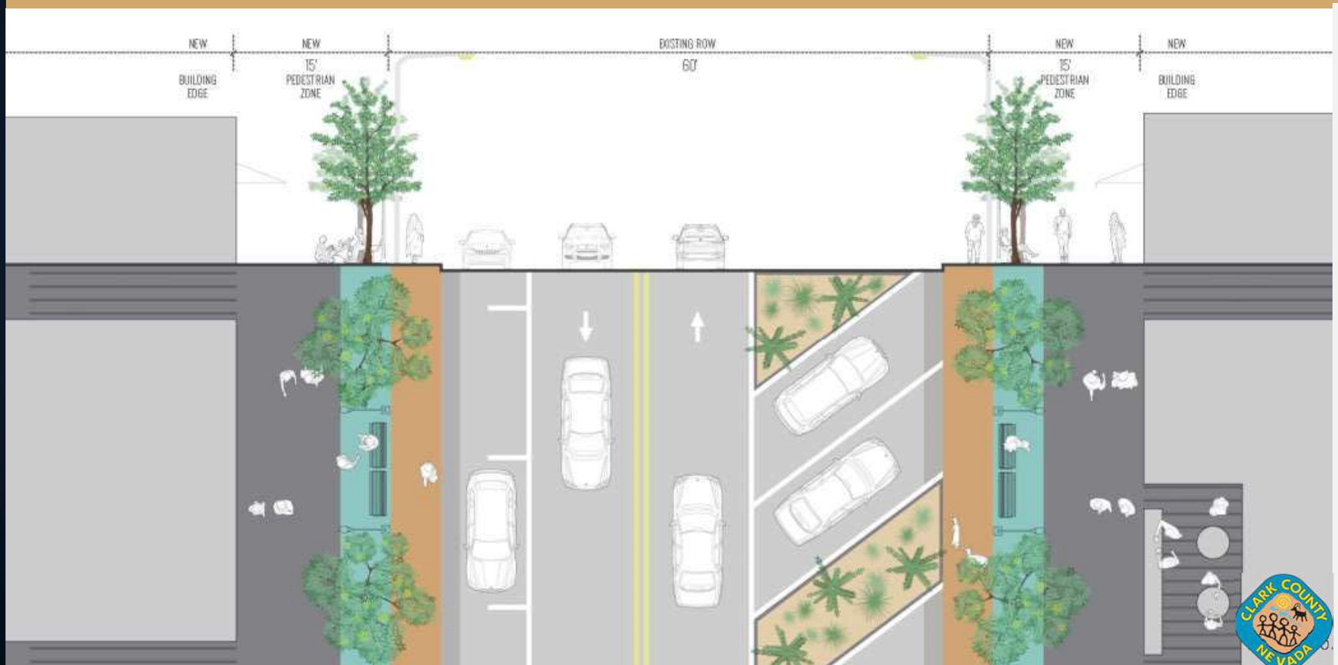


Design Elements and Criteria

- ROW—60 feet
- Lane width 11 feet
- No median
- Bicycle lane 4 feet
- Street / pedestrian lighting
- Parking lane 8 feet

NEIGHBORHOOD STREET

OPTION 3



Design Elements and Criteria

- **ROW—60 feet**
- **Lane width 11 feet**
- **No median**
- **Street / pedestrian lighting**
- **Parking lane 9 feet***
- **Angle Parking 19 feet***
- **Curb extension in lieu of parking**

** Width includes 2 feet of gutter*

NEIGHBORHOOD STREET

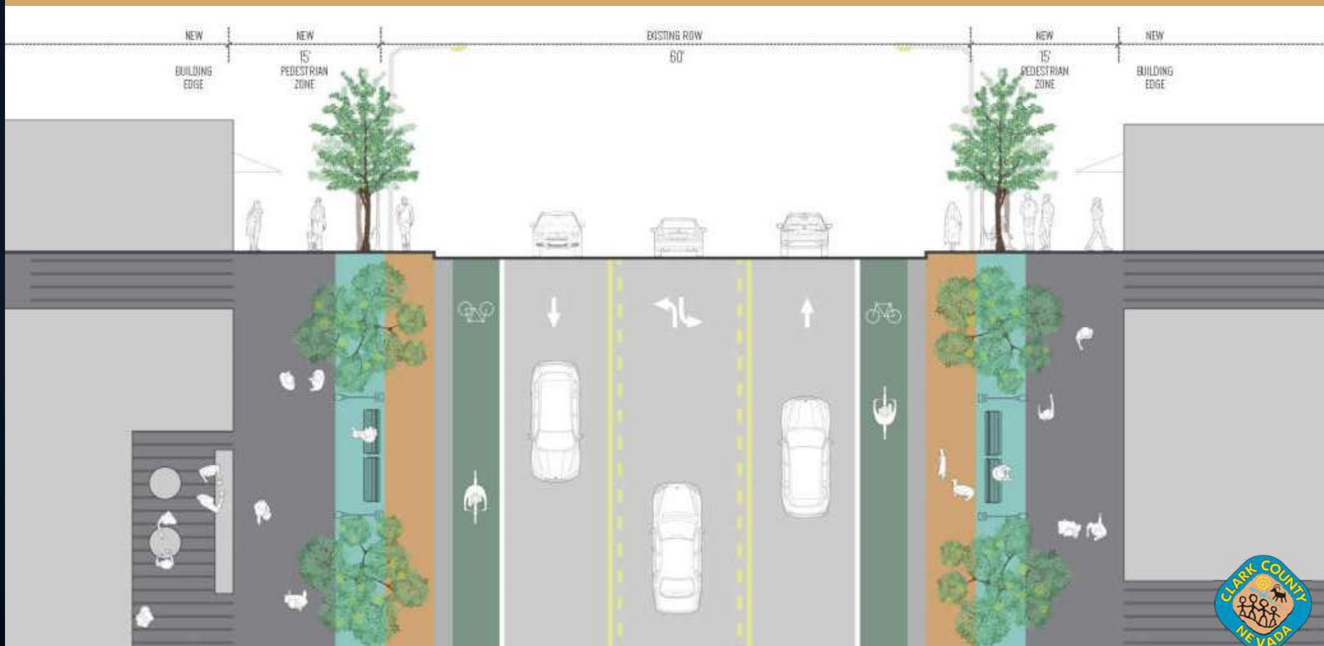
OPTION 4

Design Elements and Criteria

- **ROW—60 feet**
- **Two Way Left Turn Lane width 14 feet**
- **Travel Lane 16 feet**
- **Street / pedestrian lighting**

NEIGHBORHOOD STREET

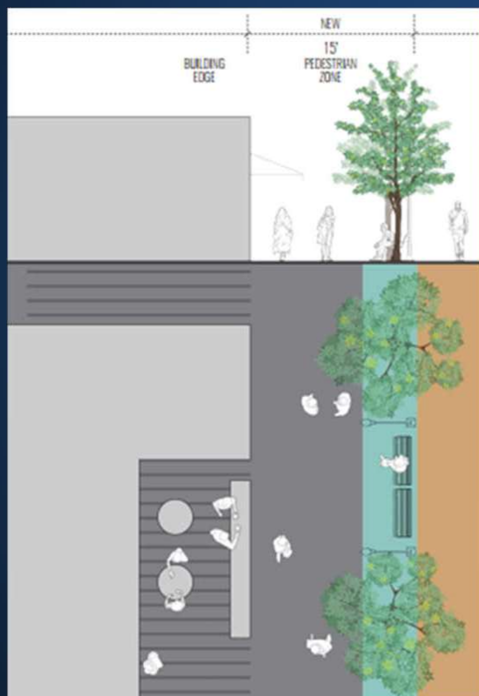
OPTION 5



Design Elements and Criteria

- **ROW—60 feet**
- **Two-Way Left Turn Lane width 14 feet**
- **Travel lane 11 feet**
- **Bicycle lane 5 feet**
- **Street / pedestrian lighting**

Pedestrian Zone



Features

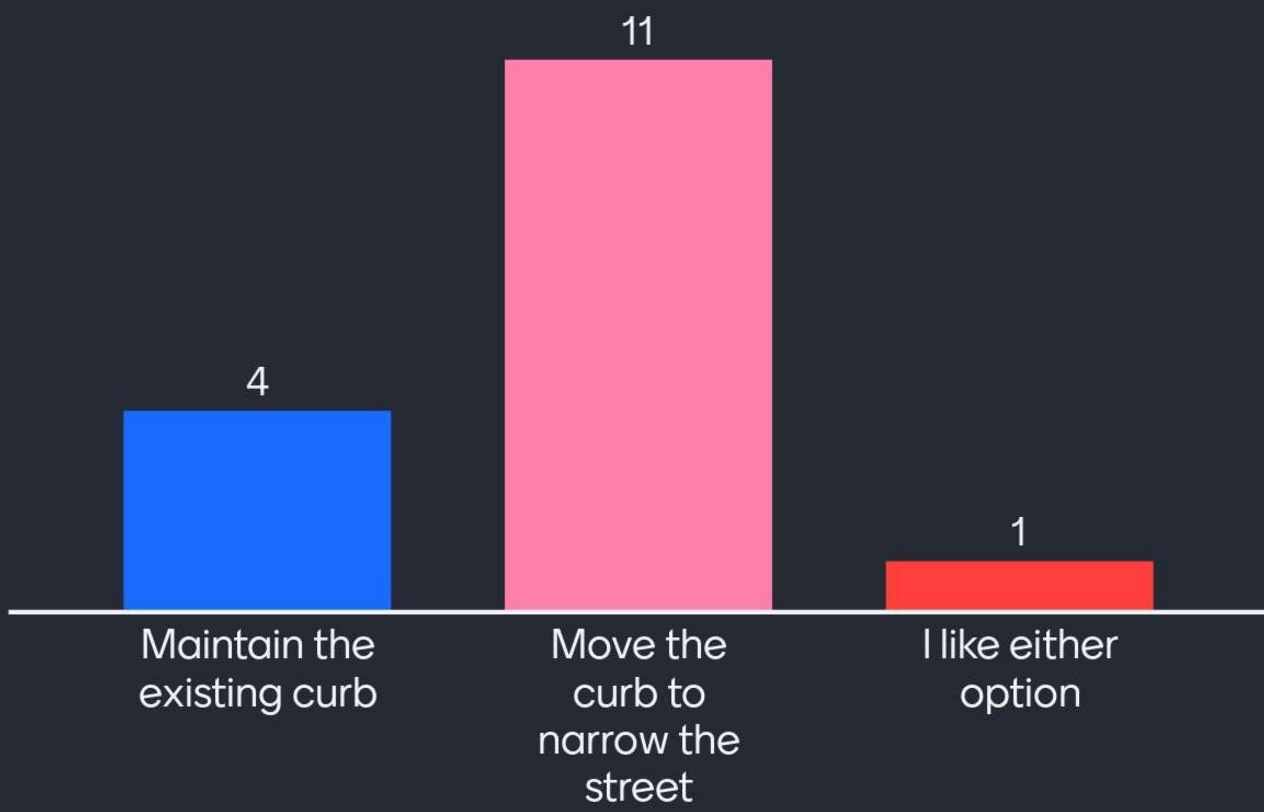
- Incorporates roadway and pedestrian scale lighting
- Eliminates the need for utility relocation
- Separates public and private ROW
- Maintains a minimum sidewalk at all times
- Creates lively streetscape

Mentimeter

Which of the following features and improvements would you like to see in neighborhood streets?

15

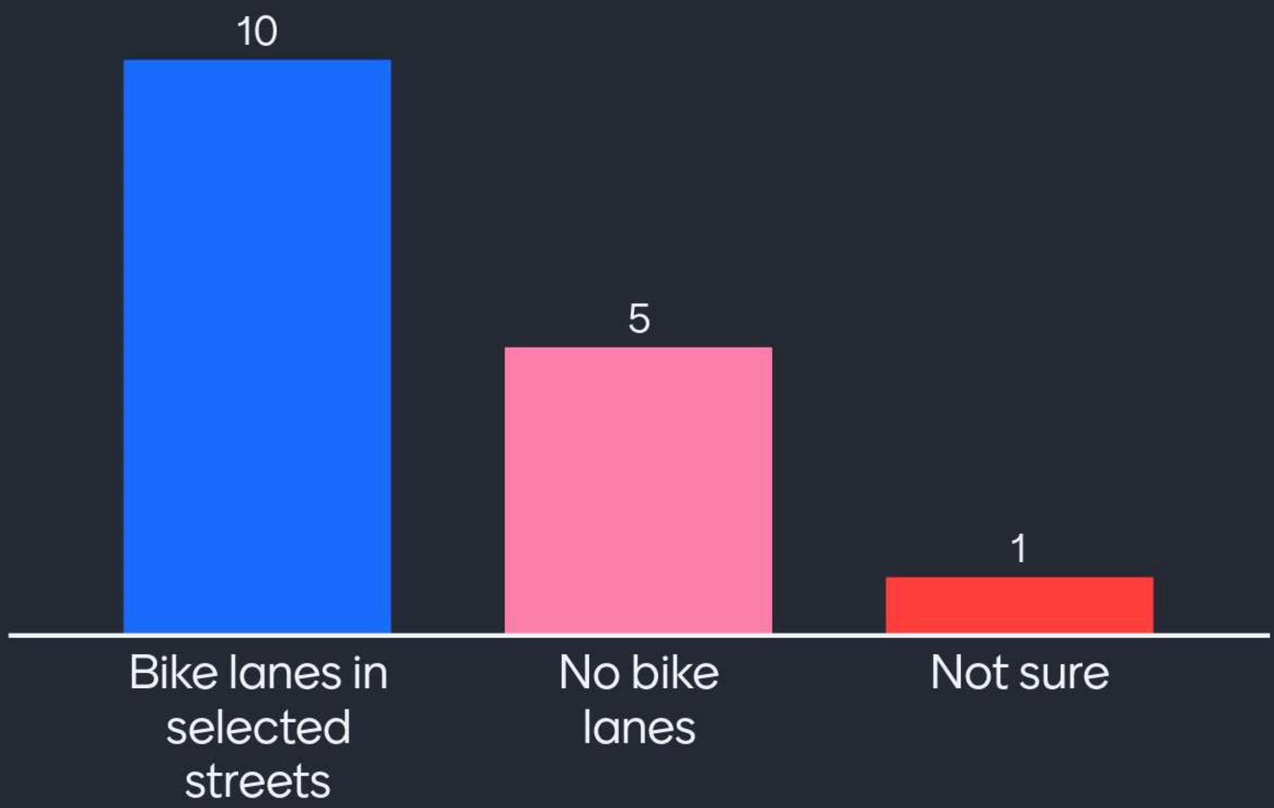
CURB:



4
11
1
Maintain the existing curb
Move the curb to narrow the street
I like either option

16

BIKE FACILITIES



If you preferred bike lanes in specific streets, please list your street suggestions.

Mentimeter

Hacienda and Valley View

N/A

Where ever possible to have them as a convenience.

Polaris north of Hacienda, and Reno

Everywhere possible, more people riding with E bikes and scooters

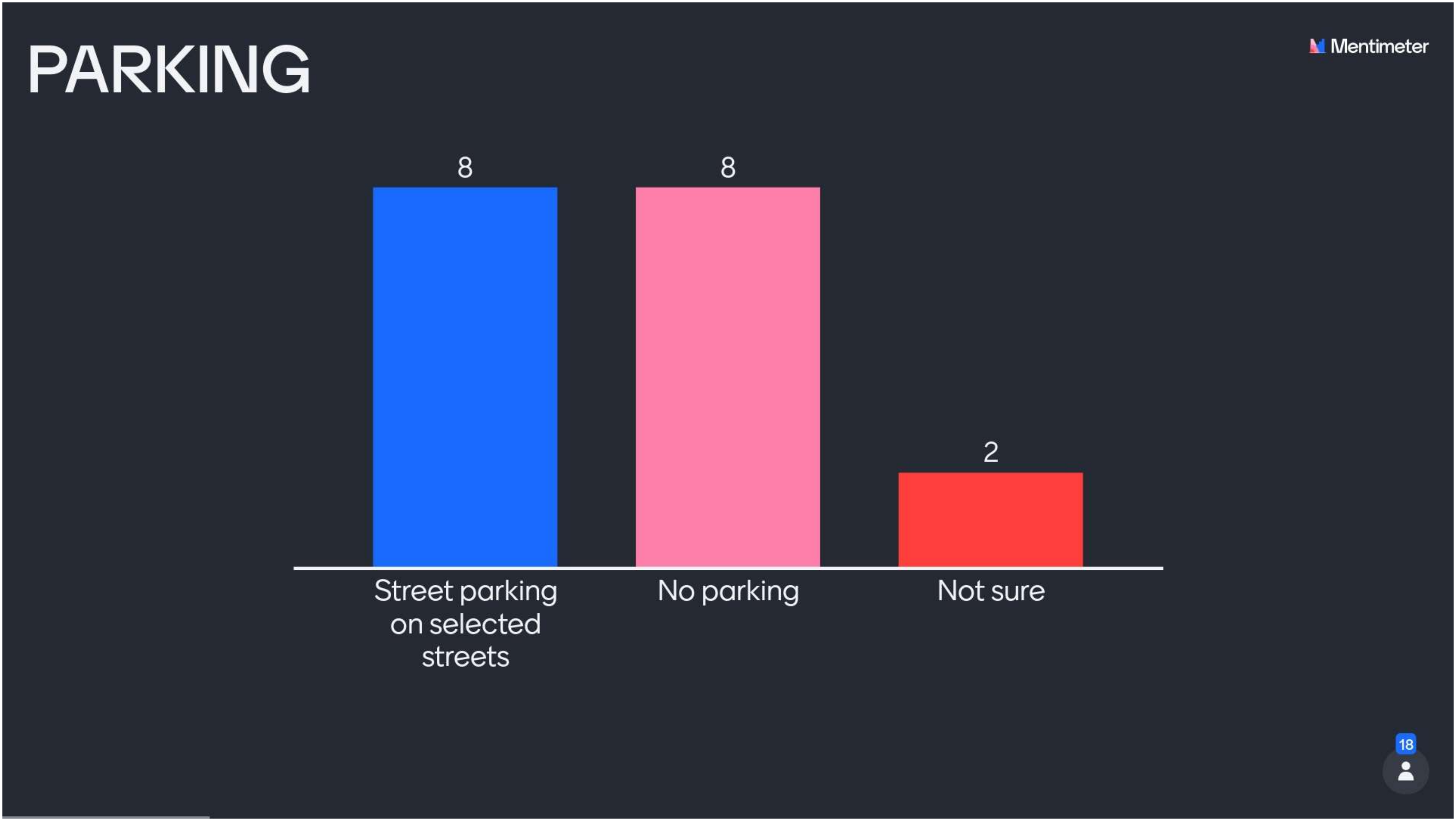
all of them where possible

I don't think there is a one size fits all solution. Some streets are going to have more car traffic than others and will more than likely require a left turn lane in the center.

Clearly marked bike lanes (bold/green).Aesthetically pleasing physical barriers in higher traffic areas. Bike traffic signal option if heavily used.

Which ever is direct routine

9


PARKING
Mentimeter
8
8
2
Street parking on selected streets
No parking
Not sure
18

If you preferred parking on specific streets, please list your street suggestions.

Mentimeter

N/A

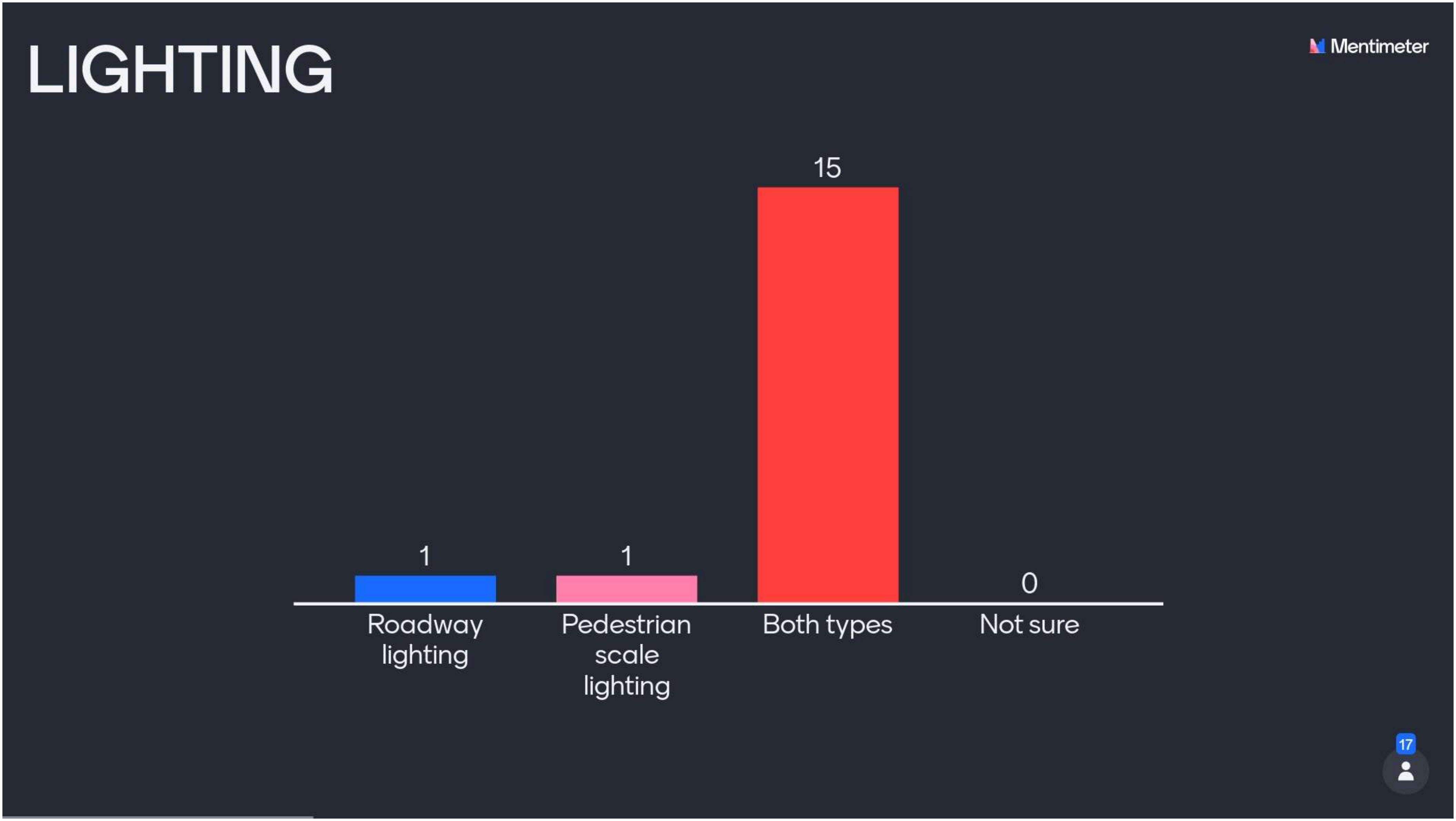
In front of retail

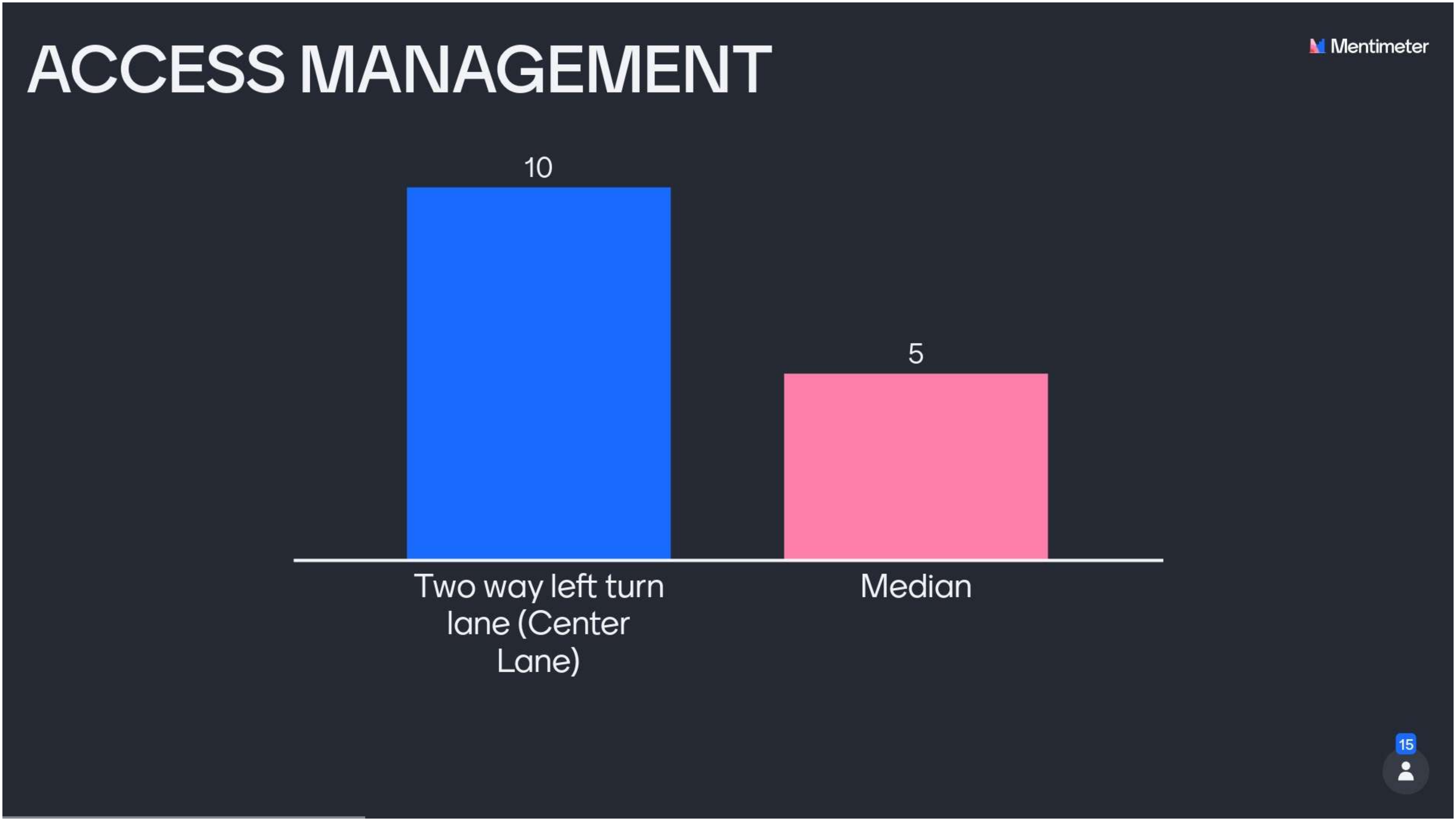
Lower traffic zones could have parking with appropriate business at the urban/street edge.

How would on street parking be handled on event days when the community has been told many streets will be posted for No Parking on those days? Would those parking lanes be able to be otherwise utilized on event days?

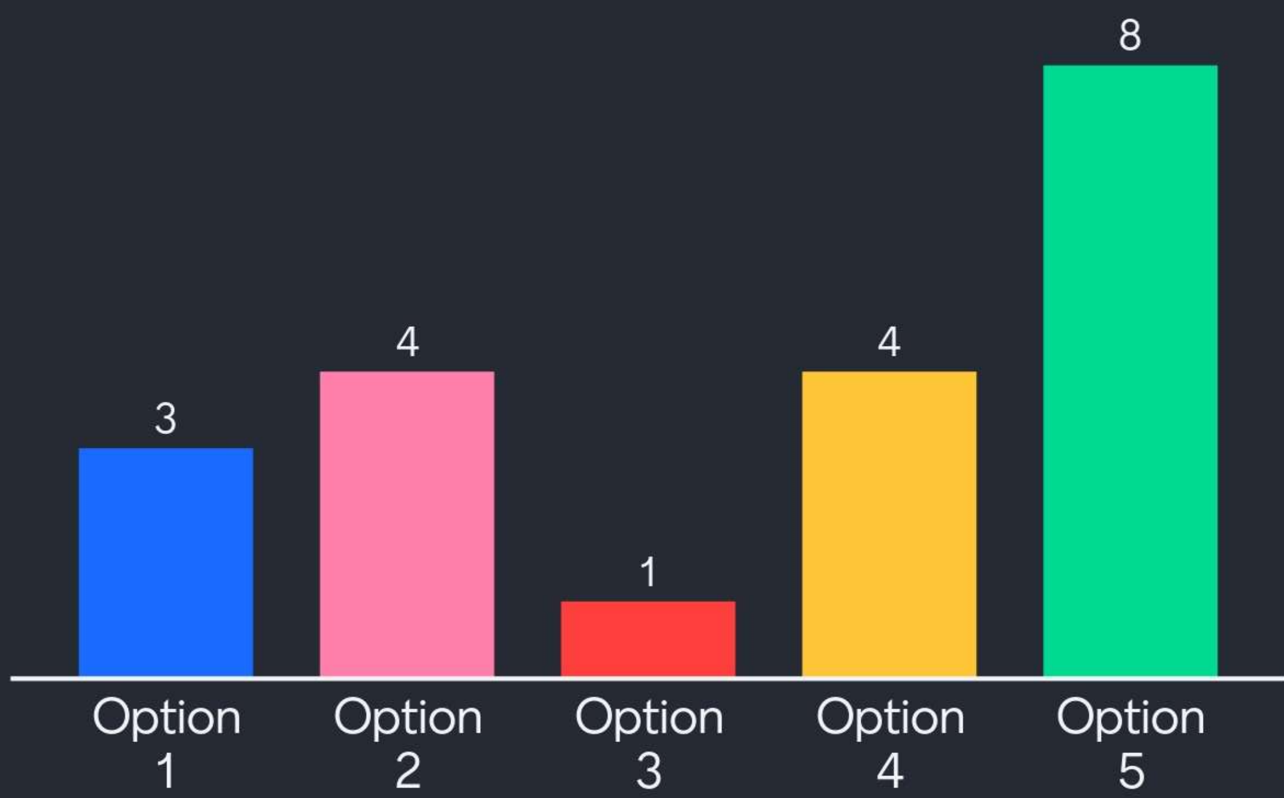
all streets where possible. it's used in most downtowns successfully to encourage daily use.

5


LIGHTING
Mentimeter
1
Roadway lighting
1
Pedestrian scale lighting
15
Both types
0
Not sure
17


ACCESS MANAGEMENT
Mentimeter
10
5
Two way left turn lane (Center Lane)
Median
15

Which street option do you like the most?



16

FESTIVAL STREET DESIGN

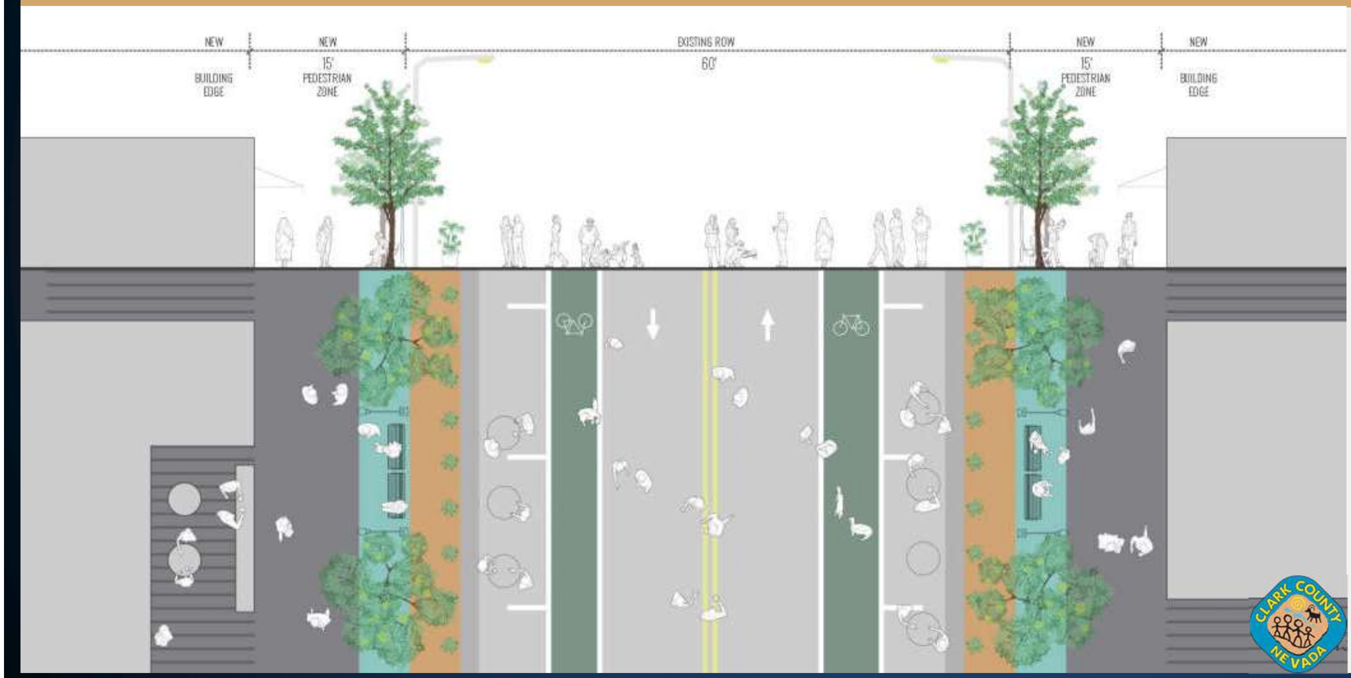
Design Features

- Speed Limit 25 mph
- No Curb
- Wide sidewalks/Pedestrian zones
- Two travel lanes
- Bike lanes
- Parking options (non-event day)
- Median integrated public space
- Furniture zones

Ali-Baba Ln, Procyon St

FESTIVAL STREET

OPTION 1

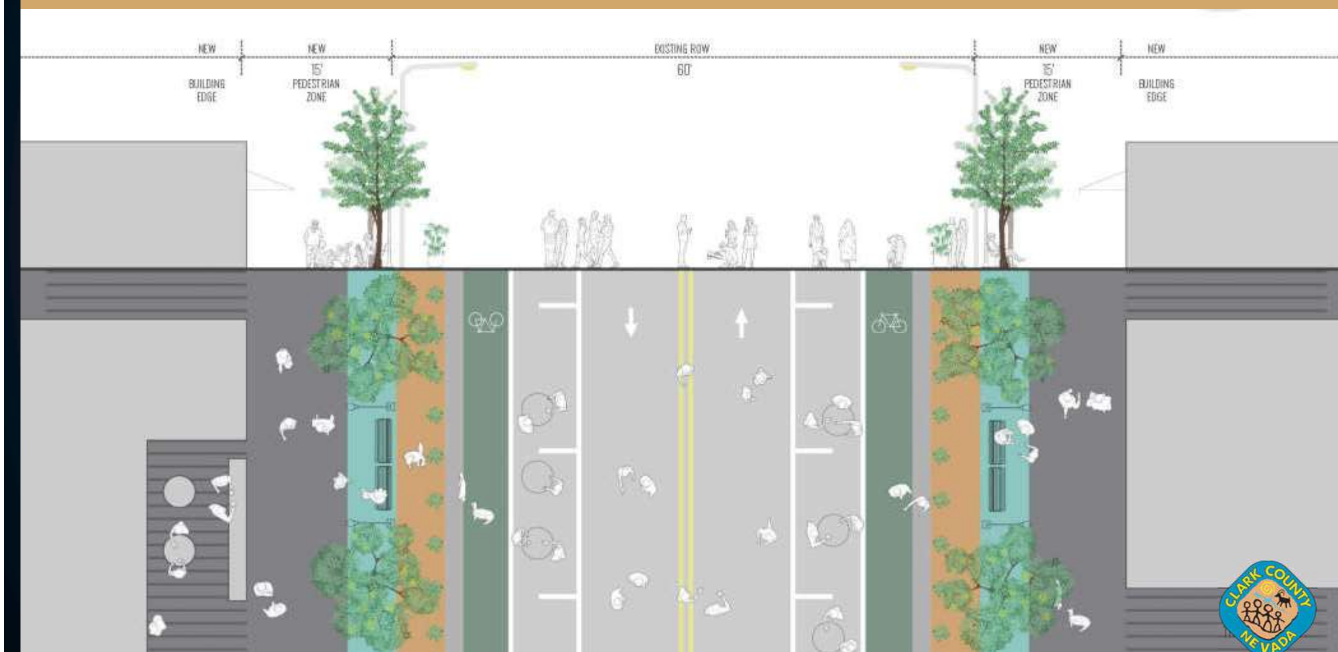


Design Elements and Criteria

- ROW—60 feet
- Lane width 11 feet
- No median
- Bicycle lane 5 feet
- Street / pedestrian lighting
- Parallel Parking
- Opportunity to utilize parking areas for outside dining or sitting area

FESTIVAL STREET

OPTION 2

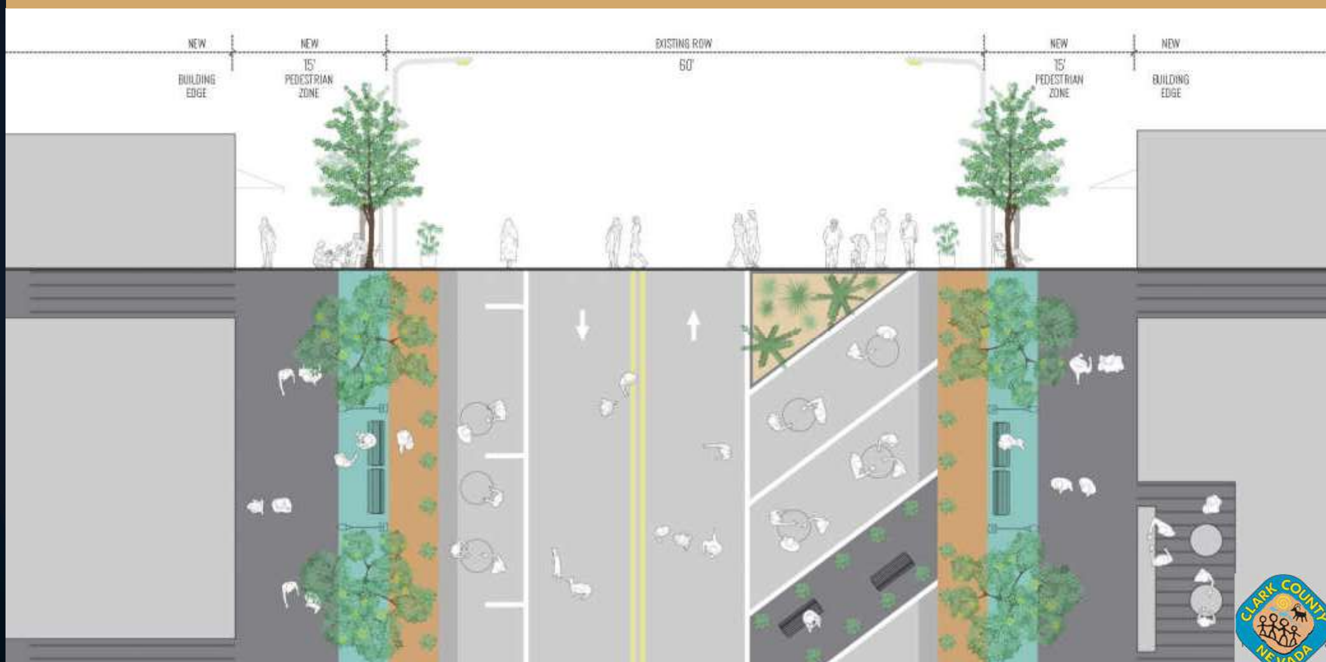


Design Elements and Criteria

- ROW—60 feet
- Lane width 11 feet
- No median
- Bicycle lane 4 feet
- Street / pedestrian lighting
- Parking lane 8 feet

FESTIVAL STREET

OPTION 3



Design Elements and Criteria

- **ROW—60 feet**
- **Lane width 11 feet**
- **No median**
- **Street / pedestrian lighting**
- **Parking lane 9 feet***
- **Angle Parking 19 feet***
- **Opportunity to utilize parking areas for outside dining or sitting areas**

** Width includes 2 feet of gutter*

FESTIVAL STREET

OPTION 4

Design Elements and Criteria

- **ROW—60 feet**
- **Activated* median 18 feet**
- **Travel Lane 14 feet**
- **Street / pedestrian lighting**

(*) *Median is utilized to accommodate pedestrian sitting areas, walking, landscaping and amenities*

FESTIVAL STREET

OPTION 5

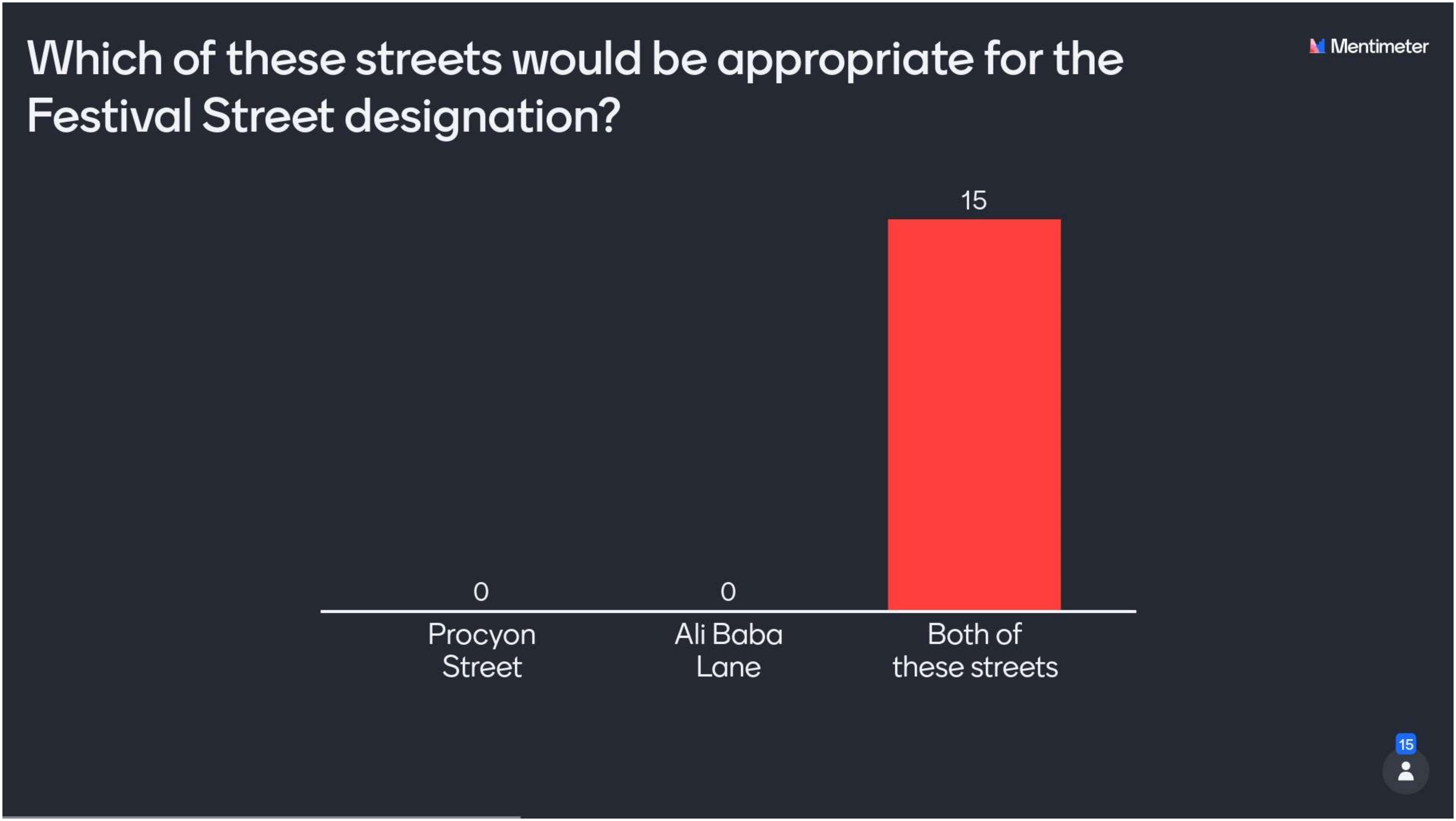
Design Elements and Criteria

- **ROW—60 feet**
- **Activated* median 16 feet**
- **Travel Lane 11 feet**
- **Bicycle lane 4 feet**
- **Street / pedestrian lighting**

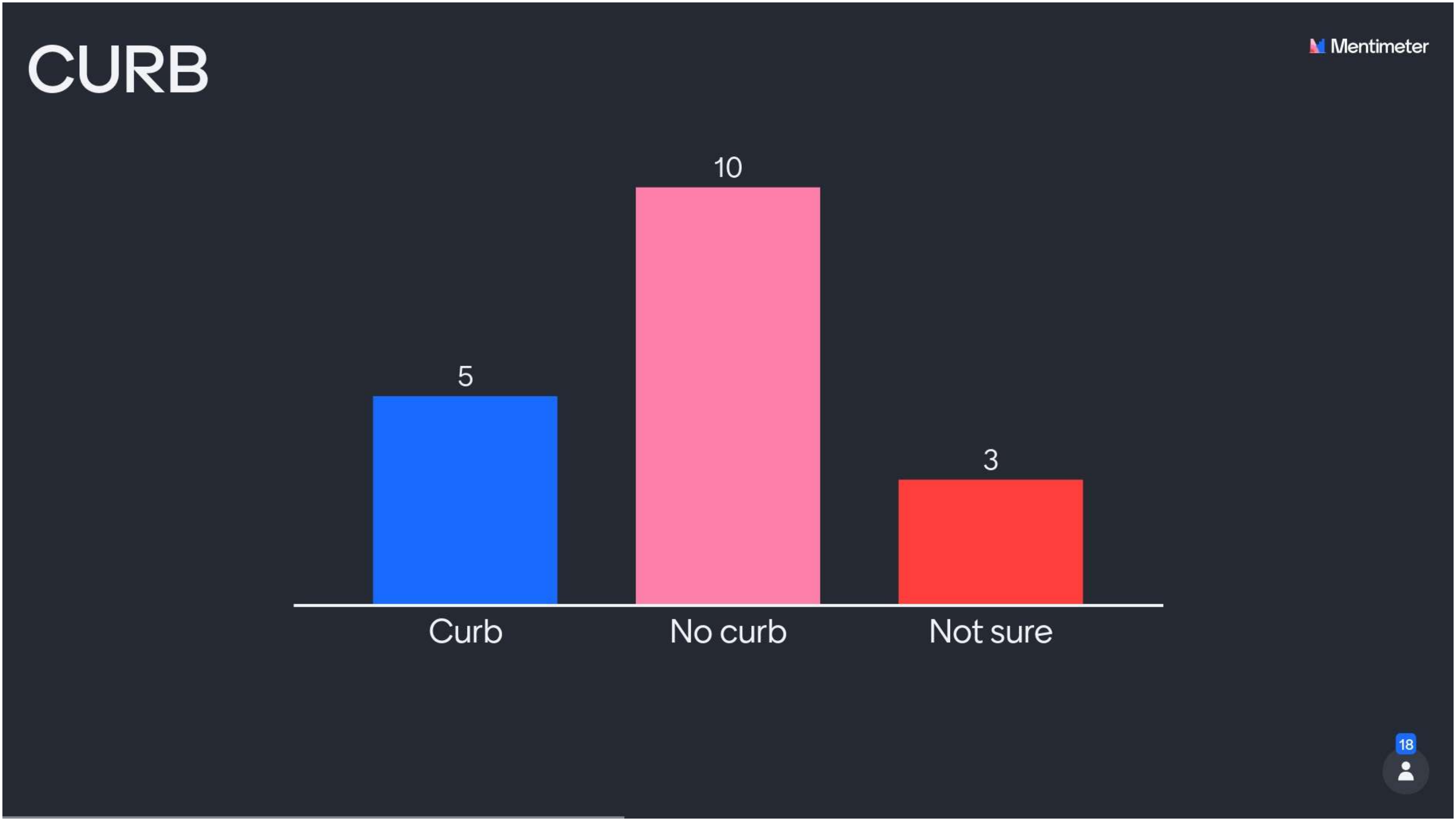
(*) *Median is utilized to accommodate pedestrian sitting areas, walking, landscaping and amenities*

FESTIVAL STREETS

Procyon Street and Ali Baba Lane are being considered as Festival Streets. This designation would allow a street to be closed to vehicular traffic and host different events throughout the year. These two streets are near the parking areas at Reno Avenue and Valley View Boulevard providing easy access from both Valley View Boulevard and Tropicana Avenue.

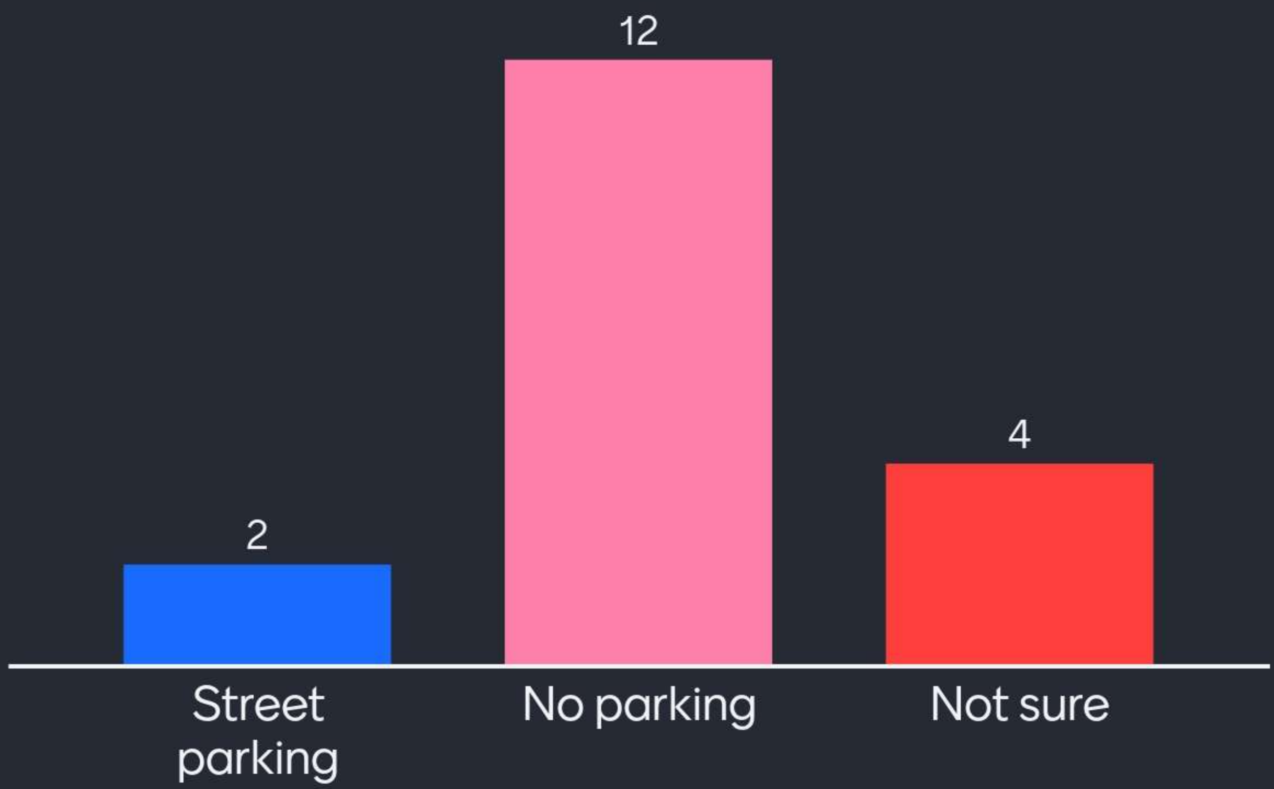

Which of these streets would be appropriate for the Festival Street designation?
Mentimeter
15
0
0
Procyon Street
Ali Baba Lane
Both of these streets
15

What street features would you like to see in a Festival Street?

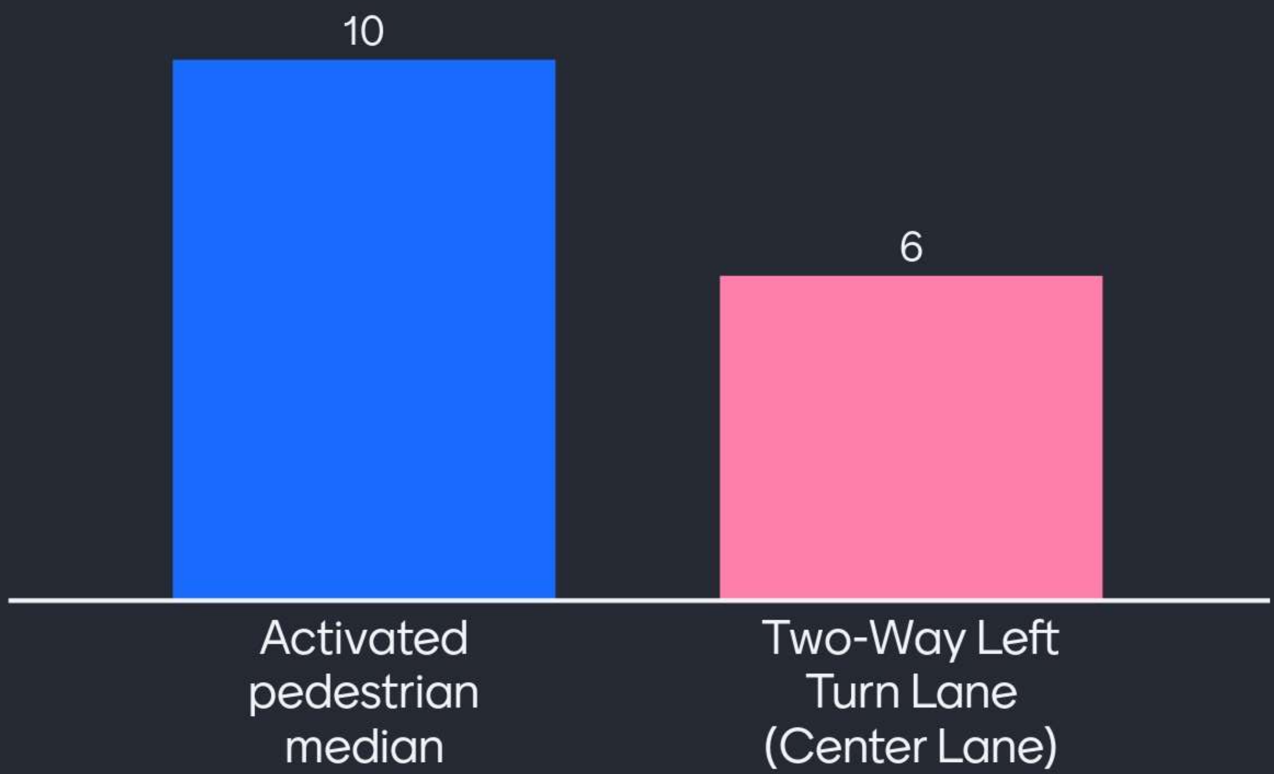


CURB
Mentimeter
10
5
3
Curb
No curb
Not sure
18

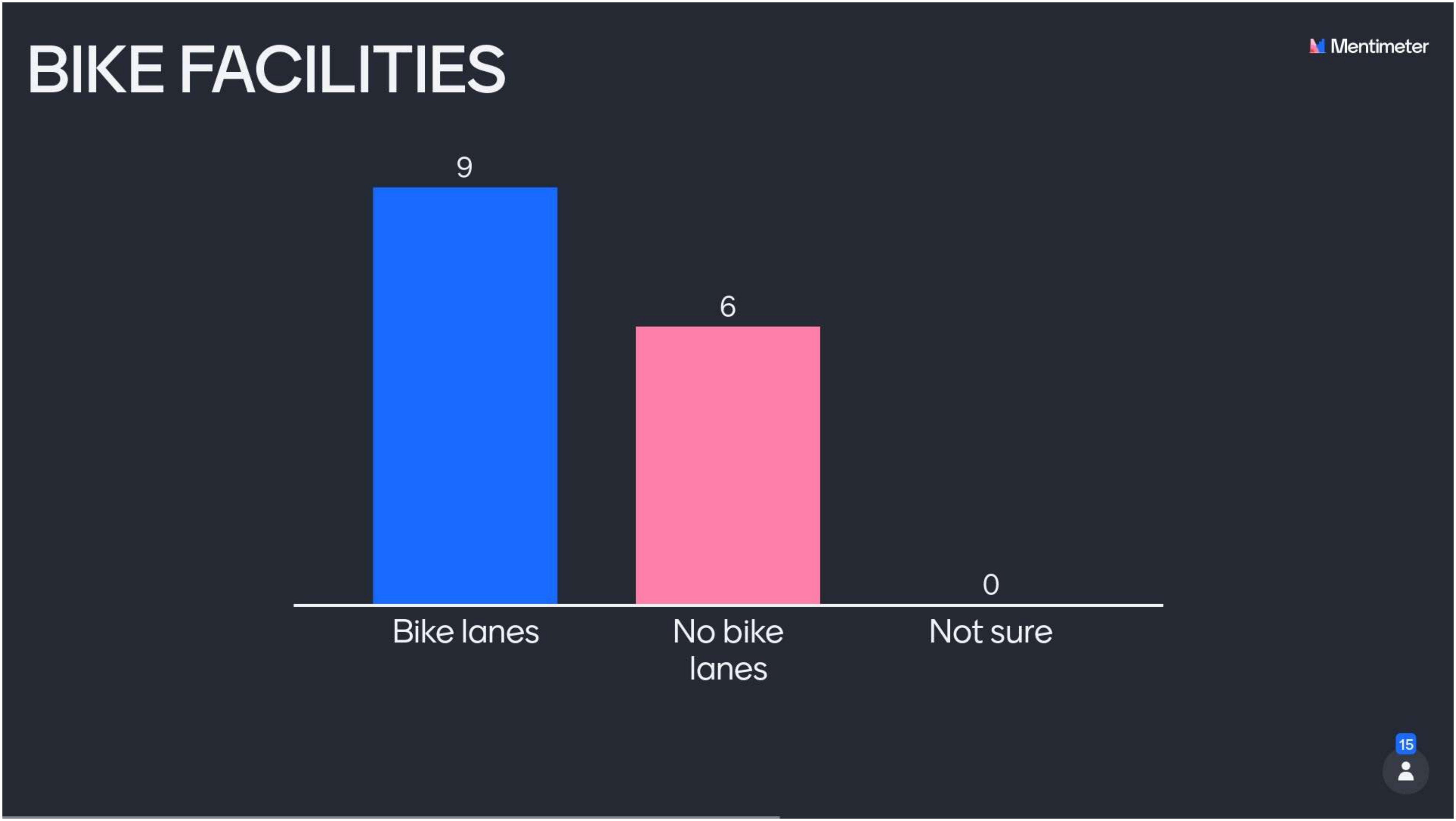
PARKING

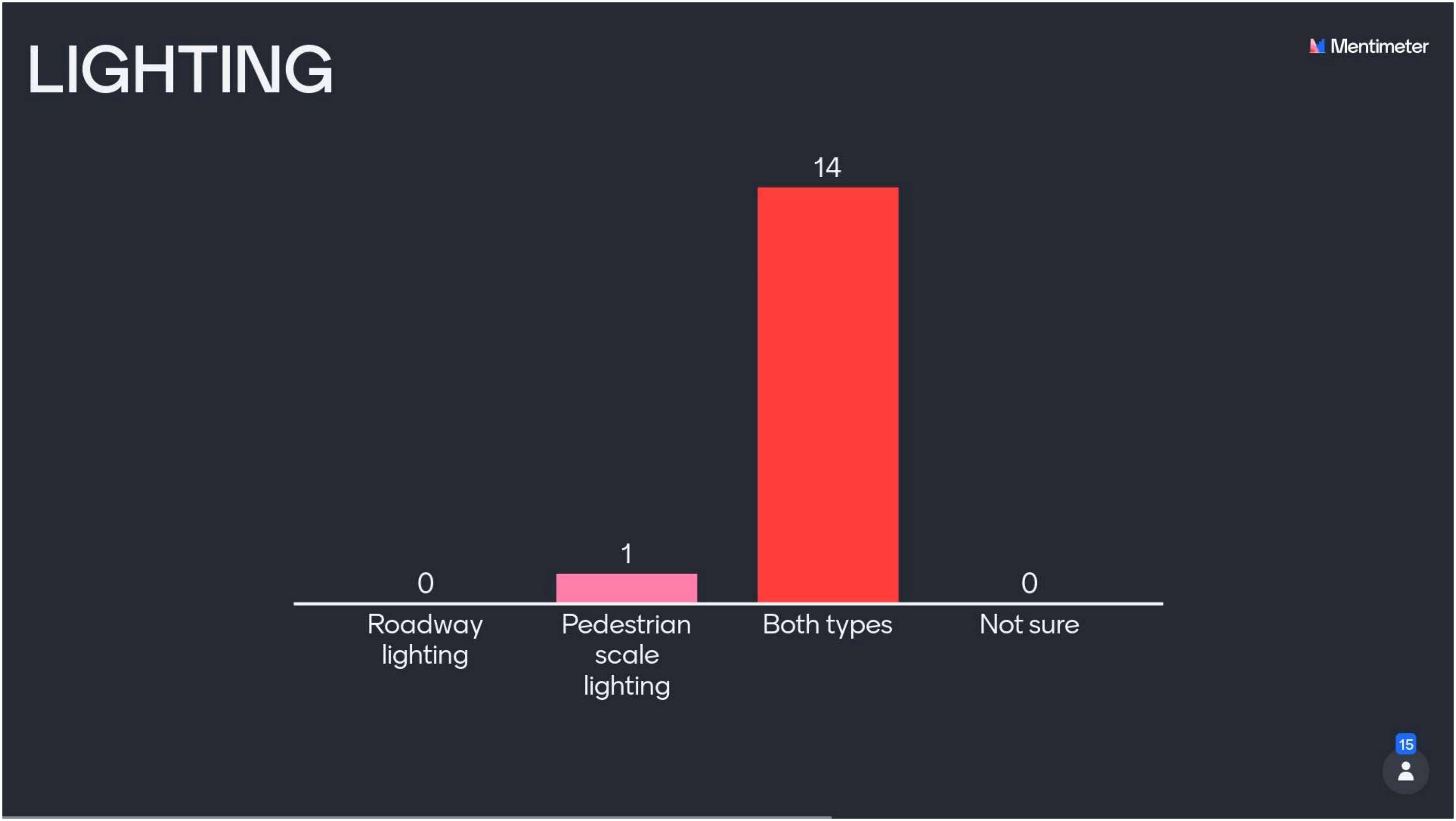


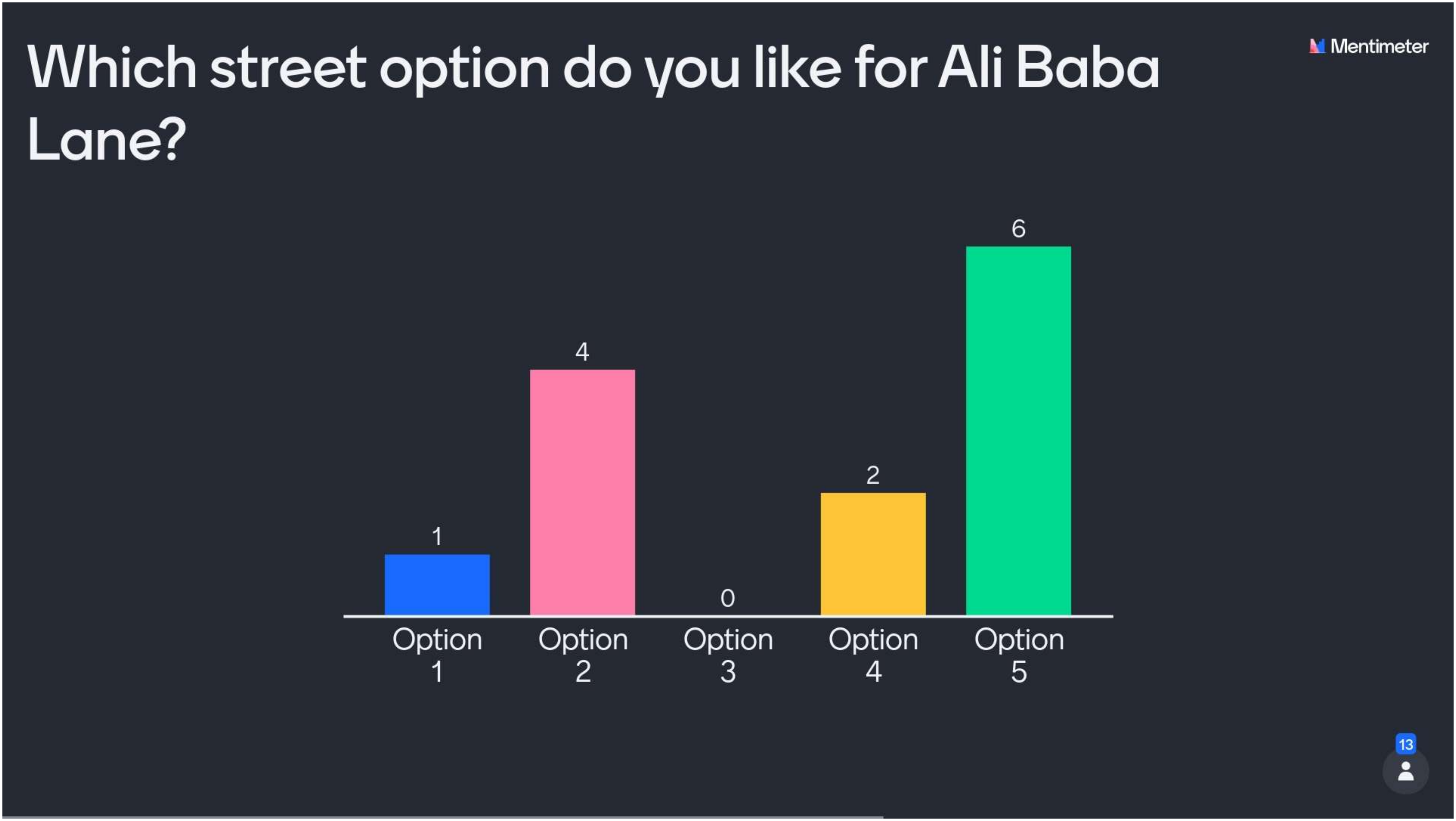
ACCESS MANAGEMENT

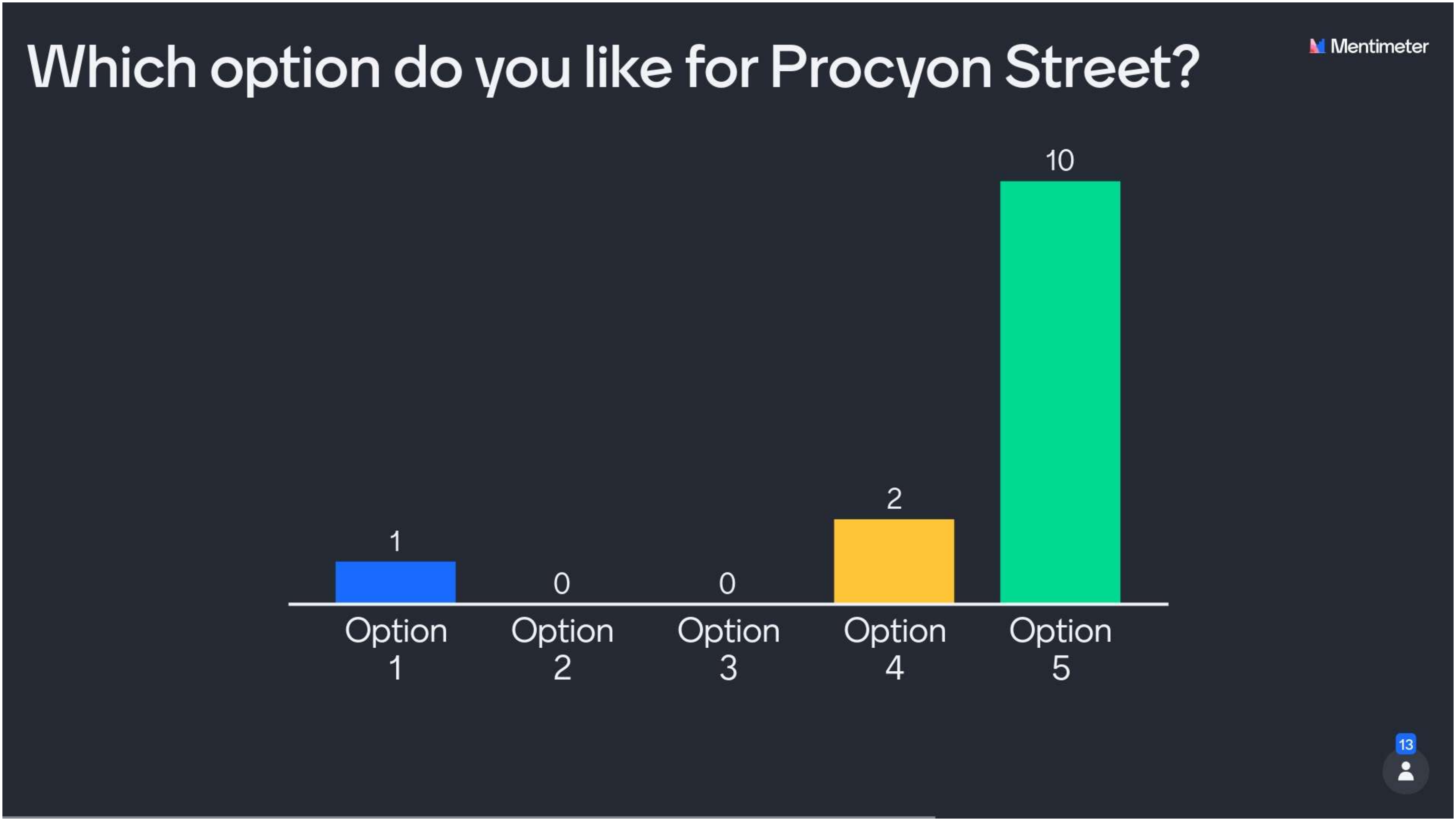


16


BIKE FACILITIES
Mentimeter
9
6
0
Bike lanes
No bike lanes
Not sure
15


LIGHTING
Mentimeter
14
1
0
0
Roadway lighting
Pedestrian scale lighting
Both types
Not sure
15

