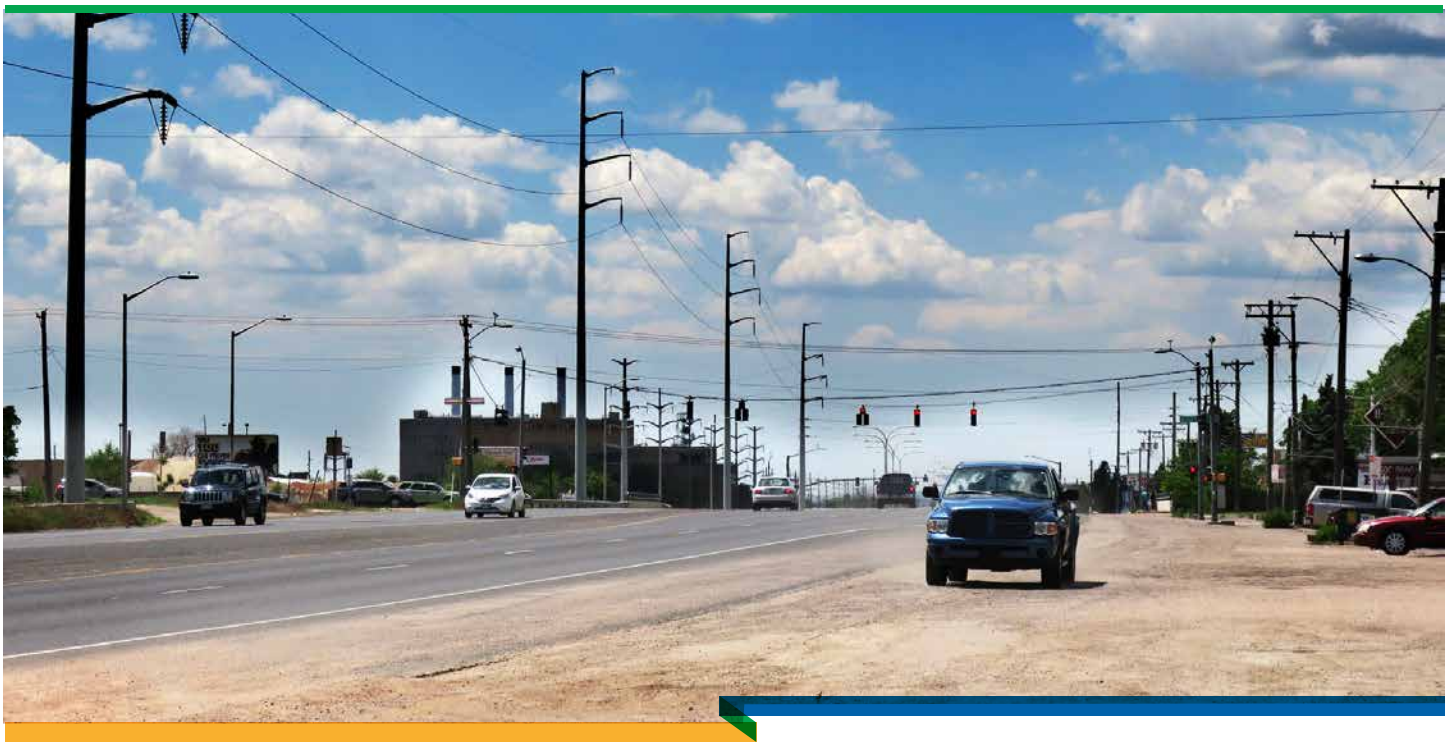


RENEW NORTH NEVADA AVENUE

Master Plan || Transportation Sub-Plan

COLORADO SPRINGS

RENEW NORTH NEVADA AVENUE MASTER PLAN | TRANSPORTATION SUB-PLAN

PRODUCED FOR:

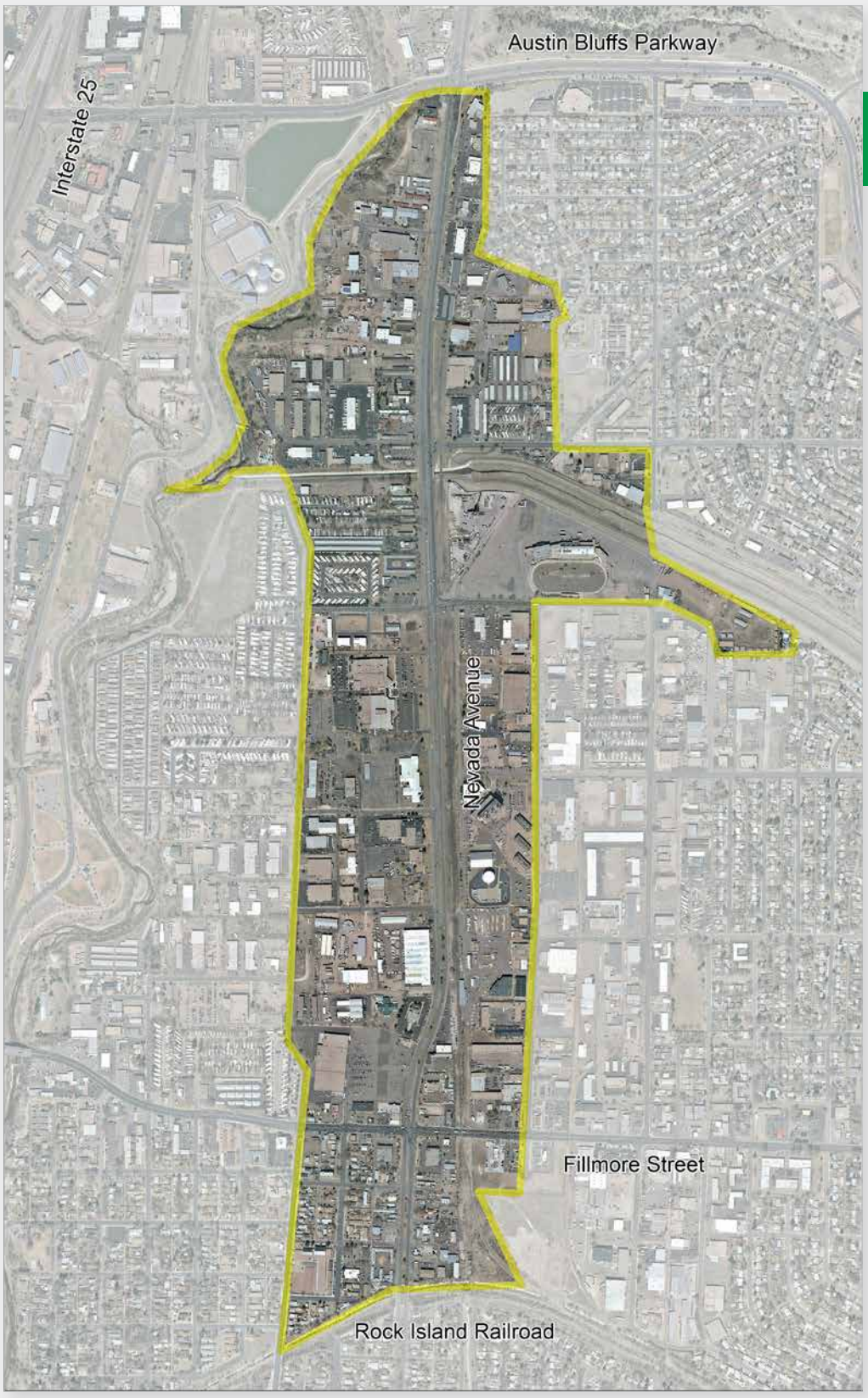
COLORADO SPRINGS

PRODUCED BY:

Kimley»Horn

November 2017

TABLE OF CONTENTS


Austin Bluffs Parkway
Interstate 25
Nevada Avenue
Fillmore Street
Rock Island Railroad

INTRODUCTION

Earlier this year, the City of Colorado Springs adopted the "Renew North Nevada Avenue Master Plan." The Master Plan was in response to the City's 2013 designation of the corridor as an Economic Opportunity Zone (EOZ). The intent of the EOZ designation was to create a mechanism to focus City energy and resources to transform the North Nevada Avenue corridor into a community gateway and to improve the connection between the University of Colorado, Colorado Springs (UCCS) and downtown Colorado Springs.

The Renew North Nevada Avenue Transportation Sub-Plan outlines the strategies and recommendations needed to ensure the mobility expectations of the Renew North Nevada Avenue Master Plan's mobility vision can be realized.

PROJECT ORGANIZATION

This report is organized into six chapters:

- CHAPTER 1 summarizes the key concepts of the Renew North Nevada Avenue Master Plan, the document which guides the development of this Transportation Sub-Plan.
- CHAPTER 2 outlines the community engagement process used to develop and test specific transportation strategies and recommendations with the Community.
- CHAPTER 3 documents the Corridor's existing transportation challenges that need to be addressed to ensure the Master Plan's success.
- CHAPTER 4 illustrates key principles of achieving an integrated land use and transportation plan.
- CHAPTER 5 showcases key transportation strategies to achieve the mobility needs of the Community's vision.
- CHAPTER 6 outlines specific recommendations and actions within an implementation strategy which matches the resources of the City.

OUR VISION

We imagine and look forward to a renewed North Nevada Avenue Corridor. Our collective vision serves as our foundation for the future.

MASTER PLAN MOBILITY GOALS:

- Curb, gutter, sidewalk, and bicycle lanes on Nevada Avenue
- Create an urban streetscape where appropriate (a semi-urban streetscape is desired)
- Enhance safety for all users
- Improve trail connections
- Utilize the railroad right-of-way for trail and transit
- Enhance street connections
- Support other goals of the Master Plan vision and how we move

HOW WE MOVE:

- Connections within the area and to the community are strengthened by improved roadways and expanded transit service.
- Pedestrians and cyclists are encouraged and are safe from vehicular traffic.
- Access within the corridor is easy and serves resident, business, and visitor needs.
- Trail connections link to local and regional trails and nearby waterways.

HOW WE LIVE:

- Our vibrant community is strengthened by housing that serves the needs of residents and offers options for all ages and levels of income.
- Our corridor provides convenient access to restaurants, shops, stores, and entertainment activities, drawing people from all over the community.
- Our corridor's streets, sidewalks, drainage, streetscape, and other infrastructure function well.
- Parks, public spaces, and community gathering places increase our sense of community and pride in our corridor.

HOW WE WORK:

- A creative mix of business types and uses supports and employs our residents and serves as a regional economic magnet.
- Historic and existing businesses are valued, and new businesses and employment generators are welcomed.
- Services and facilities support the needs of UCCS and its students.

HOW WE LOOK & FEEL:

- Our corridor is clean and safe.
- Our residents enjoy public green spaces, amenities, trees, and landscaped areas.
- The history of our area is celebrated and incorporated into the fabric of our community.
- Our corridor is a destination because its appealing character is unlike any other in Colorado Springs.

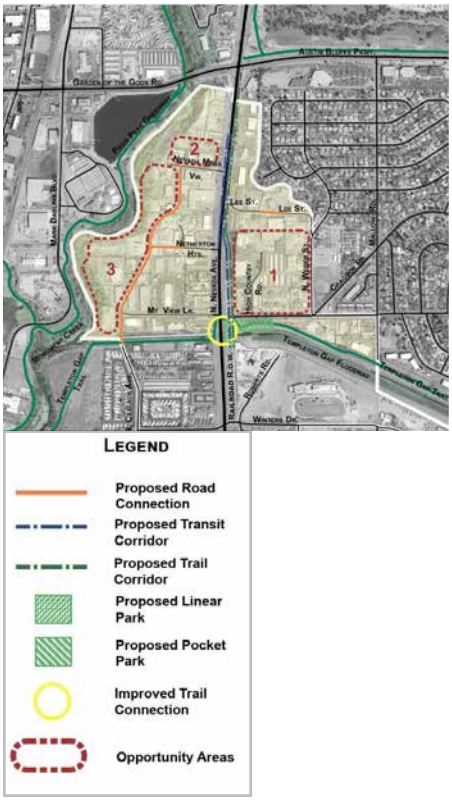
CHAPTER 1 | RENEW NORTH NEVADA AVENUE MASTER PLAN

The Renew North Nevada Avenue Master Plan provides the guiding framework that bridges the gap between the broad community goals for the corridor established in the Colorado Spring Comprehensive Plan and the City's development regulations which are used every day to review individual development projects and capital improvements.

The Master Plan presents a new image for a prosperous future for the corridor, transitioning it from a car-oriented industrial and manufacturing past to a more walkable, employment based mixed use environment. The Master Plan divides the study area into three planning zones: North, Central, and South. The North Zone is the area north of Templeton Gap drainage. The Central Zone runs from Templeton Gap drainage to Commerce Street on the west side of Nevada Avenue and to the southern extent of the Birdsall Power Plant on the east side. The South Zone encompasses the remainder of the Master Plan area from Commerce Street to the Rock Island railroad. This transportation sub-plan is intended to advance each of the three proposed planning zones' land use aspirations and mobility goals which are presented on the following pages.

NORTH ZONE MOBILITY GOALS:

- Include curb, gutter, sidewalk and bicycle lanes on North Nevada Avenue.
- Improve vehicular connectivity across Templeton Gap drainage by extending Cascade Avenue north and Mallow Road south.
- Provide a transit stop at Mount View Lane intersection.
- Encourage the connection of Lee Street to Weber Street.
- Improve the Templeton Gap trail crossing at Nevada Avenue, preferably via an underpass.
- Utilize the railroad right-of-way for trail and transit use.



NORTH ZONE

The Renew North Nevada Avenue Master Plan recommends a change in land use emphasis for the area to include more residential and commercial uses. The Master Plan encourages more mixed-use/development which will ultimately generate a healthier, more vibrant neighborhood that is appealing to both students and the existing aging population.

The residential components of the Master Plan include student and faculty housing that supports UCCS and market rate housing to support the wider community needs. The commercial uses include small-scale retail, restaurants, cafes, and bars to help create an urban village focus, as well as a hotel to support UCCS and visitors to the area. An increase in office use is also encouraged in the Master Plan to support UCCS cybersecurity and sports medicine programs.

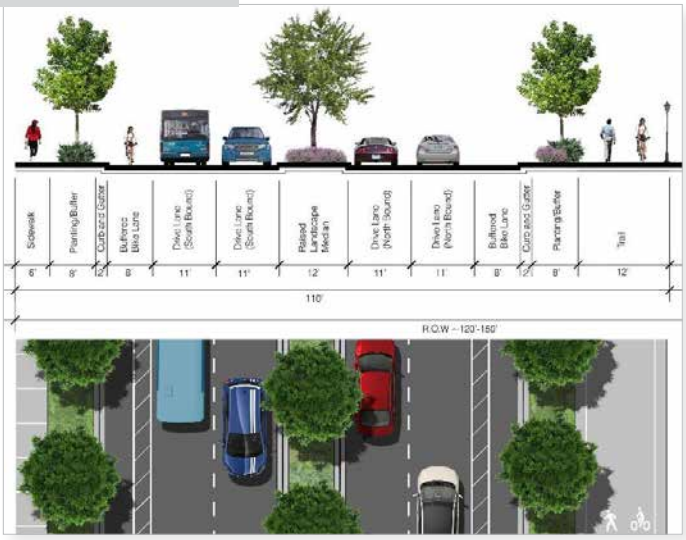
The mobility goals for the North Zone expressed in the Master Plan, and highlighted below, reinforce a more multimodal transportation strategy better suited to support the mixed land use objectives. The desire for the corridor to be "cool" and "like nowhere else in Colorado Springs" was a consistent theme through the stakeholder process. The North Zone's mobility goals provide a framework to ensure the transportation infrastructure reinforce this unique and authentic ambience envisioned.

NORTH NEVADA AVENUE IN THE NORTH ZONE

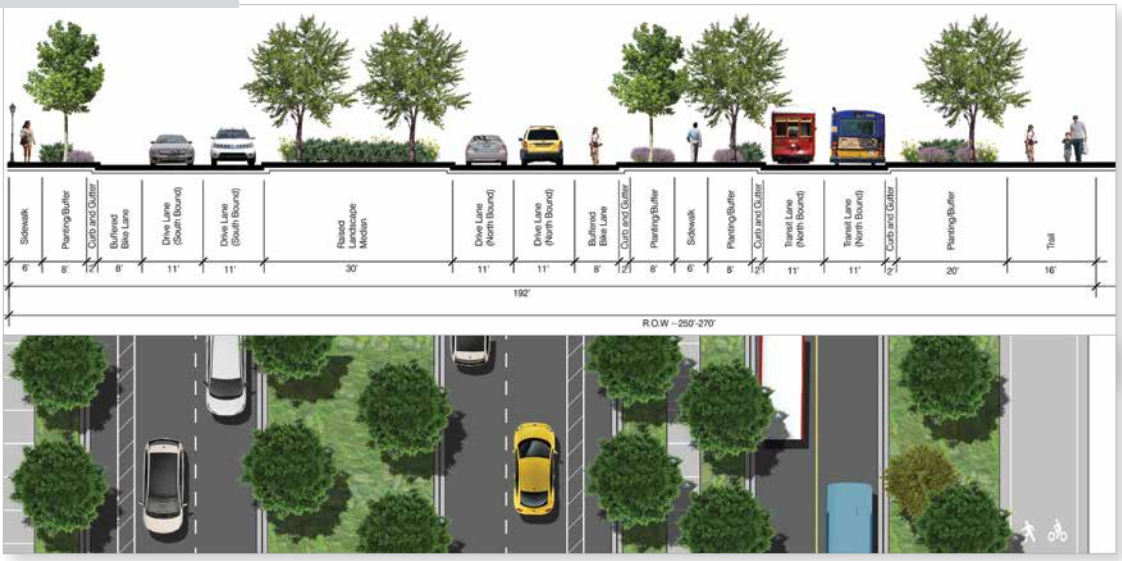
There are two recommended street cross-sections for the North Zone. SECTION A (top of page 5) runs from the end of the railroad right-of-way to Austin Bluffs Parkway. It identifies North Nevada as a four-lane street with a central median, buffered bicycle lane, and a tree lawn. It also includes a standard 6-foot sidewalk on the west side but a wider 12-foot urban trail on the east side. This trail would act as a transition from the off-street corridor within the railroad right-of-way, as shown through the rest of the corridor.

The railroad right-of-way provides an opportunity in SECTION B (bottom of page 5) to create additional off-street transit, bicycle, and pedestrian facilities. In all other respects, it is the same as Section A. A transition is needed between Section B and Section A to accommodate the change from a possible off-street transit corridor to on-street transit, as well as to accommodate the transition from a trail corridor to the urban trail depicted in Section A.

NORTH ZONE: SECTION A



NORTH ZONE: SECTION B



The street cross-sections illustrated above are as shown in the Renew North Nevada Master Plan. This Transportation Sub-Plan developed specific strategies utilizing the street elements presented in support of the larger goals of the Master Plan. Comments received during development of transportation strategies included a specific comment by the Citizen's Transportation Advisory Board to consider eliminating the sidewalk between the roadway and transit corridors in SECTION B. However, this Sub-Plan recommends that such a change to the Master Plan cross-sections shown be considered as specific transit solutions are further defined and implemented. Depending on implementation phasing and transit type, the sidewalk as shown may provide a desired function.

CENTRAL ZONE MOBILITY GOALS:

- Include curb, gutter, sidewalk and bicycle lanes on North Nevada Avenue.
- Improve vehicular connectivity across Templeton Gap drainage by extending Cascade Avenue north and Mallow Road south.
- Improve east/west connectivity between Cascade Avenue and Stone Avenue.
- Encourage a new urban trail connection along Commerce Street/4th Street to connect Flanagan Park to the east with the Pikes Peak Greenway and Gossage Park to the west.
- Utilize the railroad right-of-way for trail and transit use.

CENTRAL ZONE

The preferred future land uses in the Central Zone support the creation of a employment hub to build upon the relocation of the National Cybersecurity Center to the Expo Center and the expanding UCCS medical programs. The Master Plan also calls for new housing, both market rate and affordable, to support this employment growth, as well as redevelopment of the former Dog Track into a new destination and focal point for the corridor. Land uses in the redevelopment could include retail, entertainment, housing, and urban plazas. Mobility goals for the Central Zone call for improved street connectivity to help disperse traffic through the plan area.

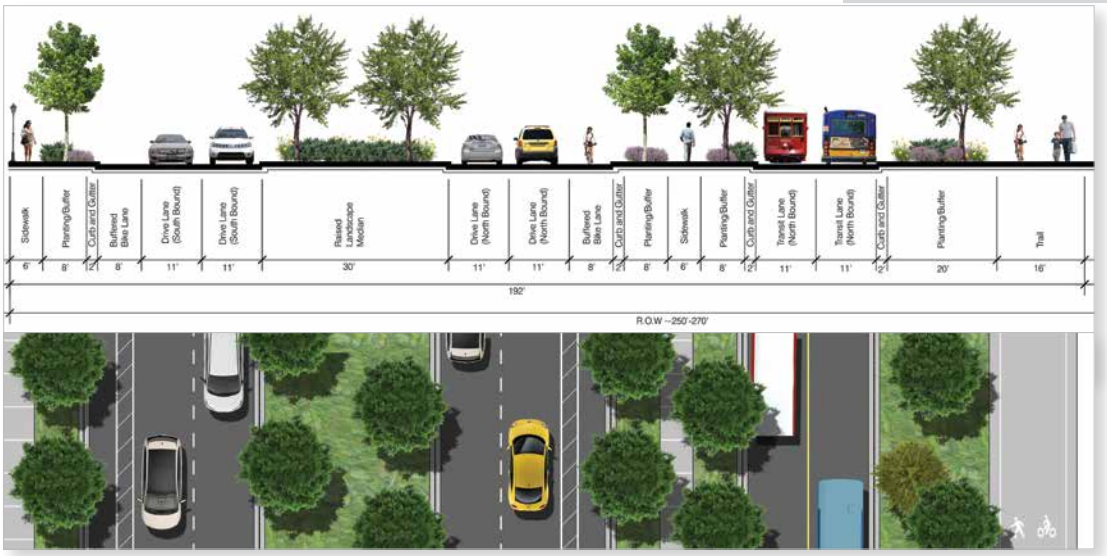
NORTH NEVADA AVENUE IN THE CENTRAL ZONE

Only one street cross-section for Nevada Avenue is recommended for the Central Zone of the corridor, as the railroad right-of-way runs along the entire length of this zone. The desired cross-section provides four travel lanes with a central median, a buffered bicycle lane, tree lawn, and off-street transit and trail throughout this zone.

With the City's potential acquisition of the railroad right-way-by, there would be additional space available to accommodate SECTION B, which is the widest of the proposed street cross-sections. There will be approximately 60–80 feet of additional unused right-of-way available.

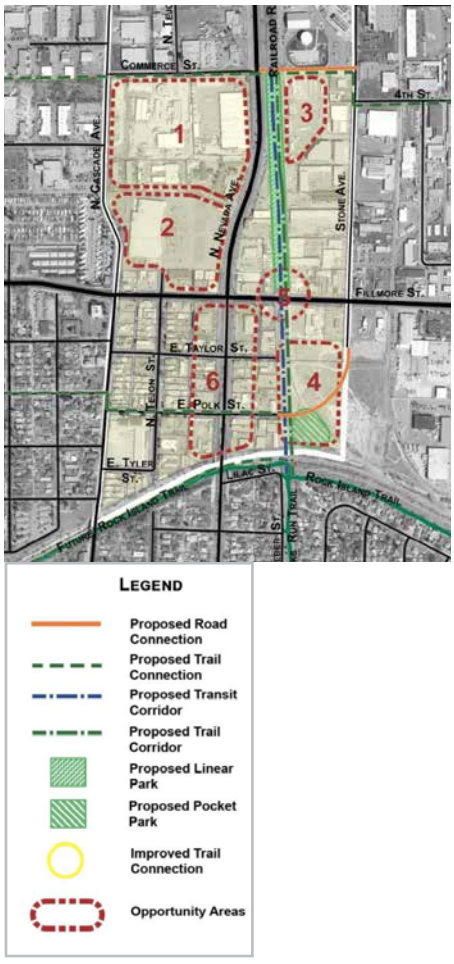
The street cross-section illustration below is shown in the Renew North Nevada Master Plan. This Transportation Sub-Plan developed specific strategies utilizing the street elements presented in support of the larger goals of the Master Plan. Comments received during development of transportation strategies included a specific comment by the Citizen's Transportation Advisory Board to consider eliminating the sidewalk between the roadway and transit corridors. However, this Sub-Plan recommends that such a change to the Master Plan cross-sections shown be considered as specific transit solutions are further defined and implemented. Depending on implementation phasing and transit type, the sidewalk as shown may provide a desired function.

CENTRAL ZONE: SECTION B



SOUTH ZONE MOBILITY GOALS:

- Include curb, gutter, sidewalk and bicycle lanes on North Nevada Avenue.
- Extend Polk Street to the east and north to connect to Fillmore Street, which will open up the vacant parcel in the southeast corner of the zone.
- Provide a transit stop where the proposed transit corridor will intersect Fillmore Street.
- Encourage a new urban trail connection along Polk Street to Pikes Peak Greenway to the west.
- Utilize the railroad right-of-way for trail and transit use.



SOUTH ZONE

The Master Plan recognizes the South Zone as the corridor transition to the older part of the City to the south of the railroad, regardless the South Zone has an opportunity to evolve into a vibrant area providing local employment, services, and entertainment to the surrounding neighborhoods in a walkable and attractive environment.

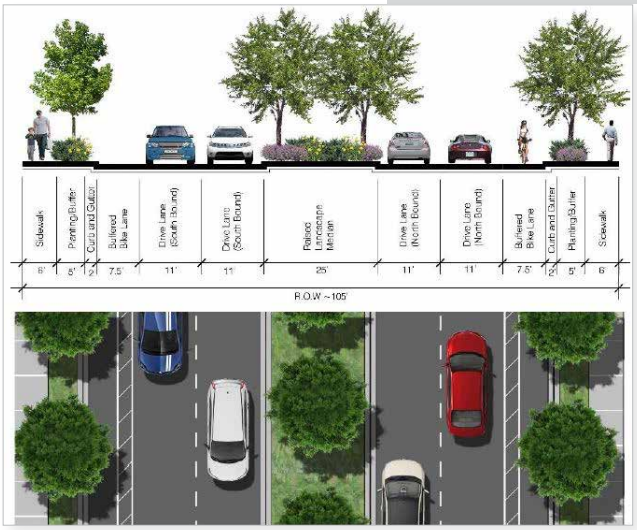
The Master Plan identifies a continuation of the rail corridor as either a transit or trail corridor, or the combination of both, to and across the Rock Island Railroad. This corridor would foster connectivity with the downtown area and link the corridor to the existing trail network. The Master Plan seeks to harness the potential of the unique Alexander Film buildings for more creative uses. The Master Plan also suggests a redevelopment of the Kmart site with a mix of retail, restaurants, and high-density housing, as well as the redevelopment of the lumberyard with more compatible employment uses. The southern parts of the South Zone are encouraged to strengthen the historic character by encouraging appropriately scaled retail, restaurant, and business uses.

NORTH NEVADA AVENUE IN THE SOUTH ZONE

The South Zone has four recommended street-sections due to the different character and function of North Nevada Avenue through this Zone and the varying right-of-way width. From Commerce Street to Fillmore Street, the available right-of-way on Nevada Avenue significantly narrows. There is insufficient width to include the same amenities as provided in the North and Central Zones. For this reason, two alternate sections are proposed:

SECTION C1 includes four travel lanes, a buffered bicycle lane, tree lawn and sidewalk. Narrowing of the existing medians would be needed to accommodate the bicycle lanes.

SOUTH ZONE: SECTION C1

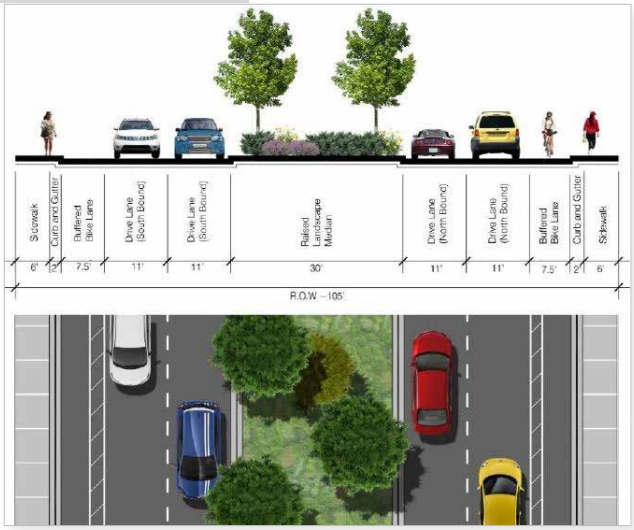


SECTION C2 retains the existing median widths but eliminates the tree lawn on each side of the street. It will also be necessary to incorporate turn lanes at the intersection with Fillmore Street. At this point, the median will have to taper out as it does today, and it may be necessary to reduce the width of the bicycle lanes and possibly remove the buffer.

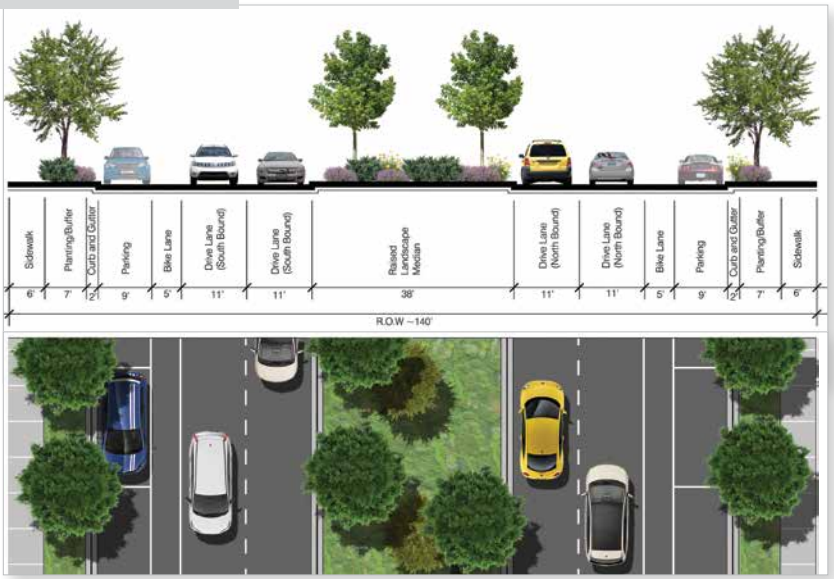
SECTION D applies only to the area south of Fillmore Street. The principal distinction is the inclusion of on-street parking to support the existing and proposed businesses in this sector. While a bicycle lane is included, there is insufficient right-of-way width to include a buffer. However, the introduction of on-street parking should help to slow traffic down so the absence of a buffer is not as critical.

SECTION E identifies the possibility of the proposed continuation of the transit and trail corridor in the railroad right-of-way. The part of the railroad from the lumberyard south is still active so this section could only be implemented when the use of the railroad ceases and if the City is able to acquire it.