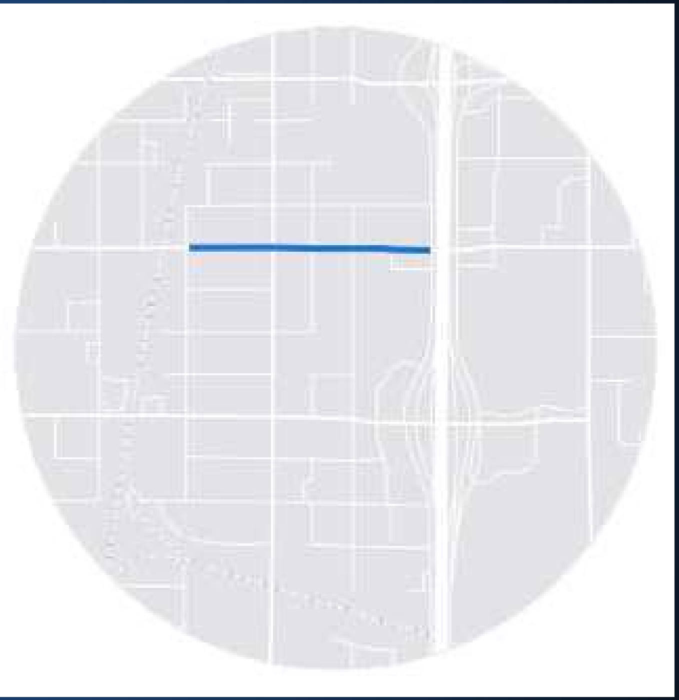

Which street option do you like for Ali Baba Lane?
Mentimeter
1
4
0
2
6
Option 1
Option 2
Option 3
Option 4
Option 5
13


Which option do you like for Procyon Street?
Mentimeter
10
2
1
0
0
Option 1
Option 2
Option 3
Option 4
Option 5
13

MAIN STREET

Design Features

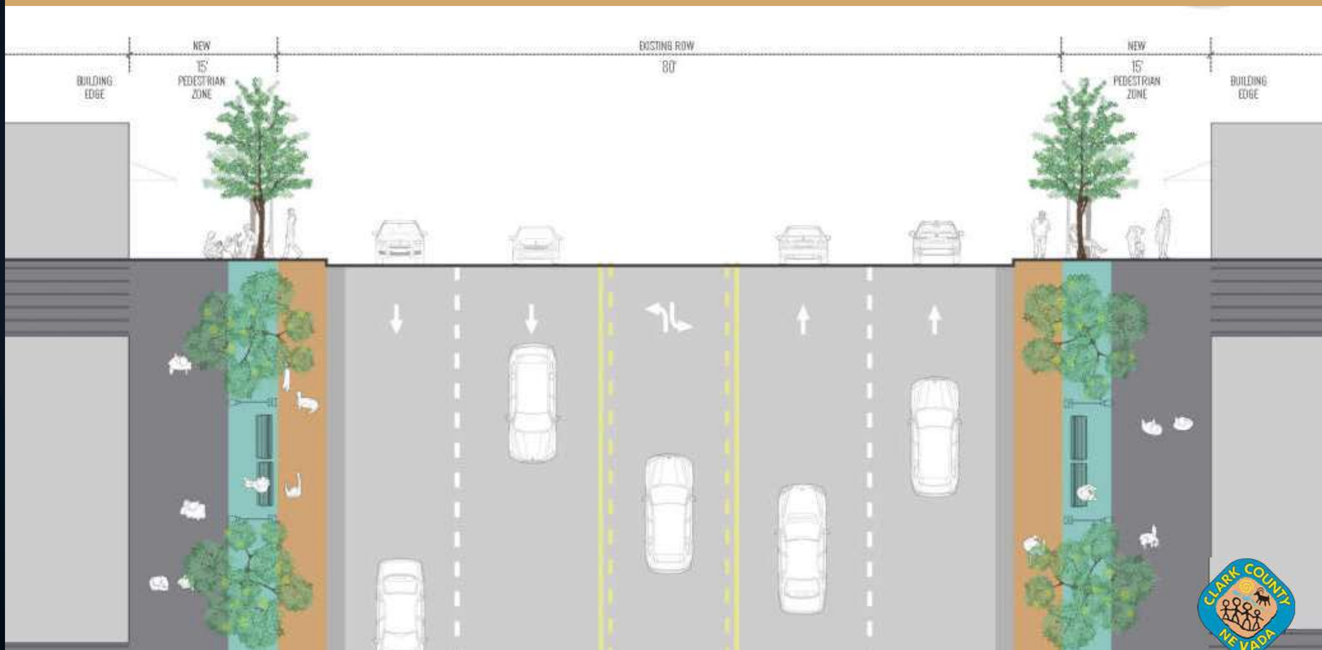
- Speed Limit 35 mph
- Wide sidewalks/pedestrian zones
- Four travel lanes
- Designated Bicycle Route
- Furniture zones



Hacienda Ave

MAIN STREET

OPTION 1



Design Elements and Criteria

- ROW—80 feet
- Maintains curb
- Two-Way Left Turn Lane width 14 feet
- Inside travel lane 11 feet
- Outside travel lane 14 feet
- Bicycle route signage
- Pedestrian lighting

MAIN STREET

OPTION 2

Design Elements and Criteria

- **ROW—80 feet**
- **Maintains curb**
- **Landscaped median 14 feet**
- **Inside travel lane 11 feet**
- **Outside travel lane 14 feet**
- **Bicycle Route signage**
- **Pedestrian lighting**

MAIN STREET

OPTION 3

Design Elements and Criteria

- ROW—80 feet
- Maintains curb
- Landscaped median width 12 feet
- Travel lanes 11 feet
- Bicycle lane 5 feet
- Pedestrian lighting

MAIN STREET

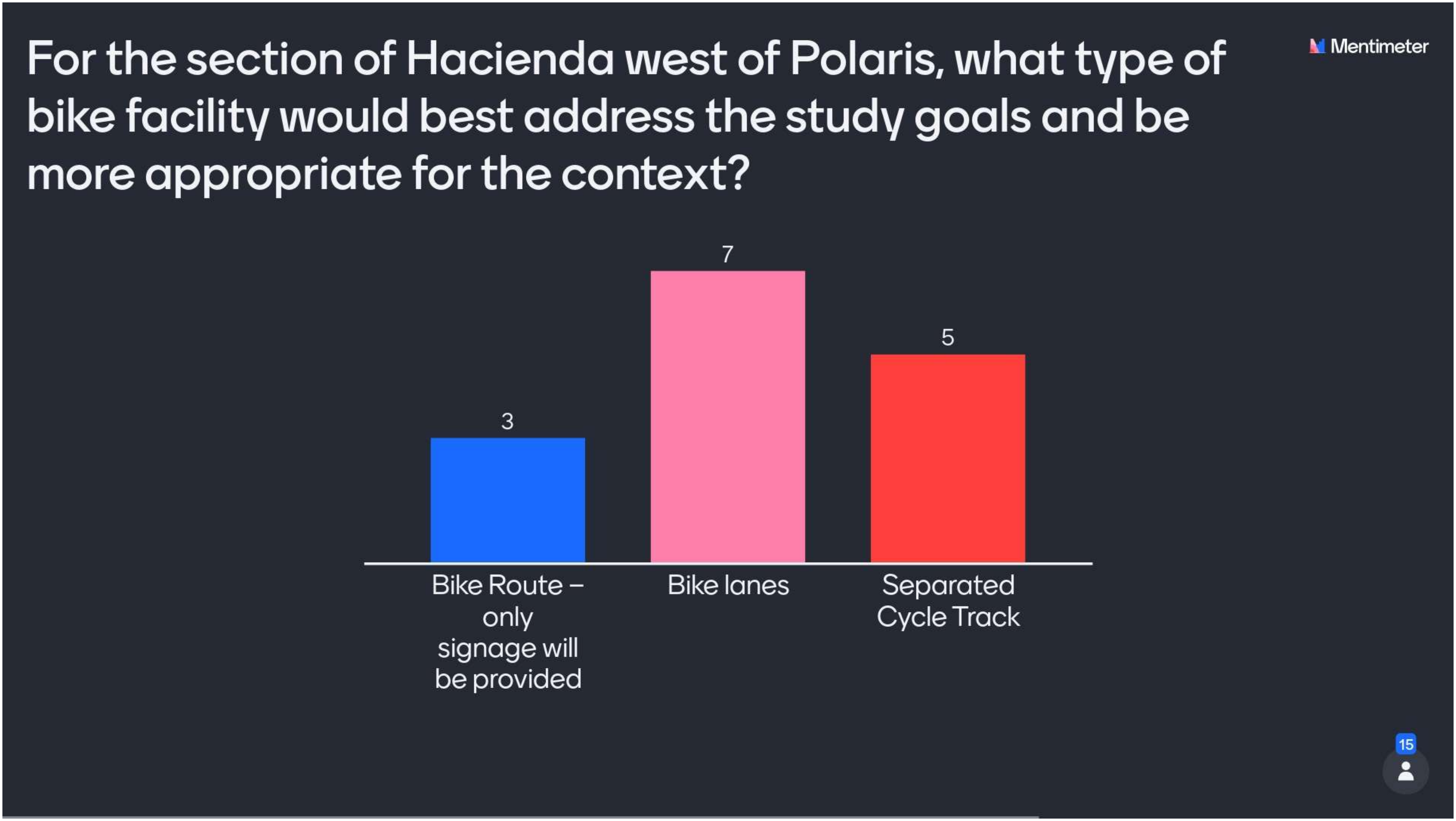
OPTION 4

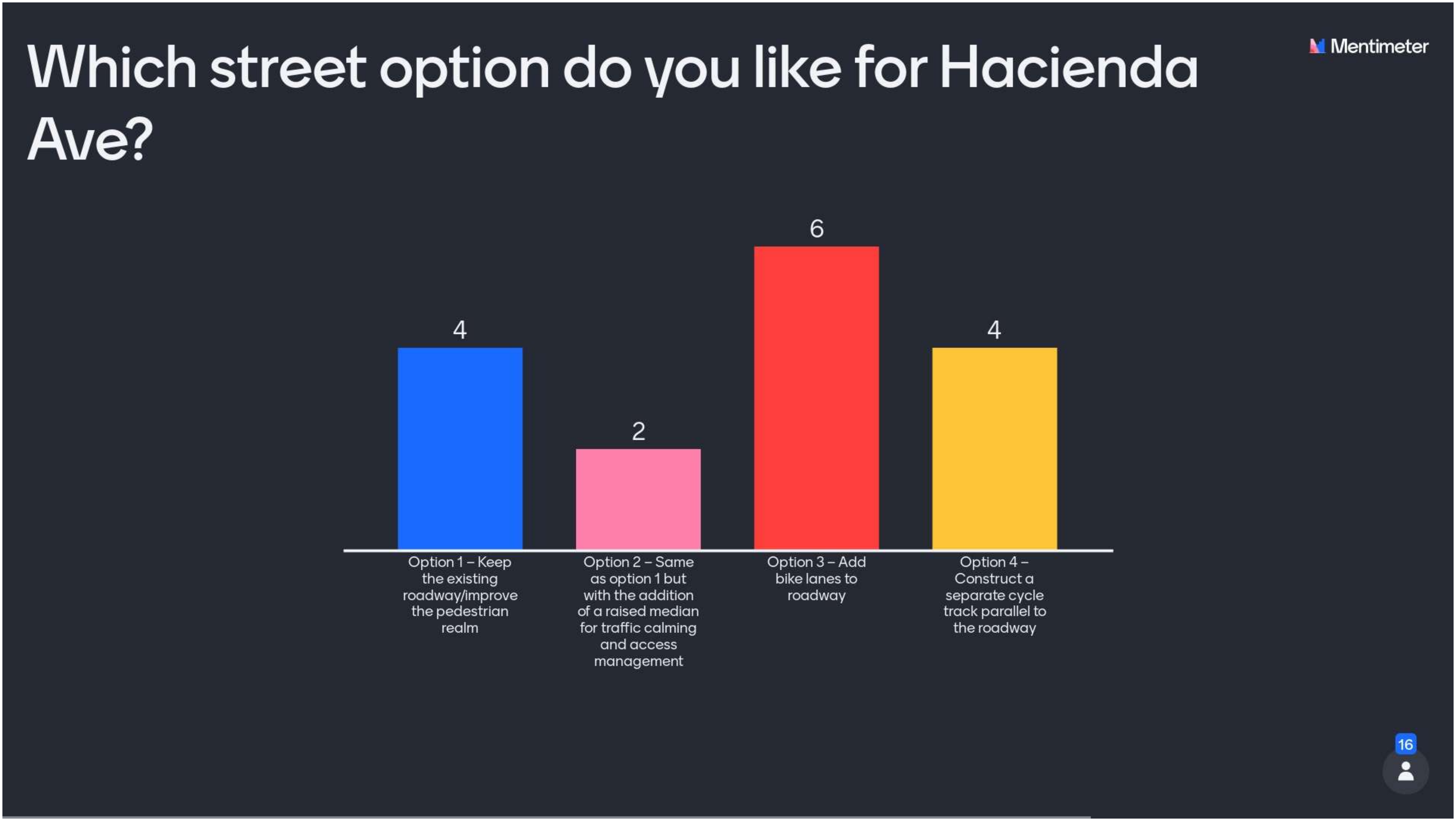
Design Elements and Criteria

- ROW—80 feet
- Curb reconstruction
- Landscaped median width 12 feet
- Travel lanes 11 feet
- Cycle track 10 feet
- Pedestrian lighting

MAIN STREET - HACIENDA AVENUE

To provide bike connectivity between the Stadium District and the west side of the valley, Hacienda Avenue is proposed to be designated as a Bicycle Route. Bike route signage will be included along this street, and bike lanes at selected locations depending on ROW availability.


For the section of Hacienda west of Polaris, what type of bike facility would best address the study goals and be more appropriate for the context?
Mentimeter
3
7
5
Bike Route – only signage will be provided
Bike lanes
Separated Cycle Track
15


Which street option do you like for Hacienda Ave?
Mentimeter
4
2
6
4
Option 1 – Keep the existing roadway/improve the pedestrian realm
Option 2 – Same as option 1 but with the addition of a raised median for traffic calming and access management
Option 3 – Add bike lanes to roadway
Option 4 – Construct a separate cycle track parallel to the roadway
16

MULTIMODAL STREET – BOULEVARD

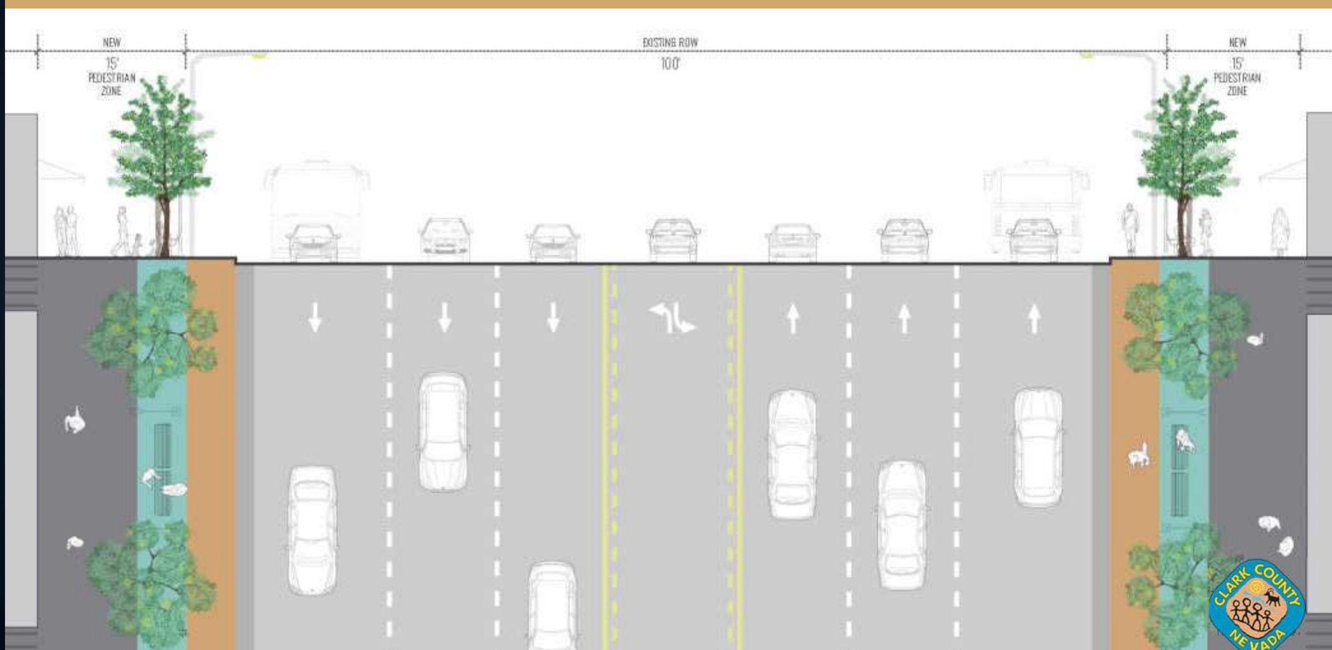
Design Features

- Speed Limit 35 mph
- Median separated/TWLTL
- Wide sidewalks/ Pedestrian zones
- Four to six travel lanes in each direction
- Elevated bike lanes
- Provides opportunity for transit
- Mid-Block pedestrian crossings

Valley View Blvd

MULTIMODAL STREET – BOULEVARD

OPTION 1



Design Elements and Criteria

- ROW—100 feet
- Two-Way Left Turn Lane width 14 feet
- Inside travel lanes 11 feet
- Outside travel lane 14 feet
- Transit route
- Pedestrian lighting

MULTIMODAL STREET – BOULEVARD

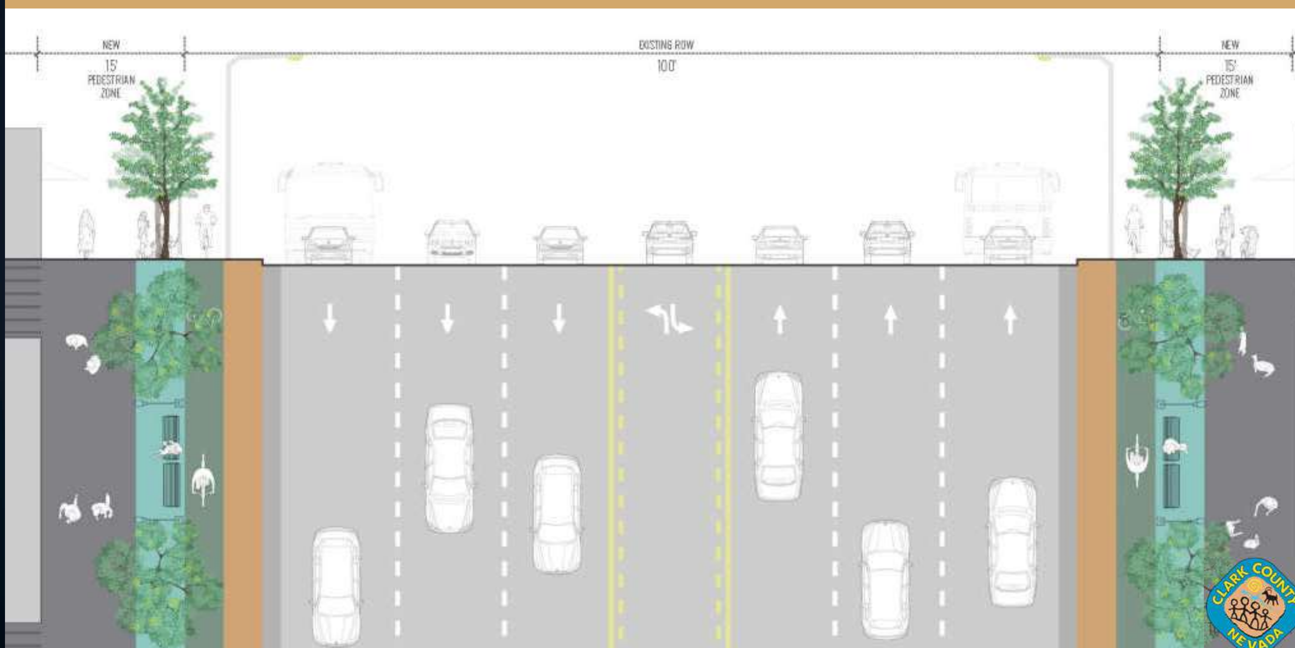
OPTION 2

Design Elements and Criteria

- **ROW—100 feet**
- **Landscaped median 14 feet**
- **Inside travel lanes 11 feet**
- **Outside travel lane 14 feet**
- **Transit route**
- **Pedestrian lighting**

MULTIMODAL STREET – BOULEVARD

OPTION 3



Design Elements and Criteria

- **ROW—100 feet**
- **Requires reconstruction**
- **Two Way Left Turn Lane width 12 feet**
- **Inside travel lanes 11 feet**
- **Outside travel lane 14 feet**
- **Bicycle lane 4 feet**
- **Public ROW sidewalk 4 feet**
- **Pedestrian lighting**

MULTIMODAL STREET – BOULEVARD

OPTION 4

Design Elements and Criteria

- **ROW—100 feet**
- **Requires reconstruction**
- **Landscaped median width 12 feet**
- **Inside travel lanes 11 feet**
- **Outside travel lane 12 feet**
- **Cycle Track 8 feet**
- **Sidewalk 4 feet**
- **Street / pedestrian lighting**

MULTIMODAL STREET – BOULEVARD

OPTION 5

Design Elements and Criteria

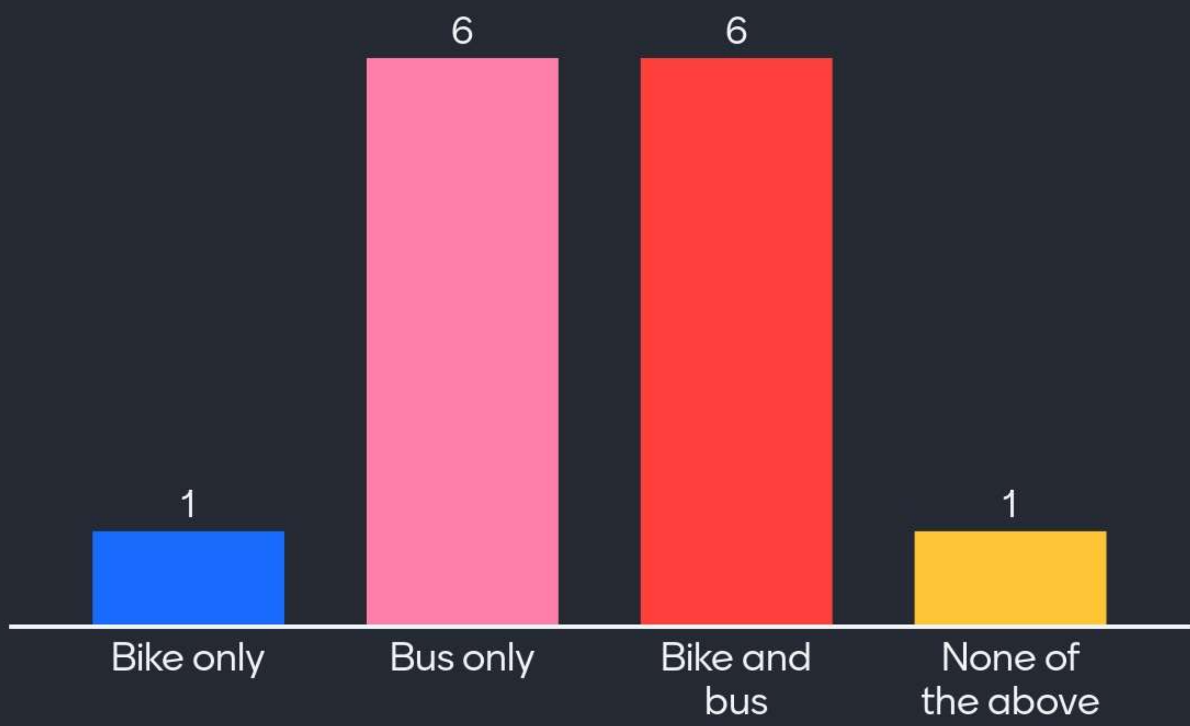
- **ROW—100 feet**
- **Landscaped median width 14 feet**
- **Travel lanes width 11 feet**
- **Transit lane width 14 feet**
- **Pedestrian lighting**

MULTIMODAL STREET – VALLEY VIEW BOULEVARD

1

In the near term what alternative modes of connectivity would you like to see along Valley View Boulevard?

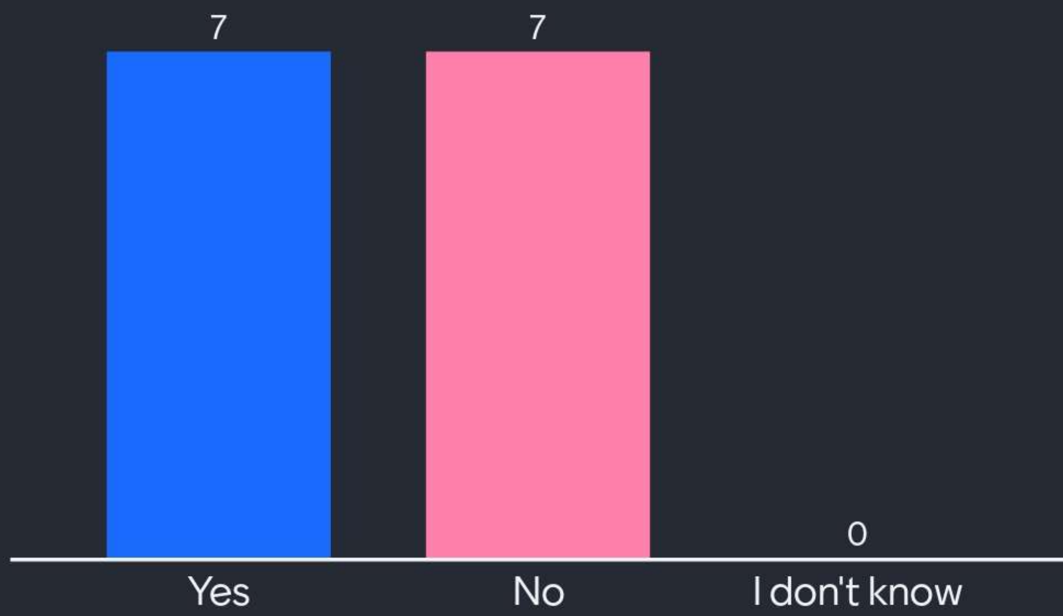
Mentimeter



14

Do you think adding pedestrian protective devices such as bollards/decorative fencing would be appropriate along Valley View Blvd within the District?

Mentimeter



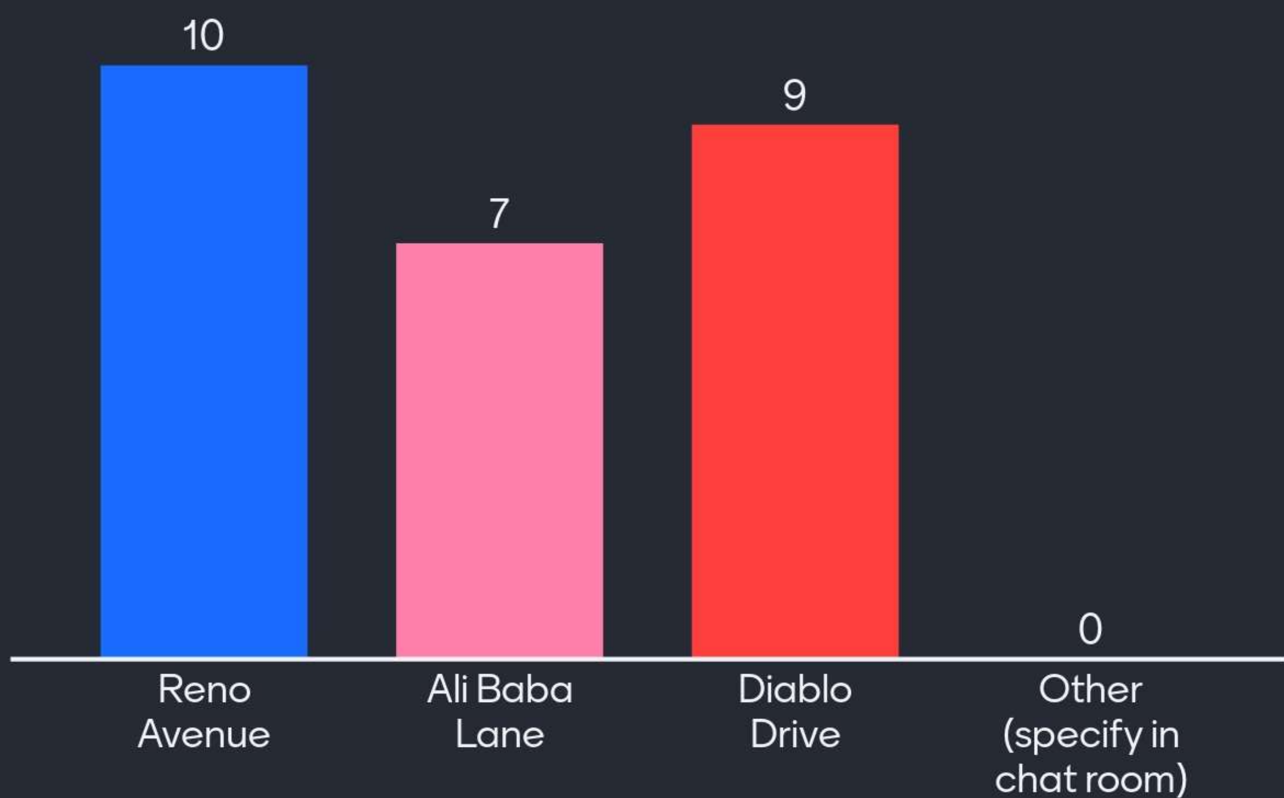
14

Pedestrian Crossings

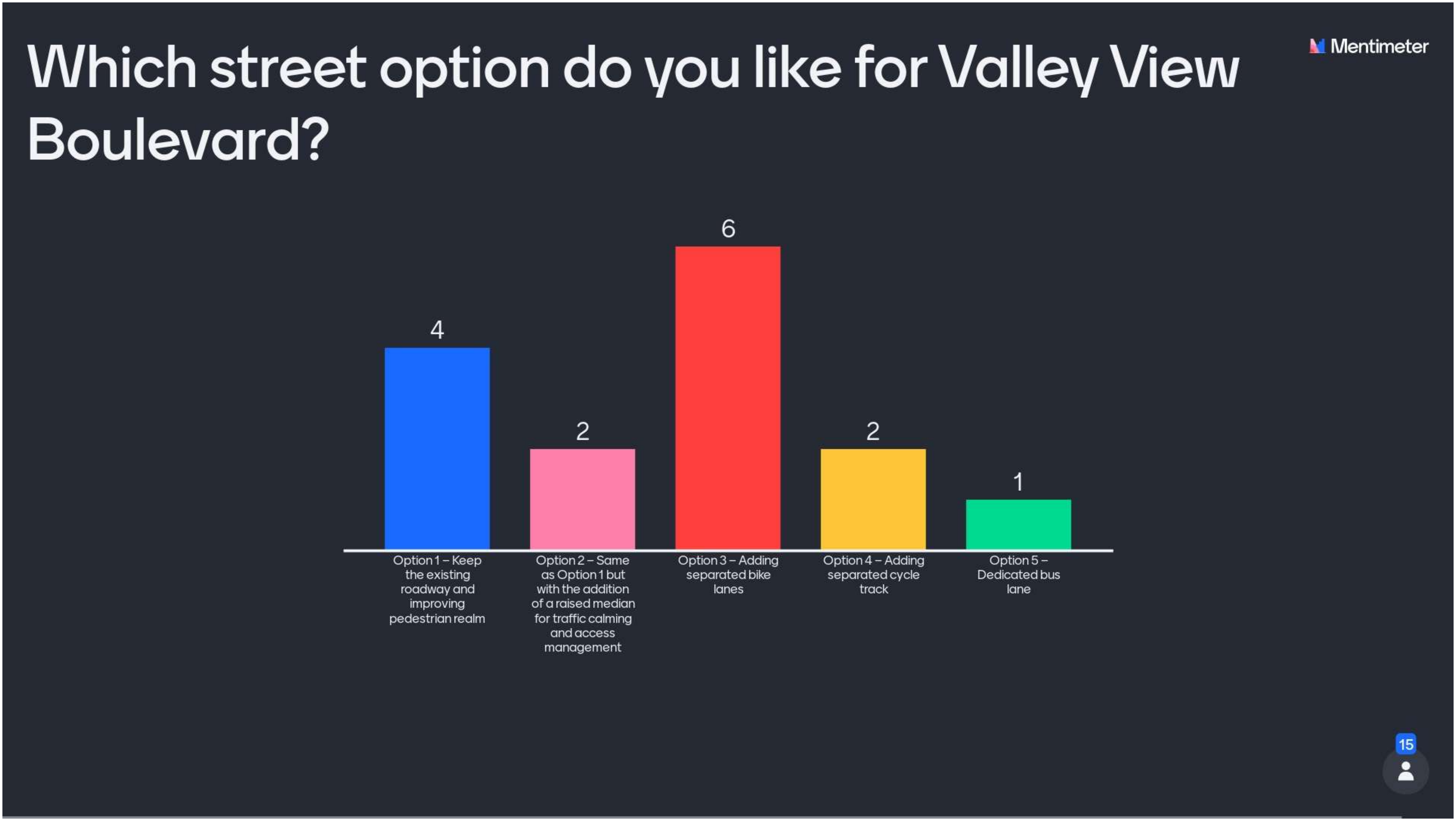
Designated pedestrian crossing locations are proposed along Valley View Boulevard at the intersections with Reno Avenue, Ali Baba Lane, and Diablo Drive. On the next slide, please indicate which crossings you think are most important.

Crossing options (Check all that apply):

Mentimeter



13



Which street option do you like for Valley View Boulevard?
Mentimeter
4
2
6
2
1
Option 1 – Keep the existing roadway and improving pedestrian realm
Option 2 – Same as Option 1 but with the addition of a raised median for traffic calming and access management
Option 3 – Adding separated bike lanes
Option 4 – Adding separated cycle track
Option 5 – Dedicated bus lane
15

MULTIMODAL STREET – REGIONAL HIGH SPEED

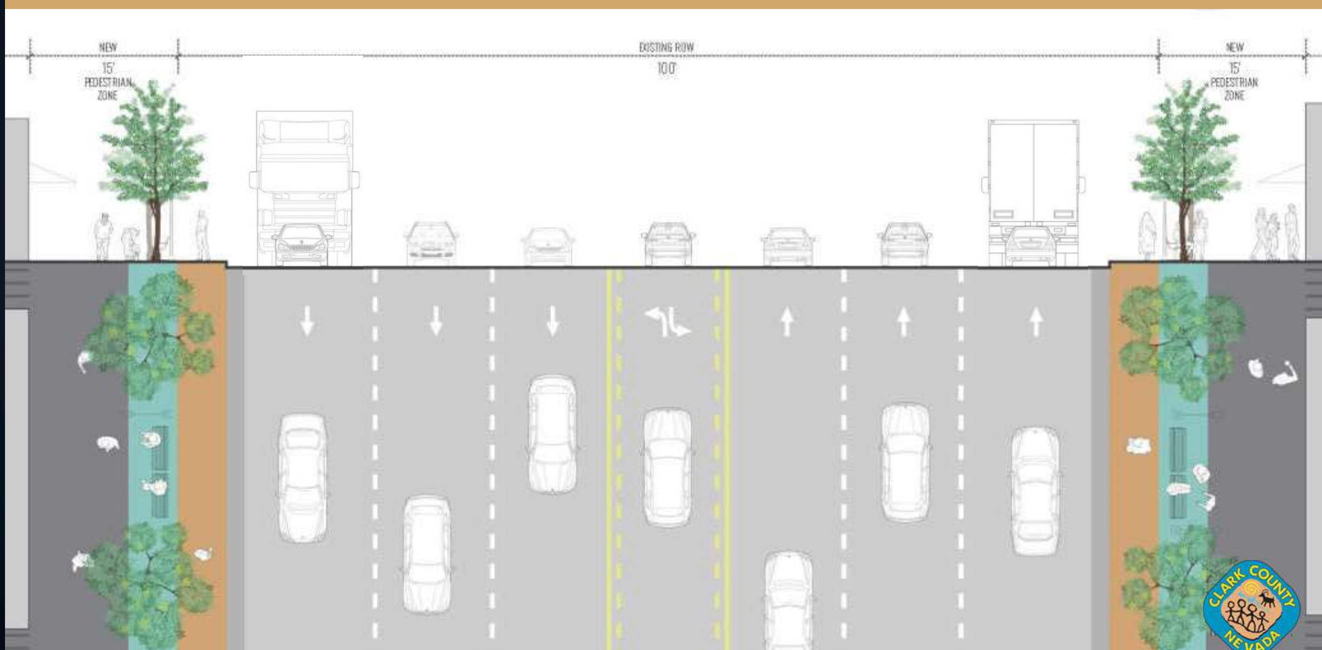
Design Features

- Speed Limit 45 mph
- Existing Curb
- TWLTL/Median separated roadway
- Wide sidewalks/ Pedestrian zones
- Six travel lanes
- Transit route

Russell Rd

MULTIMODAL STREET – REGIONAL HIGH SPEED

OPTION 1



Design Elements and Criteria

- **ROW—100 feet**
- **Two Way Left Turn Lane width 14 feet**
- **Inside travel lanes 11 feet**
- **Outside travel lane 16 feet**
- **Pedestrian lighting**

MULTIMODAL STREET – REGIONAL HIGH SPEED

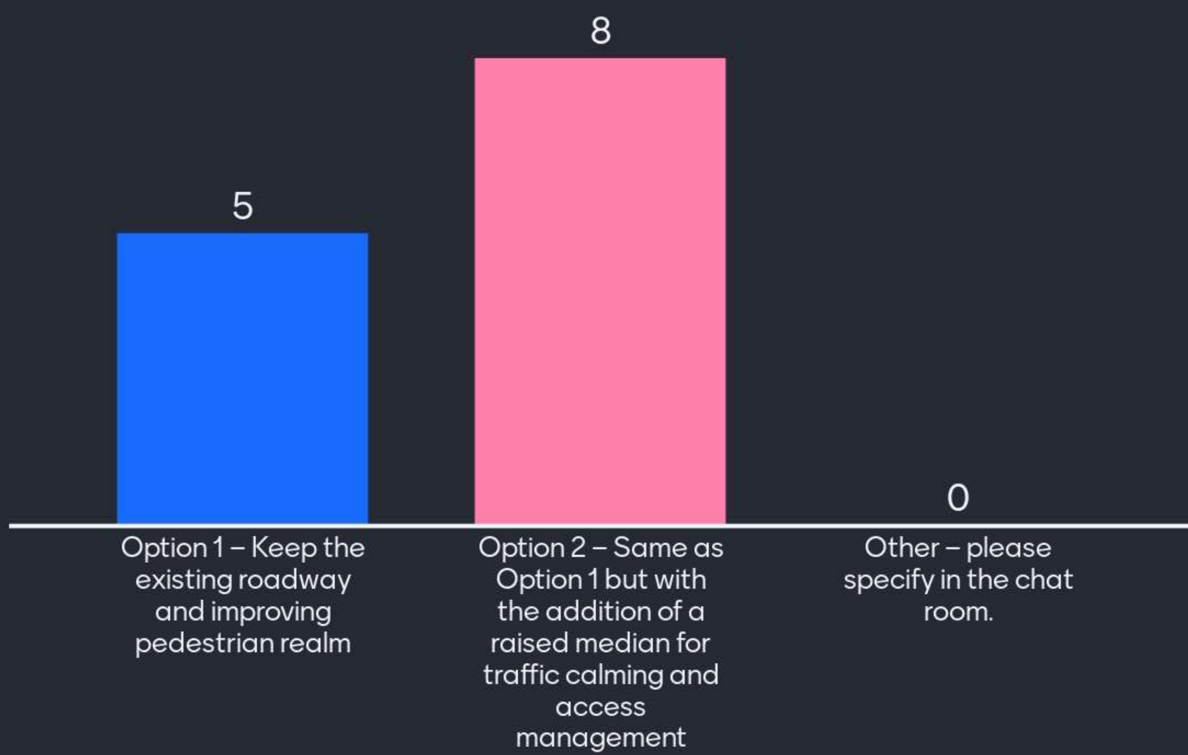
OPTION 2

Design Elements and Criteria

- **ROW—100 feet**
- **Landscaped median width 18 feet**
- **Inside travel lanes 11 feet**
- **Outside travel lane 14 feet**
- **Pedestrian lighting**

MULTIMODAL STREET - RUSSELL ROAD: Which street option do you like for Russell Road?

Mentimeter



13

EVENT STREET

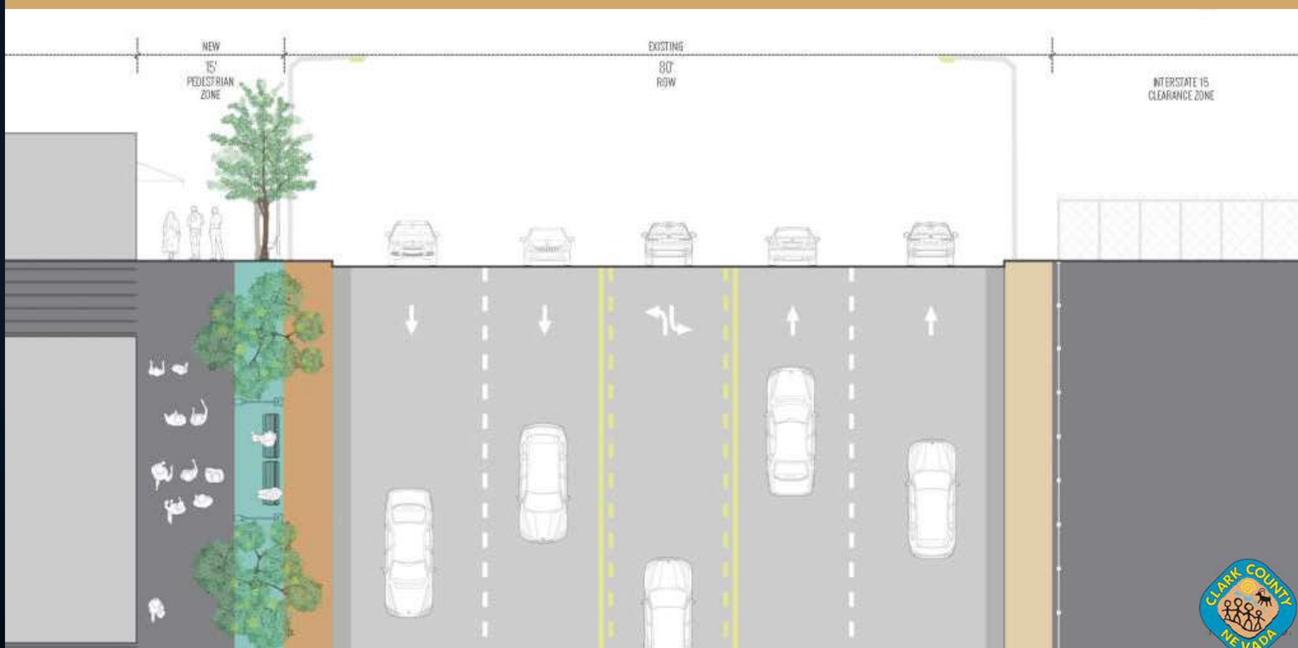
Design Features

- Existing Curb
- Two Way Left Turn Lane
- Wide sidewalks/ Pedestrian zones
- Four travel lanes

Dean Martin Drive; Polaris Avenue

EVENT STREET

DEAN MARTIN DRIVE

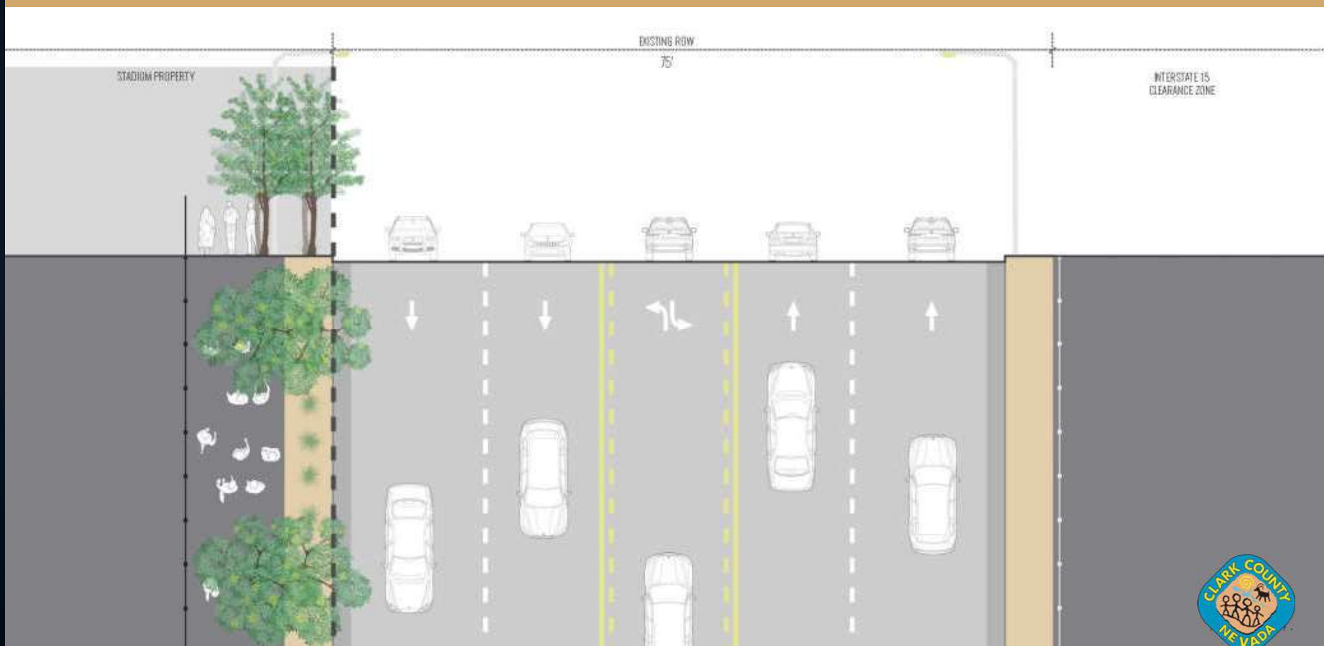


Design Elements and Criteria

- ROW—80 feet
- Speed Limit 35 mph
- Two Way Left Turn Lane width 14 feet
- Inside travel lane 11-12 feet
- Outside travel lane 14-16 feet
- Pedestrian lighting

EVENT STREET

DEAN MARTIN DRIVE

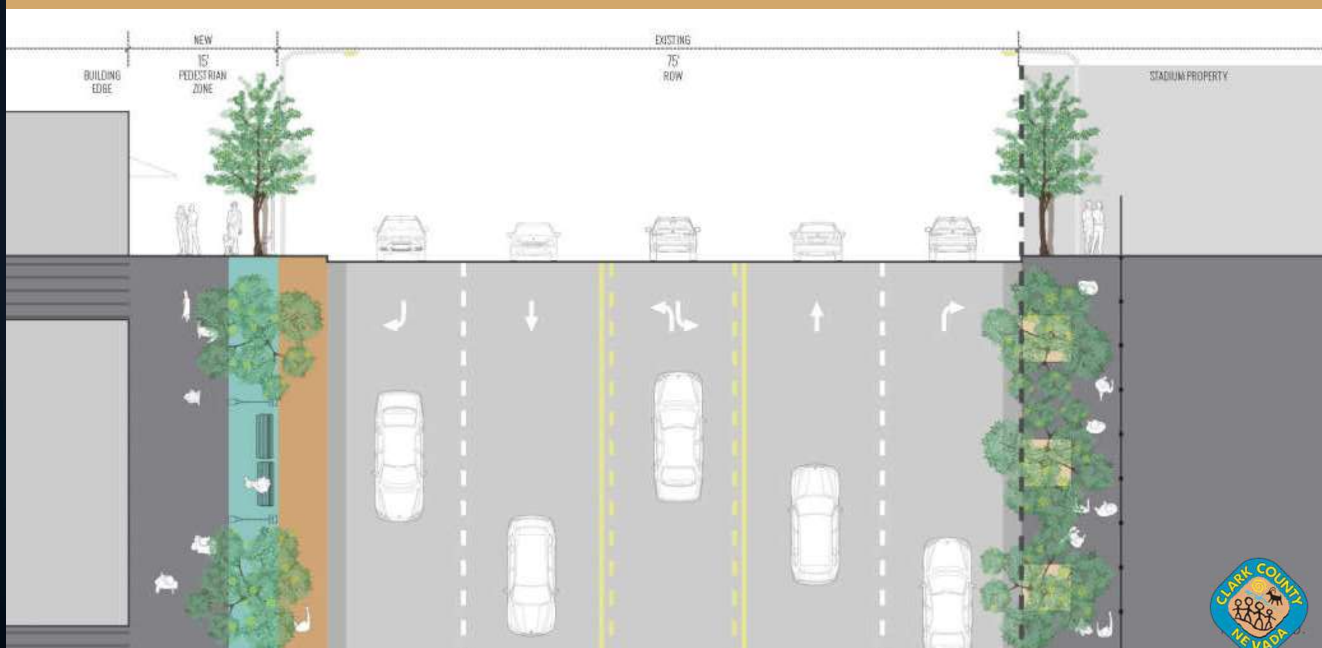


Design Elements and Criteria

- **ROW—75 feet**
- **Two Way Left Turn Lane width 14 feet**
- **Inside travel lane 11 feet**
- **Outside travel lane 16 feet**
- **Target speed 35 mph**
- **Street lighting**

EVENT STREET

POLARIS AVENUE



Design Elements and Criteria

- **ROW—75 feet**
- **Speed Limit 25 mph**
- **Two Way Left Turn Lane width 14 feet**
- **Inside travel lane 11 feet**
- **Outside travel lane 16 feet**
- **Street / pedestrian lighting**

WELCOME AND INTRODUCTIONS

SUMMARY OF PREVIOUS MEETINGS

STREET DESIGN

NEXT STEPS


NEXT STEPS
Initiate
Explore
Create
Validate
Deliver
Present
Draft Report

Q&A

APPENDIX B

Existing Conditions Report
an comprehensive transportation report conducted by
Kimley-Horn and Associates within the existing District

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STADIUM DISTRICT PLAN

Existing Conditions Report

Clark County and Regional Transportation Commission of Southern Nevada

05 March 2020

(Revised 18 December 2020; 7 May 2021)

Consultant Team:

Atkins ▪ Kimley Horn and Associates ▪ The JA Barret Company ▪ Ericka Aviles Consulting

Contents

Tables

Figures

List of Acronyms

ADA	American's with Disabilities Act
AHA	American Heart Association
BRT	Bus Rapid Transit
CDC	Center for Disease and Control
CCTV	Closed Circuit Television
FAST	Freeway and Arterial System of Transportation
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
GIS	Geographic Information System
HCM	Highway Capacity Manual
HOV	High Occupancy Vehicle
ITS	Intelligent Transportation Systems
LOS	Level of Service
LTS	Level of Traffic Stress
NDOT	Nevada Department of Transportation
RBPP	Regional Bicycle and Pedestrian Plan for Southern Nevada
RTC	Regional Transportation Commission of Southern Nevada
TNC	Transportation Network Company
TRB	Transportation Research Board
TWLTL	Two Way Left Turn Lane
UPRR	Union Pacific Railroad

1. INTRODUCTION

The purpose of the Stadium District Transportation Plan is to create a transportation plan for the approximate 1.23 square miles surrounding Allegiant Stadium, future home of the Las Vegas Raiders. Allegiant Stadium is located on the northwest corner of Russell Road and Dean Martin Drive in Clark County, Nevada. Allegiant Stadium is anticipated to include 65,000 seats and is expected to be completed in July 2020.

Clark County is currently working on a land use plan for the “Stadium District,” or the 1.23 mile area surrounding Allegiant Stadium that includes the land parcels bordered by Tropicana Avenue to the north, Union Pacific Railroad (UPRR) to the west and south, and Interstate 15 (I-15) to the east as shown in **Figure 1**.

For the purposes of the Stadium District Transportation Plan, the study area extends around the “Stadium District” boundaries to Harmon Avenue to the north, Las Vegas Boulevard to the east, and the Clark County 215 Beltway to the south.

This report provides a summary of existing conditions and related studies for the Stadium District study area, including:

- A review of related transportation plans and studies
- Site visit photographs and observations
- A series of map exhibits to evaluate the existing transportation network and identify gaps and areas for improvements within the Stadium District Transportation Plan study area
- An existing street network analysis conducted to evaluate existing roadway conditions including benefits of planned improvements, level of service (LOS) analysis, and street capacity.
- Review of existing studies related to the health benefits of improved transportation alternatives

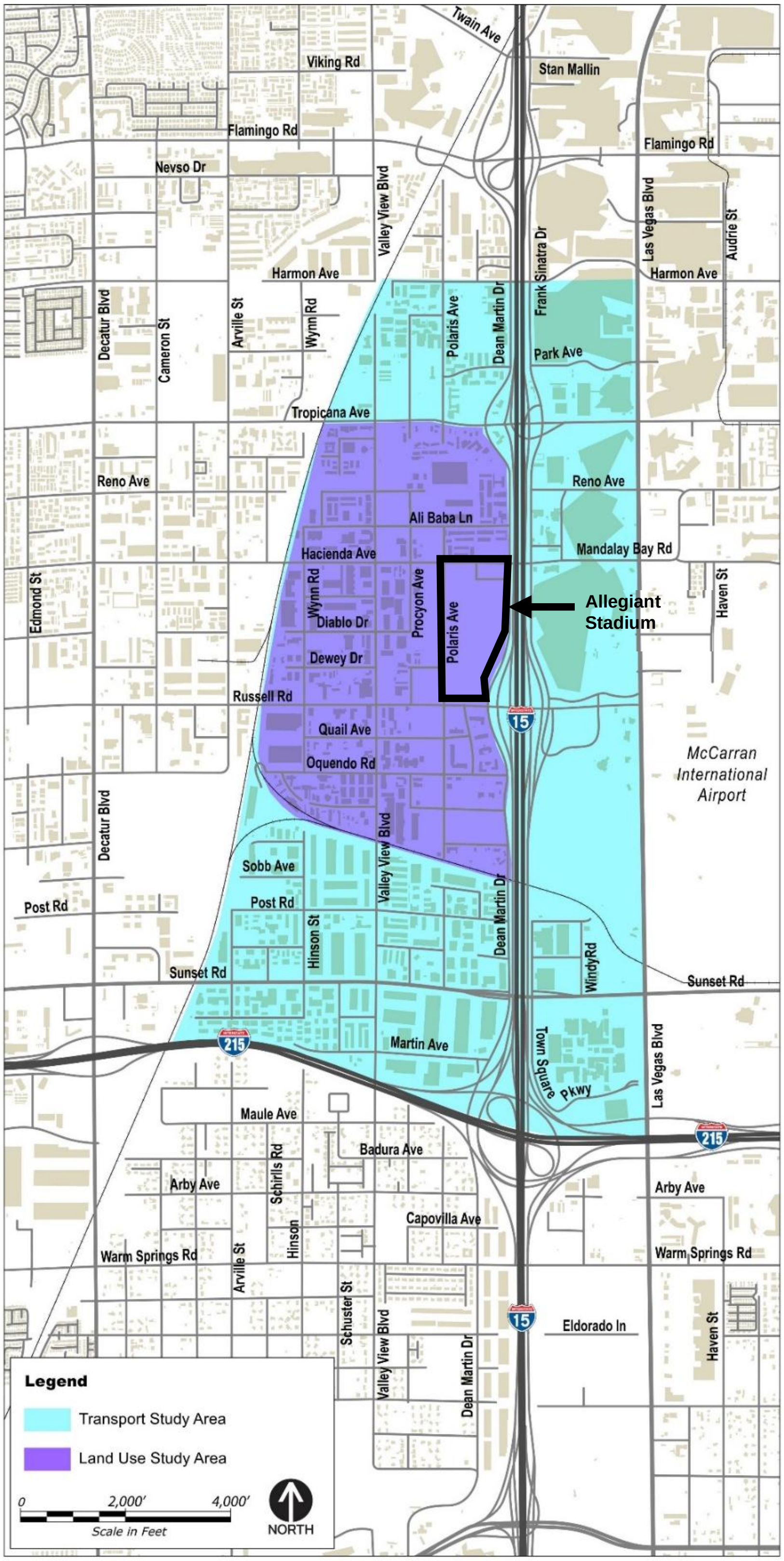


Figure 1 – Vicinity Map

2. REVIEW OF RELATED STUDIES

The following existing plans and studies were reviewed in relation to the Stadium District Transportation Plan:

- Regional Bicycle and Pedestrian Plan for Southern Nevada (RBPP) (April 2017)
- Southern Nevada Strong – Regional Plan (January 2015)
- Access 2040 Regional Transportation Plan for Southern Nevada (February 2017)
- Transportation Investment Business Plan (April 2016)
- Regional Schools Multimodal Transportation Access Study (June 2015)
- On Board – State of the System (December 2017)
- Modeling and Analysis of Walkability in Suburban Neighborhoods in Las Vegas (May 2017)
- Regional Bicycle Network Gap Analysis (May 2014)
- Las Vegas NFL Stadium Sites Traffic Assessment (October 2016)
- Southern Nevada HOV Plan Update (July 2015 – includes 2018 Addendum)
- I-15 Tropicana Project (2018-Ongoing)
- Site Access and Circulation Event and Non-Event Day Operations Traffic Impact Study Addendum #1 (December 2017) and 2020 NFL Season Initial Event Management and Transportation Summary (January 2020)
- Seattle Create Community Through Common Goals – Stadium District Concept Plan (December 2012)
- Downtown Atlanta Transportation Plan (May 2018)

Each study provides guidance, direction, and a multitude of takeaways that are relevant for future transportation planning within and surrounding the Stadium District. A summary of each study and its relevant goals, objects, and recommendations in relation to the Stadium District are included in **Appendix A**.

2.1. Regional Transportation Commission of Southern Nevada

Plans completed and/or published by the Regional Transportation Commission of Southern Nevada (RTC) are summarized below. These plans include:

- Regional Bicycle and Pedestrian Plan for Southern Nevada (RBPP) (April 2017)
- Southern Nevada Strong – Regional Plan (January 2015)
- Access 2040 Regional Transportation Plan for Southern Nevada (February 2017)
- Transportation Investment Business Plan (April 2016)
- Regional Schools Multimodal Transportation Access Study (June 2015)
- On Board – State of the System (December 2017)
- Modeling and Analysis of Walkability in Suburban Neighborhoods in Las Vegas (May 2017)
- Regional Bicycle Network Gap Analysis (May 2014)

2.1.1. Regional Bicycle and Pedestrian Plan for Southern Nevada (April 2017)

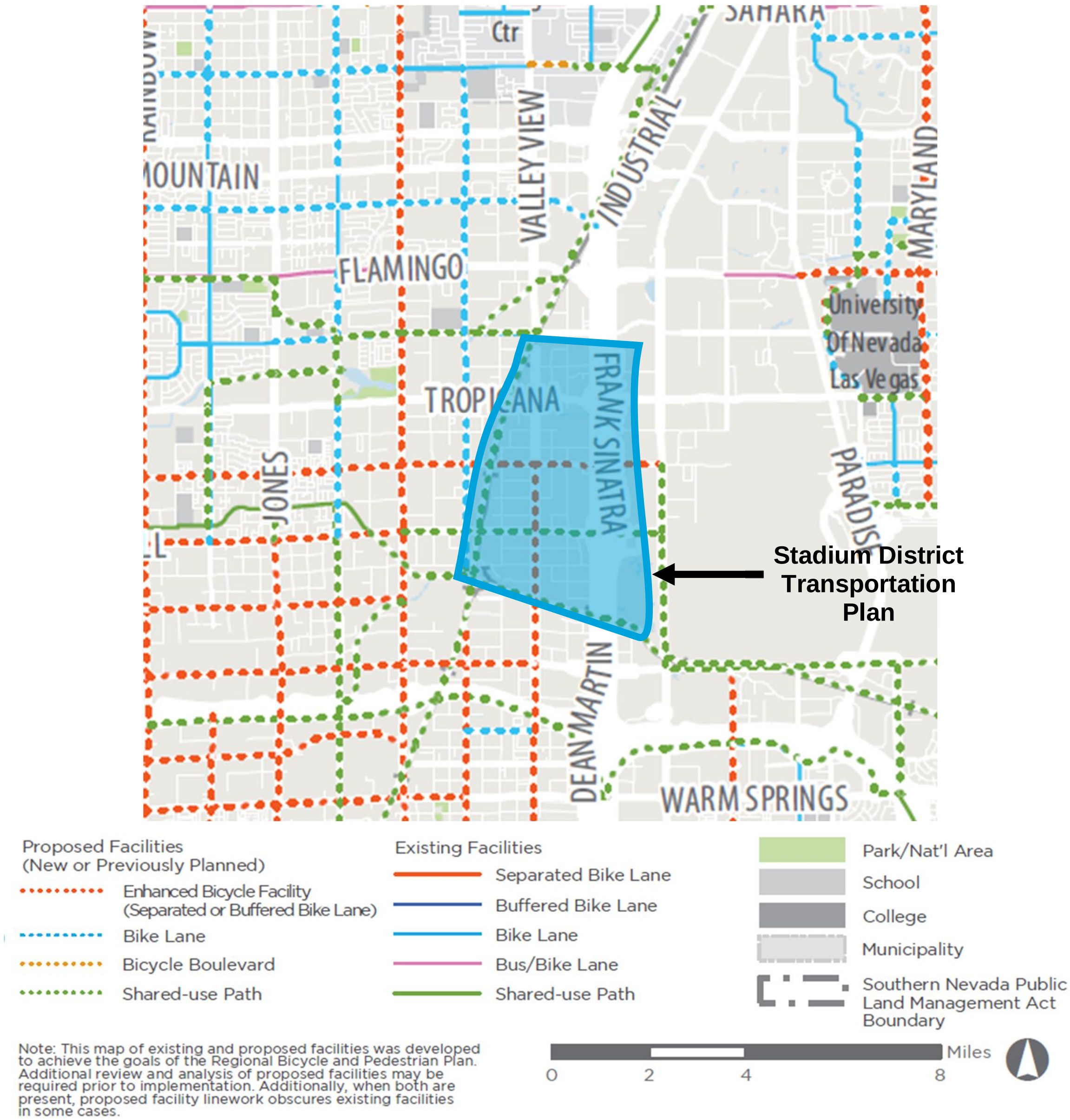
The Regional Bicycle and Pedestrian Plan for Southern Nevada (RBPP) was developed by Alta Planning + Design and CH2M and commissioned by the RTC in April 2017 with support from the Southern Nevada Health District. The purpose of the plan was to facilitate bicycle and pedestrian activity in the region. In the plan, four major goals were set to accomplish this purpose:

- Goal 1: Comfort & Safety – Develop comprehensive facilities throughout Southern Nevada to make bicycling and walking safe, comfortable, and convenient for all ages and abilities.
- Goal 2: Access – Improve bicycling and walking access to community destinations across Southern Nevada including connections to transit.
- Goal 3: Education & Encouragement – Encourage broader participation, appreciation, and awareness of walking and bicycling through program efforts targeted at all ages and abilities.
- Goal 4: Equity & Health – Recognize the transportation system's impact on air quality and community health while providing ladders of opportunity to underserved neighborhoods.

A study of existing conditions indicated one percent of all trips in Southern Nevada were completed by bicycle, while eight to twelve percent were completed by walking. Only 14-17% of all collectors and arterials were comfortable enough for the typical resident to ride a bike on. The top obstacles to walking or biking indicated by those surveyed were safety concerns (inadequate lighting, too much traffic), weather (too hot, no shade), and not convenient (takes too long, too much too carry). The most recommended improvements were better facilities (wider, separated), more paved regional trails, and more safe routes to school. Southern Nevadans indicated they would be more likely to bike or walk if adequate facilities were provided. Given that walking is currently much more common than biking, the existing network of sidewalks and paths must be much more sufficient than existing bicycle infrastructure. Either the network of bicycle facilities is not widespread enough or users are not comfortable with existing unseparated bike lanes, or both.

Relation to Stadium District:

To accommodate the large number of expected visitors to the Stadium District Transportation Plan Study Area while reducing the parking demands and traffic impacts on the region's roads, improved pedestrian and bicycle infrastructure should be provided near the stadium site with connections to the surrounding areas. The RBPP proposes enhanced bicycle facilities (separated or buffered bike lanes) on Valley View Boulevard and Hacienda Avenue and a shared-use path on Russell Road and along the UPRR tracks at the western end of the study area as shown in **Figure 2**.



Source: Regional Bicycle and Pedestrian Plan for Southern Nevada

Figure 2 – Region Bicycle and Pedestrian Plan for Southern Nevada

2.1.2. Southern Nevada Strong - Regional Plan (January 2015)

The Southern Nevada Strong – Regional Plan (Southern Nevada Strong Regional Plan) was created through a consortium of 13 regional partners to bring the region together to envision a better future recognizing the critical role of our built environment in all aspects of community life. It developed a vision for future development through a collaborative effort across a wide variety of areas. The plan identified the following challenges faced by Southern Nevada:

- Uncoordinated growth and disconnected land use
- Economic volatility and over-reliance on gaming, tourism, and construction

- Social disparities and vulnerable communities
- Continued growth and changing demographics

It was determined that the top priorities of Southern Nevada serve as the three main themes of the Southern Nevada Strong Plan, these themes are:

- Improve economic competitiveness and education
- Invest in complete communities
- Increase transportation choices

Based on the Southern Nevada Strong Regional Plan the goals in the transportation theme include:

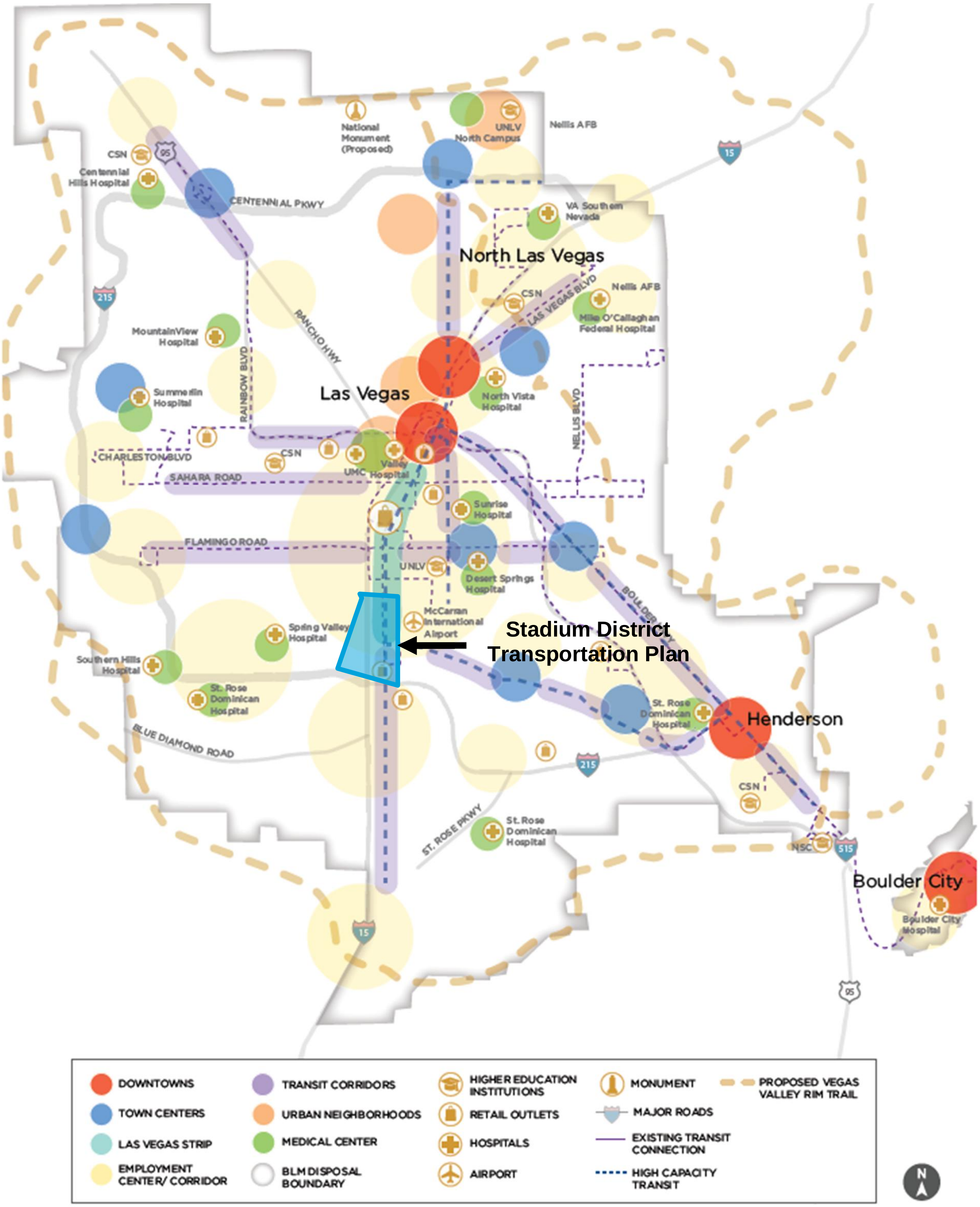
- Developing a modern and integrated transit system
- Enhancing the bicycle and pedestrian facilities
- Developing a safe and efficient road network that supports all modes of transportation

Relation to Stadium District:

The Southern Nevada Strong Regional Plan supports and promotes complete streets principles throughout Southern Nevada and is consistent with the Federal Highway Administration's (FHWA) Network Principles on Accessibility, Comfort, Cohesion, Alternatives, Safety and Security, and Directness. The Stadium District Transportation Plan is consistent with the goals of the Southern Nevada Strong Plan in that it will:

- Develop vacant, underutilized land within the Stadium District
- Create more job opportunities for the community
- Integrate multimodal transportation into the urban fabric

The Southern Nevada Strong Regional Plan map is displayed in **Figure 3**.