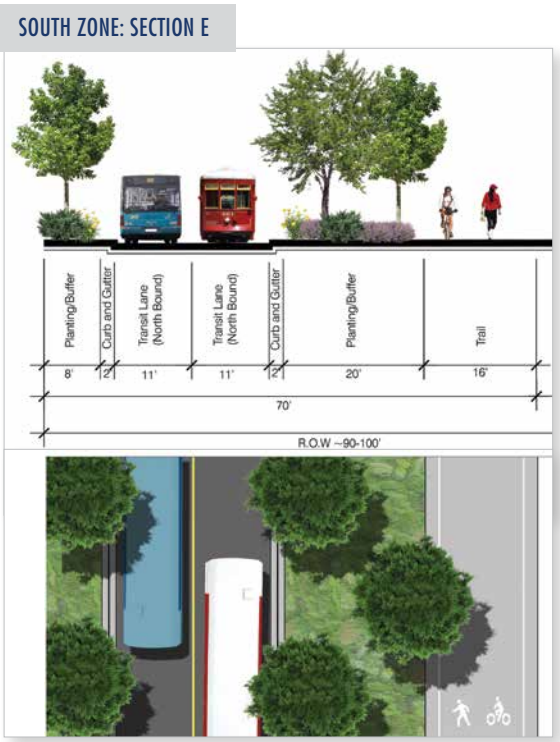
SOUTH ZONE: SECTION C2



SOUTH ZONE: SECTION D



SOUTH ZONE: SECTION E



CHAPTER 2 | PROCESS

The Transportation Sub-Plan process was built and executed to identify and develop transportation choices that would support the recently adopted Renew North Nevada Master Plan. It included additional public engagement to identify and communicate the challenges and opportunities associated with transportation for the study area. The process identified key elements and strategies that support the economic and character goals of the Master Plan.

The process began with a robust evaluation of existing traffic and traffic forecast from Master Plan future land uses. This evaluation considered the land use mix and the associated trips generated to analyze traffic operations in the corridor. The study also examined other challenges to personal mobility, safety, access, and the economic development and community character goals of the Master Plan.

CHALLENGES AND OPPORTUNITIES

The evaluation identified a range of challenges and opportunities for transportation improvements in the study area. Primary challenges include:

- Key corridor intersections are performing poorly with current levels of traffic and are forecasted to worsen.
- Redevelopment of the area will generate additional trips as land uses evolve from industrial to office, commercial, and housing.
- The Master Plan's adopted four-lane section for Nevada Avenue supports the desired community character goals, but must also continue to serve the transportation needs.
- The current Nevada Avenue mostly resembles its former role as a state highway with high speeds, large building setbacks with parking in the front, and poorly defined roadway edges that do not communicate a place for pedestrians, parking, or building access.
- The north end of the study area near the UCCS campus is a large-scale commercial corridor. The south end of the corridor enters the historic Old North End Neighborhood (ONEN) where a stately streetscape, on-street parking, and changes in land use reflect a dramatic shift in context. The Renew Nevada Avenue Master Plan and this Transportation Sub-Plan must transition and seamlessly blend these contexts.
- The transportation system must continue to serve today's residents and travelers, while being adaptable to support future land uses as redevelopment occurs.

While the transportation system in the area faces many challenges to realize the vision of the Master Plan, there are also many identified opportunities where investments can make significant improvements.

- Improvements to Nevada Avenue intersections can improve Level of Service (LOS) operations.
- A more robust street network that leverages new and existing connections can also improve traffic flow, enhance safety and walkability, and support development of the desired urban, mixed-use neighborhood.
- There is a significant amount of existing right-of-way along Nevada Avenue and the opportunity to preserve more within the former railroad alignment.
- An opportunity exists to significantly enhance trail and transit connectivity throughout the study area.
- Many opportunity investments are complementary and serve multiple modes of transportation, while supporting the Master Plan goals for neighborhood character and redevelopment.
- Transportation choices are intrinsically linked to land use, and transportation investments can catalyze private investment for redevelopment.

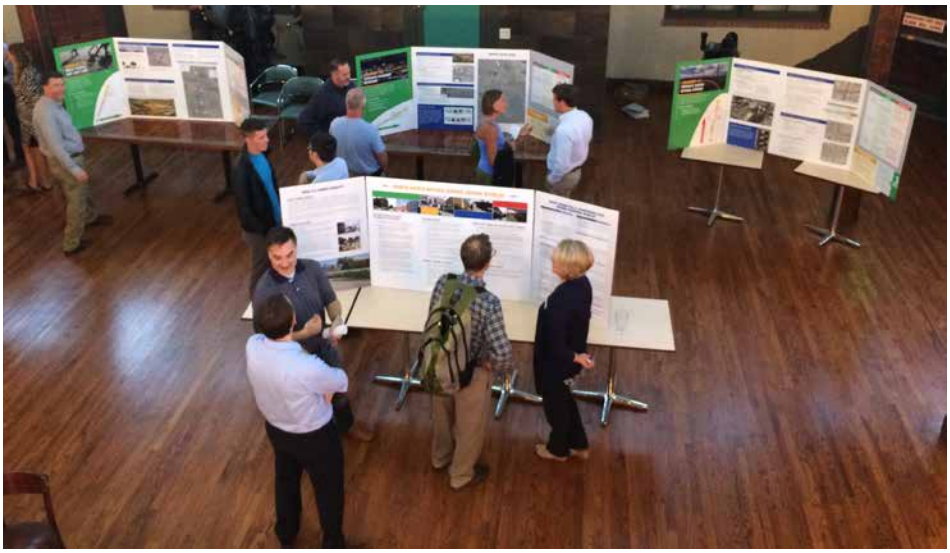
PUBLIC ENGAGEMENT

The Transportation Sub-Plan process included outreach to stakeholders through one-on-one meetings. Two specific public outreach activities were conducted in addition to the information shared through project links on the City's website.

The overall focus of the engagement process was to build upon the extensive efforts conducted during development of the Master Plan and solicit input on the transportation-related elements that would support the vision established in the master planning process. With the vision and transportation guiding principles set by the Master Plan, the engagement activities focused on feedback to various transportation strategies and identification of specific opportunities and challenges.

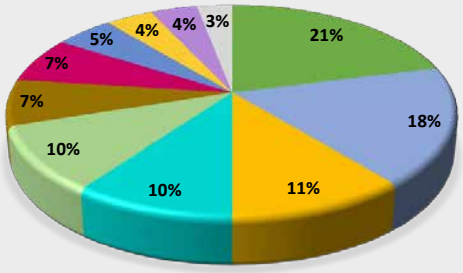
PUBLIC OUTREACH EVENTS INCLUDED:

- Project Presentation and Workshop on July 20th, 2017
- Project Open House on August 23rd, 2017



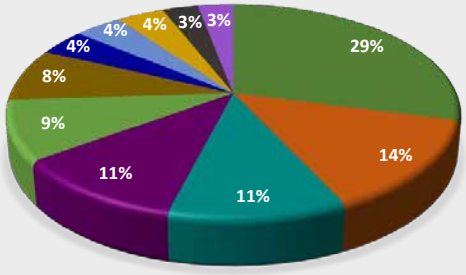
Workshop and Open House attendees were invited to leave written comments. A summary of the topics covered by the comments received appear below. Specific comments are included in the public engagement Appendix to this Transportation Sub-Plan.

FUTURE TRANSPORTATION ISSUES



- Strategy #3 - Move People, Not Just Cars
- Strategy #2 - Leverage Roadway Network
- Roadway design
- Alternate transportation
- Potential ONEN impacts
- Meeting/process
- Comprehensive view
- Corridor improvements
- Speed limits
- Other
- Truck traffic

COMMENTS REGARDING TRANSPORTATION SUB-PLAN



- Area roadways
- Bicycle/pedestrian
- Public process
- Truck traffic
- Sub-Plan
- Zoning overlay
- Trolley/light rail
- Parking
- Transit
- Other
- Implementation

PROJECT PRESENTATION AND WORKSHOP

The presentation and workshop event was conducted to present initial findings of the study team relative to existing and forecasted traffic conditions. Information was shared regarding the interaction of land use and transportation and the impacts of trip generation, community character, safety, and mobility choices. Nearly 70 people attended this workshop.

The team made a summary presentation of the range of potential strategy choices and their impacts. The presentation was followed by smaller group activities to solicit input on the perceived strengths and weaknesses relative to the transportation strategies and to identify any items the study should consider moving forward. Individual small groups reported back to the larger group to exchange ideas and concerns.

OPEN HOUSE

The Open House format was designed to respond to comments from the first public workshop. The information presented included detailed information on transportation strategies and their relationship to the Master Plan. Adjustments to the strategies were also made to respond to public comments. For example, traffic calming features were specifically added to the roadway network identified as Strategy #2 to mitigate potential impacts of additional traffic.

Over 90 people signed in as attendees of the Open House. There were additional attendees who declined to sign in or were not captured in the initial rush of people. The Open House consisted of a series of information stations covering specific topics. These included:

- Relationship to the Master Plan
- Relationship to Other Plans
- Transportation Sub-Plan Goals and Strategies
- Strategy #1 – Improve North Nevada Avenue
- Strategy #2 – Leverage Road Network
- Strategy #3 – Move People, Not Just Cars
- Transit Decisions
- Zoning Overlay to Support the Master Plan (Separate City Initiative)
- Recommendations of the Study Team
- Next Steps

CHAPTER 3 | EXISTING CONDITIONS

This Transportation Sub-Plan is intended to support a long-range vision for the North Nevada corridor that includes significant changes to land use and neighborhood character. Transportation improvements designed to support these changes are driven less by existing conditions and more by Master Plan goals for redevelopment, neighborhood character, and the desire to create an active, safe, walkable, mixed-use urban place.

An understanding of existing transportation conditions and the context of the area serves to define a baseline condition. The evaluation of existing conditions also serves to identify improvements that may be required regardless of future development, but still serve the public interest. The existing conditions and transportation-related context are described below.

EXISTING ENVIRONMENT

Nevada Avenue was a state highway and the gateway from the north to Colorado Springs. It was lined with hotels and motels, restaurants, and tourist shops. Today, remnants of these land uses are still evident. With the building of Interstate 25 (I-25) in 1960, much of the traffic heading south bypassed Nevada Avenue and it was no longer the gateway to the city. It remained a business loop for I-25 until it was reverted to local control in 2007 as part of a trade for the state taking over Powers Boulevard to the east.

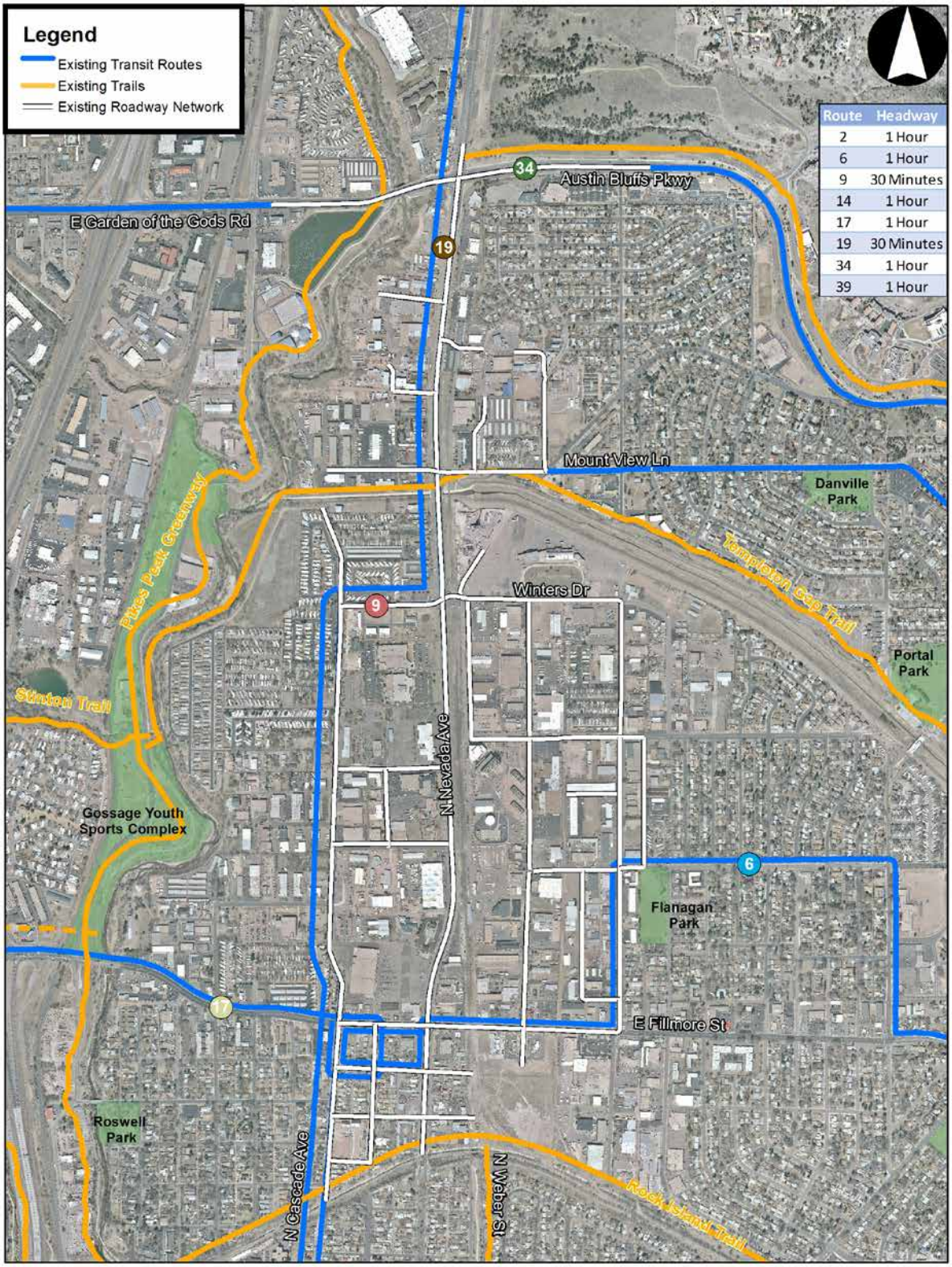
STREET NETWORK

North Nevada Avenue is oriented north/south and is generally parallel to I-25. It connects to the interstate north of the study area and is connected west of the study area via Fillmore Street and Garden of the Gods Road.

North of downtown, Nevada Avenue is flanked by Weber Street and Wasatch Avenue on the east. These parallel roadways end at the Rock Island Railroad that separates the Historic ONEN from the study area.

While there is a section of Weber Street further north, it is a remnant and does not connect to Weber Street further south. Weber and Wasatch Streets are not alternative, parallel roadways that connect to Austin Bluffs Parkway and the University. To the west, Tejon Street continues to just north of Fillmore Street. A block east of Tejon Street, Cascade Avenue parallels North Nevada as far as the Templeton Gap Floodway.

EXISTING CONDITIONS



With the streets parallel to the North Nevada corridor not being continuous, there are no opportunities for Nevada Avenue traffic to choose alternate routes between Garden of the Gods Road/Austin Bluffs Parkway and Winters Drive. However, Mountain View Lane connects to Austin Bluffs Parkway at the east end of UCCS via Meadow Lane.

NEVADA AVENUE

The roadway has two lanes in each direction with turn lanes at the major intersections at either end. The street is wide and the right-of-way even wider, especially combined with the former railroad corridor on the east side.

The sections south of Templeton Gap generally have an unpaved median and a striped paved median north of it. Those medians closest to the southern end have trees and shrubs. The medians just south of Templeton Gap are mostly bare soil with weeds.

This wide street, with many building setbacks, parking in front, and lack of a defined edge, has the look and feel of an older industrial area. Observed speeds tend to be significantly higher with few signals or other visual cues to reduce speeds. Combined with this high-speed traffic, a lack of curb, gutter, and sidewalk or other edge of roadway features creates an industrial character that may conflict with adjacent neighborhoods and the University campus. Unstructured parking and random access points exacerbate this condition.

PEDESTRIAN / BICYCLE FACILITIES

Though this corridor is clearly not a place designed for pedestrian and bicycle activity, there are many who use this corridor via these transportation modes. Because there is no definition to the edge of the road and parking areas, the pedestrian, vehicular, and bicyclist movements are not predictable, causing safety concerns from conflicts as they access properties at will. There are only intermittent sidewalks, often no curb and gutter, and unusual setbacks that all contribute to the lack of defined spaces for various modes of travel and how they should interact.

Pikes Peak Greenway Trail runs generally north/south west of Nevada Avenue along Monument Creek from near Woodmen Road in the north to the City's southern border just north of Academy Boulevard. The Templeton Gap Floodway also has a pedestrian and bicycle trail that connects to the Pikes Peak Greenway, Palmer Park, and other trails and open spaces. Nevada Avenue provides one of the few bridges across the Gap. Trail connections between the northern portions of the Pikes Peak Greenway and the eastern portions of the Templeton Gap Trail require a lengthy detour to the south to cross Monument Creek.

PARKING

The newer buildings along the corridor have well marked, specific parking areas, generally in front of the buildings. Most of the corridor with its older buildings has highly variable parking and access, partially due to the lack of curb and gutter or defined parking spaces. The right-of-way is often utilized for parking in front of businesses.

TRANSIT

The study area is currently served by eight bus transit routes with headways ranging between 30 minutes and one hour. These routes do not use Nevada Avenue in the study area except north of Winters Drive to the UCCS campus.

The Master Plan includes a stated objective to utilize the former railroad right-of-way along Nevada Avenue as a future transit and trail corridor. The specific transit solution type or timing is not yet determined. Mountain Metro will be conducting a transit alternative analysis to determine the community's transit solution.

CURRENT TRAFFIC

Nevada Avenue operates two through lanes of travel in each direction with a posted speed limit of 45 mph through the northern section of the study corridor and a 35 mph speed limit through the southern section and Fillmore Street intersection, north of Garden of the Gods Road.

Existing traffic counts showed daily traffic volumes of around 22,000 vehicles per day from Fillmore Street to Winters Drive. 30,000 from Winters Drive to Austin Bluffs Parkway/ Garden of the Gods Road, and over 36,000 north of Austin Bluffs Parkway/ Garden of the Gods Road.

Garden of the Gods Road/Austin Bluffs Parkway operates three lanes of travel in each direction with a posted speed limit of 40 mph. Mount View Lane and Winters Drive operate one lane of travel in each direction with posted speed limits of 35 and 30 mph, respectively. Fillmore Street operates two lanes of travel in each direction with a posted speed limit of 35 mph.

Garden of the Gods Road and Fillmore Street extend to the west and have interchanges with I-25. Garden of the Gods Road/Austin Bluffs Parkway and Fillmore Street are regional arterials that serve east/west travel in the northern Colorado Springs area, whereas Mount View Lane and Winters Drive only provide local access to the residential areas to the east. These roadways do not cross Monument Creek to the west.

The existing intersection of Garden of the Gods Road/Austin Bluffs Parkway and Nevada Avenue is signalized with protected dual left turn only turns on all approaches. The Mount View Lane and Nevada Avenue existing intersection is signalized with split phasing on the eastbound and westbound approaches. The intersection of Winters Drive and Nevada Avenue is signalized with protected-permissive phasing on all approaches. The existing signalized intersection of Fillmore Street and Nevada Avenue operates with protected-permissive eastbound and westbound left turn phasing and northbound and southbound protected left turn only phasing.

Existing traffic operations were analyzed to assess current LOS based on intersection delay at the signalized intersections. The results of this analysis are shown in Table 1.

TABLE 1: EXISTING INTERSECTION LEVEL-OF-SERVICE SUMMARY

	AM		PM	
	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS
Austin Bluffs Pkwy / Nevada Ave	57.0	E	191.2	F
Mount View Ln / Nevada Ave	19.7	B	90.2	F
Winters Dr / Nevada Ave	25.7	C	46.0	D
Fillmore St / Nevada Ave	48.5	D	93.4	F
Cascade Ave / Fillmore St	26.5	C	38.9	D
Stone Ave / Fillmore St	13.8	B	26.6	C
El Paso / Fillmore St	18.2	B	27.6	C

FORECAST FUTURE TRAFFIC: TRIP GENERATION SUMMARY

The Master Plan splits the land use analysis into three zones: North, Central, and South. Change in acreage of each land use type was calculated for each scenario (acreage of a particular land use in the preferred scenario minus the acreage of the same existing land use). These changes in acreage per land use were then multiplied by trip generation rates to determine new trips generated by each analysis zone. Table 2 includes a summary of the total trips generated by each of the Master Plan Zones.

Table 3 provides the results for of the future LOS for the study area intersections if no action is taken to mitigate the traffic generated by the Master Plan coupled with forecasted regional growth projected to a plan year of 2040.

Note that the intersections of Garden of the Gods Road/Austin Bluffs Parkway, Mount View Lane, Fillmore Street will perform at unacceptable levels to the City.

TABLE 2. TRIPS GENERATED BY EACH MASTER PLAN ZONE

ZONES	FORECASTED DAILY TRIPS
North Zone	9,097
Central Zone	10,249
South Zone	9.036
TOTAL	**28,382**

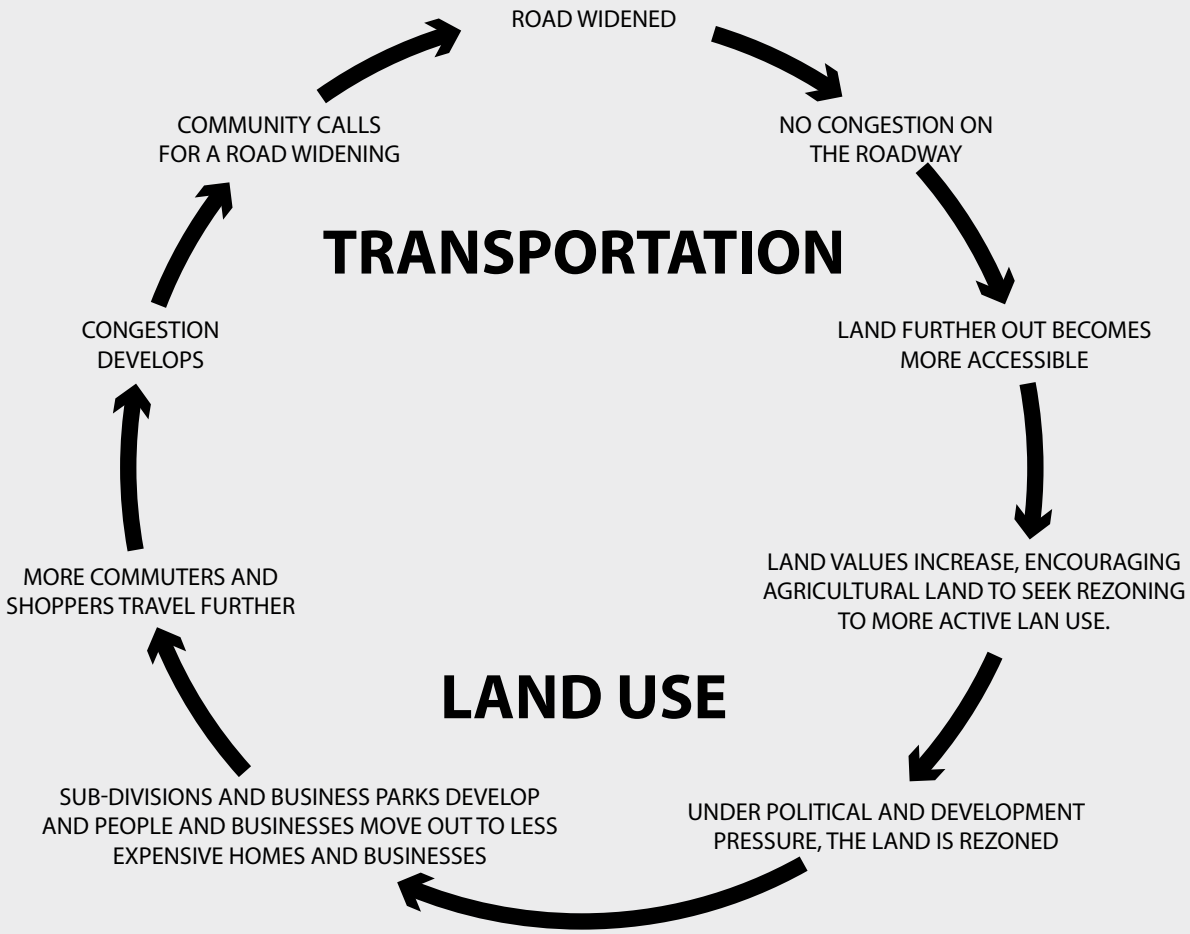
TABLE 3: FUTURE INTERSECTION WITH NO ACTION LEVEL-OF-SERVICE SUMMARY	AM		PM	
	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS
Austin Bluffs Pkwy / Nevada Ave	71.17	E	191.22	F
Mount View Ln / Nevada Ave	72.56	E	169.17	F
Winters Dr / Nevada Ave	141.50	F	105.31	F
Fillmore St / Nevada Ave	48.20	D	93.39	F
Cascade Ave / Fillmore St	28.41	C	38.85	D
Stone Ave / Fillmore St	17.67	B	26.58	C
El Paso / Fillmore St	19.33	B	27.57	C

The traffic analysis of current and future conditions confirms that investment in transportation should be considered at key locations. For example, the Nevada Avenue and Austin Bluffs Parkway/Garden of the Gods Road intersection is currently failing and will only get worse with anticipated regional growth, regardless of redevelopment.

CHAPTER 4 | PRINCIPLES OF INTEGRATED LAND USE & TRANSPORTATION

Transportation systems play a critical role in defining the character of any community. They establish the functional structure of the urban fabric: sizing blocks, providing access, and dictating the arrangement and interaction of land uses.

Changes to the transportation infrastructure have a direct impact on land use. Roadway widening alter travel patterns encouraging land use changes which in turn further burden the transportation system.

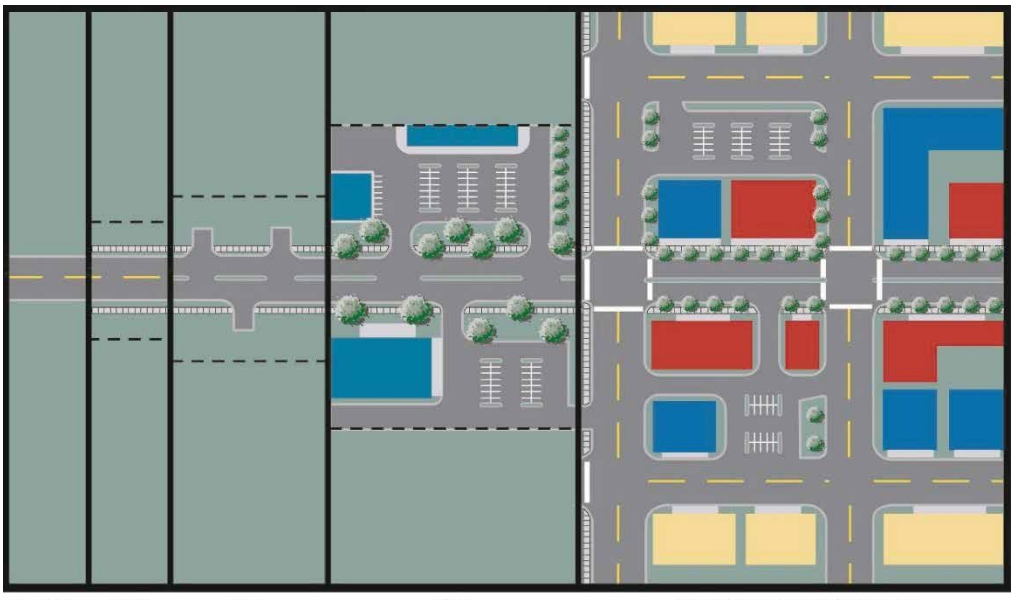


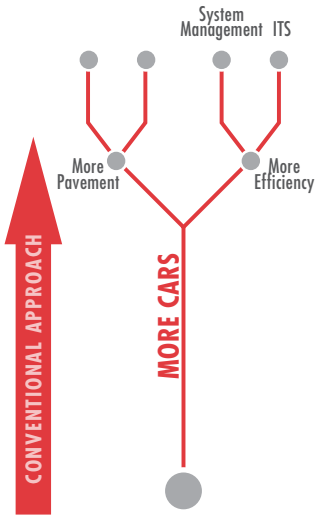
THE EVOLUTION OF TRANSPORTATION PLANNING & INTEGRATION WITH LAND USE

Transportation planning has evolved as its relationship with land use has become better understood. In the beginning, when there was no understanding of the relationship between the two disciplines, roadway engineers focused solely on extending the life of the street's surface through pavement management.

As the relationship between land use and transportation evolved, engineers soon realized land use planning could preserve future roadway needs through development approvals and right-of-way management strategies. And when road widening became more expensive, engineers developed access management plans, limiting the number of driveways and regulating the spacing of intersections, to increase the efficiency of corridors.

The evolution of transportation planning soon engaged both planners and engineers in outlining corridor plans for both transportation investments and land use allocations; yet, that was not enough. The next step in the evolution of transportation planning and its integration with land use looks beyond the corridor to include parallel roadways and planning complete communities through and engaged visioning process. Some of the most effective transportation solutions come from land use decisions outside of a roadway's corridor. Effective subdivision regulations requiring connectivity can create alternative routing for motorist and prevent additional capacity needs for an individual corridor. Successful integrated land use and transportation plans provide engineers the opportunity to create truly context sensitive solutions that can fit within the character of the surrounding community.



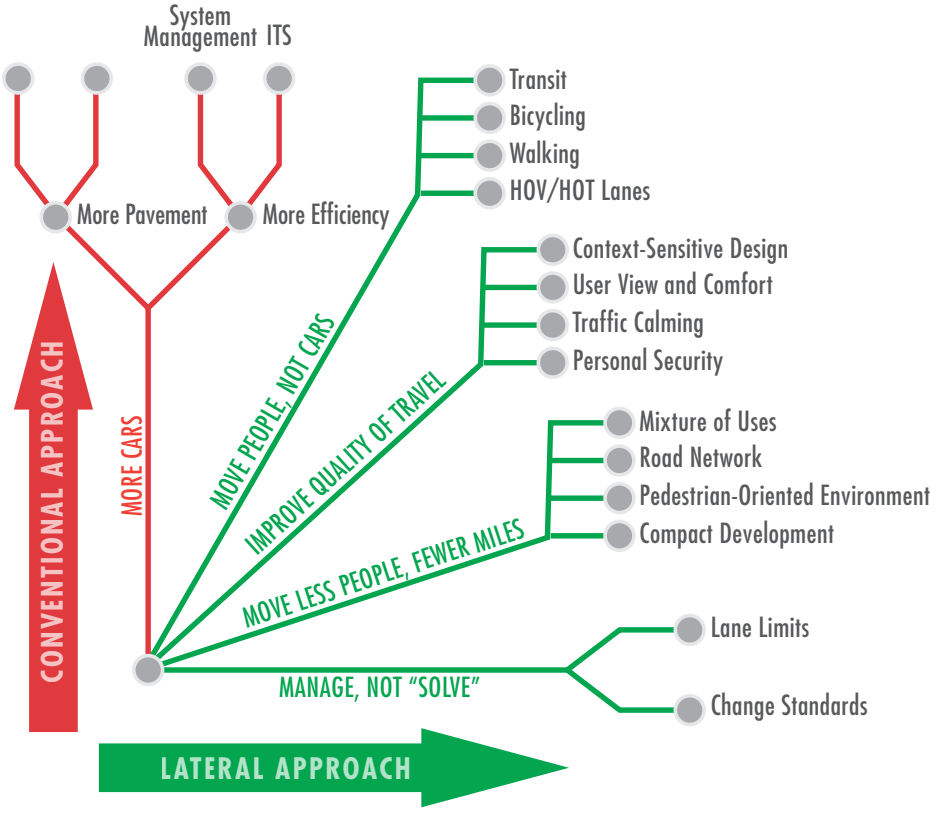


CONVENTIONAL APPROACH TO TRANSPORTATION PLANNING

Since the 1950s transportation professionals have been told to focus solely on moving more cars. As a result, transportation planners and engineers have focused on only two transportation solutions: make roads bigger or make roads more efficient. The consequences of these actions has not necessarily been productive. Growth in vehicle miles of travel is exceeding population and for the first time in modern human history, children are not expected to outlive their parents due to the obesity epidemic partially caused by our poor walking environment that encourage inactivity.

A BALANCED APPROACH TO TRANSPORTATION PLANNING

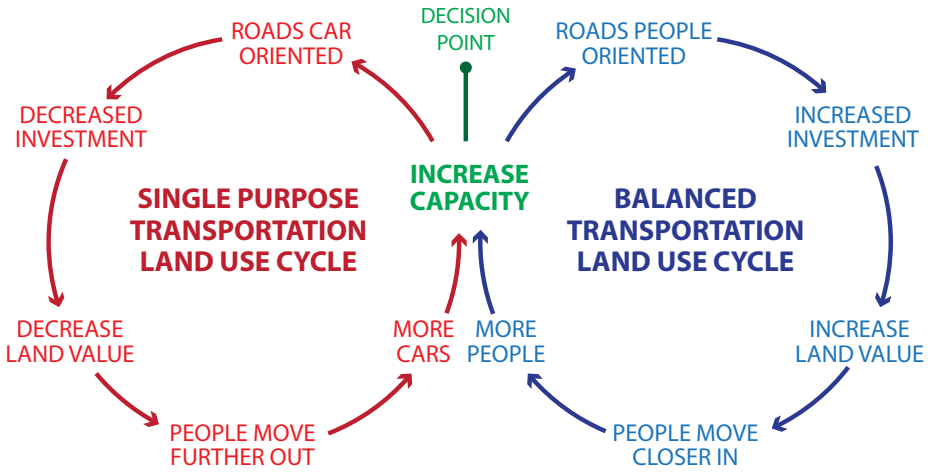
A balanced approach to transportation planning recognizes the interrelationship between land use and transportation planning. This approach broadens the definition of transportation planning to include the movement of people by cars, transit, bicycling, and walking. This approach also recognizes the value of improving the quality of a trip, as well as utilizing land use solutions to resolve transportation problems. The North Nevada Avenue corridor transportation planning should consider a range of strategies to meet transportation needs and support community goals for quality of life and community character.



TRANSPORTATION & LAND USE RELATIONSHIP

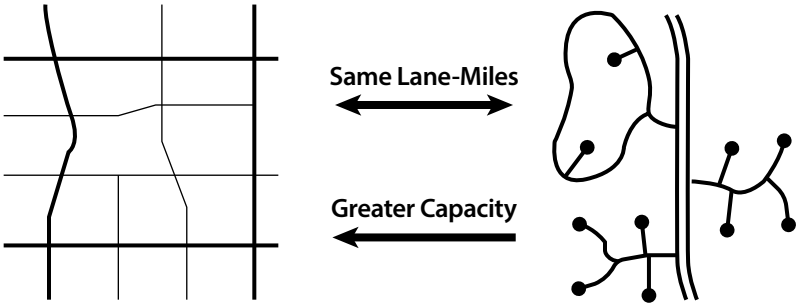
The transportation land use cycle illustrates how land development patterns in redeveloping areas are impacted by transportation investment. Typically, land development and private investment in redeveloping areas respond positively to transportation improvements that balance mobility with accessibility. Single purpose transportation investments that favoring mobility can restrict access and consequently reduce investment along a corridor.

This Transportation Sub-Plan presents a balanced transportation strategy focused on moving people and building community value within the North Nevada Avenue corridor.



STREET NETWORK

Basic transportation planning principles suggest that a traditional network of streets has more capacity than the suburban sparse hierarchy. The fundamental reason a network of small streets out performs a sparse hierarchy of streets is because streets become less efficient as their size increases. Instead of an efficiency of scale, as the street gets larger we experience a "diseconomy" of scale. A highly-connected grid of streets provides numerous, redundant opportunities to make left turns. This contrasts with a suburban sparse hierarchy in which left turns are gathered up from multiple locations and focused at a single location. The most sustainable long-term strategy for increasing vehicular capacity in the North Nevada Avenue corridor is focused on increasing the interconnectivity of the street network within the study area..

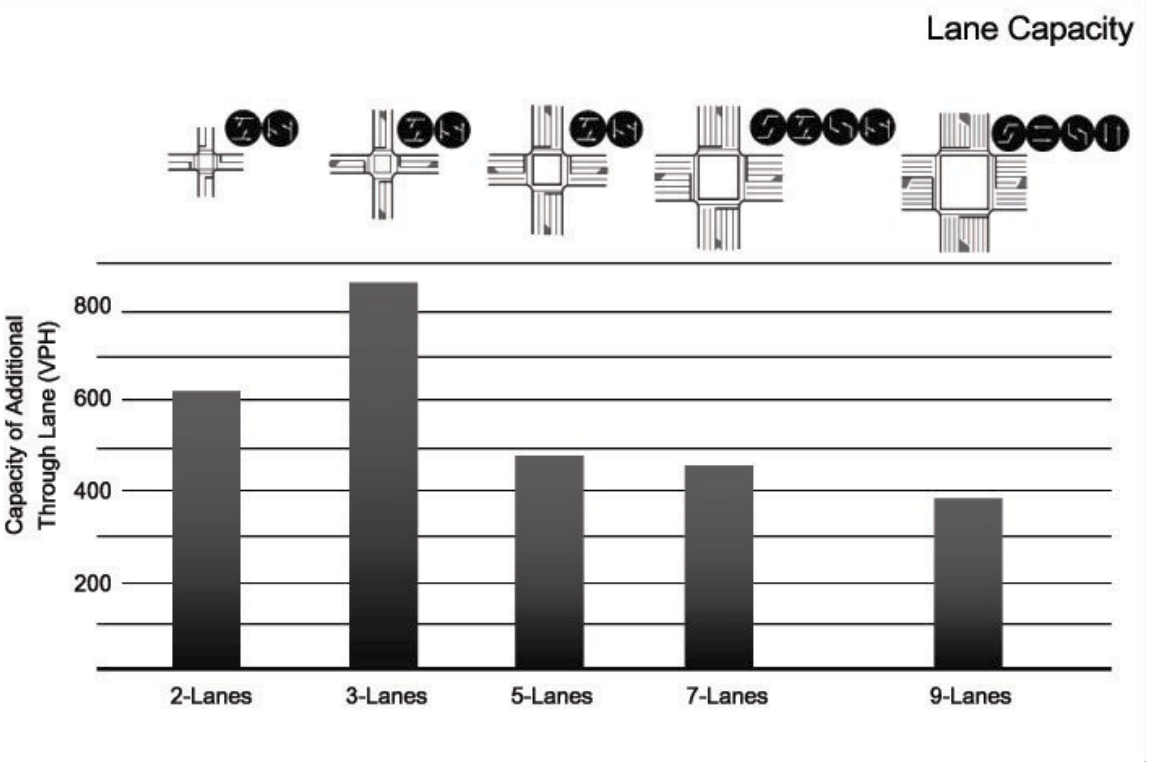


Traditional Network of Streets

Suburban Sparse Hierarchy

STREET SIZE

According to the Institute of Transportation Engineers (ITE), size matters. As roadways increase in size, they become less efficient. Roadway efficiency is measured by the number of cars per hour, per lane. As a roadway increases from a two-lane to a three-lane roadway, it increases its efficiency from approximately 600 cars per hour, per lane, to nearly 900 cars per hour, per lane. This increase results because in a two-lane situation, left-turning vehicles block through traffic.

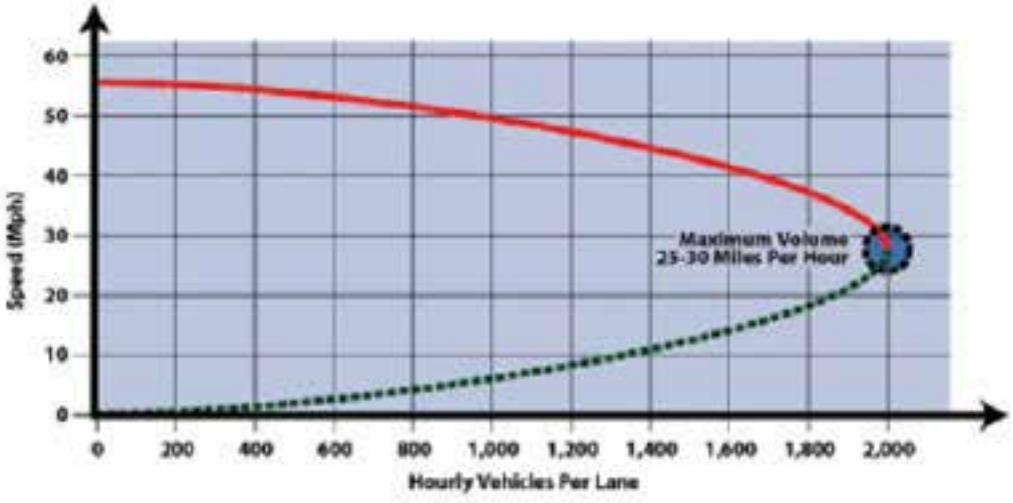


However, as roadways grow in size from a three-lane street to five- and seven-lane streets, efficiency falls from nearly 900 cars per hour, per lane, to 500 cars for a five-lane street and 450 cars per hour, per lane for a seven-lane street. This does not mean a three-lane street carries more cars than a seven-lane street, rather it indicates that two three-lane streets carry more cars than a single seven-lane street.

This is important to note because three-lane streets do not limit land use choices, discourage building from addressing the street, nor do they damage the quality of a walking and cycling environment. Residential, retail, and commercial land uses are all capable of succeeding while fronting a three-lane street. Pedestrians and cyclists also feel comfortable walking and riding along a three-lane street.

TRAVEL SPEEDS

A common misconception in transportation planning is that higher speeds allow for greater capacity than lower speeds. This is not true. According to the ITE's Highway Capacity Manual, a free-flowing roadway will carry more cars per lane between 25-30 mph than any other speed. With speeds higher than 30 mph, motorists allow for greater gaps between cars; with speeds lower than 25 mph, the efficiency of the roadway is compromised.



Speed-Flow Relationship

Vehicular speeds of 25-30 mph encourage a variety of land uses to front the street and are reasonable speeds for pedestrians and bicyclists sharing the corridor. Since capacity is not compromised with lower speeds, design solutions for roadway should limit corridor design speeds, and consequently posted speed limits to reasonable 30 and 35 mph.

Some will argue that local and arterial streets often do not offer free-flow conditions and speed is governed by the placement and timing of signalized intersections. In this frequent situation where signal progression dictates speeds lower than 30 mph, engineers should match a corridor's design speeds to that of the signal progression.

THE IMPACTS TO TRANSPORTATION DESIGN

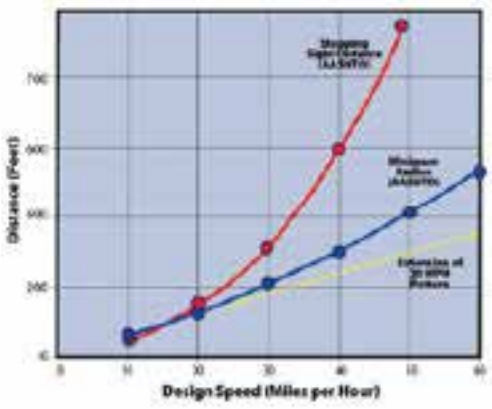
The ability of the built environment to accommodate multiple travel modes is directly impacted by the design speed of roadways. Tree placement along streets, the possibility of on-street parking, and even sidewalk locations are influenced by a roadway's design speed. Since speed controls the level of roadside improvements a community can make and impact clear zone distances. Interestingly, minor changes in design speed can leverage large gains for roadside treatments, such as street trees, lighting, and other pedestrian amenities. The graph below shows how stopping sight distances at various speeds are not linear, but exponential. Increasing speeds from 20 mph to 40 mph will not simply double stopping sight distance, it will increase stopping sight distance three-fold.

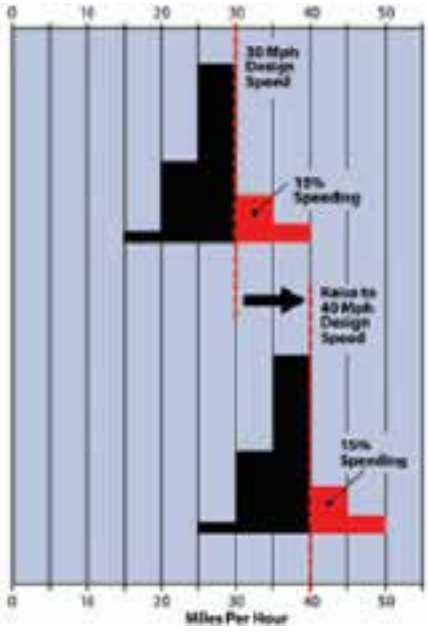
As a result, the vast majority of successful multimodal environments have lower roadway design speeds. Two different and completely reasonable approaches to roadway safety are employed throughout the United States. One approach resolves safety issues by increasing sight distances, such as flattening curves, eliminating conflicts, increasing signal spacing, and removing obstacles.

This approach to roadway design tend to follow the theory of random error—error that naturally occurs as a result of human fallibility. It assumes error is constant and fixed, and it strives for a single "fail-safe" design solution. This approach simplifies solutions behind the logic that humans make errors and a roadway should be "forgiving" when they do. The result is often a high design speed roadway with minimal obstacles and large clear zones for "cushion".

The increased sight distances approach to safety is a practical public policy as it delivers more predictable results for project budgets, schedules, and on-going public maintenance. However, this solution is most appropriate in high speed suburban environments within a single land use setting where the buildings are setback from the street. The increased design speeds associated with this safety strategy do not work well within slower speed urban settings because these environments require slower speed turning movements and the speed differentials become a systemic problem.

Additionally, increased roadway design speeds discourage walking, cycling, transit use, and the many curbside activities experienced in a mixed-use, urban setting.





A second approach to resolving safety concerns focuses on matching design speeds to the existing environment and its natural sight distances. This context sensitive approach ensures a street's design enables motorists to adequately react to curves, sight limitations, and potential conflicts as they arise.

This context sensitive approach to roadway design tends to identify solutions to resolve systematic error—the error resulting from mismatches in the interaction between people and their environment. This approach recognizes that roadway designs may produce error. Systematic errors occur when a roadway design encourages inappropriate expectations regarding safe operating behavior. Context-sensitive design is most appropriate in low speed environments within a more urban, mixed-use setting where there are slower turning movements, alternative modes of travel, and more activities closer to the street. This approach is generally more difficult to implement as public policy because of the custom nature of every solution and unpredictable impacts of solutions on projects budgets, schedules, and long-term maintenance.

In both approaches, best practices have found about 15 percent of the motoring public exceed the speed limit of the roadways' posted speeds. In the slower, more context-sensitive design approach, there are likely to be more potential conflicts than the improved sight distance solution, however, the severity of crashes are often far less significant than those speeding in a high speed design environment.

MOVING PEOPLE WITH TRANSIT

VEHICLE TRAVEL LANE
~ 800 people/hour

LOCAL BUS
15-MINUTE HEADWAY
~ 200 people/hour
Can supplement arterial capacity!

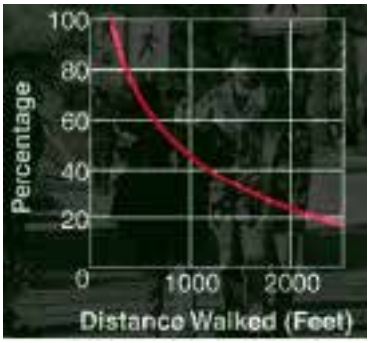
ENHANCED BUS
5-MINUTE HEADWAY
~ 1,200 people/hour

LIGHT RAIL
15-MINUTE HEADWAY
~ 2,400 people/hour

PEDESTRIAN ACCOMMODATION

A balanced transportation system is dependent on walking as the single transportation mode that begins each trip, links different modes of transportation, and completes each trip. A more balanced transportation systems effectiveness is determined by its ability to accommodate pedestrian movements. Walking distance and the quality of the walking environment influence the effectiveness of alternative modes of travel. Better pedestrian system design can encourage alternative modes of transportation and improve the effectiveness of transit. Every attempt should be made by planners and designers to improve the walking experience to make it more safe, convenient, and attractive.

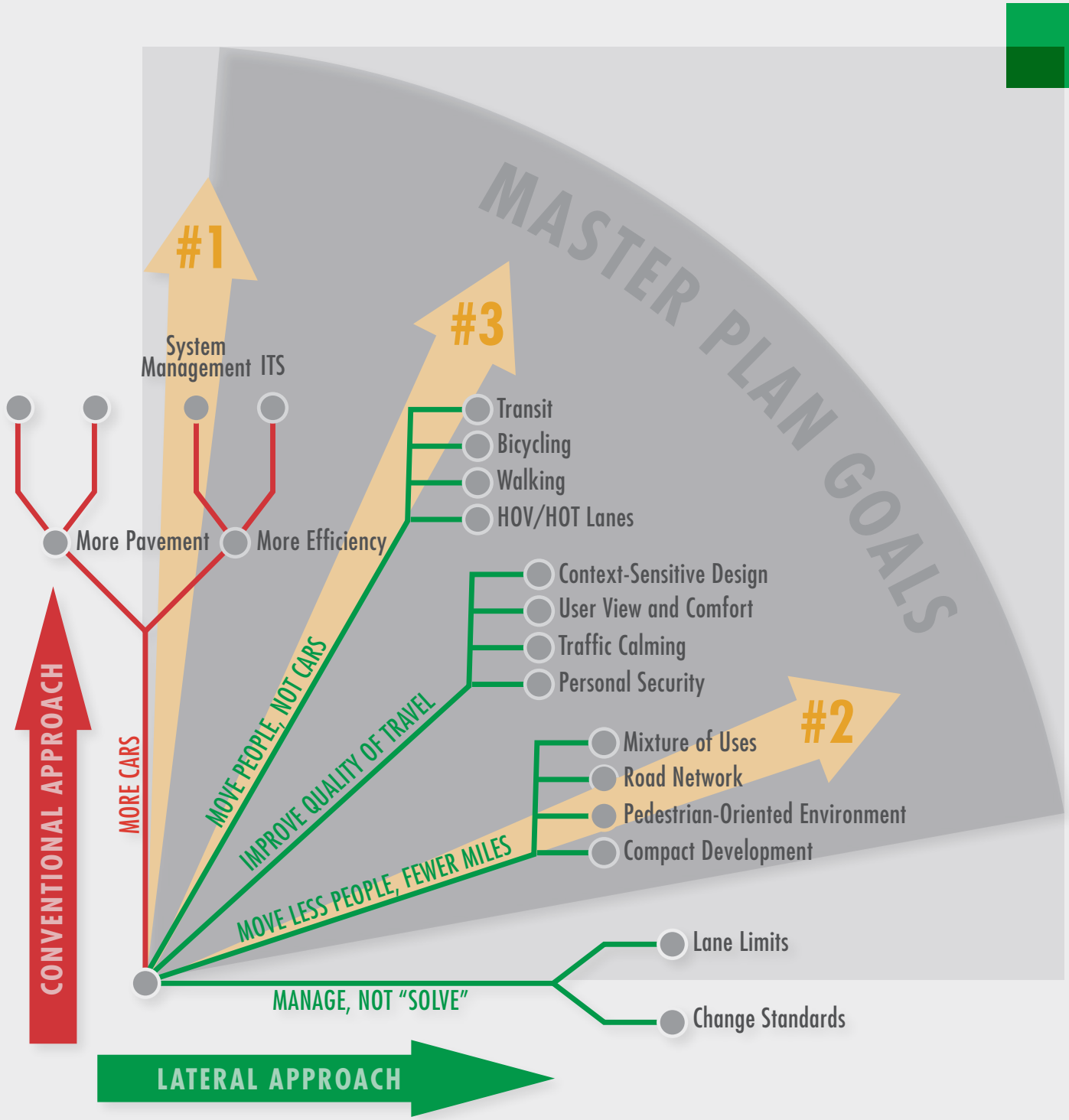
Walking is the most convenient means of transportation up to 500 feet. As distances increase, the car, bus or bicycle become more attractive. The present desire to walk in America is depicted by a steep, tapered curve with most people 70% willing to walk 500 feet, 40% willing to walk 1,000 feet, and the remaining tapering off until 10% are willing to walk a half-mile.



TRANSIT MOBILITY

Transit provides additional capacity for moving people. As headways (times between vehicles) decrease, transit efficiency increases.

The challenge for North Nevada Avenue corridor is to create a sustainable, more economically viable, livable corridor with a balanced transportation system where walking, biking, and transit are as valued as the automobile in providing viable forms of transportation.


MASTER PLAN GOALS
#1
System Management ITS
More Pavement
More Efficiency
#3
Transit
Bicycling
Walking
HOV/HOT Lanes
Context-Sensitive Design
User View and Comfort
Traffic Calming
Personal Security
#2
Mixture of Uses
Road Network
Pedestrian-Oriented Environment
Compact Development
Lane Limits
Change Standards
MORE CARS
MOVE PEOPLE, NOT CARS
IMPROVE QUALITY OF TRAVEL
MOVE LESS PEOPLE, FEWER MILES
MANAGE, NOT "SOLVE"
CONVENTIONAL APPROACH
LATERAL APPROACH

CHAPTER 5 | STRATEGIES

Three general strategies have been identified to support the vision of the Renew North Nevada Master Plan and to reinforce the creation of a more balanced transportation system.

Each of these strategies addresses specific transportation objectives of the Master Plan, supporting not only how people move, but also contributing to character of the corridor and livability of the neighborhood.

STRATEGY #1 IMPROVE NORTH NEVADA AVENUE

Focuses on improving transportation efficiency and safety of the North Nevada Avenue and its right-of-way

STRATEGY #2 LEVERAGE EXISTING ROADWAY NETWORK

Identifies larger roadway network improvements to improve the mobility of the entire corridor. A robust roadway network leverages available capacity for moving vehicles. It also supports the creation of a walkable mixture of land uses.

STRATEGY #3 MOVE PEOPLE, NOT JUST CARS

Outlines longer-term actions focused on moving people, not just cars. This third strategy focuses on providing safe and convenient choices for personal mobility, while also contributing to the overall land use vision of the corridor.

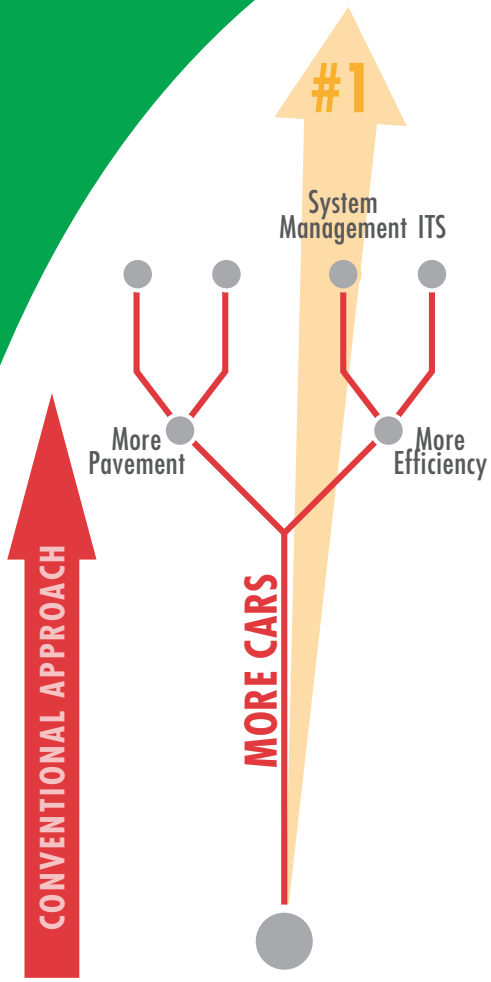
STRATEGY #1
IMPROVE NORTH NEVADA AVENUE

Follow a conventional approach to improving transportation function within a corridor. This strategy focuses on improving the movement of vehicles along North Nevada Avenue.

The following pages will explain our four actions along North Nevada Avenue that are included in this strategy.

WHAT IS THE OBJECTIVE?

- **Implement improvements to increase efficiency, enhance safety, and incorporate better access management practices to improve the current state of Nevada Avenue**



1. ACCESS MANAGEMENT

This strategy begins with developing access management strategies and actions for North Nevada Avenue. Access management generally refers to the regulation and management of driveways, median opening, and signal locations along a roadway. Its objectives is to enable access to land uses while maintaining roadway safety and mobility through controlling access location, design, spacing, and operation. Access Management also includes establishment of curb and gutter and sidewalks improvements to better define roadside activities including parking, pedestrian spaces, and vehicle access points.

EXAMPLE - EXPO CENTER:

- Existing median opening only serves one parcel.

POTENTIAL IMPROVEMENT:

- Shift the existing opening to the south and extend the access drive to Cascade Lane.

STRATEGY BENEFIT:

Reference map below for number associations below.

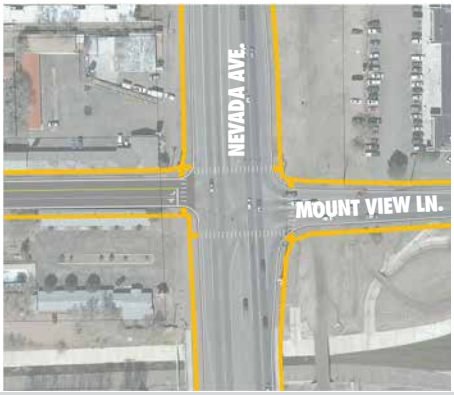
1. Provides multi parcel access for more efficiency
2. Allows for the opportunity to expand the east/west network connectivity
3. Reduces block sizes (increases walkability and fits the desired character)
4. Well-managed arterials are often 40-50 percent safer (per the Federal Highway Administration [FHWA]).

2. SIGNAL OPTIMIZATION

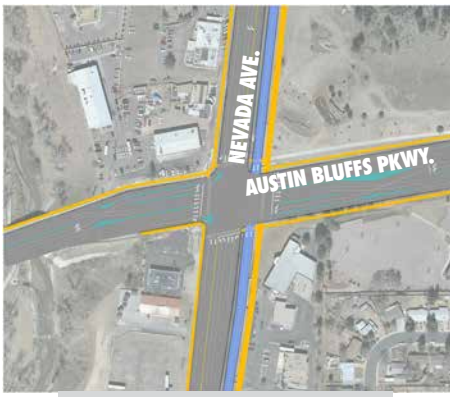
Revised signal timing along North Nevada Avenue will improve existing traffic operations.

STRATEGY #1 CONTINUED

WINTERS DRIVE AND NEVADA AVENUE INTERSECTION



MOUNT VIEW LANE AND NEVADA AVENUE INTERSECTION



AUSTIN BLUFFS PARKWAY AND NEVADA AVENUE CFI INTERSECTION

3. MINOR INTERSECTION IMPROVEMENTS

Several minor intersection improvements are recommended throughout the North Nevada Avenue corridor. These improvements will improve the general operations of each intersection, as well as efficiency and safety of all modes of travel.

WINTERS DRIVE/NEVADA AVENUE IMPROVEMENTS:

- Dual left turn for southbound movement
- Additional receiving lane on east leg of Winters Drive
- Add curb and gutter with sidewalks
- Add Americans with Disabilities Act (ADA) compliant pedestrian ramps
- Add reflective crosswalks
- Consider leading pedestrian interval

MOUNT VIEW LANE/NEVADA AVENUE IMPROVEMENTS:

- Dedicated eastbound left-turn lane
- Convert westbound shared thru/left lane to thru only to remove split phasing
- Add curb and gutter
- Add ADA-compliant pedestrian ramps
- Add reflective crosswalks
- Realign east and legs of Mount View Lane with redevelopment

4. MAJOR INTERSECTION IMPROVEMENTS

The Nevada Avenue/Austin Bluffs Parkway intersection requires major improvements irrespective of any redevelopment. “Outside the box” intersection improvements are necessary to improve traffic operations at this intersection. Traffic modeling has demonstrated widening Nevada Avenue to six lanes will not improve this already poor performing intersection. A planning level evaluation of various intersection types showed that a Continuous Flow Intersection (CFI) would improve operations and accommodate heavy left-turn volumes. A grade separated interchange would also improve operations, but may be cost restrictive and not compatible with the surrounding area’s desired character.

Results for Intersections

#	TYPE OF INTERSECTION	Sheet	Zone 1 (North) CLV	Zone 1 (North) V/C	Zone 2 (South) CLV	Zone 2 (South) V/C	Zone 3 (East) CLV	Zone 3 (East) V/C	Zone 4 (West) CLV	Zone 4 (West) V/C	Zone 5 (Center) CLV	Zone 5 (Center) V/C	Overall v/c Ratio	Ranking
4.1	Partial Displaced Left Turn	N-S	1040	0.65	741	0.46					1146	0.72	0.72	2
4.2		E-W					835	0.52	779	0.49	1382	0.86	0.86	3
5	Displaced Left Turn	FULL	1040	0.65	741	0.46	835	0.52	779	0.49	1078	0.67	0.67	1

IMPLEMENTATION	BENEFIT	CONSIDERATIONS
Major Intersection Improvements *Austin Bluffs Parkway/ Garden of the Gods Road*	Improves operational performance that is currently failing The overall intersection LOS can be improved from LOS E/F to an estimated LOS C/D, within the City's standard performance threshold	May require the reconstruction of the Monument Creek Bridge Potential right-of-way impacts and acquisition High capital cost and investment May complicate pedestrian/bicycle movements
Minor Intersection Improvements	Can include low cost improvements, such as signal optimization or re-timing Improves corridor efficiency by improving the Winters Drive and Mount View Lane intersections along Nevada Avenue Overall intersection LOS is improved by accommodating critical turning movements, e.g. Mount View's failing LOS is improved to LOS C/D, within the City's standard performance threshold	Will require higher cost improvements (e.g. realignment of Mount View Lane, east of Nevada Avenue) Potential right-of-way impacts and acquisition
Access Management	All groups (community, business owners, pedestrians, cyclists, and motorist) benefit Can improve east/west connectivity Provides a more efficient motorist experience by improving capacity and safety Improves the corridor character and aesthetics	Requires consolidation of Nevada Avenue business driveways/access points Planning and partnership is required to reduce risk that changes to access locations appear inconvenient

3 THINGS TO REMEMBER

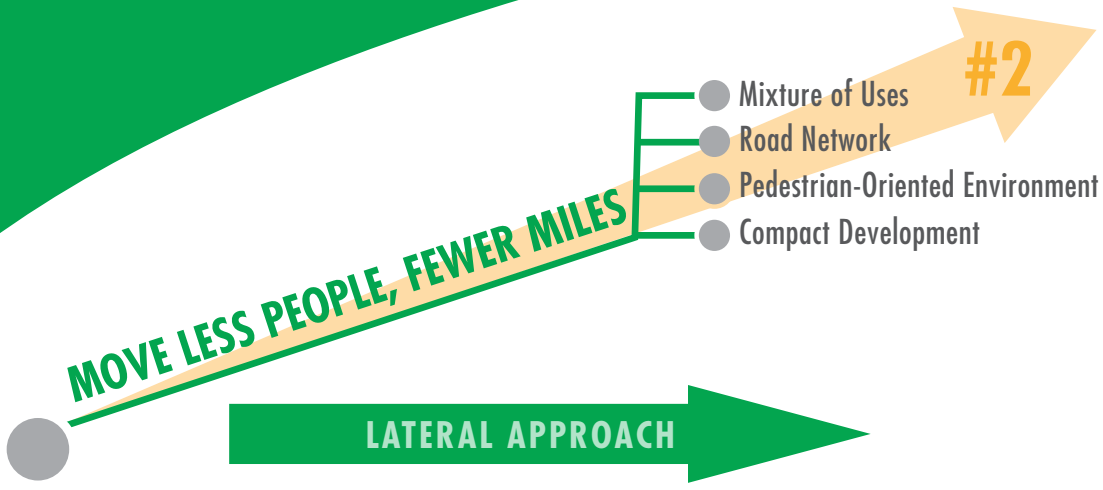
1. Improvements to North Nevada Avenue support the Master Plan vision by enhancing vehicular travel and safety of all users.
2. Many of these improvements can be implemented in the near term with relatively low capital cost.
3. The Nevada Avenue/Austin Bluffs Parkway intersection requires major improvements irrespective of any redevelopment.