Source: Southern Nevada Strong Regional Plan

Figure 3 – Southern Nevada Strong Regional Plan

2.1.3. Access 2040 Regional Transportation Plan for Southern Nevada (February 2017)

Federal law requires the development of a regional transportation plan for Southern Nevada; in response the RTC published the Access 2040 Regional Transportation Plan for Southern Nevada. After conducting a survey of over 7,000 residents, the following primary strategies were adopted to improve access to jobs and services for Southern Nevada residents:

- Improve safety
- Manage congestion
- Enhance multimodal connectivity
- Maintain current infrastructure

Six additional secondary strategies were also identified:

- Improve access to essential services
- Provide an accountable and transparent planning process
- Enhance freight movement
- Improve public health related to transportation
- Conserve and protect natural resources
- Use innovative planning to address emerging technologies and trends

Relation to Stadium District:

This plan supports the expansion and connectivity of pedestrian and bicycle facilities throughout the Stadium District Transportation Plan area which satisfies the FHWA's Network Principles on Cohesion, Directness, Alternatives, and Accessibility.

2.1.4. Transportation Investment Business Plan (April 2016)

The Transportation Investment Business Plan explores opportunities for transportation growth in the Las Vegas area. Peer cities around the world were studied and evaluated for contributions to state-of-the art mobility and safe practices in urban planning. Unique to the Las Vegas Valley is the iconic Strip and downtown area that provide for much of the local economy. The plan defined a "Core Area" for the study which spans from Valley View Boulevard to the west, Maryland Parkway on the east, Washington Avenue on the north, and Clark County 215 Beltway on the south. The Las Vegas Strip and outlying communities were studied to identify areas of greatest growth potential. It was determined that in the coming years a multimodal transportation system will become essential to the Las Vegas Valley for the sustainability of its economy. As a part of this business plan, the Las Vegas Valley will need partnerships between the public and private sectors. Other cities such as Denver, San Francisco, San Diego, and Phoenix have had success doing so. The business plan recommendations are grouped into seven suites. These seven suites include improvement in the following areas:

- Surface/Local Roadway Improvements
- High-Capacity Transit Improvements
- Pedestrian Improvements
- Freeway Improvements

- Public Policy Actions

Further, the plan made recommendations to:

- Improve mobility between the airport, resort corridor, and downtown via a new light rail line
- Increase pedestrian safety and mobility along Las Vegas Boulevard
- Improve connections between convention centers and event facilities
- Improve downtown circulation and access
- Improve access to the Core Area from I-15

Relation to Stadium District:

The Stadium District Transportation Plan can partially fulfill these recommendations by ensuring the area connects with the "Core Area" and I-15. The plan proposes improving pedestrian mobility along Las Vegas Boulevard which forms the eastern boundary of the Stadium District. Further, the plan proposes a Bus Rapid Transit (BRT) line along Flamingo Road which is located a mile north of the Stadium District boundary.

2.1.5. Regional Schools Multimodal Transportation Access Study (June 2015)

CH2M produced the Regional Schools Multimodal Transportation Access Study for the RTC in June 2015. The purpose of the Regional Schools Multimodal Transportation Access Study was to establish a toolbox of policies, guidelines, and strategies for developing schools that are accessible to children by all modes of transportation including vehicular, bicycle, and walking.

When creating the toolbox of policies, guidelines, and strategies for ideal access to schools the following underlying principles were used:

- Separation of sidewalks and multi-use pathways from traffic
- Safe and pleasant pedestrian and bicycle routes that allow for natural surveillance
- Direct connections
- Integrated local, regional, and state-wide pedestrian and bicycle facilities, sidewalks, and multi-use pathways
- Open access to school sites on all four sides

Relation to Stadium District:

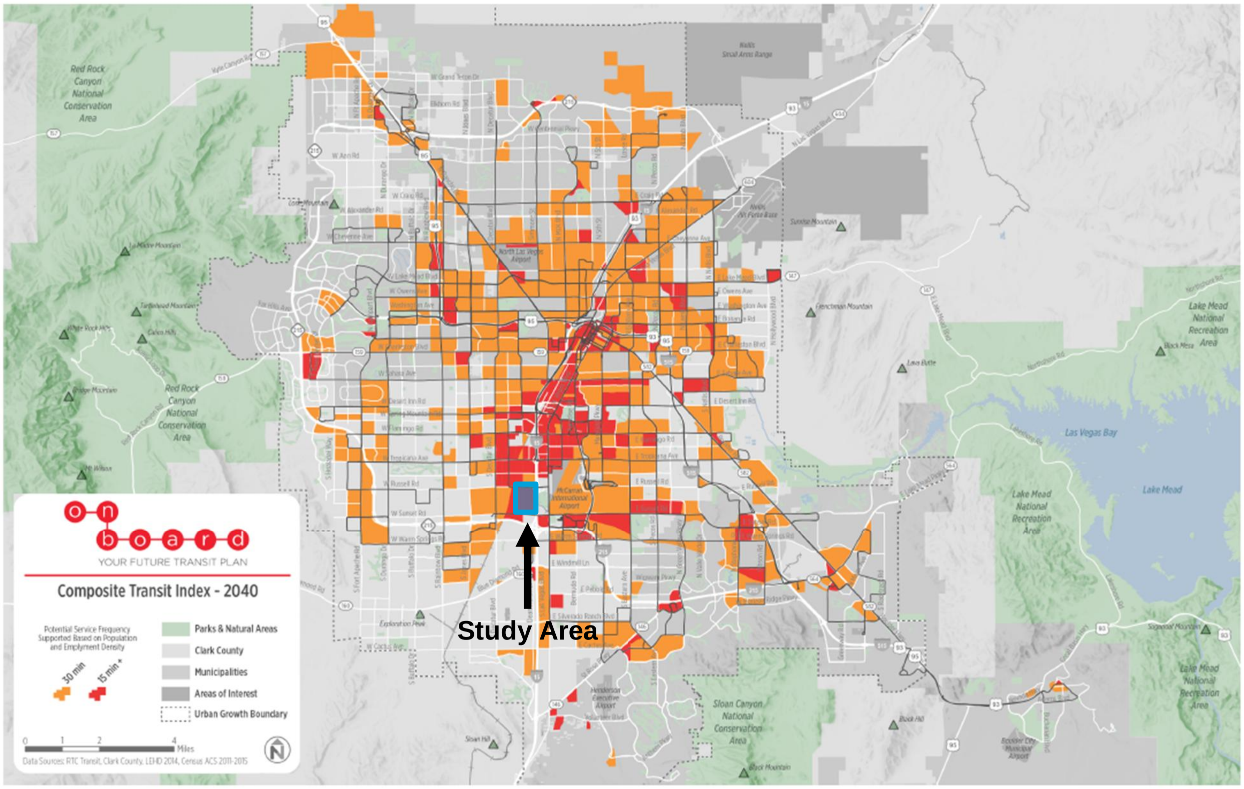
Although these guidelines were specifically developed for schools, and there are no schools within the Stadium District Transportation Plan area, they are consistent with the Federal Highway Administration's Network Principles and implementing them will create consistency with the guidelines throughout the Las Vegas Valley transportation network.

2.1.6. On Board – State of the System (December 2017)

The On Board study, prepared by Nelson Nygaard for the RTC, reviewed the current public transportation network in the Southern Nevada area that generate residential or commercial transit demand, and identified possible corridors for future high capacity transit. The study concluded that underlying demand and the current bus system generally overlap, and the system is best serving those most likely to use transit. Certain corridors generate significant ridership and transfers which warrant high-frequency service as shown in **Figure 4** below for every 15 (orange) or 30 (red) minutes.

Relation to Stadium District:

The study area for the Stadium District Transportation Plan is included in the high demand area, but currently has no high-frequency transit service. The underlying demand in the area combined with future demand from events justifies the installation of improved transit services in the study area as shown in **Figure 4**.



Source: On Board – State of the System

Figure 4 – On Board Composite Transit Index - 2040

2.1.7. Modeling and Analysis of Walkability in Suburban Neighborhoods in Las Vegas (May 2017)

Walkability is defined as a measure of how safe and appealing it is to walk in a given area. The purpose of the Modeling and Analysis of Walkability in Suburban Neighborhoods in Las Vegas Study (Modeling and Analysis of Walkability Study) was to create a quantifiable walkability index for Las Vegas. Produced by the Mineta National Transit Research Consortium and the University of Nevada Las Vegas (UNLV), the study looked at crash risk, attributes of the built environment, walking purpose (either recreational or utilitarian), and resident perception of walking patterns as features that contributed to this index. Statistical models were generated to create the walkability index. Through the course of the study, it was observed that previous walkability indices that do not include crash data have significant differences to the index generated in this study. The reason a walkability index is so valuable is that community decision makers will be better equipped to develop plans and solutions for improving transportation options and the quality of life of the residents under their jurisdictions. At the end, researchers found that the need for a transactional evaluation approach to analyze pedestrian behavior more accurately reflects walkability than other study methods.

Relation to Stadium District:

The Modeling and Analysis of Walkability Study concluded the perception of land use mix, as well as aesthetics and amenities, significantly influenced walking frequency. To improve the perception of land use and walkability in the neighborhoods, the analysis recommended:

- Install flatter sidewalk gradients
- Smaller parking lots in front of commercial buildings
- Improved access to enclosed communities

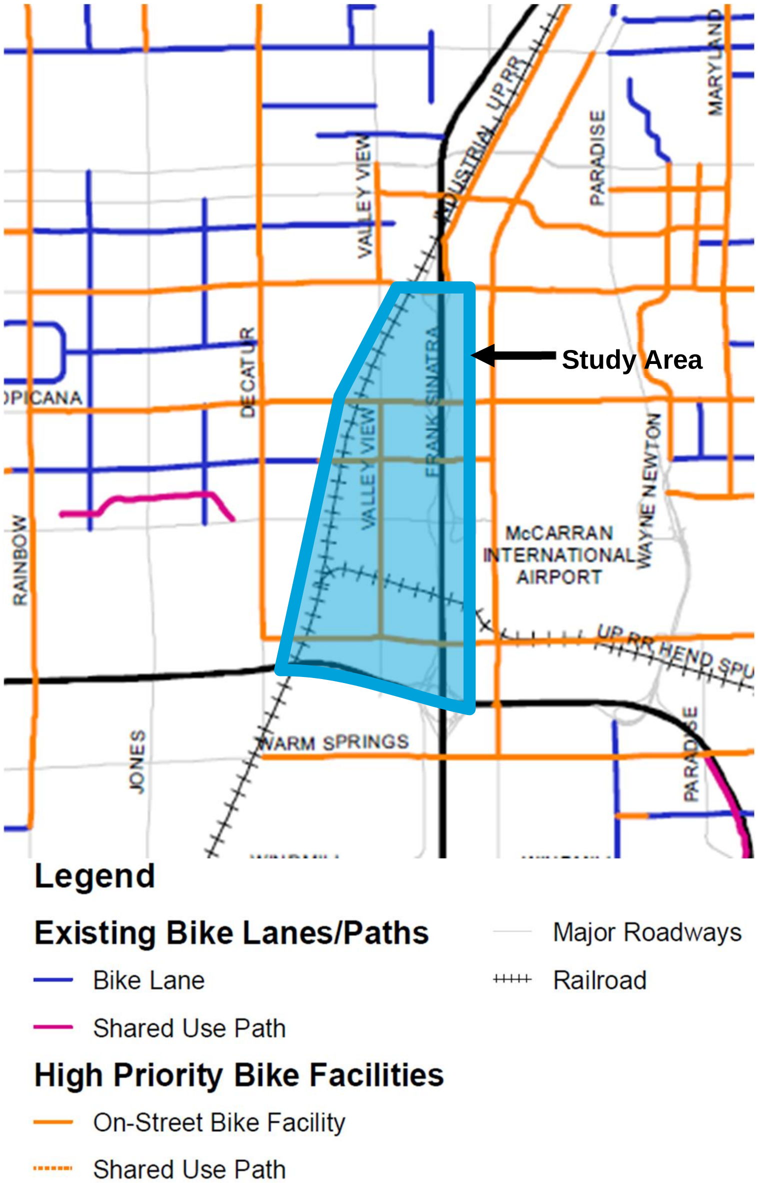
These recommendations should be considered within the Stadium District to influence users to walk within the District.

2.1.8. Regional Bicycle Network Gap Analysis (May 2014)

The Regional Bicycle Network Gap Analysis study developed for the RTC by Kimley-Horn was performed to determine the locations of critical gaps in the existing bicycle network throughout the Las Vegas Valley. The identification of these critical gaps allows for decision makers to make more informed decisions regarding where new bicycle facilities should be installed to connect bicyclists to key destinations in the area. Priority was given to areas that have high volumes of bicycle travel. Data was collected and analyzed using Geographic Information Systems (GIS). Key destinations were defined as parks, schools, airports, regional malls, park and rides, club ride origins, and census tracts with a high number of bicycling commuters. The Regional Bicycle Network Gap Analysis recommends the use of bike lanes, bike boulevards, cycle tracks, buffered bike lanes, and transit/bike only lanes as acceptable bicycle facilities.

Relation to Stadium District:

The study's high priority area recommendations as indicated in orange on **Figure 5** shows the need for improvements along Valley View Boulevard, Tropicana Avenue, and Hacienda Avenue. Interconnected bike lanes and sidewalks throughout community districts and cities fulfill the FHWA's Network Guidelines for Cohesion and Accessibility. The proposed recommendations from the Regional Bicycle Network Gap Analysis are shown in **Figure 5**.



Source: Regional Bicycle Network Gap Analysis

Figure 5 – Regional Bicycle Network Gap Analysis Recommendations

2.2. Nevada Department of Transportation

The Nevada Department of Transportation (NDOT) produced several plans and studies that relate to the Stadium District and transportation facilities in the Las Vegas Valley. The following were reviewed and summarized for the Stadium District Transportation Plan:

Las Vegas NFL Stadium Sites Traffic Assessment (October 2016)

Southern Nevada HOV Plan Update (July 2015 – includes 2018 Addendum)

I-15 Tropicana Project (2018 – Ongoing)

2.2.1. Las Vegas NFL Stadium Sites Traffic Assessment (October 2016)

A major development, such as an NFL stadium, will impact regional transportation. The impacts should be addressed proactively rather than reactively, requiring in-depth planning. The Las Vegas NFL Stadium Sites Traffic Assessment, produced by CH2M in October 2016, determined what improvements were needed to support a new stadium, as well as the future transportation demands of the region. In addition, the question of which projects on state-maintained roads should be considered for acceleration to improve access and mobility to a stadium site was addressed. The assessment identified trip generation and then factored in event travel and the impacts on roadways.

To accommodate the future traffic generated by an NFL stadium, the assessment determined the following projects should be considered for acceleration:

- The addition of HOV interchanges on I-15 at Harmon Avenue and Hacienda Avenue (Hacienda Avenue HOV ramps removed per HOV system modifications as included in the I-15 Tropicana Project)
- Adding HOV lanes on I-15 and Interstate 215 (I-215)
- Extending the Las Vegas Monorail to Mandalay Bay Resort and Casino
- Construction of a new pedestrian bridge over I-15 (Hacienda Avenue HOV ramps removed per HOV system modifications as included in the I-15 Tropicana Project)

Relation to Stadium District:

The Las Vegas NFL Stadium Sites Traffic Assessment recommended to conduct additional studies after a definitive stadium site was identified. This would allow a more precise plan for impacts such as parking analysis, traffic management plans, and expanded transit services to events. Developing the Stadium District Transportation Plan, this is helping to fulfill this recommendation.

2.2.2. Southern Nevada HOV Plan Update (July 2015 – includes 2018 Addendum)

The Southern Nevada HOV Plan Update was produced in July 2015 by Jacobs in order to determine the usefulness of implementing High Occupancy Vehicle (HOV) facilities in the Las Vegas metropolitan area in alleviating expected future congestion in the region's roadways. The system was evaluated on several criteria, including congestion and bottlenecks, HOV demand, travel time savings, transit service available space, and connectivity and continuity. Based on the results of the analysis, the following freeway segments had high potential for HOV facility implementation in the long term:

- I-15 from St. Rose Parkway to Lake Mead Boulevard
- Interstate 515 (I-515) from Clark County 215 to I-15

- US 95 from I-15 to Elkhorn Road
- I-215 from I-15 to I-515
- Clark County 215 (Southern and Western Beltway) from I-15 to Summerlin Parkway
- Summerlin Parkway from US 95 to Rampart Boulevard

The following segments were determined to warrant multiple-lane HOV facilities in the long term:

- I-15 from Clark County 215 to US 95/I-515
- US 95 from I-15 to Summerlin Parkway
- I- 215 from I-15 to the Airport Connector

The following locations within the study area of the Stadium District Transportation Plan were found to warrant direct-access ramps in the long term:

- Hacienda Avenue on I-15 (ramps to/from the south) (Hacienda Avenue HOV ramps removed per HOV system modifications as included in the I-15 Tropicana Project)
- Harmon Avenue on I-15 (ramps to/from the north)

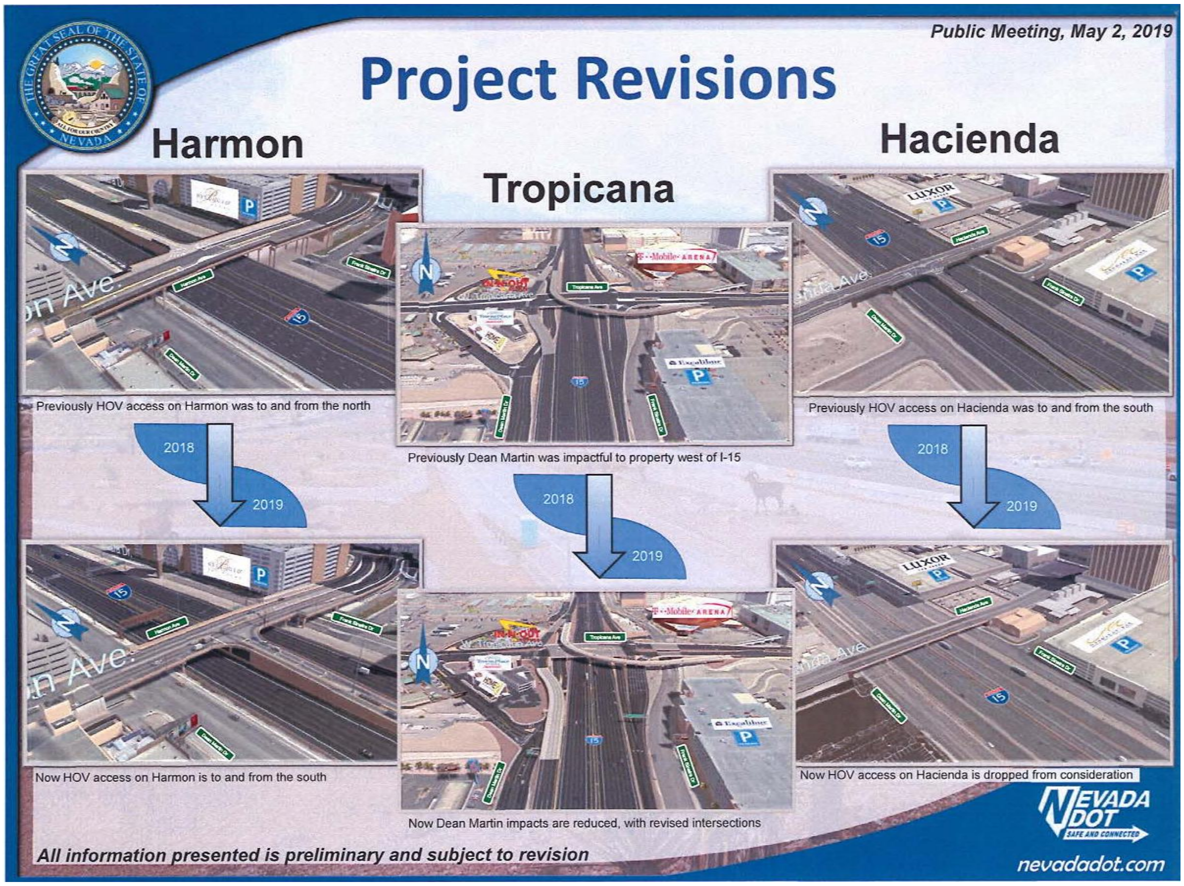
Relation to Stadium District:

HOV Lanes are consistent with the Las Vegas NFL Stadium Sites Traffic Assessment and will provide better access to the Stadium District Transportation Plan study area.

2.2.3. I-15 Tropicana Project (2018-Ongoing)

As part of the I-15 Tropicana Project, NDOT revised the project to alter the previously proposed HOV access on Harmon Avenue, Hacienda Avenue, and Tropicana Avenue as shown in **Figure 6**. The revisions were made as follows:

- Harmon Avenue: HOV access was moved from being to and from the north to be to and from the south
- Hacienda Avenue: HOV access that was proposed to be located to and from the south was removed from consideration



Source: NDOT I-15 Tropicana Project Public Meeting May 2, 2019

Figure 6 – NDOT Project Revisions

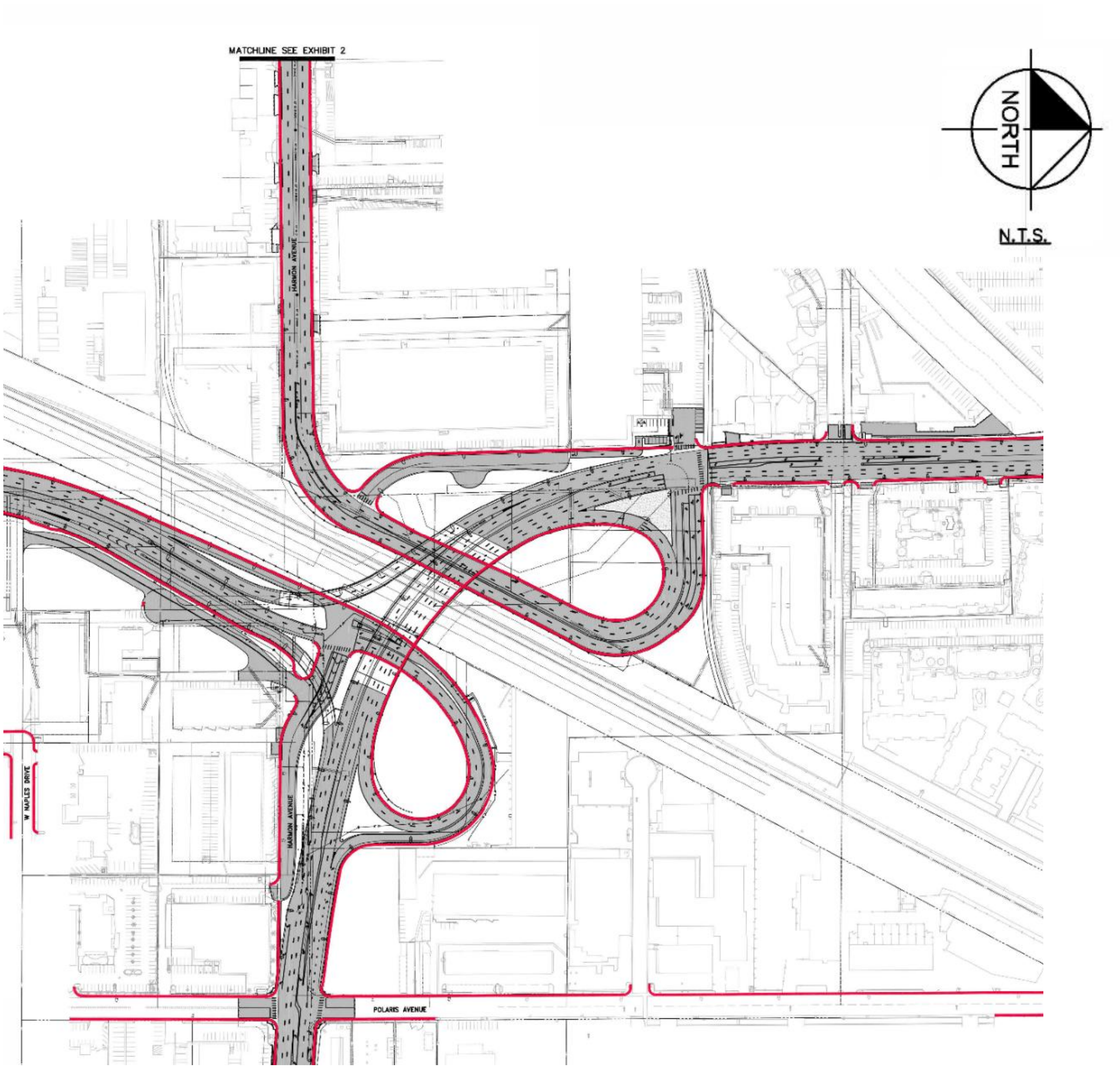
Relation to Stadium District:

HOV Lanes are consistent with the Las Vegas NFL Stadium Sites Traffic Assessment and will provide better access to the Stadium District. The plan was updated once the Stadium site was identified, as Hacienda Avenue is no longer a recommended HOV access location. NDOT is moving forward with plans for an HOV access at Harmon Avenue.

2.3. Clark County

2.3.1. Harmon Avenue and Valley View Boulevard Project (2020)

Construction of the Harmon Avenue and Valley View Boulevard Project, being led by the Clark County Public Works Department and designed by GCW Engineering, has been completed. The project provides a grade separated connection over the UPRR. The improvements provide continuous east to west access along Harmon Avenue and north to south access along Valley View Boulevard to alleviate congestion on Tropicana Avenue and Flamingo Road. The improvements are illustrated in **Figure 7**.



Source: GCW Engineering

Figure 7 – Harmon Avenue/Valley View Boulevard Connector and Roadway Improvements

Relation to Stadium District:

The construction of the Harmon Avenue/Valley View Boulevard connector provides additional arterial connections west of I-15.

2.3.2. Site Access and Circulation Event and Non-Event Day Operations Traffic Impact Study Addendum #1 (December 2017) and 2020 NFL Season Initial Event Management and Transportation Summary (January 2020)

The Site Access and Circulation Event and Non-Event Day Operations Traffic Impact Study Addendum #1 addresses the pedestrian and vehicle impacts for the Allegiant Stadium access drives and frontage streets of Dean Martin Drive, Hacienda Avenue, Polaris Avenue, and Russell Road. The 2020 NFL Season Initial Event Management and Transportation Summary (Event Management Summary) evaluated and developed traffic management recommendations, including patron mobility and mode options for different event scenarios, for the Allegiant Stadium. Detailed information and figures for small, medium, and large event scenarios studied in the Event Management Plan can be referenced from the 2020 NFL Season Initial Event Management and Transportation Summary Report (January 2020). It should be noted that the Hacienda Avenue Bridge will be closed to vehicular traffic for pedestrian use during stadium events as approved by Clack County. Both studies completed by Kimley-Horn assumes that the Harmon Avenue/Valley View Boulevard Connector and Roadway Improvements project will be completed by the anticipated stadium opening in 2020.

Relation to Stadium District:

Both the Site Access and Circulation Event and Non-Event Day Operations Traffic Impact Study Addendum #1 and the 2020 NFL Season Initial Event Management and Transportation Summary describe the Stadium District Area impacts due to the opening of the Allegiant Stadium.

2.4. Stadium District Plans in other U.S. Cities

Cities throughout the United States have conducted and published plans for stadium districts and the transportation network that surrounds them. The following plans were reviewed in relation to the Stadium District Transportation Plan:

- Seattle Create Community Through Common Goals – Stadium District Concept Plan (December 2012)
- Downtown Atlanta Transportation Plan (May 2018)

2.4.1. Seattle Create Community Through Common Goals – Stadium District Concept Plan (December 2012)

Seattle is home to three professional sports teams located within a small area. Sports events generate much more foot traffic than in comparable cities, but less money is spent by these fans when they visit the area. Recent redevelopment of the surrounding area has reduced the amount of available parking, and there are only two households per acre in the Seattle Stadium District area compared to 20 in comparable stadium districts. The purpose of the study was to create a unified set of goals and a concept for the future of Seattle's Stadium District. It addressed these concerns by encouraging sustainable retail, residential, and entertainment development.

The guiding principles of the Seattle Stadium District Concept Plan are:

- Develop public and private strategic partnerships consistent with Core Values to achieve the following targets under a 10-year plan for development within a 15-minute walk of the stadiums:
    1. Threshold increase of 2,000 new market rate housing units
    2. Minimum 2,000 new parking spaces
    3. Enhanced pedestrian, bicycle, and transit facilities and connections
    4. A major new destination open space
- Encourage residential and hotel development with street level retail (especially food and beverage), entertainment and cultural uses.
- Provide inviting west face (the District's front door, front porch and front yard).

- Adopt a balanced approach to transportation that optimizes the convenience and safety of all transportation modes including: pedestrian, bicycle, transit, car, and service
- Support development incentives including: land entitlements, zoning changes, new market and historic tax credits, and local improvement districts

Relation to Stadium District:

The Stadium District Transportation Plan should consider Seattle's guiding principles to ensure the Stadium District is walkable and utilized.

2.4.2. Downtown Atlanta Transportation Plan (May 2018)

The Downtown Atlanta Transportation Plan set goals to improve connectivity, accessibility, and mobility; enhance safety; and support economic vitality in Downtown Atlanta. The area supported many modes of transportation at the time of the Downtown Atlanta Transportation Plan, including freeways, nine train stations, a network of bicycle lanes and trails, and a highly walkable street area overall. Proposed projects were split into short-term projects (to be completed in the next five years), signature projects of high importance, and longer-term projects.

Projects included adding shared streets and other pedestrian improvements, several miles of high-quality bicycle infrastructure, enhancing existing rail stations, adding a bus priority corridor, expanding the streetcar network, adding 8.4 miles of new streets to improve connectivity, converting one-way streets to two-way, and improving safety at key intersections. In addition, the report recommended several policies and programs, such as parking management, transportation demand management, curbside management and enforcement, traffic operations management, and sidewalk repair and maintenance. Community engagement was sought during the planning process to make sure that the proposals fit the real needs of local citizens.

Relation to Stadium District:

The addition of pedestrian improvements and bicycle infrastructure would improve connectivity, accessibility, mobility and enhance safety and economic vitality within the Stadium District Transportation Plan, per FHWA's network guidelines.

3. FIELD OBSERVATIONS TOUR

A field observation tour of the Stadium District was conducted on Tuesday, February 18, 2020 in order to observe the following:

- Russell Road/Polaris Avenue Intersection
- Valley View Boulevard
- Polaris Avenue
- Dean Martin Drive from Oquendo Road to Tropicana Avenue
- UPRR
- Transportation Network Company (TNC) Pick-up/Drop-off Areas
- Parking Area at Reno Avenue and Valley View Boulevard
- Hacienda Avenue Bridge over I-15
- Proposed Diablo Drive Pedestrian Corridor
- Surrounding Land uses

Figure 8 through **Figure 16** show existing conditions observed during the field observation tour.

Figure 8 – Proposed Diablo Drive Walkway from Procyon Street to Polaris Avenue

Figure 9 – Russell Road Looking East Toward I-15 Near Dean Martin Drive

Figure 10 – Reno Avenue near Procyon Street (Looking East)

Figure 11 – Event Parking on Valley View Boulevard and Reno Avenue

Figure 12 – Russell Road and Polaris Avenue Intersection (Looking North)

Figure 13 – Hacienda Avenue Bridge Over I-15 (Looking East)

Figure 14 – Elevated UPRR (Looking West)

Figure 15 – Valley View Boulevard Looking South


Figure 16 – Future TNC Lot at Polaris Avenue and Ali Baba Lane

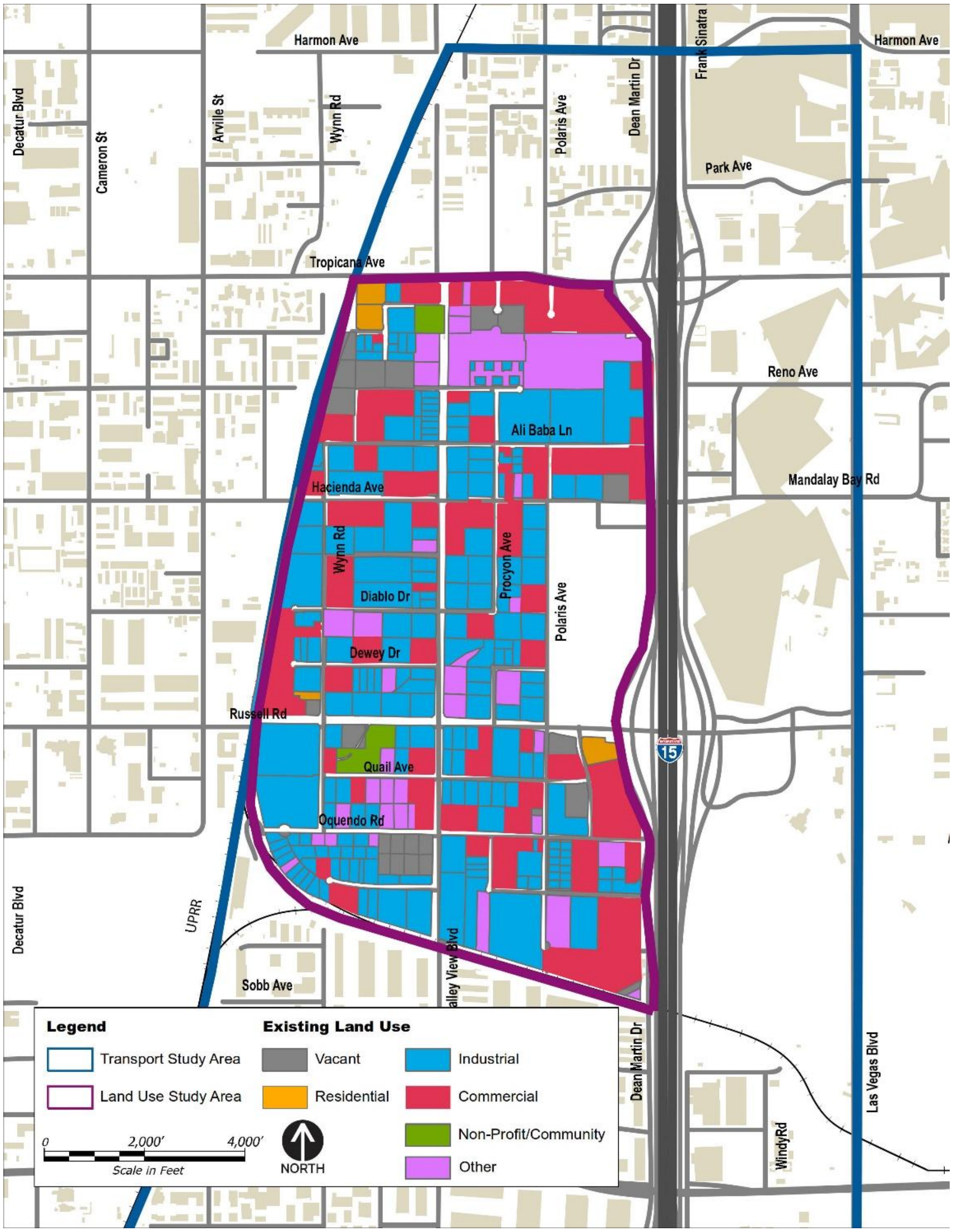
4. EXISTING CONDITIONS

Existing condition data was collected throughout the Stadium District in order to identify any gaps in transportation facilities. Existing and proposed infrastructure analyzed included:

- Existing Land Uses
- Roadways
- RTC Transit stops
- Pedestrian facilities
- Bicycle facilities
- Key intersection existing lane configurations and traffic control
- Key intersection turning movement counts
- Annual Average Daily Traffic (AADT) values along with truck percentages
- Proposed Stadium District Parking

4.1. Existing Land Uses

Currently, the areas within the Stadium District consist mostly of industrial and commercial land uses with minimal residential and other use areas as shown in **Figure 17**.



Source: Clark County Land Use GIS Layer

Figure 17 – Existing Land Uses

4.2. Roadway

There are four major roadways within the study area (Sunset Road, Russell Road, Hacienda Avenue, and Tropicana Avenue) providing vehicular access across I-15. These streets will serve as vehicle connections between the Las Vegas Strip and the Stadium District. Three roadways provide access across Clark County 215; Las Vegas Boulevard, Dean Martin Drive, and Valley View Boulevard. Of these roadways, only Tropicana Avenue and Russell Road via I-15 have direct access to on and off-ramps for I-15 and south to Clark County 215.

4.2.1. Existing Street Network

A complete grid street network does not exist within the study area as several public streets terminate in culs-de-sac at the railroad tracks on the west side of the District. The culs-de-sac seem to be sized to accommodate turn-arounds for large semi-trucks serving the existing neighboring warehouses. A map indicating the existing right-of-way at the roadway network within the Stadium District is presented in **Figure 18**.

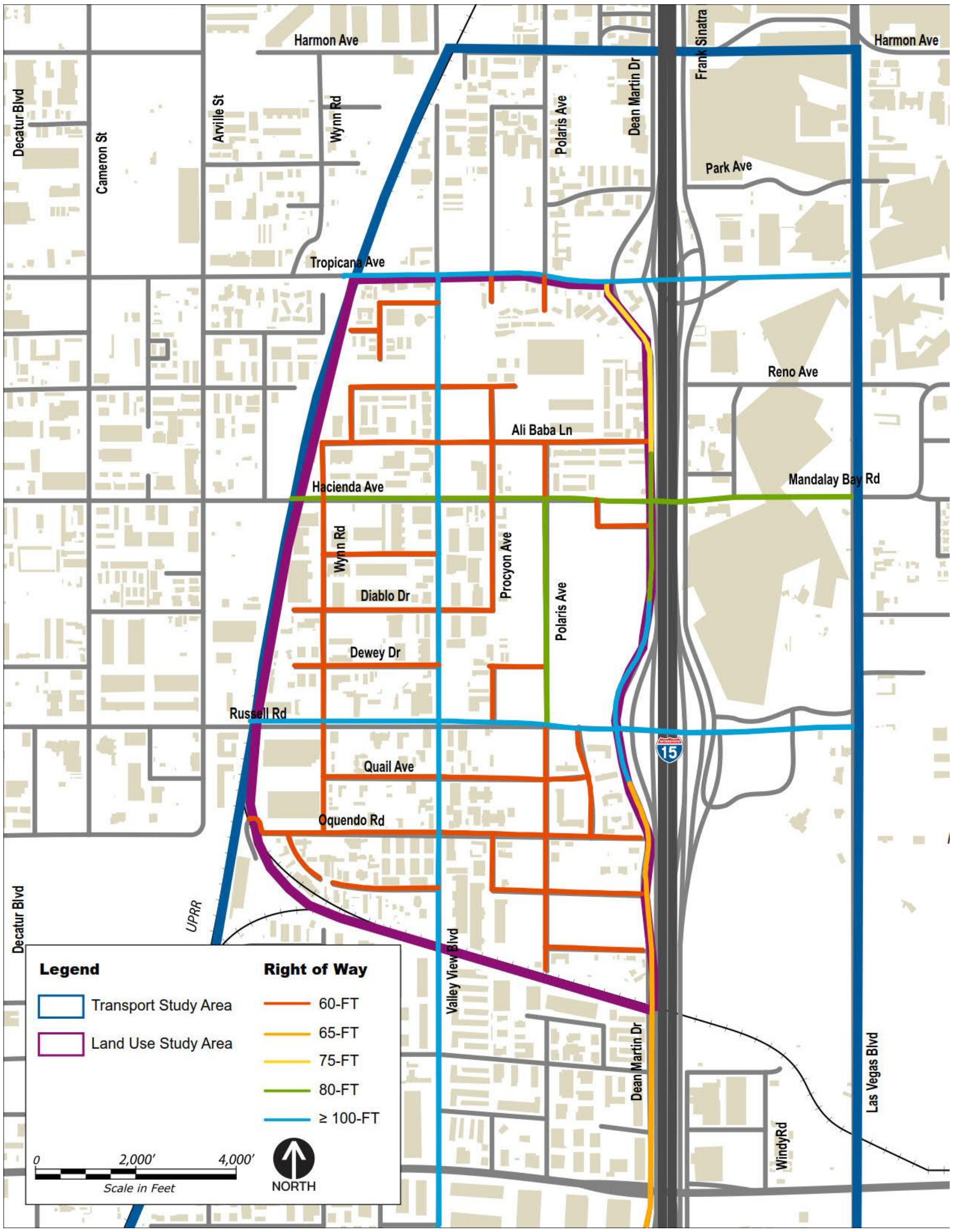


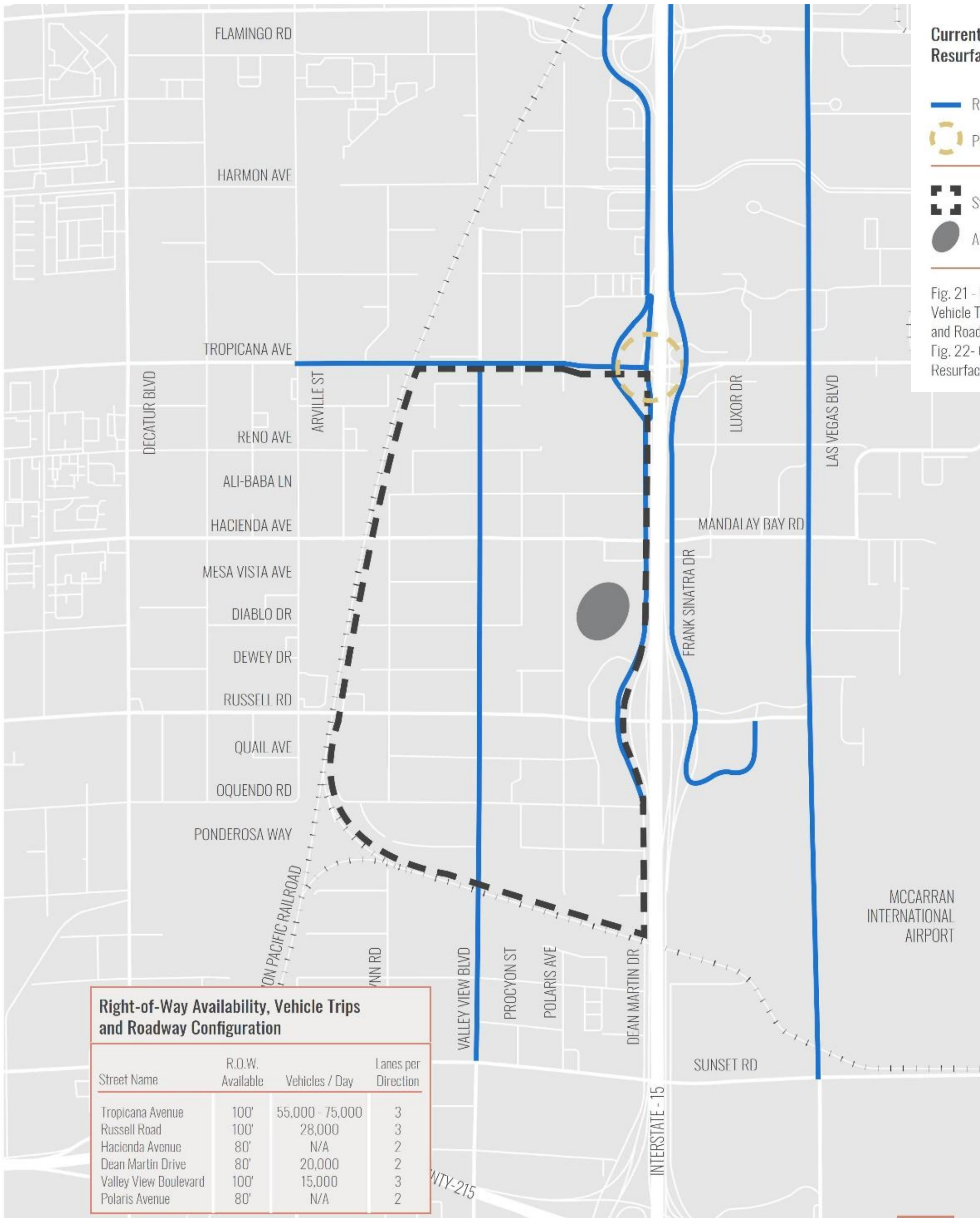
Figure 18 – Roadway Network with Right-of-Way Information

4.2.2. Future Roadway Improvements

The following roadways are displayed in **Figure 19** and represent current or proposed resurfacing projects within the Stadium District:

- Tropicana Avenue, Decatur Boulevard to I-15
- Las Vegas Boulevard, Sunset Road to Sahara Avenue
- Dean Martin Drive, Russell Road to Sammy Davis Jr. Drive
- I-15/Tropicana Interchange
- Harmon/Valley View/UPRR Grade Separation Connection

The resurfacing of roadway not only presents a smoother surface and better experience for motorists and cyclists but presents opportunity for restriping and improving or implementing bicycle and pedestrian infrastructure.



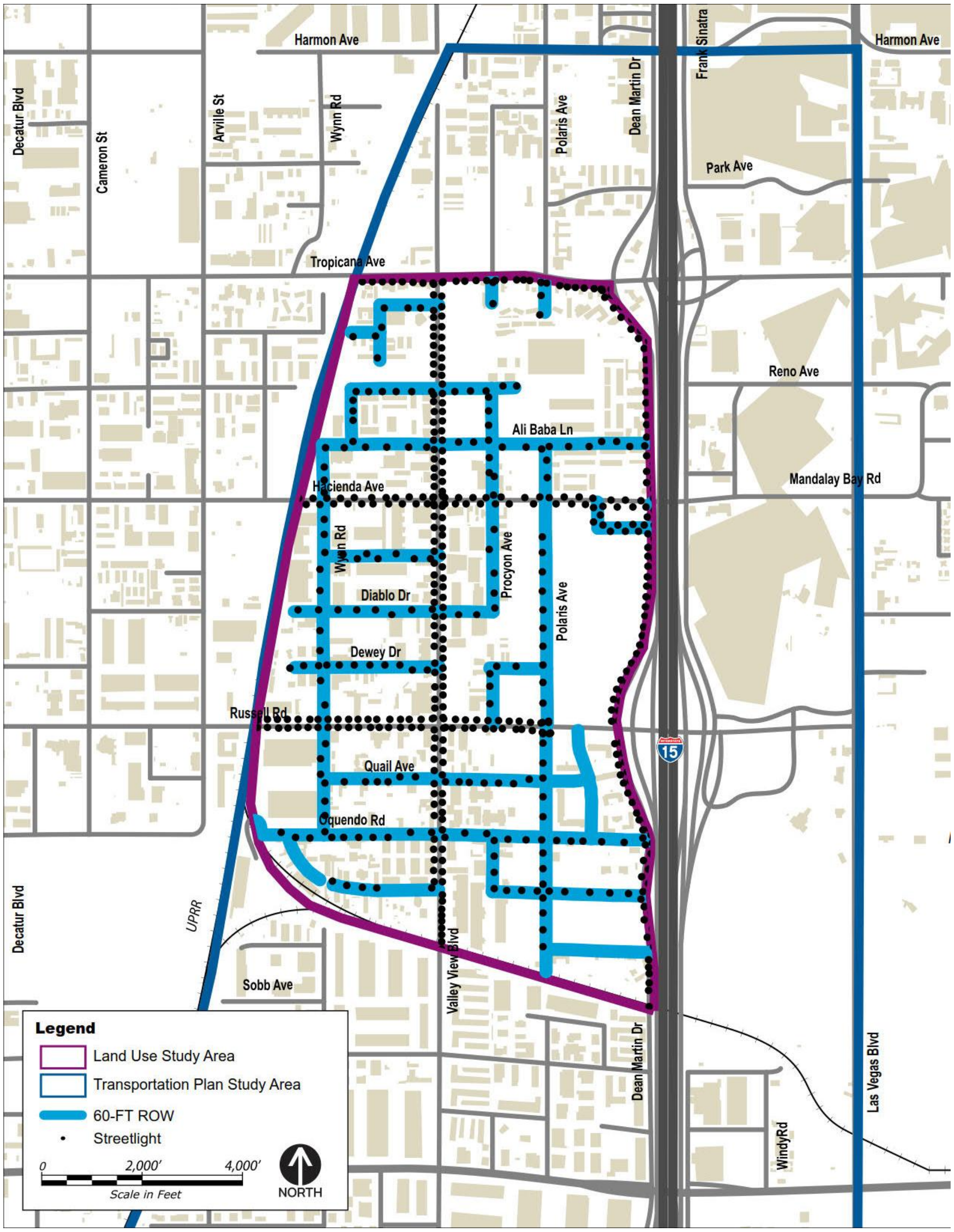
Street Name	R.O.W. Available	Vehicles / Day	Lanes per Direction
Tropicana Avenue	100'	55,000 - 75,000	3
Russell Road	100'	28,000	3
Hacienda Avenue	80'	N/A	2
Dean Martin Drive	80'	20,000	2
Valley View Boulevard	100'	15,000	3
Polaris Avenue	80'	N/A	2

Source: RTC Regional Project Coordination Committee

Figure 19 – Current and Proposed Resurfacing Projects

4.2.3. Existing Streetlight Inventory

Existing streetlight inventory within the study area was obtained from Clark County Public Works and is shown in **Figure 20**. It should be noted that the standard for 60-foot right-of-way streets or less includes streetlights along one side of the roadway per Clark County Area Uniform Standard Drawing 311.1. Within the Stadium District, Ali Baba Lane, Diablo Drive, Mesa Vista Avenue, Reno Avenue, Polaris Avenue and Procyon Street are all 60-foot right-of-way streets and have streetlights on one side of the street.

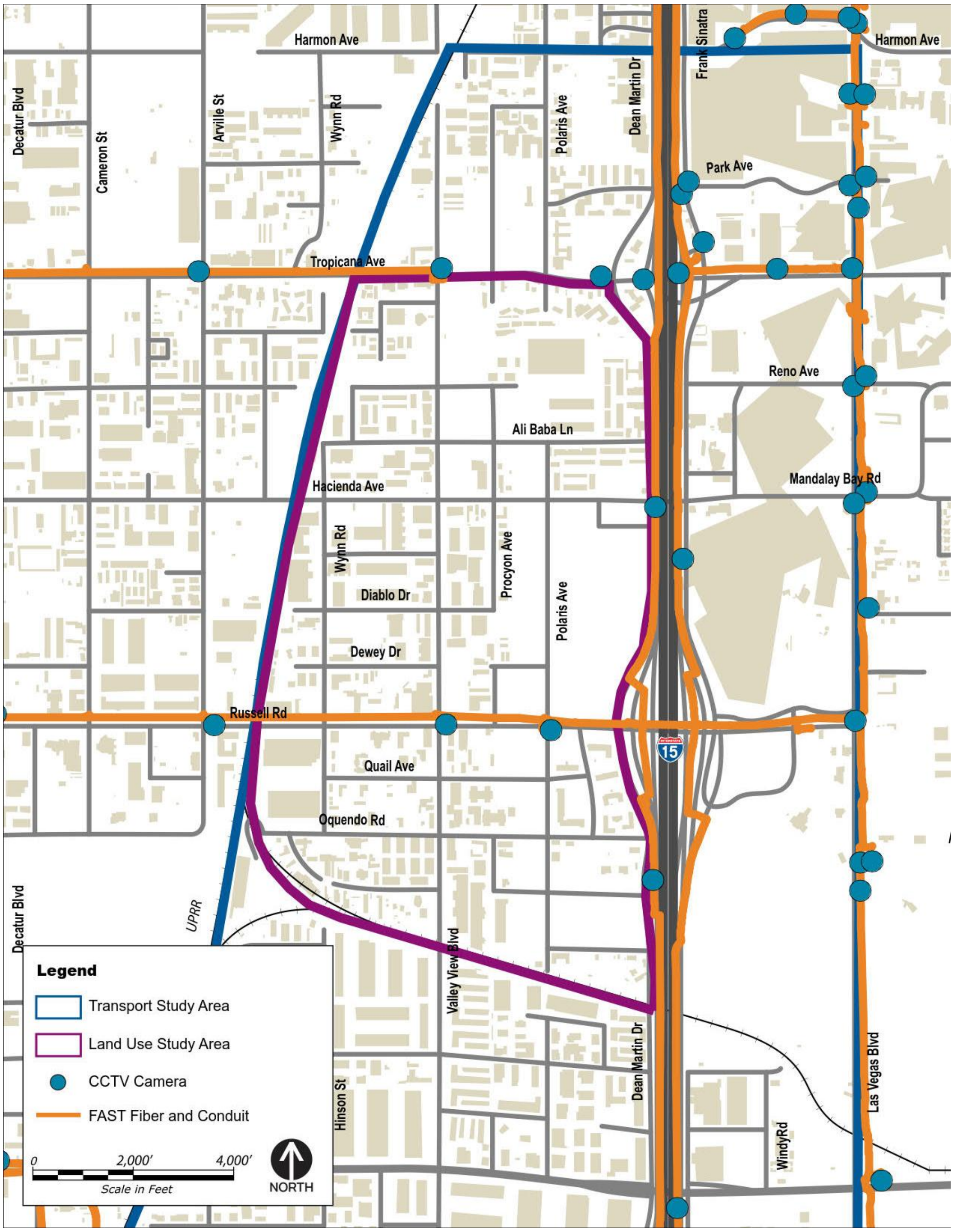


Source: Clark County Streetlight GIS Layer

Figure 20 – Streetlight Inventory

4.2.4. Intelligent Transportation System (ITS)

Inventory of the available intelligent transportation system (ITS) infrastructure within the Stadium District was collected from RTC Freeway and Arterial System of Transportation (FAST) and is depicted in **Figure 21**. This inventory includes closed circuit television (CCTV) cameras and FAST fiber and conduit.



Source: RTC FAST ITS Inventory GIS Layer

Figure 21 – ITS Inventory within Stadium District and Surrounding Areas

4.3. RTC Transit

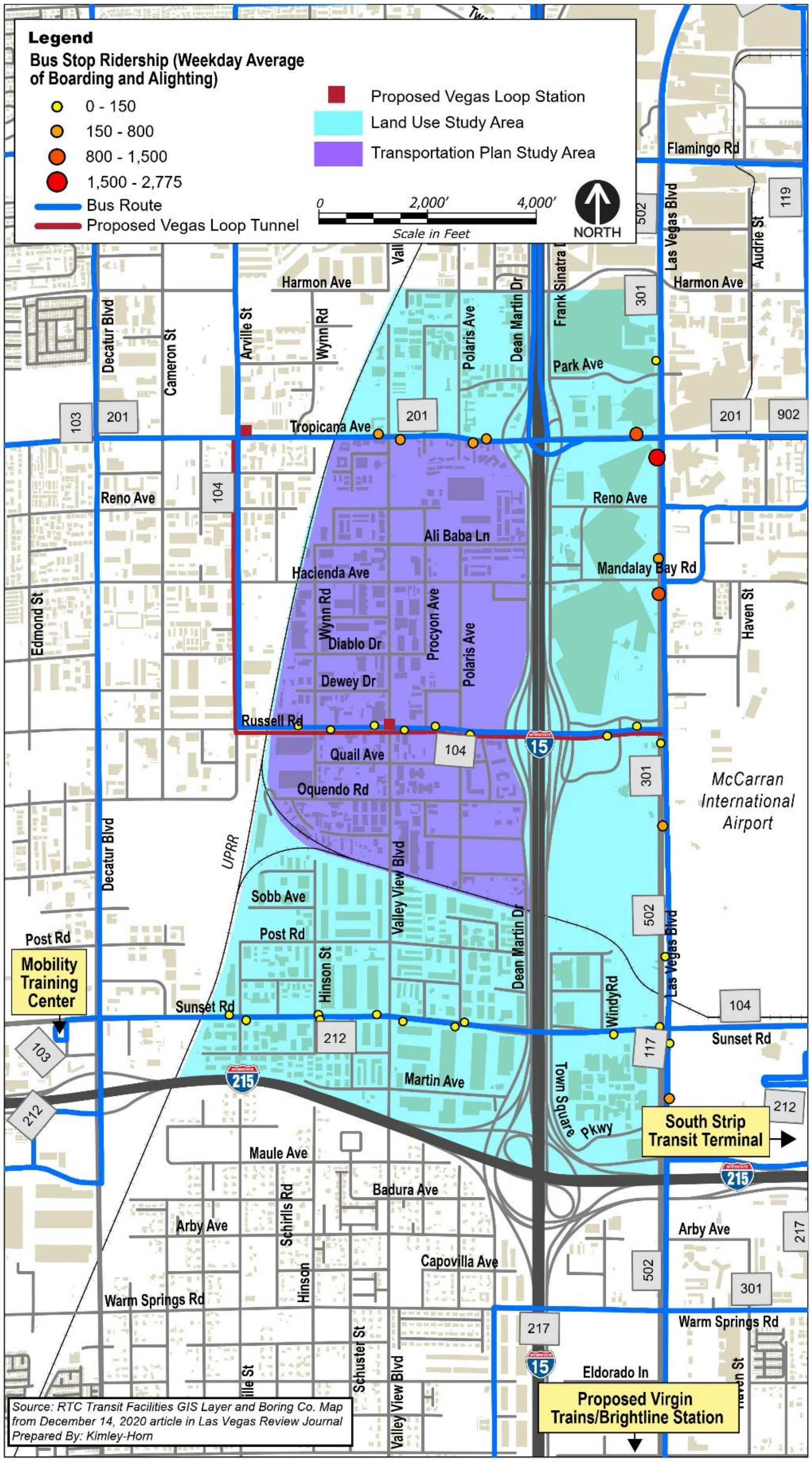
Buses serve four corridors throughout the Stadium District Transportation Plan Study Area with a total of 32 bus stops along Sunset Road (RTC Transit Route 212), Valley View Boulevard (RTC Transit Route 104), Tropicana Avenue (RTC Transit Route 201), and Las Vegas Boulevard (RTC Transit Route 301 and RTC Transit Route 502). Of the 32 bus stops within the district, two are within one city block (about 660 feet) of the stadium. Ridership information for the bus routes within the Stadium District is summarized in **Table 1**.

During event days at the stadium, the RTC plans to provide bus service directly to the stadium similar to the service currently being provided to the T-Mobile Arena during the Vegas Golden Knights hockey games. Existing transit facilities are shown in **Figure 22**. The bus stops are color coded by the weekday average total for boarding and alighting of each bus stop. The map also shows the proposed location of the Virgin Trains/Brightline Station which is to be located along Las Vegas Boulevard between Warm Springs Road and Blue Diamond Road (SR 160). The proposed Vegas Loop Tunnel from the Boring Co within the Stadium District Transportation Plan Study Area is also shown.

Table 1 – RTC Transit Route Ridership Within Stadium District

Route	Streets Serviced	Weekday Average # of Riders Boarding	Weekday Average # of Riders Alighting	Average Weekday Total
104	Valley View Boulevard	265.40	246.80	512.20
201	Tropicana Avenue	1,177.70	1,136.10	2,313.80
212	Sunset Road	172.40	171.70	344.10
301	Las Vegas Boulevard	0.90	11.10	12.00
502	Las Vegas Boulevard	1,226.40	3,845.70	5,072.10

Source: RTC



Source: RTC Transit Facilities GIS Layer and Las Vegas Review Journal

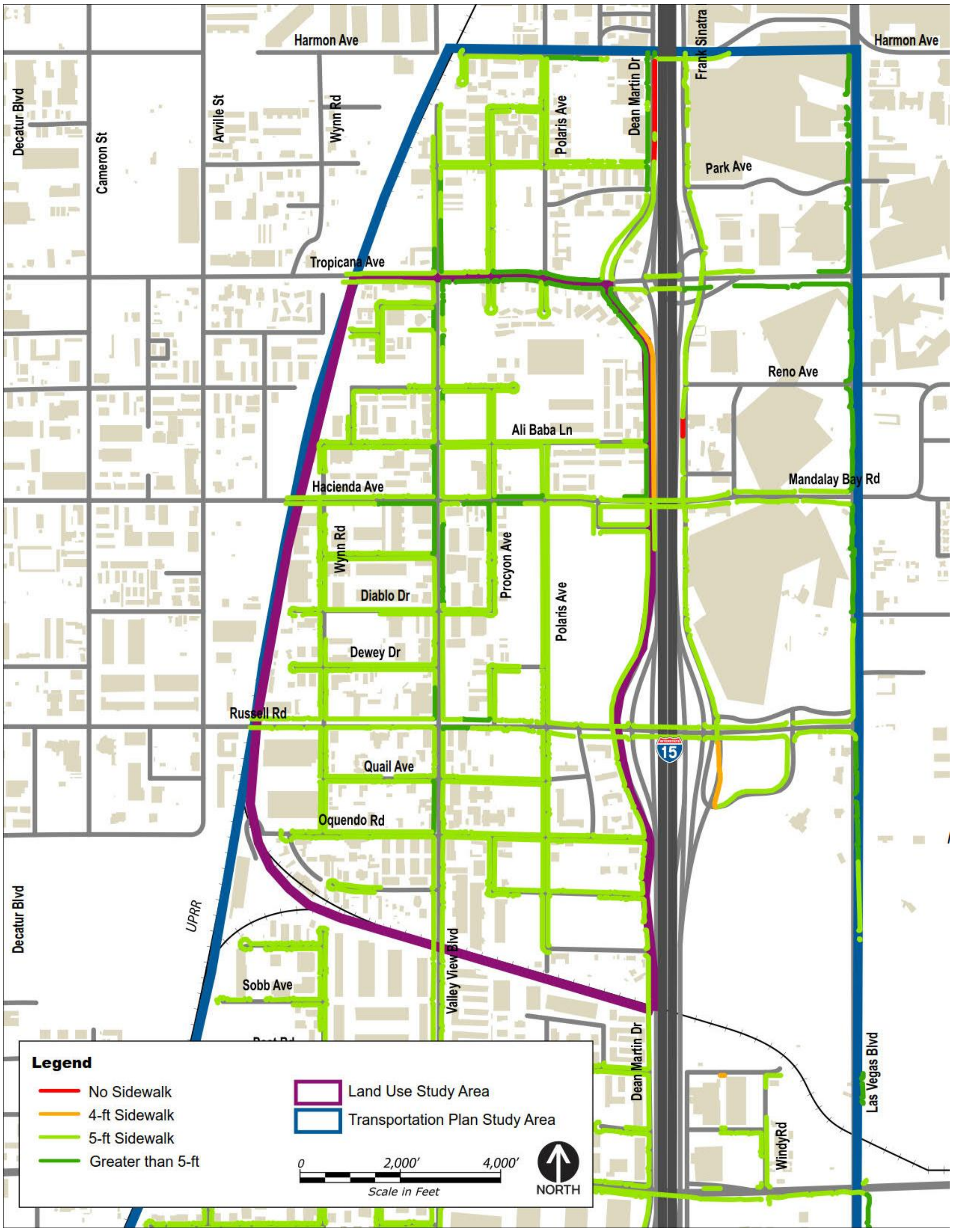
Figure 22 – Existing and Proposed Transit Facilities with Ridership

4.4. Bicycle and Pedestrian Facilities

Bicycle and pedestrian facilities within the Stadium District are summarized in the following subsections.

4.4.1. Pedestrian Facilities

Sidewalks exist throughout the corridor and are generally five feet wide (**Figure 23**). However, there is not a complete grid within the Stadium District and pedestrians may have to walk in indirect paths to reach their desired destination.

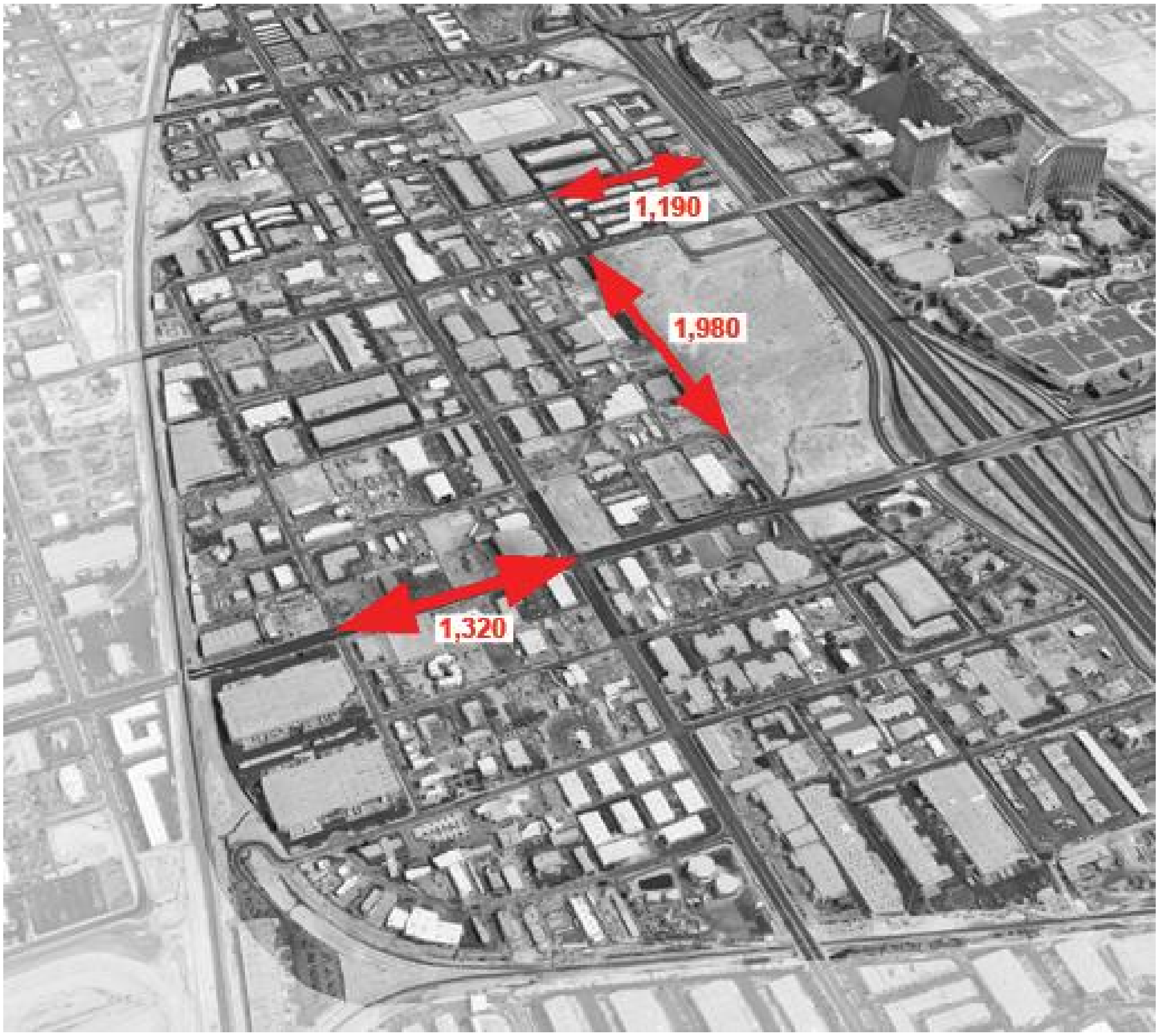


Source: Clark County Sidewalk GIS Layer

Figure 23 – Existing Sidewalk within Stadium District

The average block length is approximately 970 feet (where 660 feet is desirable). Examples of blocks with above average lengths are displayed in **Figure 24** and include the following:

- Polaris Avenue between Hacienda Avenue and Dewey Drive (1,980 feet)
- Ali Baba Lane between Polaris Avenue and Dean Martin Drive (1,190 feet)
- Russell Road between Wynn Road and Valley View Boulevard (1,320 feet)



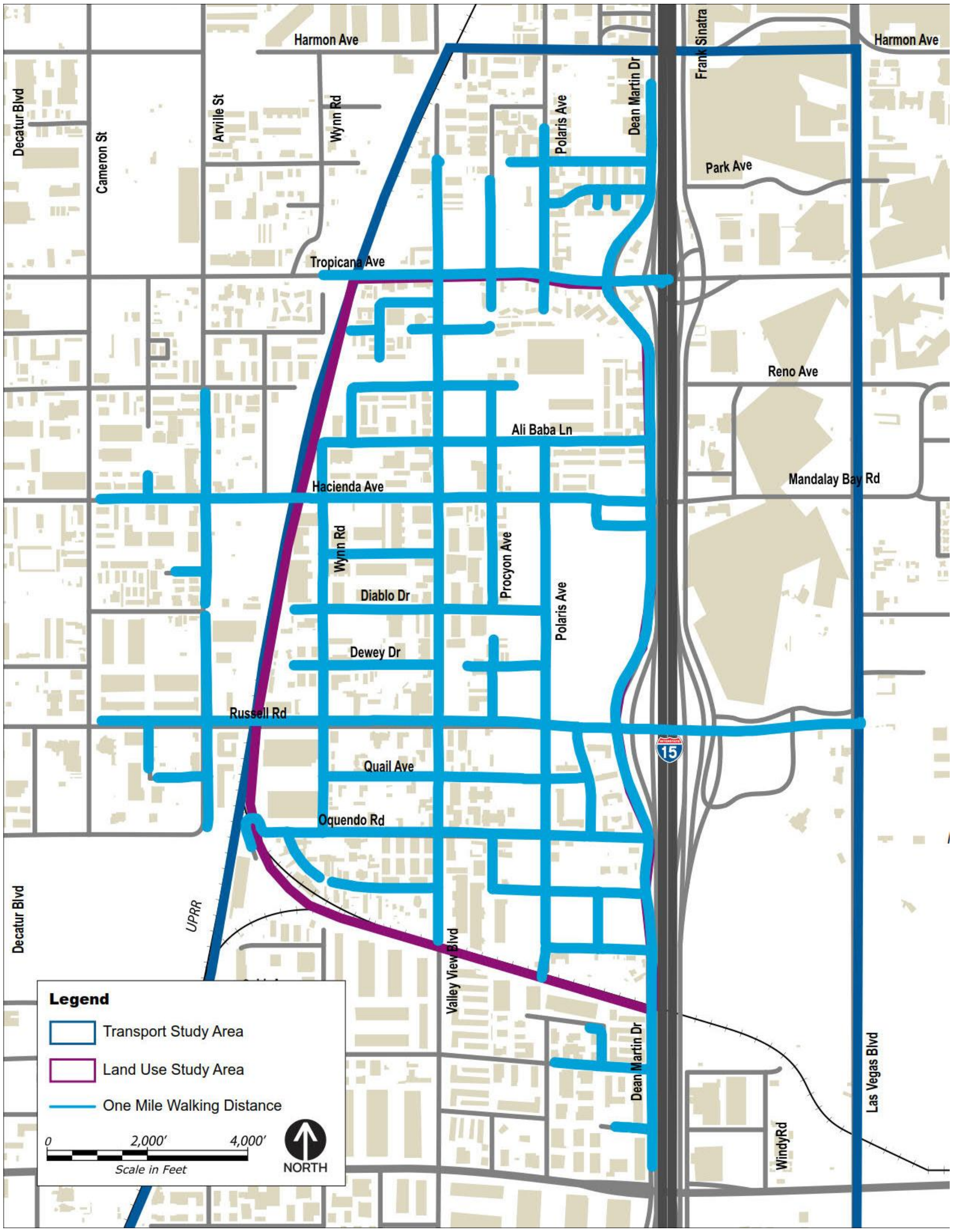
Source: Google Maps

Figure 24 – Existing Block Lengths (Feet)

A typical section with five-foot sidewalks is shown in **Figure 25**. In some locations, utility poles are located within the sidewalk width and decrease the clear width distance to 2.5-3.5 feet. This creates a mobility issue where three feet (36") is the minimum clear width required by the Americans with Disabilities Act (ADA). **Figure 26** shows pedestrian walking routes within one mile of the stadium site.