STRATEGY #2
LEVERAGE THE EXISTING ROADWAY NETWORK

Employ more lateral thinking to consider the larger roadway network as one system. A robust roadway network leverages available capacity for moving vehicles and supports the creation of a walkable mixture of land uses.

WHAT IS THE OBJECTIVE?

- **Enhance network connectivity to better use available capacity**
- **Create opportunities to decrease block size and increase walkability**
- **Improve the pedestrian/bicycle environment by connecting to existing trail systems**



LEGEND:

AM/PM Level of Service (LOS) per Intersection

CASCADE AVENUE

Connecting Cascade Avenue to Mark Dabling Boulevard provides a secondary outlet for the northeast portion of the North Nevada Avenue study area. This connection would require a new bridge over the Templeton Gap Floodway and Monument Creek. This bridge connection would also enhance trail connections in the area.

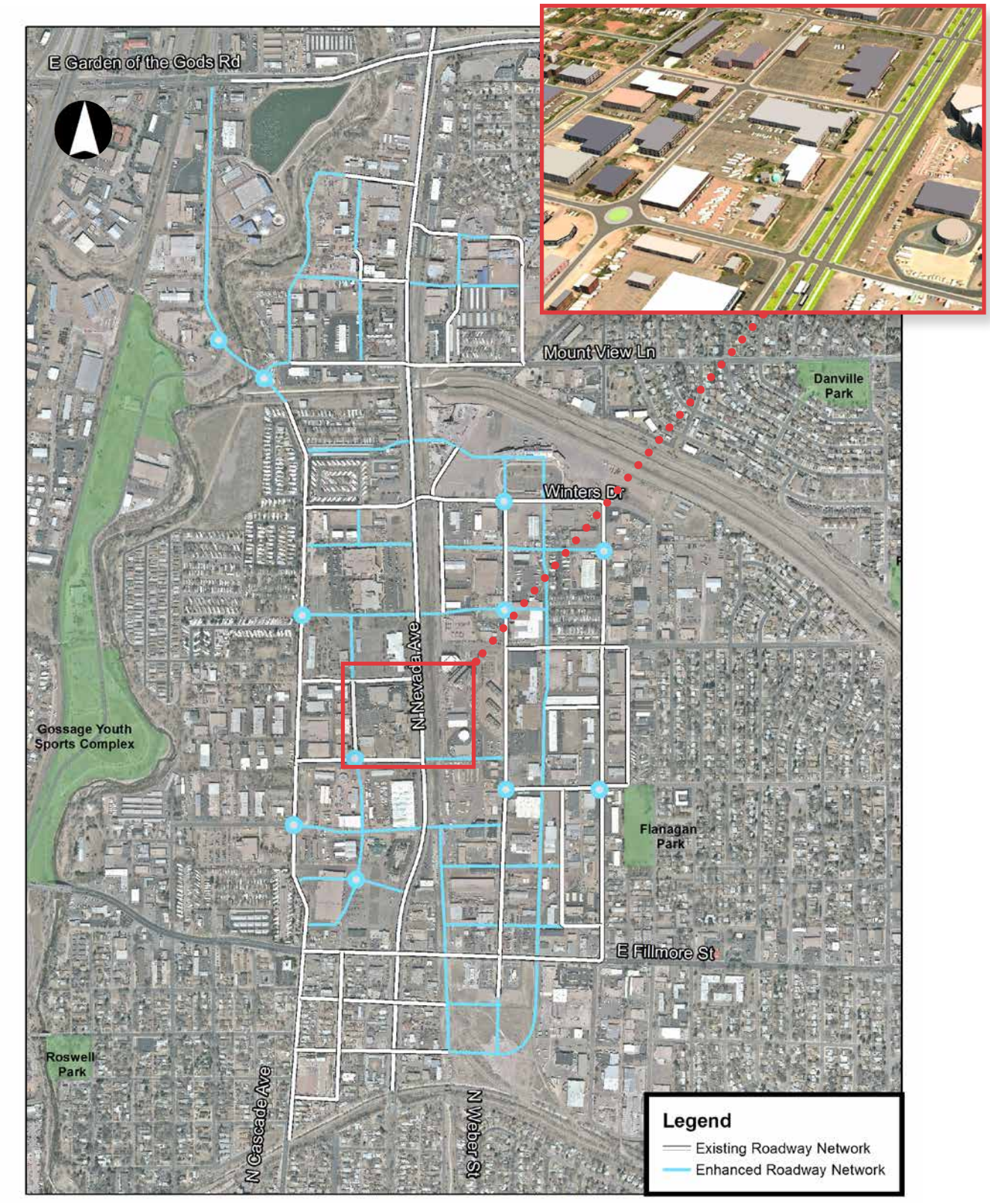
Improvements to Cascade Avenue do not include significant widening or the addition of travel lanes. Curb, gutter, and sidewalk improvements will better define space for vehicles and other users. Mark Dabling Boulevard would have similar improvements.

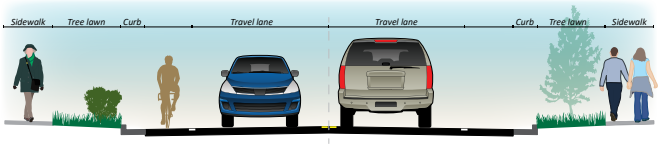
With this connection, improvements to the Cascade Avenue/Fillmore Street intersection would include: three westbound lanes on Fillmore Street; southbound free right turn; and adding curb and gutter with sidewalks. Improvements at the intersection of Fillmore Street would include a right-turn lane bridging drivers into a new thru lane extending to I-25.

FILLMORE STREET AND CASCADE AVENUE INTERSECTION

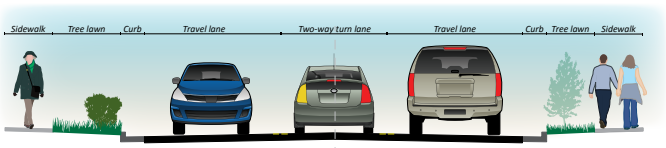
STRATEGY #2 CONTINUED

EFFECTIVE ROADWAY NETWORK





TWO-LANE CROSS SECTION



THREE-LANE CROSS SECTION

ADDITIONAL STREET NETWORK, CONNECTIONS & WALKABLE BLOCKS

As development occurs, the City should require the development community to assist in developing this interconnected street network. This assistance would occur though modifying the City's land development regulations and the city street network. The potential roadway network shown to the left illustrates a suggested number and spacing based on current parcels to best leverage existing street connections. Approximate block sizes of 500 feet are desired to create a walkable character.

Connected streets provide a more resilient and flexible transportation system that supports motorists, pedestrians, and cyclists while improving access for residents, businesses, and visitors. Connected streets create more walkable blocks and provide a foundation to create the mixed-use neighborhood desired in the Master Plan vision. These proposed street network connections would allow travel patterns to distribute in the street network, decreasing traffic dependency on any one roadway.

IMPLEMENTATION	BENEFIT	CONSIDERATIONS
Cascade Avenue Improvements	Provides a secondary connection between Fillmore Street and Garden of the Gods Road Provides an increase in performance along Nevada Avenue and overall LOS improvement at Fillmore Street/Nevada Avenue (LOS B/D) Alternate route for pedestrians/bicyclists Serves as the foundation for a robust street network	Significant cost for new bridges and potential right-of-way acquisition Additional traffic on Cascade Avenue and Mark Dabling Boulevard (an additional 5,000 vehicles per day was estimated near the end of the Master Plan timeline) Minimal traffic operational impacts on Mark Dabling Boulevard and Garden of the Gods Road Traffic calming measures such as roundabouts and truck restrictions should be considered
Block Building	Increases the study area's walkability Contributes to the character described in the Master Plan Better leverages the existing streets to meet transportation needs	Must be implemented as redevelopment occurs Will see an increase in City maintenance costs with additional streets and sidewalks

3 THINGS TO REMEMBER

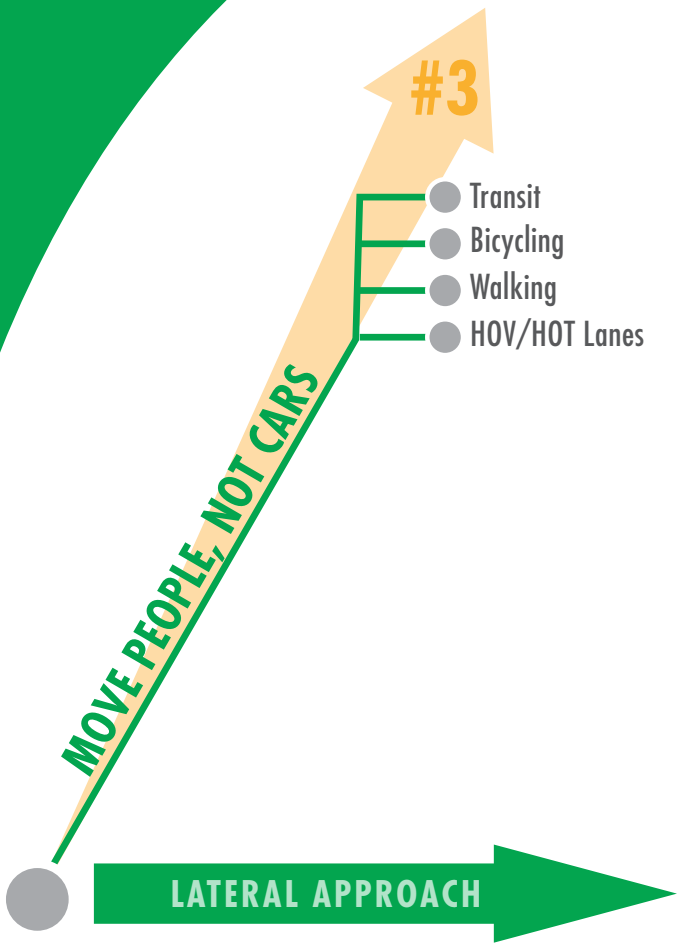
1. Provides a more resilient and flexible transportation system that supports motorists, pedestrians, and cyclists while improving access for residents, businesses, and visitors.
2. Walkable blocks provide a foundation to create the mixed-use neighborhood of the Master Plan vision.
3. As travel patterns distribute in the network, increased traffic on Cascade Avenue and Mark Dabling Boulevard impacts neighbors.

STRATEGY #3
MOVE PEOPLE, NOT JUST CARS

Shift conventional thinking to moving people, not just cars. It focuses on providing safe and convenient choices for personal mobility, while also contributing to the overall vision.

WHAT IS THE OBJECTIVE?

- **Enhance transportation choices that support non-vehicle based trips**
- **Position Nevada Avenue for high frequency transit**
- **Expand bicycle and trail network**
- **Increase safety for all users**
- **Improve the pedestrian/bicycle environment by connecting to existing trail systems**

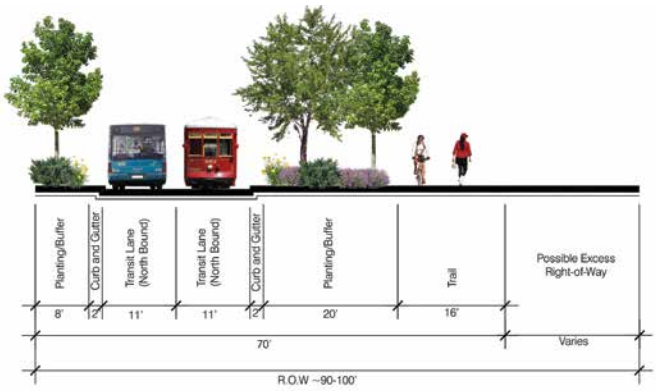


Determining the right transit recommendation requires consideration of regional priorities and a more detailed and wider reaching approach to address questions including:

- How does a North Nevada Avenue to downtown transit plan support the Comprehensive Plan?
- How will the project be funded?
- Does transit offer a specific transportation benefit? Economic benefit? Financial return?
- Is the project viable?
- What route best supports the transportation/economic objectives and neighborhood plans?
- What type of transit best meets these objectives?
- How does emerging technology (autonomous vehicles, micro-transit, etc.) impact these decisions?

Identifying and routing any new transit will be shaped by a thoughtful evaluation with extensive community inputs from multiple sources, including:

- Other Plans: *Comprehensive Plan; Neighborhood Plans; Experience Downtown Plan; and the Regional Transportation Plan*
- Transportation Needs: *Travel patterns; ridership; and, transportation benefits*
- Transit Solutions: *Vehicle types; economics; and flexibility*



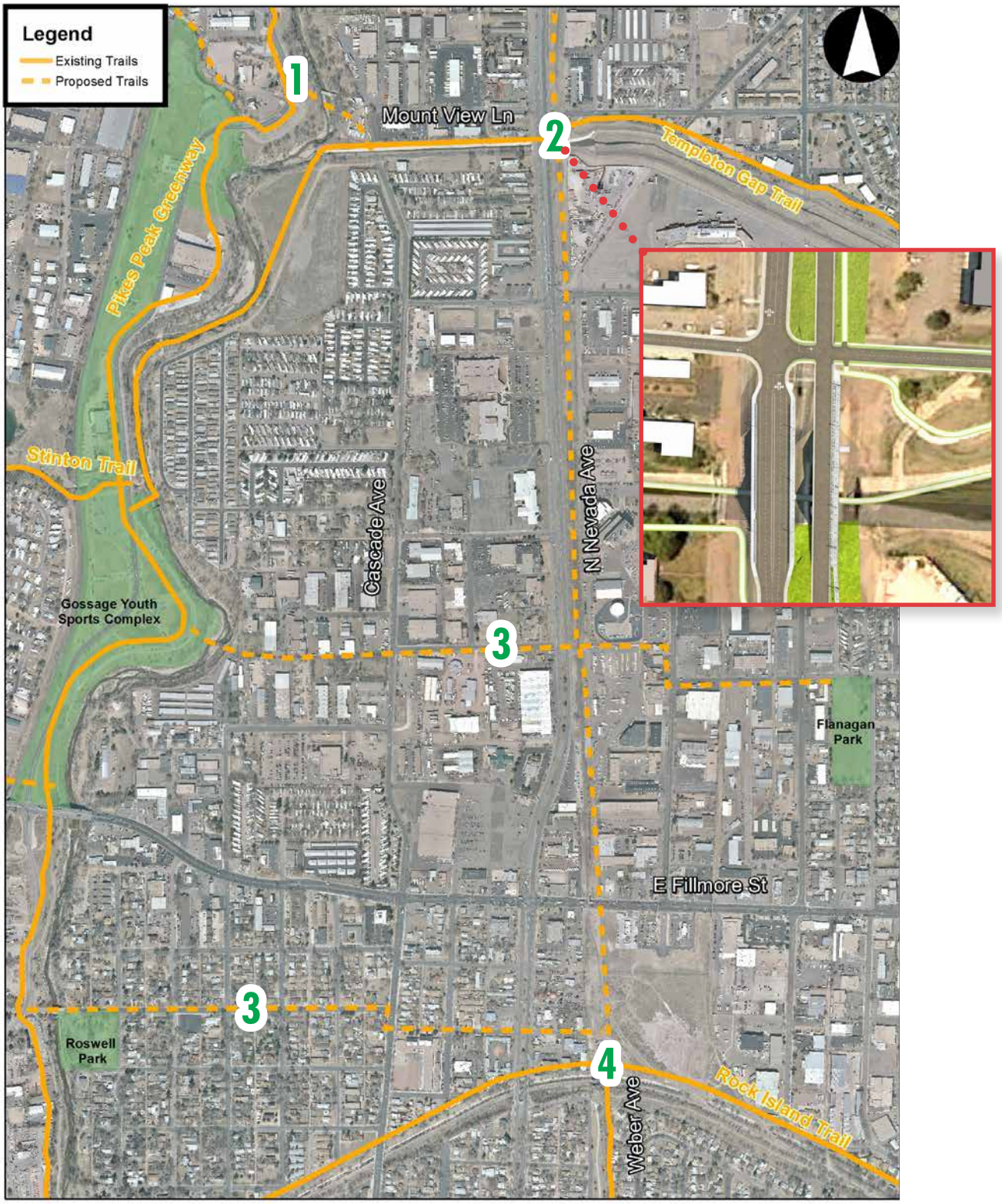
TRANSIT/TRAIL CORRIDOR PRESERVATION

- In the meantime, the former railroad right-of-way could be preserved for future transit along the Nevada Avenue corridor. Additionally, a multi-use trail in the former rail corridor could provide additional travel choices for local residents and employees.
- Preservation of this transit/trail corridor recognizes the opportunity and potential value of transit within the Renew North Nevada Avenue Master Plan.
- However, identifying the specific type and routing of transit for this corridor is premature and not specifically recommended by this study. Evaluating and selecting an appropriate regional transit technology requires a detailed alternative analysis including engineering, environmental, and financial evaluations with extensive community outreach.

STRATEGY #3 CONTINUED

TRAIL CONNECTIONS

Reference Trail Connections and Connections text on right page for number legend



TRAIL NETWORK AND CONNECTIONS

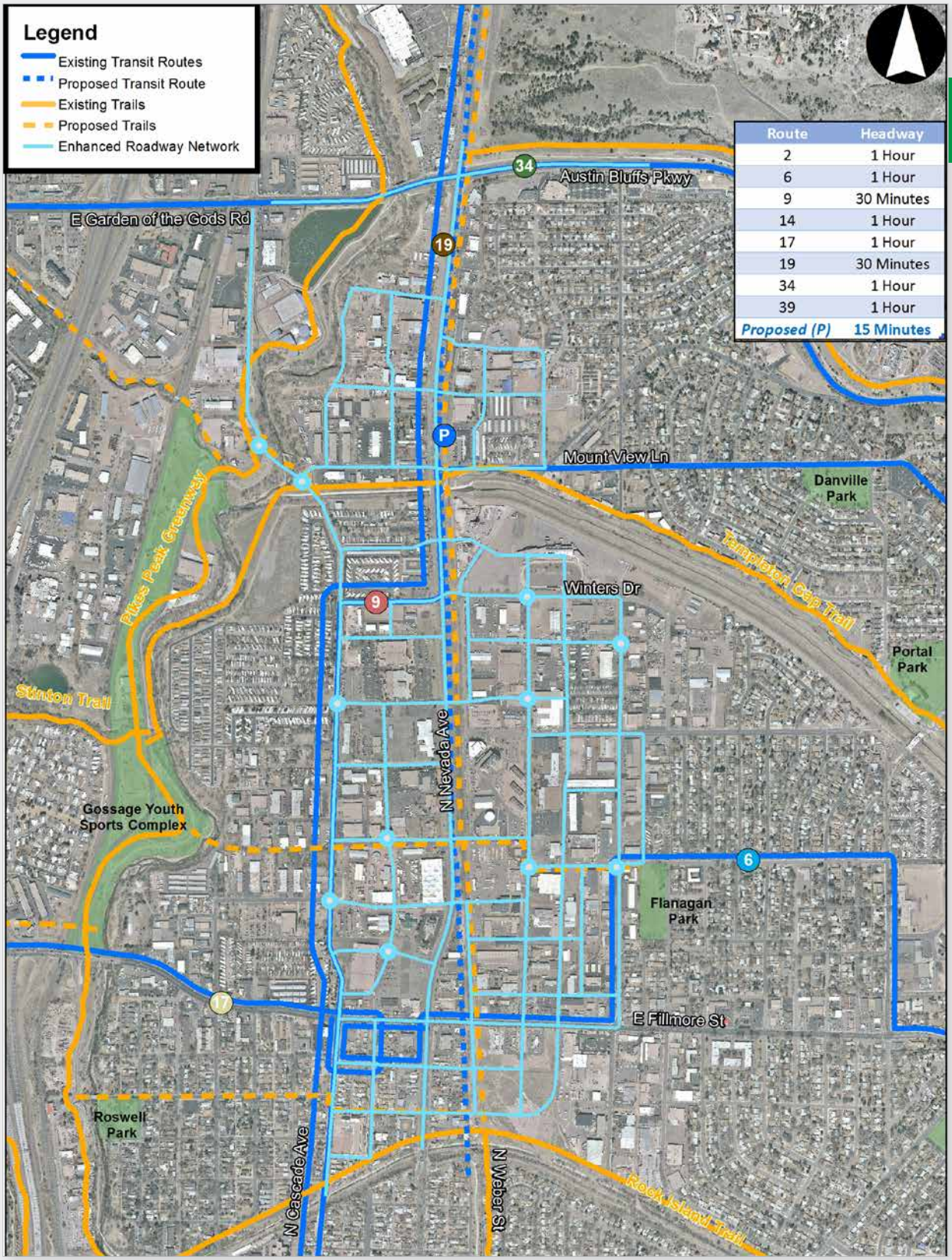
Reference Trail Connections map on the previous page for number associations below

1. Improve trail connections using new roadway bridges across Templeton Gap Trail and Monument Creek. Design bridges to include a multi-use trail crossing. This connection shortens trail connections between the northern Pikes Peak Greenway Trail and points east of Monument Creek.
2. Connect the Templeton Gap Trail across Nevada Avenue to connect to the Pikes Peak Greenway Trail.
3. Encourage new east/west urban trail connections from Flanagan Park and the Nevada Avenue multi-use trail to Pikes Peak Greenway Trail.
4. Connect the new Nevada Avenue multi-use trail south across the Rock Island railroad to the Shooks Run Trail (image right).

IMPLEMENTATION	BENEFIT	CONSIDERATIONS
Transit Enhancement	Traffic congestion relief, depending on the frequency and type of service Serves as a catalyst for private investment	Requires a regional approach and a comprehensive study Increases capital and annual operational costs Transit type (vehicle size) must match desired character and route requirements
Expand Trail Network and Connections	Enhanced trail networks can revitalize and build strong communities Studies have shown that public health benefits can be associated with a robust trail system Provides a first/last mile connection to homes, activity centers, businesses, and transit Dedicated trails appeal to more users	Measurable traffic benefits will likely be less apparent and most likely serve localized activity

3 THINGS TO REMEMBER

1. A focus on how people move integrates the character and quality of life elements of the Master Plan vision with a transportation system that supports it.
2. Providing safe and reliable choices for personal mobility has measurable benefits in system performance and lets the system adapt to changes in land use.
3. Transit options have potential benefits within the corridor but require a regional perspective and shared commitment.


Legend
Existing Transit Routes
Proposed Transit Route
Existing Trails
Proposed Trails
Enhanced Roadway Network
Route | Headway
2 | 1 Hour
6 | 1 Hour
9 | 30 Minutes
14 | 1 Hour
17 | 1 Hour
19 | 30 Minutes
34 | 1 Hour
39 | 1 Hour
Proposed (P) | 15 Minutes
Austin Bluffs Pkwy
E Garden of the Gods Rd
Mount View Ln
Danville Park
Pikes Peak Greenway
Templeton Gap Trail
Winters Dr
Portal Park
Stinton Trail
N Nevada Ave
Gossage Youth Sports Complex
Flanagan Park
E Fillmore St
Roswell Park
N Cascade Ave
N Weber St
Rock Island Trail

CHAPTER 6 | RECOMMENDATIONS OF THE STUDY TEAM

STRATEGY

A combined strategy provides the most capacity and flexibility to adapt to future conditions.

The strategy that best supports the Master Plan vision combines the strengths of each of the three strategies, including improving North Nevada Avenue, leveraging a robust road network, and moving people, not just cars.

TIMING

Many of these improvements are required to address traffic needs in the area, even with current uses. The elements of the three strategies should be programmed as near-, mid-, and long term investments. **A recommended program regardless of redevelopment includes:**

NEAR-TERM IMPROVEMENTS: 0–5 YEARS

- Complete acquisition of railroad right-of-way
- Access Management Plan and improvements in Nevada Avenue
- Minor intersection improvements on Nevada Avenue
- Identify funding for new bridges at Monument Creek and the Templeton Gap Floodway for Cascade Avenue improvements
- Design major intersection improvements
- Complete transit implementation study

MID-TERM IMPROVEMENTS: 5–10 YEARS

- Complete new Nevada Avenue roadway section, including trail improvements
- Complete roadway improvements to Cascade Avenue, including connection to Mark Dabling Boulevard
- Identify funding for major intersection improvements at Austin Bluffs Parkway/Garden of the Gods Road and Nevada Avenue
- Construct major intersection improvements
- Identify transit funding; complete environmental documentation if required

LONG-TERM IMPROVEMENTS: 10–20 YEARS

- Implement preferred transit solution(s)

Other improvements are more closely related to the reality and pace of redevelopment. **These improvements should be considered as redevelopment occurs:**

AS REDEVELOPMENT OCCURS

- Construct new roadway section on Cascade Avenue
- Construct new “creek side” road connecting Cascade Avenue and Mount View Lane north to Nevada Mesa View
- Preserve and construct remaining robust street network to create walkable blocks of approximately 500 feet

CONCLUSION

WHAT'S NEXT?

1. Complete the Transportation Sub-Plan and Zoning Overlay
2. Begin the Transit Study
3. Identify funding strategies for implementing the Transportation Sub-Plan

Thank You!

To the **over 900 individuals** who participated in the Renew North Nevada Avenue Master Plan and Transportation Sub-Plan processes!

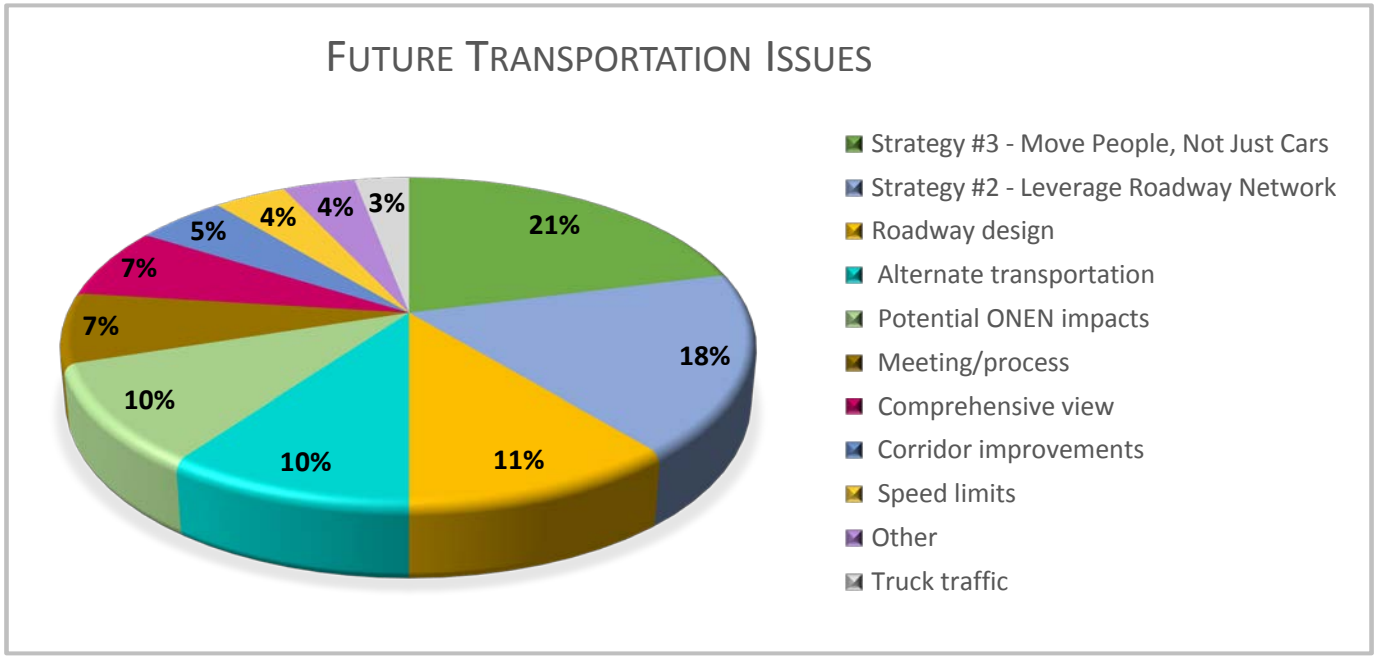
APPENDIX

PUBLIC ENGAGEMENT

Renew North Nevada Avenue Transportation Sub-Plan
Community Workshop
July 20, 2017

Verbatim Individual Responses

What are your thoughts about the future transportation-related issues along North Nevada Avenue?



Strategy #3 – 21% of mentions

- Excited by strategy #3 – more bike lanes, sidewalks, trees, beauty, mixed use.
- Would like to see efficient public transportation, quiet and safe.
- Bikes should be moved to the Greenway Trail.
- Too much area is being used for walking and bikes when that type of traffic is not a large user now. Many current businesses are motorize-related, truck deliveries and auto repair, Waste Management trucks, warehouses, etc. Nevada Ave. is not a downtown Breckenridge of shops and boutiques.
- Sidewalks and bike-ability are good and desirable.
- Keep bicycle traffic on existing trails to west of this area. Improve current trail system with lighting and connections to existing roads and shopping areas. Improve ingress/egress to/from Nevada.
- Bike lanes need to be put on Nevada.
- Strategy #3 also has value, but only to a logical extent. It would be great if N. Nevada between Austin Bluffs all the way to downtown was a complete street, including a bike lane and sidewalks. Having transit available is also desirable. Use of the existing railroad R.O.W. for

dedicated off-street transit lanes will serve to make transit more efficient and much safer for riders. It will also keep the buses off of N. Nevada and allow a smoother flow of traffic and also improve traffic safety. It is understood that high-frequency transit service (<30 minute headways) may someday be needed within the Renew Master Plan area. But, running such high-frequency transit service (e.g. 15-minute service, BRT, or light rail) south along Nevada Avenue through the Old North End would destroy that historic neighborhood. The folks residing along N. Nevada through that neighborhood were forced to experience 6 months of 15-minute service just last year. It was a disaster and created a significant neighborhood outcry and steadfast opposition to any expanded transit services in or through the neighborhood. It also, regrettably, served to create an atmosphere of potentially unsurmountable mistrust of the City.

- Strategy #3 [and #2] are the strongest options!
- Strategy #3 [and Strategy #2] better options. Not option [strategy] 1.
- Strategy #3 is better for multi-modal, urban village concept.
- Worried about where transportation stops would be located and how many people would congregate at the stops if the stops are located in residential areas.
- That the bus stop at Winters and North Nevada will be done away with and all bus stops will be only upon Nevada, causing people to have to walk to.
- Sitting at a bus stop and just waiting to be flooded by a puddle because a car runs through a deep hole right in front of the bus stop. The streets are very unsafe for all pedestrians!
- Transit good in train [right-of-way].

Strategy #2 – 18% of mentions

- Connecting Cascade Ave. to Mark Dabling is a great idea. This would give an alternative to I-25 and Nevada.
- I really like the idea of bridging Cascade so it doesn't dead end. I also like the idea of bridging Weber which a very unused street. Weber should connect on through Fillmore and possibly on to the University. Colorado College is a choke point on N. Nevada, especially on the left turn to Uintah. Buses are not helping.
- Here we go again. We don't know what's going to happen to our mobile home park.
- Presentation of cut-through on Expo Center driveway to connect Nevada to Cascade was a good idea.
- The idea about increasing connectivity to Nevada is good and needs to happen. Who will pay for that?
- Connected network – small roads A+ strategy. Spread traffic along corridors, provide alternate routes.
- Increased and faster moving traffic on Cascade and back in those areas where all the trailer parks are.
- Opening up the end of Cascade will create more traffic on Cascade.
- I support Strategy #2 (Leverage the Road Network) as it recognizes the need to spread the traffic load to a number of roadways vs. concentrating all traffic on N. Nevada Ave. This a more efficient approach and makes more effective use of existing pavement throughout the planning area. It also can help avoid the need to constructing very expensive grade

separations that local taxpayers, nor the redeveloped property in the corridor, can afford. This approach is refreshing and is definitely a change from City Traffic/Planning Dept.'s past desire to concentrate all traffic, transit, and congestion onto N. Nevada Avenue. N. Nevada, particularly the portion through the Old North End Neighborhood already has serious traffic and pedestrian safety issues as a result of that past strategy.

- I very much support the improvements to Cascade Avenue connections, at the north and through the N. Nevada Ave. corridor. That roadway is definitely underutilized. Also, being able to turn south at Mark Dabling and take Cascade all the way downtown is an excellent way of evenly balancing the traffic load between Nevada and Cascade. <u>That would be a game changer and definitely a paradigm shift that is very much needed!</u> It should also serve to reduce some of the congestion (current and future) at Nevada and Austin Bluffs and, hopefully postpone the need for an urban interchange at that very congested intersection. But, it will also likely serve to take some of the pressure off of N. Nevada through the Old North End Neighborhood in which recent traffic counts on Nevada are currently in excess of 17,000 vehicles/day.
- Strategy #2 will also have positive implications south of the Renew N. Nevada master plan area, particularly in the Old North End, in which Cascade and Weber are currently grossly underutilized, while all the north-south traffic through the neighborhood is currently funneled unto Nevada and (to a lesser extent) Wahsatch Avenues. Unfortunately, that current traffic distribution is partially the result of City Traffic Engineering actions/policies to dump all traffic (including transit) onto N. Nevada.
- There is an existing neighborhood Master Plan (officially adopted by ordinance by the City Council) for the Old North End Neighborhood. That master plan has been the guiding document for the all land use issues/decisions for nearly three decades. <u>That Master Plan includes a traffic flow sub-plan that specifically calls for the equitable distribution of north-south traffic through that neighborhood, between Wahsatch, Weber, Nevada, and Cascade. Your Strategy #2 (and specifically the improvements to the Cascade Avenue connections) is consistent with the objectives of the Old North End Master Plan.</u>
- It is hoped that the folks at City Traffic Engineering are genuinely supportive of this Strategy #2, because their recent policies and actions relating to N. Nevada have been just the opposite. Indeed, the City Traffic folks have identified, but openly refused to make a number of changes (creating new turn pockets, lower the speed limit on N. Nevada from 35 MPH) that would serve to better balance north-south traffic flow through the Old North End.
- Strategy #2 [and #3] are the strongest options!
- Strategy #2 [and Strategy #3] better options. <u>Not</u> option [strategy] 1.
- Direction of Strategy #2 OK.

<u>Roadway design – 11% of mentions</u>

- The 6-lane project should be put back on the table, as the negative impacts to the smaller corridors was not presented at the Master Plan.
- Pull-off lane, as not to interfere with traffic flow, or dedicated lane for public transportation.
- Create some "feeder" roads off of Nevada as shown in slide. Leave Nevada 4 lanes with improved curbs and gutters, sidewalks, and landscaping.
- A lot depends on what is to happen to Cascade. In its current condition, Cascade cannot handle the traffic.

- The old train tracks parallel to Nevada between Mount View Drive and Lilac Street should be used as a new road to reduce traffic on North Nevada and hold North Nevada to two lanes on each side.
- Spread the traffic out on other streets besides Nevada.
- Please consider near-term major investment in $$, time and inconvenience for long-term gain. Look at St. Kilda Blvd., Melbourne, Australia as a template. It has 12 lanes of traffic in a tree-shaded, green space, wide pedestrian way: sidewalk-green-parking lane-bike lane-two (north) lanes-green-two (north) lanes-two tram lanes-two (south) lanes-green-two (south) lanes-bike lane-parking-sidewalk.
- Keeping N. Nevada at 4 lanes through the Master Plan area is essential to maintaining the integrity of the Master Plan and the stated desires and expectations of all the citizen participants in the planning process for that Master Plan.

Alternate transportation – 10% of mentions

- Please consider bringing the trolley to North Nevada! It would help move people and bring back some nostalgia.
- North → South Nevada is a prime opportunity for a tram system.
- I moved from San Francisco and it is walkable and historic – even cable car at $5 per ride is an historic attraction. I'm not opposed to a light rail/cable car option.
- The idea of light rail will divide a developing community; it should be moved closer to I-25.
- Light rail is not acceptable in any residential neighborhood.
- Light rail must not be placed on Nevada Ave. Use I-25.
- Any high-frequency transit service through the Renew Master Plan area must not be extended down through the Old North End Neighborhood. It will destroy that historic neighborhood. No established residential neighborhood should have to bear the substantial negative externalities associated with BRT or other high-frequency mass transit directly in front of their homes. Extension of such high-frequency mass transit should be limited only to commercial/industrial corridors and along I-25.

Potential impacts on Old North End Neighborhood – 10% of mentions

- Consideration about how all of these decisions will affect the Old North End Neighborhood (ONEN) must be NOW!
- Too much traffic going through Old North End.
- Please keep medians and trees intact and preserve historic integrity of ONEN.
- Deathly afraid the City is going to abuse Nevada Avenue through the Old North End. We are a historic and residential neighborhood and deserve special consideration and protection as a very special asset to the City.
- The City must respect the historic integrity of our old North End Neighborhood.
- The historic medians through ONEN are protected by the ONEN Master Plan. You must not touch them.

- **There is significant disappointment that the whole topic of how transit services may be extended south through the Old North End is not being addressed by the Transportation Sub=Plan. Why is there such a delay? Again, this delay is serving to sow distrust of the City and the Renew N. Nevada planning process.**

Meeting logistics/process – 7% of mentions

- Get an audio system that works. Waste of time when you cannot hear speakers (presenters and attendees.)
- Provide handout of presentation ahead of time so the material can be studied.
- No clear plan to make clear decisions or comments – plan consequences need to be clear.
- The small group discussion did not work at my table.
- I'm interested in changing the N. Nevada corridor but the format given is not informative enough.

Take comprehensive view – 7% of mentions

- Comcor is not being addressed and it is a huge limiting factor.
- In order to put in any changes the total impact has to be considered.
- The transportation study should have happened first. This still feels cart-before-the-horse.
- The plan has some good suggestions for Plan corridor but cannot be done in isolation to how it affects roadways south of Fillmore.
- This cannot be determined in isolation. The neighborhoods surrounding need to be considered in the "bigger" plan. You cannot plan to end at Fillmore. Traffic analyses need to put traffic on several roads.

Corridor improvements – 5% of mentions

- Improvements are needed to beautify the Nevada Ave. "No man's land."
- Sidewalks and walkways need to be put on Nevada and on Cascade.
- The whole section of North Nevada needs to be upgraded to include sidewalks, trees, and shrubbery in medians. Improve the appearance, the north entry to Colorado Springs.
- Curbs, drainage ditches at corners and sidewalks! 'Nuff said ☺

Speed limits – 4% of mentions

- The proposals to "improve the quality of travel" are also very much supported, particularly the proposal to lower the speed limits on the arterials roads along the corridor to 25-30 mph. The concept of being able to move more traffic down existing lanes if the speed limit is lowered has been widely recognized in our neighborhood and very much supported. It is assumed that such a move would also serve to nudge those drivers looking for a high-speed north-south corridor from N. Nevada and onto I-25 where they should be. Much of N. Nevada through the master plan area and further through the Old North End is viewed by many drivers as a high-speed throughway.

- Though I get the 25-30 mph through this [Nevada Ave.] corridor, how can that possibly be implemented?
- I did like the information given about speeds and moving traffic does not mean more traffic movement.

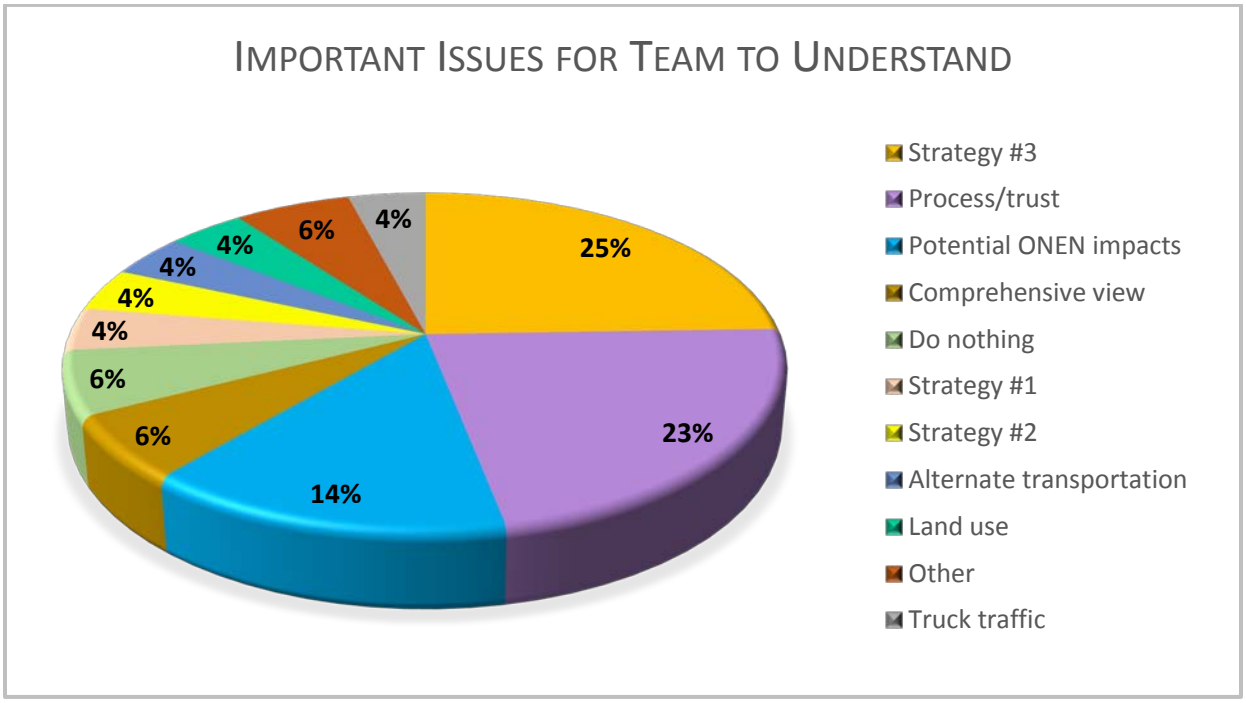
Truck traffic – 3% of mentions

- Didn't hear anything addressing how to have delivery trucks (semis or box trucks) still be able to make pickups/deliveries at existing businesses.
- Make the heavy trucks and heavy traffic use Nevada, not Cascade or smaller roads.

Other – 4% of mentions

- I want a city I can be proud of – look, culture, feel, safety, clean/green.
- What was that big fat planning textbook in 1965 or so that this all came from?
- No industry is driving this change – just nice ideas.

Is there anything you want to make sure project team members understand as they develop the recommended Renew North Nevada Avenue Transportation Sub-Plan?



Strategy #3 – 25% of mentions

- I like it being multi-use, not like Powers Blvd.
- I think walkability and bike-ability can be achieved within this specific area but I am doubtful that it can be achieved on a larger scale, except through the existing trail system.
- Why a transit corridor? I know it came out of the Master Plan discussions but I never understood it. Nothing can cut through the Old North End, so transit corridor to run parallel to Nevada makes no sense. Why not start first with bike lanes, curbs, sidewalks between Fillmore and Nevada north of Garden of the Gods?
- You need to stop talking about pedestrians and bikes. I ride a bike and scooter. It is not safe to ride on N. Nevada. I really like the idea of a trolley on the Rock Island abandoned rail line. Run it out to the airport and up to the University is isolated but N. Nevada doesn't need to be the corridor. Use Weber. **(See scanned drawing at the end of this document.)*
- Would like to see dedicated bike lanes, not sharing the road with cars.
- Would like to see improved walkability, not just walking along a highway. Make it a pleasant experience.
- Separate bikes from cars completely. Unrealistic expectations of foot and bike and public transportation.
- My transportation is walking. What I want to know is how soon the muddy! corners of Nevada and Winters are going to be paved with curbs?? They have crosswalks but is it inhumane to stand at or push the buttons to cross!?!? These corners have been nothing but mud for years. Is this because UCCS don't use it…yet?

- I like Strategy #3 – transit – namely streetcars (my bias!).
- Improve the bus system to run later so maybe people can use less cars.
- Bus stops on Winters and Nevada need to be improved.
- There are a lot of people that walk and have no cars.

Process/trust – 23% of mentions

- Thank you for getting all input, positive/negative. What a great process.
- Please acknowledge where trust has been broken with the key neighborhoods south of this Nevada corridor. Work to build trust in those relationships: transparency; where we have messed up; invite and include dialogue.
- Thank you for getting community input!
- The community needs to have the possible pros and cons thoroughly explained. Too many vague answers without any real information given.
- Can you please set up the food, water, etc. before the meeting begins? The rustling was loud and distracting to those of us in the back. Please ask team members not to talk in the back of the room. You all know this material; we don't. The chatting and whispering was so distracting.
- We cannot hear the speakers in this setting.
- Thank you for all your time and research on this very important project!
- I'm starting to feel the City gives these workshops and then presents the "outcome" as the wishes of the community. Something that will affect so many citizens in the wallet and community setting needs to be put to a vote.
- It appears UCCS is going to get what it wants. Why not let us hear what they want and adjust from there?
- More clarity is needed!!
- I might recommend a presentation that involves an overlay of sheets. The main being the existing area (how it is now) and with every change, having a sheet that is placed on top of the main so we can see how the change looks with the existing conditions. (Like a body→skeleton→organs→blood vessels→muscle, etc.

Potential impacts to Old North End Neighborhood –14% of mentions

- Consider impact on the Old North End Neighborhood NOW! It is part and parcel of this total picture.
- Historic median with historic trees should not be moved/changed or harmed. The train tracks should have a combination of road/bike trails.
- We absolutely need to build out the grid so that development and transit equitably distribute traffic in a way that preserves and respects the residential character of the Old North End Neighborhood. Nevada is abused and overused as a corridor. All light rail needs to move via I-25, not through a residential neighborhood, no matter what street in ONEN.
- Mass transit needs to go on I-25. Historic master plan [should] be followed.

- It is hoped that the traffic modeling for the Transportation Sub-Plan is including traffic/transit impacts on adjacent neighborhoods, including Cragmoor and the Old North End. To do otherwise would serve to deny adjacent neighborhoods the opportunity to weigh in on transportation impacts of the proposed master plan and that would not be good public policy.
- The Old North End Neighborhood is a National Historic District. That district is the largest intact residential district west of the Mississippi. The neighborhood has an existing master plan (adopted by City Council via ordinance) and has a transportation/traffic component that calls for a balanced north-south roadway network though the Old North End.
- The 1.4 mile segment of N. Nevada Avenue through the Old North End Neighborhood currently is one of the deadliest roadway segments in the City. Over the last five years there have been 4 traffic fatalities on that 1.4 mile segment. The posted speed limit (35 mph) is too high given the current roadway cross section and width of N. Nevada through that neighborhood. There are also numerous rollovers and traffic crashes with injuries.

Take comprehensive view – 6% of mentions

- They really need to examine the impact on the roadways around this area.
- Need to understand how roadways connect. People need to better understand the connectivity between downtown and N. Nevada corridor. These could become important anew of growth *[?]*. Hate to discuss this in isolation, not big picture.
- Aim the sub-study on all corridors, I-25, Cascade, Nevada, and Weber.

Do nothing – 6% of mentions

- One option has to be a "do nothing" option.
- No reason to change until money and above problems [Comcor and no industry driving the change] are solved. Very short-sighted and is telling people what to do.
- No major changes are needed. Traffic north to south and vice versa are currently fine.

Strategy #1– 4% of mentions

- Garden of the Gods and Austin Bluffs needs to be revamped.
- Continuous flow intersection at Fillmore is not terrible, once you understand how it works – it seems to move traffic.

Strategy #2– 4% of mentions

- What will happen to the mobile home park when you start working on Cascade?
- Left-in and left-out turns make for easy access to businesses. Easy access is good for business. People don't shop if it's a hassle to get in or out.

Alternate transportation– 4% of mentions

- Ensure that streetcars and trolleys are not precluded from the right-of-way upgrades. The corridor needs to be future-proofed if or when streetcars become a viable transit option.
- Don't forget tech. for self-driving cars/delivery trucks.

- An extensive plan already exists for the ex-railroad property by Pikes Peak Historical Society Railroad Foundation (it calls for six lanes between Winters and I-25, using four lanes south of Winters.)

Land use– 4% of mentions

- Housing should be on west side of Nevada to allow connectivity to the trail system. Put business/industrial on the east side.
- Manufacturing needs have to be addressed. This area has long included manufacturing and should continue to. People need to make good wages to be able to shop and live in the area and manufacturing provides that.

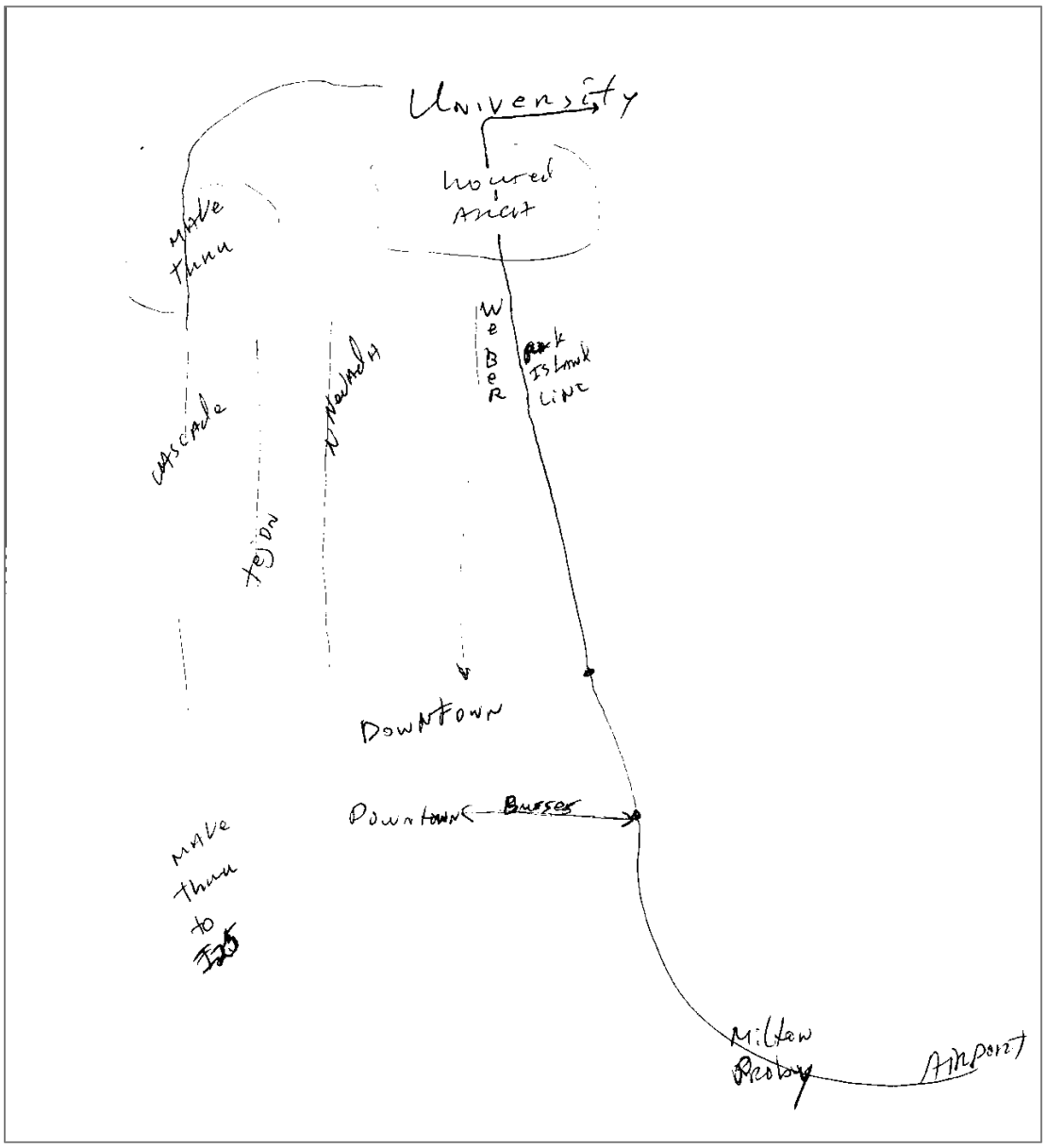
Truck traffic– 4% of mentions

- There is way too much heavy truck traffic on Cascade Ave. which is "residential" and light industrial (soft goods?).
- We need help keeping the trucks on the truck route (Nevada). Could we put roundabouts on Cascade to slow the traffic and heavy trucks down from taking short cuts? Estes Trucking, Waste Management, Iron Mountain Disposal often fail to use the designated truck routes, adding a very heavy and undesirable load to the residential residents. Truck routes: please route the trucks accordingly.

Other – 6% of mentions

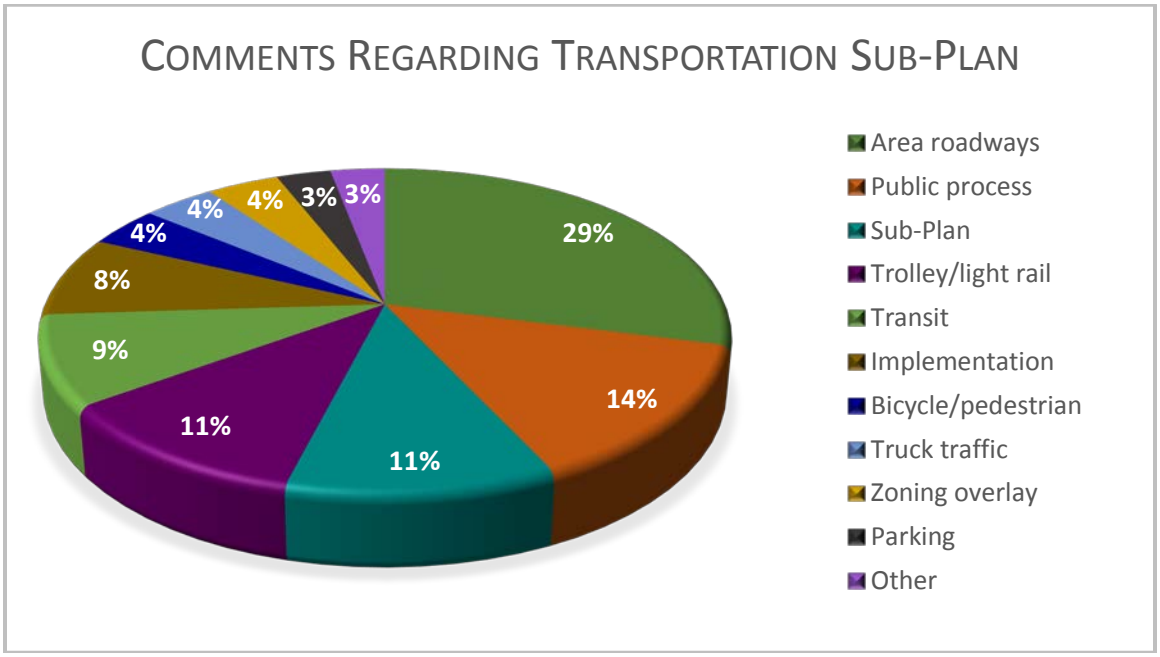
- Go for long-term.
- Please look at miles-per-hour in the study. Decreased speeds you reported 25-30 mph are more efficient. Can we lower speed limits both north and south of Nevada corridor?
- Sure don't know.

*Response form scan:



Renew North Nevada Avenue Transportation Sub-Plan
Community Open House
August 23, 2017

Categorized Individual Comments



Area roadways – 19 mentions=29%

- Please maintain the integrity of Cascade Ave. south of Fillmore. It is the baseline of Gen. Palmer's layout (why the Old North End has so much appeal)!!! Please improve the north of Fillmore section.
- I strongly suggest opening the roadway from Mallow to Stone Ave. as an easier access for the Cragmoor neighborhood to Fillmore. I understand if it's not in the plan due to "cut through" traffic – why not make this a southbound one-way? Please consider this request [from a] Cragmoor resident.
- I was concerned about how the road connection was going to work with the extension/bridge from Cascade to Mark Dabling. I like your idea of using Mark Dabling and Mount View as the connector, as it will keep a lot of the current traffic taking Cascade to Winters as a shortcut from continuing its use, rather will somewhat divert it. I am concerned with how fast drivers might try to go along the current parks on Mark Dabling.
- Will this increase traffic on Cascade, Tejon south of Fillmore? It appears this plan will divert traffic from Nevada to Cascade. Cascade is a residential street!
- Why does the mid corridor on N. Nevada show two 2-lanes going north? I saw four lanes northbound through the Old North End Neighborhood. You'd have to confiscate the sidewalk and kill the parkway to do that.
- Good idea extending Cascade – how about Weber?

- The University will be growing – population is bound to grow. Traffic is almost maximum capacity presently – greater flow for traffic I would say is a priority now.
- Not in favor of extending Cascade since we live next to Cascade. Intersections of Nevada and Garden of the Gods and intersection of Nevada and Fillmore need improvement.
- What is the plan to improve Fillmore? It is a major intersection and feeder into this corridor.
- I like the idea of extending the Cascade Ave. from the Expo Center.
- Major intersection repair on Austin Bluffs/Nevada is something that needs to be done very soon.
- One suggestion I'd hope for is extending Mallow over Stone Ave.
- As you look further into south of Fillmore I think you should consider turning several of the E/W side streets like Madison, Monroe, Jefferson, Washington and Del Norte into one-way streets.
- I own the landscaping on the Nevada Ave. side [at Axios Technologies]. Are you widening Nevada in front of my building and taking my property? Please reply (*contact information provided and forwarded to the project manager for follow up).*
- I would like to see many road/street improvement to move traffic through or around Westmoreland and Manchester. The four-way stop is generally ignored and speeds are between 35 – 45 mph down Manchester. **(See image from scanned comment card on page 5 of this document).*
- I am especially glad to see that the recommendations to use the grid are still being considered. I'm not sure if you remember me but we met last year in your office. I recommended using the entire region as a grid rather than funneling everything down Nevada. I am thrilled that you seem to be moving in this direction.
- I love the connected network - small roads over no network - large roads.
- Love extending Cascade to the north.
- Less traffic on N. Nevada.

<u>Public process – 9 mentions=14%</u>

- I like the fact that citizens are involved with the planning process.
- Please make sure that neighborhoods are given plenty of warning so that they can attend any transit planning meetings. They have not been invited in the past, and as stakeholders, they definitely should be invited. Also, the Old North End Neighborhood needs to know how transit and traffic will be routed through the neighborhood.
- Poster boards not useful. Too many generalities. Why is every meeting the first meeting? Too noisy room. Use Lon Chaney Auditorium. Too crowded at this restaurant.
- The presentation stations are very informative.
- I think neighborhoods should be in on the initial planning stages for public transit in the northern corridor to downtown, not just when a basic form has been decided upon and the public process begins. <u>All downtown neighborhoods are important!</u>
- Thank you for the meeting and planning!
- Meetings have been most informative. Thanks.
- A presentation would be nice.
- Sound system echoed and was hard to understand.

Sub-Plan recommendations – 7 mentions=11%

- All three transportation options are excellent! The streets create value, economic and quality of life.
- I think the team(s) have done a very good job.
- The plan sure looks great on paper. I hope that it will come through.
- Looks good – good to have a plan and vision – to work together.
- A good plan. Live on Winters – will improve everything for residents and the city.
- Thanks for your perseverance.
- I would like to thank you for all the hard work you and your team are putting into this project.

Trolley/light rail – 7 mentions=11%

- Think of a trolley from Fillmore to UCCS.
- Trolley system is an idea I think is great and would be an asset to Colorado Springs.
- We would love to see the trolley added to this plan. It could go to University Park and then to downtown and back.
- Proceed with railroad acquisition and put in the light rail/trolley!
- Trolley specifics? To airport? UCCS? Bon? University shopping?
- Start working now before it becomes more expensive, to establish some fixed route (trolley, rail) transit through downtown, the Old North End Neighborhood, and the length of N. Nevada. Use the old rail line, the legacy trail, etc. It can take years to persuade people to give up their cars and adopt mass transit. Start now on making transit the way to access the N. Nevada area. Make it attractive, put in a trolley or a small train car, not a lumbering, boring bus.
- Light rail would be awesome!

Transit – 6 mentions=9%

- Use what you have…Mountain Transit—a route up from the downtown terminal to UCCS.
- I ride the bus a lot! It's good as it is, but yes!!! any improvements and running more often and adding different routes would be wonderful.
- Like transit lanes IF they can bridge directly to Weber without diversion to Nevada. Prefer bus lines to remain on Cascade IF transit lanes cannot directly connect to Weber.
- I'm pleased to see the plan coming together, including the future transit plan that extends south of the renewal area. We need a cohesive, consistent plan through the entire N. Nevada corridor, including the Old North End. Improvements to Cascade north of Fillmore are critically important.
- Too many empty or near-empty buses on N. Nevada at 6 p.m.
- Putting the bus lines along the old railroad track is good.

Implementation – 5 mentions=8%

- Implementation of this plan will require substantial public funding. What is the plan to finance this redevelopment?
- Hope that affordable housing will be there for all of us that are living in mobile home parks.

- Key concept from Plan COS: to add "Create a Unique Urban Place." For the sub-Plan, don't defer the basic recommendations and parameters of the Access Management Plan. They should be somewhat clear at this stage and will help as people come in with interim development plans before you get the whole *(? illegible)* done. [From Carl in City Comprehensive Planning]
- Any plan needs to keep the integrity of the Old North End, including its treed medians.
- Now hopefully funding and investments will support this [street grid] concept.

Bicycle/pedestrian – 3 mentions=4%

- Bike arteries function much better with pedestrian routes not adjacent to auto traffic (conflict).
- My desire is we create a street system that moves people (bike/ped), not just cars. Students (CC and UCCS) should be able to bike between the two campuses safely.
- Yay for more trails and bike lanes!!! Great to see initiatives to make the city more walkable and pedestrian-friendly.

Truck traffic – 3 mentions=4%

- There was no mention of truck routes in the plan. Recommend moving the current truck route from Nevada to Stone between Winters and Fillmore. This will keep pressure off of the Nevada/Fillmore intersection and discourage trucks from illegally using Nevada south of Fillmore and encourage the use of Union for access to downtown. Nevada south of Fillmore is not a truck route but it is regularly abused.
- Improve (make safer) the left turn required of semis exiting I-25 to the track route. As long as that left turn remains difficult the semis will continue to use Nevada in the Old North End Neighborhood.
- Cascade could benefit from roundabouts to slow down and minimize heavy truck traffic. It's heavily residential, please make it residential-friendly and minimize undesirable heavy industrial traffic. Thank you☺

Zoning overlay – 3 mentions=4%

- I came in and trusted, participated in the process. I should have been documenting it. Tim Siebert in his answer on what the overlay zoning would mean to existing owners either lied, gave a purposefully deceitful answer, or is incompetent. He gave a carefully-worded answer to comfort, deceive owners that they could continue on. Page 68 of the "Master Plan" clearly states differently. It says it clearly and concisely. Why did he not answer in a similar way? Watch the video. It leaves me doubting the honesty of the whole process! I am very disappointed, concerned, and somewhat angry – I came working on an "open" project. I guess that was a joke. We could help our city and our country more if we were to encourage manufacturing. The overlay says manufacturing can continue as long as they don't grow.
- It appears that manufacturing is at the bottom of the list. There are many people who make a good living working in this area, but they are being forced out (over time) without an alternative place to go. I do not trust that the zoning overlay will allow manufacturing to exist and thrive.
- Please consider industry and the many jobs it provides.