Source: Google Maps

Figure 25 – Sidewalks on Polaris Avenue (Looking North)

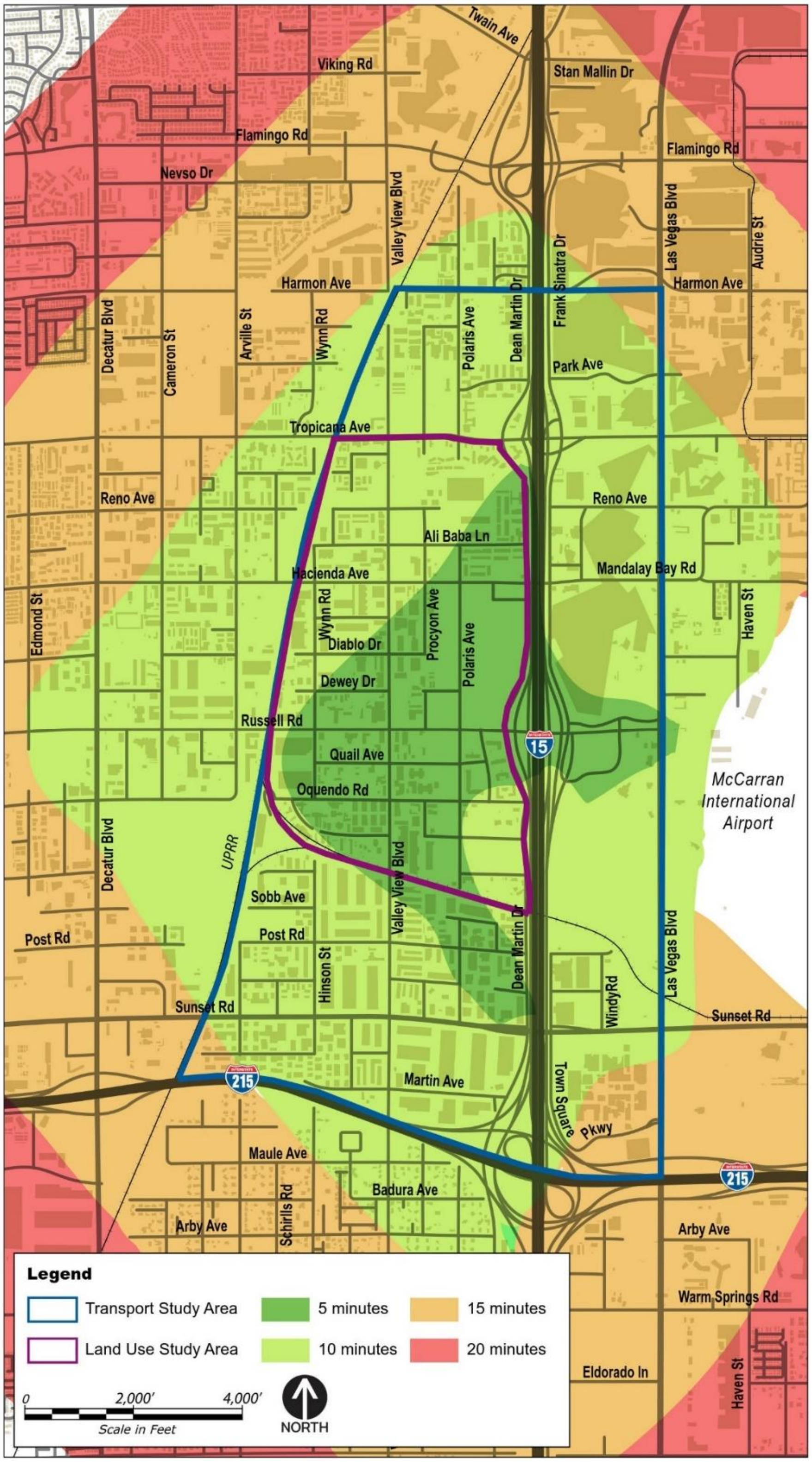


Source: Las Vegas Raiders Stadium Event Traffic Impact Study (Prepared by Kimley-Horn)

Figure 26 – One-Mile Pedestrian Walking Routes

4.4.2. Bicycle Facilities

There are no bicycle facilities within the Stadium District. Therefore, bicycles currently share the lane with motor vehicles. **Figure 27** shows bicycle travel times less than 20 minutes from the Stadium District.



Source: Openroute Service

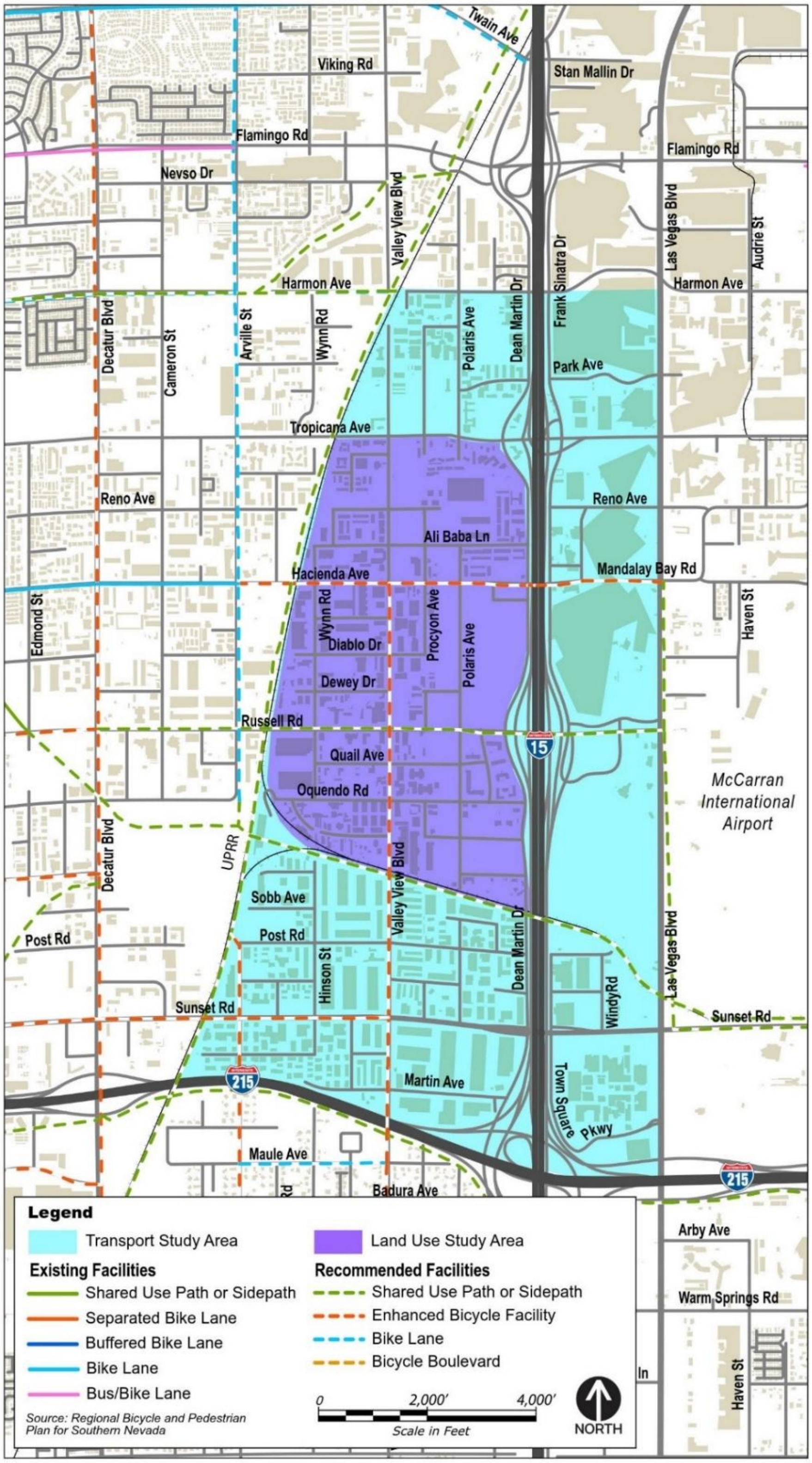
Figure 27 – Bicycle Travel Time

4.4.3. Planned Bicycle and Pedestrian Projects

According to the RBPP, enhanced bicycle facilities are proposed on Hacienda Avenue, Sunset Road, and Valley View Boulevard. The proposed bicycle facility on Hacienda Avenue will connect with the proposed bicycle facility on Valley View Boulevard and a proposed shared use path on Las Vegas Boulevard. In addition to Las Vegas Boulevard, shared use paths are proposed along the UPRR railroad tracks, along the western boundary of the District site and the UPRR tracks that run through the District from east to west, and along Russell Road. The proposed paths on the UPRR tracks and Russell Road will connect with the path on the northern boundary, Las Vegas Boulevard, and the enhanced bicycle facilities on Valley View Boulevard. This will create a stronger network for pedestrians and bicyclists. The proposed bicycle facilities and paths are shown in **Figure 28**.

Several pedestrian improvements being proposed as part of the Allegiant Stadium include:

- 10 to 15-ft sidewalk along Russell Road
- 10-ft sidewalk along Polaris Avenue
- 15-ft sidewalk along Hacienda Avenue
- 15 to 30-ft sidewalk along Aldebaran Avenue
- 10 to 15-ft sidewalk along Al Davis Way
- 10 to 15-ft sidewalk along Dean Martin Drive
- Proposed pedestrian connection along Diablo Drive alignment from Procyon Street to Polaris Avenue



Source: Regional Bicycle and Pedestrian Plan for Southern Nevada

Figure 28 – Pedestrian and Bike Facilities Map

4.5. Crash Data Analysis

A total of 233 crashes occurred within the Land Use study area between the 2015 and 2017 three-year period. Of the 233 crashes, one was a fatal crash involving a bus traveling on Tropicana Avenue which ran off the road crashing into a building approximately 230 feet east of Polaris Avenue. **Table 2** provides a summary of the crashes within the Stadium District Area by severity.

Table 2 – Stadium District Crash Data Summary

Injury Type	Number of Crashes
K – Fatal	1
A – Serious Injury	2
B – Non-incapacitating Injury	40
C – Possible/claimed Injury	84
O – Property Damage Only	106

Note: Six of the crashes indicated "Unknown Injury Type", these crashes were classified as Injury Type C since the data showed at least one person had been reported as injured.

4.6. Railroad Information

The number for trains passing the Stadium District Area along the South Central Route (combination of Caliente and Cima Routes) and the BMI branch from Henderson were obtained from the Federal Railroad Administration (FRA). A total of 15 trains per day pass through the Stadium District, 13 travel the South Central Route and 2 use the BMI branch. Reports from the FRA are located in **Appendix B**.

4.7. Study Area Intersections

The Stadium District study area intersections were identified as key intersection that will be impacted by Stadium District and event traffic. The study area intersections are as follows and are shown in **Figure 29**:

1. Tropicana Avenue/Valley View Boulevard
2. Tropicana Avenue/Dean Martin Drive
3. Tropicana Avenue/Polaris Avenue
4. I-15 Southbound Ramps/Tropicana Avenue
5. Hacienda Avenue/Valley View Boulevard
6. Hacienda Avenue/Polaris Avenue
7. Hacienda Avenue/Aldebaran Avenue
8. Dean martin Drive/Connector Road
9. Russell Road/Valley View Boulevard
10. Russell Toad/Polaris Avenue
11. I-15 Southbound Ramps/Russell Road
12. Russell Road/Wynn Road
13. Harmon Avenue/Valley View Boulevard
14. Harmon Avenue/Polaris Avenue
15. Harmon Avenue/Aldebaran Avenue
16. Oquendo Road/Valley View Boulevard
17. Oquendo Road/Polaris Avenue
18. Oquendo Road/Dean Martin Drive
19. Thompkins Avenue/Valley View Boulevard
20. Thompkins Avenue/Dean Martin Drive

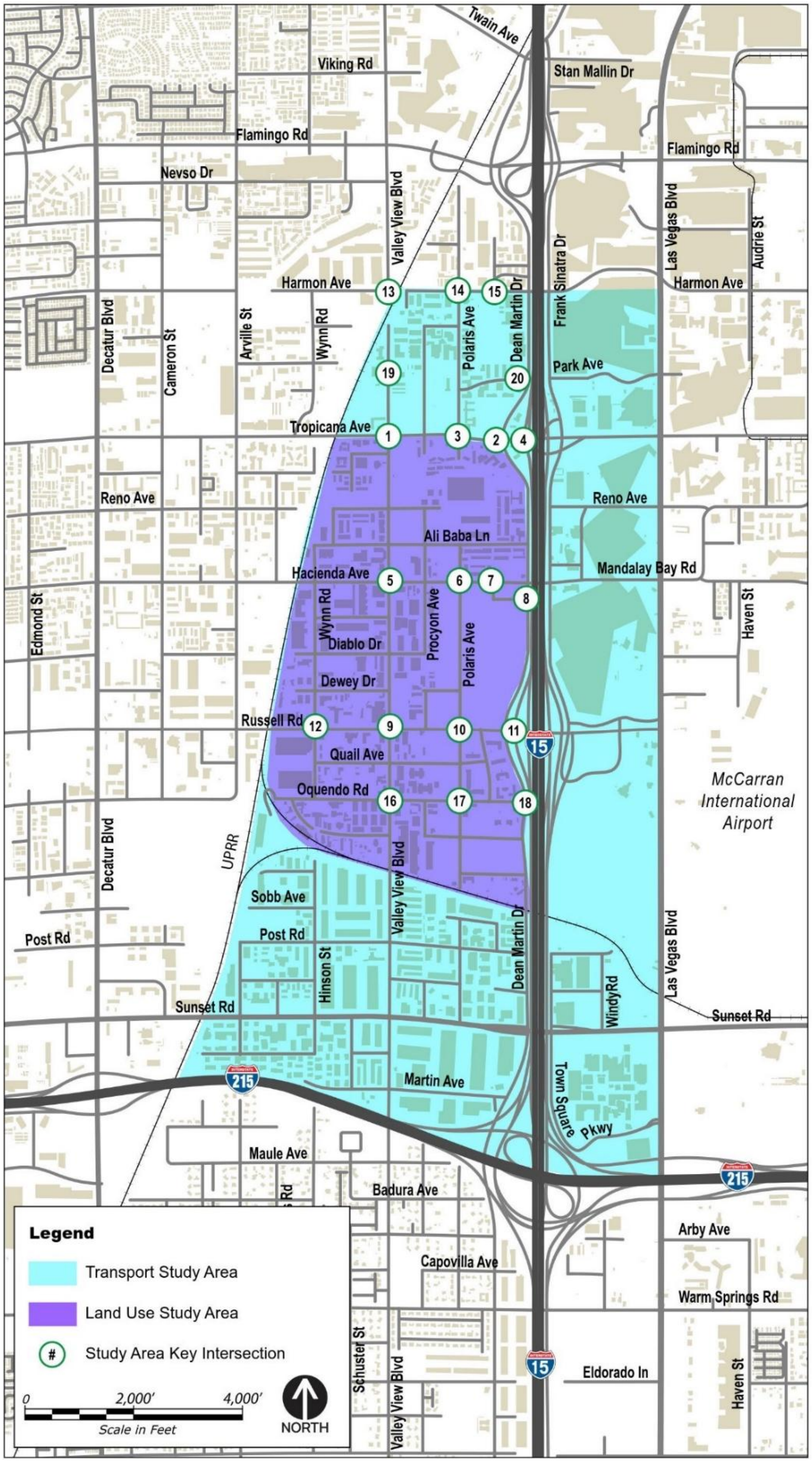


Figure 29 – Study Area Intersections

4.8. 2019 Existing Lane Configuration and Control

Regional access to the Stadium District is being provided via I-15 and Clark County 215. Valley View Boulevard, Sunset Road, Tropicana Avenue, and Russell Road are all 100-ft arterials providing three lanes of travel each way. Hacienda Avenue and parts of Dean Martin Drive are 80-ft roadways providing two lanes of travel each way. Polaris Avenue between Hacienda Avenue and Russell Road also provides for an 80-ft right-of-way while the remaining portions within the Stadium District provide a 60-ft right-of-way. Existing lane configurations and traffic controls at the time of this study are illustrated in **Figure 30**.

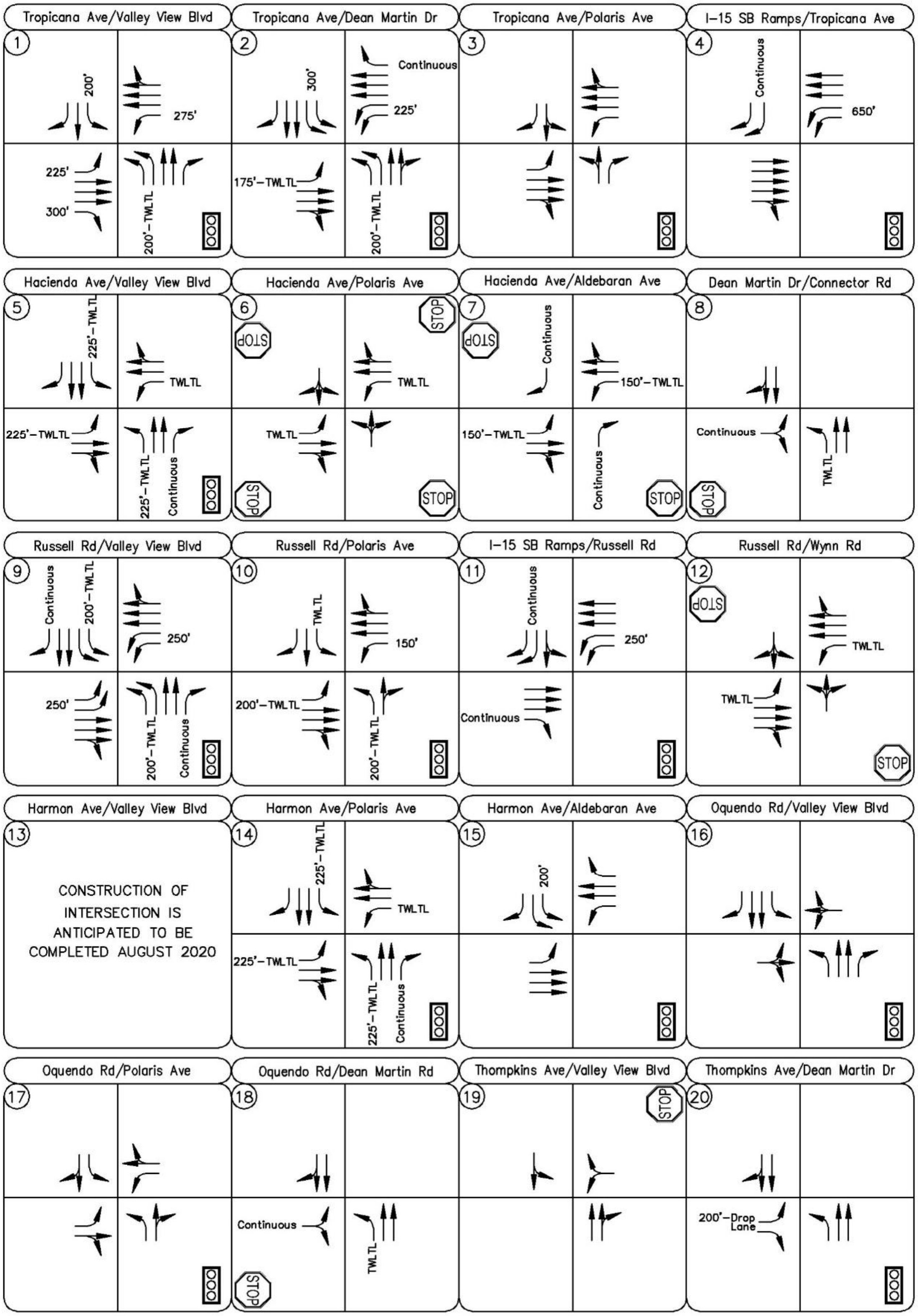


Figure 30 – Existing 2019 Lane Configuration and Intersection Control

4.9. 2019 Existing Turning Movements

Historical peak hour turning movement counts were obtained from previous studies for 10 of the 20 key study area intersections, as summarized in **Table 3.** Counts were collected in 2013 and 2017.

Table 3 – Peak Hour Turning Movement Count Dates

Intersection	Count Date
Tropicana Avenue/Valley View Boulevard (Intersection #1)	Sunday, May 7, 2017
Tropicana Avenue/Dean Martin Drive (Intersection #2)	Saturday, November 9, 2013
I-15 Southbound Ramp/Tropicana Avenue (Intersection #4)	Saturday, October 19, 2013
Hacienda Avenue/Valley View Boulevard (Intersection #5)	Sunday, April 30, 2017
Hacienda Avenue/Polaris Avenue (Intersection #6)	Thursday, November 16, 2017
Hacienda Avenue/Aldebaran Avenue (Intersection #7)	Thursday, November 16, 2017
Dean Martin Drive/Connector Road (Intersection #8)	Thursday, November 16, 2017
Russell Road/Valley View Boulevard (Intersection #9)	Sunday, April 30, 2017
Russell Road/Polaris Avenue (Intersection #10)	Thursday, November 16, 2017
I-15 Southbound Ramp/Russell Road (Intersection #11)	Sunday, April 30, 2017

To estimate current 2019 traffic volumes, a 2.37 percent (2.37%) an annual growth rate was obtained from the evaluation of five (5) Nevada Department of Transportation (NDOT) count stations (0030058, 0030269, 0031055, 0031500, and 0031520). Detailed growth rate calculations are found in **Appendix C**.

A summary of the historic and adjusted count data at the study area intersection is provided in **Appendix D** (turning movement counts).

4.10. AADT Counts and Vehicle Classifications

Vehicle classification information was available for only Tropicana Avenue (SR 593) and Valley View Boulevard within the Stadium District Area, the data provided from the *NDOT 2018 Vehicle Classification Distribution Report* was used to determine the truck percentage. AADT values along with truck percentages for those roadways with available data are presented in **Table 4**.

Table 4 – AADT and Vehicle Classification

NDOT ID	Location	2015 AADT	2016 AADT	2017 AADT	Truck Percentage
0031500	Dean Martin Dr, .1 mi N of Tompkins St	19,000	19,000	20,000*	N/A
0030269	SR 593, Tropicana Blvd, 175ft W of Procyon St	54,500	49,000	55,000	1.1%
0030058	SR 593, Tropicana Ave, 170ft E of Dean Martin Rd	76,500	75,000	74,000	5.6%
0031055	Valley View Blvd, 335ft S of Reno Ave	14,000*	15,000	15,000	1.4%
0031020	SR 594, Russell Rd, 435ft E of I-15 N/B Ramps (Exit 36)	25,500	28,000	28,100*	N/A

Source: NDOT Traffic Records Information Access and NDOT 2018 Vehicle Classification Distribution Report (June 2019)
*Indicates the AADT value is estimated.

4.11. Stadium District Parking

This subsection provides details of existing and proposed parking within the Stadium District.

4.11.1. Existing Parking

On-street parking currently exists within the street network of the Stadium District.

4.11.2. Potential Parking

Stadium District parking could include the surface parking shown in **Figure 31**.

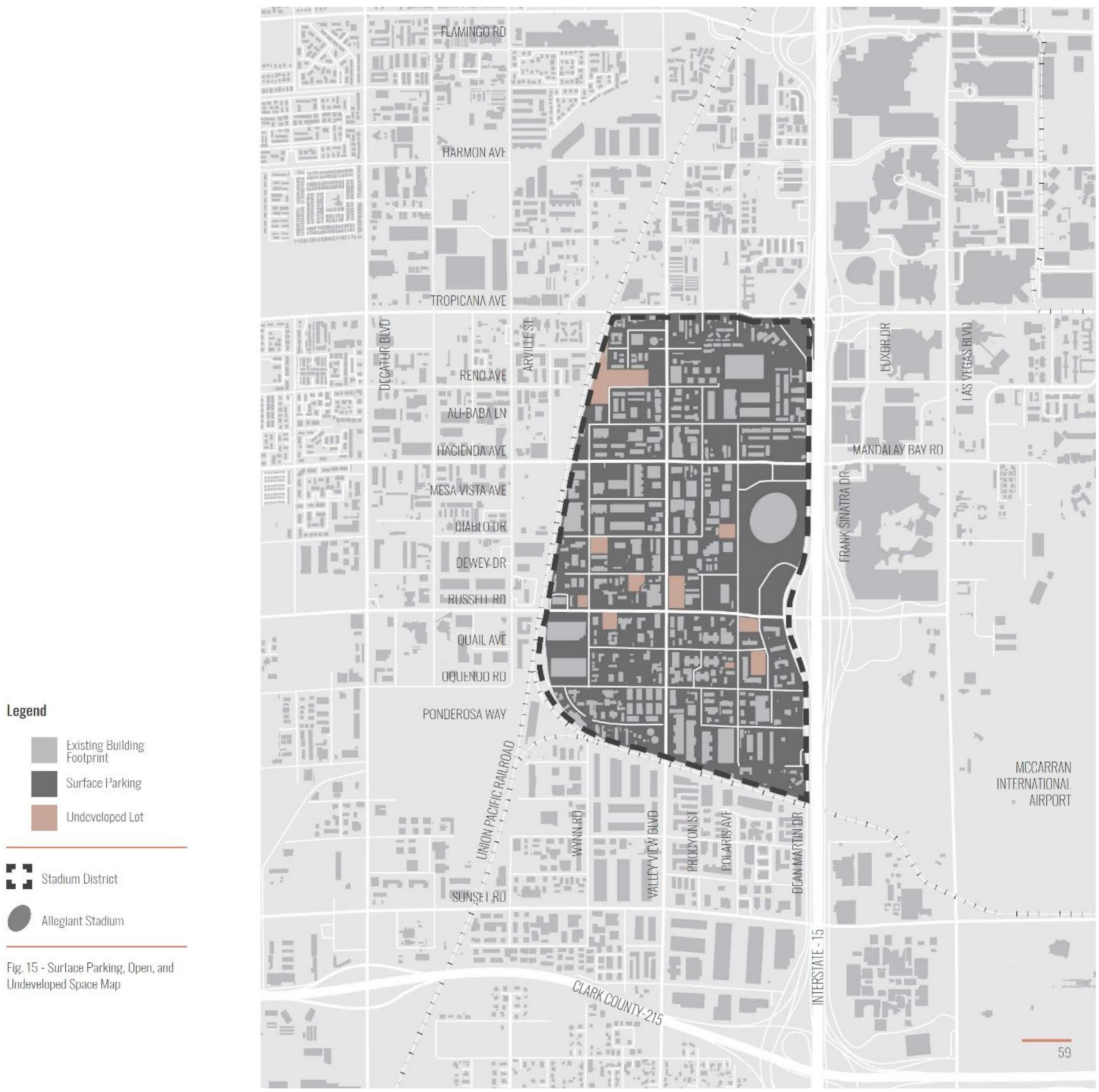


Figure 31 – Potential Stadium District Parking

5. NETWORK ANALYSIS

The existing roadway network conditions for the Stadium District were evaluated with the information gathered from the data needs assessment, base mapping, GIS analysis, and planned projects within the District. The study area key intersections level of service (LOS) was analyzed using adjusted 2019 turning movement volumes. Additionally, the existing conditions for the Stadium District were evaluated based on the FHWA's guiding principles of cohesion, directness, accessibility, alternatives, safety and security, and comfort. Each principle uses different measurements and analyses to determine the existing conditions and identify gaps in a network. The following sections summarize the existing conditions of the Stadium District study area.

5.1. Existing Key Intersection LOS Analysis

The preferred FAST cycle length of 140-seconds was used in the LOS analysis. Based on the LOS analysis, all key Stadium District intersections were found to be operating at acceptable D or better LOS, except for the intersections of I-15/Tropicana Avenue, Hacienda Avenue/Polaris Avenue, during the AM and PM peak hour. **Figure 32** shows the LOS at the key intersections, note that two-way stop controlled intersections show the LOS for the worst movement. Methodology and calculations for the LOS analysis are provided in **Appendix E**. All existing analyses were based on the lane geometry and intersection control shown in **Figure 30**.

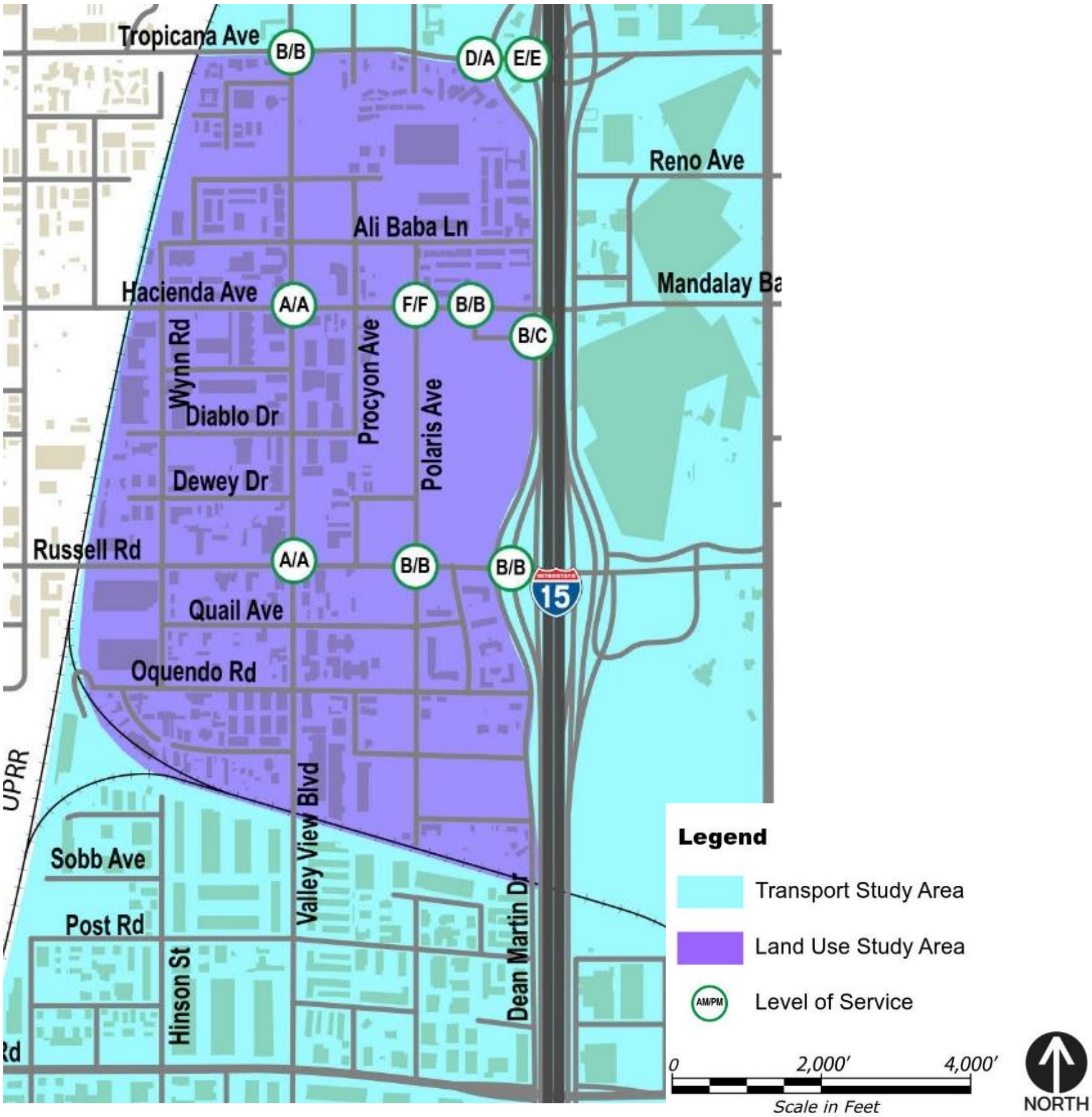


Figure 32 – Study Area Intersection LOS

5.2. Future Land Use and Volumes

A mix of various land uses (hotel/commercial, restaurant/bar/retail, mixed use (multifamily mid-rise), industrial, and office space were considered for the three future condition scenarios consisting of low, medium, and high density uses for the Stadium District in order to estimate future traffic volumes. The estimated trips from the three scenarios were distributed along the roadway network and 2040 volumes calculated for each scenario. Detailed assumptions and calculations are located in **Appendix C**.

5.3. Cohesion

Cohesion in a transportation network defines how connected various transportation infrastructure is throughout a given area. To measure the cohesion in the Stadium District, the connectivity ratio, node to intersection ratio, network density, and average block length were calculated.

The connectivity ratio, measured as a ratio between links and nodes, was 1.34 (180 links/134 nodes) within the Stadium District. A perfect grid pattern in a transportation network has a connectivity ratio of 2.0 and a non-connected culs-de-sac only transportation network has a connectivity ratio of 1.0. A connectivity ratio of 1.34 implies that there are several streets terminating in either a stub or cul-de-sac. The roadway map confirms that there are several stub streets and cul-de-sacs within the Stadium District. Several of these streets dead end into the UPRR along the west and south side of the study area.

The node to intersection ratio measures the ratio of nodes to intersections. This is an indication of terminating streets and connectivity in the area. The node to intersection ratio was 1.28 (134 nodes/110 intersections) where a ratio of 1.0 represents ideal connectivity. There are more nodes than intersections in the Stadium District, which means there are several points where the user must turn around to reach their destination.

The average block length within the Stadium District was measured to be approximately 970 feet where the average block size is 660 feet. The large block length indicates there may be missing connections between intersections.

5.4. Directness

The directness of the Stadium District was analyzed in order to determine which routes minimize the distance pedestrians and bicyclists need to travel to reach a destination. Providing policies within the Stadium District that require through access to key routes will improve the directness of the area. Four key evaluation sites were chosen within and adjacent to the Stadium District to evaluate the directness of each travel route. The key sites are mapped in **Figure 33**. Each site was chosen because it is a potential destination within the study area. The four sites are:

- Valley View Parking Lots
- Event Drop-off/Pick-up Area
- TNC Pick-up Lot
- Las Vegas Boulevard/Hacienda Avenue (MGM Resort Properties – potential to have event entertainment)

Figure 33 – Key Sites to Stadium District

The distance of each available route for the four different modes of transportation (driving, walking, biking, and transit) were calculated from each of the key sites to the stadium site. The ratio of the travel distance between the sites and the true straight-line distance was calculated for each of the four sites. The average travel distance to true distance ratio was found to be 1.6, meaning users have to travel an average of 1.6 times further than the actual distance to their destination when traveling between sites within the Stadium District. The calculated ratio between Allegiant Stadium and the four key locations is located in **Table 5**.

Table 5 – Ratio of Average Travel Distance to True Travel Distance

	Key Sites	Driving	Walking	Biking	Transit	Average Travel Distance	True Distance	Ratio
A	**Valley View Parking Lots**	0.8	0.8	0.8	N/A	0.8	0.58	1.4
B	**Event Drop-off/Pick-up Area**	0.6	0.6	0.6	N/A	0.6	0.22	2.7
C	**TNC Pick-up Lot**	0.4	0.4	0.4	N/A	0.4	0.40	1.0
D	**Las Vegas Boulevard and Hacienda Avenue**	1	1	1	N/A	1.0	0.75	1.3

5.5. Accessibility

Some segments of the transportation network throughout the Stadium District are not in compliance with the ADA standards. Crosswalks, curb ramps, and continuous sidewalks are not consistent throughout the network. Policies that require complete street elements that meet ADA standards should be in place within the Stadium District to provide accessibility for all users and modes of travel regardless of users' age or ability.

5.6. Alternatives

The four sites shown in **Figure 33** were chosen within and adjacent to the Stadium District Area. The travel time from each site to the Allegiant Stadium was calculated for four major modes of alternative transportation: driving, walking, biking, and transit. The travel times are summarized in **Table 6**.

Table 6 – Key Sites to Stadium Site

Key Sites		Driving	Walking	Biking	Transit
A	**Valley View Parking Lots**	2 minutes	16 minutes	4 minutes	Not Available
B	**Event Drop-off/Pick-up Area**	3 minutes	12 minutes	3 minutes	Not Available
C	**TNC Pick-up Lot**	1 minutes	8 minutes	2 minutes	Not Available
D	**Las Vegas Boulevard and Hacienda Avenue**	3 minutes	19 minutes	6 minutes	Not Available

Driving is the fastest mode of transportation within the District and was closely followed by biking. Biking as an alternate mode of transportation was never more than double the travel time associated with driving. However, walking between destinations took more than five times the time it would take to drive and was more than double the time it took to bike to the same destination for most locations. There are no existing transit options for the four locations.

5.7. Safety and Security

Streetlights are present on the larger corridors within the Stadium District but are missing or found to not to be working on a few of the smaller side streets such as those in **Figure 34**. Missing or damaged streetlights create an unsafe environment for users in the corridor during night-time conditions. This is especially hazardous for pedestrians and bicyclists as they are less visible to motorists in the area. It should be noted that the standard for 60-foot right-of-way streets or less includes streetlights along one side of the roadway per Clark County Area Uniform Standard Drawing 311.1. Within the Stadium District, Ali Baba Lane, Diablo Drive, Mesa Vista Avenue, Reno Avenue, Polaris Avenue and Procyon Street are all 60-foot right-of-way streets and have streetlights on one side of the street.

Figure 34 – Unilluminated Streetlight at Reno Avenue and Procyon Street

Most of the buildings within the Stadium District have a large setback with no storefront. The plain facade of the warehouse-type buildings and the large setback create an uncomfortable environment for pedestrians. Speeds are also generally higher on roads with large setbacks because motorists do not have a sense of confinement or definition.

There have been three stolen vehicles, two disturbance of the peace complaints, and one assault/battery event between February 27, 2020 and March 4, 2020 within the Stadium District area (https://www.crimemapping.com/).

5.8. Comfort

Similar to safety and security and accessibility, the comfort level is low for the transportation network within the Stadium District. Motorists often face dead-end roads in the corridor because the network grid is not complete. There is a high volume of commercial trucks operating throughout the District serving the existing industrial-related businesses. Bicyclists do not have any defined bike lanes to use in the District area. They share the road with motorists and commercial trucks. Pedestrians face similar challenges – sidewalks have gaps and there are widely spaced crosswalks. The average block size in the District is 970 feet where the typical U.S. block size is 660 feet. This means the average pedestrian has to walk 1.5 times further than “normal” in the District Area to reach an intersection which may or may not be delineated with appropriate crosswalks and curb cuts.

The Level of Traffic Stress (LTS) methodology has become a standard method of analysis for bicycle networks during the past four years. Roadways are ranked on a scale of one to four, where scores of two or lower are acceptable bicycle facilities to the average adult:

LTS 1—Presents little traffic stress and demands little attention from bicyclists. Suitable for almost all bicyclists, including children who are trained to safely cross intersections. Traffic speeds are low and there is no more than one lane per direction. Intersections are easy to cross by children and adults. Typical street types include residential streets, local streets, and multi-use paths.

LTS 2—Presents little traffic stress but requires more attention than children can handle. Suitable for teens and adult bicyclists with mainstream bicycle-handling skills. Traffic speeds are higher, but speed differentials are still low. Intersection crossings are not difficult for most teens or adults.

Roadways are less than three lanes or additional separation/ dedicated space is provided between bicyclists and traffic. Typical street types include collector-level streets with bike lanes.

LTS 3—Presents moderate traffic stress, is suitable for observant and confident adult bicyclists. Traffic speeds are moderate, or high where separation or exclusive riding space is provided. Intersection crossings are longer or higher speed than LTS 2, but still are considered acceptably safe by most adults. Typical locations include low-speed arterials with bike lanes.

LTS 4—Represents high stress and is only suitable for experienced bicyclists. Traffic speeds are moderate or high and intersections can be complex, wide, or high volume. Intersections are difficult to cross and can be perceived as unsafe. Typical locations include high-speed and multi-lane roadways with no dedicated bicycling space or narrow shoulders.

Future bicycle facilities within the Stadium District should aim to provide an LTS 2 in order to increase bike ridership for a larger population.

6. AVAILABLE PROGRAMS AND HEALTH ANALYSIS

Four studies that analyze the health impacts of multimodal transportation were reviewed as part of this study. These plans make recommendations to improve quality of life and public health through transportation and related programs. The documents reviewed include:

- CDC Recommendations for Improving Health through Transportation Policy (2010)
- Public Health Engagement in Complete Streets Initiatives: Examples and Lessons Learned (April 2019)
- American Heart Association (AHA) Active Transportation (July 2017)
- RTC Complete Streets Design Guidelines for Livable Communities

6.1. CDC Recommendations for Improving Health through Transportation Policy (2010)

The Center for Disease Control (CDC) published an article with recommendations on improving transportation modes for the benefit of public health. The study made recommendations for the following topics:

- Reduce injuries associated with motor vehicle crashes
- Improve Air Quality
- Expand Public Transportation
- Promote Active Transportation
- Encourage Healthy Community Design
- Require Research and Surveillance
- Support Professional Development and Job Creation

There are several key points from the study the Stadium District Transportation Plan can include as implementable action items. The study suggests:

- Promoting transportation choices and innovative transportation measures to reduce emissions and improve air quality,
- Provide incentives for a network of public transit (bus rapid transit/light rail), and
- Provide well-lit sidewalks and paths, safe crossing points, designated bicycle infrastructure, safe connections to public transit and public parks and recreation.

Further, the study recommends encouraging and constructing a dense network of streets to improve connectibility and encourage healthy community design.

6.2. Public Health Engagement in complete Streets Initiatives: Examples and Lessons Learned (April 2019)

The Illinois Prevention Research Center, PAPRN+ Physical Activity, and PARC Physical Activity Research Center analyzed 15 jurisdictions within the United States that engaged in Complete-Streets initiatives with a public health focus. In each of the 15 cities, the health department or a health coalition facilitated, engaged, and/or supported the implementation of a Complete Streets policy within their respective jurisdiction. Prior to implementing complete streets in a jurisdiction, the study recommends the following:

- Conduct community engagement
- Conduct interactive community outreach
- Build relationships with key agencies and departments

6.3. American Heart Association Active Transportation (June 2019)

The American Heart Association (AHA) developed guidelines on complete streets and active transportation. These guidelines were produced with the goal of improving the health of the population through multi-modal transportation implementations on America's roadways. According to the guidelines, and a study conducted in the City of Atlanta found that residents living in the most walkable neighborhoods were 35% less likely to be obese. The guidelines make several recommendations for decision makers and advocates to use when trying to develop complete streets policy. Notably, the guidelines recommend that transportation system interventions include the following items to improve the health of the U.S. population:

- Street connectivity
- Sidewalk and trail infrastructure
- Bicycle infrastructure
- Public transit infrastructure and access

6.4. RTC Complete Streets Design Guidelines for Livable Communities

The RTC developed "Complete Streets Design Guidelines for Livable Communities" adopted March 2013 for the Las Vegas Valley. The RTC Complete Streets Guidelines goals include:

- Encourage the mindset that streets need to be designed for everyone
- Serve the land uses that are adjacent to the street
- Encourage people to travel by walking, bicycling, and transit, and to drive less
- Provide transportation options for people of all ages, physical abilities, and income levels
- Enhance the safety and security of streets, from both a traffic and personal perspective
- Improve peoples' health
- Create livable neighborhoods
- Reduce the total amount of paved area
- Reduce greenhouse gas emissions and other air pollution
- Reduce energy consumption
- Promote the economic well-being of both businesses and residents
- Increase civic space and encourage human interaction

This set of RTC guidelines should be used for the development of the street network within the Stadium District.

Appendix A: Literature Review Matrix

Table 1 – Review of Related Studies Matrix

Plan	Bicycle	Pedestrian	Land Use	Roadway	Public Transportation	Nodes
Regional Bicycle and Pedestrian Plan for Southern Nevada (RBPP)	Proposed bicycle lanes and other bicycle facilities throughout the Las Vegas Valley	Proposed shared use paths throughout the Las Vegas Valley	N/A	N/A	N/A	N/A
Southern Nevada Strong – Regional Plan	Proposed to enhance bicycle facilities.	Proposed to enhance pedestrian facilities.	Addressed uncoordinated growth and disconnected land uses.	Proposed to develop a safe and efficient road network that supports all modes of transportation.	Proposed to develop a modern and integrated transit system.	Identified downtowns and town centers throughout the Las Vegas Valley.
Regional Transportation Plan – 2017 to 2040	Proposes to expand bicycle networks and overall connectivity in accordance with the RBPP. Proposes to make existing infrastructure compliant with ADA requirements.	Proposes to expand pedestrian networks and overall connectivity in accordance with the RBPP. Proposes to make existing infrastructure compliant with ADA requirements.	N/A	Strategized ways to manage congestion within the Las Vegas Valley. Proposed to emphasize roadway design that accommodates all potential users and modes. Proposed to reconstruct, rehabilitate, and repave roadways.	Proposed to expand the service network to new areas and increase the frequency of service on select routes. Proposed to consider high-capacity connections from McCarren International Airport, the strip, and downtown. Proposed to improve and repair bus stops and transit centers.	Identified the area around the Las Vegas Strip as the core area within the Las Vegas Valley.
Transportation Investment Business Plan (TIBP)	N/A	Proposed to improve pedestrian experience in the resort corridor with street and road improvements, pedestrian improvements, and policy. Proposes to widen the sidewalks on Las Vegas Boulevard. Proposes to convert Las Vegas Boulevard to a pedestrian mall.	Appendix E of the TIBP projected the future land use for Resort Hotel, Office, Industrial, Retail, Single Family Residential, and Multi-Family Residential in the Las Vegas core area. These projections include the majority of the Stadium District Area and are projected for 2035.	Rated corridors on transportation reliability, travel experience, cost, global completeness, to produce an average travel rating. The plan rates Harmon Avenue, Valley View Boulevard, Russell Road, Las Vegas Boulevard, and Tropicana Avenue, which are all located within the Stadium District. Proposes to create dedicated lanes for taxis/limos/shuttles from McCarren Airport to Las Vegas Boulevard and Tropicana Avenue. Proposes to convert Las Vegas Boulevard to a one-way street. Proposes to make Valley View Boulevard a continuous corridor, connect to Harmon Avenue via a grade separation. Proposes to convert Harmon Avenue to a Complete Street between Las Vegas Boulevard and UNLV.	Supported the expansion of the Las Vegas Monorail from its current terminating point at Mandalay Bay to a high-speed rail station proposed at the stadium site within the Stadium District. **the proposed location of a high-speed station was within the stadium district at the time this study was published but has since moved to Las Vegas Boulevard between Warm Springs Road and Blue Diamond Road.* Proposed a potential regional park & ride transit center just to the west of the Stadium District boundary.	Identified a core area with several different centers. The types of centers include, resort/casino, convention, events, medical, travel hub, and transportation hub. Within the Stadium District, there is a resort/casino center and a convention center.
Regional Schools Multimodal Transportation Access Study	Proposed creating safe and pleasant bicycle routes that allow for natural surveillance. Proposed Integrated local, regional, and state-wide pedestrian and bicycle facilities, sidewalks, and multi-use pathways	Proposed separating sidewalks and multi-use paths from traffic. Proposed creating safe and pleasant pedestrian routes that allow for natural surveillance. Proposed Integrated local, regional, and state-wide pedestrian and bicycle facilities, sidewalks, and multi-use pathways	N/A	N/A	N/A	N/A

Table 1 Cont. – Review of Related Studies

Plan	Bicycle	Pedestrian	Land Use	Roadway	Public Transportation	Nodes
On Board – State of the System	N/A	N/A	Identified an index of density and mixed land use. The Stadium District area shows that there are currently more jobs per acre than persons per acre and projects the person per acre count to increase but not to exceed jobs per acre by 2040.	N/A	Identified the Deuce & SDX and the 201 routes (both service the Stadium District area) as two of the most frequented RTC routes.	Identified the resort corridor, which bleeds into the northeast area of the Stadium District, as a Major Activity Center. Identified Allegiant Stadium as a potential Major Activity Center by 2040.
Modeling and Analysis of Walkability in Suburban Neighborhoods in Las Vegas	N/A	The plan surveyed residents within the neighborhood about the frequency of walking and found that most survey respondents walk frequently.	Scored land uses on the proportion of the types of land uses within walking distance. A score of 1 in a neighborhood indicated it was within walking distance of all major types of land use. This scoring method could be replicated in the Stadium District to identify gaps.	N/A	The plan surveyed residents on their transportation choices and found that most neighborhood residents do not use public transit.	N/A
Regional Bicycle Network Gap Analysis	Identified gaps in the bicycle network and proposed locations to install bicycle facilities to make a consistent grid. A high priority area was Tropicana Boulevard within the Stadium District.	Identified gaps in the bicycle network and proposed shared use paths to fill in gaps and provide pedestrian infrastructure within the Las Vegas Valley.	N/A	N/A	N/A	N/A
Las Vegas NFL Stadium Sites Traffic Assessment	N/A	Proposed the construction of a pedestrian bridge over the highway.	N/A	Proposed HOV interchanges on Interstate 15 at Harmon and Hacienda Avenues.	Proposed extending the monorail to Mandalay Bay.	N/A
Southern Nevada HOV Plan Update	N/A	N/A	N/A	Proposed multiple HOV lanes throughout the Las Vegas Valley on interstate-15 and Clark County 215.	N/A	N/A
Tropicana Interchange	N/A	N/A	N/A	Revised HOV plan to remove HOV access from Hacienda Avenue and to change the HOV lanes providing access to Harmon Avenue be to and from the south rather than the north.	N/A	N/A
Stadium Traffic Impact Study & Event Management Plan – Addendum #1	N/A	N/A	N/A	Anticipated the completion og the Harmon Avenue/Valley View Boulevard Connector and Roadways Improvements project to be completed by 2020.	N/A	N/A
Create Community Through Common Goals – Stadium District Concept Plan	Proposed including bicycle infrastructure.	Proposed the inclusion of pedestrian infrastructure.	N/A	N/A	Proposed increase transit service in the area.	N/A
Downtown Atlanta Transportation Plan (May 2018)	Proposed constructing new bicycle infrastructure.	Proposed pedestrian improvements to improve walkability in the neighborhood.	N/A	Proposed converting one-way streets to two way streets.	N/A	N/A

Appendix B: Railroad Crossing Information

U. S. DOT CROSSING INVENTORY FORM

DEPARTMENT OF TRANSPORTATION

FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part III Item 2.K. are required unless otherwise noted. An asterisk * denotes an optional field.

A. Revision Date (MM/DD/YYYY)	B. Reporting Agency	C. Reason for Update (Select only one)	D. DOT Crossing Inventory Number
07 / 12 / 2019	☒ Railroad ☐ Transit ☐ State ☐ Other	☐ Change in Data ☐ New Crossing ☐ Closed ☐ No Train Traffic ☐ Quiet Zone Update ☐ Re-Open ☒ Date Change Only ☐ Change in Primary Operating RR ☐ Admin. Correction	906354A

Part I: Location and Classification Information

1. Primary Operating Railroad: Union Pacific Railroad Company [UP]
2. State: NEVADA
3. County: CLARK

4. City / Municipality: ☒ In ☐ Near LAS VEGAS
5. Street/Road Name & Block Number: TROPICANA AVENUE (Street/Road Name) | * (Block Number)
6. Highway Type & No.: TBD

7. Do Other Railroads Operate a Separate Track at Crossing? ☐ Yes ☒ No
If Yes, Specify RR ____, ____, ____, ____

8. Do Other Railroads Operate Over Your Track at Crossing? ☐ Yes ☒ No
If Yes, Specify RR ____, ____, ____, ____

9. Railroad Division or Region: ☐ None ROCKY MOUNTAIN
10. Railroad Subdivision or District: ☐ None Cima SUB
11. Branch or Line Name: ☒ None
12. RR Milepost: (prefix) | 0328.691 (nnnn.nnn) | (suffix)

13. Line Segment *
14. Nearest RR Timetable Station *
15. Parent RR (if applicable) ☒ N/A
16. Crossing Owner (if applicable) ☐ N/A UP

17. Crossing Type: ☒ Public ☐ Private
18. Crossing Purpose: ☒ Highway ☐ Pathway, Ped. ☐ Station, Ped.
19. Crossing Position: ☐ At Grade ☐ RR Under ☒ RR Over
20. Public Access (if Private Crossing): ☐ Yes ☐ No
21. Type of Train: ☒ Freight ☐ Transit ☐ Intercity Passenger ☐ Shared Use Transit ☐ Commuter ☐ Tourist/Other
22. Average Passenger Train Count Per Day: ☐ Less Than One Per Day ☐ Number Per Day 0

23. Type of Land Use: ☒ Open Space ☐ Farm ☐ Residential ☐ Commercial ☐ Industrial ☐ Institutional ☐ Recreational ☐ RR Yard

24. Is there an Adjacent Crossing with a Separate Number? ☐ Yes ☒ No If Yes, Provide Crossing Number ____
25. Quiet Zone (FRA provided): ☒ No ☐ 24 Hr ☐ Partial ☐ Chicago Excused Date Established ____

26. HSR Corridor ID: ☒ N/A
27. Latitude in decimal degrees (WGS84 std: nn.nnnnnnn) 36.1009100
28. Longitude in decimal degrees (WGS84 std: -nnn.nnnnnnn) -115.1932950
29. Lat/Long Source: ☒ Actual ☐ Estimated

30.A. Railroad Use *	**31.A. State Use** *
30.B. Railroad Use *	**31.B. State Use** *
30.C. Railroad Use *	**31.C. State Use** *
30.D. Railroad Use *	**31.D. State Use** *
32.A. Narrative (Railroad Use) *	**32.B. Narrative** (State Use) *

33. Emergency Notification Telephone No. (posted): 800-848-8715
34. Railroad Contact (Telephone No.): 402-544-3721
35. State Contact (Telephone No.): 775-888-7333

Part II: Railroad Information

1. Estimated Number of Daily Train Movements

1.A. Total Day Thru Trains (6 AM to 6 PM)	1.B. Total Night Thru Trains (6 PM to 6 AM)	1.C. Total Switching Trains	1.D. Total Transit Trains	1.E. Check if Less Than One Movement Per Day ☐ How many trains per week?
7	6	0	0	____

2. Year of Train Count Data (YYYY): 2019

3. Speed of Train at Crossing
3.A. Maximum Timetable Speed (mph) 40
3.B. Typical Speed Range Over Crossing (mph) From 20 to 40

4. Type and Count of Tracks
Main 1 Siding 0 Yard 0 Transit 0 Industry 0

5. Train Detection (Main Track only)
☐ Constant Warning Time ☐ Motion Detection ☐ AFO ☐ PTC ☐ DC ☒ Other ☐ None

6. Is Track Signaled? ☐ Yes ☒ No
7.A. Event Recorder ☐ Yes ☒ No
7.B. Remote Health Monitoring ☐ Yes ☒ No

U. S. DOT CROSSING INVENTORY FORM

A. Revision Date *(MM/DD/YYYY)* 07/12/2019	PAGE 2	D. Crossing Inventory Number *(7 char.)* 906354A

Part III: Highway or Pathway Traffic Control Device Information

1. Are there Signs or Signals? ☐ Yes ☒ No

2. Types of Passive Traffic Control Devices associated with the Crossing

2.A. Crossbuck Assemblies *(count)* 0

2.B. STOP Signs *(R1-1)* *(count)* 0

2.C. YIELD Signs *(R1-2)* *(count)*

2.D. Advance Warning Signs *(Check all that apply; include count)* ☐ None
☐ W10-1 ____ ☐ W10-3 0 ☐ W10-11 ____
☐ W10-2 0 ☐ W10-4 0 ☐ W10-12 0

2.E. Low Ground Clearance Sign *(W10-5)* ☐ Yes *(count* 0 *)* ☒ No

2.F. Pavement Markings ☐ Stop Lines ☐ Dynamic Envelope ☐ RR Xing Symbols ☒ None

2.G. Channelization Devices/Medians ☐ All Approaches ☐ Median ☐ One Approach ☒ None

2.H. EXEMPT Sign *(R15-3)* ☐ Yes ☐ No

2.I. ENS Sign *(I-13)* Displayed ☐ Yes ☐ No

2.J. Other MUTCD Signs ☐ Yes ☒ No
Specify Type ______ Count 0
Specify Type ______ Count 0
Specify Type ______ Count 0

2.K. Private Crossing Signs *(if private)* ☐ Yes ☐ No

2.L. LED Enhanced Signs *(List types)*

3. Types of Train Activated Warning Devices at the Grade Crossing *(specify count of each device for all that apply)*

3.A. Gate Arms *(count)* Roadway 0 Pedestrian ____

3.B. Gate Configuration ☐ 2 Quad ☐ 3 Quad ☐ 4 Quad ☐ Full *(Barrier)* Resistance ☐ Median Gates

3.C. Cantilevered *(or Bridged)* Flashing Light Structures *(count)* Over Traffic Lane 0 ☐ Incandescent; Not Over Traffic Lane 0 ☐ LED

3.D. Mast Mounted Flashing Lights *(count of masts)* 0 ☐ Incandescent ☐ LED ☐ Back Lights Included ☐ Side Lights Included

3.E. Total Count of Flashing Light Pairs 0

3.F. Installation Date of Current Active Warning Devices: *(MM/YYYY)* ____/____ ☒ Not Required

3.G. Wayside Horn ☐ Yes Installed on *(MM/YYYY)* ____/____ ☐ No

3.H. Highway Traffic Signals Controlling Crossing ☐ Yes ☒ No

3.I. Bells *(count)* 0

3.J. Non-Train Active Warning ☐ Flagging/Flagman ☐ Manually Operated Signals ☐ Watchman ☐ Floodlighting ☐ None

3.K. Other Flashing Lights or Warning Devices Count 0 Specify type ______

4.A. Does nearby Hwy Intersection have Traffic Signals? ☐ Yes ☐ No

4.B. Hwy Traffic Signal Interconnection ☐ Not Interconnected ☐ For Traffic Signals ☐ For Warning Signs

4.C. Hwy Traffic Signal Preemption ☐ Simultaneous ☐ Advance

5. Highway Traffic Pre-Signals ☐ Yes ☐ No Storage Distance * ____ Stop Line Distance * ____

6. Highway Monitoring Devices *(Check all that apply)* ☐ Yes - Photo/Video Recording ☐ Yes – Vehicle Presence Detection ☐ None

Part IV: Physical Characteristics

1. Traffic Lanes Crossing Railroad ☐ One-way Traffic ☐ Two-way Traffic ☐ Divided Traffic; Number of Lanes 0

2. Is Roadway/Pathway Paved? ☒ Yes ☐ No

3. Does Track Run Down a Street? ☐ Yes ☒ No

4. Is Crossing Illuminated? *(Street lights within approx. 50 feet from nearest rail)* ☐ Yes ☒ No

5. Crossing Surface *(on Main Track, multiple types allowed)* Installation Date * *(MM/YYYY)* ____/____ Width * ____ Length * ____
☐ 1 Timber ☐ 2 Asphalt ☐ 3 Asphalt and Timber ☐ 4 Concrete ☐ 5 Concrete and Rubber ☐ 6 Rubber ☐ 7 Metal
☐ 8 Unconsolidated ☐ 9 Composite ☐ 10 Other *(specify)* ______

6. Intersecting Roadway within 500 feet? ☐ Yes ☒ No If Yes, Approximate Distance *(feet)* ______

7. Smallest Crossing Angle ☒ 0° – 29° ☐ 30° – 59° ☐ 60° - 90°

8. Is Commercial Power Available? * ☐ Yes ☒ No

Part V: Public Highway Information

1. Highway System
☐ (01) Interstate Highway System
☐ (02) Other Nat Hwy System (NHS)
☐ (03) Federal AID, Not NHS
☒ (08) Non-Federal Aid

2. Functional Classification of Road at Crossing ☒ (0) Rural ☐ (1) Urban
☐ (1) Interstate ☐ (5) Major Collector
☐ (2) Other Freeways and Expressways
☐ (3) Other Principal Arterial ☐ (6) Minor Collector
☐ (4) Minor Arterial ☒ (7) Local

3. Is Crossing on State Highway System? ☒ Yes ☐ No

4. Highway Speed Limit 45 MPH ☒ Posted ☐ Statutory

5. Linear Referencing System *(LRS Route ID)* *

6. LRS Milepost *

7. Annual Average Daily Traffic *(AADT)* Year 2012 AADT 53500

8. Estimated Percent Trucks 03 %

9. Regularly Used by School Buses? ☐ Yes ☒ No Average Number per Day 0

10. Emergency Services Route ☐ Yes ☐ No

Submission Information - *This information is used for administrative purposes and is not available on the public website.*

Submitted by ______ Organization ______ Phone ______ Date ______

Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.

U. S. DOT CROSSING INVENTORY FORM

DEPARTMENT OF TRANSPORTATION

FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part III Item 2.K. are required unless otherwise noted. An asterisk * denotes an optional field.

A. Revision Date *(MM/DD/YYYY)* 05 / 13 / 2019

B. Reporting Agency ☒ Railroad ☐ Transit ☐ State ☐ Other

C. Reason for Update *(Select only one)* ☐ Change in Data ☐ New Crossing ☐ Closed ☐ No Train Traffic ☐ Quiet Zone Update ☐ Re-Open ☐ Date Change Only ☐ Change in Primary Operating RR ☒ Admin. Correction

D. DOT Crossing Inventory Number 906670X

Part I: Location and Classification Information

1. Primary Operating Railroad Union Pacific Railroad Company [UP]

2. State NEVADA

3. County CLARK

4. City / Municipality ☒ In ☐ Near LAS VEGAS

5. Street/Road Name & Block Number RUSSEL ROAD | ____ *(Street/Road Name)* | * *(Block Number)*

6. Highway Type & No. TBD

7. Do Other Railroads Operate a Separate Track at Crossing? ☐ Yes ☒ No If Yes, Specify RR ____, ____, ____, ____

8. Do Other Railroads Operate Over Your Track at Crossing? ☐ Yes ☒ No If Yes, Specify RR ____, ____, ____, ____

9. Railroad Division or Region ☐ None ROCKY MOUNTAIN

10. Railroad Subdivision or District ☐ None Cima SUB

11. Branch or Line Name ☒ None

12. RR Milepost ____ | 0327.657 | ____ *(prefix)* | *(nnnn.nnn)* | *(suffix)*

13. Line Segment *

14. Nearest RR Timetable Station *

15. Parent RR *(if applicable)* ☒ N/A

16. Crossing Owner *(if applicable)* ☐ N/A UP

17. Crossing Type ☒ Public ☐ Private

18. Crossing Purpose ☒ Highway ☐ Pathway, Ped. ☐ Station, Ped.

19. Crossing Position ☐ At Grade ☐ RR Under ☒ RR Over

20. Public Access *(if Private Crossing)* ☐ Yes ☐ No

21. Type of Train ☒ Freight ☐ Transit ☐ Intercity Passenger ☐ Shared Use Transit ☐ Commuter ☐ Tourist/Other

22. Average Passenger Train Count Per Day ☐ Less Than One Per Day ☐ Number Per Day 0

23. Type of Land Use ☒ Open Space ☐ Farm ☐ Residential ☐ Commercial ☐ Industrial ☐ Institutional ☐ Recreational ☐ RR Yard

24. Is there an Adjacent Crossing with a Separate Number? ☐ Yes ☒ No If Yes, Provide Crossing Number ____

25. Quiet Zone *(FRA provided)* ☒ No ☐ 24 Hr ☐ Partial ☐ Chicago Excused Date Established ____

26. HSR Corridor ID ☒ N/A

27. Latitude in decimal degrees *(WGS84 std: nn.nnnnnnn)* 36.0863480

28. Longitude in decimal degrees *(WGS84 std: -nnn.nnnnnnn)* -115.1974620

29. Lat/Long Source ☒ Actual ☐ Estimated

30.A. Railroad Use *

31.A. State Use *

30.B. Railroad Use *

31.B. State Use *

30.C. Railroad Use *

31.C. State Use *

30.D. Railroad Use *

31.D. State Use *

32.A. Narrative *(Railroad Use)* *

32.B. Narrative *(State Use)* *

33. Emergency Notification Telephone No. *(posted)* 800-848-8715

34. Railroad Contact *(Telephone No.)* 402-544-3721

35. State Contact *(Telephone No.)* 775-888-7333

Part II: Railroad Information

1. Estimated Number of Daily Train Movements

1.A. Total Day Thru Trains *(6 AM to 6 PM)* 0

1.B. Total Night Thru Trains *(6 PM to 6 AM)* 0

1.C. Total Switching Trains 0

1.D. Total Transit Trains 0

1.E. Check if Less Than One Movement Per Day ☒ How many trains per week? 1

2. Year of Train Count Data *(YYYY)* 2017

3. Speed of Train at Crossing

3.A. Maximum Timetable Speed *(mph)* 40

3.B. Typical Speed Range Over Crossing *(mph)* From 20 to 40

4. Type and Count of Tracks

Main 1 Siding 0 Yard 0 Transit 0 Industry 0

5. Train Detection *(Main Track only)* ☐ Constant Warning Time ☐ Motion Detection ☐AFO ☐ PTC ☐ DC ☒ Other ☐ None

6. Is Track Signaled? ☐ Yes ☒ No

7.A. Event Recorder ☐ Yes ☒ No

7.B. Remote Health Monitoring ☐ Yes ☒ No

U. S. DOT CROSSING INVENTORY FORM

A. Revision Date *(MM/DD/YYYY)* 05/13/2019	PAGE 2	D. Crossing Inventory Number *(7 char.)* 906670X

Part III: Highway or Pathway Traffic Control Device Information

1. Are there Signs or Signals? ☐ Yes ☒ No

2. Types of Passive Traffic Control Devices associated with the Crossing

2.A. Crossbuck Assemblies *(count)* 0
2.B. STOP Signs *(R1-1)* *(count)* 0
2.C. YIELD Signs *(R1-2)* *(count)*
2.D. Advance Warning Signs *(Check all that apply; include count)* ☒ None
☐ W10-1 ______ ☐ W10-3 ______ ☐ W10-11 ______
☐ W10-2 ______ ☐ W10-4 ______ ☐ W10-12 ______

2.E. Low Ground Clearance Sign *(W10-5)* ☐ Yes *(count____)* ☒ No
2.F. Pavement Markings ☐ Stop Lines ☐ Dynamic Envelope ☐ RR Xing Symbols ☒ None
2.G. Channelization Devices/Medians ☐ All Approaches ☐ Median ☐ One Approach ☒ None
2.H. EXEMPT Sign *(R15-3)* ☐ Yes ☐ No
2.I. ENS Sign *(I-13)* Displayed ☐ Yes ☐ No

2.J. Other MUTCD Signs ☐ Yes ☒ No
Specify Type ________ Count ________
Specify Type ________ Count ________
Specify Type ________ Count 0
2.K. Private Crossing Signs *(if private)* ☐ Yes ☐ No
2.L. LED Enhanced Signs *(List types)*

3. Types of Train Activated Warning Devices at the Grade Crossing *(specify count of each device for all that apply)*

3.A. Gate Arms *(count)* Roadway 0 Pedestrian ____
3.B. Gate Configuration ☐ 2 Quad ☐ 3 Quad ☐ 4 Quad ☐ Full *(Barrier)* Resistance ☐ Median Gates
3.C. Cantilevered *(or Bridged)* Flashing Light Structures *(count)* Over Traffic Lane 0 ☐ Incandescent; Not Over Traffic Lane 0 ☐ LED
3.D. Mast Mounted Flashing Lights *(count of masts)* 0 ☐ Incandescent ☐ LED ☐ Back Lights Included ☐ Side Lights Included
3.E. Total Count of Flashing Light Pairs 0

3.F. Installation Date of Current Active Warning Devices: *(MM/YYYY)* ____/______ ☒ Not Required
3.G. Wayside Horn ☐ Yes Installed on *(MM/YYYY)* ____/______ ☐ No
3.H. Highway Traffic Signals Controlling Crossing ☐ Yes ☒ No
3.I. Bells *(count)* 0

3.J. Non-Train Active Warning ☐ Flagging/Flagman ☐ Manually Operated Signals ☐ Watchman ☐ Floodlighting ☐ None
3.K. Other Flashing Lights or Warning Devices Count 0 Specify type ________

4.A. Does nearby Hwy Intersection have Traffic Signals? ☐ Yes ☐ No
4.B. Hwy Traffic Signal Interconnection ☐ Not Interconnected ☐ For Traffic Signals ☐ For Warning Signs
4.C. Hwy Traffic Signal Preemption ☐ Simultaneous ☐ Advance
5. Highway Traffic Pre-Signals ☐ Yes ☐ No Storage Distance * ______ Stop Line Distance * ______
6. Highway Monitoring Devices *(Check all that apply)* ☐ Yes - Photo/Video Recording ☐ Yes – Vehicle Presence Detection ☐ None

Part IV: Physical Characteristics

1. Traffic Lanes Crossing Railroad ☐ One-way Traffic ☐ Two-way Traffic ☐ Divided Traffic Number of Lanes 0
2. Is Roadway/Pathway Paved? ☒ Yes ☐ No
3. Does Track Run Down a Street? ☐ Yes ☒ No
4. Is Crossing Illuminated? *(Street lights within approx. 50 feet from nearest rail)* ☐ Yes ☒ No

5. Crossing Surface *(on Main Track, multiple types allowed)* Installation Date * *(MM/YYYY)* ____/______ Width * ______ Length * ______
☐ 1 Timber ☐ 2 Asphalt ☐ 3 Asphalt and Timber ☐ 4 Concrete ☐ 5 Concrete and Rubber ☐ 6 Rubber ☐ 7 Metal
☐ 8 Unconsolidated ☐ 9 Composite ☐ 10 Other *(specify)* ________

6. Intersecting Roadway within 500 feet? ☐ Yes ☒ No If Yes, Approximate Distance *(feet)* ________
7. Smallest Crossing Angle ☒ 0° – 29° ☐ 30° – 59° ☐ 60° - 90°
8. Is Commercial Power Available? * ☐ Yes ☒ No

Part V: Public Highway Information

1. Highway System ☐ (01) Interstate Highway System ☐ (02) Other Nat Hwy System (NHS) ☒ (03) Federal AID, Not NHS ☐ (08) Non-Federal Aid
2. Functional Classification of Road at Crossing ☒ (0) Rural ☐ (1) Urban
☐ (1) Interstate ☒ (5) Major Collector
☐ (2) Other Freeways and Expressways
☐ (3) Other Principal Arterial ☐ (6) Minor Collector
☐ (4) Minor Arterial ☐ (7) Local
3. Is Crossing on State Highway System? ☐ Yes ☒ No
4. Highway Speed Limit 25 MPH ☒ Posted ☐ Statutory
5. Linear Referencing System *(LRS Route ID)* *
6. LRS Milepost *

7. Annual Average Daily Traffic *(AADT)* Year 2012 AADT 24000
8. Estimated Percent Trucks 05 %
9. Regularly Used by School Buses? ☐ Yes ☒ No Average Number per Day 0
10. Emergency Services Route ☐ Yes ☐ No

Submission Information - *This information is used for administrative purposes and is not available on the public website.*

Submitted by ____________ Organization ____________ Phone ________ Date ________

Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.