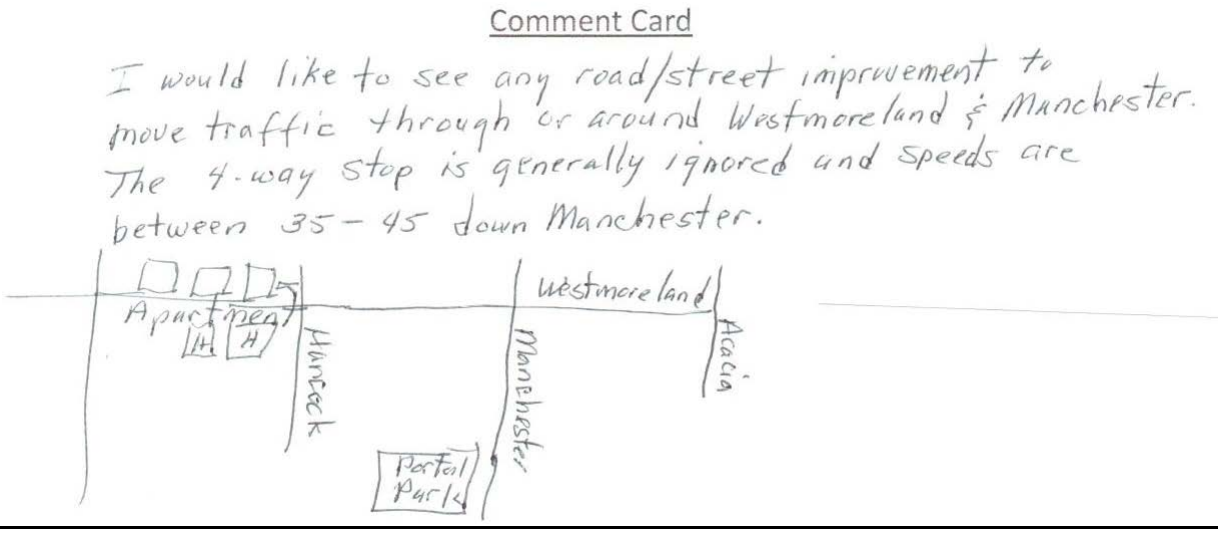
Parking – 2 mentions=3%

- To facilitate walkability and high density, how about building central parking facilities and eliminate parking space requirements using overlay zoning. Recommend a maximum number of parking spaces (instead of minimum) and restrict to the back of facilities using overlay zoning.
- Love walkability (small blocks) - how about adding central parking to keep everything more compact?

Other – 2 mentions=3%

- The single biggest issue we face in the north end is security in the alleys. That issue could implode values eventually. It's a big challenge since they are service access. Defining entry, lighting, and restricting after-hour access are a few ideas. ***(See image from scanned comment card on page 6 of this document).*
- Storm water collection strategies could combine to flush sewer lines, improve Memorial Park with grants.

* *(Scanned image from comment card)*



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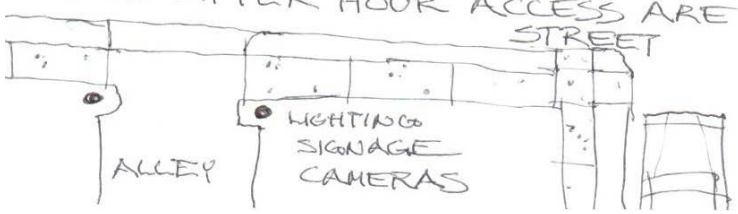
Comment Card

THE SINGLE BIGGEST ISSUE WE FACE IN THE NORTH END IS SECURITY IN THE ALLEYS. THAT ISSUE COULD IMPLODE VALUES EVENTUALLY. IT'S A BIG CHALLENGE SINCE THEY ARE SERVICE ACCESS. DEFINING ENTRY, LIGHTING, AND RESTRICTING AFTER HOUR ACCESS ARE A FEW IDEAS.



APPENDIX

TRAFFIC ANALYSIS TECHNICAL MEMORANDUM

Renew North Nevada Master Plan: Transportation Sub-Plan

Traffic Technical Memorandum

November 2017

Introduction

This memorandum presents the results of the traffic analysis conducted for the Renew North Nevada Master Plan: Transportation Sub-Plan. The extents of the analysis include the Nevada Avenue intersections with Garden of the Gods Road/Austin Bluffs Parkway, Mount View Lane, Winters Drive, and Fillmore Street. The intersections of Fillmore Street with Cascade Avenue, Stone Avenue, and El Paso Street were also included. The purpose of this analysis is to assess the traffic challenges generated by the approved Renew North Nevada Master Plan (the Master Plan) and to provide solutions to maintain the Master Plan's vision and keep traffic operations at acceptable City levels. The Master Plan changes the land use of the area from a primarily light industrial zone to a mix of office, retail, and residential developments. To maintain the vision of the Master Plan, the traffic analysis was performed with a capacity constrained four-lane Nevada Avenue rather than a major six-lane regional roadway. The provided analysis and solutions will assist the City of Colorado Springs in the decision-making process of implementing the Master Plan. A vicinity map of the project study area is illustrated in **Figure 1**.

Existing Conditions

PHYSICAL CHARACTERISTICS

The existing roadway network within the study area includes Nevada Avenue, Cascade Avenue, Stone Avenue, Fillmore Street, Garden of the Gods Road/Austin Bluffs Parkway, and El Paso Street.

North Nevada Avenue provides two through lanes of travel in each direction, northbound and southbound, with a posted speed limit of 45 miles per hour (mph) through the northern section of the study corridor and a 35 mph speed limit through the southern section and the Fillmore Street intersection.

Garden of the Gods Road/Austin Bluffs Parkway provides three lanes of travel each direction, eastbound and westbound, with a posted speed limit of 40 miles per hour.

Mount View Lane and Winters Drive provide one lane of travel each direction, eastbound and westbound, with posted speed limits of 35 and 30 miles per hour, respectively. Mount View Lane and Winters Drive only provide local access to the residential areas to the east. These roadways do not cross the Monument Creek to the west.

Fillmore Street provides two lanes of travel in each direction, eastbound and westbound, with a posted speed limit of 35 mph.

Cascade Avenue, Stone Avenue, and El Paso Street north of Fillmore Street provide one lane of travel in each direction, northbound and westbound, with a posted speed of 30 mph on each road. Stone Avenue also has a two-way left turn lane in the center of the roadway, making it a three-lane section. These streets provide north south travel and local access to businesses to the east and west of Nevada Avenue. These roads do not cross the Templeton Gap Floodway.

Both Garden of the Gods Road and Fillmore Street provide connections to the west and have interchanges with Interstate 25 (I-25). Garden of the Gods Road/Austin Bluffs Parkway and Fillmore Street are regional arterials that serve east west travel in the northern Colorado Springs area.

All of the analyzed major intersections along Nevada Avenue and Fillmore Street are signalized. The traffic signal operations cycle lengths vary between intersections. The primary study intersections for this study include:

- Nevada Avenue and Austin Bluffs Parkway/Garden of the Gods Road (135 Sec)
- Nevada Avenue and Mount View Lane (140 sec)
- Nevada Avenue and Winters Drive (140 sec)
- Nevada Avenue and Fillmore Street (150 sec)
- Fillmore Street and Cascade Avenue (135 sec)
- Fillmore Street and Stone Avenue (135 sec)
- Fillmore Street and El Paso Street (140 sec)

The existing intersection of Garden of the Gods Road/Austin Bluffs Parkway and Nevada Avenue is signalized with protected left turn phasing on all approaches. The eastbound and westbound approaches consist of dual left turn lanes, three through lanes, and a right turn lane. The northbound and southbound approaches consist of dual left turn lanes, two through lanes, and a right turn lane.

The Mount View Lane and Nevada Avenue existing intersection is signalized with split phasing on the eastbound and westbound approaches. The eastbound approach consists of a single shared left turn, through lane, and right turn lane. The westbound approach consists of a left turn lane, a shared left turn/through lane, and a right turn lane. The northbound and southbound approaches consist of a left turn lane, two through lanes, and a right turn lane.

The intersection of Winters Drive and Nevada Avenue is signalized with protected-permissive phasing on all approaches. The eastbound approach consists of a left turn lane and a shared through/right turn lane. The westbound approach consists of a left turn lane, one through lane, and a channelized “free” right turn lane with an acceleration lane along northbound Nevada Avenue. The northbound and southbound approaches consist of a left turn lane, two through lanes, and a right turn lane.

The existing signalized intersection of Fillmore Street and Nevada Avenue operates with protected-permissive eastbound and westbound left turn phasing and northbound and southbound protected left turn phasing. The eastbound and westbound approaches consist of a left turn lane, two through lanes, and a right turn lane. The northbound and southbound approaches consist of dual left turn lanes, two through lanes, and a right turn lane.

The existing signalized intersection of Fillmore Street and Cascade Avenue operates with protected-permissive left turn phasing for each approach. The eastbound approach consists of a left turn lane, two through lanes, and a right turn lane. The westbound approach has a left turn lane and two through lanes. The northbound and southbound approaches consist of one left turn lane, one through lane, and a right turn lane.

The existing intersection of Fillmore Street and Stone Avenue operates with protected-permissive left turn phasing in the eastbound and westbound directions. The northbound and southbound directions operate as permissive left turn phasing. The eastbound and westbound approaches consist of a left turn lane, two through lanes, and a right turn lane. The northbound and southbound approaches consist of a dedicated left turn lane and one shared through/right turn lane.

The Fillmore Street and El Paso Street signalized intersection operates with protected permissive left turn phasing in the eastbound and westbound directions and permissive left turn phasing in the northbound and southbound directions. The eastbound approach consists of a left turn lane, two through lanes, and a right turn lane. The westbound approach has a left turn lane and two through lanes. The northbound and southbound approaches consist of a dedicated left turn lane and one shared through/right turn lane.

The existing intersection lanes and control for the project study area is shown in **Figure 2**.

TRAFFIC VOLUMES

Existing peak hour turning movement counts were conducted at the key intersections excluding the intersections of Nevada Avenue with Mount View Lane and Winters Drive, on Tuesday May 16, 2017. Counts from a previous study were used for Nevada Avenue with Mount View Lane and Winters Drive. The counts for these two intersections were collected on Wednesday, July 8, 2015. All counts were conducted in 15-minute intervals during the morning and afternoon peak hours of adjacent street traffic from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM on this count date. When the 2017 counts were compared to the 2015 counts, a growth of 12.5 percent was determined. This percentage is unusually high for typical growth. An average of the 2017 and 2015 counts were used for existing turning movements. Existing turning movement counts are shown in **Figure 3**. Count sheets are attached to the end of this report.

EXISTING TRAFFIC ANALYSIS

Kimley-Horn's analysis of traffic operations was conducted to determine if the anticipated redevelopment can be accommodated while maintaining acceptable operations. The acknowledged source for determining overall capacity is the *Highway Capacity Manual*[1] *(HCM).* Capacity analysis results are listed in terms of Level of Service (LOS). LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. It ranges from A (very little delay) to F (long delays and congestion). For intersections in this

[1] Transportation Research Board, *Highway Capacity Manual*, Special Report 209, Washington DC, 2010.

study area, City of Colorado Springs staff determined that LOS E was the minimum threshold for acceptable operations for signalized intersections along the study corridor. **Table 1** shows the definition of LOS for signalized intersections.

Table 1. Level of Service Definitions

Level of Service	Signalized Intersection Average Total Delay (Sec/veh)
A	≤ 10
B	> 10 and ≤ 20
C	> 20 and ≤ 35
D	> 30 and ≤ 55
E	> 55 and ≤ 80
F	> 80

Traffic Levels of Service. Definitions provided from the Highway Capacity Manual, Special Report 209, Transportation Research Board, 2010.

The study area intersections along Nevada Avenue were analyzed based on average total delay analysis for signalized intersections. LOS for a signalized intersection is defined for each approach and for the overall intersection.

The existing analyses are based on the lane geometry and intersection control shown in **Figure 2**. The existing signalized intersection analysis along Nevada Avenue utilizes the observed cycle lengths previously specified with existing phasing and timing splits for the weekday morning and afternoon peak hours. VISTRO traffic analysis software was used to analyze the study area intersections with the HCM methodology reports used to analyze intersection delay and LOS.

It was found that all the existing study intersections currently operate with an acceptable LOS (LOS E or better) during the weekday morning and afternoon peak hours except for the Garden of the Gods Road/Austin Bluffs Parkway intersection. **Table 2** provides the results of the existing LOS for the study area intersections (capacity analysis worksheets are also attached).

Table 2. Existing Intersection Level-of-Service Summary

Intersection	AM		PM	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Austin Bluffs Parkway / Nevada Avenue	57.0	E	191.2	F
Mount View Lane / Nevada Avenue	19.7	B	90.2	F
Winters Drive / Nevada Avenue	25.7	C	46.0	D
Fillmore Street/ Nevada Avenue	48.5	D	93.4	F
Cascade Avenue / Fillmore Street	26.5	C	38.9	D
Stone Avenue / Fillmore Street	13.8	B	26.6	C
El Paso Street / Fillmore Street	18.2	B	27.6	C

The observations from the LOS summary indicate that Austin Bluffs Parkway/Nevada Avenue is already a failing intersection. In addition, Fillmore Street / Nevada Avenue performs at a LOS "F" during the PM peak with existing traffic volumes.

Future Traffic Analysis

TRIP GENERATION

Site-generated traffic estimates are determined through a process known as trip generation. Rates and equations are applied to the proposed land use to estimate traffic generated by the development areas during a specific time interval. The acknowledged source for trip generation rates is the *Trip Generation Report*[2] published by the Institute of Transportation Engineers (ITE). ITE has established trip rates in nationwide studies of similar land uses. For this study, Kimley-Horn used the ITE Trip Generation Report average rates that apply to Apartment (ITE Code 220), General Office Building (ITE Code 710), Research and Development Center (ITE Code 760), City Park (ITE Code 411) and Specialty Retail Center (ITE Code 826).

2 Institute of Transportation Engineers, *Trip Generation: An Information Report*, Ninth Edition, Washington DC, 2012.

Reference the Trip Generation information at the end of the report for a summary of the options available for different ITE Rates. Based on the Renew North Nevada Avenue Master Plan, the trip generation assumes the Master Plan's interpretation of market demand which includes:

- 20 dwelling units/acre for Multifamily units
- 0.40 FAR for office and research/development land-use
- 0.20 FAR for retail land-use

The Master Plan splits the land use analysis into three zones: North, Central, and South. Change in acreage of each land use type was calculated for each scenario (acreage of a particular land use in the preferred scenario minus the acreage of the same existing land use). These changes in acreage per land use were then multiplied by trip generation rates to determine traffic generated by each analysis zone. **Table 3** includes a summary of the total trips generated by each of the Master Plan zones.

Table 3. Trips Generated by Each Master Plan Zone

Zone	Forecasted Trips
North Zone	9,097 Daily Trips
Central Zone	10,249 Daily Trips
South Zone	9,036 Daily Trips
Total	28,382 Daily Trips

In order to more accurately distribute and assign the trips generated by each of the three zones, the study area was split into 12 unique analysis zones and the acreage was proportionally divided according the acreage determined by the Master Plan. Reference the Trip Generation information at the end of this report for a summary of how the three zones from the Master Plan were proportionally divided into 12 analysis zones. **Table 4** summarizes the estimated trip generation volumes on a per acre basis for the project (calculations attached).

Table 4. Trips Generated by Each Sub-Area

Total Trips	Sub-Area	Total Trips Generated						
		Daily	AM (IN)	AM (Out)	AM (Total)	PM (IN)	PM (Out)	PM (Total)
North Zone	NE	3953	276	64	340	248	172	420
	NW	5144	281	134	415	330	194	524
	Total	9097	557	198	755	578	366	944
Central Zone	CE	0	0	0	0	0	0	0
	DogTrack	3923	161	12	174	36	224	260
	CW	1332	-7	26	20	39	21	60
	Expo	3370	216	11	228	18	255	273
	Power	0	0	0	0	0	0	0
	SW (North)	1624	44	7	52	21	74	94
	Total	10249	414	56	474	114	574	687
South Zone	SE	2430	272	9	281	178	106	284
	SW (South)	2252	87	37	124	79	24	122
	Kmart	1597	108	42	150	103	59	162
	SW of Fillmore	551	91	-35	56	25	9	42
	SE of Fillmore	2206	19	102	121	94	41	143
	Total	9036	577	155	732	479	239	752
Total		28382	1,548	409	1,961	1,171	1,179	2,383
Internal Capture Reduction (Conservative 12%)		24976	1,362	360	1,726	1,030	1,038	2,097

Several reduction factors were applied to the Trip Generation. It was assumed that only 80 percent of the acreage will be built out at any given time. Thus, a 20 percent reduction was applied to account for a realistic buildout scenario. A reduction of 12 percent was used to account for internal capture, which accounts for the trips generated internally between mixed-uses. An additional 2 percent was applied to account for the City's goal to have 2 percent of trips use transit.

TRIP DISTRIBUTION

Distribution of redevelopment traffic on Nevada Avenue through the Garden of the Gods Road/Austin Bluffs Parkway, Mount View Lane, Winters Drive, and Fillmore Street intersections was based on the area street system characteristics, existing traffic patterns, existing and anticipated surrounding development areas, development location and type, expected roadway improvements, and the proposed future roadway system. The directional distribution of traffic is a means to quantify the percentage of generated traffic that approaches the area from a given direction and departs back to the original source. VISTRO software implements these percentages by establishing "gateways," or percentages of traffic from a particular area. For this study, it was assumed that most trips leave to the northwest, north, northeast, southwest, south, and southeast. **Table 4** shows the percentage applied to each gateway.

Table 4. Distribution Percentages Per Gateway

Gateway to Study Area	Distribution Percentage
Northwest	18%
North	35%
Northeast	8%
Southwest	5%
South	25%
Southeast	9%

TRAFFIC ASSIGNMENT

Traffic assignment was obtained by applying the software capabilities of VISTRO. Certain percentages of trips from each zone were assigned to the "gateways" identified in the Trip Distribution. The paths/routes were based on the likely travel patterns to and from the land uses. **Figure 5** and **Figure 6** provide the trip assignment for both the future build-out (Strategy 1) and for Strategy 2, which incorporates network enhancements and alternate routes within the study area.

FUTURE TRAFFIC FORECASTING

A 20-year background growth factor of 1.1 (annual traffic volume growth rate of 0.5 percent) was used to calculate future traffic volumes prior to any redevelopment within the study area. The future analysis utilizes optimized phasing and timing splits as necessary due to the increase in traffic volumes. These volumes are shown in **Figure 4**.

TOTAL TRAFFIC

Trips generated by the Master Plan were then added to the background volumes per traffic assignment (see **Figure 5**). This represents the estimated traffic conditions for the build-out of each analysis with the additional trips generated by the Master Plan. **Figure 7** provides the volumes for the future build-out condition. **Table 5** provides the results for of the future LOS for the study area intersections if no action is taken to mitigate the traffic generated by the Master Plan. Note that the intersections of Garden of the Gods Road/Austin Bluffs Parkway, Mount View Lane, and Fillmore Street will perform at unacceptable levels to the City. Mitigation strategies need to be implemented in order to maintain acceptable LOS.

Table 5. Future Intersection with No Action LOS Summary

Intersection	AM		PM	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Austin Bluffs Parkway / Nevada Avenue	71.17	E	191.22	F
Mount View Lane / Nevada Avenue	72.56	E	169.17	F
Winters Drive / Nevada Avenue	141.50	F	105.31	F
Fillmore Street/ Nevada Avenue	48.20	D	93.39	F
Cascade Avenue / Fillmore Street	28.41	C	38.85	D
Stone Avenue / Fillmore Street	17.67	B	26.58	C
El Paso Street / Fillmore Street	19.33	B	27.57	C

As **Table 5** illustrates, the intersections primarily along North Nevada Avenue have a LOS "D" or worse. Daily traffic volumes were forecasted to reach 46,091 vehicles per day assuming no improvements or alternate routes are made.

Strategy Analysis

Three strategies were developed to mitigate the future additional trips added by the Master Plan and enhance the LOS at major intersections:

1. Improve North Nevada Avenue
2. Leveraging the Existing Roadway Network
3. Move People, Not Just Cars

A combination of the three strategies will be recommended to the City, as all three have different benefits to traffic mitigation and can work in coordination with one another. Each strategy will be briefly described son the following pages, to better analyze the impact of each strategy in mitigating traffic.

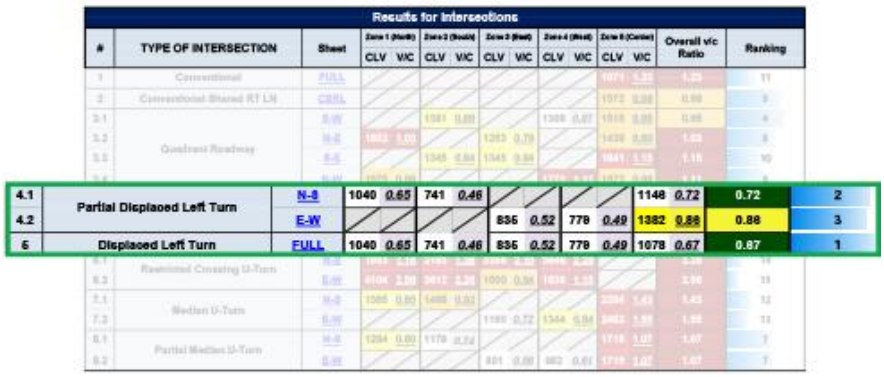
STRATEGY 1: IMPROVE NORTH NEVADA AVENUE

Strategy 1 follows a conventional approach to improving transportation function within a corridor. It focuses on improving the movement of vehicles along North Nevada Avenue. These improvements would include:

1. Signal Optimization

2. Increased Access Management
3. Major Intersection Improvements
4. Minor Intersection Improvements

The intersection of North Nevada Avenue and Austin Bluffs Parkway/Garden of the Gods Road currently performs at unacceptable LOS and will continue to perform at unacceptable levels in the future, even with implemented mitigation strategies. This intersection will need major intersection improvements. A brief analysis using the Federal Highway Administration (FHWA) Capacity Analysis for Planning of Junctions worksheet shows that implementing a partial displaced or full displaced intersection would improve the intersection improvement (determined by an acceptable V/C Ratio).



Implementation of the Master Plan will require minor improvements at other intersections. Here is a summary of the proposed improvements:

1. North Nevada Avenue and Winters Drive:
    - Southbound dual left turn
    - Additional receiving lane on east leg
2. North Nevada Avenue and Mount View Lane:
    - Dedicated eastbound left turn lane
    - Convert westbound shared through/left turnlane to through only to remove split phasing

Table 6 provides the results for of the future LOS for the study area intersections needing minor intersection improvements.

Table 6. Future Intersection with LOS Summary for Strategy 1

Intersection	AM		PM	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Mount View Lane / Nevada Avenue	29.02	C	44.24	D
Winters Drive / Nevada Avenue	41.51	D	13.0	B

STRATEGY 2: LEVAERAGE THE EXISTING ROADWAY NETWORK

Strategy 2 focuses on viewing the larger roadway network as one system. A more robust roadway network leverages available capacity for moving vehicles and supports the creation of a walkable mixture of land uses.

1. Creating Walkable Block Sizes (building a robust network)
2. Improving Cascade Avenue and Fillmore Street

Strategy 2 implements outlets for vehicular traffic other than North Nevada Avenue. By extending Cascade Avenue across the Templeton Gap Floodway and then across Monument Creek to Mark Dabling Boulevard, and improving the Fillmore Street and Cascade Avenue intersection, there are substantial traffic benefits for some of the intersections along the corridor. Mark Dabling Boulevard has the capacity to add the approximately 5,000 vehicles per day forecasted, helping mitigate the traffic congestion along North Nevada Avenue.

By adding this connection Average Daily Traffic (ADT) volumes along North Nevada Avenue decrease from approximately 46,000 vehicles per day to 36,000 vehicles per day. **Figure 8** provides the volumes for Strategy 2 that include a robust network and the connection of Cascade Avenue to Mark Dabling Boulevard. **Table 7** provides the corresponding results for of the future LOS for the study area

Table 7. Future Intersection with LOS Summary for Strategy 2

Intersection	AM		PM	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Austin Bluffs Parkway / Nevada Avenue	47.7	D	73.8	E
Mount View Lane / Nevada Avenue	19.9	B	18.8	B
Winters Drive / Nevada Avenue	10.2	B	13.0	B
Fillmore Street/ Nevada Avenue	48.5	D	47.8	D
Cascade Avenue / Fillmore Street	31.2	C	38.3	D
Stone Avenue / Fillmore Street	19.5	B	23.9	C
El Paso Street / Fillmore Street	23.9	C	26.3	C

STRATEGY 3: MOVE PEOPLE, NOT JUST CARS

Strategy 3 objectives are to enhance transportation choices for non-vehicle based trips and improve the safety within the corridor for all users. Implementation of this strategy includes:

1. Transit Enhancement
2. Expanding Trail Network and Connections

Currently, there are no plans for the mode or path of transit, making it difficult to accurately show the traffic benefits from enhancing the transit along North Nevada Avenue. As previously mentioned, a 2 percent reduction in trips was assumed during the Trip Generation to account for future transit needs. This number represents the City's goal and is not an accurate estimate of the percentage of trips that transit could generate. Next year, the Mountain Metropolitan Transit will conduct a transit study to determine the best route and mode of transit. After the study is complete, a more robust and accurate report on the reductions to traffic can be determined.

Expanding the trail network through the corridor can also mitigate traffic. In this study, the impact of these trail connections was assumed in the internal capture percentage included in the Trip Generation.

In all, the results for the future LOS and delays, as well as those for strategies 1 and 2, already include the conservative estimates of the reductions generated by transit and trail connections. More accurate results can be determined when the transit study conducted by Mountain Metropolitan Transit is completed.

Conclusion

Based on the results of this analysis, it is recommended that Nevada Avenue continue to provide two through lanes in each direction through the study area. It is understood that it is the City's desire to maintain this four-lane urban section for Nevada Avenue, to implement the vision of the approved Master Plan. Based on this, the City of Colorado Springs should consider implementing the recommended strategies. By making major and minor intersection improvements, connecting Cascade across Templeton Gap Floodway and to Mark Dabling Boulevard and enhancing transit and pedestrian connectivity, the traffic generated by the approved Master Plan can be appropriately mitigated. Therefore, Kimley-Horn believes the proposed redevelopment traffic of the Nevada Avenue Corridor Study Area will be successfully incorporated into the existing roadway network, while allowing for the enhanced parking, pedestrian, bicycle, and transit improvements desired. The Strategies provided herein can be developed without the need for additional through lane capacity along Nevada Avenue.