U. S. DOT CROSSING INVENTORY FORM

DEPARTMENT OF TRANSPORTATION

FEDERAL RAILROAD ADMINISTRATION **OMB No. 2130-0017**

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part III Item 2.K. are required unless otherwise noted. An asterisk * denotes an optional field.

A. Revision Date (MM/DD/YYYY)	B. Reporting Agency	C. Reason for Update (Select only one)	D. DOT Crossing Inventory Number
07 / 12 / 2019	☒ Railroad ☐ Transit ☐ State ☐ Other	☐ Change in Data ☐ New Crossing ☐ Closed ☐ No Train Traffic ☐ Quiet Zone Update ☐ Re-Open ☒ Date Change Only ☐ Change in Primary Operating RR ☐ Admin. Correction	922162Y

Part I: Location and Classification Information

1. Primary Operating Railroad: Union Pacific Railroad Company [UP]

2. State: NEVADA

3. County: CLARK

4. City / Municipality: ☒ In ☐ Near LAS VEGAS

5. Street/Road Name & Block Number: HACIENDA AVENUE (Street/Road Name) | * (Block Number)

6. Highway Type & No.: NA

7. Do Other Railroads Operate a Separate Track at Crossing? ☐ Yes ☒ No
If Yes, Specify RR ____, ____, ____, ____

8. Do Other Railroads Operate Over Your Track at Crossing? ☐ Yes ☒ No
If Yes, Specify RR ____, ____, ____, ____

9. Railroad Division or Region: ☐ None ROCKY MOUNTAIN

10. Railroad Subdivision or District: ☐ None Cima SUB

11. Branch or Line Name: ☒ None

12. RR Milepost: ____ | 0328.166 | ____ (prefix) | (nnnn.nnn) | (suffix)

13. Line Segment *

14. Nearest RR Timetable Station *

15. Parent RR *(if applicable)*: ☒ N/A

16. Crossing Owner *(if applicable)*: ☐ N/A UP

17. Crossing Type: ☒ Public ☐ Private

18. Crossing Purpose: ☒ Highway ☐ Pathway, Ped. ☐ Station, Ped.

19. Crossing Position: ☐ At Grade ☒ RR Under ☐ RR Over

20. Public Access *(if Private Crossing)*: ☐ Yes ☐ No

21. Type of Train: ☒ Freight ☐ Transit ☐ Intercity Passenger ☐ Shared Use Transit ☐ Commuter ☐ Tourist/Other

22. Average Passenger Train Count Per Day: ☐ Less Than One Per Day ☐ Number Per Day 0

23. Type of Land Use: ☒ Open Space ☐ Farm ☐ Residential ☐ Commercial ☐ Industrial ☐ Institutional ☐ Recreational ☐ RR Yard

24. Is there an Adjacent Crossing with a Separate Number? ☐ Yes ☒ No If Yes, Provide Crossing Number ____

25. Quiet Zone *(FRA provided)*: ☒ No ☐ 24 Hr ☐ Partial ☐ Chicago Excused Date Established ____

26. HSR Corridor ID: ____ ☒ N/A

27. Latitude in decimal degrees *(WGS84 std: nn.nnnnnnn)*: 36.0936130

28. Longitude in decimal degrees *(WGS84 std: -nnn.nnnnnnn)*: -115.1958510

29. Lat/Long Source: ☒ Actual ☐ Estimated

30.A. Railroad Use *	**31.A. State Use** *
30.B. Railroad Use *	**31.B. State Use** *
30.C. Railroad Use *	**31.C. State Use** *
30.D. Railroad Use *	**31.D. State Use** *
32.A. Narrative *(Railroad Use)* *	**32.B. Narrative** *(State Use)* *

33. Emergency Notification Telephone No. *(posted)*: 800-848-8715

34. Railroad Contact *(Telephone No.)*: 402-544-3721

35. State Contact *(Telephone No.)*: 775-888-7333

Part II: Railroad Information

1. Estimated Number of Daily Train Movements

1.A. Total Day Thru Trains (6 AM to 6 PM)	1.B. Total Night Thru Trains (6 PM to 6 AM)	1.C. Total Switching Trains	1.D. Total Transit Trains	1.E. Check if Less Than One Movement Per Day ☒ How many trains per week?
7	6	0	0	1

2. Year of Train Count Data *(YYYY)*: 2019

3. Speed of Train at Crossing
3.A. Maximum Timetable Speed *(mph)* 40
3.B. Typical Speed Range Over Crossing *(mph)* From 20 to 40

4. Type and Count of Tracks
Main 1 Siding 0 Yard 0 Transit 0 Industry 0

5. Train Detection *(Main Track only)*
☐ Constant Warning Time ☐ Motion Detection ☐ AFO ☐ PTC ☐ DC ☒ Other ☐ None

6. Is Track Signaled? ☐ Yes ☒ No

7.A. Event Recorder ☐ Yes ☒ No

7.B. Remote Health Monitoring ☐ Yes ☒ No

U. S. DOT CROSSING INVENTORY FORM

A. Revision Date *(MM/DD/YYYY)* 07/12/2019	PAGE 2	D. Crossing Inventory Number *(7 char.)* 922162Y

Part III: Highway or Pathway Traffic Control Device Information

1. Are there Signs or Signals? ☐ Yes ☒ No

2. Types of Passive Traffic Control Devices associated with the Crossing

2.A. Crossbuck Assemblies *(count)* 0

2.B. STOP Signs *(R1-1)* *(count)* 0

2.C. YIELD Signs *(R1-2)* *(count)*

2.D. Advance Warning Signs *(Check all that apply; include count)* ☒ None
☐ W10-1 0 ☐ W10-3 0 ☐ W10-11 ___
☐ W10-2 0 ☐ W10-4 0 ☐ W10-12 0

2.E. Low Ground Clearance Sign *(W10-5)* ☐ Yes *(count* 0 *)* ☒ No

2.F. Pavement Markings ☐ Stop Lines ☐ Dynamic Envelope ☐ RR Xing Symbols ☐ None

2.G. Channelization Devices/Medians ☐ All Approaches ☐ Median ☐ One Approach ☒ None

2.H. EXEMPT Sign *(R15-3)* ☐ Yes ☒ No

2.I. ENS Sign *(I-13)* Displayed ☐ Yes ☒ No

2.J. Other MUTCD Signs ☐ Yes ☒ No
Specify Type ___ Count 0
Specify Type ___ Count 0
Specify Type ___ Count 0

2.K. Private Crossing Signs *(if private)* ☐ Yes ☐ No

2.L. LED Enhanced Signs *(List types)*

3. Types of Train Activated Warning Devices at the Grade Crossing *(specify count of each device for all that apply)*

3.A. Gate Arms *(count)* Roadway 0 Pedestrian ___

3.B. Gate Configuration ☐ 2 Quad ☐ 3 Quad ☐ 4 Quad ☐ Full *(Barrier)* Resistance ☐ Median Gates

3.C. Cantilevered *(or Bridged)* Flashing Light Structures *(count)* Over Traffic Lane 0 ☐ Incandescent Not Over Traffic Lane 0 ☐ LED

3.D. Mast Mounted Flashing Lights *(count of masts)* 0 ☐ Incandescent ☐ LED ☐ Back Lights Included ☐ Side Lights Included

3.E. Total Count of Flashing Light Pairs 0

3.F. Installation Date of Current Active Warning Devices: *(MM/YYYY)* ___/___ ☒ Not Required

3.G. Wayside Horn ☐ Yes Installed on *(MM/YYYY)* ___/___ ☐ No

3.H. Highway Traffic Signals Controlling Crossing ☐ Yes ☒ No

3.I. Bells *(count)* 0

3.J. Non-Train Active Warning ☐ Flagging/Flagman ☐ Manually Operated Signals ☐ Watchman ☐ Floodlighting ☐ None

3.K. Other Flashing Lights or Warning Devices Count 0 Specify type ___

4.A. Does nearby Hwy Intersection have Traffic Signals? ☐ Yes ☐ No

4.B. Hwy Traffic Signal Interconnection ☐ Not Interconnected ☐ For Traffic Signals ☐ For Warning Signs

4.C. Hwy Traffic Signal Preemption ☐ Simultaneous ☐ Advance

5. Highway Traffic Pre-Signals ☐ Yes ☒ No Storage Distance * ___ Stop Line Distance * ___

6. Highway Monitoring Devices *(Check all that apply)* ☐ Yes - Photo/Video Recording ☐ Yes – Vehicle Presence Detection ☐ None

Part IV: Physical Characteristics

1. Traffic Lanes Crossing Railroad ☐ One-way Traffic ☐ Two-way Traffic ☐ Divided Traffic Number of Lanes 0

2. Is Roadway/Pathway Paved? ☐ Yes ☒ No

3. Does Track Run Down a Street? ☐ Yes ☒ No

4. Is Crossing Illuminated? *(Street lights within approx. 50 feet from nearest rail)* ☐ Yes ☒ No

5. Crossing Surface *(on Main Track, multiple types allowed)* Installation Date * *(MM/YYYY)* ___/___ Width * ___ Length * ___
☐ 1 Timber ☐ 2 Asphalt ☐ 3 Asphalt and Timber ☐ 4 Concrete ☐ 5 Concrete and Rubber ☐ 6 Rubber ☐ 7 Metal
☐ 8 Unconsolidated ☐ 9 Composite ☐ 10 Other *(specify)* ___

6. Intersecting Roadway within 500 feet? ☐ Yes ☒ No If Yes, Approximate Distance *(feet)* ___

7. Smallest Crossing Angle ☐ 0° – 29° ☐ 30° – 59° ☐ 60° - 90°

8. Is Commercial Power Available? * ☐ Yes ☒ No

Part V: Public Highway Information

1. Highway System
☐ (01) Interstate Highway System
☐ (02) Other Nat Hwy System (NHS)
☐ (03) Federal AID, Not NHS
☐ (08) Non-Federal Aid

2. Functional Classification of Road at Crossing ☐ (0) Rural ☐ (1) Urban
☐ (1) Interstate ☐ (5) Major Collector
☐ (2) Other Freeways and Expressways
☐ (3) Other Principal Arterial ☐ (6) Minor Collector
☐ (4) Minor Arterial ☐ (7) Local

3. Is Crossing on State Highway System? ☐ Yes ☒ No

4. Highway Speed Limit ___ MPH ☐ Posted ☐ Statutory

5. Linear Referencing System *(LRS Route ID)* *

6. LRS Milepost *

7. Annual Average Daily Traffic *(AADT)* Year ___ AADT 1

8. Estimated Percent Trucks ___ %

9. Regularly Used by School Buses? ☐ Yes ☒ No Average Number per Day 0

10. Emergency Services Route ☐ Yes ☐ No

Submission Information - *This information is used for administrative purposes and is not available on the public website.*

Submitted by ___ Organization ___ Phone ___ Date ___

Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.

Appendix C: Growth Rate

Note: Five stations were used to grow the historical turning movement counts to a consistent year.

Kimley»Horn

Project:	Stadium District	*Project Number:*	92970001
Subject:	Growth Rate Calculations	*Date:*	11/13/2019
Designed By:	JDJ		

Existing Growth Rate Calculations

Ref: Nevada Department of Transportation - Annual Traffic Report 2019

Number of Count Stations Analyzed = 5

Average Annual Growth Rate in the Vicinity of the Proposed Project = **2.37%**

NDOT COUNT STATION:	0030058	
ROADWAY:	SR593	
LOCATION:	Tropicana Ave, 170ft E of Dean Martin Dr	

Year	ADT	Annual Growth Rate
2013	67000	**2.14%**
2018	74500	
YEARS =	5	

PROJECTED TRAFFIC VOLUMES	
Year	ADT
2019	76098
2020	77730
2021	79397

NDOT COUNT STATION:	0030269	
ROADWAY:	SR593	
LOCATION:	Tropicana Ave, 830ft W of Valley View Blvd	

Year	ADT	Annual Growth Rate
2013	50500	**1.54%**
2018	54500	
YEARS =	5	

PROJECTED TRAFFIC VOLUMES	
Year	ADT
2019	55337
2020	56187
2021	57051

NDOT COUNT STATION:	0031055	
ROADWAY:	Valley View Blvd	
LOCATION:	765ft S of Tropicana Ave	

Year	ADT	Annual Growth Rate
2013	12500	**3.44%**
2018	14800	
YEARS =	5	

PROJECTED TRAFFIC VOLUMES	
Year	ADT
2019	15308
2020	15834
2021	16378

NDOT COUNT STATION:	0031500	
ROADWAY:	Dean Martin Dr	
LOCATION:	700ft N of Tompkins St	

Year	ADT	Annual Growth Rate
2013	16500	**4.03%**
2018	20100	
YEARS =	5	

PROJECTED TRAFFIC VOLUMES	
Year	ADT
2019	20909
2020	21751
2021	22627

NDOT COUNT STATION:	0031520	
ROADWAY:	Valley View Blvd	
LOCATION:	220ft N of Post Rd	

Year	ADT	Annual Growth Rate
2013	14900	**4.87%**
2018	18900	
YEARS =	5	

PROJECTED TRAFFIC VOLUMES	
Year	ADT
2019	19549
2020	20221
2021	20916


HUMBOLDT
ELKO
WASHOE
PERSHING
LANDER
EUREKA
CHURCHILL
STOREY
WHITE PINE
CARSON CITY
LYON
DOUGLAS
MINERAL
NYE
ESMERALDA
LINCOLN
N
CLARK
NEVADA
MILES
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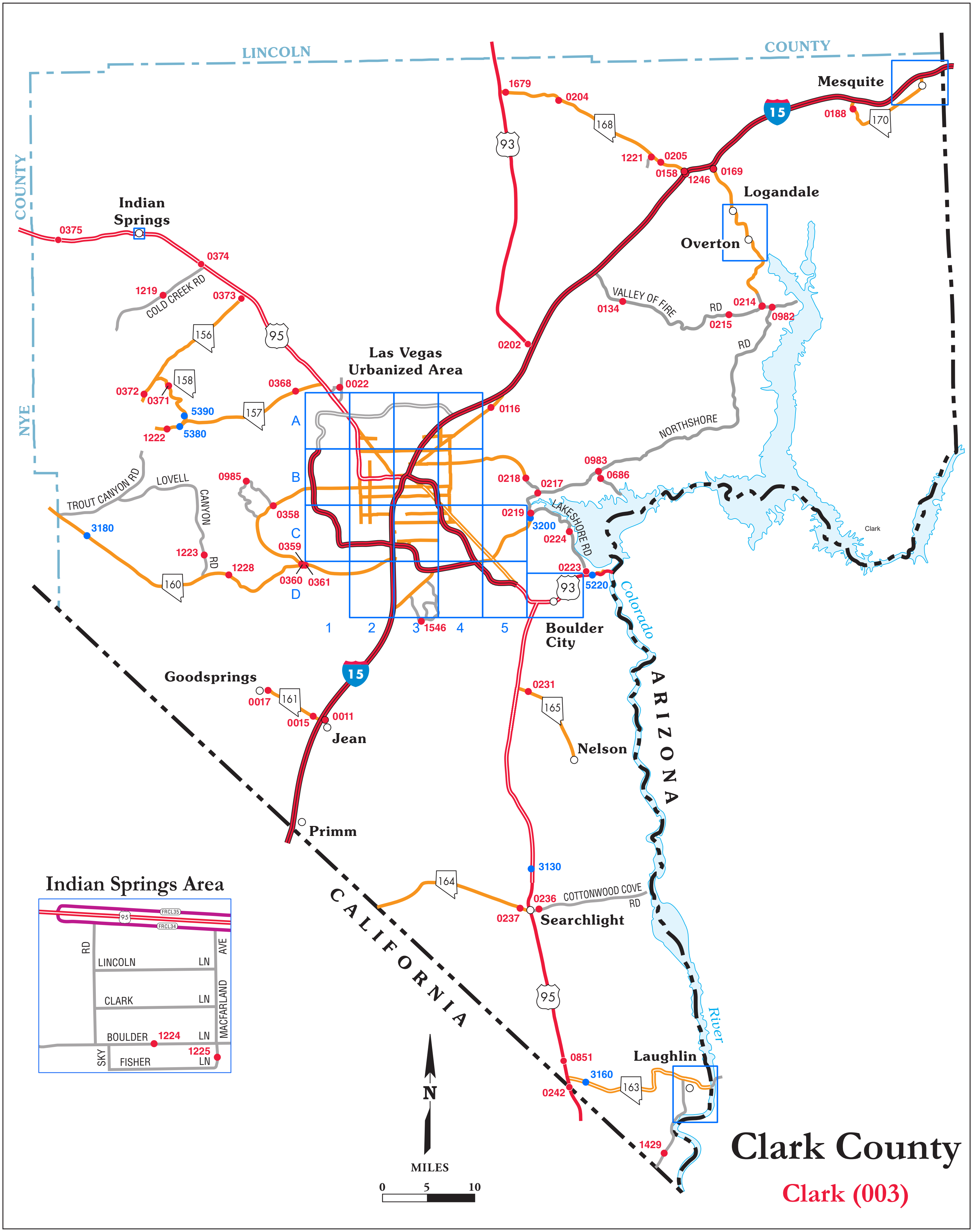
50
0
80
KILOMETERS
NEVADA DOT
NEVADA DEPARTMENT OF TRANSPORTATION
LOCATION DIVISION
CARTOGRAPHY
(775) 888-7627


Clark County
Clark (003)
LINCOLN
COUNTY
NYE
COUNTY
ARIZONA
CALIFORNIA
Mesquite
Logandale
Overton
Indian Springs
Las Vegas Urbanized Area
Boulder City
Goodsprings
Jean
Primm
Nelson
Searchlight
Laughlin
Colorado
River
Clark
VALLEY OF FIRE RD
NORTHSHORE RD
LAKESHORE RD
COLD CREEK RD
TROUT CANYON RD
LOVELL CANYON RD
COTTONWOOD COVE RD
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Indian Springs Area
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CLARK LN
BOULDER LN
FISHER LN
SKY RD
MACFARLAND AVE
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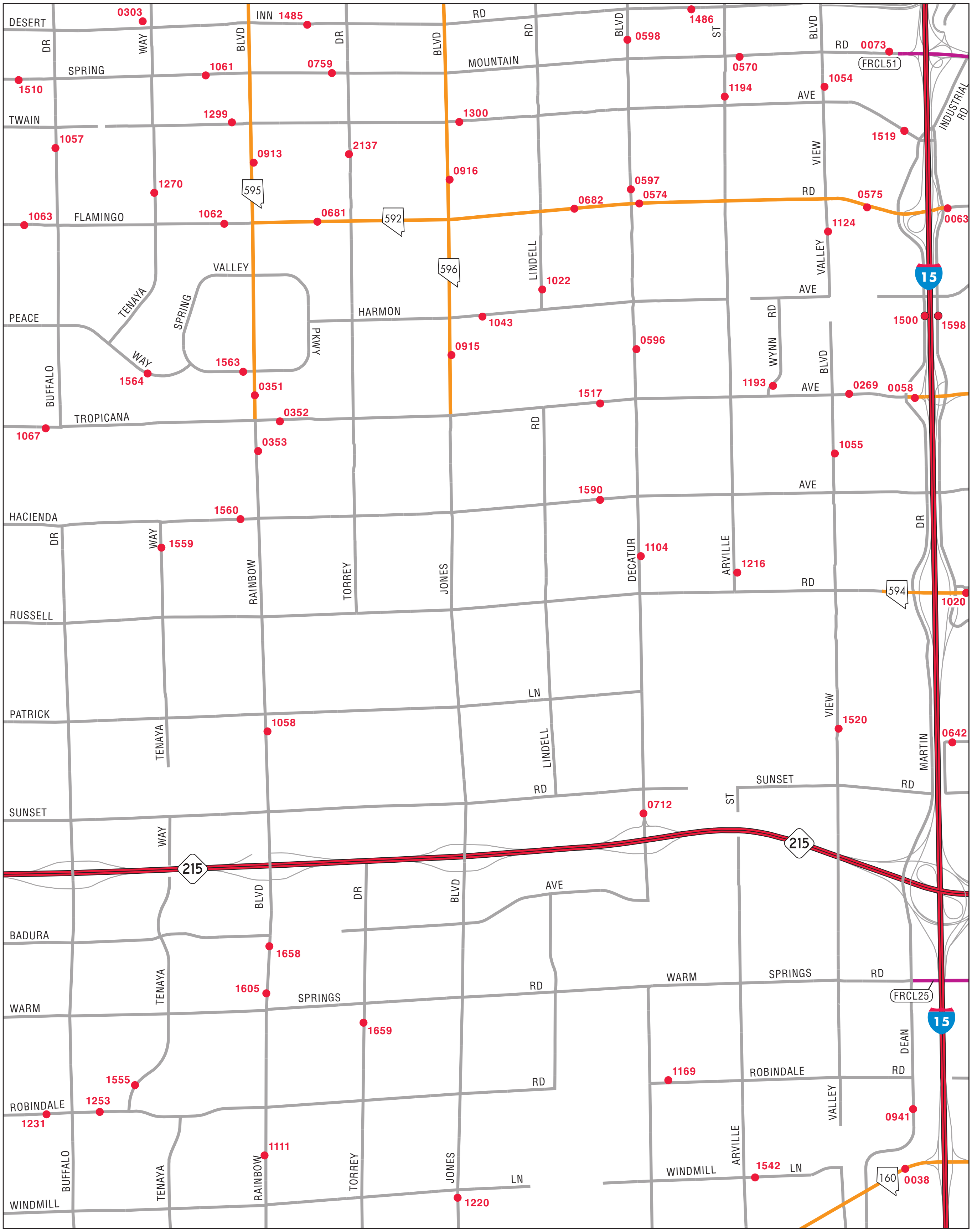


Las Vegas
Urbanized Area

MILES
0 0.5 1

N

Sheet C-2
Clark (003)

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Station	Route/Location	AADT	AADT	AADT	AADT	AADT	AADT	AADT	AADT	AADT	AADT
0030042	IR215, W/B off-ramp of the Windmill Intch 'Exit 8'	5200	5900	5400	4800	5400	5700	5600	5900	6200	6100
0030043	IR15, S/B off-ramp of the Blue Diamond Intch 'Exit 33' to EB Blue Diamond Rd	21000	22000	23000	22000	23000	18000	6800	7100	6900	5750
0030044	SR160, 600ft E of Hinson St	40000	40000	41000	43500	52000	53500	51500	56000	58000	62000
0030045	IR15, S/B on-ramp of the Blue Diamond Intch 'Exit 33'	5600	5400	5500	5700	5200	5500	6000	6800	6400	7250
0030046	IR15, N/B off-ramp of the IR215 Intch to Las Vegas Blvd	1300	1200	1300	1300	1300	1600	1800	1800	2200	2250
0030047	IR215, E/B off-ramp of the Eastern Intch 'Exit 7'	19000	17000	17000	17000	17500	17000	17500	17000	18000	18200
0030048	IR215, E/B off ramp of the Windmill Intch 'Exit 8'	11000	11000	11000	9900	8900	13000	14500	13000	14000	16200
0030049	Las Vegas Blvd, 275ft S of Moberly Ave	31000	33000	29000	33500	33000	32500	29000	34000	33000	32500
0030050	Las Vegas Blvd, 275ft S of Arby Ave	43000	46000	45000	46000	42500	45500	45000	46000	48000	42000
0030052	IR15, S of the Tropicana Intch 'Exit 37'	197000	222000	214000	213000	228000	225000	226000	237000	242000	244000
0030053	IR15, N/B off-ramp of the Tropicana Intch 'Exit 37'	14000	17000	19000	15500	19000	19000	14500	20000	21000	21100
0030054	SR593, Tropicana Ave, 550ft E of the N/B ramps of the Tropicana Intch 'Exit 37'	108000	63000	65000	76000	78000	67000	75000	74000	86000	87000
0030055	IR15, N/B on-ramp of the Tropicana Intch 'Exit 37'	29000	34000	35000	32500	24000	24000	31000	30000	31000	31000
0030056	IR15, N/B off-ramp of IR215 Intch to IR215 E/B	8600	6900	7800	7800	8400	9900	11500	12000	13000	14100
0030057	IR15, S/B off-ramp of the Tropicana Intch 'Exit 37'	10000	8500	8800	9500	9900	10500	10000	32000	33000	33000
0030058	SR593, Tropicana Ave, 170ft E of Dean Martin Dr	75000	75000	76000	70000	67000	73500	76500	75000	74000	74500
0030060	IR15, S/B on-ramp of the Tropicana Intch 'Exit 37'	13000	15000	16000	17000	16000	17000	18000	19000	18000	18600
0030061	IR15, .4 mi S of the Flamingo Intch 'Exit 38'	231000	255000	259000	246000	248000	278000	278000	294000	322000	325000

Color indicates that the AADT value is estimated

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Station	Route/Location	AADT	AADT	AADT	AADT	AADT	AADT	AADT	AADT	AADT	AADT
0030255	SR562, Sunset Rd, 755ft E of Las Vegas Blvd	22000	22000	25000	24500	23500	24500	24500	25000	33000	30500
0030258	SR582, Boulder Hwy, .25 mi N of SR593 (Tropicana Ave)	36000	32000	32000	30000	28500	29500	30000	34000	33000	31500
0030259	SR593, Tropicana Ave, 450ft W of SR582 (Boulder Hwy)	20000	19000	18000	16500	15500	17000	17500	17000	19000	17300
0030260	SR593, Tropicana Ave, 370ft E of Paradise Rd	79000	65000	72000	70500	68000	64500	65500	85000	71000	71000
0030261	Paradise Rd, 400ft S of SR592 (Flamingo Rd)	41000	39000	40000	38000	37000	38000	37500	40000	36000	38000
0030262	SR593, Tropicana Ave, .25 mi W of Paradise Rd	90000	91000	96000	90000	91500	92000	95000	97500	101000	101000
0030264	Las Vegas Blvd, 370ft S of Mandalay Bay Rd	47000	47000	47000	48000	49000	52000	48000	49000	51000	46000
0030265	Davis Dam Rd, 440ft N/E of SR163				90	90	150	300	270	230	340
0030266	SR593, Tropicana Ave, 605ft W of Koval Ln	73000	74000	78000	74000	74500	73500	73500	86000	90000	68000
0030268	Las Vegas Blvd, 200ft N of Reno Ave	50000	49000	56000	56000	55000	55500	56500	58000	61000	61000
0030269	SR593, Tropicana Ave, 830ft W of Valley View Blvd	50000	55000	56000	53500	50500	55000	54500	49000	55000	54500
0030270	Las Vegas Blvd, 545ft N of SR592 (Flamingo Rd)	66000	65000	65000	68500	68000	59000	59500	57000	60000	60000
0030271	SR582, Boulder Hwy, .2 mi N of Flamingo Rd	33000	32000	32000	28000	27500	28000	27500	28000	30000	30000
0030272	Lamb Blvd, 200ft N of SR582 (Boulder Hwy)	38000	33000	27000	30000	32500	29500	30000	35000	38000	38000
0030273	SR582, Boulder Hwy, 415ft N of the US95 ramps at 'Exit 69'	37000	33000	33000	22500	23000	27500	28500	34000	35000	37000
0030274	SR589, Sahara Ave, 465ft E of Mojave Rd	40000	37000	35000	29500	29500	30000	34000	38000	43000	42000
0030275	SR589, Sahara Ave, 760ft W of Maryland Pkwy	51000	47000	45000	40500	41000	43500	43500	46000	50000	49000
0030277	Paradise Rd, 245ft N of Karen Ave	34000	26000	27000	24500	24000	24500	28000	29000	27000	29800
0030278	Paradise Rd, 450ft N of SR589 (Sahara Ave)	15000	12000	12000	12000	12500	12500	12500	12000	13000	13200

Color indicates that the AADT value is estimated

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Station	Route/Location	AADT	AADT	AADT	AADT	AADT	AADT	AADT	AADT	AADT	AADT
0031045	Racetrack Rd, 150ft N of Sausalito Dr	15000	17000	18000	15900	16500	16500	16500	17000	12000	10600
0031046	Racetrack Rd, 300ft N of Warm Springs Rd	2500	2700	2500	2500	2600	2600	2500	2200	2300	1900
0031048	US95, S/B off-ramp to Martin L King Blvd from US95					5500	5800	5900	6500	6800	6900
0031051	Green Valley Pkwy, 300ft N of SR562 (Sunset Rd)	15000	14000	14000	13000	12500	13000	12000	13000	14000	14200
0031052	Jimmy Durante Blvd, 240ft N of Cinnamon Ave	8700	9700	9800	8100	8100	8500	9200	9500	10000	10500
0031054	Valley View Blvd, 405ft N of Twain Ave	19000	20000	21000	19500	19000	22000	24500	25000	26000	28800
0031055	Valley View Blvd, 765ft S of Tropicana Ave	12000	13000	13000	13500	12500	14000	14000	15000	15000	14800
0031056	Buffalo Dr, 260ft N of Eldora Ave	21000	19000	19000	19500	19500	17900	19000	21000	22000	22400
0031057	Buffalo Dr, 110ft N of Fire Falls Dr	19000	19000	18000	16000	17000	18000	17000	20000	19000	19000
0031058	Rainbow Blvd, 400ft N of Patrick Ln	45000	42000	41000	40500	40000	39500	40000	41000	43000	43000
0031059	SR589, Sahara Ave, 890ft E of Maryland Pkwy	47000	43000	40000	39000	36500	39500	40000	44000	46000	49000
0031060	Sahara Ave, 335ft E of Montessouri St	40000	36000	36000	31500	32000	34000	34500	35000	37000	37500
0031061	Spring Mountain Rd, 115ft W of Montessouri St	23000	22000	22000	22000	20000	20500	20500	21000	22400	22400
0031062	Flamingo Rd, 410ft E of Sandalwood Dr	36000	35000	36000	36000	34000	33500	33500	39000	39000	40500
0031063	Flamingo Rd, 235ft W of Miller Ln	35000	34000	34000	34000	32000	34000	30000	36000	37000	37000
0031064	Flamingo Rd, 680ft W of Koval Ln	55000	58000	53000	48000	48000	47500	48000	49000	52000	52000
0031067	Tropicana Ave, 390ft W of Buffalo Dr	27000	27000	26000	26500	25500	27500	28000	30000	31000	32500
0031068	Desert Inn Rd, 260ft W of Backstage Blvd	38000	37000	38000	35500	36500	30500	36500	40000	38000	38500
0031070	Hacienda Ave, 200ft W of Topaz St	3300	3200	3200	2800	3000	3100	3100	4400	4500	4150

Color indicates that the AADT value is estimated

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Station	Route/Location	AADT	AADT	AADT	AADT	AADT	AADT	AADT	AADT	AADT	AADT
0031483	Decatur Blvd, 460ft S of Deer Springs Way		19000	19000	17500	17500	20000	20000	23000	22000	23600
0031484	Desert Inn Rd, 300ft E of El Capitan Way		19000	22000	20000	19000	19500	20000	21000	21000	21000
0031485	Desert Inn Rd, .2 mi W of Torrey Pines Dr	27000	23000	29000	27500	27000	25000	28000	28000	31000	29800
0031486	Desert Inn Rd, 135ft W of Pioneer Ave	41000	34000	36000	34500	34500	34000	36000	37000	38000	42000
0031487	Durango Dr, 425ft N of Twain Ave		28000	27000	27000	28500	28500	29500	29000	31000	33500
0031488	Durango Dr, 230ft S of Soneto Ln		26000	25000	26500	26000	22000	26500	27000	28000	28300
0031489	Durango Dr, 565ft S of Westcliff Dr		22000	21000	22000	21000	20500	24000	25000	22000	22500
0031490	Durango Dr, .2 mi S of Peace Way	25000	23000	23000	26000	25000	26000	26500	27000	33000	35500
0031492	Eastern Ave, 285ft N of Camero Ave		35000	34000	33000	32500	31500	30000	29000	32000	30000
0031493	Sky Point Dr, 140ft S of Ranch House Rd					3100	3100	3400	3500	3700	3750
0031494	Flamingo Rd, 460ft W of Cabana Dr	15000	17000	13000	15000	13400	16000	13500	14000	16000	17500
0031495	Bradley Dr, 280ft N of Dorrell Ln					4600	4000	4300	4900	4500	4350
0031497	Harmon Ave, .2 mi W of SR612 (Nellis Blvd)		7600	7600	7100	6800	7400	7400	7600	8600	8100
0031498	Hollywood Blvd, 150ft N of Stewart Ave	12500	11800	11600	11500	10300	11400	11000	13000	13500	13500
0031499	Horizon Dr, 335ft E of Arrowhead Trl		20400	20300	18500	19500	19000	19000	20000	20000	17900
0031500	Dean Martin Dr, 700ft N of Tompkins St		14000	16000	16000	16500	17000	19000	19000	20000	20100
0031501	Lake Mead Blvd, .2 mi E of CC215		5600	6000	6200	6500	6500	7700	9400	9100	9750
0031502	Lone Mountain Rd, 500ft W of Scott Robinson St		3800	3600	3400	3600	4000	4100	4200	4900	4500
0031503	Lone Mountain Rd, 100ft W of Torrey Pines Dr		10100	7700	8100	9700	9800	12500	13000	13400	12500

Color indicates that the AADT value is estimated

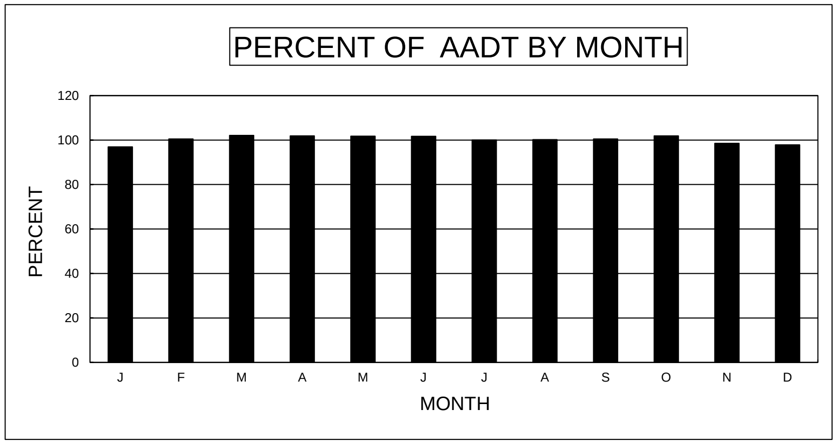
		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Station	**Route/Location**	**AADT**	**AADT**	**AADT**	**AADT**	**AADT**	**AADT**	**AADT**	**AADT**	**AADT**	**AADT**
0031504	**Mountain Vista St, 250ft N of Harmon Ave**		11000	11000	10000	11000	11000	13500	13000	13000	13500
0031505	**Pecos Rd, 300ft S of Pebble Rd**		23000	25000	24500	25000	25500	27000	27000	28000	29700
0031506	**Rainbow Blvd, 300ft N of Vegas Dr**	29500	26000	26000	26000	25000	24000	24500	26000	27000	26900
0031507	**Smoke Ranch Rd, 130ft W of Maverick St**	13000	12000	11000	11000	11000	11000	11000	11000	11000	12400
0031508	**Spencer St, 200ft N of Richmar Ave**	17500	18100	16000	16500	18500	18000	18000	18000	19000	19300
0031509	**Spring Mountain Rd, 280ft E of Artemis St**	10300	10200	10100	9500	9300	8800	10000	9600	9900	9600
0031510	**Spring Mountain Rd, 215ft E of Spring Shower Dr**	18000	16000	18000	16500	16500	16500	17500	18000	18400	18000
0031511	**Stephanie St, 300ft N of Galleria Dr**		17000	17000	17000	17000	17500	18000	19000	19000	18800
0031512	**Stephanie St, 395ft N of Warm Springs Rd**		29000	30000	30500	31000	28000	29000	29000	33000	33000
0031513	**Sunridge Heights Parkway, 900ft W of Eastern Ave**		8600	8300	8100	8600	8500	9200	9600	9400	9500
0031514	**Torrey Pines Dr, 250ft N of Lake Mead Blvd**	9400	8400	7500	9200	9100	8000	9300	9300	9600	10400
0031515	**Torrey Pines Dr, 250ft N of Washington Ave**	8800	7900	7200	7400	7100	7100	7200	7300	7700	8050
0031516	**Torrey Pines Dr, 200ft N of Oakey Blvd**		7200	6700	8400	8900	6900	7700	7600	10000	8500
0031517	**Tropicana Ave, 300ft E of Edmond St**	45000	45000	46000	43500	41500	44000	45000	46000	43000	43500
0031518	**Twain Ave, 475ft E of Paradise Rd**				14500	14000	16000	15500	18000	18000	16300
0031519	**Twain Ave, 490ft W of Dean Martin Dr**	15000	14000	16000	14500	14500	15500	16000	19000	21000	21600
0031520	**Valley View Blvd, 220ft N of Post Rd**		15600	14800	14800	14900	13000	12500	14000	16000	18900
0031521	**Vegas Dr, 785ft W of Valley Dr**		10000	9100	8900	8800	7200	9100	9700	12000	11700
0031522	**Warm Springs Rd, 530ft E of Valle Verde Dr**		24000	23000	23500	23500	24000	22500	25000	25000	26300

Color indicates that the AADT value is estimated

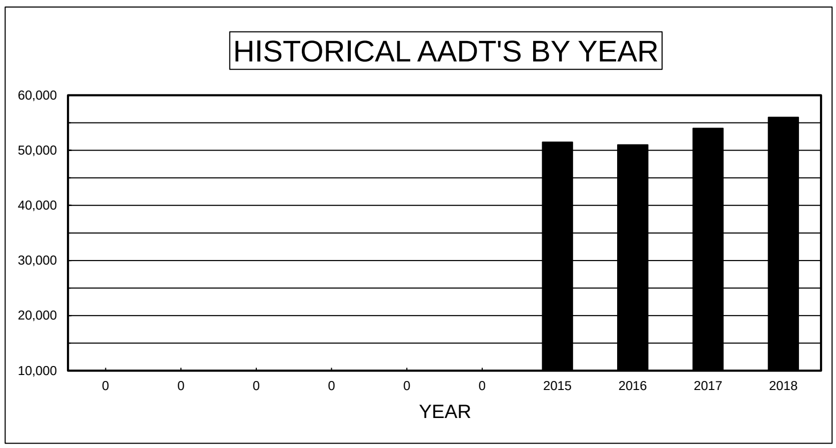
ATR 0035250

SR592 (Flamingo Rd) 220ft E of Decatur Blvd

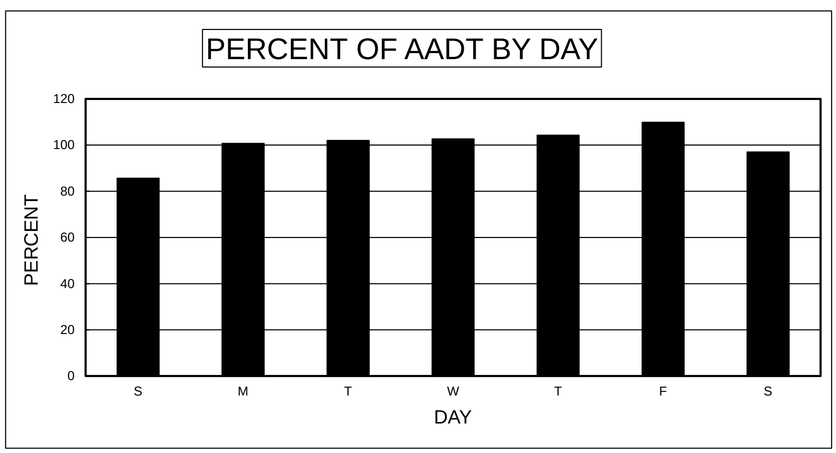
MONTHLY PERCENT		
MONTH	MADT	% OF AADT
JANUARY	54,300	97.0%
FEBRUARY	56,289	100.5%
MARCH	57,197	102.1%
APRIL	57,041	101.9%
MAY	57,004	101.8%
JUNE	56,952	101.7%
JULY	56,039	100.1%
AUGUST	56,110	100.2%
SEPTEMBER	56,271	100.5%
OCTOBER	57,051	101.9%
NOVEMBER	55,193	98.6%
DECEMBER	54,795	97.8%



HISTORICAL RECORD		
YEAR	AADT	% OF PREVIOUS YEAR
2018	56,000	103.7%
2017	54,000	105.9%
2016	51,000	99.0%
2015	51,500	-



DAY OF WEEK		
DAY	ADT	% OF AADT
SUN	47,965	85.7%
MON	56,422	100.8%
TUE	57,142	102.0%
WED	57,499	102.7%
THU	58,417	104.3%
FRI	61,531	109.9%
SAT	54,332	97.0%
AVG WEEKDAY	57,370	102.4%
AVG WEEKEND	51,149	91.3%



PERCENT DESIGN VOLUME (DHV) IS OF ANNUAL AVERAGE	7.7%
PERCENT HIGH DIRECTION IS OF DHV	53.6%

Note: An additional count station was added for the future volume calculations resulting in a different growth rate for the area.

Kimley»Horn

Project: Stadium District
Subject: Growth Rate Calculations
Designed By: JDJ
Project Number: 92970001
Date: 11/13/2019

Existing Growth Rate Calculations

Ref: Nevada Department of Transportation - Annual Traffic Report 2018

Number of Count Stations Analyzed = 6

Average Annual Growth Rate in the Vicinity of the Proposed Project = **3.34%**

NDOT COUNT STATION:	0030058
ROADWAY:	SR593
LOCATION:	Tropicana Ave, 170ft E of Dean Martin Dr

Year	ADT	Annual Growth Rate
2013	67000	**2.14%**
2018	74500	
YEARS =	5	

PROJECTED TRAFFIC VOLUMES	
Year	ADT
2019	76098
2020	77730
2021	79397

NDOT COUNT STATION:	0030269
ROADWAY:	SR593
LOCATION:	Tropicana Ave, 830ft W of Valley View Blvd

Year	ADT	Annual Growth Rate
2013	50500	**1.54%**
2018	54500	
YEARS =	5	

PROJECTED TRAFFIC VOLUMES	
Year	ADT
2019	55337
2020	56187
2021	57051

NDOT COUNT STATION:	0031055
ROADWAY:	Valley View Blvd
LOCATION:	765ft S of Tropicana Ave

Year	ADT	Annual Growth Rate
2013	12500	**3.44%**
2018	14800	
YEARS =	5	

PROJECTED TRAFFIC VOLUMES	
Year	ADT
2019	15308
2020	15834
2021	16378

NDOT COUNT STATION:	0031500
ROADWAY:	Dean Martin Dr
LOCATION:	700ft N of Tompkins St

Year	ADT	Annual Growth Rate
2013	16500	**4.03%**
2018	20100	
YEARS =	5	

PROJECTED TRAFFIC VOLUMES	
Year	ADT
2019	20909
2020	21751
2021	22627

NDOT COUNT STATION:	0031520
ROADWAY:	Valley View Blvd
LOCATION:	220ft N of Post Rd

Year	ADT	Annual Growth Rate
2013	14900	**4.87%**
2018	18900	
YEARS =	5	

PROJECTED TRAFFIC VOLUMES	
Year	ADT
2019	19549
2020	20221
2021	20916

NDOT COUNT STATION:	0031020
ROADWAY:	SR 594, Russell Road
LOCATION:	435ft E of the I-15 N/B Ramps

Year	ADT	Annual Growth Rate
2013	23300	**4.04%**
2018	28400	
YEARS =	5	

PROJECTED TRAFFIC VOLUMES	
Year	ADT
2019	29543
2020	30733
2021	31970

		0.25	0.3	0.4			Trips			
Proposed Land Use	Area (Acres)	Low Density SF	Medium Density SF	High Density SF	ITE LU Code	Average Rate	Low Density	Medium Density	High Density	
Hotel/Commercial	79.05	860,855	1,033,025	1,377,367	Local Data	8.36	33,043	39,651	52,869	Based on Rooms Used 50 Rooms as Low Density and Increased accordingly by FAR increase
Restaurant/Bar/Retail	90.88	989,683	1,187,620	1,583,493	Various	90.81	89,872	107,846	143,795	Based on 1,000 SF
Mixed Use (Multifamily Mid-Rise)	80.3	874,467	1,049,360	1,399,147	LU 221	5.44	4,757	5,709	7,611	Based on 1,000 SF
Industrial	196	-	2,561,328	3,415,104	-	-	-	-	-	
Office	55.5	604,395	725,274	967,032	Various	9.74	5,887	7,064	9,419	Based on 1,000 SF
Total	502	3,329,400	6,556,608	8,742,144		Total Trips	133,559	160,270	213,694	

ASSUMPTIONS:	
Assume 50 rooms/acre (rooms in various hotels around study area)	See Hotel Info
Floor Area Ratio	
Low Density	0.25
Medium Density	0.3 From previous project on a Master Planned Community.
High Density	0.4
Assume Industrial is Existing Uses	

ITEMS EXCLUDED	Hotel Commercial (Acres)	Restaurant/Bar/Retail (Acres)
Utilities - three sites (see map)	20.81	2.69
Raiders Parking Lots (see map)	16.18	0
Existing Hotels and Commercial		
Adjacent to Tropicana	29.71	-
Hotel on Dean Martin	5.16	
Hotels South of Stadium	15.5	-

Trip Distribution To Network			
Distribution	Number of Trips		
	Low Density	Medium Density	High Density
10% Valley View from the North	13,356	16,027	21,369
10% Valley View from the South	13,356	16,027	21,369
10% Tropicana Avenue from the East	13,356	16,027	21,369
10% Tropicana Avenue from the West	13,356	16,027	21,369
10% Hacienda Avenue from East	13,356	16,027	21,369
10% Hacienda Avenue from West	13,356	16,027	21,369
15% Russell Road from East	20,034	24,041	32,054
15% Russell Road from West	20,034	24,041	32,054
5% Dean Martin from the North	6,678	8,014	10,685
5% Dean Martin from the South	6,678	8,014	10,685
Total Trips	133,559	160,270	213,694

Vehicle Trips Accounting for Internal Capture and Modes	From NCHRP Report 684 Spreadsheet		
Internal Capture	9%		
External Vehicle Trips (Median Density)	101,629	0.63	(Vehicle trip output from NCHRP/Total Vehicle Trips)
Reduction in Trips	Calculated Reduction	0.37	Applied Median Density Calculation to all density categories.

Trip Distribution To Network			
Distribution	Number of Trips		
	Low Density	Medium Density	High Density
10% Valley View from the North	8,469	10,163	13,551
10% Valley View from the South	8,469	10,163	13,551
10% Tropicana Avenue from the East	8,469	10,163	13,551
10% Tropicana Avenue from the West	8,469	10,163	13,551
10% Hacienda Avenue from East	8,469	10,163	13,551
10% Hacienda Avenue from West	8,469	10,163	13,551
15% Russell Road from East	12,704	15,244	20,326
15% Russell Road from West	12,704	15,244	20,326
5% Dean Martin from the North	4,235	5,081	6,775
5% Dean Martin from the South	4,235	5,081	6,775
Total Trips	84,691	101,629	135,505

**Note: The Internal Capture spreadsheet accounts for a 1.2 vehicle occupancy; 10% transit, and 20% bike/ped share.*

		Growth Rate	3.34%	1.00%	RTC TDM (Used Largest Value within District)
NDOT ID	Location	2018 AADT	2040 AADT	2040 AADT	2040 AADT
0031500	Dean Martin Dr, .1 mi N of Tompkins St	20,100	41,410	25,019	10,513
0030269*	SR 593, Tropicana Blvd, 175ft W of Procyon St	54,500	54,500	54,500	64,650
0030058*	SR 593, Tropicana Ave, 170ft E of Dean Martin Dr	74,500	74,500	74,500	93,952
0031055	Valley View Blvd, 335ft S of Reno Ave	14,800	30,491	18,422	22,244
0031020	SR 594, Russell Rd, 435ft E of Interstate 15 N/B Ramps (Exit 36)	28,400	58,509	35,350	44,143
No Station**	Hacienda Avenue	9,770	20,128	12,161	29,346

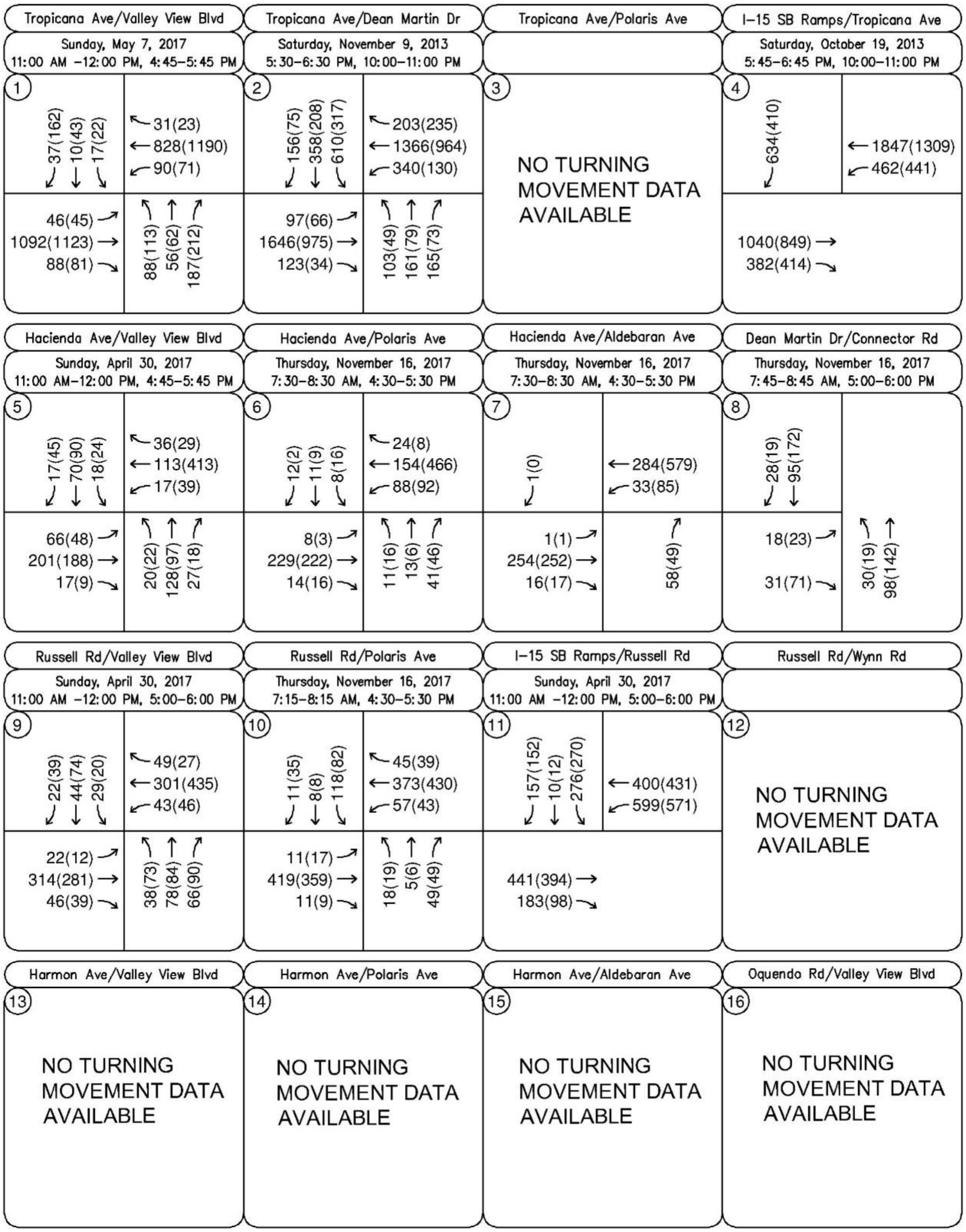
**Note: An average growth rate of 3.34% from 2013 to 2018 was calculated using existing NDOT count station data, included for comparison purposes. However, it is anticipated that the majority of growth in the area will be due to the Stadium and land use changes in the surrounding area. Therefore a 1% annual growth rate was added for background traffic to provide a conservative estimate to show positive growth in the area. A growth rate was not applied to Tropicana Avenue as it is anticipated the Stadium District traffic will be the only growth along that roadway.*

*** Turning movement count data for the EB and WB approach of the intersection of Hacienda Avenue and Aldebaran Avenue were used to determine the AADT value with a 10% K-factor.*

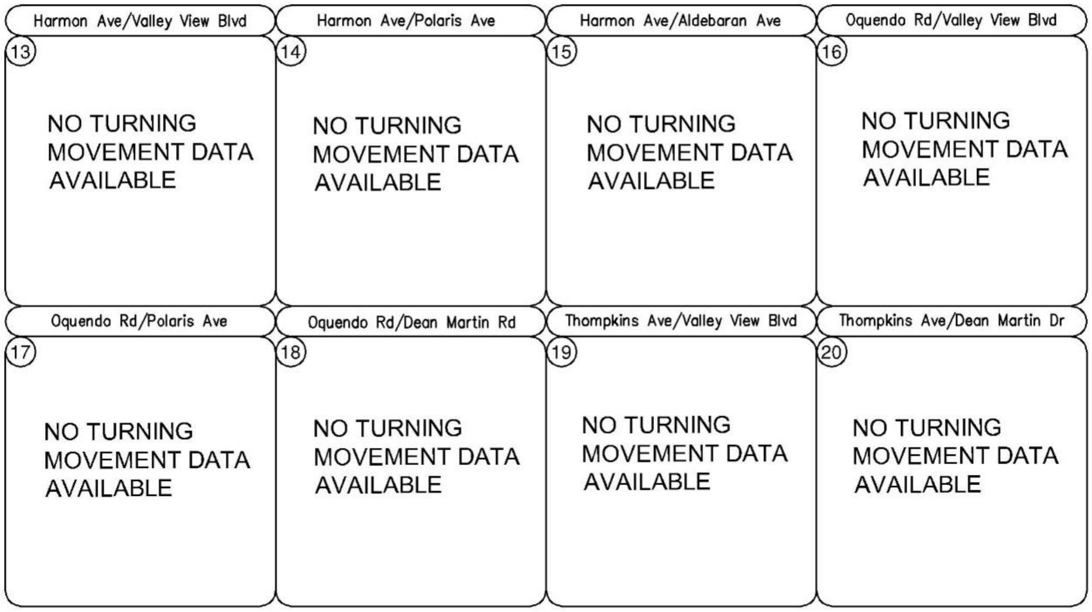
Using 1% growth to 2040 as background traffic	2040 AADT With Project Traffic		
Roadway	Low Density	Medium Density	High Density
Dean Martin Drive	29,253	30,100	31,794
Tropicana Avenue West of Procyon Street	62,969	64,663	68,051
Tropicana Avenue East of Dean Martin Drive	82,969	84,663	88,051
Valley View Boulevard	26,891	28,585	31,972
Russell Road	48,054	50,594	55,676
Hacienda Avenue	20,630	22,324	25,711

Appendix D: Turning Movement Counts

Historic Intersection Turning Movement Counts

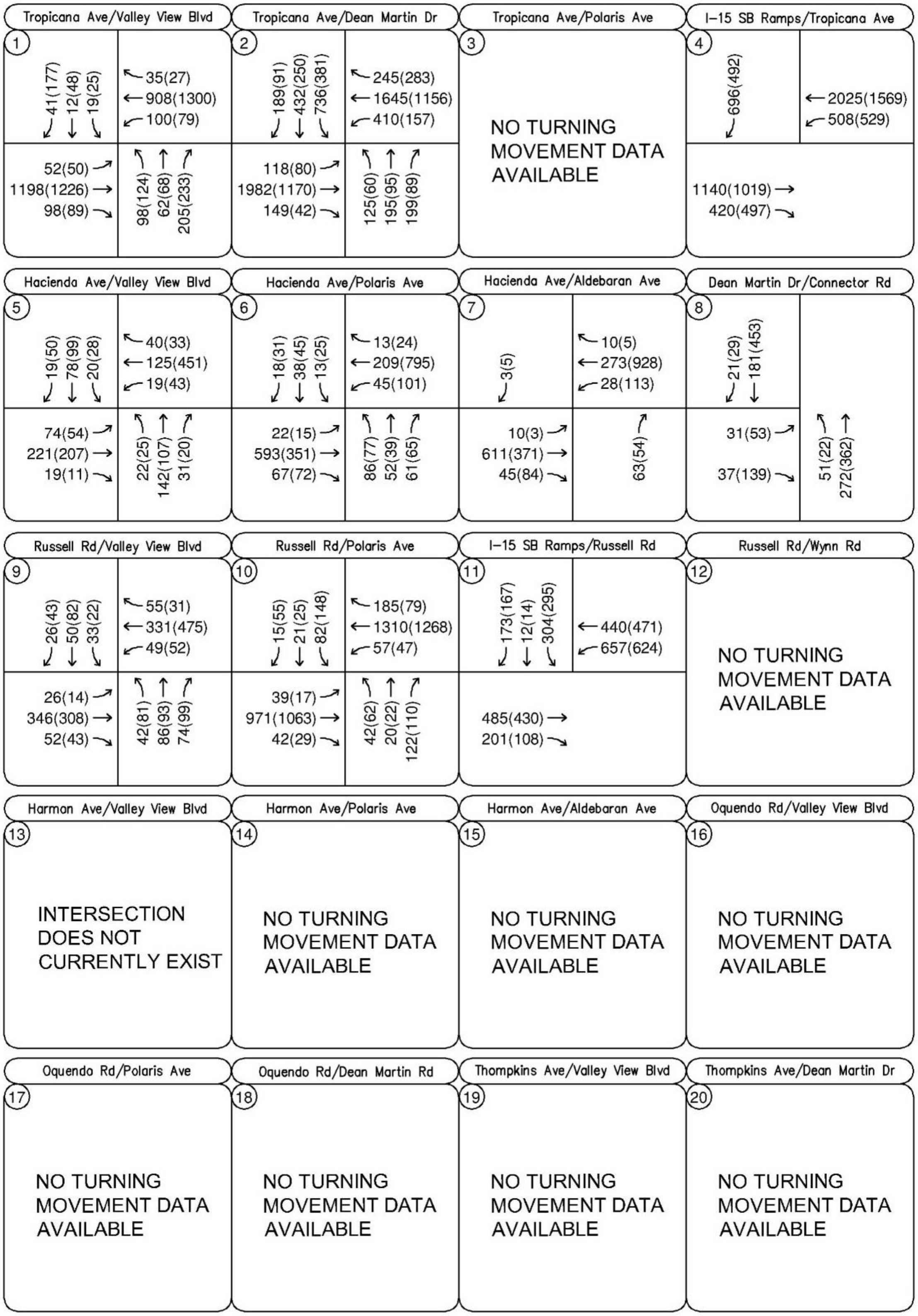


Source: Silver State Traffic Data Collection, LLC. and Lochsa Engineering



Source: Silver State Traffic Data Collection, LLC. and Lochsa Engineering

2019 Adjusted Intersection Turning Movement Counts



Silver State Traffic Data Collection, LLC

1819 Quarley Place
Henderson, NV 89014
702-898-1968
sstraffic@msn.com

File Name : Tropicana-Valley View
Site Code : 00003333
Start Date : 5/7/2017
Page No : 1

Groups Printed- Unshifted

	Valley View Southbound				Tropicana Westbound				Valley View Northbound				Tropicana Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
11:00 AM	3	5	5	0	10	158	13	0	41	18	17	0	19	262	9	0	560
11:15 AM	7	3	1	0	12	222	28	0	35	16	20	0	21	288	10	0	663
11:30 AM	12	0	2	0	5	212	25	0	54	13	24	0	27	287	15	0	676
11:45 AM	15	2	9	0	4	236	24	0	57	9	27	0	21	255	12	0	671
Total	37	10	17	0	31	828	90	0	187	56	88	0	88	1092	46	0	2570
12:00 PM	12	6	3	0	6	231	26	0	58	9	24	0	17	280	8	0	680
12:15 PM	14	5	2	0	4	254	21	0	46	16	25	0	30	264	6	0	687
12:30 PM	12	2	4	0	5	229	25	0	69	12	22	0	21	243	7	0	651
12:45 PM	14	9	11	0	7	253	25	0	55	11	19	0	28	252	6	0	690
Total	52	22	20	0	22	967	97	0	228	48	90	0	96	1039	27	0	2708
*** BREAK ***																	
04:00 PM	32	8	12	0	9	276	31	0	51	17	40	0	29	258	13	0	776
04:15 PM	29	9	2	0	9	284	21	0	45	14	24	0	22	301	16	0	776
04:30 PM	23	5	7	0	9	255	23	0	42	23	35	0	28	302	16	0	768
04:45 PM	34	6	5	0	7	332	23	0	51	12	31	0	28	282	14	0	825
Total	118	28	26	0	34	1147	98	0	189	66	130	0	107	1143	59	0	3145
05:00 PM	38	6	4	0	3	279	19	0	56	20	32	0	26	283	7	0	773
05:15 PM	46	20	11	0	5	287	18	0	53	16	29	0	10	250	10	0	755
05:30 PM	44	11	2	0	8	292	11	0	52	14	21	0	17	308	14	0	794
05:45 PM	40	7	6	0	11	269	13	0	29	8	25	0	15	259	6	0	688
Total	168	44	23	0	27	1127	61	0	190	58	107	0	68	1100	37	0	3010
Grand Total	375	104	86	0	114	4069	346	0	794	228	415	0	359	4374	169	0	11433
Apprch %	66.4	18.4	15.2	0	2.5	89.8	7.6	0	55.3	15.9	28.9	0	7.3	89.2	3.4	0	
Total %	3.3	0.9	0.8	0	1	35.6	3	0	6.9	2	3.6	0	3.1	38.3	1.5	0	

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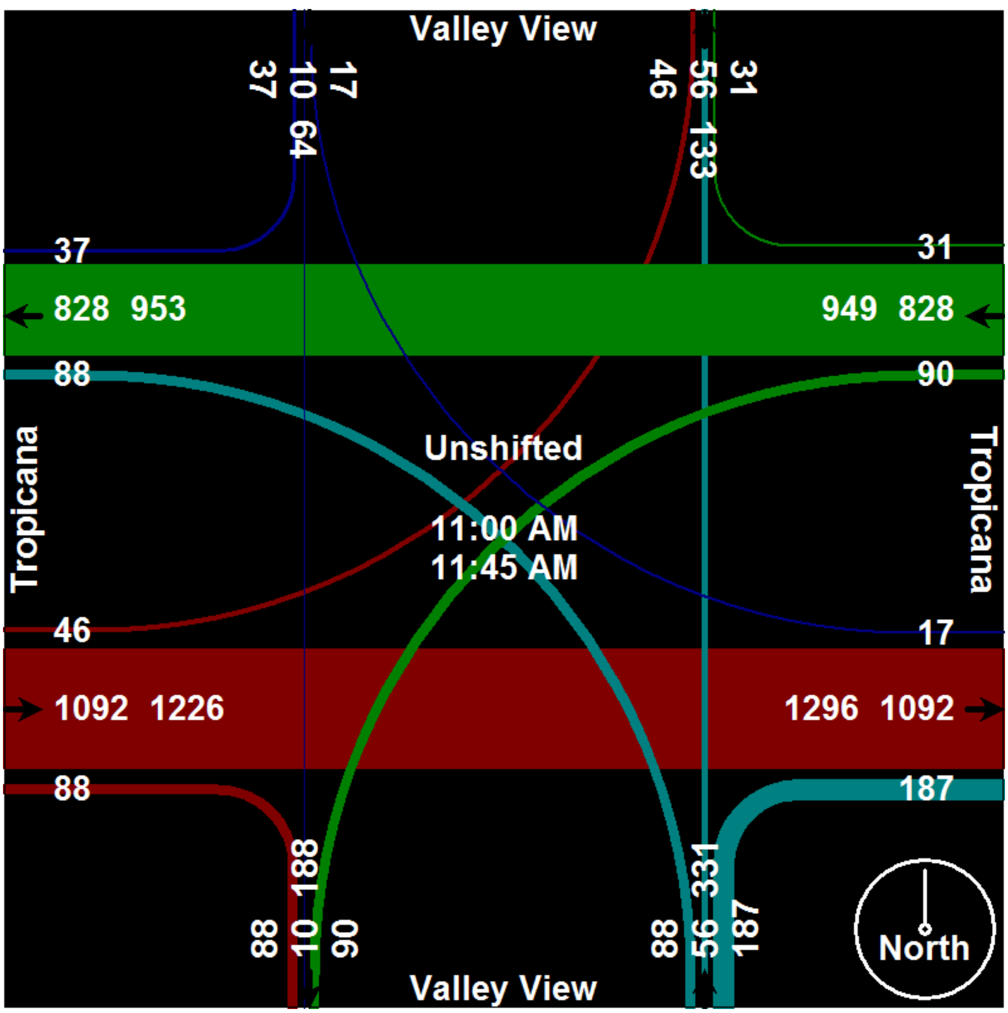
File Name : Tropicana-Valley View
Site Code : 00003333
Start Date : 5/7/2017

	Valley View Southbound					Tropicana Westbound					Valley View Northbound					Tropicana Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:00 AM																					
11:00 AM	3	**5**	5	0	13	10	158	13	0	181	41	**18**	17	0	76	19	262	9	0	290	560
11:15 AM	7	3	1	0	11	**12**	222	**28**	0	262	35	16	20	0	71	21	**288**	10	0	319	663
11:30 AM	12	0	2	0	14	5	212	25	0	242	54	13	24	0	91	**27**	287	**15**	0	**329**	**676**
11:45 AM	**15**	2	**9**	0	**26**	4	**236**	24	0	**264**	**57**	9	**27**	0	**93**	21	255	12	0	288	671
Total Volume	37	10	17	0	64	31	828	90	0	949	187	56	88	0	331	88	1092	46	0	1226	2570
% App. Total	57.8	15.6	26.6	0		3.3	87.2	9.5	0		56.5	16.9	26.6	0		7.2	89.1	3.8	0		
PHF	.617	.500	.472	.000	.615	.646	.877	.804	.000	.899	.820	.778	.815	.000	.890	.815	.948	.767	.000	.932	.950



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File Name : Tropicana-Valley View
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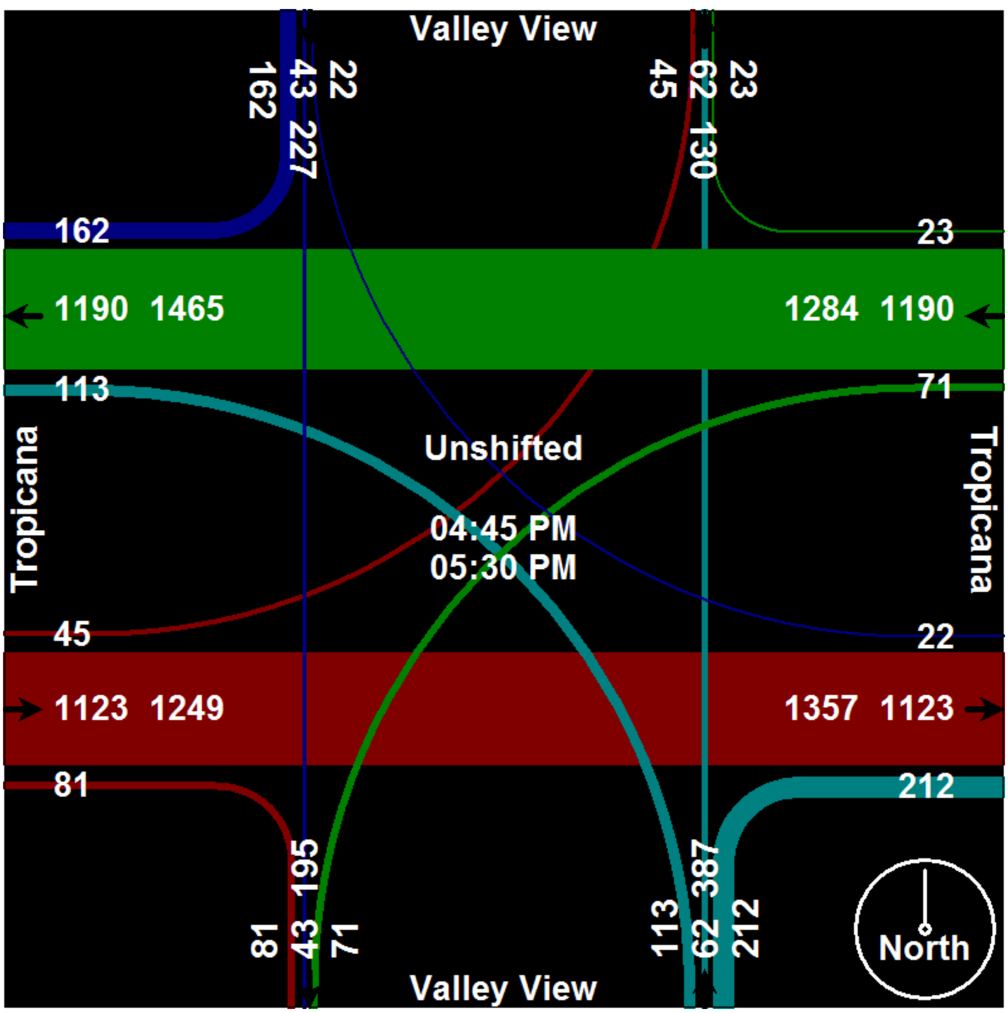
Start Date : 5/7/2017
Page No : 3

	Valley View Southbound					Tropicana Westbound					Valley View Northbound					Tropicana Eastbound					
Start Time	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Right	Thr u	Left	Peds	App. Total	Right	Thr u	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	34	6	5	0	45	7	**332**	**23**	0	**362**	51	12	31	0	94	**28**	282	**14**	0	324	**825**
05:00 PM	38	6	4	0	48	3	279	19	0	301	**56**	**20**	**32**	0	**108**	26	283	7	0	316	773
05:15 PM	**46**	**20**	**11**	0	**77**	5	287	18	0	310	53	16	29	0	98	10	250	10	0	270	755
05:30 PM	44	11	2	0	57	**8**	292	11	0	311	52	14	21	0	87	17	**308**	14	0	**339**	794
Total Volume	162	43	22	0	227	23	1190	71	0	1284	212	62	113	0	387	81	1123	45	0	1249	3147
% App. Total	71.4	18.9	9.7	0		1.8	92.7	5.5	0		54.8	16	29.2	0		6.5	89.9	3.6	0		
PHF	.880	.538	.500	.000	.737	.719	.896	.772	.000	.887	.946	.775	.883	.000	.896	.723	.912	.804	.000	.921	.954



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

File Name : DETR
Site Code : 00000000
Start Date : 11/9/2013
Page No : 1

Groups Printed- Unshifted

	DEAN MARTIN DRIVE From North				TROPICANA AVENUE From East				DEAN MARTIN DRIVE From South				TROPICANA AVENUE From West				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
05:30 PM	49	91	156	0	51	336	47	0	43	47	29	0	41	436	28	0	1354
05:45 PM	32	86	161	0	39	356	130	0	38	34	27	0	31	381	17	0	1332
Total	81	177	317	0	90	692	177	0	81	81	56	0	72	817	45	0	2686
06:00 PM	52	91	151	0	38	300	82	0	47	50	27	0	19	403	27	0	1287
06:15 PM	23	90	142	0	75	376	81	0	37	30	20	0	32	426	25	0	1357
06:30 PM	35	84	186	0	38	258	76	0	29	33	16	0	30	420	16	0	1221
06:45 PM	26	59	130	0	64	344	60	0	21	37	13	0	17	255	31	0	1057
Total	136	324	609	0	215	1278	299	0	134	150	76	0	98	1504	99	0	4922
07:00 PM	13	47	144	0	59	333	113	0	17	26	15	0	20	269	19	0	1075
07:15 PM	18	60	145	0	70	332	118	0	22	46	11	0	44	280	27	0	1173
*** BREAK ***																	
Total	31	107	289	0	129	665	231	0	39	72	26	0	64	549	46	0	2248
*** BREAK ***																	
10:00 PM	20	84	86	0	59	216	25	0	19	21	13	0	9	258	17	0	827
10:15 PM	21	42	71	0	62	284	26	0	14	19	9	0	13	279	14	0	854
10:30 PM	20	43	89	0	69	218	38	0	23	20	14	0	7	206	15	0	762
10:45 PM	14	39	71	0	45	246	41	0	17	19	13	0	5	232	20	0	762
Total	75	208	317	0	235	964	130	0	73	79	49	0	34	975	66	0	3205
11:00 PM	30	49	79	0	34	227	33	0	16	17	10	0	10	171	18	0	694
11:15 PM	19	32	96	0	51	227	30	0	24	18	9	0	13	175	12	0	706
Grand Total	372	897	1707	0	754	4053	900	0	367	417	226	0	291	4191	286	0	14461
Apprch %	12.5	30.1	57.4	0	13.2	71	15.8	0	36.3	41.3	22.4	0	6.1	87.9	6	0	
Total %	2.6	6.2	11.8	0	5.2	28	6.2	0	2.5	2.9	1.6	0	2	29	2	0	

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File Name : DETR
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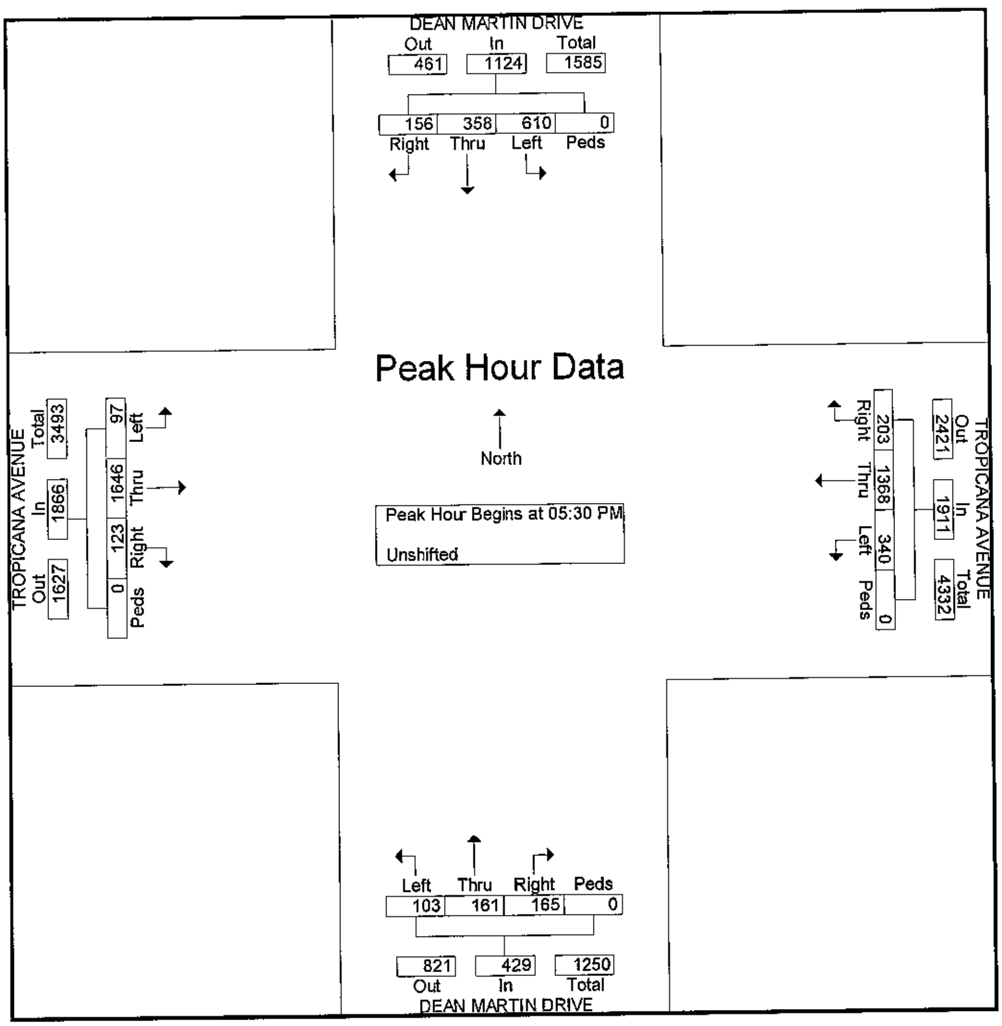
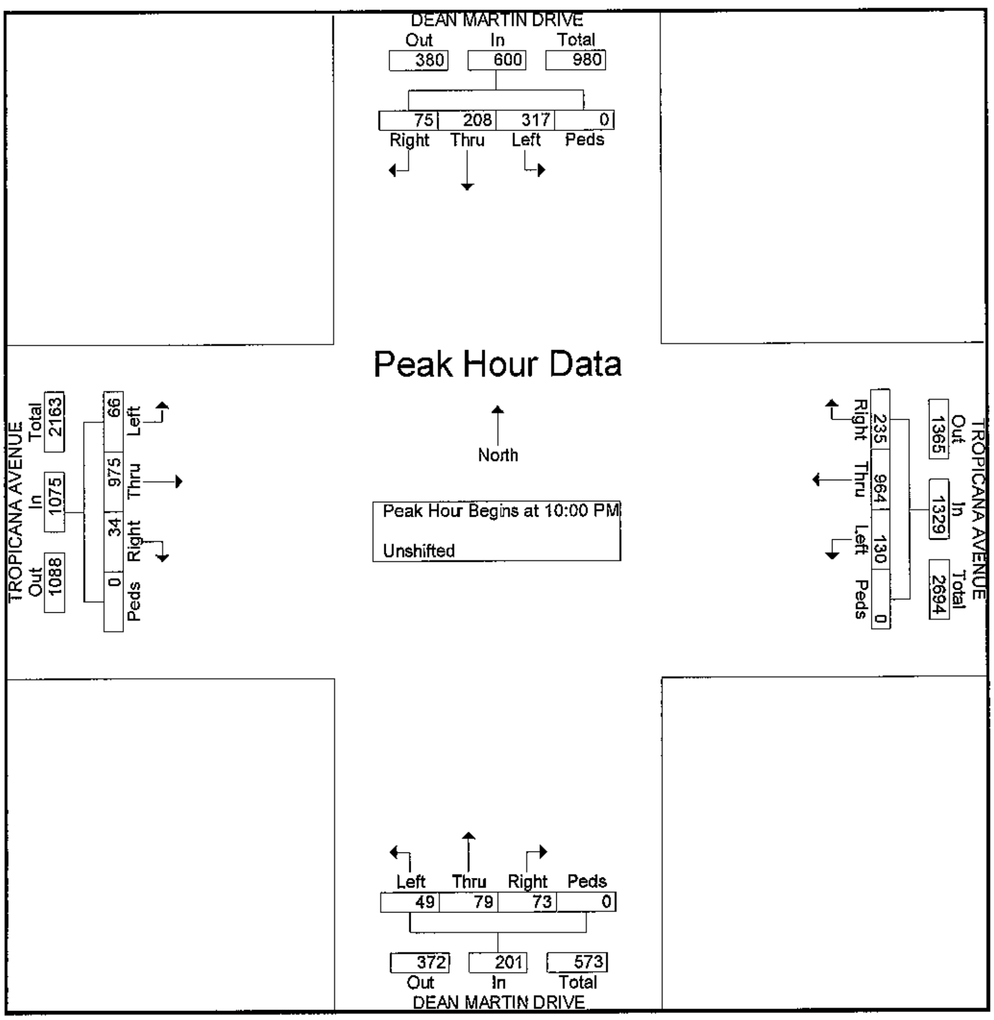
	DEAN MARTIN DRIVE From North					TROPICANA AVENUE From East					DEAN MARTIN DRIVE From South					TROPICANA AVENUE From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 05:30 PM to 08:30 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:30 PM																					
05:30 PM	49	**91**	156	0	**296**	51	336	47	0	434	43	47	**29**	0	119	**41**	**436**	**28**	0	**505**	1354
05:45 PM	32	86	**161**	0	279	39	356	**130**	0	525	38	34	27	0	99	31	381	17	0	429	1332
06:00 PM	**52**	91	151	0	294	38	300	82	0	420	**47**	**50**	27	0	**124**	19	403	27	0	449	1287
06:15 PM	23	90	142	0	255	**75**	**376**	81	0	**532**	37	30	20	0	87	32	426	25	0	483	**1357**
Total Volume	156	358	610	0	1124	203	1368	340	0	1911	165	161	103	0	429	123	1646	97	0	1866	5330
% App. Total	13.9	31.9	54.3	0		10.6	71.6	17.8	0		38.5	37.5	24	0		6.6	88.2	5.2	0		
PHF	.750	.984	.947	.000	.949	.677	.910	.654	.000	.898	.878	.805	.888	.000	.865	.750	.944	.866	.000	.924	.982



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

File Name : DETR
Site Code : 00000000
Start Date : 11/9/2013

	DEAN MARTIN DRIVE From North					TROPICANA AVENUE From East					DEAN MARTIN DRIVE From South					TROPICANA AVENUE From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 08:45 PM to 11:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 10:00 PM																					
10:00 PM	20	**84**	86	0	**190**	59	216	25	0	300	19	**21**	13	0	53	9	258	17	0	284	827
10:15 PM	**21**	42	71	0	134	62	**284**	26	0	**372**	14	19	9	0	42	**13**	**279**	14	0	**306**	**854**
10:30 PM	20	43	**89**	0	152	**69**	218	38	0	325	**23**	20	**14**	0	**57**	7	206	15	0	228	762
10:45 PM	14	39	71	0	124	45	246	**41**	0	332	17	19	13	0	49	5	232	**20**	0	257	762
Total Volume	75	208	317	0	600	235	964	130	0	1329	73	79	49	0	201	34	975	66	0	1075	3205
% App. Total	12.5	34.7	52.8	0		17.7	72.5	9.8	0		36.3	39.3	24.4	0		3.2	90.7	6.1	0		
PHF	.893	.619	.890	.000	.789	.851	.849	.793	.000	.893	.793	.940	.875	.000	.882	.654	.874	.825	.000	.878	.938



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

File Name : SBI15-TROP FINAL
Site Code : 00000000
Start Date : 10/19/2013
Page No : 1

Groups Printed- Unshifted

	SOUTHBOUND I15 From North				TROPICANA AVENUE From East				SOUTHBOUND I15 From South				TROPICANA AVENUE From West				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
05:30 PM	112	0	0	0	0	410	0	0	0	0	0	0	91	315	114	0	1042
05:45 PM	156	0	0	0	0	475	0	0	0	0	0	0	85	237	129	0	1082
Total	268	0	0	0	0	885	0	0	0	0	0	0	176	552	243	0	2124
06:00 PM	148	0	0	0	0	431	0	0	0	0	0	0	98	266	110	0	1053
06:15 PM	162	0	0	0	0	512	0	0	0	0	0	0	94	269	107	0	1144
06:30 PM	168	0	0	0	0	429	0	0	0	0	0	0	105	268	116	0	1086
06:45 PM	172	0	0	0	0	368	0	0	0	0	0	0	76	247	100	0	963
Total	650	0	0	0	0	1740	0	0	0	0	0	0	373	1050	433	0	4246
07:00 PM	149	0	0	0	0	429	0	0	0	0	0	0	83	273	116	0	1050
07:15 PM	173	0	0	0	0	341	0	0	0	0	0	0	86	249	99	0	948
*** BREAK ***																	
Total	322	0	0	0	0	770	0	0	0	0	0	0	169	522	215	0	1998
*** BREAK ***																	
10:00 PM	91	0	0	0	0	363	0	0	0	0	0	0	135	219	126	0	934
10:15 PM	119	0	0	0	0	310	0	0	0	0	0	0	114	227	112	0	882
10:30 PM	94	0	0	0	0	337	0	0	0	0	0	0	89	196	94	0	810
10:45 PM	106	0	0	0	0	299	0	0	0	0	0	0	76	207	109	0	797
Total	410	0	0	0	0	1309	0	0	0	0	0	0	414	849	441	0	3423
11:00 PM	76	0	0	0	0	290	0	0	0	0	0	0	81	170	82	0	699
11:15 PM	77	0	0	0	0	312	0	0	0	0	0	0	84	216	103	0	792
Grand Total	1803	0	0	0	0	5306	0	0	0	0	0	0	1297	3359	1517	0	13282
Apprch %	100	0	0	0	0	100	0	0	0	0	0	0	21	54.4	24.6	0	
Total %	13.6	0	0	0	0	39.9	0	0	0	0	0	0	9.8	25.3	11.4	0	

Lochsa Engineering

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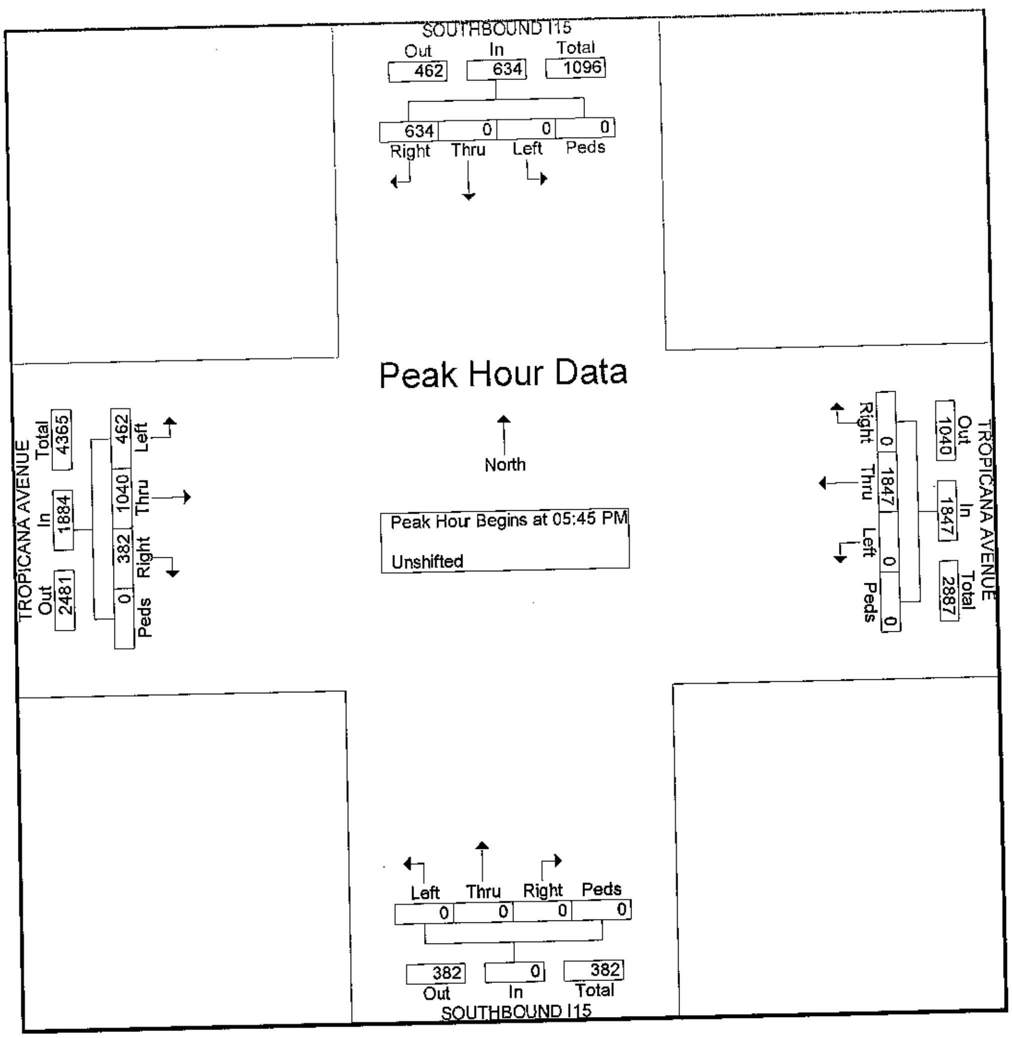
Las Vegas, NV 89118

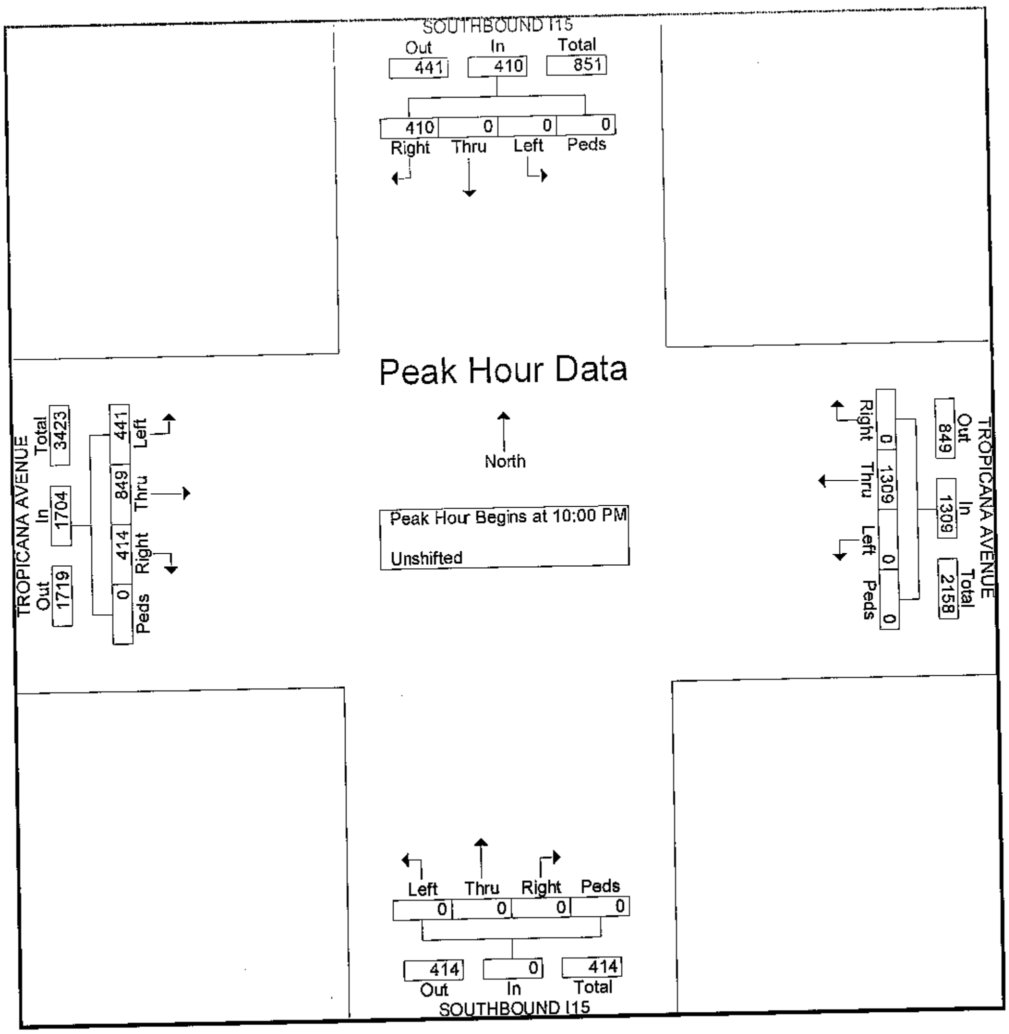
	SOUTHBOUND I15 From North					TROPICANA AVENUE From East					SOUTHBOUND I15 From South					TROPICANA AVENUE From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 05:30 PM to 08:30 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:45 PM																					
05:45 PM	156	0	0	0	156	0	475	0	0	475	0	0	0	0	0	85	237	**129**	0	451	1082
06:00 PM	148	0	0	0	148	0	431	0	0	431	0	0	0	0	0	98	266	110	0	474	1053
06:15 PM	162	0	0	0	162	0	**512**	0	0	**512**	0	0	0	0	0	94	**269**	107	0	470	**1144**
06:30 PM	**168**	0	0	0	**168**	0	429	0	0	429	0	0	0	0	0	**105**	268	116	0	**489**	1086
Total Volume	634	0	0	0	634	0	1847	0	0	1847	0	0	0	0	0	382	1040	462	0	1884	4365
% App. Total	100	0	0	0		0	100	0	0		0	0	0	0		20.3	55.2	24.5	0		
PHF	.943	.000	.000	.000	.943	.000	.902	.000	.000	.902	.000	.000	.000	.000	.000	.910	.967	.895	.000	.963	.954



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

File Name : SBI15-TROP FINAL
Site Code : 00000000
Start Date : 10/19/2013

	SOUTHBOUND I15 From North					TROPICANA AVENUE From East					SOUTHBOUND I15 From South					TROPICANA AVENUE From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 08:45 PM to 11:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 10:00 PM																					
10:00 PM	91	0	0	0	91	0	**363**	0	0	**363**	0	0	0	0	0	**135**	219	**126**	0	**480**	**934**
10:15 PM	**119**	0	0	0	**119**	0	310	0	0	310	0	0	0	0	0	114	**227**	112	0	453	882
10:30 PM	94	0	0	0	94	0	337	0	0	337	0	0	0	0	0	89	196	94	0	379	810
10:45 PM	106	0	0	0	106	0	299	0	0	299	0	0	0	0	0	76	207	109	0	392	797
Total Volume	410	0	0	0	410	0	1309	0	0	1309	0	0	0	0	0	414	849	441	0	1704	3423
% App. Total	100	0	0	0		0	100	0	0		0	0	0	0		24.3	49.8	25.9	0		
PHF	.861	.000	.000	.000	.861	.000	.902	.000	.000	.902	.000	.000	.000	.000	.000	.767	.935	.875	.000	.888	.916



Silver State Traffic Data Collection, LLC

1819 Quarley Place
Henderson, Nevada 89014
702-217-1968
sstraffic@msn.com

File Name : Hacienda-Valley View
Site Code : 00000777
Start Date : 4/30/2017
Page No : 1

Groups Printed- Unshifted

	Valley View Southbound				Hacienda Westbound				Valley View Northbound				Hacienda Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
11:00 AM	9	17	3	0	9	24	4	0	11	29	2	0	3	30	17	0	158
11:15 AM	2	20	6	0	13	22	6	0	5	37	6	0	6	68	21	0	212
11:30 AM	4	15	5	0	10	23	2	0	5	30	4	0	4	57	14	0	173
11:45 AM	2	18	4	0	4	44	5	0	6	32	8	0	4	46	14	0	187
Total	17	70	18	0	36	113	17	0	27	128	20	0	17	201	66	0	730
12:00 PM	4	20	5	0	8	48	4	0	5	37	6	0	3	48	7	0	195
12:15 PM	6	19	4	0	4	43	4	0	4	25	6	0	8	52	13	0	188
12:30 PM	3	25	5	0	10	24	1	0	4	31	5	0	4	45	11	0	168
12:45 PM	6	17	2	0	7	25	2	0	2	24	4	0	4	31	15	0	139
Total	19	81	16	0	29	140	11	0	15	117	21	0	19	176	46	0	690
*** BREAK ***																	
04:00 PM	11	18	6	0	6	69	8	0	3	35	3	0	2	40	8	0	209
04:15 PM	9	17	2	0	6	65	11	0	2	30	3	0	6	60	15	0	226
04:30 PM	4	17	8	0	8	48	2	0	3	29	6	0	1	57	12	0	195
04:45 PM	12	26	3	0	7	61	8	0	4	22	6	0	1	42	14	0	206
Total	36	78	19	0	27	243	29	0	12	116	18	0	10	199	49	0	836
05:00 PM	11	27	5	0	8	124	12	0	2	30	1	0	5	48	10	0	283
05:15 PM	16	24	9	0	9	120	8	0	1	26	7	0	2	51	12	0	285
05:30 PM	6	13	7	0	5	108	11	0	11	19	8	0	1	47	12	0	248
05:45 PM	11	17	4	0	5	75	8	0	4	18	4	0	7	31	8	0	192
Total	44	81	25	0	27	427	39	0	18	93	20	0	15	177	42	0	1008
Grand Total	116	310	78	0	119	923	96	0	72	454	79	0	61	753	203	0	3264
Apprch %	23	61.5	15.5	0	10.5	81.1	8.4	0	11.9	75	13.1	0	6	74	20	0	
Total %	3.6	9.5	2.4	0	3.6	28.3	2.9	0	2.2	13.9	2.4	0	1.9	23.1	6.2	0	

Silver State Traffic Data Collection, LLC

1819 Quarley Place
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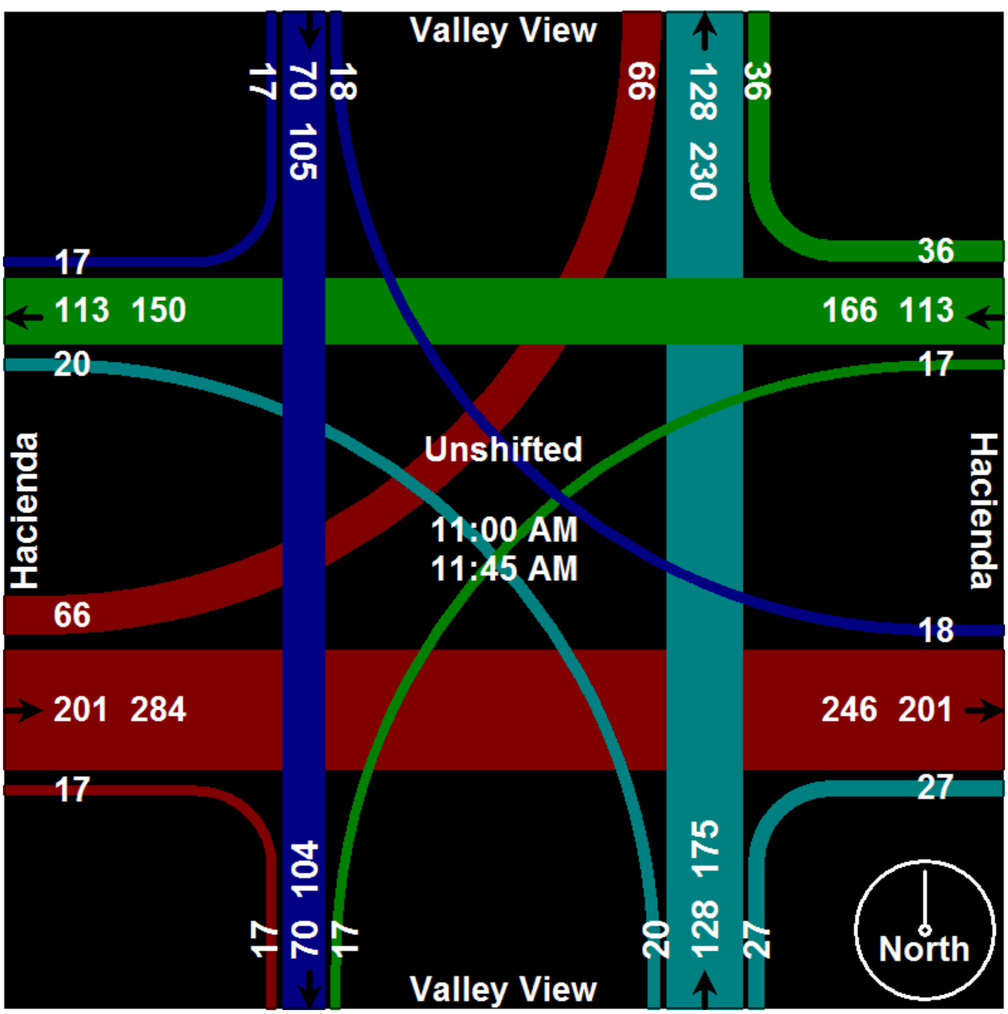
File Name : Hacienda-Valley View
Site Code : 00000777
Start Date : 4/30/2017
Page No : 2

	Valley View Southbound					Hacienda Westbound					Valley View Northbound					Hacienda Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:00 AM																					
11:00 AM	9	17	3	0	29	9	24	4	0	37	11	29	2	0	42	3	30	17	0	50	158
11:15 AM	2	20	6	0	28	13	22	6	0	41	5	37	6	0	48	6	68	21	0	95	212
11:30 AM	4	15	5	0	24	10	23	2	0	35	5	30	4	0	39	4	57	14	0	75	173
11:45 AM	2	18	4	0	24	4	44	5	0	53	6	32	8	0	46	4	46	14	0	64	187
Total Volume	17	70	18	0	105	36	113	17	0	166	27	128	20	0	175	17	201	66	0	284	730
% App. Total	16.2	66.7	17.1	0		21.7	68.1	10.2	0		15.4	73.1	11.4	0		6	70.8	23.2	0		
PHF	.472	.875	.750	.000	.905	.692	.642	.708	.000	.783	.614	.865	.625	.000	.911	.708	.739	.786	.000	.747	.861



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1819 Quarley Place
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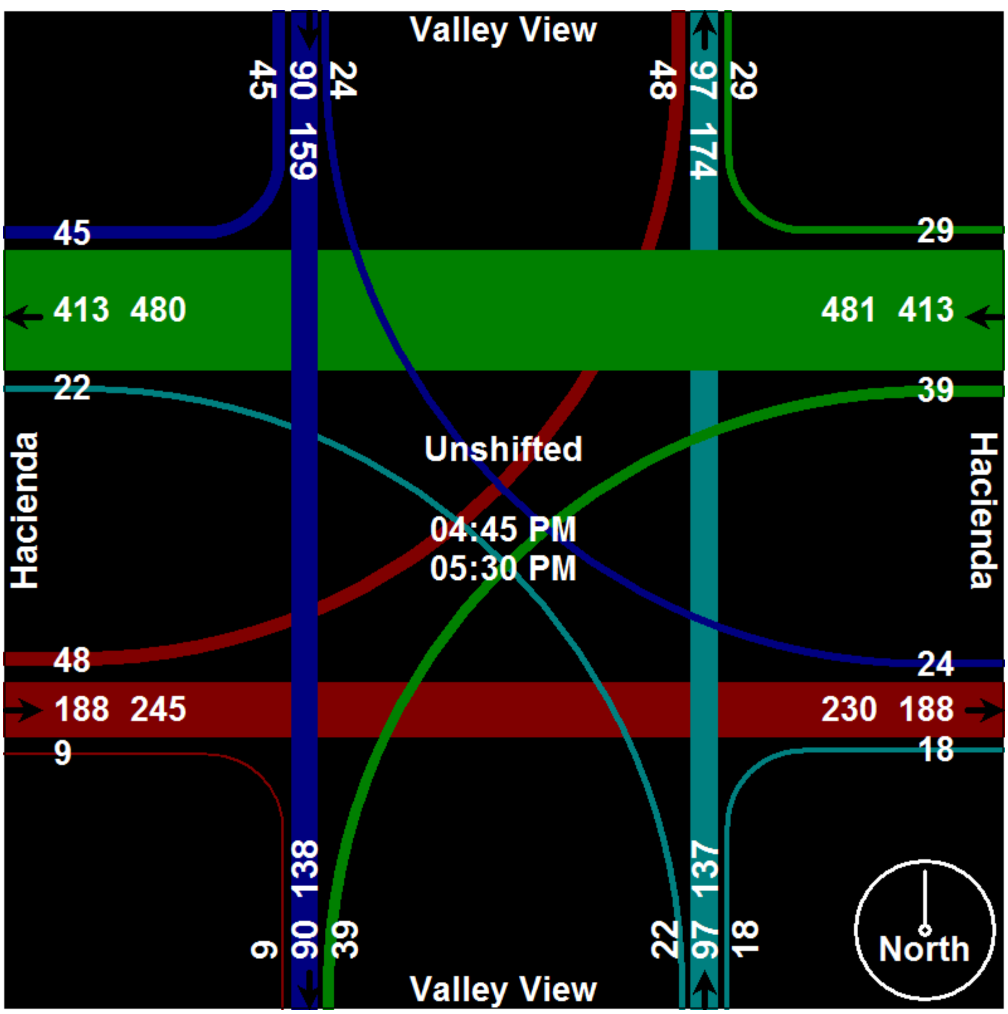
File Name : Hacienda-Valley View
Site Code : 00000777
Start Date : 4/30/2017
Page No : 3

	Valley View Southbound					Hacienda Westbound					Valley View Northbound					Hacienda Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	12	26	3	0	41	7	61	8	0	76	4	22	6	0	32	1	42	14	0	57	206
05:00 PM	11	27	5	0	43	8	124	12	0	144	2	30	1	0	33	5	48	10	0	63	283
05:15 PM	16	24	9	0	49	9	120	8	0	137	1	26	7	0	34	2	51	12	0	65	285
05:30 PM	6	13	7	0	26	5	108	11	0	124	11	19	8	0	38	1	47	12	0	60	248
Total Volume	45	90	24	0	159	29	413	39	0	481	18	97	22	0	137	9	188	48	0	245	1022
% App. Total	28.3	56.6	15.1	0		6	85.9	8.1	0		13.1	70.8	16.1	0		3.7	76.7	19.6	0		
PHF	.703	.833	.667	.000	.811	.806	.833	.813	.000	.835	.409	.808	.688	.000	.901	.450	.922	.857	.000	.942	.896



Silver State Traffic Data Collection, LLC

1819 Quarley Place
Henderson, Nevada 89014
702-217-1968
sstraffic@msn.com

File Name : Hacienda-Polaris
Site Code : 00000000
Start Date : 4/30/2017
Page No : 1

Groups Printed- Unshifted

	Polaris Southbound				Hacienda Westbound				Polaris Northbound				Hacienda Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
11:00 AM	6	3	1	0	6	37	19	0	7	4	3	0	2	43	0	0	131
11:15 AM	3	4	0	0	6	35	27	0	14	1	4	0	6	74	3	0	177
11:30 AM	2	3	3	0	8	32	24	0	8	5	3	0	3	59	1	0	151
11:45 AM	1	1	4	0	4	50	18	0	12	3	1	0	3	53	4	0	154
Total	12	11	8	0	24	154	88	0	41	13	11	0	14	229	8	0	613
12:00 PM	2	4	1	0	5	53	15	0	7	9	5	0	3	50	0	0	154
12:15 PM	0	2	1	0	6	51	18	0	8	5	1	0	1	63	5	0	161
12:30 PM	1	1	7	0	6	32	15	0	9	6	2	0	3	50	2	0	134
12:45 PM	0	1	3	0	7	31	14	0	8	5	4	0	2	34	1	0	110
Total	3	8	12	0	24	167	62	0	32	25	12	0	9	197	8	0	559
*** BREAK ***																	
04:00 PM	2	1	4	0	6	81	17	0	16	4	4	0	2	50	0	0	187
04:15 PM	0	6	1	0	6	82	16	0	7	5	5	0	1	66	0	0	195
04:30 PM	1	4	5	0	4	57	14	0	8	2	2	0	1	65	0	0	163
04:45 PM	1	2	7	0	2	74	18	0	13	2	2	0	7	48	1	0	177
Total	4	13	17	0	18	294	65	0	44	13	13	0	11	229	1	0	722
05:00 PM	0	3	2	0	2	139	30	0	13	2	5	0	4	47	1	0	248
05:15 PM	1	2	4	0	2	130	25	0	13	1	6	0	3	67	0	0	254
05:30 PM	0	2	3	0	2	123	19	0	7	1	3	0	2	60	1	0	223
05:45 PM	2	2	0	0	1	81	11	0	8	3	9	0	5	37	2	0	161
Total	3	9	9	0	7	473	85	0	41	7	23	0	14	211	4	0	886
Grand Total	22	41	46	0	73	1088	300	0	158	58	59	0	48	866	21	0	2780
Apprch %	20.2	37.6	42.2	0	5	74.5	20.5	0	57.5	21.1	21.5	0	5.1	92.6	2.2	0	
Total %	0.8	1.5	1.7	0	2.6	39.1	10.8	0	5.7	2.1	2.1	0	1.7	31.2	0.8	0	

Silver State Traffic Data Collection, LLC

1819 Quarley Place
Henderson, Nevada 89014
702-217-1968
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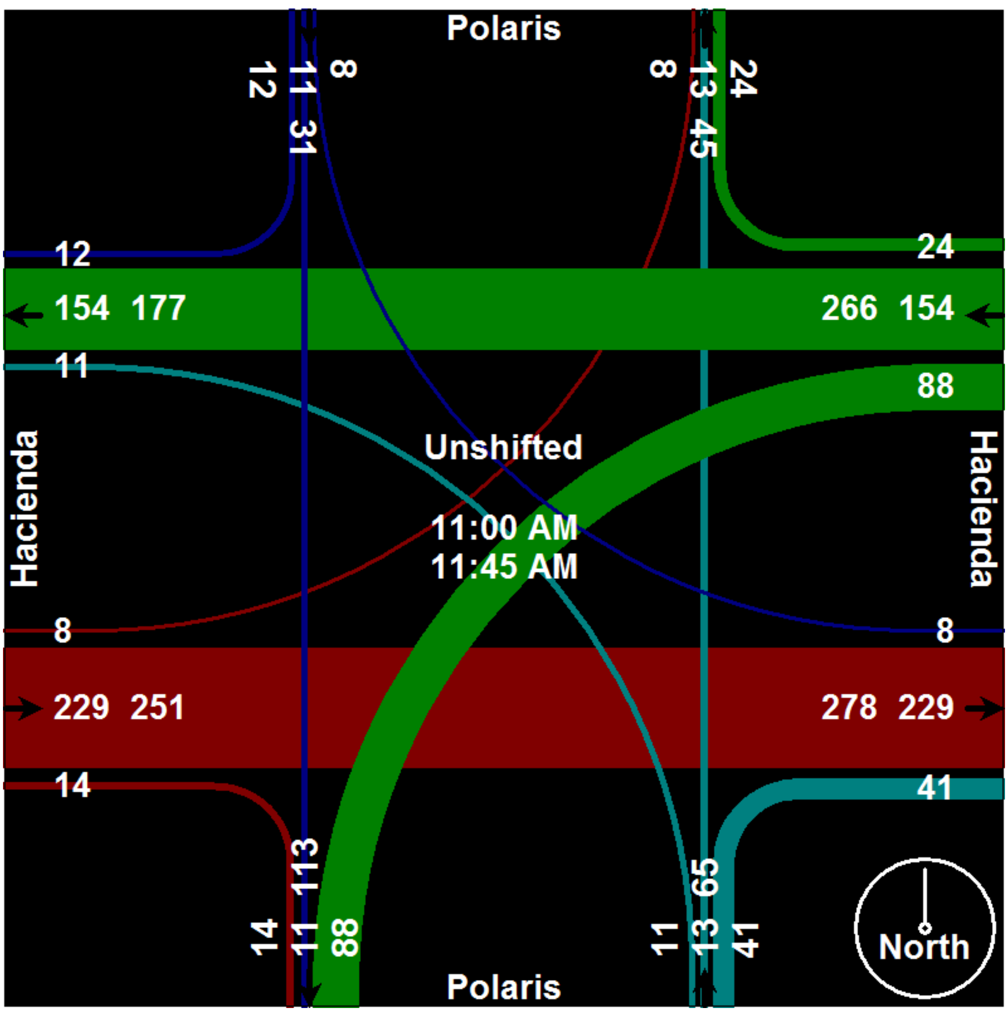
	Polaris Southbound					Hacienda Westbound					Polaris Northbound					Hacienda Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:00 AM																					
11:00 AM	6	3	1	0	10	6	37	19	0	62	7	4	3	0	14	2	43	0	0	45	131
11:15 AM	3	4	0	0	7	6	35	27	0	68	14	1	4	0	19	6	74	3	0	83	177
11:30 AM	2	3	3	0	8	8	32	24	0	64	8	5	3	0	16	3	59	1	0	63	151
11:45 AM	1	1	4	0	6	4	50	18	0	72	12	3	1	0	16	3	53	4	0	60	154
Total Volume	12	11	8	0	31	24	154	88	0	266	41	13	11	0	65	14	229	8	0	251	613
% App. Total	38.7	35.5	25.8	0		9	57.9	33.1	0		63.1	20	16.9	0		5.6	91.2	3.2	0		
PHF	.500	.688	.500	.000	.775	.750	.770	.815	.000	.924	.732	.650	.688	.000	.855	.583	.774	.500	.000	.756	.866



Silver State Traffic Data Collection, LLC

1819 Quarley Place
Henderson, Nevada 89014
702-217-1968
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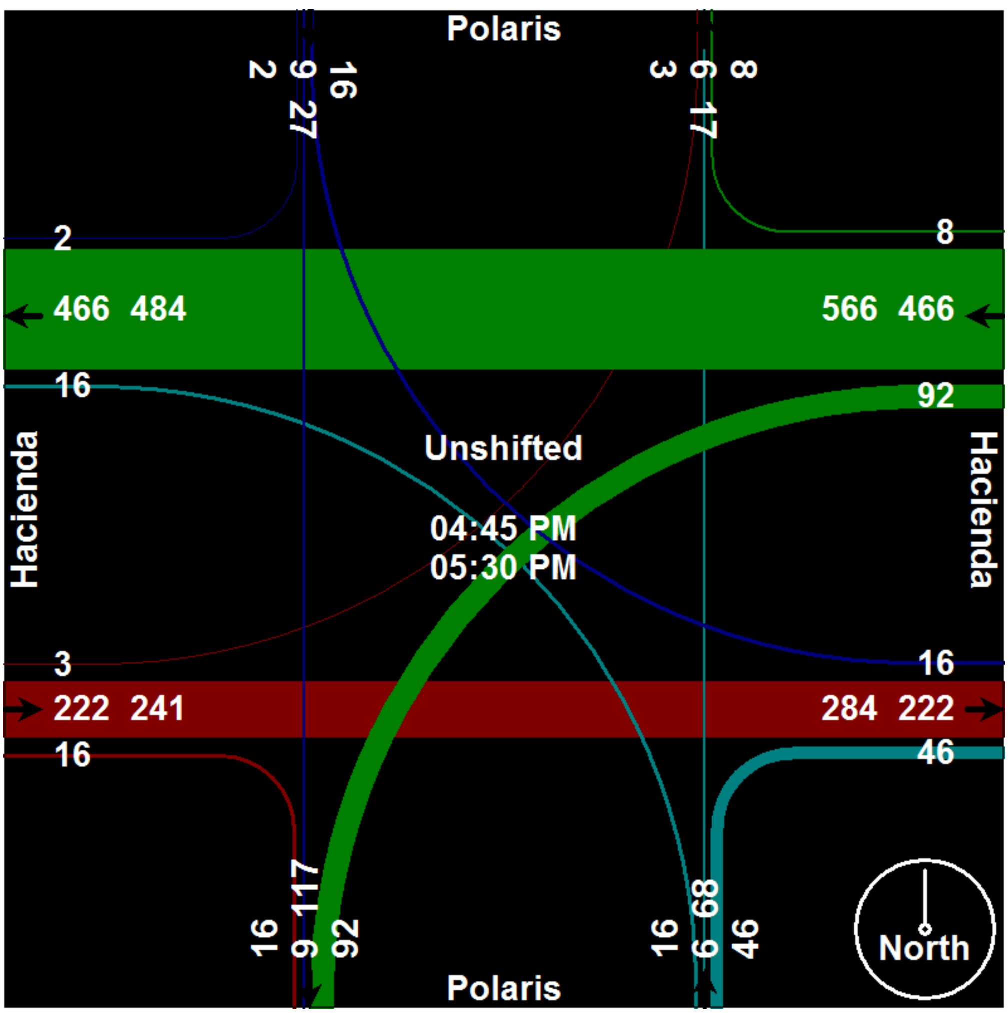
File Name : Hacienda-Polaris
Site Code : 00000000
Start Date : 4/30/2017
Page No : 3

	Polaris Southbound					Hacienda Westbound					Polaris Northbound					Hacienda Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	1	2	7	0	10	2	74	18	0	94	13	2	2	0	17	7	48	1	0	56	177
05:00 PM	0	3	2	0	5	2	139	30	0	171	13	2	5	0	20	4	47	1	0	52	248
05:15 PM	1	2	4	0	7	2	130	25	0	157	13	1	6	0	20	3	67	0	0	70	254
05:30 PM	0	2	3	0	5	2	123	19	0	144	7	1	3	0	11	2	60	1	0	63	223
Total Volume	2	9	16	0	27	8	466	92	0	566	46	6	16	0	68	16	222	3	0	241	902
% App. Total	7.4	33.3	59.3	0		1.4	82.3	16.3	0		67.6	8.8	23.5	0		6.6	92.1	1.2	0		
PHF	.500	.750	.571	.000	.675	1.00	.838	.767	.000	.827	.885	.750	.667	.000	.850	.571	.828	.750	.000	.861	.888



Silver State Traffic Data Collection, LLC

1819 Quarley Place
Henderson, NV 89014
702-898-1968
sstraffic@msn.com

File Name : Hacienda-Aldebaran
Site Code : 00000044
Start Date : 5/7/2017

Groups Printed- Unshifted

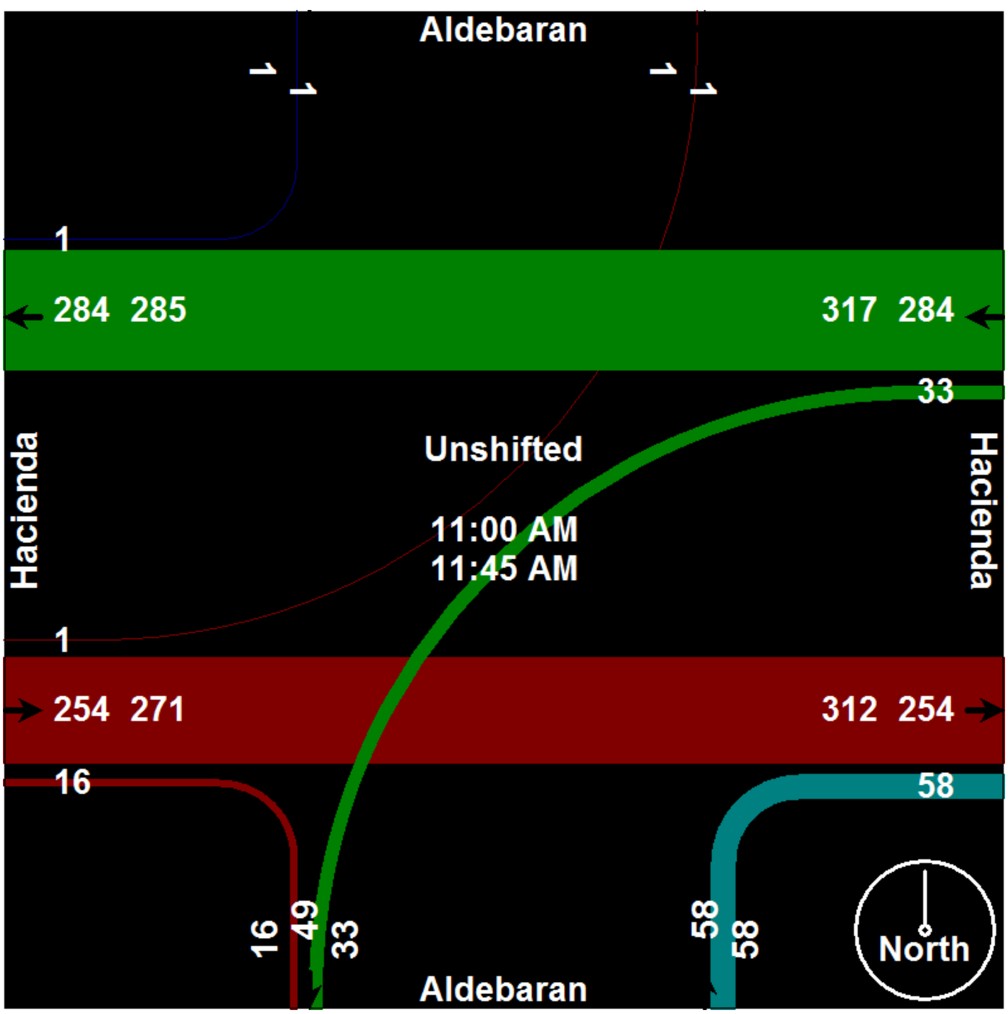
	Aldebaran Southbound				Hacienda Westbound				Aldebaran Northbound				Hacienda Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
11:00 AM	0	0	0	0	0	74	1	0	16	0	0	0	2	55	0	0	148
11:15 AM	0	0	0	0	0	77	3	0	16	0	0	0	4	72	1	0	173
11:30 AM	1	0	0	0	0	63	7	0	18	0	0	0	4	61	0	0	154
11:45 AM	0	0	0	0	0	70	22	0	8	0	0	0	6	66	0	0	172
Total	1	0	0	0	0	284	33	0	58	0	0	0	16	254	1	0	647
12:00 PM	0	0	0	0	0	61	15	0	16	0	0	0	6	60	0	0	158
12:15 PM	0	0	0	0	0	70	22	0	6	0	0	0	3	71	0	0	172
12:30 PM	0	0	0	0	0	64	7	0	10	0	0	0	6	63	1	0	151
12:45 PM	0	0	0	0	0	56	5	0	10	0	0	0	4	53	0	0	128
Total	0	0	0	0	0	251	49	0	42	0	0	0	19	247	1	0	609
*** BREAK ***																	
04:00 PM	1	0	0	0	0	98	22	0	8	0	0	0	1	77	0	0	207
04:15 PM	0	0	0	0	0	93	15	0	13	0	0	0	3	70	2	0	196
04:30 PM	0	0	0	0	0	82	13	0	11	0	0	0	8	74	0	0	188
04:45 PM	0	0	0	0	0	88	14	0	6	0	0	0	6	73	0	0	187
Total	1	0	0	0	0	361	64	0	38	0	0	0	18	294	2	0	778
05:00 PM	0	0	0	0	0	145	23	0	8	0	0	0	4	68	0	0	248
05:15 PM	0	0	0	0	0	162	24	0	13	0	0	0	2	72	0	0	273
05:30 PM	0	0	0	0	0	151	24	0	13	0	0	0	3	66	1	0	258
05:45 PM	0	0	0	0	0	121	14	0	15	0	0	0	8	46	0	0	204
Total	0	0	0	0	0	579	85	0	49	0	0	0	17	252	1	0	983
Grand Total	2	0	0	0	0	1475	231	0	187	0	0	0	70	1047	5	0	3017
Apprch %	100	0	0	0	0	86.5	13.5	0	100	0	0	0	6.2	93.3	0.4	0	
Total %	0.1	0	0	0	0	48.9	7.7	0	6.2	0	0	0	2.3	34.7	0.2	0	

Silver State Traffic Data Collection, LLC

1819 Quarley Place
Henderson, NV 89014
702-898-1968
sstraffic@msn.com

File Name : Hacienda-Aldebaran
Site Code : 00000044
Start Date : 5/7/2017

	Aldebaran Southbound					Hacienda Westbound					Aldebaran Northbound					Hacienda Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:00 AM																					
11:00 AM	0	0	0	0	0	0	74	1	0	75	16	0	0	0	16	2	55	0	0	57	148
11:15 AM	0	0	0	0	0	0	**77**	3	0	80	16	0	0	0	16	4	**72**	**1**	0	**77**	**173**
11:30 AM	**1**	0	0	0	**1**	0	63	7	0	70	**18**	0	0	0	**18**	4	61	0	0	65	154
11:45 AM	0	0	0	0	0	0	70	**22**	0	**92**	8	0	0	0	8	**6**	66	0	0	72	172
Total Volume	1	0	0	0	1	0	284	33	0	317	58	0	0	0	58	16	254	1	0	271	647
% App. Total	100	0	0	0		0	89.6	10.4	0		100	0	0	0		5.9	93.7	0.4	0		
PHF	.250	.000	.000	.000	.250	.000	.922	.375	.000	.861	.806	.000	.000	.000	.806	.667	.882	.250	.000	.880	.935



Silver State Traffic Data Collection, LLC

1819 Quarley Place
Henderson, NV 89014
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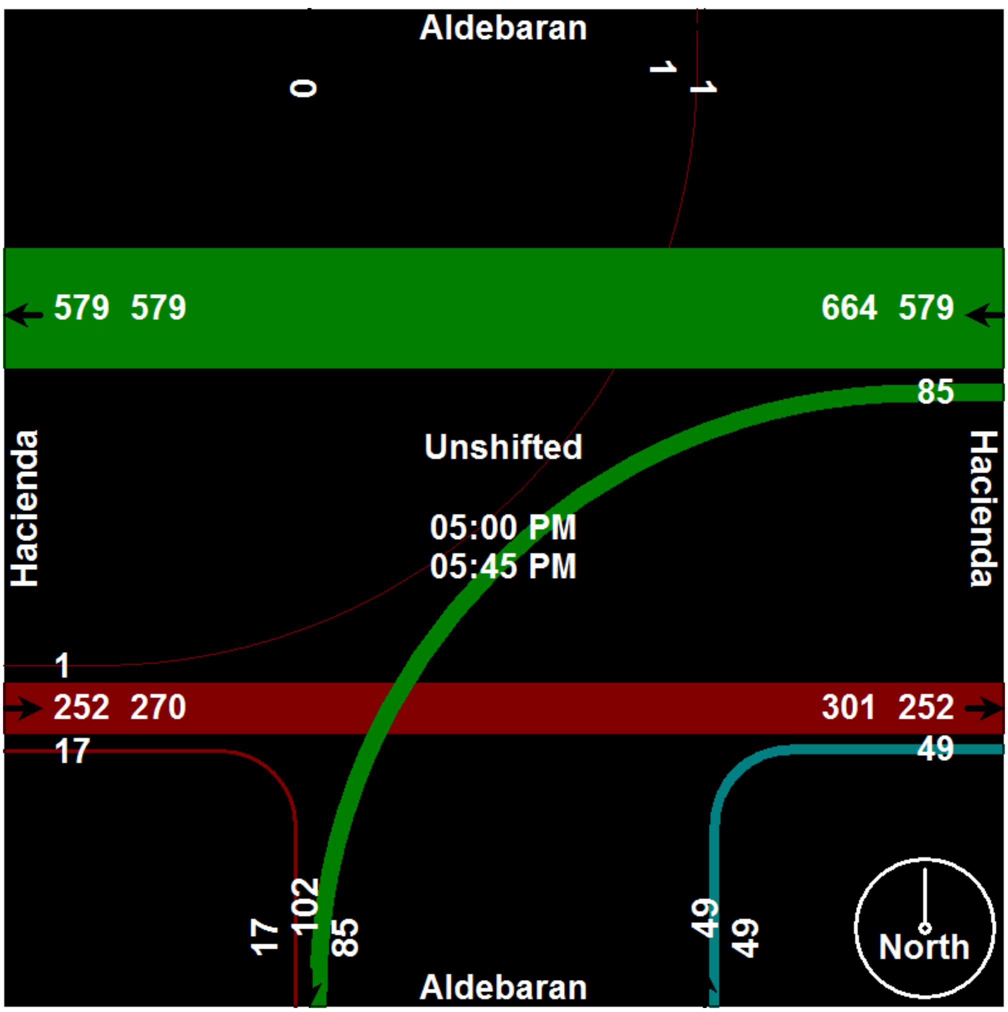
sstraffic@msn.com

File Name : Hacienda-Aldebaran
Site Code : 00000044
Start Date : 5/7/2017
Page No : 3

	Aldebaran Southbound					Hacienda Westbound					Aldebaran Northbound					Hacienda Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	0	0	0	0	0	145	23	0	168	8	0	0	0	8	4	68	0	0	72	248
05:15 PM	0	0	0	0	0	0	**162**	**24**	0	**186**	13	0	0	0	13	2	**72**	0	0	**74**	**273**
05:30 PM	0	0	0	0	0	0	151	24	0	175	13	0	0	0	13	3	66	**1**	0	70	258
05:45 PM	0	0	0	0	0	0	121	14	0	135	**15**	0	0	0	**15**	**8**	46	0	0	54	204
Total Volume	0	0	0	0	0	0	579	85	0	664	49	0	0	0	49	17	252	1	0	270	983
% App. Total	0	0	0	0		0	87.2	12.8	0		100	0	0	0		6.3	93.3	0.4	0		
PHF	.000	.000	.000	.000	.000	.000	.894	.885	.000	.892	.817	.000	.000	.000	.817	.531	.875	.250	.000	.912	.900



Silver State Traffic Data Collection, LLC

1819 Quarley Place
Henderson, NV 89014
702-898-1968
sstraffic@msn.com

File Name : Dean Martin-Connector Road
Site Code : 00000044
Start Date : 5/7/2017
Page No : 1

Groups Printed- Unshifted

	Dean Martin Southbound				**Dean Martin Northbound**				**Connector Road Eastbound**				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
11:00 AM	13	19	0	0	0	23	3	0	2	0	1	0	61
11:15 AM	7	29	0	0	0	21	9	0	4	0	3	0	73
11:30 AM	5	18	0	0	0	27	13	0	8	0	3	0	74
11:45 AM	3	29	0	0	0	27	5	0	17	0	11	0	92
Total	28	95	0	0	0	98	30	0	31	0	18	0	300
12:00 PM	10	37	0	0	0	27	6	0	14	0	7	0	101
12:15 PM	3	48	0	0	0	29	3	0	19	0	6	0	108
12:30 PM	2	17	0	0	0	37	8	0	5	0	8	0	77
12:45 PM	7	46	0	0	0	44	3	0	2	0	7	0	109
Total	22	148	0	0	0	137	20	0	40	0	28	0	395
*** BREAK ***													
04:00 PM	4	30	0	0	0	31	4	0	19	0	4	0	92
04:15 PM	2	38	0	0	0	32	11	0	14	0	4	0	101
04:30 PM	4	52	0	0	0	40	7	0	17	0	4	0	124
04:45 PM	5	36	0	0	0	36	1	0	14	0	6	0	98
Total	15	156	0	0	0	139	23	0	64	0	18	0	415
05:00 PM	4	26	0	0	0	30	4	0	18	0	9	0	91
05:15 PM	6	58	0	0	0	36	7	0	22	0	4	0	133
05:30 PM	8	28	0	0	0	27	5	0	21	0	6	0	95
05:45 PM	9	30	0	0	0	21	6	0	17	0	5	0	88
Total	27	142	0	0	0	114	22	0	78	0	24	0	407
Grand Total	92	541	0	0	0	488	95	0	213	0	88	0	1517
Apprch %	14.5	85.5	0	0	0	83.7	16.3	0	70.8	0	29.2	0	
Total %	6.1	35.7	0	0	0	32.2	6.3	0	14	0	5.8	0	

Silver State Traffic Data Collection, LLC

1819 Quarley Place
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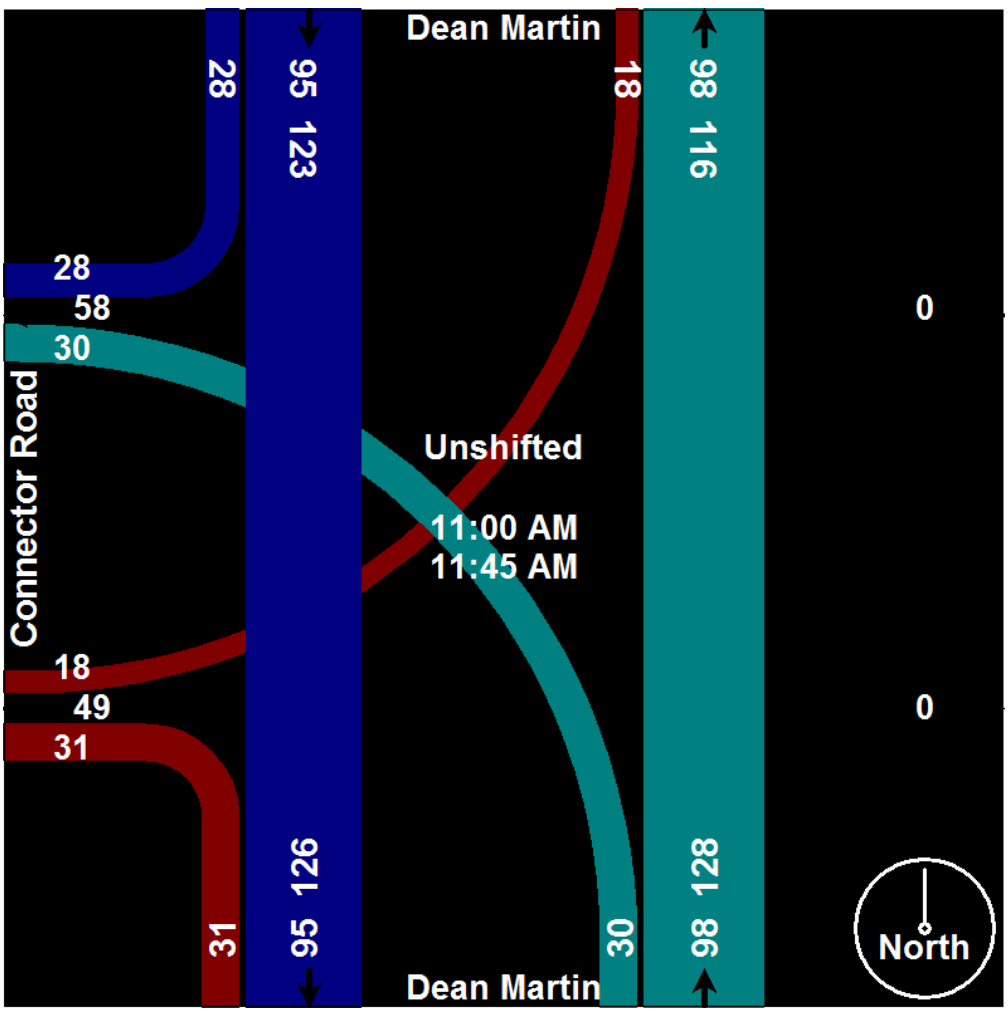
File Name : Dean Martin-Connector Road
Site Code : 00000044
Start Date : 5/7/2017
Page No : 2

	Dean Martin Southbound					Westbound	Dean Martin Northbound					Connector Road Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:00 AM																	
11:00 AM	**13**	19	0	0	32	0	0	23	3	0	26	2	0	1	0	3	61
11:15 AM	7	**29**	0	0	**36**	0	0	21	9	0	30	4	0	3	0	7	73
11:30 AM	5	18	0	0	23	0	0	**27**	**13**	0	**40**	8	0	3	0	11	74
11:45 AM	3	29	0	0	32	0	0	27	5	0	32	**17**	0	**11**	0	**28**	**92**
Total Volume	28	95	0	0	123	0	0	98	30	0	128	31	0	18	0	49	300
% App. Total	22.8	77.2	0	0			0	76.6	23.4	0		63.3	0	36.7	0		
PHF	.538	.819	.000	.000	.854	.000	.000	.907	.577	.000	.800	.456	.000	.409	.000	.438	.815