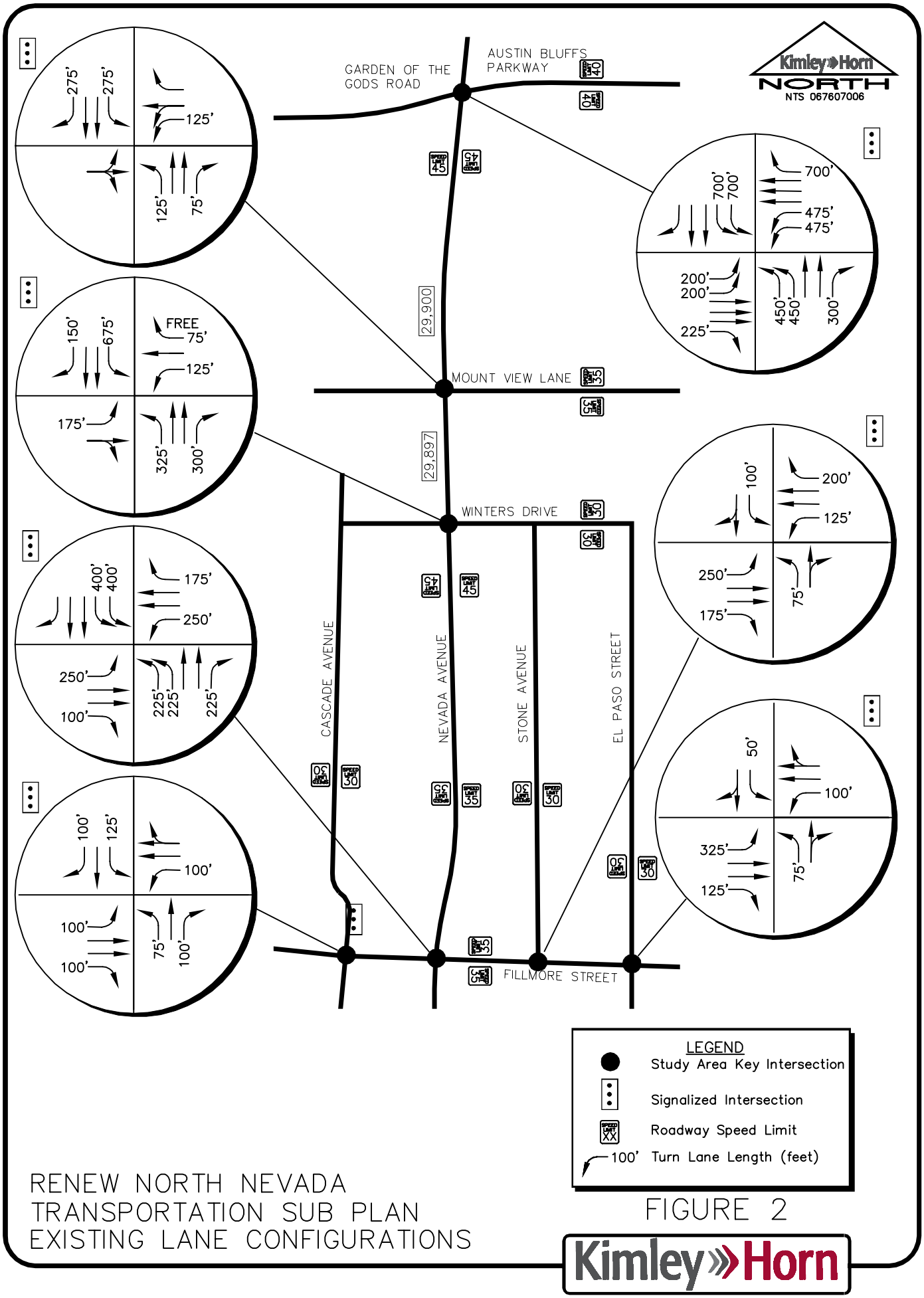
Figures

Kimley»Horn
NORTH
NTS 067607006

RENEW NORTH NEVADA
TRANSPORTATION SUB PLAN
VICINITY MAP

FIGURE 1

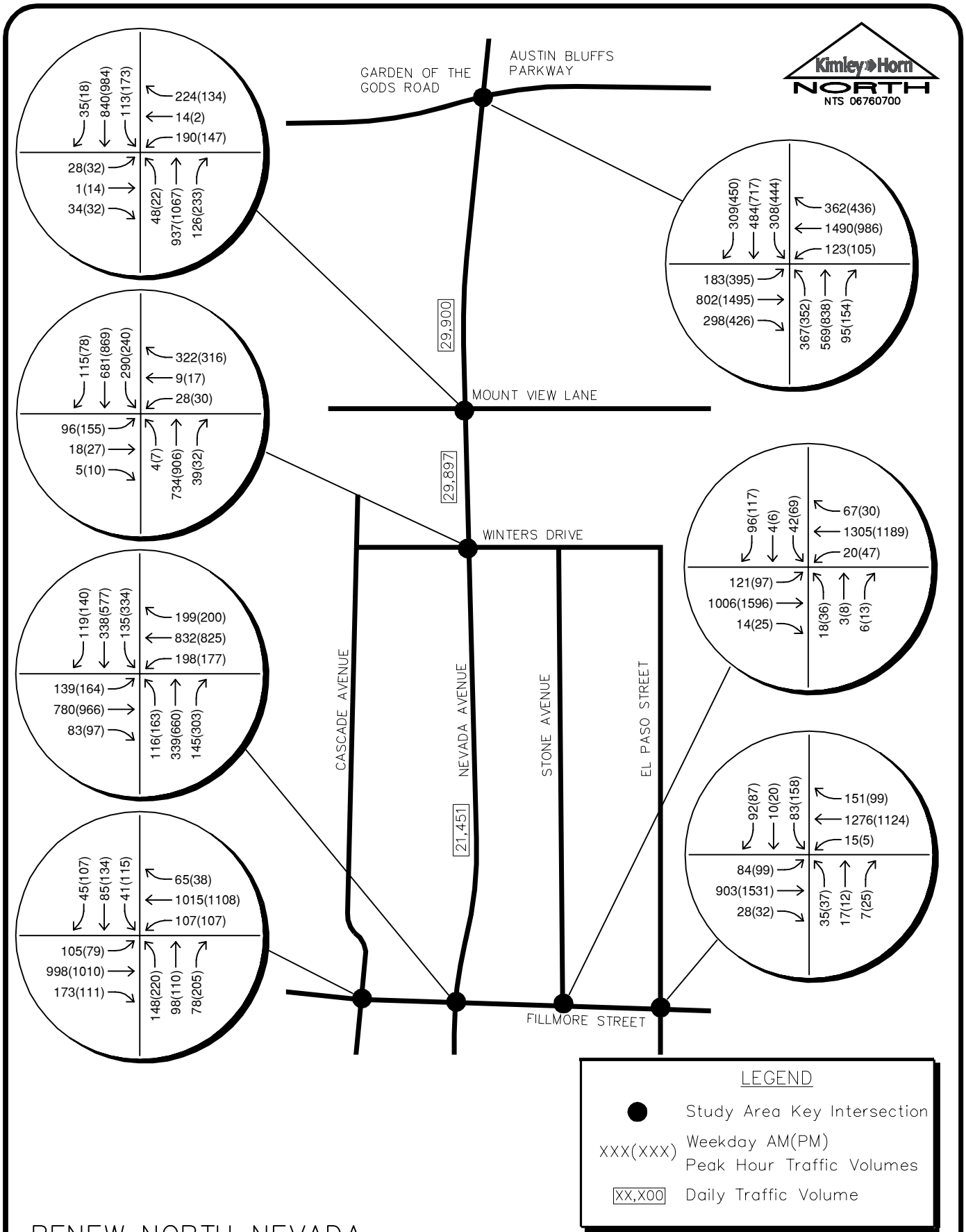
Kimley»Horn



RENEW NORTH NEVADA
TRANSPORTATION SUB PLAN
EXISTING LANE CONFIGURATIONS

FIGURE 2

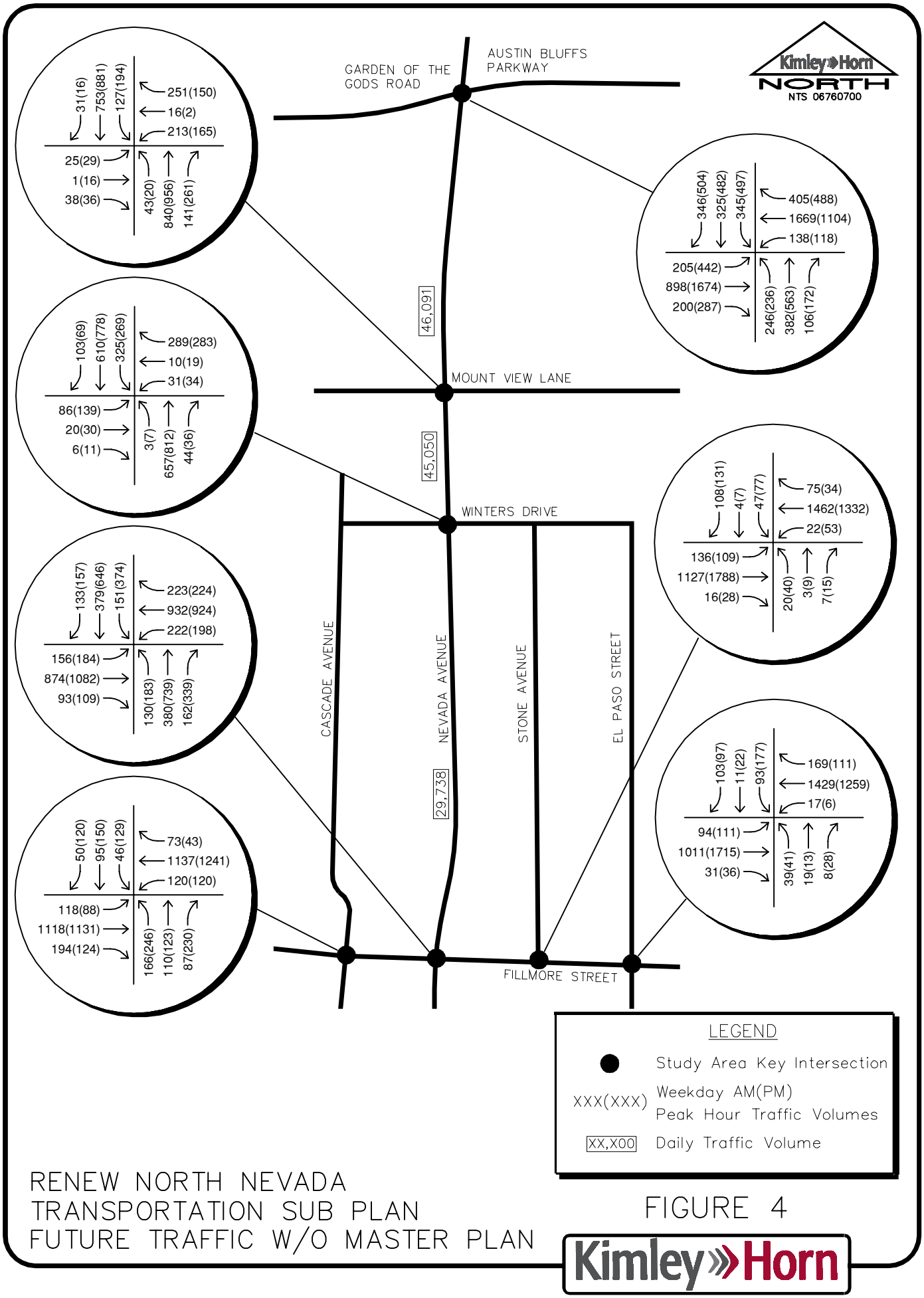
Kimley»Horn



RENEW NORTH NEVADA
TRANSPORTATION SUB PLAN
EXISTING TRAFFIC VOLUMES

FIGURE 3

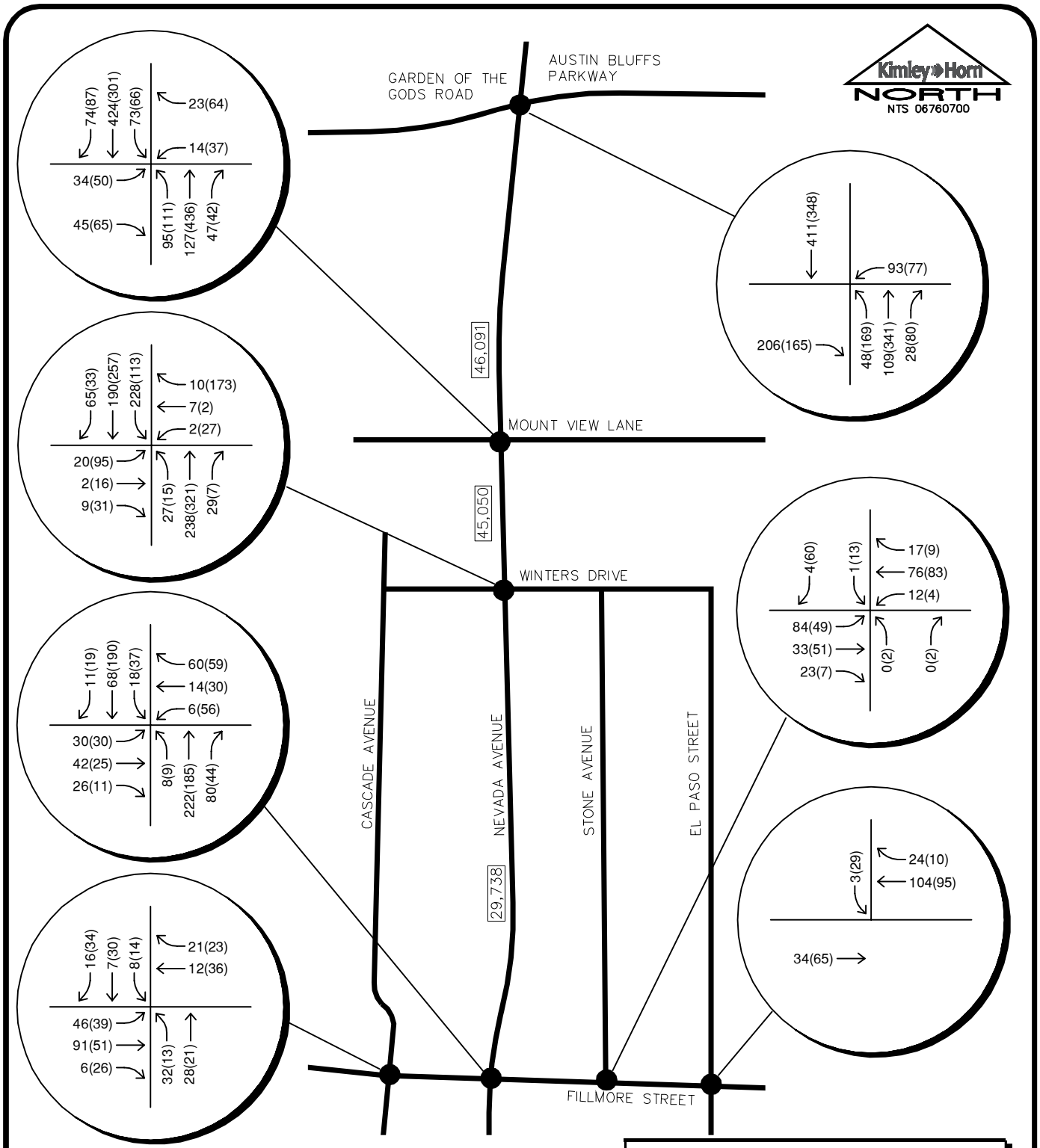
Kimley»Horn



RENEW NORTH NEVADA
TRANSPORTATION SUB PLAN
FUTURE TRAFFIC W/O MASTER PLAN

FIGURE 4

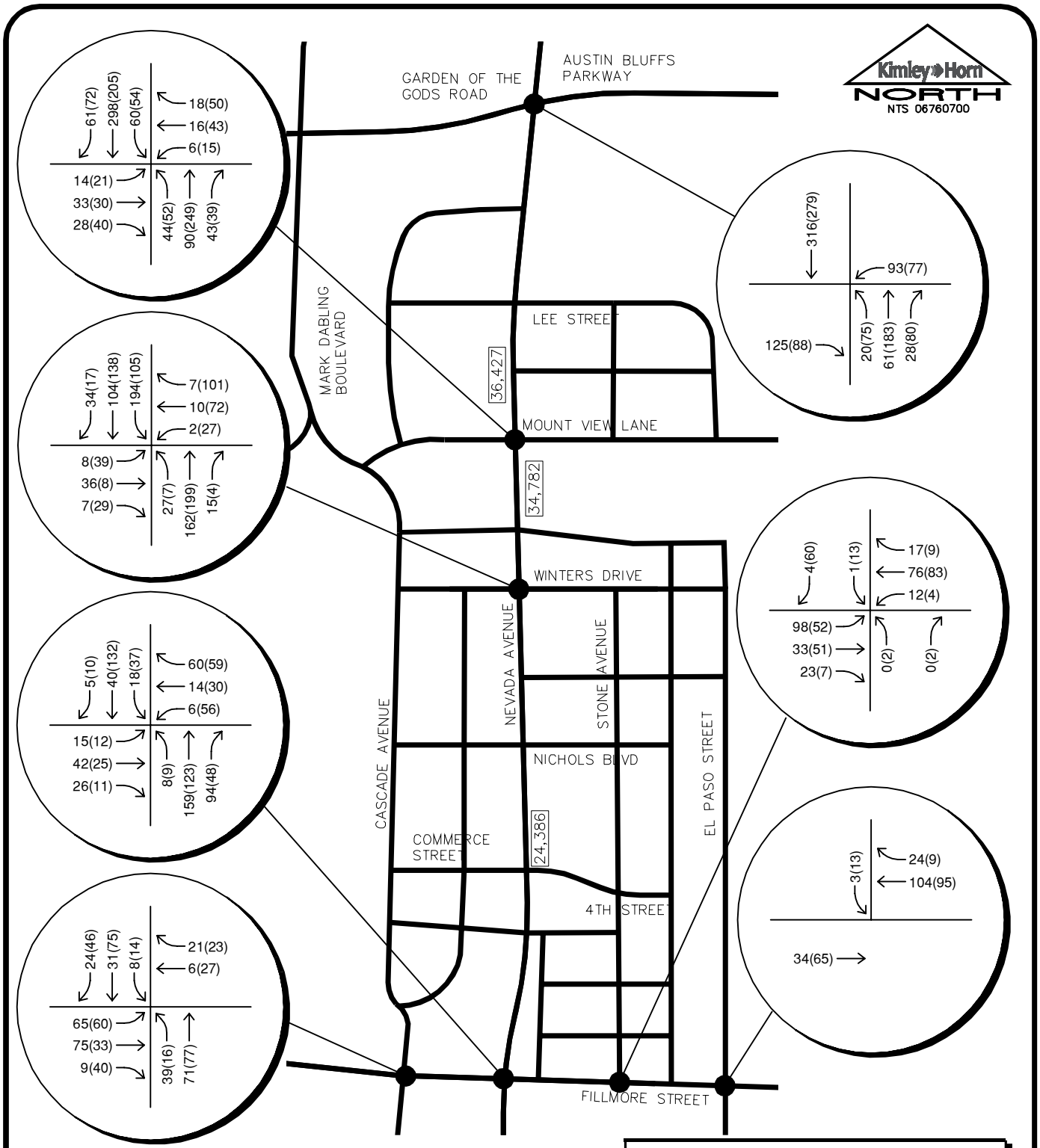
Kimley»Horn



RENEW NORTH NEVADA
TRANSPORTATION SUB PLAN
FUTURE BUILD-OUT TRIP ASSIGNMENT
STRATEGY 1

FIGURE 5

Kimley»Horn



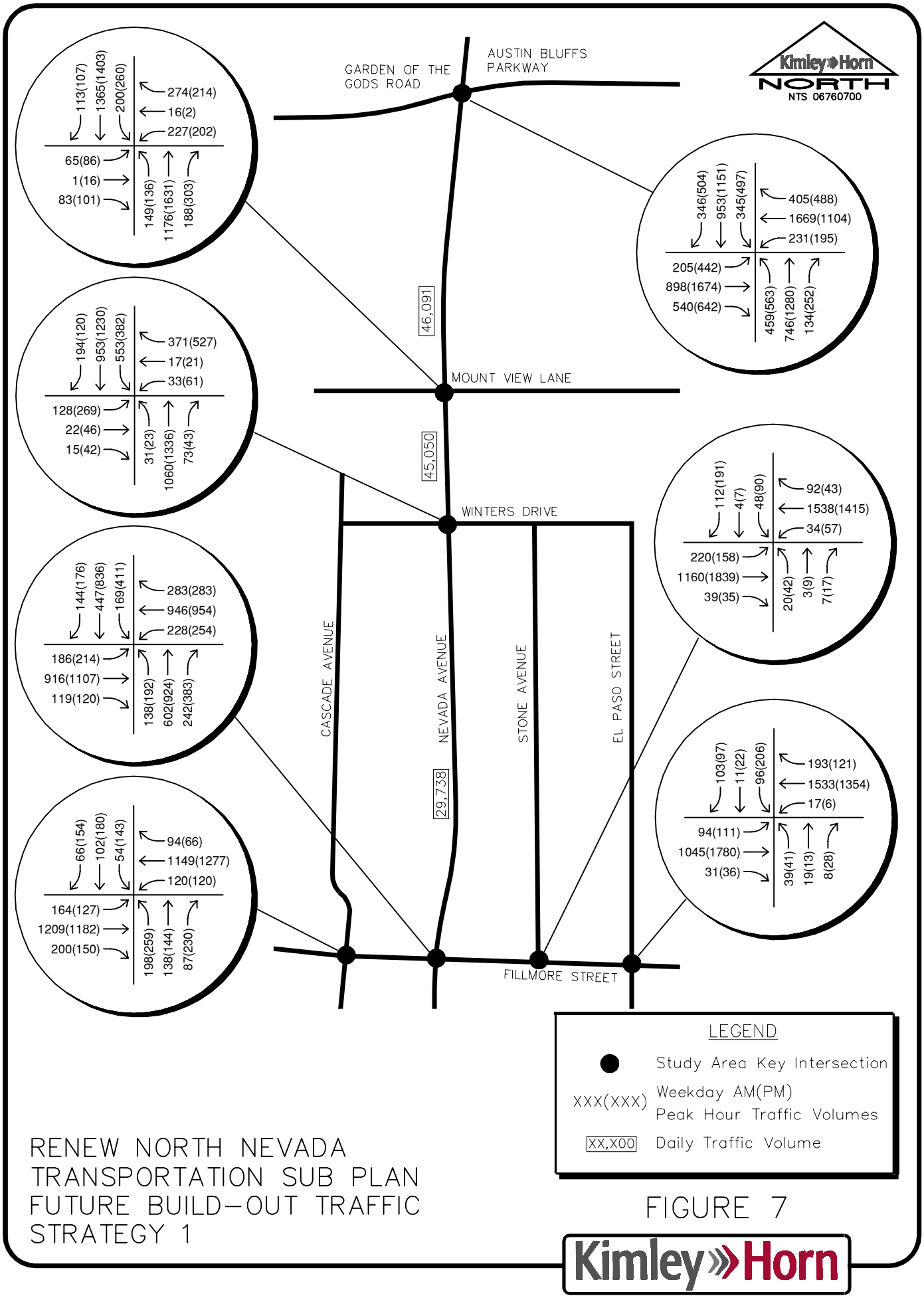
LEGEND

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

RENEW NORTH NEVADA
TRANSPORTATION SUB PLAN
FUTURE BUILD-OUT TRIP ASSIGNMENT
STRATEGY 2

FIGURE 6

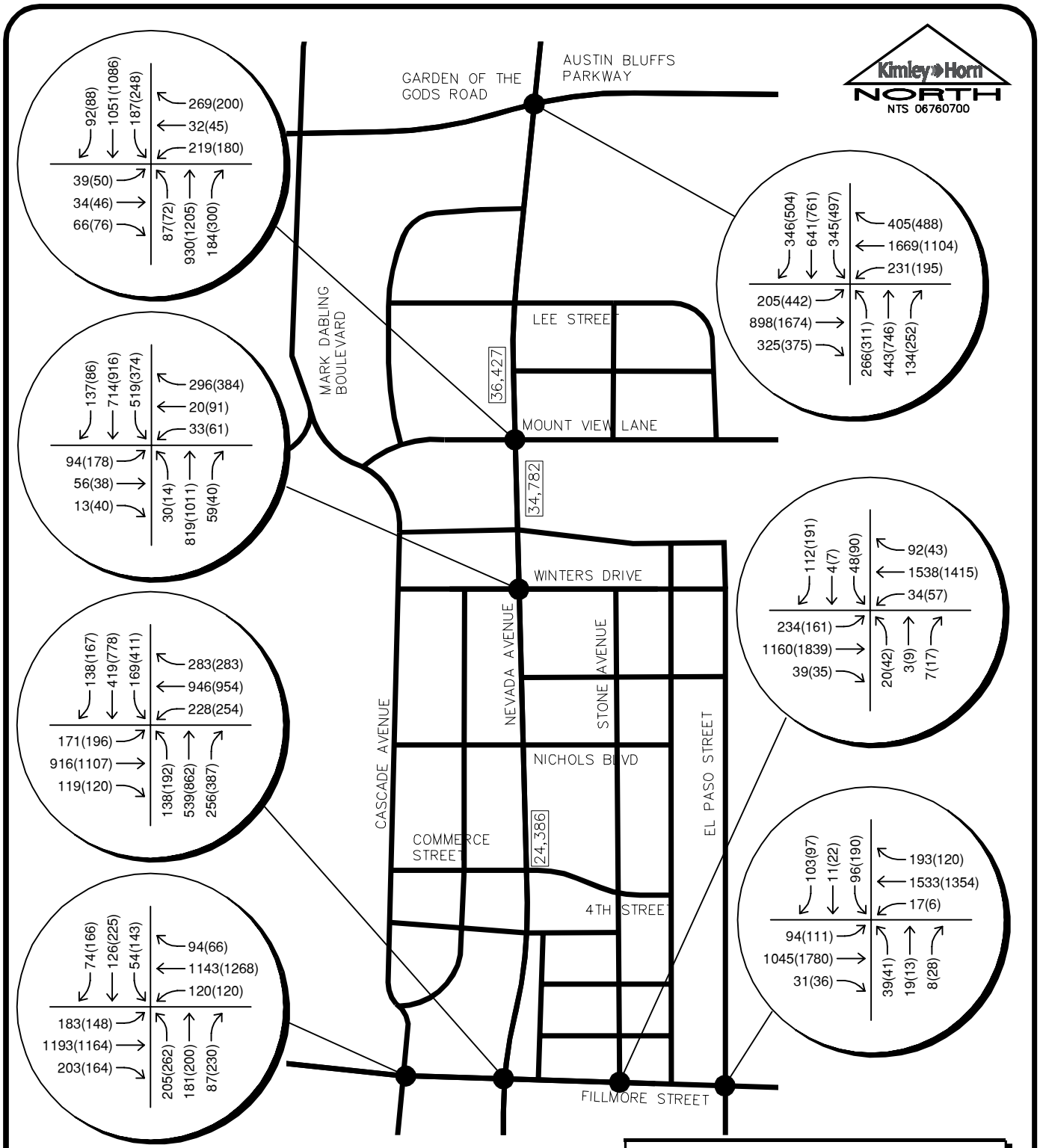
Kimley»Horn



RENEW NORTH NEVADA TRANSPORTATION SUB PLAN FUTURE BUILD-OUT TRAFFIC STRATEGY 1

FIGURE 7

Kimley»Horn



RENEW NORTH NEVADA TRANSPORTATION SUB PLAN
FUTURE BUILD-OUT TRAFFIC STRATEGY 2

FIGURE 8

Kimley»Horn

Trip Generation Information

Trip Generation Options

Land Use	ITE Trip Gen Variable	ITE Rate	NES Study Parameter Units	NES Study Parameter Values	Equation	Daily Trips/Acre	AM Trips/ Acre	PM Trips/Acre	Notes
Commerical									
445a Multiplex Movie Theater	Screens	292.5 (Friday)/13.64 (PM)	N/A	N/A	10 Screens*ITE RATE			136	Only data for Fridays and PM trips
820 Shopping Center	1,000 GLA	42.7	FAR	0.2	0.2*43560/1000*ITE RATE	372	8	32	
826 Specialty Retail Center	1,000 GLA	44.32	FAR	0.2	0.2*43560/1000*ITE RATE	386	9	24	*Used in current estimate
879 Arts and Crafts Store	1,000 SF	56.55	FAR	0.2	0.2*43560/1000*ITE RATE	493	41	54	
931 Quality Restaurant	1,000 SF	89.95	FAR	0.2	0.2*43560/1000*ITE RATE	784	7	65	
Employment									
110 General Light Industrial	1,000 SF	6.97	N/A (see NES chart)	N/A (see NES chart)	0.4*43560/1000*ITE RATE	121	16	17	Study incidates industrial as current use. Rate not used in current estimate. Phase 1 used a rate of 52
120 General Heavy Industrial	1,000 SF	1.5	N/A (see NES chart)	N/A (see NES chart)	0.4*43560/1000*ITE RATE	26	9	12	Study incidates industrial as current use. Rate not used in current estimate. Phase 1 used a rate of 52
150 Warehousing	1,000 SF	3.56	N/A (see NES chart)	N/A (see NES chart)	0.4*43560/1000*ITE RATE	62	5	6	Study incidates industrial as current use. Rate not used in current estimate. Phase 1 used a rate of 52
710 General Office Building	1,000 SF	11.03	FAR	0.4	0.4*43560/1000*ITE RATE	192	27	26	*Used in current estimate
750 Office Park	1,000 SF	11.42	FAR	0.4	0.4*43560/1000*ITE RATE	199	30	26	
760 Research and Development Center	1,000 SF	8.11	FAR	0.4	0.4*43560/1000*ITE RATE	141	21	19	*Used in Central Zone Per Master Plan Comments
Low Density Residential									
210 Single-Family Detached Housing	Dwelling Units	9.52	Dwelling Unit/Acre	20	20*ITE RATE	190	15	20	No Low Density rates are in the current esimate. Low density was assumed as 220 Apt.
230 Residential Condominium/Townhouse	Dwelling Units	5.81	Dwelling Unit/Acre	20	20*ITE RATE	116	9	10	No Low Density rates are in the current esimate. Low density was assumed as 220 Apt.
High Density Residential									
220 Apartment	Dwelling Units	6.65	Dwelling Unit/Acre	20	20*ITE RATE	133	10	12	* Used in current estimate. Low and High Density used this rate
221 Low Rise Apartment	Dwelling Units	6.59	Dwelling Unit/Acre	20	20*ITE RATE	132	9	12	
232 High Rise Residential Condo/Townhouse	Dwelling Units	4.18	Dwelling Unit/Acre	20	20*ITE RATE	84	7	8	
Park/Open Space									
411 City Park	Acres	1.89	N/A	N/A	ITE RATE	2			*Used in current estimate
417 Regional Park	Acres	4.57	N/A	N/A	ITE RATE	5	0.15	0.20	

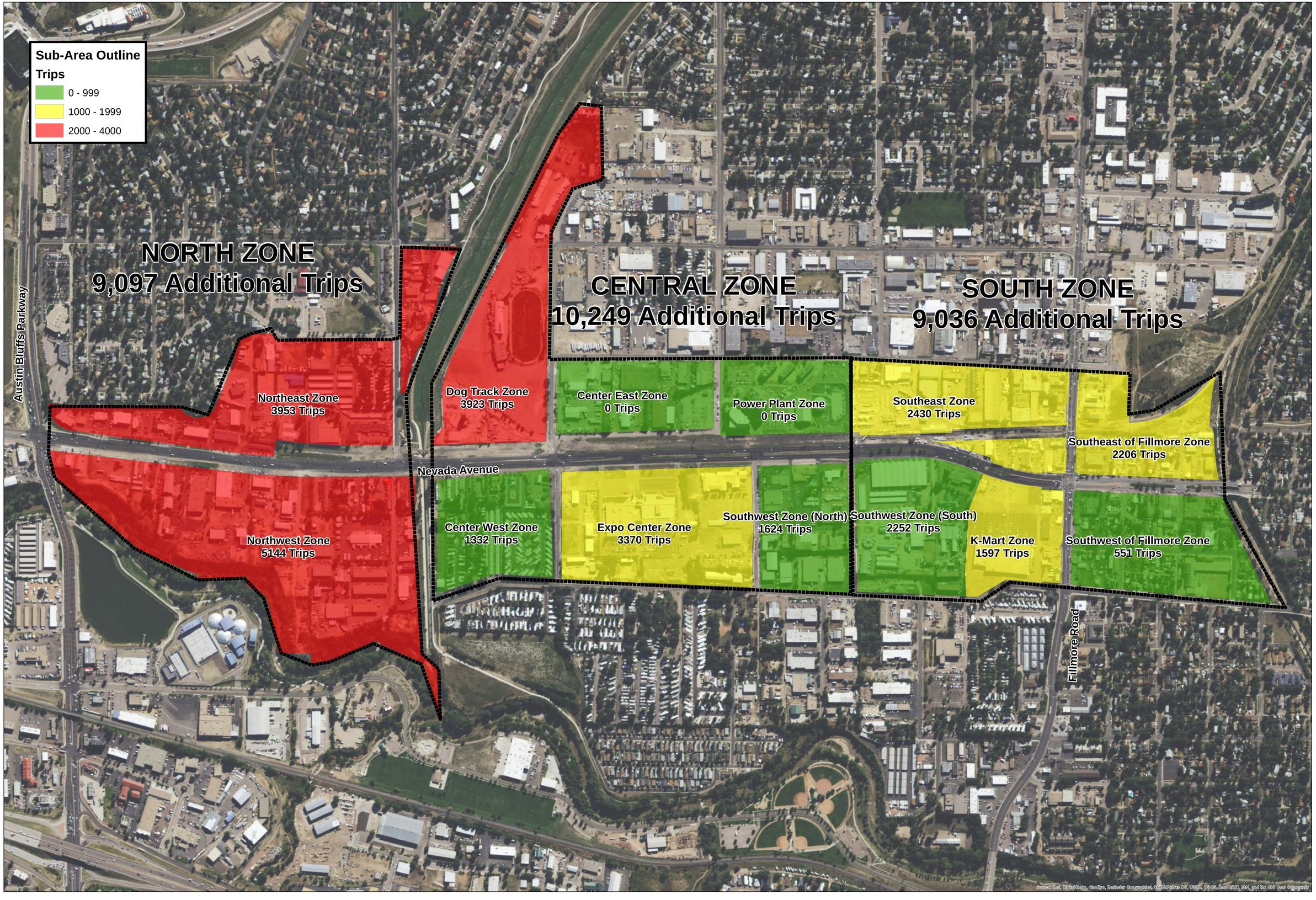
*Civic/Vacant Land rates are ignored because they either do not produce trips or have no net change in acreage

Legend
Land Use Defintion Per NES Study
ITE Land Use Description
Currently Used In Estimate