Silver State Traffic Data Collection, LLC

1819 Quarley Place
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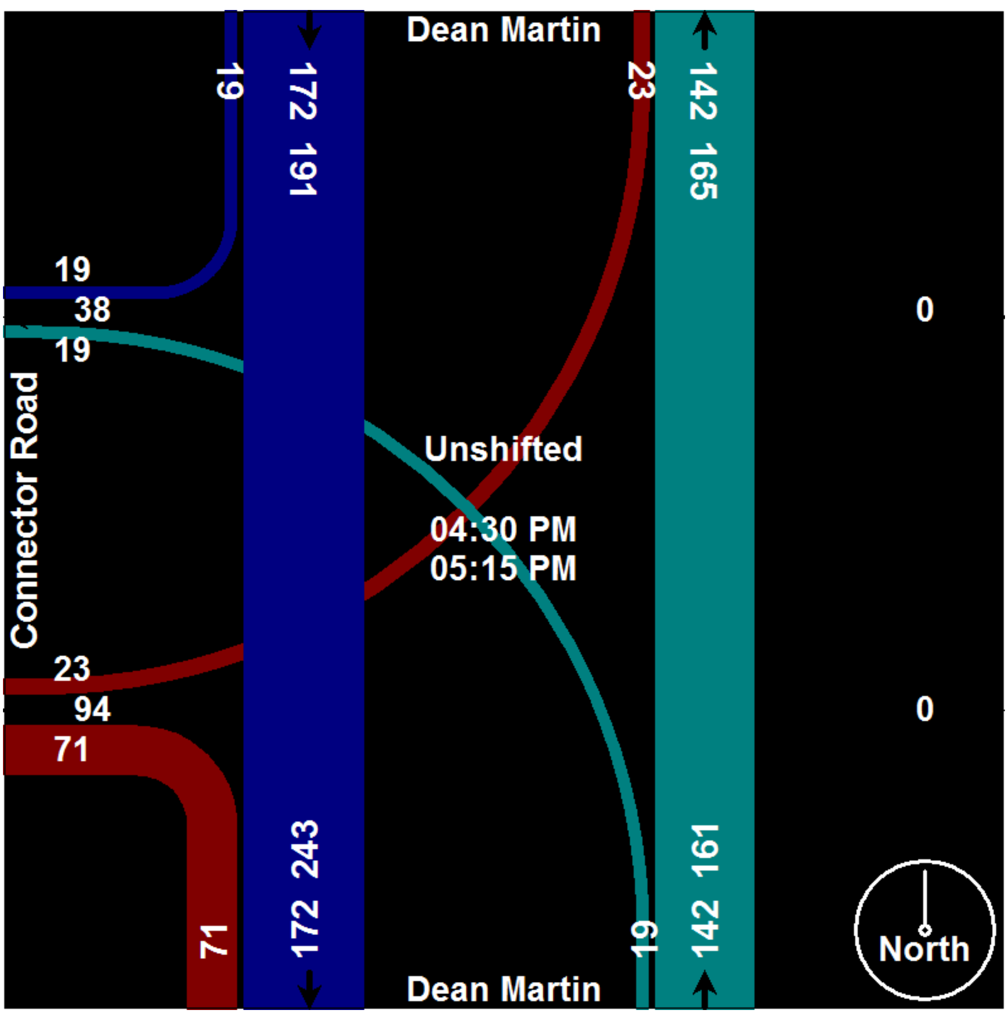
File Name : Dean Martin-Connector Road
Site Code : 00000044
Start Date : 5/7/2017
Page No : 3

	Dean Martin Southbound					Westbound	Dean Martin Northbound					Connector Road Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	4	52	0	0	56	0	0	**40**	**7**	0	**47**	17	0	4	0	21	124
04:45 PM	5	36	0	0	41	0	0	36	1	0	37	14	0	6	0	20	98
05:00 PM	4	26	0	0	30	0	0	30	4	0	34	18	0	**9**	0	**27**	91
05:15 PM	**6**	**58**	0	0	**64**	0	0	36	7	0	43	**22**	0	4	0	26	**133**
Total Volume	19	172	0	0	191	0	0	142	19	0	161	71	0	23	0	94	446
% App. Total	9.9	90.1	0	0			0	88.2	11.8	0		75.5	0	24.5	0		
PHF	.792	.741	.000	.000	.746	.000	.000	.888	.679	.000	.856	.807	.000	.639	.000	.870	.838



Silver State Traffic Data Collection, LLC
1819 Quarley Place
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File Name : Russell-Valley View
Site Code : 00000044
Start Date : 4/30/2017
Page No : 1

Groups Printed- Unshifted

	Valley View Southbound				Russell Westbound				Valley View Northbound				Russell Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
11:00 AM	7	9	9	0	7	74	12	0	18	23	13	0	9	73	6	0	260
11:15 AM	7	14	5	0	13	82	10	0	18	21	6	0	16	83	5	0	280
11:30 AM	5	11	5	0	11	68	8	0	21	18	9	0	10	76	3	0	245
11:45 AM	3	10	10	0	18	77	13	0	9	16	10	0	11	82	8	0	267
Total	22	44	29	0	49	301	43	0	66	78	38	0	46	314	22	0	1052
12:00 PM	1	15	13	0	14	94	19	0	18	27	9	0	17	81	3	0	311
12:15 PM	4	10	9	0	12	85	9	0	10	21	17	0	18	68	3	0	266
12:30 PM	6	13	11	0	8	79	19	0	21	18	20	0	14	58	5	0	272
12:45 PM	4	13	8	0	10	78	14	0	12	18	14	0	9	61	2	0	243
Total	15	51	41	0	44	336	61	0	61	84	60	0	58	268	13	0	1092
*** BREAK ***																	
04:00 PM	16	9	6	0	7	88	14	0	20	24	13	0	5	45	7	0	254
04:15 PM	6	19	6	0	10	84	4	0	13	23	12	0	12	64	0	0	253
04:30 PM	3	12	10	0	10	91	14	0	14	22	13	0	14	78	4	0	285
04:45 PM	8	21	5	0	11	106	14	0	21	19	13	0	11	52	2	0	283
Total	33	61	27	0	38	369	46	0	68	88	51	0	42	239	13	0	1075
05:00 PM	14	26	4	0	9	119	7	0	25	20	13	0	13	65	2	0	317
05:15 PM	8	19	7	0	6	112	13	0	15	23	18	0	11	70	4	0	306
05:30 PM	8	11	2	0	9	99	15	0	30	25	21	0	3	69	3	0	295
05:45 PM	9	18	7	0	3	105	11	0	20	16	21	0	12	77	3	0	302
Total	39	74	20	0	27	435	46	0	90	84	73	0	39	281	12	0	1220
Grand Total	109	230	117	0	158	1441	196	0	285	334	222	0	185	1102	60	0	4439
Apprch %	23.9	50.4	25.7	0	8.8	80.3	10.9	0	33.9	39.7	26.4	0	13.7	81.8	4.5	0	
Total %	2.5	5.2	2.6	0	3.6	32.5	4.4	0	6.4	7.5	5	0	4.2	24.8	1.4	0	

Silver State Traffic Data Collection, LLC

1819 Quarley Place
Henderson, Nevada 89014
702-217-1968
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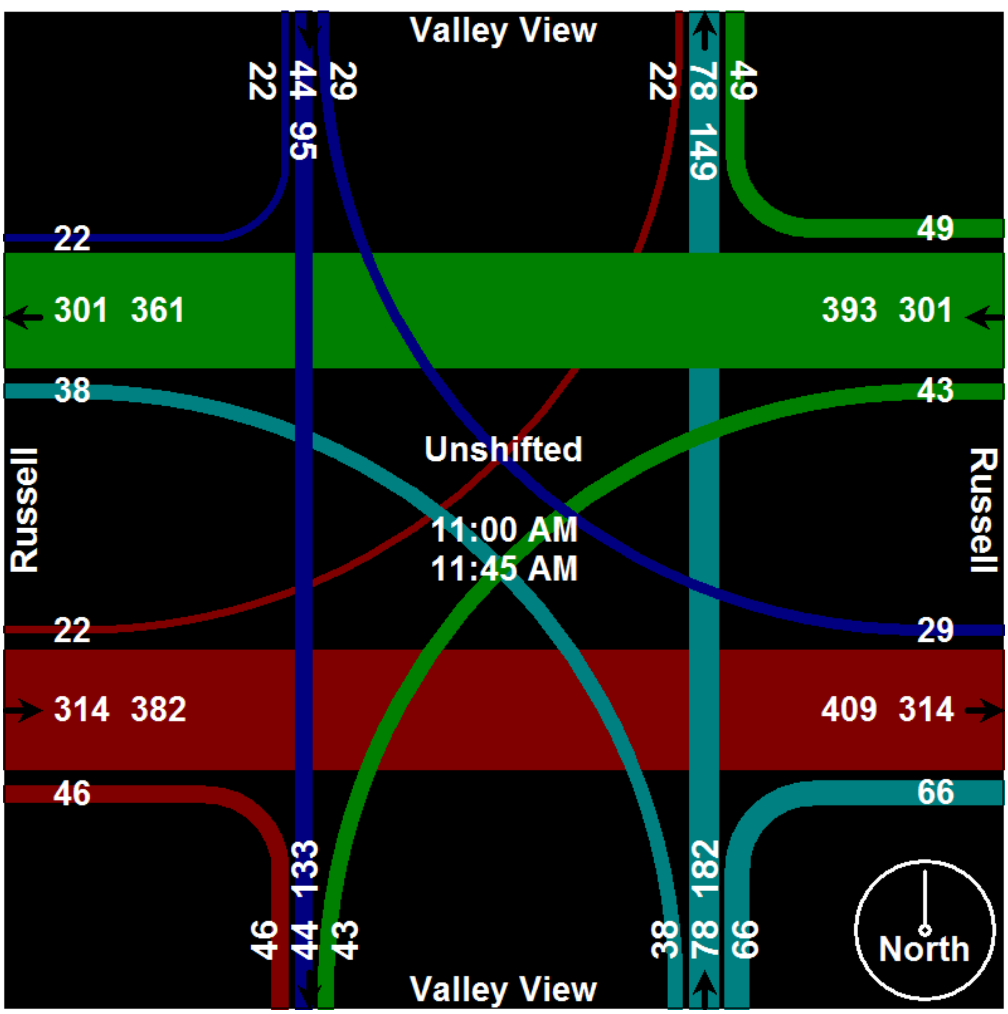
File Name : Russell-Valley View
Site Code : 00000044
Start Date : 4/30/2017
Page No : 2

	Valley View Southbound					Russell Westbound					Valley View Northbound					Russell Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:00 AM																					
11:00 AM	7	9	9	0	25	7	74	12	0	93	18	23	13	0	54	9	73	6	0	88	260
11:15 AM	7	14	5	0	26	13	82	10	0	105	18	21	6	0	45	16	83	5	0	104	280
11:30 AM	5	11	5	0	21	11	68	8	0	87	21	18	9	0	48	10	76	3	0	89	245
11:45 AM	3	10	10	0	23	18	77	13	0	108	9	16	10	0	35	11	82	8	0	101	267
Total Volume	22	44	29	0	95	49	301	43	0	393	66	78	38	0	182	46	314	22	0	382	1052
% App. Total	23.2	46.3	30.5	0		12.5	76.6	10.9	0		36.3	42.9	20.9	0		12	82.2	5.8	0		
PHF	.786	.786	.725	.000	.913	.681	.918	.827	.000	.910	.786	.848	.731	.000	.843	.719	.946	.688	.000	.918	.939



Silver State Traffic Data Collection, LLC

1819 Quarley Place
Henderson, Nevada 89014
702-217-1968
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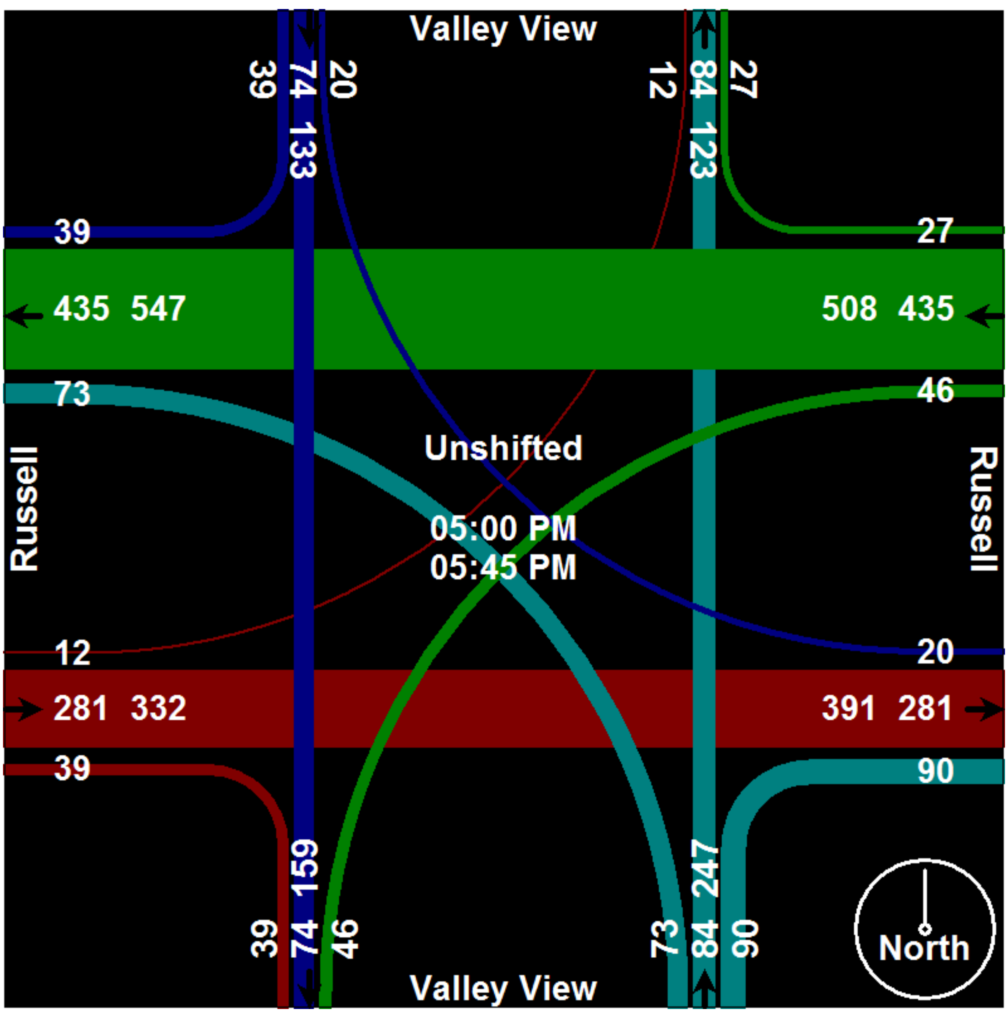
File Name : Russell-Valley View
Site Code : 00000044
Start Date : 4/30/2017
Page No : 3

	Valley View Southbound					Russell Westbound					Valley View Northbound					Russell Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	14	26	4	0	44	9	119	7	0	135	25	20	13	0	58	13	65	2	0	80	317
05:15 PM	8	19	7	0	34	6	112	13	0	131	15	23	18	0	56	11	70	4	0	85	306
05:30 PM	8	11	2	0	21	9	99	15	0	123	30	25	21	0	76	3	69	3	0	75	295
05:45 PM	9	18	7	0	34	3	105	11	0	119	20	16	21	0	57	12	77	3	0	92	302
Total Volume	39	74	20	0	133	27	435	46	0	508	90	84	73	0	247	39	281	12	0	332	1220
% App. Total	29.3	55.6	15	0		5.3	85.6	9.1	0		36.4	34	29.6	0		11.7	84.6	3.6	0		
PHF	.696	.712	.714	.000	.756	.750	.914	.767	.000	.941	.750	.840	.869	.000	.813	.750	.912	.750	.000	.902	.962



Silver State Traffic Data Collection, LLC

1819 Quarley Place
Henderson, Nevada 89014
702-217-1968
sstraffic@msn.com

File Name : Russell-Polaris
Site Code : 00004444
Start Date : 4/30/2017
Page No : 1

Groups Printed- Unshifted

	Polaris Southbound				Russell Westbound				Polaris Northbound				Russell Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
11:00 AM	1	1	28	0	11	83	11	0	6	3	4	0	2	103	3	0	256
11:15 AM	4	2	39	0	8	89	17	0	9	2	4	0	0	110	4	0	288
11:30 AM	4	2	22	0	11	88	20	0	13	0	5	0	3	112	1	0	281
11:45 AM	2	3	29	0	15	113	9	0	21	0	5	0	6	94	3	0	300
Total	11	8	118	0	45	373	57	0	49	5	18	0	11	419	11	0	1125
12:00 PM	4	1	19	0	14	110	14	0	10	1	2	0	0	113	3	0	291
12:15 PM	2	1	26	0	9	87	16	0	9	3	0	0	3	89	2	0	247
12:30 PM	4	3	15	0	8	84	6	0	10	2	5	0	3	86	2	0	228
12:45 PM	1	4	23	0	8	87	10	0	13	1	4	0	4	74	3	0	232
Total	11	9	83	0	39	368	46	0	42	7	11	0	10	362	10	0	998
*** BREAK ***																	
04:00 PM	6	2	19	0	12	83	6	0	8	8	4	0	4	64	8	0	224
04:15 PM	4	1	15	0	12	92	13	0	7	0	3	0	2	72	3	0	224
04:30 PM	4	4	20	0	8	99	8	0	11	1	5	0	3	109	4	0	276
04:45 PM	6	1	28	0	14	101	14	0	16	0	5	0	3	69	3	0	260
Total	20	8	82	0	46	375	41	0	42	9	17	0	12	314	18	0	984
05:00 PM	14	3	16	0	11	119	10	0	12	4	6	0	2	85	4	0	286
05:15 PM	11	0	18	0	6	111	11	0	10	1	3	0	1	96	6	0	274
05:30 PM	9	3	17	0	7	94	9	0	12	0	4	0	0	104	3	0	262
05:45 PM	3	3	11	0	10	118	8	0	17	2	2	0	0	90	3	0	267
Total	37	9	62	0	34	442	38	0	51	7	15	0	3	375	16	0	1089
Grand Total	79	34	345	0	164	1558	182	0	184	28	61	0	36	1470	55	0	4196
Apprch %	17.2	7.4	75.3	0	8.6	81.8	9.6	0	67.4	10.3	22.3	0	2.3	94.2	3.5	0	
Total %	1.9	0.8	8.2	0	3.9	37.1	4.3	0	4.4	0.7	1.5	0	0.9	35	1.3	0	

Silver State Traffic Data Collection, LLC

1819 Quarley Place
Henderson, Nevada 89014
702-217-1968
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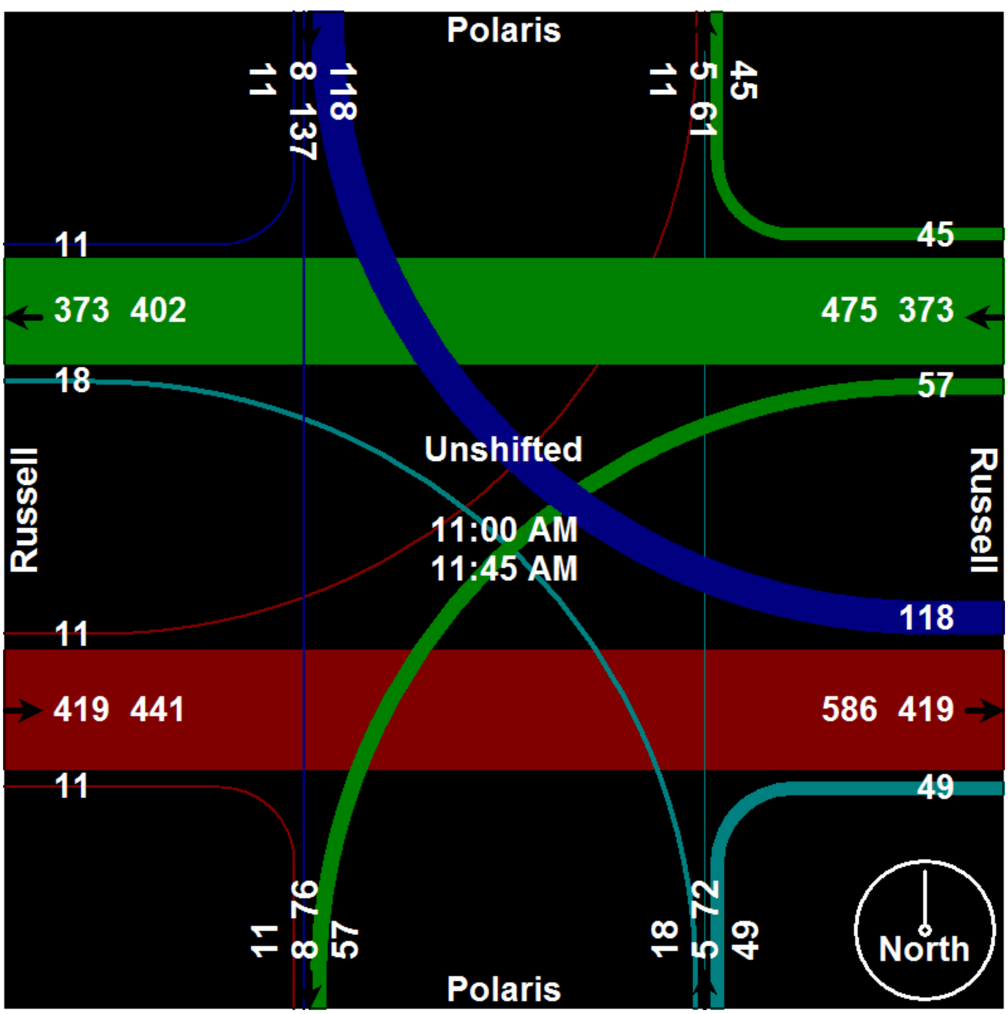
File Name : Russell-Polaris
Site Code : 00004444
Start Date : 4/30/2017

	Polaris Southbound					Russell Westbound					Polaris Northbound					Russell Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:00 AM																					
11:00 AM	1	1	28	0	30	11	83	11	0	105	6	3	4	0	13	2	103	3	0	108	256
11:15 AM	4	2	39	0	45	8	89	17	0	114	9	2	4	0	15	0	110	4	0	114	288
11:30 AM	4	2	22	0	28	11	88	20	0	119	13	0	5	0	18	3	112	1	0	116	281
11:45 AM	2	3	29	0	34	15	113	9	0	137	21	0	5	0	26	6	94	3	0	103	300
Total Volume	11	8	118	0	137	45	373	57	0	475	49	5	18	0	72	11	419	11	0	441	1125
% App. Total	8	5.8	86.1	0		9.5	78.5	12	0		68.1	6.9	25	0		2.5	95	2.5	0		
PHF	.688	.667	.756	.000	.761	.750	.825	.713	.000	.867	.583	.417	.900	.000	.692	.458	.935	.688	.000	.950	.938

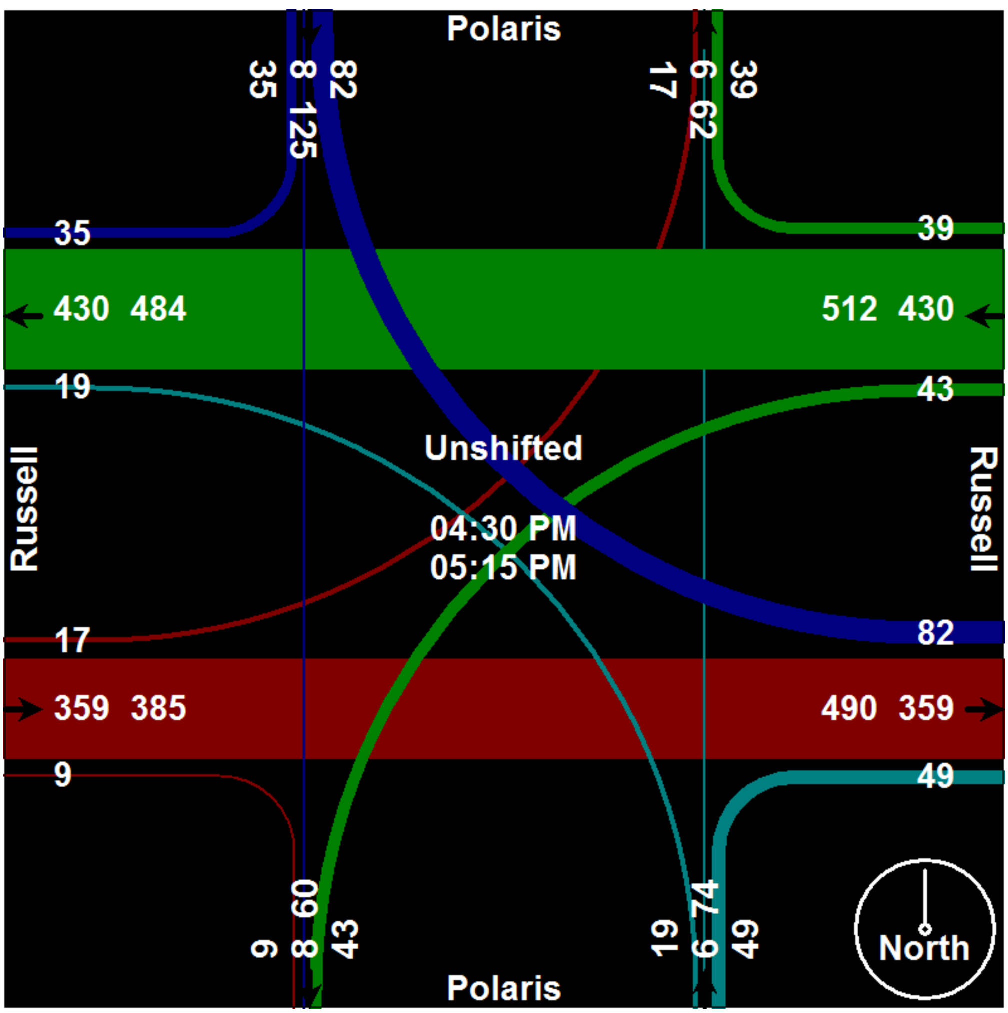


Silver State Traffic Data Collection, LLC

1819 Quarley Place
Henderson, Nevada 89014
702-217-1968
sstraffic@msn.com

File Name : Russell-Polaris
Site Code : 00004444
Start Date : 4/30/2017

	Polaris Southbound					Russell Westbound					Polaris Northbound					Russell Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	4	4	20	0	28	8	99	8	0	115	11	1	5	0	17	3	109	4	0	116	276
04:45 PM	6	1	28	0	35	14	101	14	0	129	16	0	5	0	21	3	69	3	0	75	260
05:00 PM	14	3	16	0	33	11	119	10	0	140	12	4	6	0	22	2	85	4	0	91	286
05:15 PM	11	0	18	0	29	6	111	11	0	128	10	1	3	0	14	1	96	6	0	103	274
Total Volume	35	8	82	0	125	39	430	43	0	512	49	6	19	0	74	9	359	17	0	385	1096
% App. Total	28	6.4	65.6	0		7.6	84	8.4	0		66.2	8.1	25.7	0		2.3	93.2	4.4	0		
PHF	.625	.500	.732	.000	.893	.696	.903	.768	.000	.914	.766	.375	.792	.000	.841	.750	.823	.708	.000	.830	.958



Silver State Traffic Data Collection, LLC
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Henderson, Nevada 89014
702-217-1968
sstraffic@msn.com

File Name : Russell-SB Ramps I-15
Site Code : 00000000
Start Date : 4/30/2017
Page No : 1

Groups Printed- Unshifted

	SB I-15 Ramps Southbound				Russell Westbound				SB I-15 Ramps Northbound				Russell Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
11:00 AM	28	2	71	0	0	97	141	0	0	0	0	0	40	100	0	0	479
11:15 AM	31	4	63	0	0	104	149	0	0	0	0	0	58	116	0	0	525
11:30 AM	52	1	66	0	0	81	148	0	0	0	0	0	40	124	0	0	512
11:45 AM	46	3	76	0	0	118	161	0	0	0	0	0	45	101	0	0	550
Total	157	10	276	0	0	400	599	0	0	0	0	0	183	441	0	0	2066
12:00 PM	40	3	88	0	0	132	170	0	0	0	0	0	39	114	0	0	586
12:15 PM	31	3	83	0	0	99	150	0	0	0	0	0	37	90	0	0	493
12:30 PM	43	3	113	0	0	66	91	0	0	0	0	0	42	82	0	0	440
12:45 PM	50	3	100	0	0	69	82	0	0	0	0	0	30	67	0	0	401
Total	164	12	384	0	0	366	493	0	0	0	0	0	148	353	0	0	1920
*** BREAK ***																	
04:00 PM	40	2	63	0	0	80	99	0	0	0	0	0	29	60	0	0	373
04:15 PM	36	2	73	0	0	96	122	0	0	0	0	0	30	78	0	0	437
04:30 PM	54	6	64	0	0	88	131	0	0	0	0	0	29	121	0	0	493
04:45 PM	51	1	91	0	0	100	124	0	0	0	0	0	41	59	0	0	467
Total	181	11	291	0	0	364	476	0	0	0	0	0	129	318	0	0	1770
05:00 PM	31	3	83	0	0	135	135	0	0	0	0	0	23	78	0	0	488
05:15 PM	49	3	52	0	0	85	152	0	0	0	0	0	27	99	0	0	467
05:30 PM	38	5	68	0	0	87	134	0	0	0	0	0	28	118	0	0	478
05:45 PM	34	1	67	0	0	124	150	0	0	0	0	0	20	99	0	0	495
Total	152	12	270	0	0	431	571	0	0	0	0	0	98	394	0	0	1928
Grand Total	654	45	1221	0	0	1561	2139	0	0	0	0	0	558	1506	0	0	7684
Apprch %	34.1	2.3	63.6	0	0	42.2	57.8	0	0	0	0	0	27	73	0	0	
Total %	8.5	0.6	15.9	0	0	20.3	27.8	0	0	0	0	0	7.3	19.6	0	0	

Silver State Traffic Data Collection, LLC
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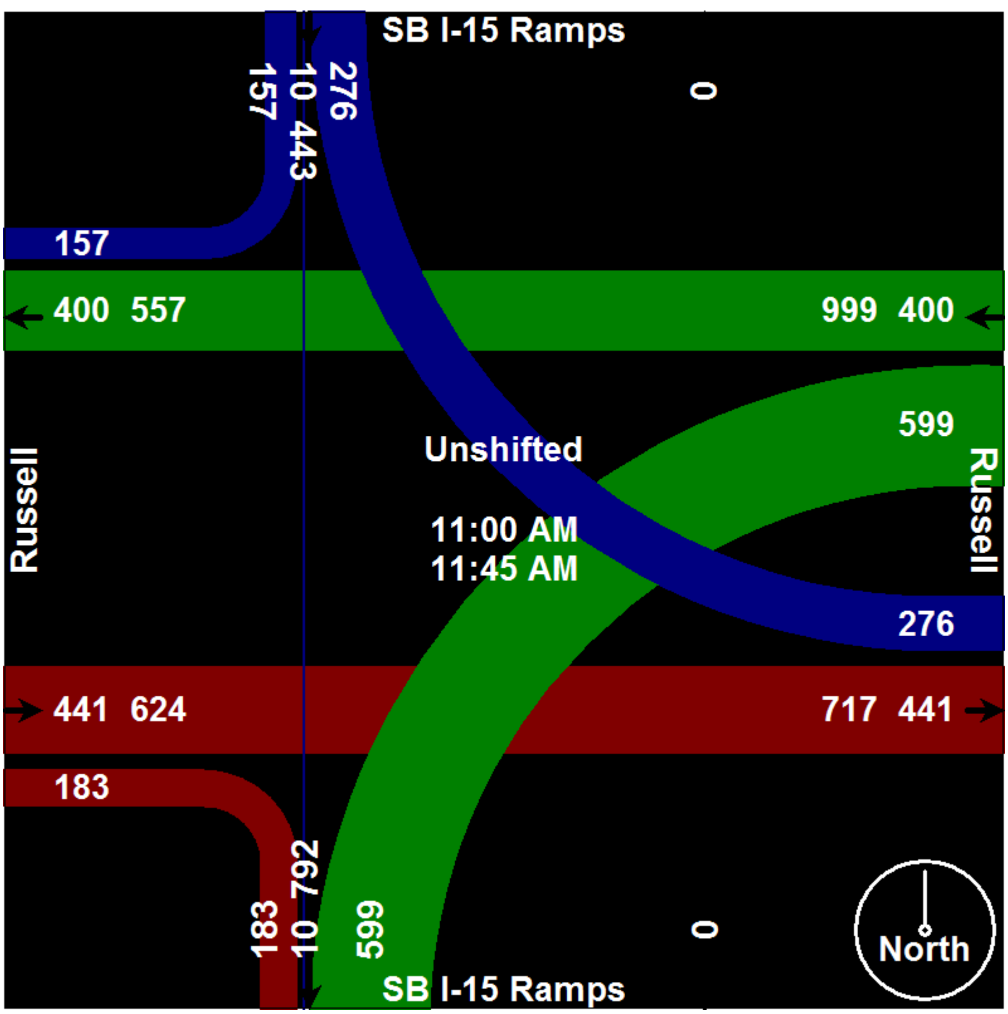
File Name : Russell-SB Ramps I-15
Site Code : 00000000
Start Date : 4/30/2017

	SB I-15 Ramps Southbound					Russell Westbound					SB I-15 Ramps Northbound					Russell Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:00 AM																					
11:00 AM	28	2	71	0	101	0	97	141	0	238	0	0	0	0	0	40	100	0	0	140	479
11:15 AM	31	4	63	0	98	0	104	149	0	253	0	0	0	0	0	58	116	0	0	174	525
11:30 AM	52	1	66	0	119	0	81	148	0	229	0	0	0	0	0	40	124	0	0	164	512
11:45 AM	46	3	76	0	125	0	118	161	0	279	0	0	0	0	0	45	101	0	0	146	550
Total Volume	157	10	276	0	443	0	400	599	0	999	0	0	0	0	0	183	441	0	0	624	2066
% App. Total	35.4	2.3	62.3	0		0	40	60	0		0	0	0	0		29.3	70.7	0	0		
PHF	.755	.625	.908	.000	.886	.000	.847	.930	.000	.895	.000	.000	.000	.000	.000	.789	.889	.000	.000	.897	.939



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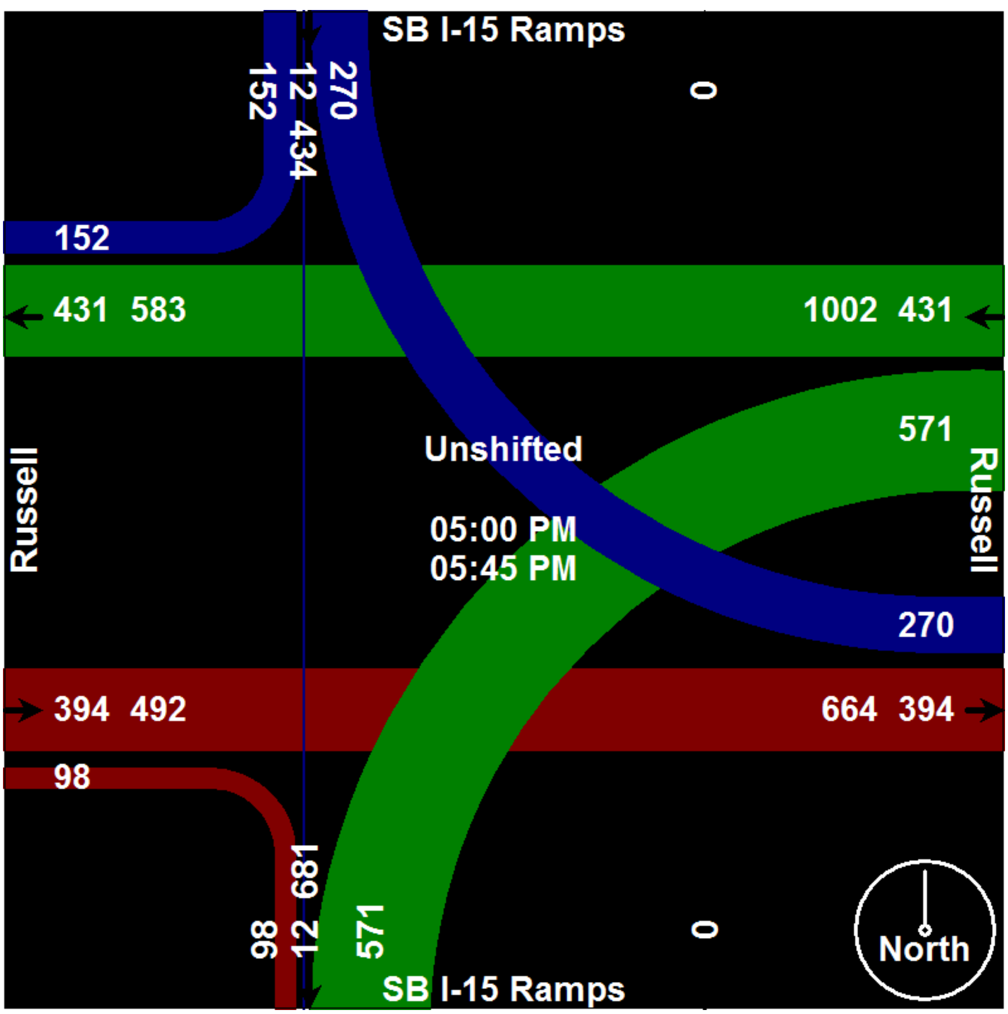
File Name : Russell-SB Ramps I-15
Site Code : 00000000
Start Date : 4/30/2017
Page No : 3

	SB I-15 Ramps Southbound					Russell Westbound					SB I-15 Ramps Northbound					Russell Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	31	3	83	0	117	0	135	135	0	270	0	0	0	0	0	23	78	0	0	101	488
05:15 PM	49	3	52	0	104	0	85	152	0	237	0	0	0	0	0	27	99	0	0	126	467
05:30 PM	38	5	68	0	111	0	87	134	0	221	0	0	0	0	0	28	118	0	0	146	478
05:45 PM	34	1	67	0	102	0	124	150	0	274	0	0	0	0	0	20	99	0	0	119	495
Total Volume	152	12	270	0	434	0	431	571	0	1002	0	0	0	0	0	98	394	0	0	492	1928
% App. Total	35	2.8	62.2	0		0	43	57	0		0	0	0	0		19.9	80.1	0	0		
PHF	.776	.600	.813	.000	.927	.000	.798	.939	.000	.914	.000	.000	.000	.000	.000	.875	.835	.000	.000	.842	.974



Appendix E: Level of Service Analysis

LEVEL OF SERVICE ANALYSIS

The study area key intersections LOS were analyzed using existing turning movement volumes. The existing turning movement volumes include non-typical AM and PM peak volumes. The intersections were adjusted for weekday AM and PM peak hour conditions. Of the 20 study intersections only 10 had historical turning movement counts.

1.1. Analysis Methodology

Key District study area intersections were analyzed based on average total delay for signalized and unsignalized intersections presented in the Transportation Research Board's (TRB) "Highway Capacity Manual" Sixth Edition. Under the unsignalized analysis, the LOS for a two-way stop controlled intersection is determined by the computed or measured control delay and is defined for each minor movement. LOS for a two-way stop-controlled intersection is not defined for the intersection as a whole. LOS for a signalized or four-way stop controlled intersection is defined for the intersection as a whole. **Table 1** shows the definition of LOS for intersections.

Table 1 – Level of Service Definitions

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

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

Synchro 10 Traffic Impact Analysis Software was used to analyze the study area intersections for average total delays. Synchro 10 utilizes the Highway Capacity Manual (HCM) methodology to analyze intersection delay and LOS.

1.2. Level of Service Analysis

The preferred FAST cycle length of 140-seconds was used in the analysis. Based on the LOS analysis, all key Stadium District intersections were found to be operating at acceptable D or better LOS, except for the intersections of Interstate 15/Tropicana Avenue, Hacienda Avenue/Polaris Avenue, during the selected AM and PM peak hour under the existing 2019 conditions. **Table 2** summarize the LOS results.

Table 2 – 2019 Operational Analysis LOS Results

Intersection Number	Intersection	Existing AM Peak Hour Delay (s) (LOS)	Existing PM Peak Hour Delay (s) (LOS)	2019 Adjusted AM Peak Hour Delay (s) (LOS)	2019 Adjusted PM Peak Hour Delay (s) (LOS)
1	**Tropicana Avenue and Valley View Boulevard**				
	Signalized	12.5 (B)	13.5 (B)	13.1 (B)	14.4 (B)
2	**Tropicana Avenue and Dean Martin Drive**				
	Signalized	16.9 (B)	5.9 (A)	47.8 (D)	7.6 (A)
4	**Interstate 15 SB Ramp and Tropicana Avenue**				
	Signalized	49.4 (D)	41.5 (D)	69.8 (E)	60.4 (E)
5	**Hacienda Avenue and Valley View Boulevard**				
	Signalized	8.9 (A)	9.7 (A)	9.0 (A)	9.9 (A)
6	**Hacienda Avenue and Polaris Avenue**				
	Two-Way Stop Control				
	Northbound	12.1 (B)	13.2 (A)	93.4 (F)	355.5 (F)
	Southbound Left	13.1 (B)	22.2 (C)	25.5 (D)	169.3 (F)
	Eastbound Left	7.6 (A)	8.5 (A)	7.8 (A)	9.9 (A)
	Westbound Left	8.0 (A)	8.0 (A)	9.3 (A)	8.6 (A)
7	**Hacienda Avenue and Aldebaran Avenue**				
	Two-Way Stop Control				
	Northbound Right	9.4 (A)	9.4 (A)	11.3 (B)	10.2 (B)
	Southbound Right	9.2 (A)	0.0 (A)	9.2 (A)	12.1 (B)
	Eastbound Left/Through/Right	7.9 (A)	8.8 (A)	7.9 (A)	10.3 (B)
	Westbound Left/Through/Right	7.9 (A)	8.1 (A)	9.2 (A)	8.8 (A)
8	**Dean Martin Drive and Connector Road**				
	Two-Way Stop Control				
	Northbound Left	7.5 (A)	7.7 (A)	7.8 (A)	8.5 (A)
	Eastbound Left	9.5 (A)	9.9 (A)	11.1 (B)	15.3 (C)
9	**Valley View Boulevard and Russell Road**				
	Signalized	9.0 (A)	9.1 (A)	9.1 (A)	9.3 (A)
10	**Russell Road and Polaris Avenue**				
	Signalized	6.9 (A)	6.5 (A)	14.5 (B)	13.3 (B)
11	**Interstate 15 SB Ramp and Russell Road**				
	Signalized	11.1 (B)	10.3 (B)	13.0 (B)	11.3 (B)

* LOS for a two-way stop-controlled intersection is not defined for the intersection as a whole as is it for a signalized intersection.

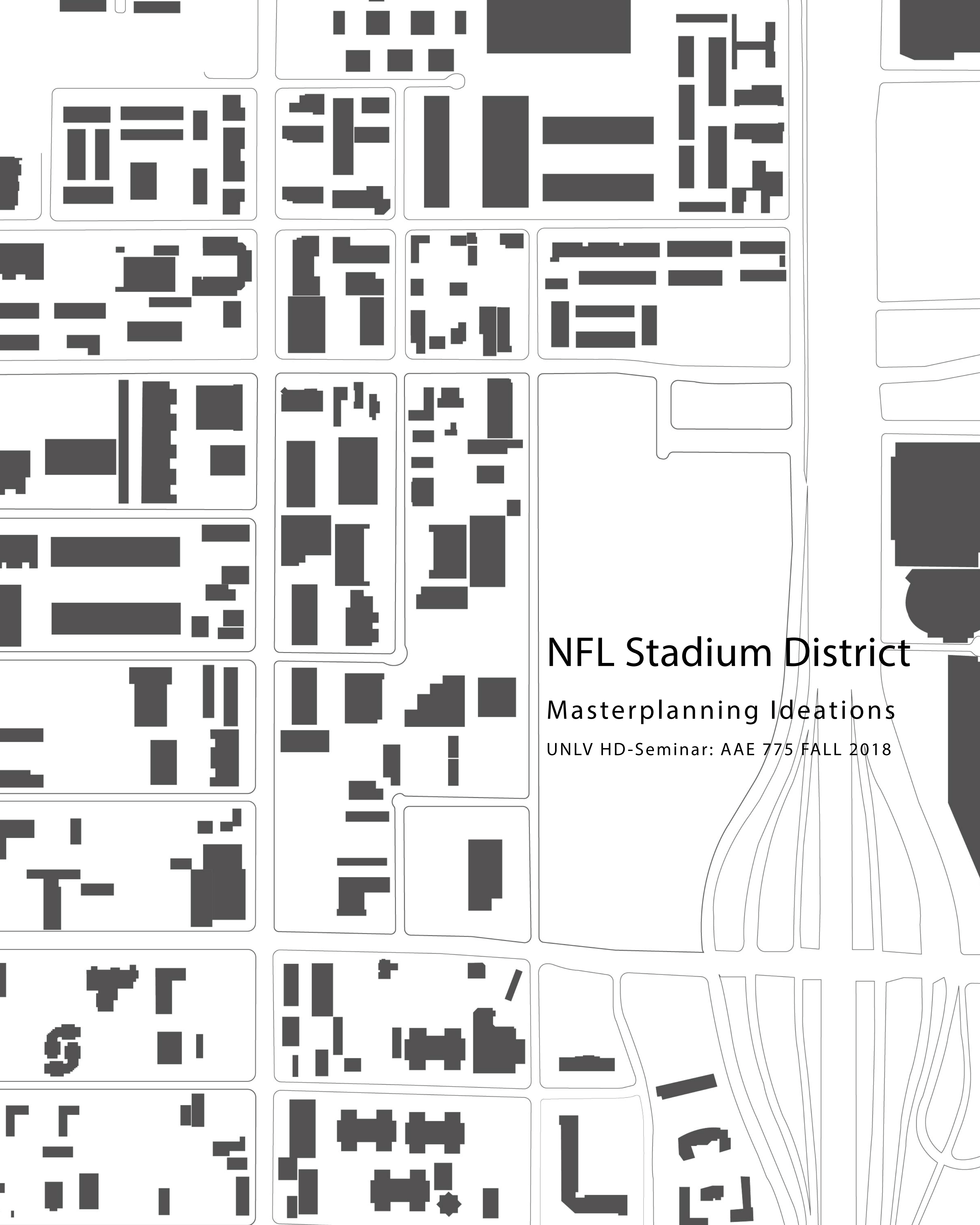
APPENDIX C

UNLV Study - NFL Stadium Master Plan
a semester-long prescedent study, existing conditions report and design recommendations completed by Glenn Nowak's Hospitality Design class

NFL Stadium District

Masterplanning Ideations

UNLV HD-Seminar: AAE 775 FALL 2018



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Forward Page

With the construction of the NFL Stadium underway in Las Vegas, the effect of this large-scale sports/entertainment/tourism destination is likely to have widespread impacts on development surrounding the site in all directions. As much of the land surrounding the stadium is comprised of private property with various zoning, conversations amongst community members: residents, business owners, public officials, and other stakeholders may seek information on possible highest and best use of the areas near the stadium. As many individual design and construction projects are expected to gradually transform the urban fabric in and around the stadium district, the opportunity to support the cohesion of independent developments for the betterment of pedestrian experience, traffic flow, entire neighborhoods' sense of community, and the identity of the city is at the heart of this design investigation.

UNLV SoA | HD Seminar
College of Fine Arts
University of Nevada, Las Vegas
4505 S Maryland Parkway
Las Vegas, NV 89145

hd.sites.unlv.edu

Methodology

Three Phases

Phase one of the design research process includes case studies of comparable projects and the lessons learned from previous developments. An inventory of current site conditions and a site analysis is conducted to identify potential strengths, weaknesses, opportunities, and threats. Schematic designs informed by the case studies and site analysis is conceptualized and illustrated as a means of starting conversations with community stakeholders about the possibilities of the evolving district.

Phase two consists of a design charrette. To synthesize the innumerable interests of individual community stakeholders into representations of aspirational places to live, work, and play, the design research group serves as a neutral assimilator of recommendations, concerns, and wishes brought forth in a public forum for input on the stadium district. Drawings translate these community conversations into visualizations of smart growth… architectural and urban development greater than the sum of its parts (addressing economic, environmental, and social sustainability).

Phase three refines the outcomes of the charrette. Site plans and perspective renderings are revised based on consultant feedback from areas including but not limited to public transit and land planning. Final graphics are produced for exhibition and public comment. This summarizing report is intendent to accompany any exhibition/ presentation.

Precedent Studies

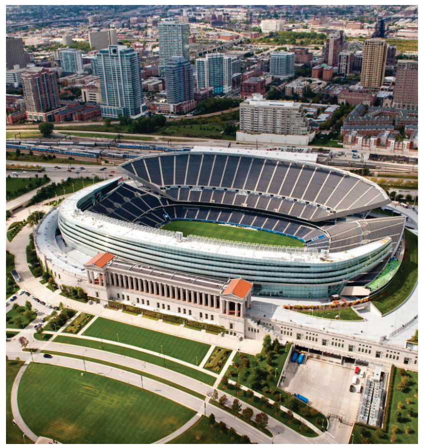
FAILING EXAMPLES

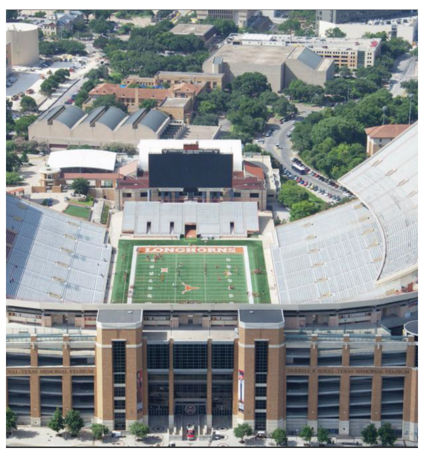
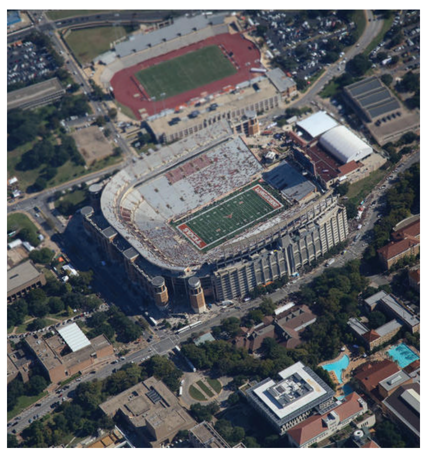
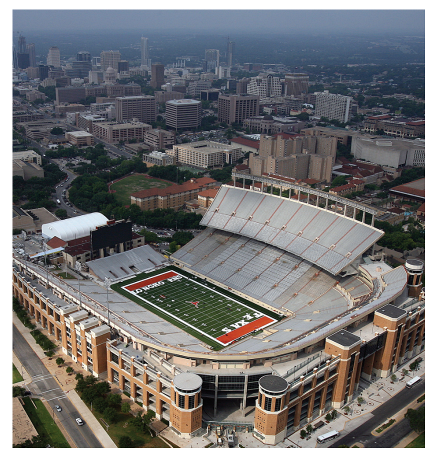
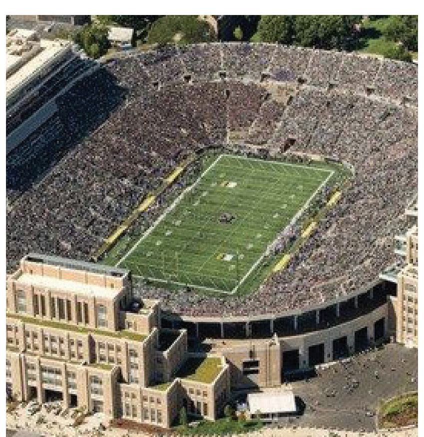
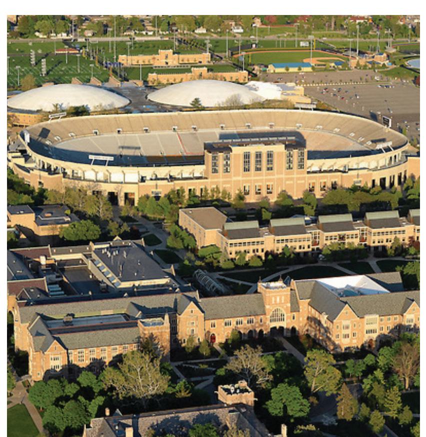
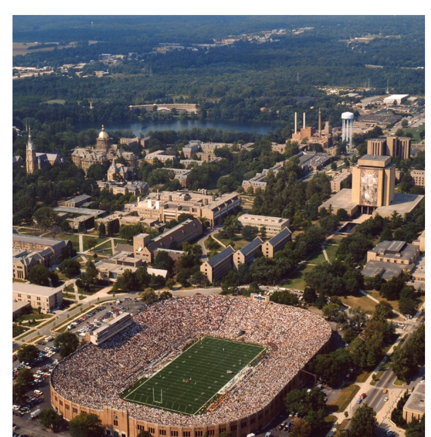
Stadiums once lauded as state of the art (facing page - top to bottom: Silverdome, SDCCU, and Oakland Coliseum), are among those being abandoned by their teams and/or costing cities large sums of money. To avoid repeating past mistakes, the following case studies look for the relationships between stadia performance and the amenities designed into the surrounding areas.

Megastructures developed in districts comprised primarily of surface parking, low-density commercial or industrial zones, and devoid of mixed-use entertainment have been seen to fail.

Precedent Studies

SUSTAINING EXAMPLES



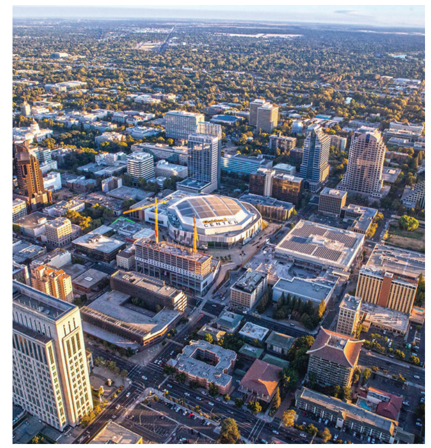
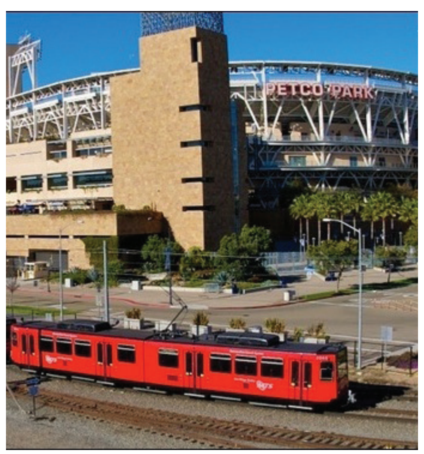
Stadiums that hold historic significance and have evolved with their surrounding community (facing page - top to bottom: Soldier Field, Notre Dame Stadium, University of Texas at Austin), maintain decades-long traditions. In Las Vegas, a city that continuously reinvents itself, merely sustainting the status quo is not part of our vernacular.

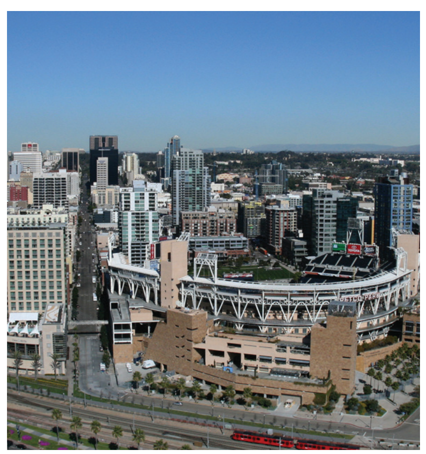
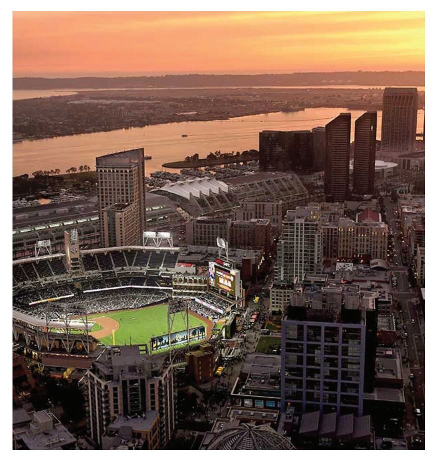
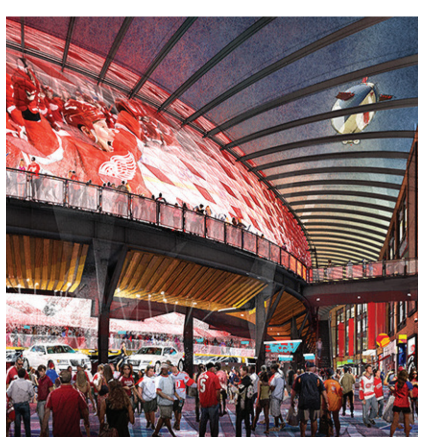
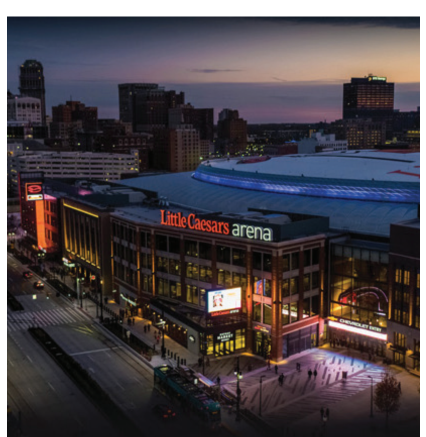
Stadiums and their immediate surroundings that offer more pedestrian opportunities for pre- and post-game activities create larger game-day impact.

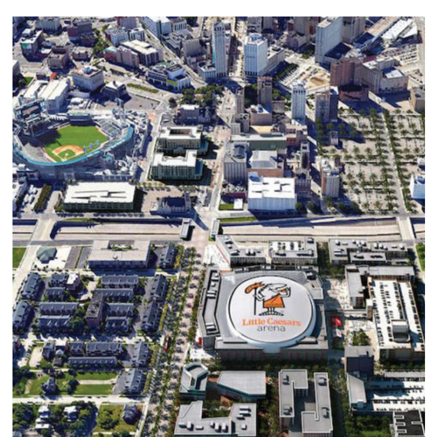
Precedent Studies

THRIVING EXAMPLES



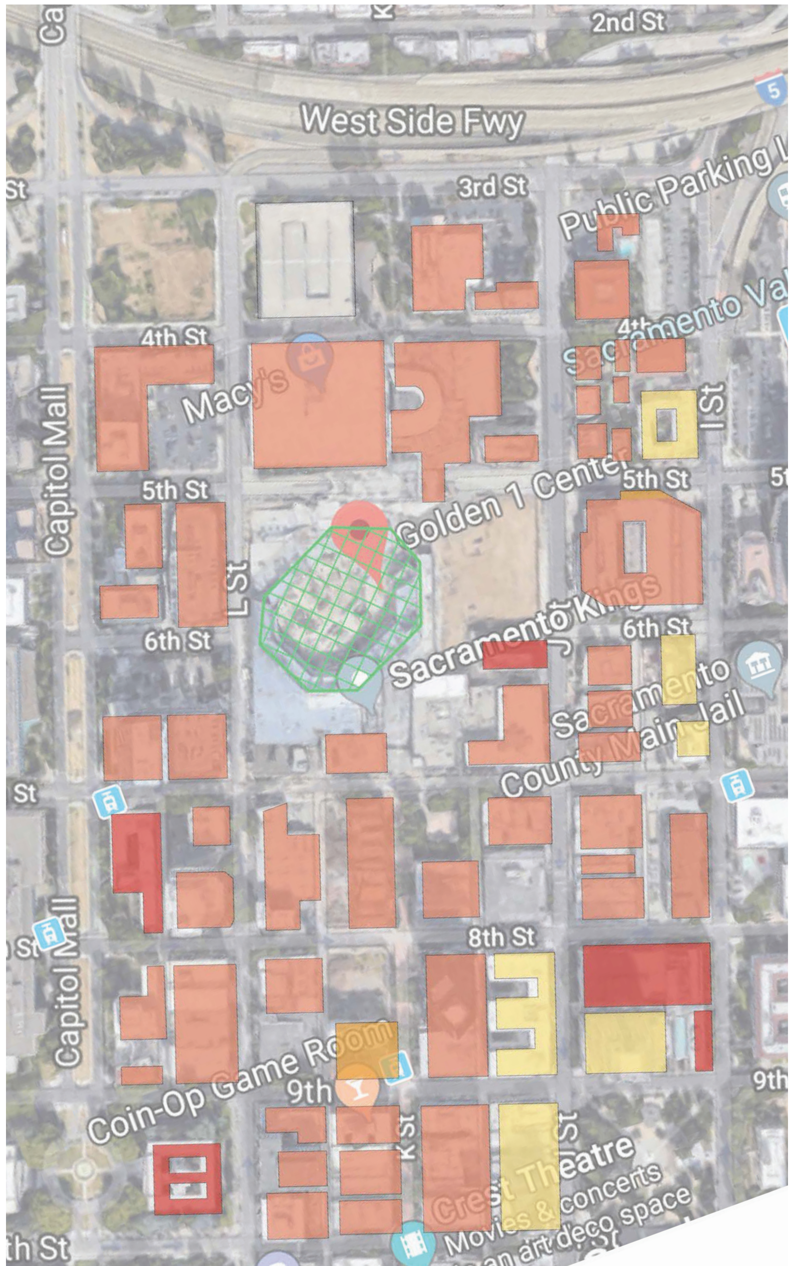







Emerging success stories show a pattern of treating stadia as extensions of their surrounding contexts (facing page - top to bottom: PetCo Park, Golden 1 Center, Little Casears Arena). Within a ten-minute walk from the stadium, most event attendees are absorbed into other leisure destinations. As part of the entertainment capital of the world, the area around the Las Vegas Stadium should be an extension of our world-class city.

Entertainment districts anchored by a stadium and a density of local residents with mixed use destinations throughout multiply the effects of game-day throughout the entire year.

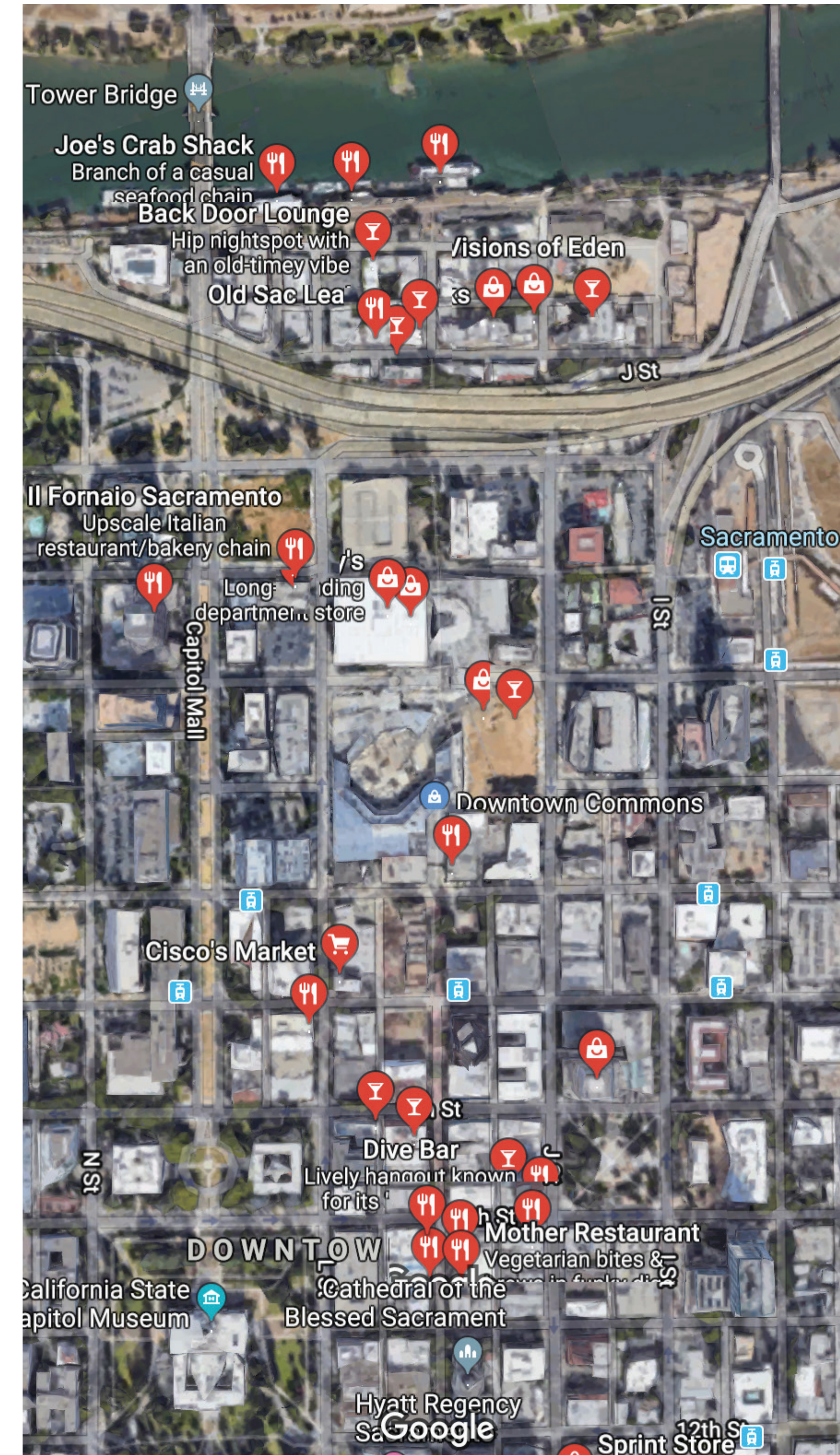
Golden 1 Center



Residential
Public Transit
Commercial
Government/ Public

District Inventory

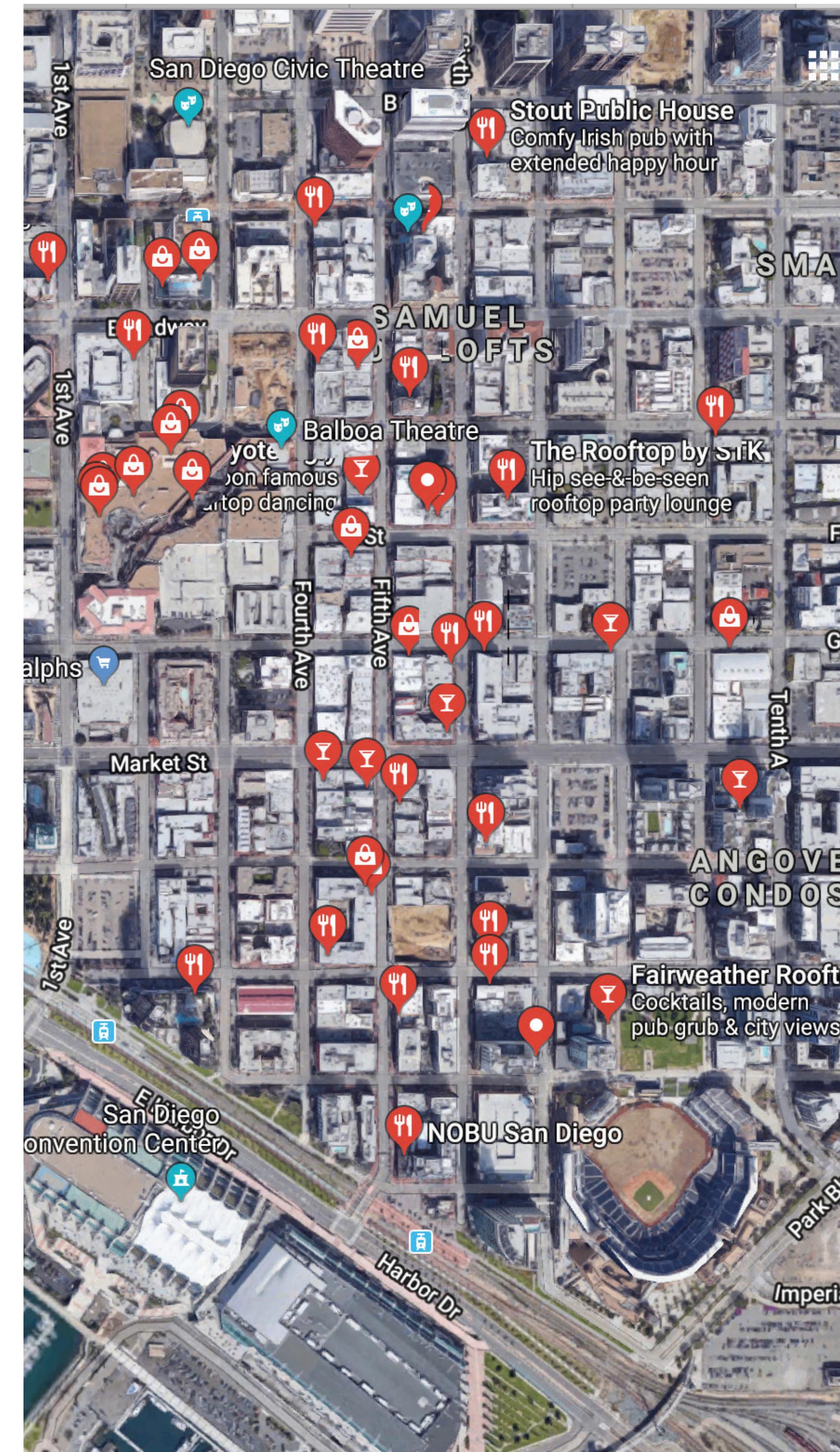
By documenting successful districts' amenities, a target quantity and quality of features begins to emerge. Commercial entertainment establishments like bars and restaurants add to the pre- and post-game impacts of the stadium. Retail expands the variety of activities available. Business park development provides additional parking opportunities on weekends, and mixed-use with high density residential maintains a critical mass of people to sustain the local businesses between game days.



PetCo Park

District Inventory

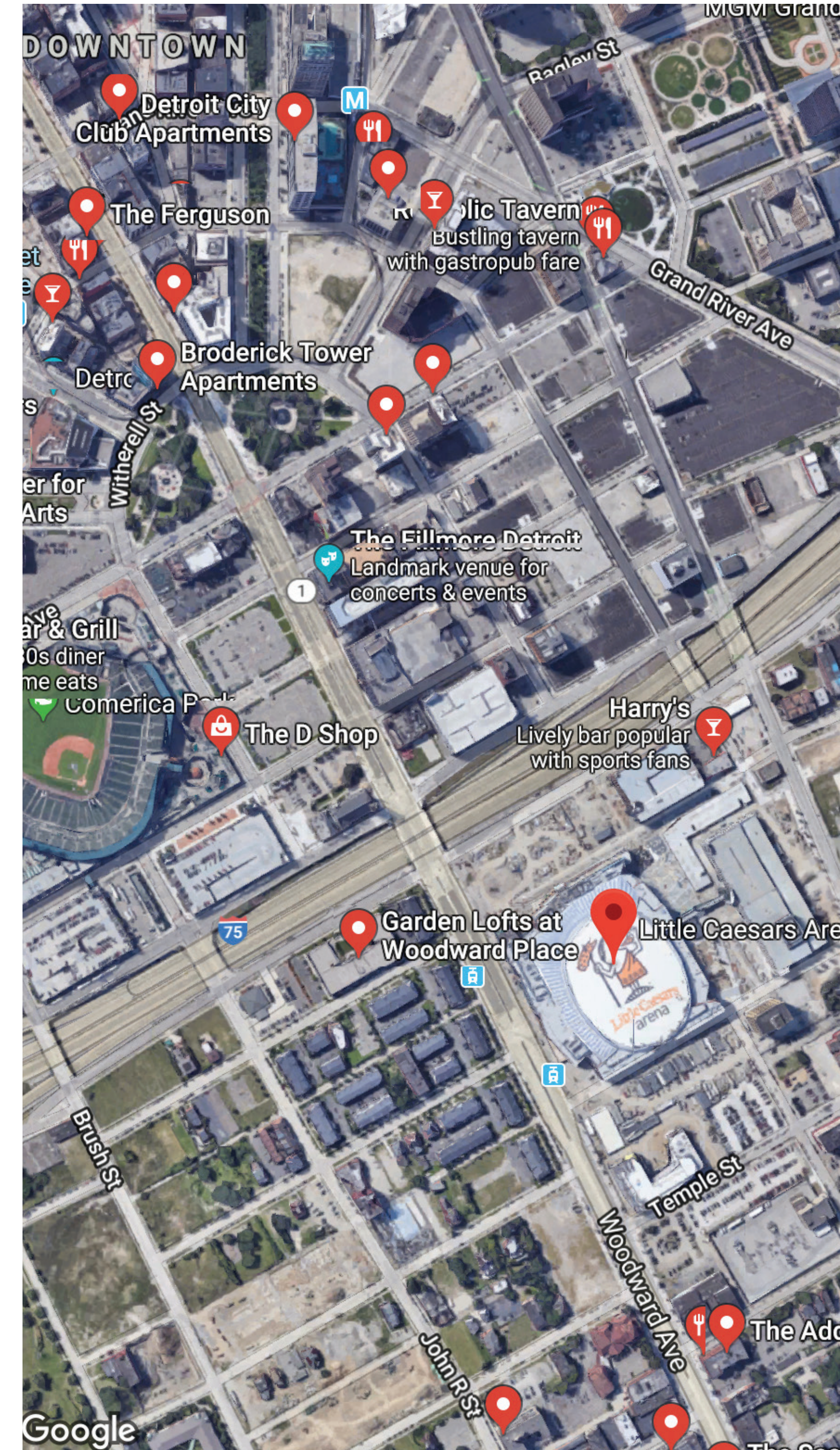
Even when there is not a game in the stadium, the surrounding area attracts diverse audiences from the local residents and workfoce to visitors. With hundreds of living units per acre (14,000 district residents), approximately twenty bars, dozens of eateries, and countless shopping opportunities, the Gaslamp Quarter emerged as a destination in its own right through a process of urban renewal in the decade leading up to the opening of Petco Park, which in turn has contributed to the success of the stadium.



Little Cesars Arena

District Inventory

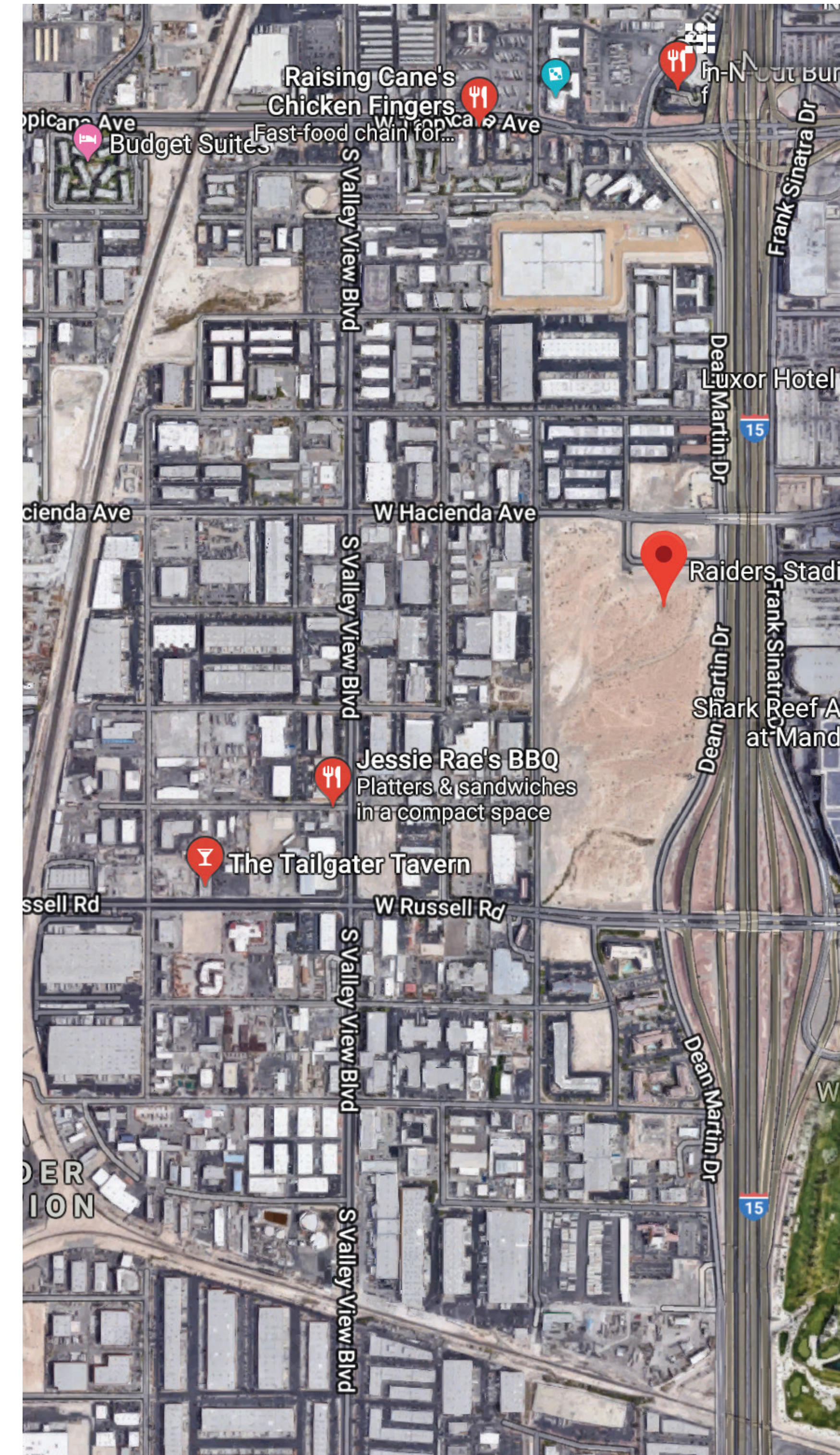
Again, the next generation of stadium design is intimately linked to the development of the districts surrounding them. Detroit's failed Silverdome (which was surrounded by surface parking, industrial properties, low-density commercial, and minimal housing) has been replaced by sports complexes within walking distance to numerous pubs, restaurants, civic buildings, apartment lofts, public transportation, and park space. Walking distance is not only measured in its quantity (ex. 1/4 mile) but its quality (ex. the experience is preferred).



Las Vegas Stadium

District Inventory

The NFL Stadium District of Las Vegas closely resembles the areas surrounding other cities' failed attempts at integrating sports tourism into their economies. Currently, there are only a couple bars, a restaurant or two, virtually no commercial tourism or retail experience, no desirable walking paths, and zero places to live. Without an emphasis on holistic entertainment (pregame, postgame, preseason, off-season, and everything in between), a stadium only comes alive in fleeting moments. A supporting district multiplies its impact.



Las Vegas Stadium

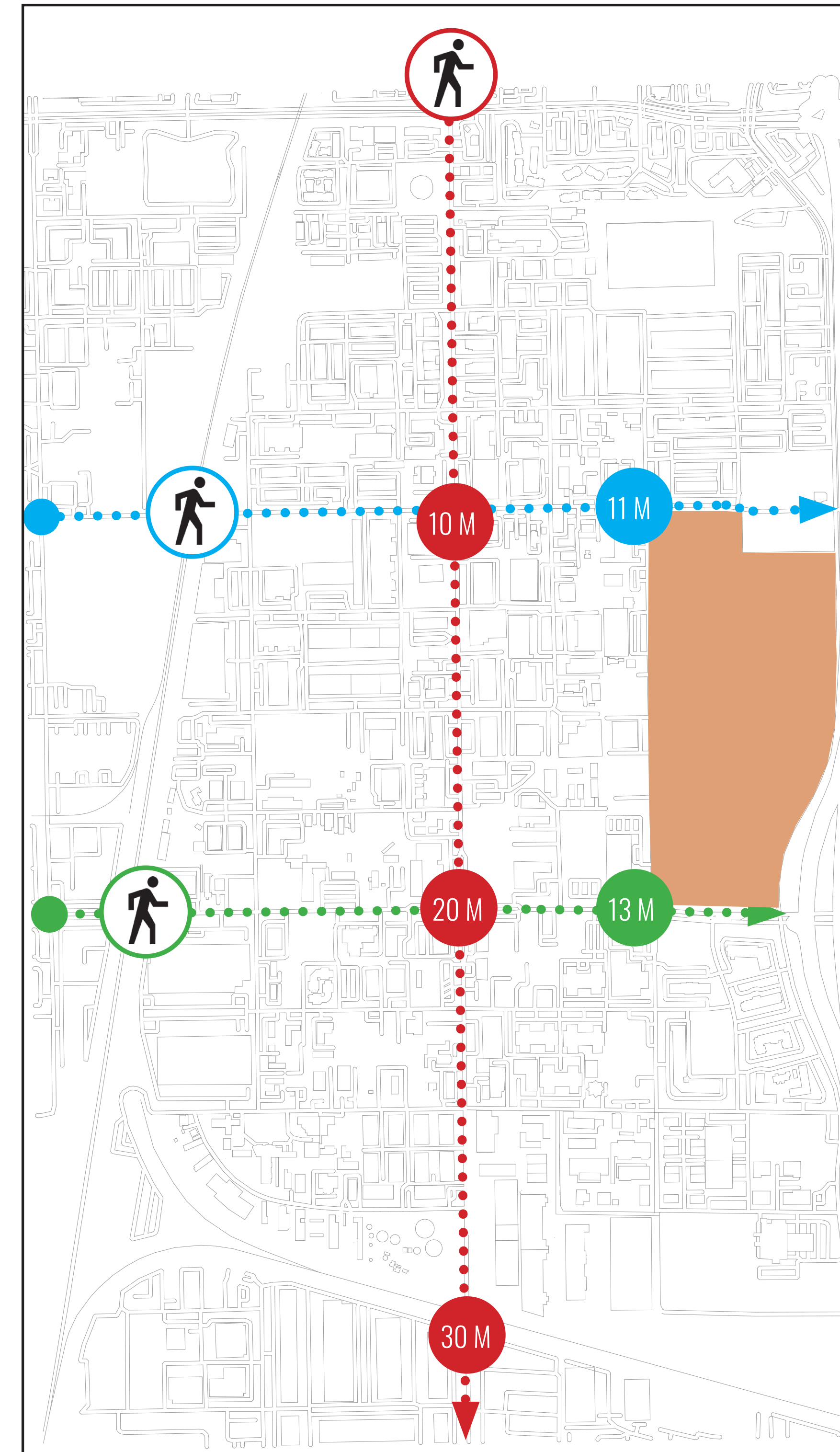
District Analysis

When one looks at the figure-ground drawing, however, the site revels many opportunities. Less than 50% of the land has been built on and most everything is one or two-story construction which leaves a lot of room for addition, expansion, and renovation. Underdeveloped streets and easements can be reimagined to form linkages throughout the district. Adaptive reuse and new construction clusters can inform concentrated efforts to bring mixed-use destinations along key axes running through the site.

Las Vegas Stadium

District Analysis

Recognizing the average person could walk across the site in a matter of minutes, the question emerges, "Why would they want to?" Along the Las Vegas Strip, people will happily walk 10-15 minutes or more to get to a Golden Knights game because there are things to see and do along the way. There is a sense of excitement. The events leading to and from the destination are all a part of the experience. There is also a sense of safety and belonging. The walk through the stadium district must expand on Las Vegas' notion of community.



Las Vegas Stadium

District Landscape

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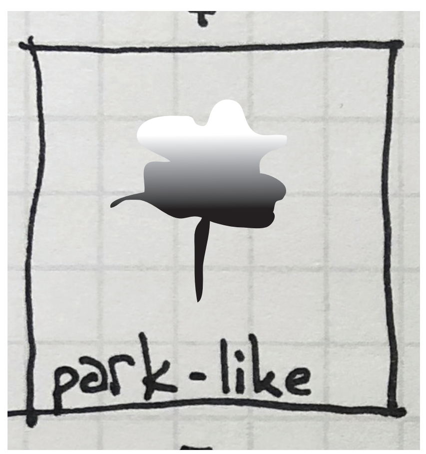

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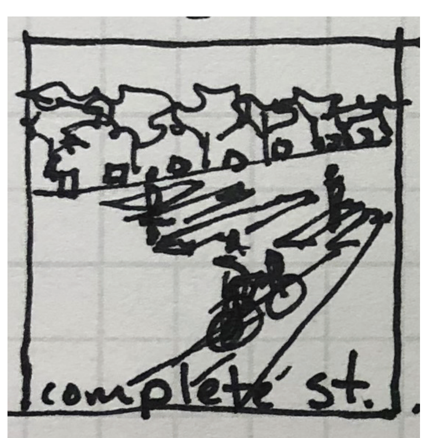
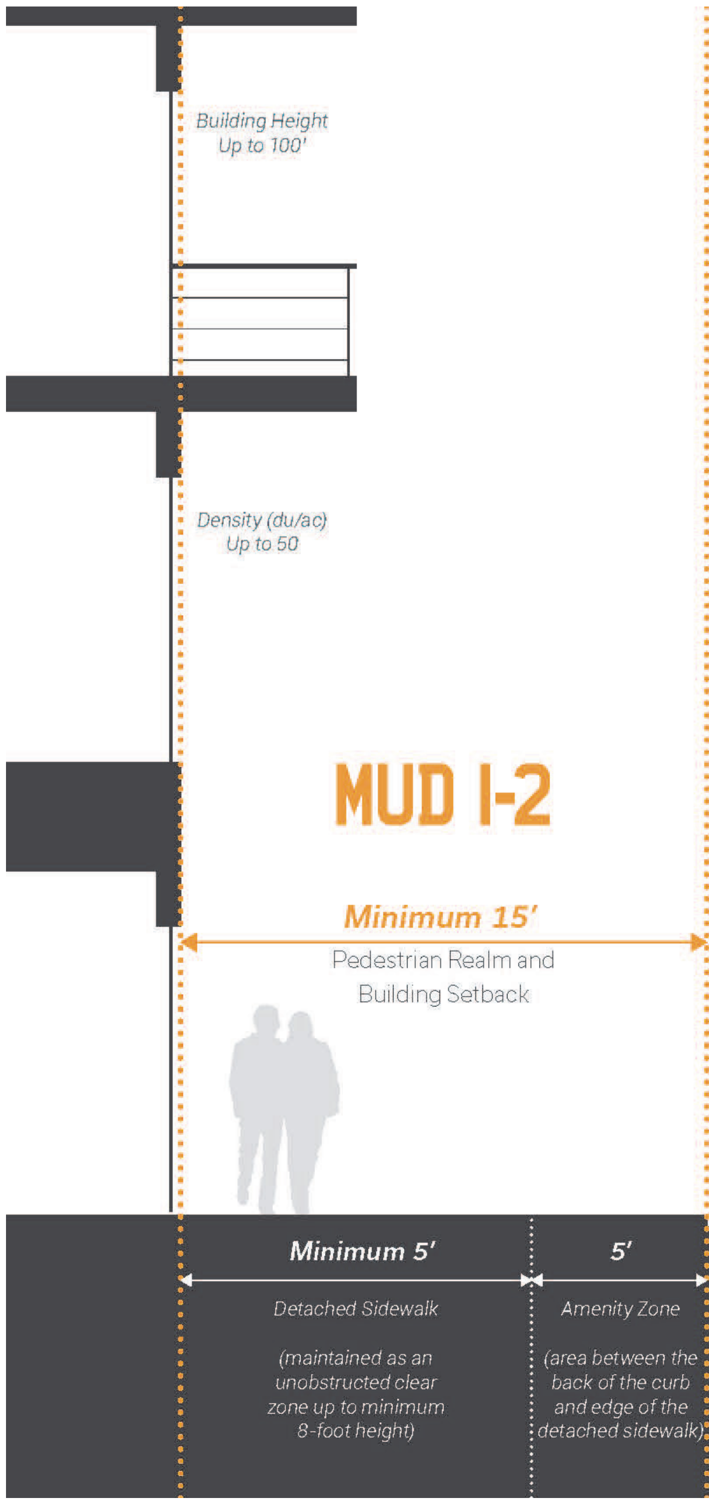


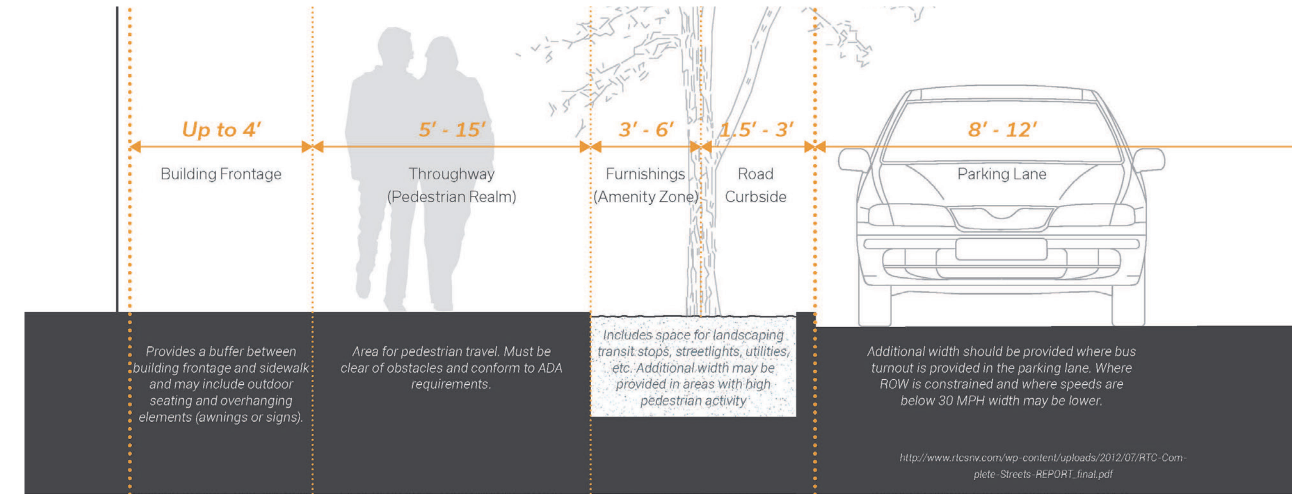
To further support community redevelopment efforts to enhance the livability of the district for residents, visitors, and tourists, the County may implement "Complete Streets", "Green Streets", and "Pedestrian Streets" aimed at strategic planning goals identified through public participation. Incentivizing "pocket park" developments as privately-owned public open spaces has also been proven to have significant economic impact on surrounding properties. These ideas can be achieved using Clark County guidelines to follow.

Las Vegas Stadium

District Landscape



Best practices in urban design and landscape architecture seen in these diagrams from Clark County can inform how architectural developments throughout the district might anticipate large flows of people and better address the public realm. Properly designed green space can also improve economic performance of adjacent properties.



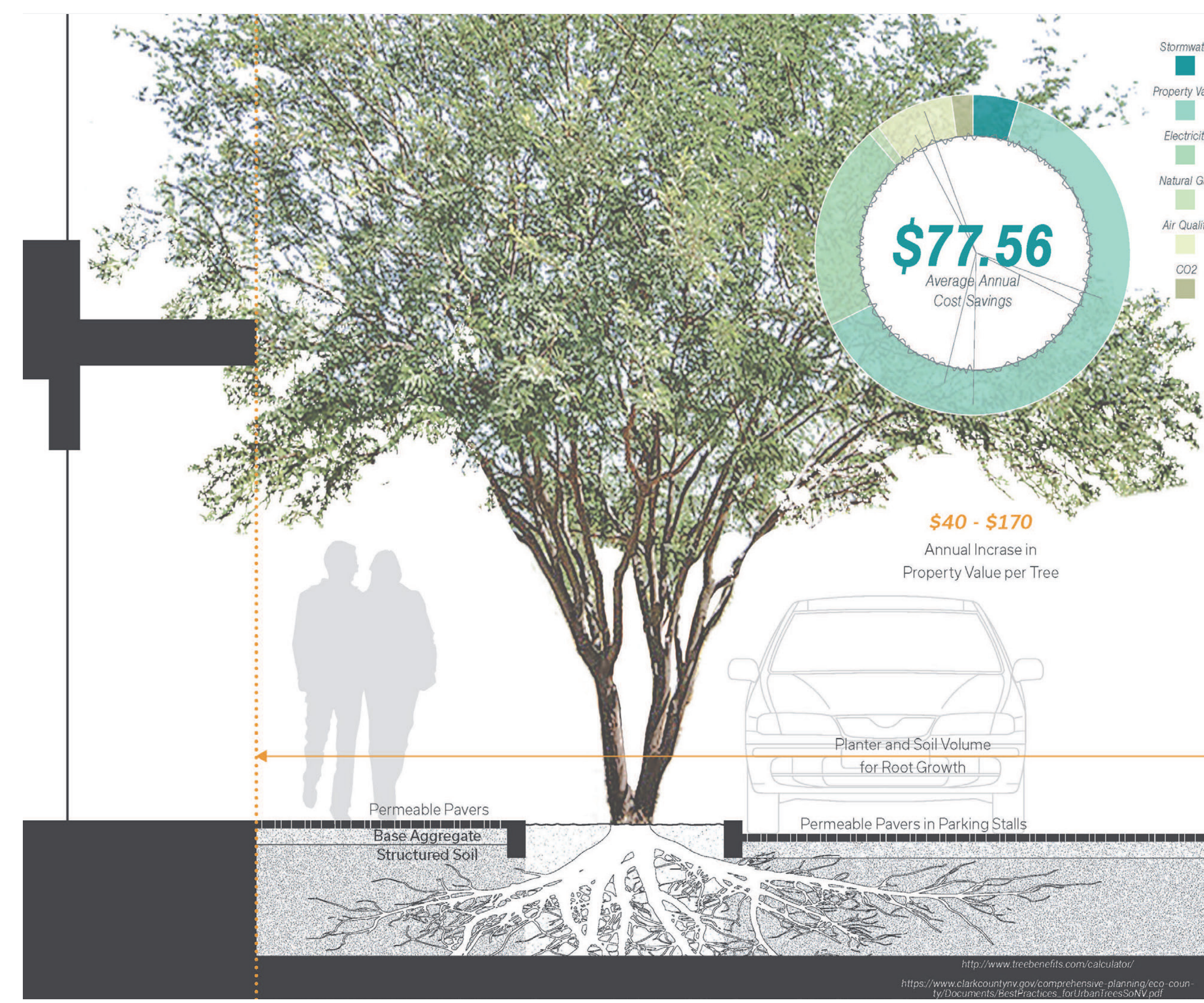


Photo Documentation

Sector 1



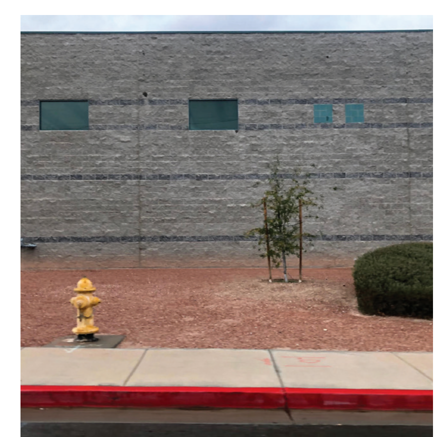










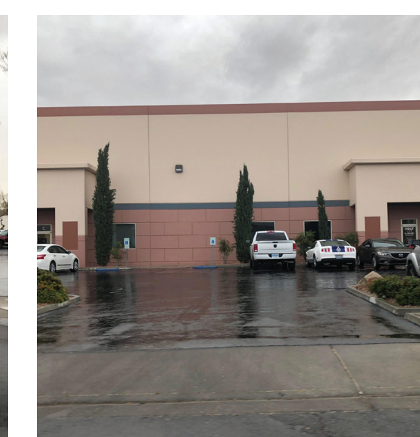


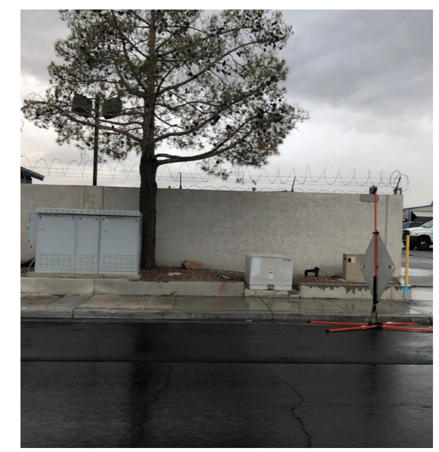
Photo Documentation

Sector 2





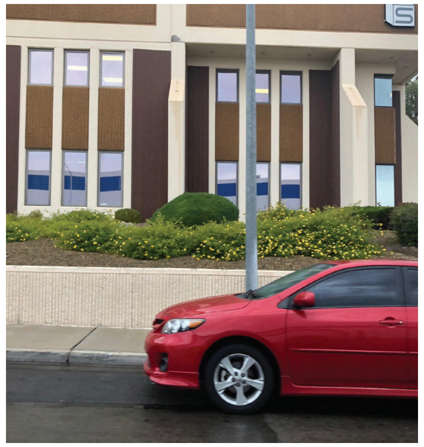




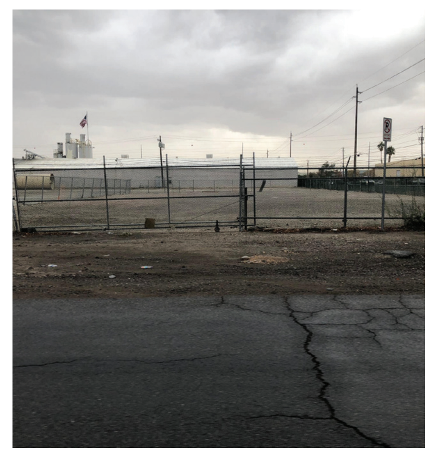

The previous, current, and following page spreads seek to document the six sectors of the NFL Stadium District. They do not record every structure but provide representative sample sof the existing. Recommendations are not made for specific properties, but commentary from classroom discussions is included as a possible conversation starter for future planning. As the closest sector to The Strip, this area can serve as a critical link between the stadium and Las Vegas Blvd. Greater pedestrian amenities (wider sidewalks, abundant street lighting, appropriate landscape, adequate shade, and dedicated lanes for bikes and buses among other features), will enable greater activation of the site. While sector 1 leads toward the center of the Las Vegas Valley and is perhaps better suited for adaptive resuse projects dedicated to residential and community development, sector 2's proximity to the tourist corridor suggests emphasis on both commerical tourism and higher density business parks with mixed-use projects bringing such amenities together on the same sites. The arrival of a world-class stadium, the existing global intellectual capital on all things gaming, and the proliferation of integrated resorts, sports-betting, and tourism across the country and beyond sets the stage for innovative industries and emerging start-ups to find headquarters in this district. Many properties in Section 1 are great candidates for renovations and additions, retaining several existing uses while adding many more. A number of buildings in Sector 2 may find highest and best use in newer building stock and new construction. Significant improvements may be found in collaborative efforts throughout the community... especially along broadly recognized thoroughfairs providing critical access to pedestrians, mass transit, and commercial vehicles during peak use. Building out to the properties' edges and in tandem with "smart street" development will likely increase district vitality.

Photo Documentation

Sector 3

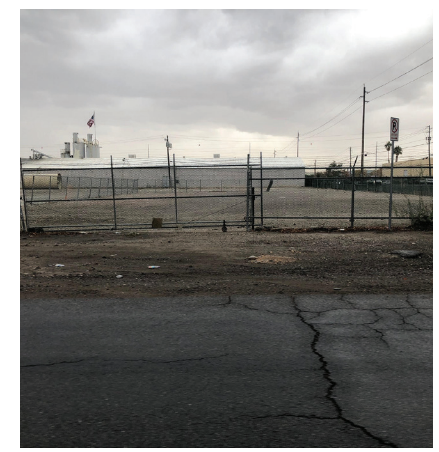











This area has the potential to be among the most iconic live-work neighborhoods in the country. Developments along Valley View would enable transformation of low-density commercial to medium and high-density residential with walkable streets to the stadium toward the East and parks to the West.



Photo Documentation

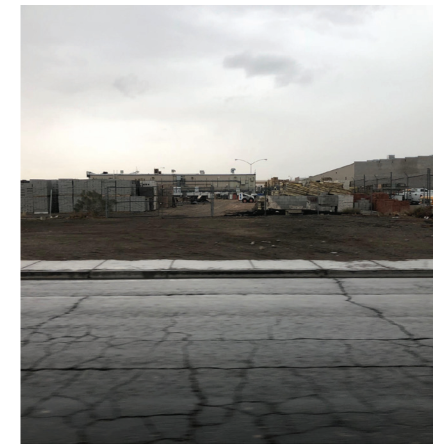
Sector 4

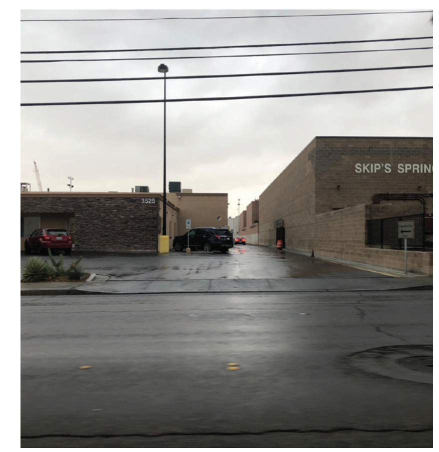


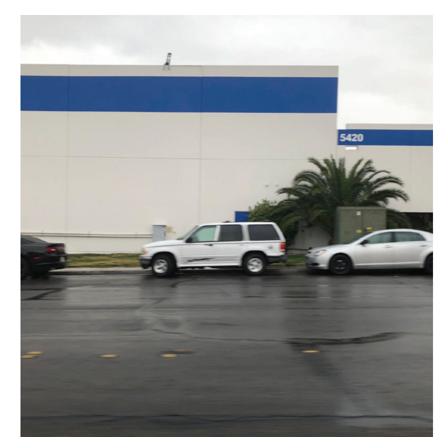

A central hub for the district, sector 4 is currently comprised of wide asphalt streets, nearly 50% surface parking, and a collection of 1-2 story office and industrial buildings. In addition to significant new mid- to high-rise construction, extensive greening of the streets and integrating pocket parks will support game-day creativity.







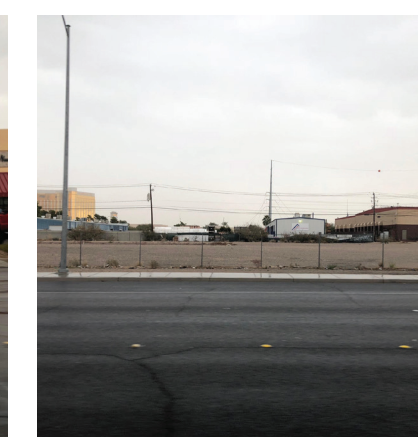


Photo Documentation

Sector 5









Distribution centers and warehouses continue to characterize the district in sector 5. The big-box archetypes in this area could lend themselves to adaptive reuse projects that transform into community destinations. Art galleries, libraries, transit hubs, and other civic architecture can bring people together throughout the year.

Loft-style and row housing could be integrated into existing building shells creating both high-end and affordable housing in what would be one of the most desirable neighborhoods in the desert Southwest. Walking distance to the stadium numorous restaurants, and bars this sector would follow many similar trends of sectors 3-4.



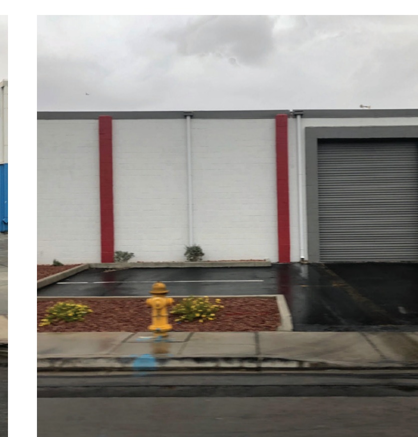


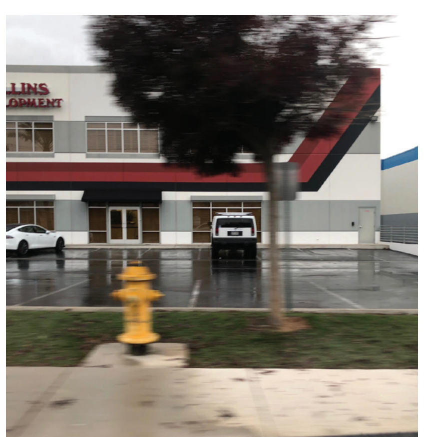
Photo Documentation

Sector 6





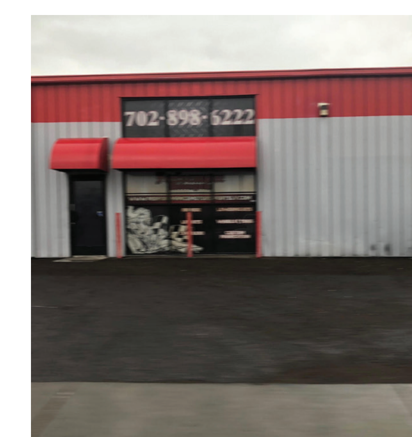






Sector 6 anchors the district to the South between Valley View and the I-15. Properties along Russell and Valley View have the opportunity to serve as a gateway to the stadium from the South. Again, residential development on interior blocks or minor streets can further support businesses along the main axes. Locals can find comfortable living through the outer reaches of the district while locals and tourists alike can enjoy innummerable centrally located entertainment spots and points of interest radiating in all directions.

In each of the sectors, redevelopment efforts may find their best momentum when community stakeholders work together to leverage resources and bring adjacent properties into the new era of entertainment and healthful living. In a hierarchy from the stadium site moving outward (West, North, and South), developments along Hacienda, Russell, and Diablo may be seen as moving pedestrian flows and providing pre- and post-game activities and year-long amenities. The North-South corridor, Valley View, touches on all sectors and has the potential to organize movement through the district. Larger scale offices with Monday-Friday schedules will have additional parking available on weekends for special events. Stadium employees and others can find housing within walking distance. Grids of designated bike lanes and a robust public transit will be seen criss-crossing the sectors.



Adaptive Reuse Charrette

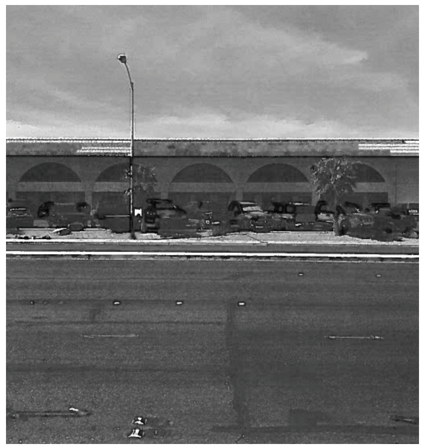
Example Sketches

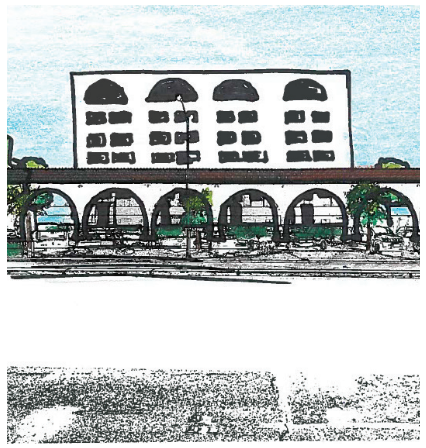
Following photographic documentation of the district, a series of quick sketches were generated based on stakeholder comments from the October 8, 2018 Stadium District "Kick-off" meeting at the Clark County Government Center. Attendees noted several concerns from affordable worker housing to urban redevelopment of sidewalks and streets. These sketches begin to envision architectural responses to the questions posed by the community. Top left: Valley View and other streets

become more pedestrian friendly with desert-specific plantings that offer shade, wider sidewalks to accommodate walkers to special events, dedicated bike lanes and bus lanes, and medians to control traffic flow and facilitate easier crossing. Top right and bottom right: industrial warehouses can flexibly adapt into 2-4 story housing and desirable open office space among others. Bottom left: worker housing, affordable, and luxury living can be designed into existing buildings.

Adaptive Reuse Charrette

Example Sketches

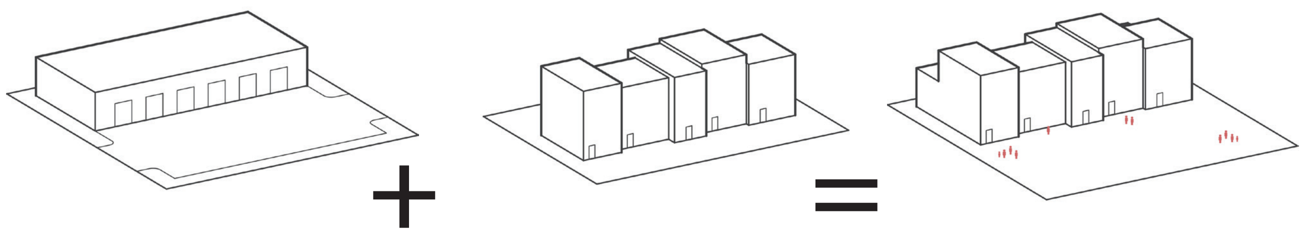


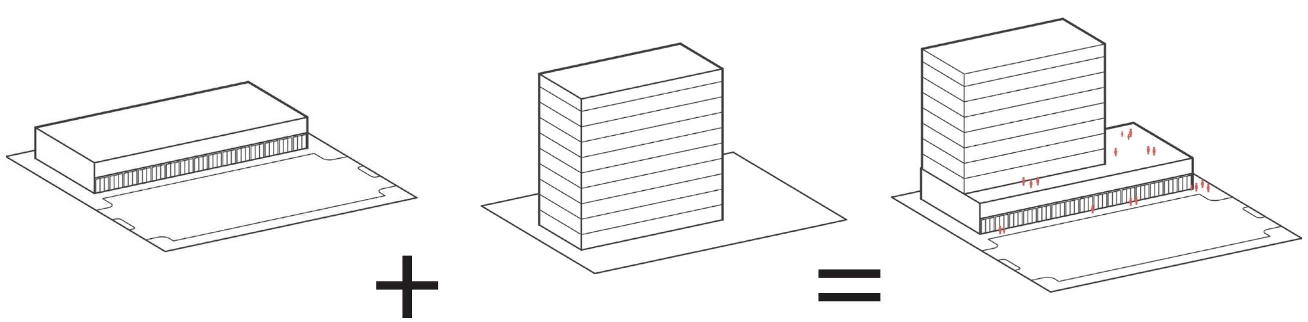


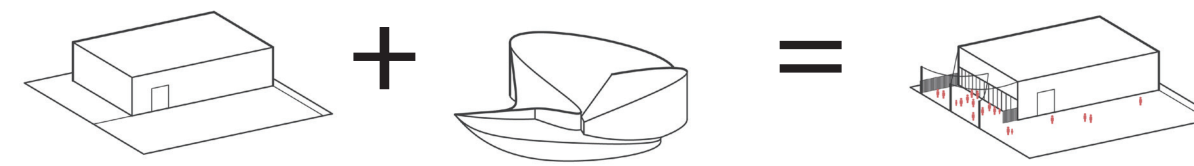
Community stakeholders noted interest in capitalizing on game-day activity but recognized challenges to making investments sustainable throughout the year. As business viability is often related to connection with critical masses of consumers, design strategies shown begin to explore ways of increasing population density and commercial/entertainment throughout the district. Preserving buildings (or parts) in the district's transformation would be among the strategies for keeping projects economically and environmentally sustainable. Sketches on this page show ways to evolve properties with an eye toward successful stadium district amenities. Top left: preserving historical architectural features while increasing office space, parking capacity, and green space. Top right: public art and dedicated spaces for event catering, food trucks, and tailgating. Lower left: remodels to work with improved outdoor space. Lower right: mixed-use office and residential.

Adaptive Reuse Charrette

Diagrams





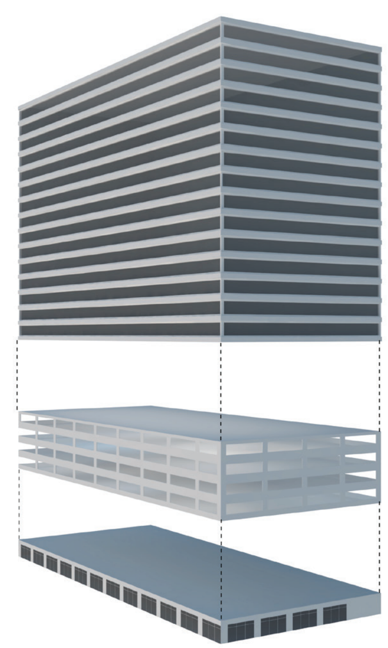


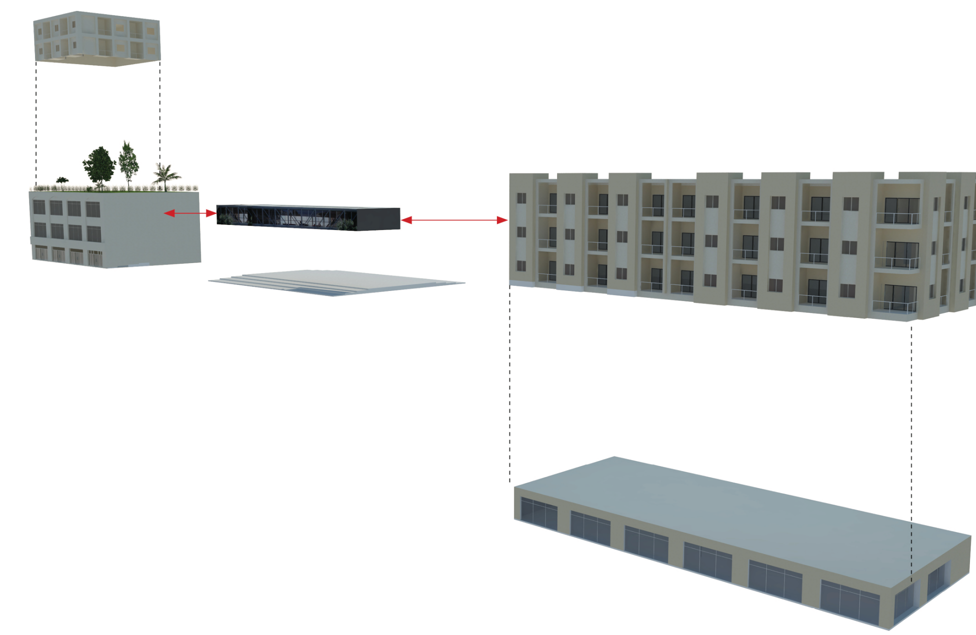
Through the photographic and sketching exercises, challenges and potential solutions were identified. These diagrams seek to distill those into a few key strategies for adaptive reuse addressing the most common building typologies throughout the district. For those properties that might be seeking a transformation, each triptych presents a representation of current building stock + an envisioned new use = resulting redesign.

Warehouse or distribution center plus row housing equals new modern loft space. A commercial strip mall plus a midrise office or residential tower may create mixed use areas. Nondescript buildings combined with the idea of becoming a cultural center can leverage contextual design elements to bring people in from throughout the neighborhood.

Adaptive Reuse Charrette

Diagrams



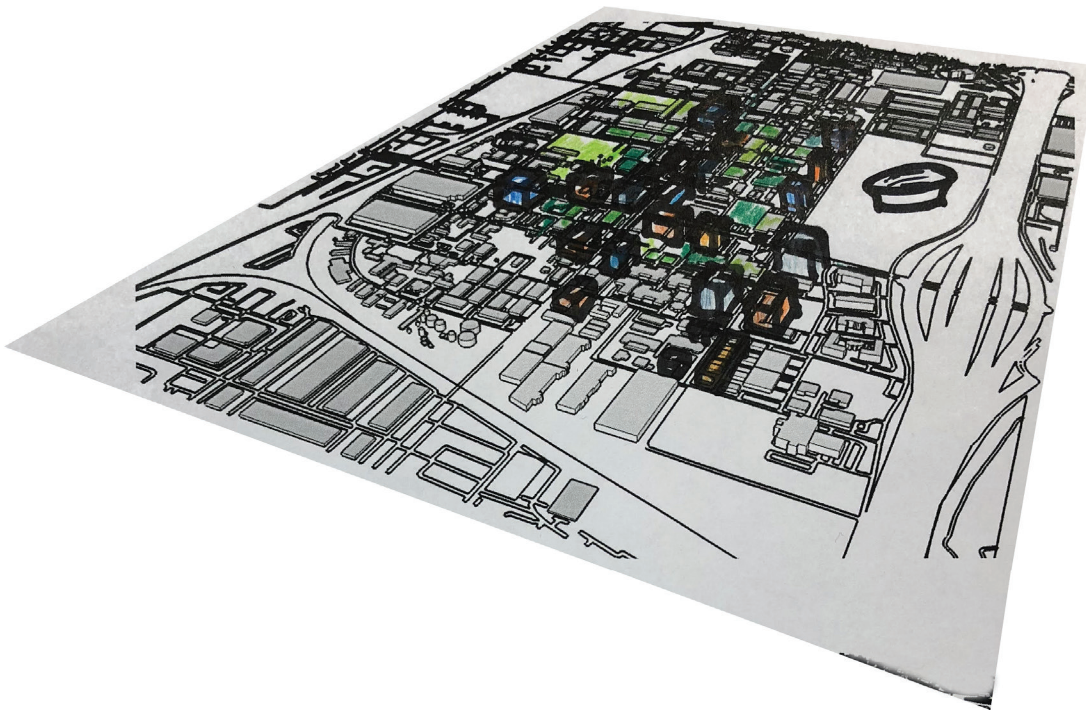


The basic architectural typology studies led to questions of programming for the entire site. How many people should live here? How many parking spaces are needed? What is the right balance of industrial, commercial, residential, office, public, and other space? Based on the precedent analysis, this district should have about 3,000-4,000 residential units or at least 8,000-10,000 people living in the area, 15,000-20,000 parking spaces, 100+ new retail shops, 10-15 bars, 10-20 restaurants, and at least 5 miles of pedestrian-focused complete streets. Without that substantial number, the district is deserted outside regular business hours, and there would not be enough people to sustain other businesses trying to capitalize on the occasional stadium crowds.

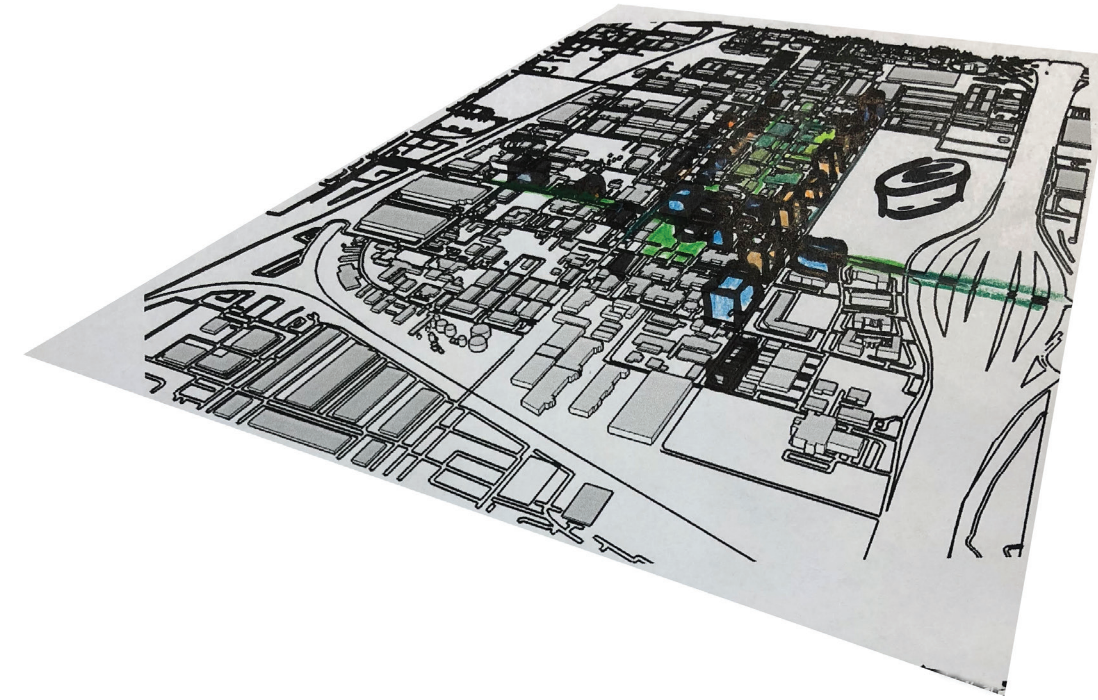
These diagrams start to look at existing building types as potentially fulfilling the needs of a successful stadium district. Business park towers with integrated parking could accommodate guests for weekend games. Industrial spaces could be converted into boutique shops, commercial buildings could become modern lofts.

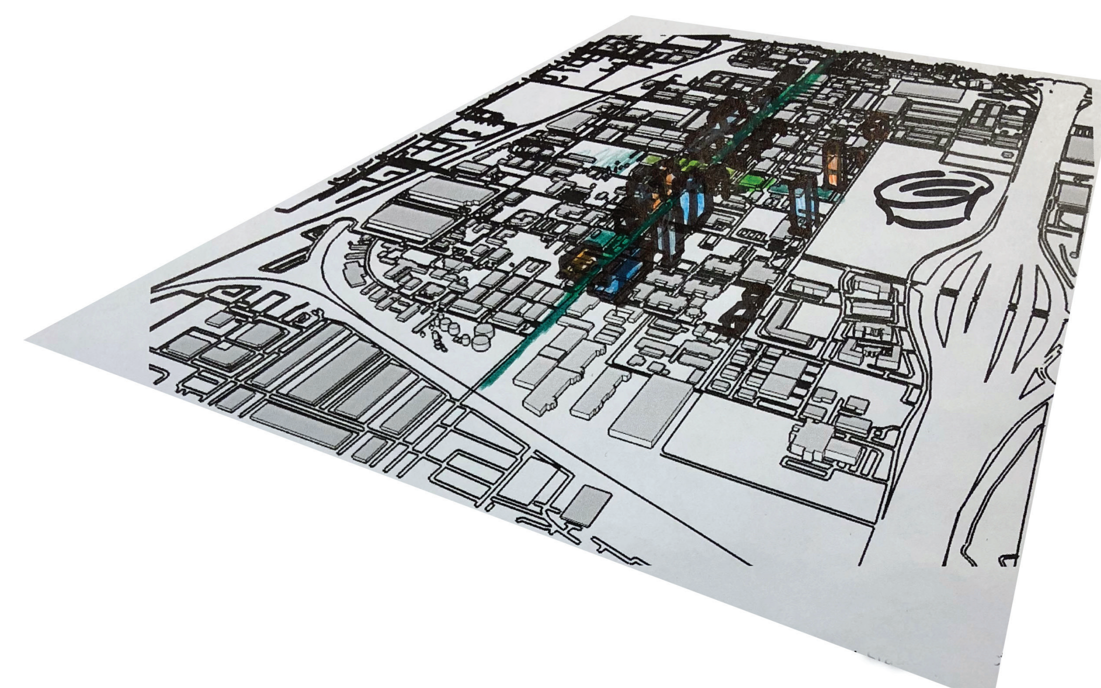
Masterplan

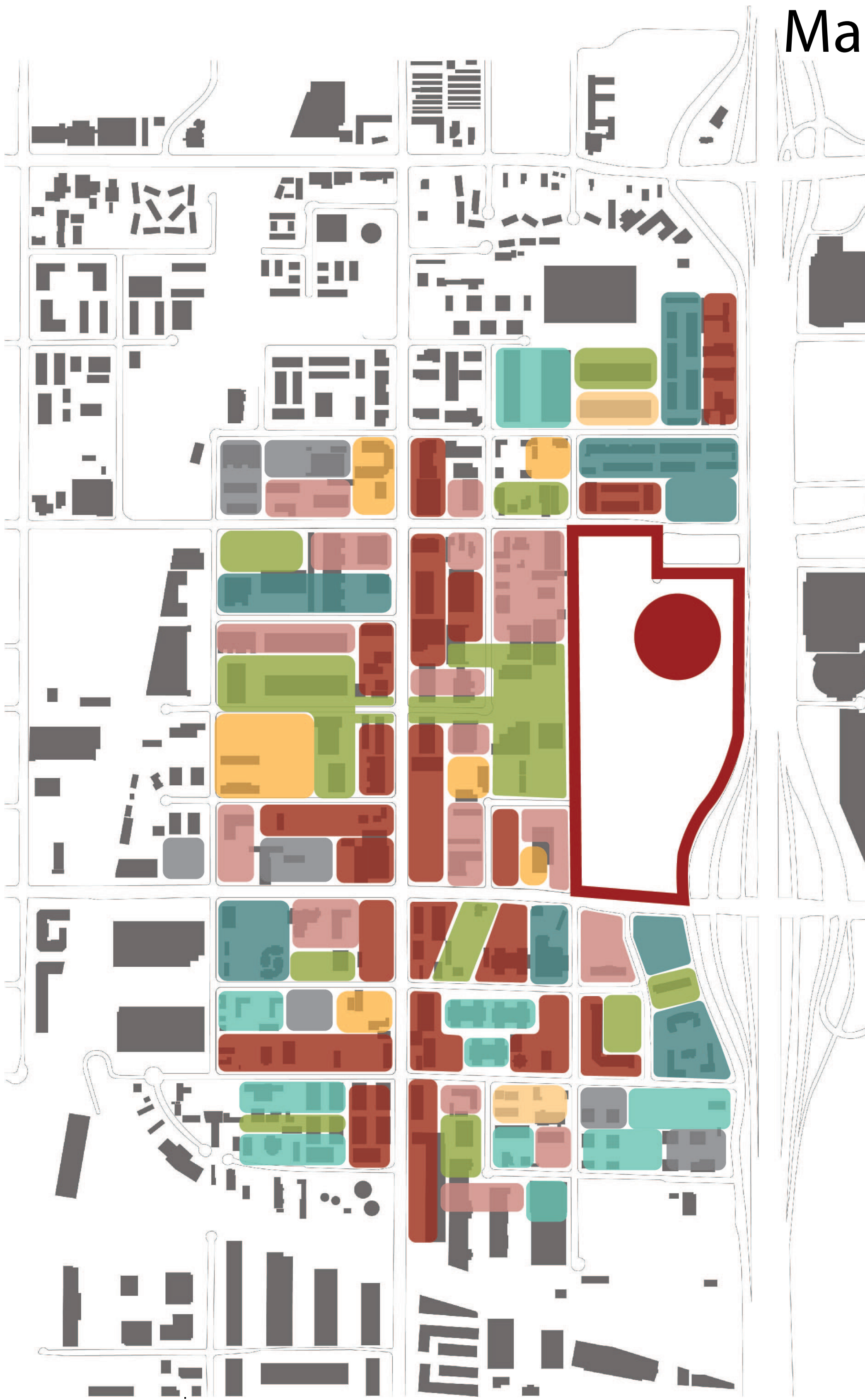
Ideas



Above: Approximately 3000 residential units equally distributed with mixed-use, civic, and green space. Facing page top: 2000 residential units along Polaris and 1000 units along Valley View with framed entertainment district and "green-street" along Russel axis. Facing page bottom: 2000 units and mixed-use along Valley View with green axis along Diablo. 1000 units on Polaris with continued growth over time.



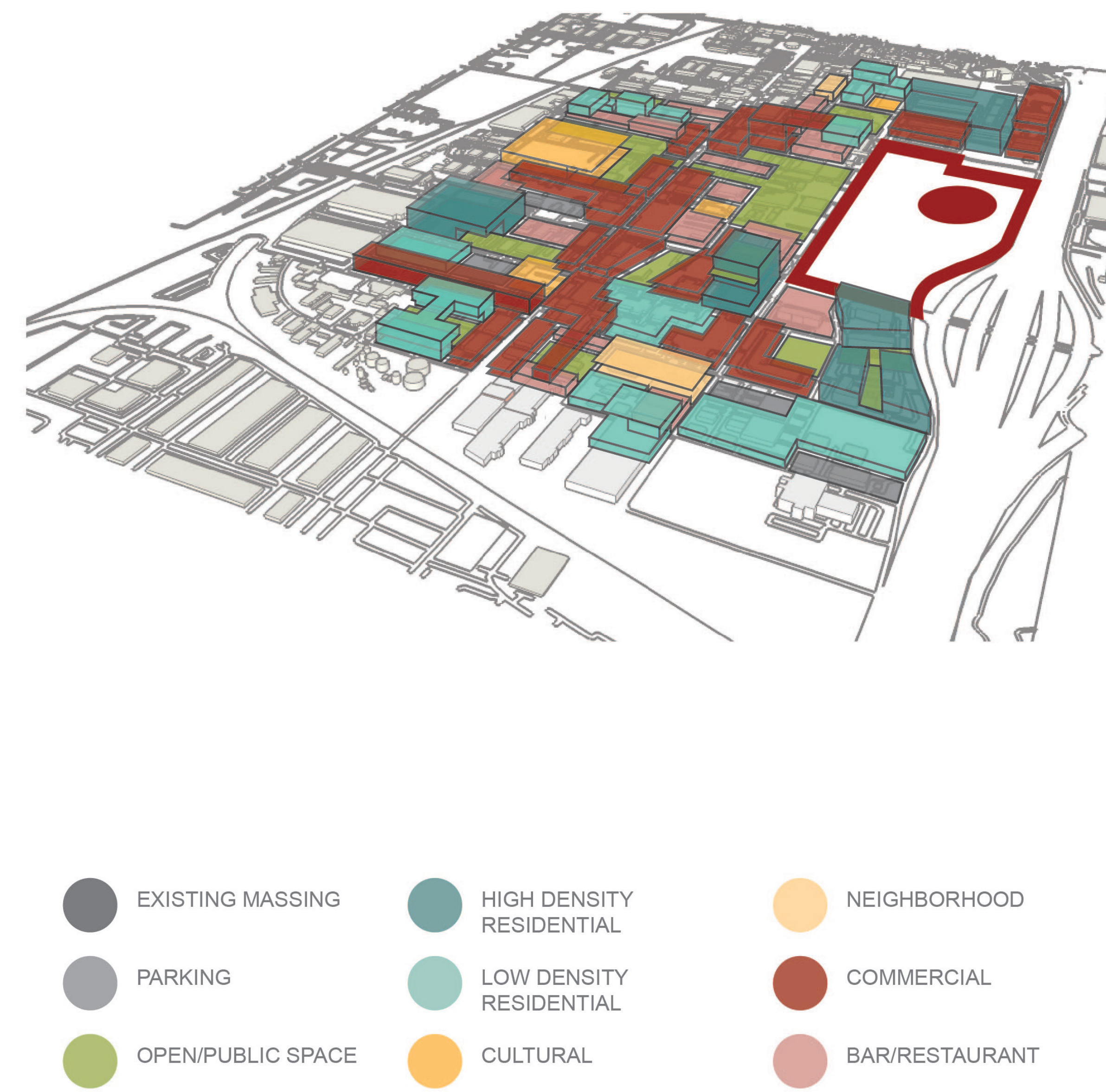




Masterplan

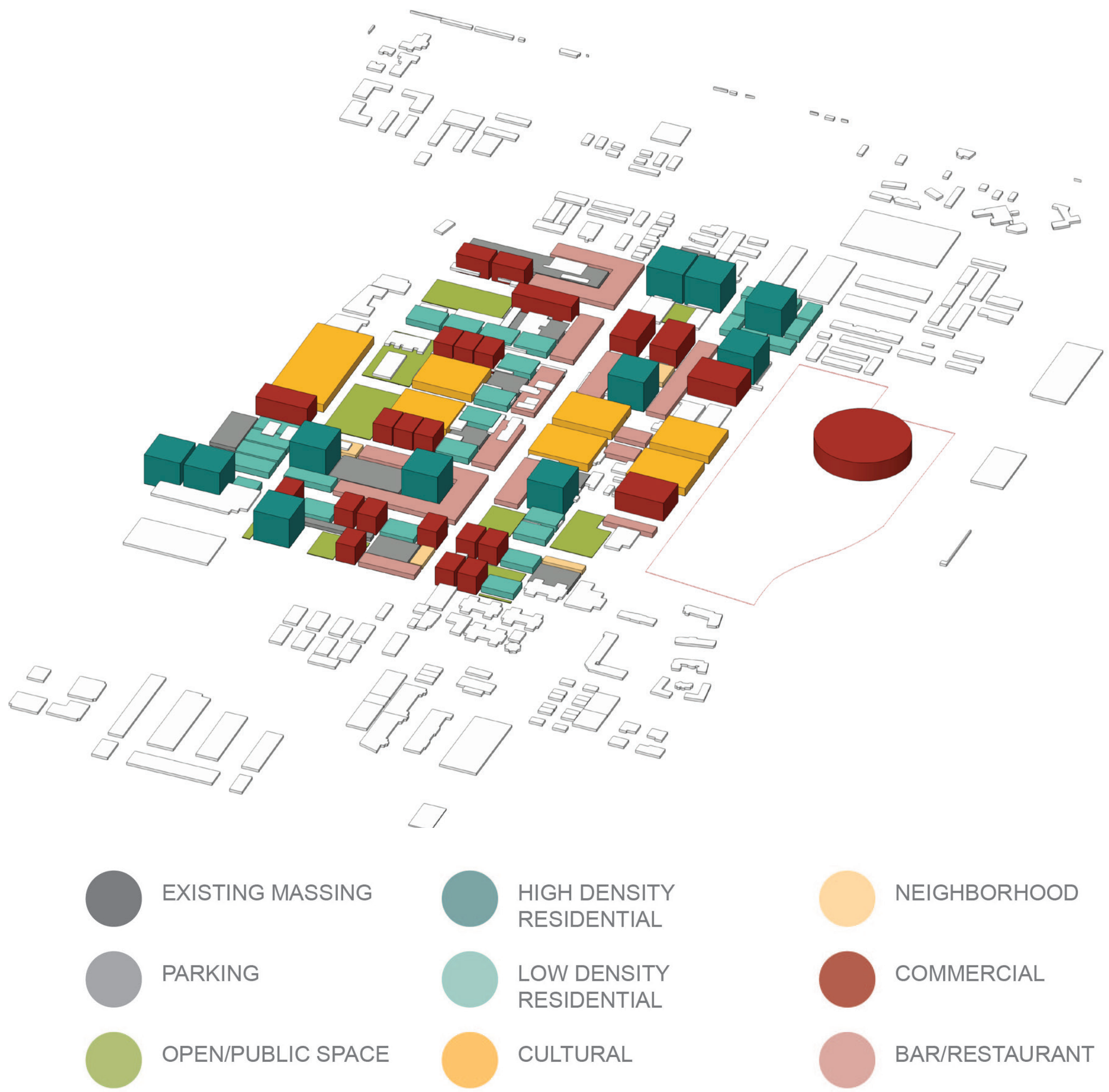
Ideas

A tapestry of diverse land uses aims to balance live, work, and play within every sector of the district. Higher densities of each are concentrated nearest the stadium and along Valley View, Hacienda, and Russell among others. Scheme below by Amanda McGurk.



Masterplan

Ideas



Guidelines for land use, target quantities of amenities/units, and incentives to align with shared vision or design aesthetics can begin to shape the district's evolution. The prioritization of design and build timelines for various masterplan features can also have significant influence on the success of the stadium and the district at large. Masterplan and concept rendering by Trevor Dotson.

Masterplan

Ideas

Pleasant walking, biking, and commuter paths can connect the stadium to points of interest throughout the district. Green space can serve as public gathering places and augment the experience of new shopping, dining, and entertaining in the area. Cutting edge technology, sustainability, and hospitality throughout will ensure this district is recognized as an extension of the entertainment capital of the world. Masterplan and concept rendering (Valley View looking South) by Jairo Garcia

Masterplan

Moving Forward...

The UNLV Hospitality Design (HD) Seminar is humbled to be a part of the ongoing process to envision the evolution of the stadium district. Just as this report's process started with the "Community Kick-Off Meeting" in October where stakeholder comments and questions helped inform student design inquiry, the culmination of this report hopes to foster the continuation of public conversation. The multiple design schemes developed by the students do not try to present a single solution but illustrate that there are many ways to achieve successful outcomes.

"Masterplan" might even be a misnomer in this situation as each individual property can have its own masterplan that may or may not fit with others' visions for the whole. Recognizing the strength of the district as a whole is related to the relative strength of each individual property, this masterplanning excercise is ultimately a "master-guide" to building a strong community, together... #VegasStrong.

Glenn NP Nowak, AIA - Associate Professor Architecture
Destanee Cook, AIAS - Graduate Assistant, M. Arch
Jairo Garcia - M. Arch Candidate
Amanda McGurk - M. Arch Candidate
Trevor Dotson - MFA Candidate

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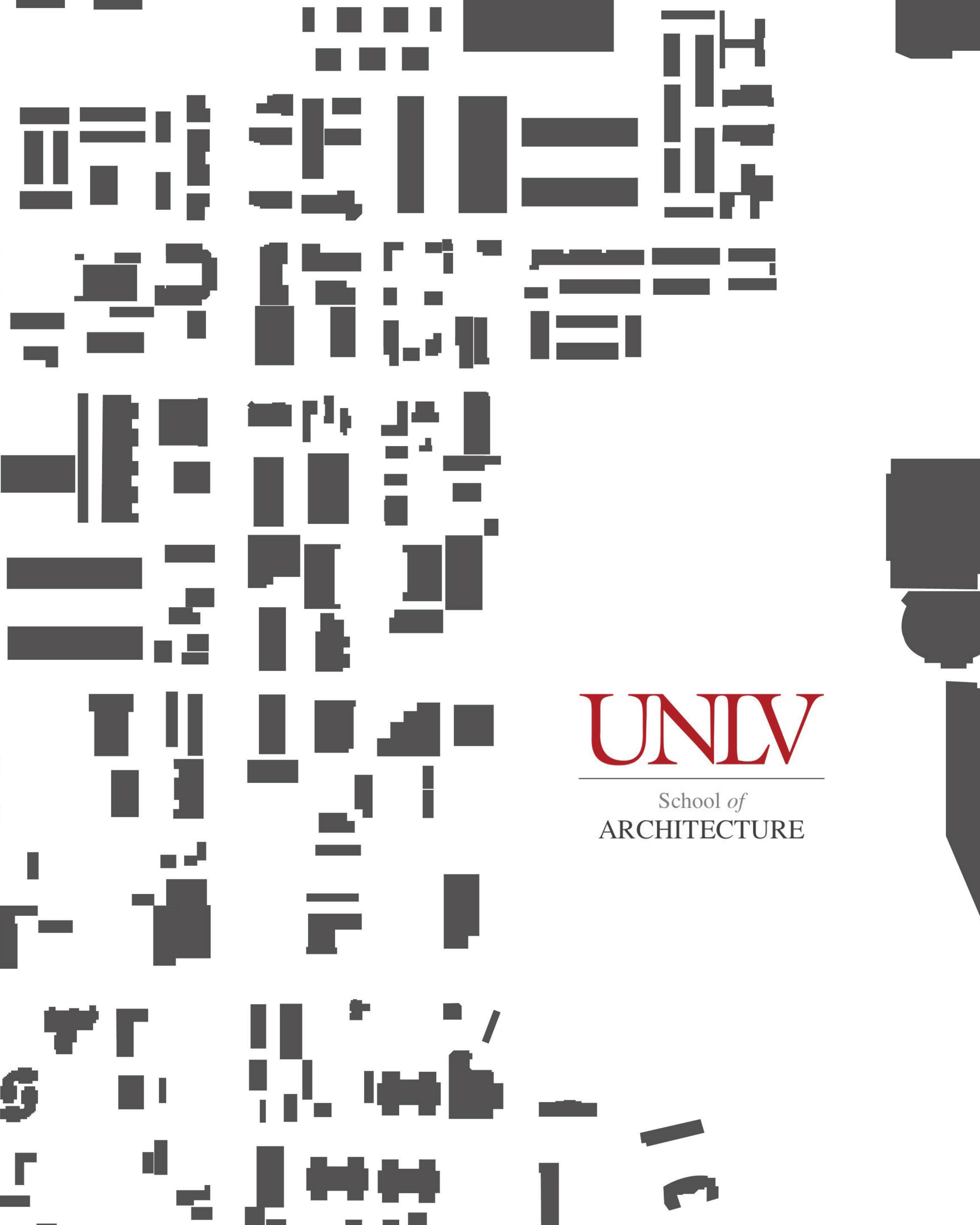
Clark County Code Diagrams

https://library.municode.com/nv/clark_county/codes/code_of_ordinances?nodeId=TIT30UNDECO_30.48ZOOVDI_PTJMIUSOVDI



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