			Scenario 0 (Existing uses)										Baseline								
	Sub-Area	Total Acreage	% Developed	Office	Housing	Retail	Industrial	Office	Housing	Retail	Industrial	Redevelop	Office	Housing	Retail	Industrial	Office	Housing	Retail	Industrial
North Zone	NE	44.44	81%	0%	3%	22%	56%	0.00	0.97	7.99	20.38	1	48%	30%	50%	0%	20.09	10.61	13.27	0.00
	NW	70.27	75%	0%	0%	15%	60%	0.00	0.00	7.91	31.62	1	52%	70%	50%	0%	21.76	24.77	13.27	0.00
								0.00	0.97	15.90	52.00		100%	100%	100%	MP Goal*	41.85	35.38	26.54	
Central Zone	CE	16.35	100%	19%	0%	39%	48%	3.15	0.00	6.36	7.93	0	5%	0%	15%	0%	3.15	0.00	6.36	0.00
	DogTrack	34.95	27%	1%	9%	1%	7%	0.07	0.87	0.07	0.67	1	30%	15%	31%	0%	18.24	3.15	13.28	0.00
	CW	20.44	90%	0%	45%	0%	45%	0.00	8.28	0.00	8.28	1	0%	75%	10%	0%	0.00	15.75	4.28	0.00
	Expo	33.80	85%	9%	0%	0%	77%	2.44	0.00	0.00	21.98	1	40%	0%	20%	0%	24.32	0.00	8.57	0.00
	Power	14.92	100%	50%	0%	0%	50%	7.46	0.00	0.00	7.46	0	12%	0%	0%	0%	7.46	0.00	0.00	0.00
	SW (North)	16.18	85%	17%	0%	0%	68%	2.34	0.00	0.00	9.35	1	13%	10%	14%	0%	7.91	2.10	6.00	0.00
								15.46	9.15	6.43	55.67		100%	100%	90%	MP Goal*	60.81	21.00	42.84	
South Zone	SE	26.46	95%	10%	0%	34%	50%	2.63	0.00	8.67	12.68	1	39%	0%	23%	0%	17.74	0.00	8.63	0.00
	SW (South)	23.42	85%	29%	0%	0%	115%	5.72	0.00	0.00	22.89	1	23%	15%	25%	0%	10.92	3.35	9.00	0.00
	Kmart	14.60	65%	0%	0%	59%	0%	0.00	0.00	5.55	0.00	1	12%	15%	15%	0%	5.46	3.35	5.63	0.00
	SW of Fillmore	20.22	90%	0%	54%	23%	0%	0.00	9.83	4.09	0.00	1	10%	30%	20%	0%	5.91	6.69	7.50	0.00
	SE of Fillmore	15.76	60%	0%	0%	30%	0%	0.00	0.00	2.84	0.00	1	0%	40%	17%	0%	0.00	8.92	6.75	0.00
		351.81						8.35	9.83	21.15	35.57		84%	100%	100%	MP Goal*	45.48	22.31	37.52	0.00

*Due to constriants within the sub-areas, the total land use acreage may not exaclty meet MP goal for the Zones

Total Trips	Sub-Area	Total Trips Generated						
		Daily	AM (IN)	AM (Out)	AM (Total)	PM (IN)	PM (Out)	PM (Total)
North Zone	NE	3953	276	64	340	248	172	420
	NW	5144	281	134	415	330	194	524
	Total	9097	557	198	755	578	366	944
Central Zone	CE	0	0	0	0	0	0	0
	DogTrack	3923	161	12	174	36	224	260
	CW	1332	-7	26	20	39	21	60
	Expo	3370	216	11	228	18	255	273
	Power	0	0	0	0	0	0	0
	SW (North)	1624	44	7	52	21	74	94
	Total	10249	414	56	474	114	574	687
South Zone	SE	2430	272	9	281	178	106	284
	SW (South)	2252	87	37	124	79	24	122
	Kmart	1597	108	42	150	103	59	162
	SW of Fillmore	551	91	-35	56	25	9	42
	SE of Fillmore	2206	19	102	121	94	41	143
	Total	9036	577	155	732	479	239	752
Total		28382	1,548	409	1,961	1,171	1,179	2,383
Internal Capture Reduction (Conservative 12%)		24976	1,362	360	1,726	1,030	1,038	2,097



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0 200 400 800 Feet

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4582 S Ulster St, Suite 1500
Denver, Colorado 80237 (303) 228-2300
Engineering, Planning and
Environmental Consultants

SCALE(H):1"= SHOWN	
SCALE(V):	NONE
DESIGNED BY:	CI
DRAWN BY:	CI
CHECKED BY:	TR
DATE:	SEP 2017

NEVADA AVENUE CORRIDOR STUDY
TRIPS GENERATED PER SUB ZONE

PROJECT NO.
067607006

DRAWING NAME
CORRIDOR STUDY

Counts

RDC
Ridgeview Data Collection

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
AM Peak
Filmore St and Cascade Ave

File Name : Filmore and Cascade AM
Site Code : IPO 239
Start Date : 5/16/2017
Page No : 1

Groups Printed- Automobiles

	Filmore St Eastbound					Filmore St Westbound					Cascade Ave Northbound					Cascade Ave Southbound					
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07:15 AM	27	222	42	0	291	16	229	18	0	263	18	20	15	0	53	15	16	14	0	45	652
07:30 AM	27	244	48	0	319	29	267	19	0	315	48	26	25	0	99	12	26	19	0	57	790
07:45 AM	32	272	46	0	350	38	266	17	0	321	31	23	18	0	72	7	19	8	0	34	777
Total	101	902	168	0	1171	100	966	70	0	1136	119	85	62	0	266	44	76	50	0	170	2743
08:00 AM	22	233	40	0	295	21	249	13	0	283	30	30	19	0	79	11	21	8	0	40	697
08:15 AM	24	249	39	0	312	19	233	16	0	268	39	19	16	0	74	11	19	10	0	40	694
08:30 AM	14	203	40	0	257	10	220	16	0	246	24	21	17	0	62	10	10	10	0	30	595
08:45 AM	28	256	43	0	327	22	225	12	0	259	24	22	23	0	69	13	15	12	0	40	695
Total	88	941	162	0	1191	72	927	57	0	1056	117	92	75	0	284	45	65	40	0	150	2681
Grand Total	189	1843	330	0	2362	172	1893	127	0	2192	236	177	137	0	550	89	141	90	0	320	5424
Apprch %	8	78	14	0		7.8	86.4	5.8	0		42.9	32.2	24.9	0		27.8	44.1	28.1	0		
Total %	3.5	34	6.1	0	43.5	3.2	34.9	2.3	0	40.4	4.4	3.3	2.5	0	10.1	1.6	2.6	1.7	0	5.9	

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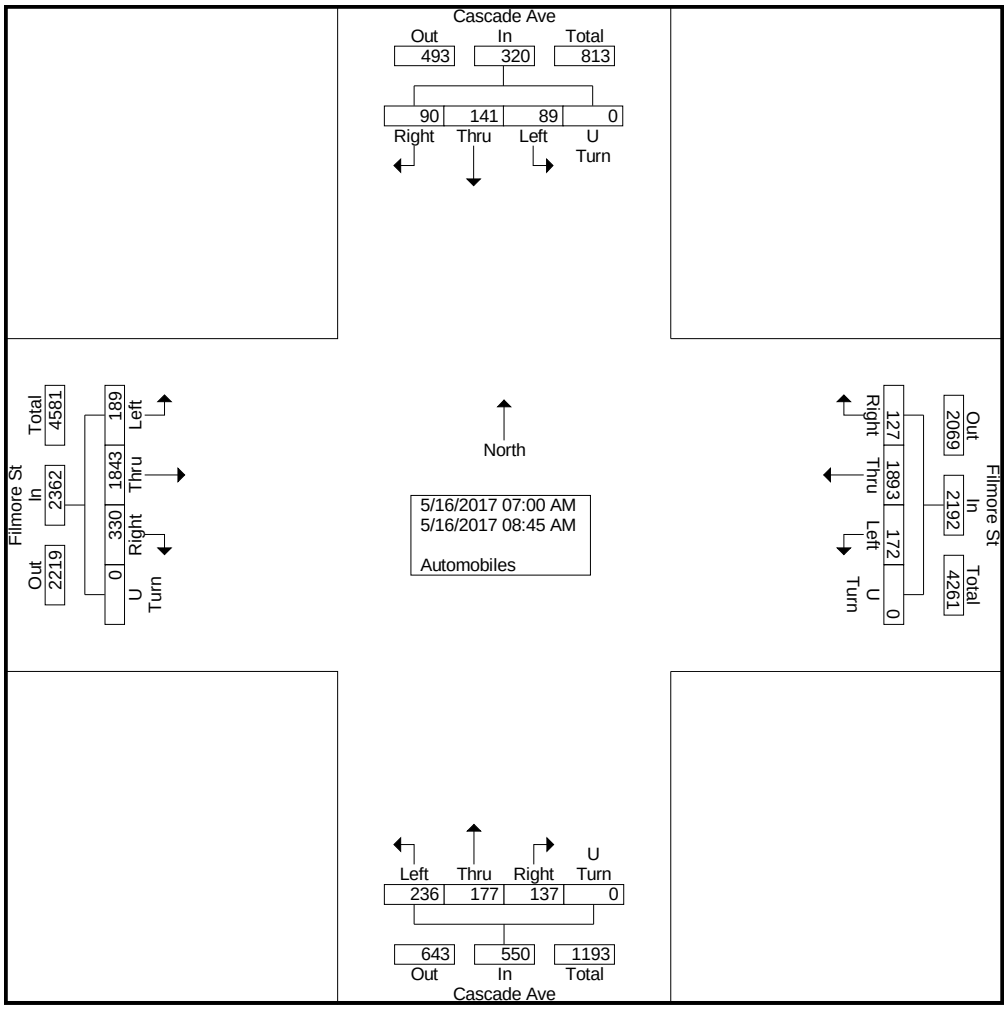

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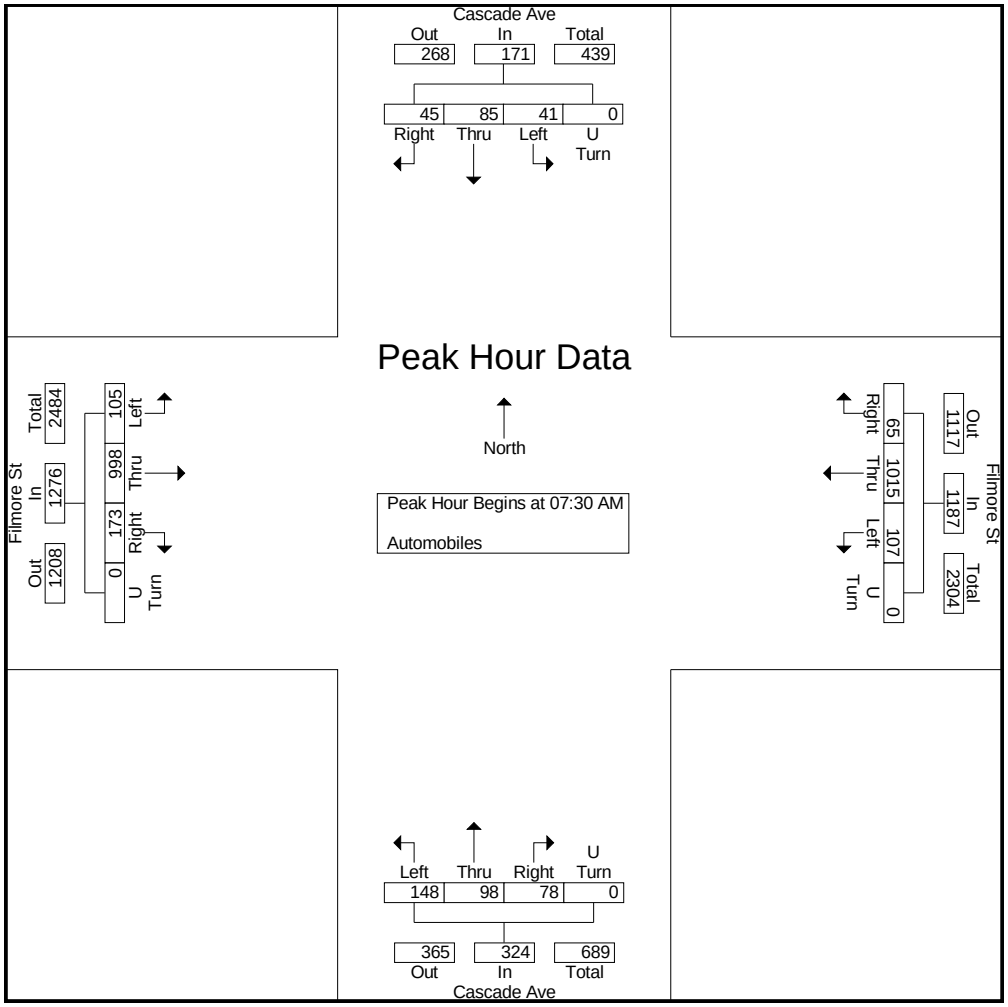
	Filmore St Eastbound					Filmore St Westbound					Cascade Ave Northbound					Cascade Ave Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	27	244	48	0	319	29	267	19	0	315	48	26	25	0	99	12	26	19	0	57	790
07:45 AM	32	272	46	0	350	38	266	17	0	321	31	23	18	0	72	7	19	8	0	34	777
08:00 AM	22	233	40	0	295	21	249	13	0	283	30	30	19	0	79	11	21	8	0	40	697
08:15 AM	24	249	39	0	312	19	233	16	0	268	39	19	16	0	74	11	19	10	0	40	694
Total Volume	105	998	173	0	1276	107	1015	65	0	1187	148	98	78	0	324	41	85	45	0	171	2958
% App. Total	8.2	78.2	13.6	0		9	85.5	5.5	0		45.7	30.2	24.1	0		24	49.7	26.3	0		
PHF	.820	.917	.901	.000	.911	.704	.950	.855	.000	.924	.771	.817	.780	.000	.818	.854	.817	.592	.000	.750	.936



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Groups Printed- Automobiles

	Filmore St Eastbound					Filmore St Westbound					Cascade Ave Northbound					Cascade Ave Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
04:00 PM	30	295	41	0	366	19	296	13	0	328	44	22	29	0	95	28	31	32	0	91	880
04:15 PM	32	249	38	0	319	23	246	12	0	281	42	23	46	0	111	24	20	19	0	63	774
04:30 PM	20	250	23	0	293	23	281	11	0	315	48	32	58	0	138	38	35	30	0	103	849
04:45 PM	23	238	39	0	300	28	244	8	0	280	55	26	45	0	126	23	37	30	0	90	796
Total	105	1032	141	0	1278	93	1067	44	0	1204	189	103	178	0	470	113	123	111	0	347	3299
05:00 PM	13	276	26	0	315	23	313	12	0	348	47	24	48	0	119	28	30	22	0	80	862
05:15 PM	23	246	23	0	292	33	270	7	0	310	70	28	54	0	152	26	32	25	0	83	837
05:30 PM	14	258	38	0	310	13	271	9	0	293	54	23	41	0	118	23	26	11	0	60	781
05:45 PM	17	226	28	0	271	23	245	10	0	278	41	19	26	0	86	23	23	24	0	70	705
Total	67	1006	115	0	1188	92	1099	38	0	1229	212	94	169	0	475	100	111	82	0	293	3185
Grand Total	172	2038	256	0	2466	185	2166	82	0	2433	401	197	347	0	945	213	234	193	0	640	6484
Apprch %	7	82.6	10.4	0		7.6	89	3.4	0		42.4	20.8	36.7	0		33.3	36.6	30.2	0		
Total %	2.7	31.4	3.9	0	38	2.9	33.4	1.3	0	37.5	6.2	3	5.4	0	14.6	3.3	3.6	3	0	9.9	

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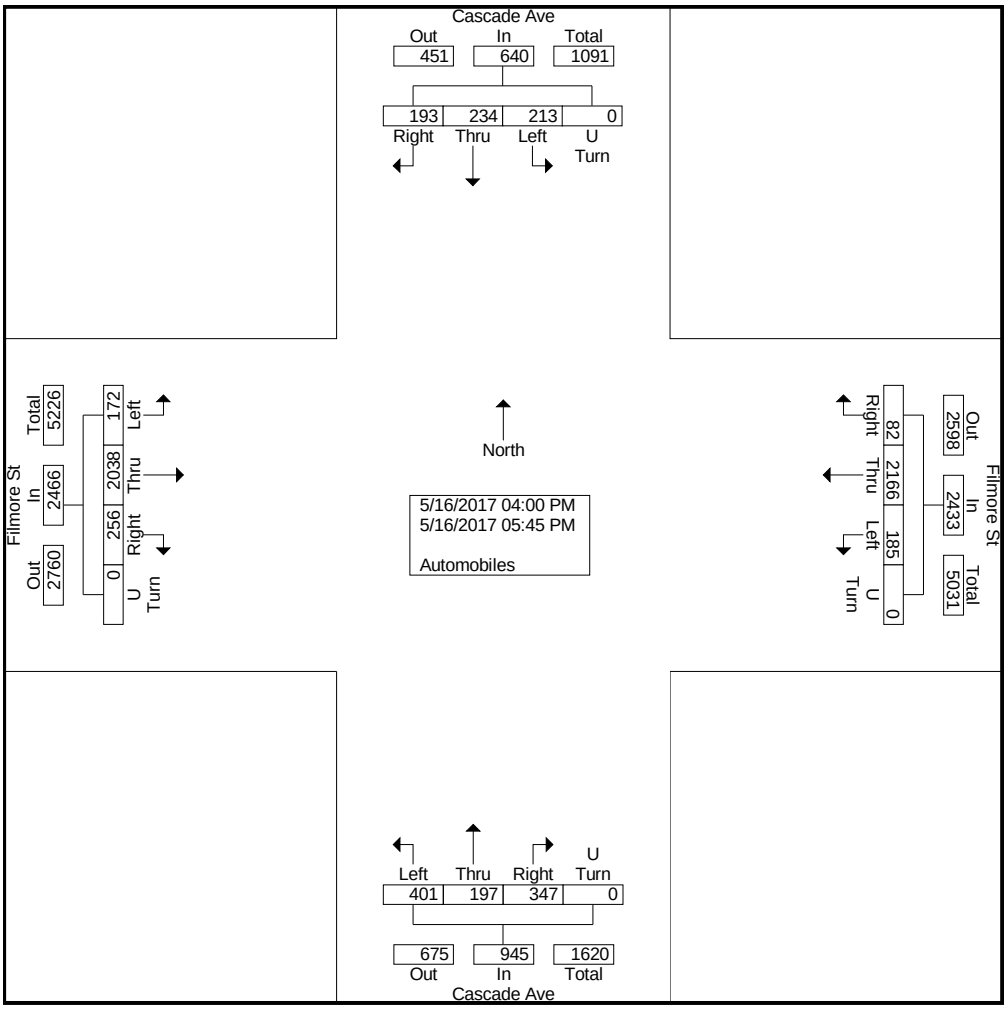

RDC
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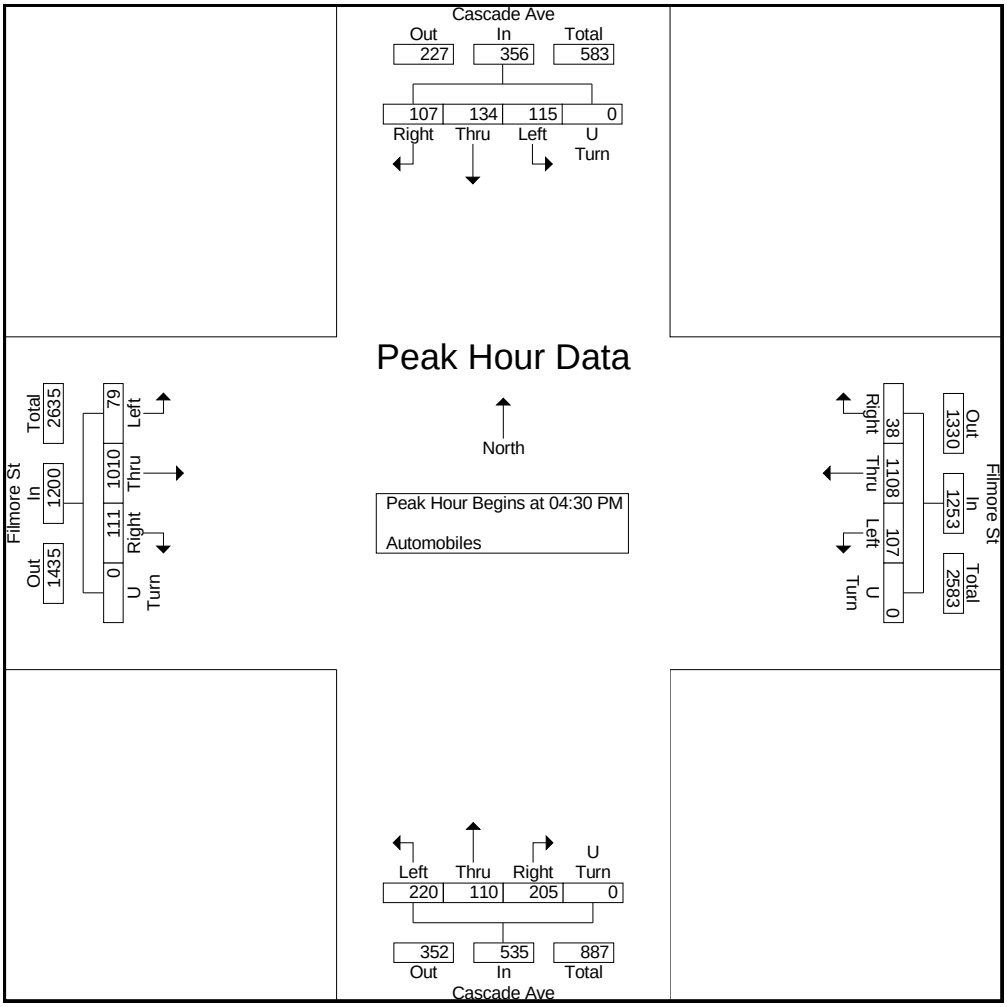
Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
PM Peak
Filmore St and Cascade Ave

File Name : Filmore and Cascade PM
Site Code : IPO 239
Start Date : 5/16/2017
Page No : 3

	Filmore St Eastbound					Filmore St Westbound					Cascade Ave Northbound					Cascade Ave Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	20	250	23	0	293	23	281	11	0	315	48	32	58	0	138	38	35	30	0	103	849
04:45 PM	23	238	39	0	300	28	244	8	0	280	55	26	45	0	126	23	37	30	0	90	796
05:00 PM	13	276	26	0	315	23	313	12	0	348	47	24	48	0	119	28	30	22	0	80	862
05:15 PM	23	246	23	0	292	33	270	7	0	310	70	28	54	0	152	26	32	25	0	83	837
Total Volume	79	1010	111	0	1200	107	1108	38	0	1253	220	110	205	0	535	115	134	107	0	356	3344
% App. Total	6.6	84.2	9.2	0		8.5	88.4	3	0		41.1	20.6	38.3	0		32.3	37.6	30.1	0		
PHF	.859	.915	.712	.000	.952	.811	.885	.792	.000	.900	.786	.859	.884	.000	.880	.757	.905	.892	.000	.864	.970



RDC
Ridgeview Data Collection

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
AM Peak
Filmore St and El Paso Street

File Name : Filmore and El Paso AM
Site Code : IPO 239
Start Date : 5/16/2017
Page No : 1

Groups Printed- Automobiles

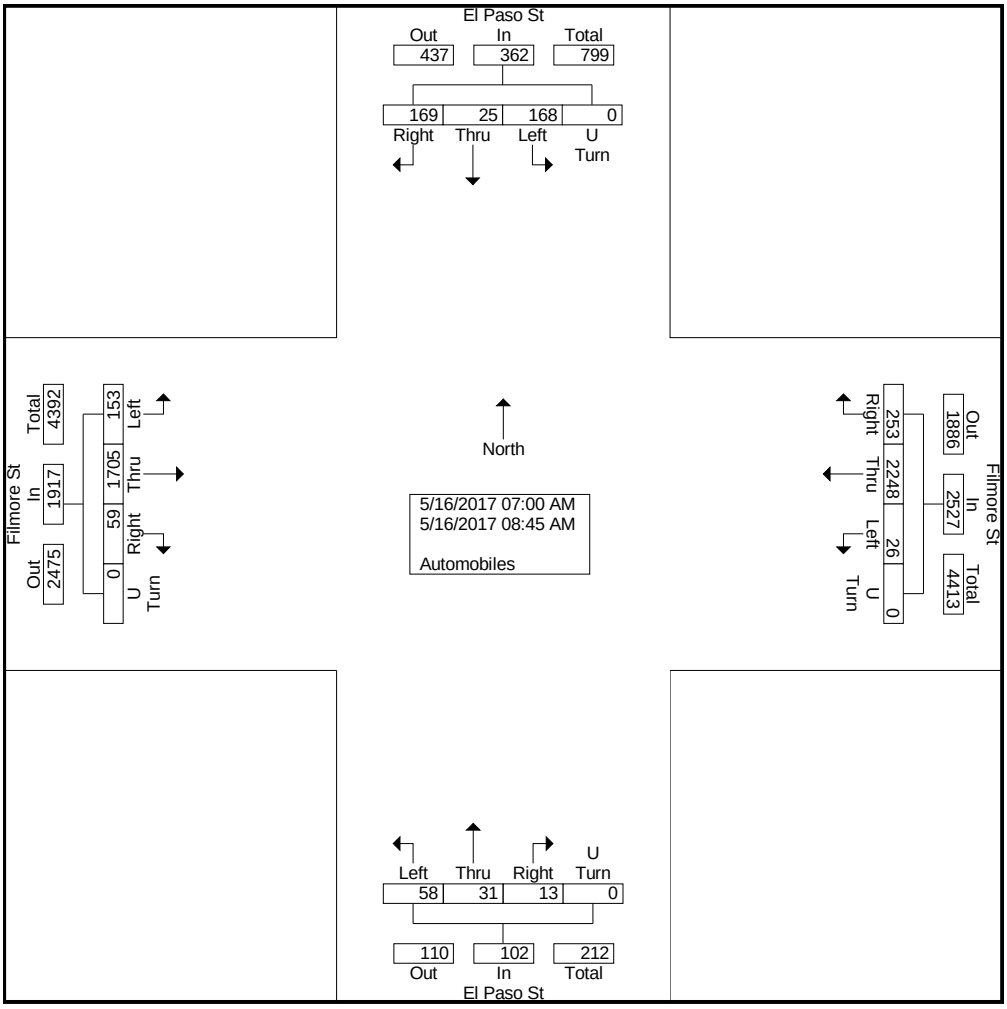
	Filmore St Eastbound					Filmore St Westbound					El Paso St Northbound					El Paso St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
07:00 AM	15	147	7	0	169	4	237	29	0	270	4	4	2	0	10	14	3	15	0	32	481
07:15 AM	24	181	7	0	212	4	302	42	0	348	16	6	1	0	23	13	3	21	0	37	620
07:30 AM	14	248	2	0	264	3	341	34	0	378	9	4	0	0	13	27	3	23	0	53	708
07:45 AM	19	238	8	0	265	4	315	35	0	354	6	2	3	0	11	22	2	22	0	46	676
Total	72	814	24	0	910	15	1195	140	0	1350	35	16	6	0	57	76	11	81	0	168	2485
08:00 AM	27	236	11	0	274	4	317	40	0	361	4	5	3	0	12	21	2	26	0	49	696
08:15 AM	18	199	7	0	224	2	248	22	0	272	7	3	0	0	10	22	1	20	0	43	549
08:30 AM	20	224	12	0	256	1	258	22	0	281	6	6	3	0	15	16	7	20	0	43	595
08:45 AM	16	232	5	0	253	4	230	29	0	263	6	1	1	0	8	33	4	22	0	59	583
Total	81	891	35	0	1007	11	1053	113	0	1177	23	15	7	0	45	92	14	88	0	194	2423
Grand Total	153	1705	59	0	1917	26	2248	253	0	2527	58	31	13	0	102	168	25	169	0	362	4908
Apprch %	8	88.9	3.1	0		1	89	10	0		56.9	30.4	12.7	0		46.4	6.9	46.7	0		
Total %	3.1	34.7	1.2	0	39.1	0.5	45.8	5.2	0	51.5	1.2	0.6	0.3	0	2.1	3.4	0.5	3.4	0	7.4	

RDC
Ridgeview Data Collection

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
AM Peak
Filmore St and El Paso Street

File Name : Filmore and El Paso AM
Site Code : IPO 239
Start Date : 5/16/2017
Page No : 2



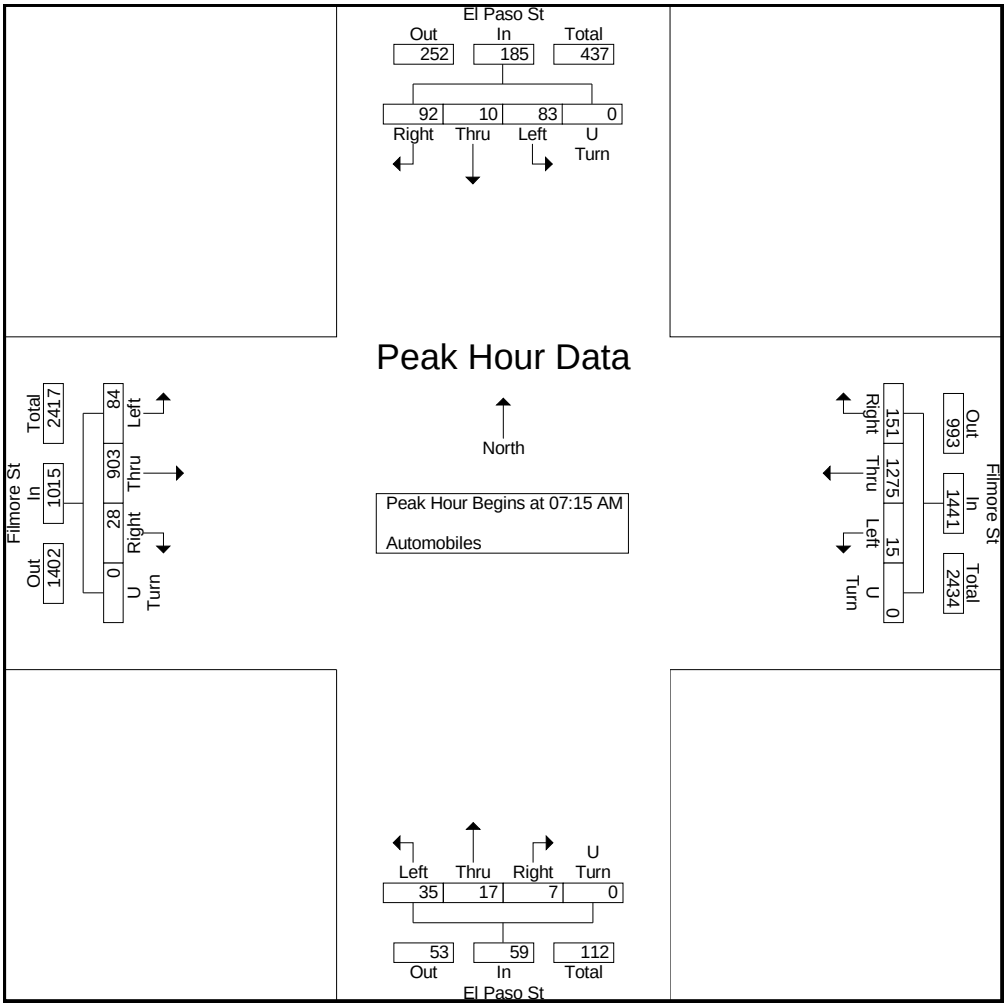
RDC
Ridgeview Data Collection

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
AM Peak
Filmore St and El Paso Street

File Name : Filmore and El Paso AM
Site Code : IPO 239
Start Date : 5/16/2017
Page No : 3

	Filmore St Eastbound					Filmore St Westbound					El Paso St Northbound					El Paso St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	24	181	7	0	212	4	302	42	0	348	16	6	1	0	23	13	3	21	0	37	620
07:30 AM	14	248	2	0	264	3	341	34	0	378	9	4	0	0	13	27	3	23	0	53	708
07:45 AM	19	238	8	0	265	4	315	35	0	354	6	2	3	0	11	22	2	22	0	46	676
08:00 AM	27	236	11	0	274	4	317	40	0	361	4	5	3	0	12	21	2	26	0	49	696
Total Volume	84	903	28	0	1015	15	1275	151	0	1441	35	17	7	0	59	83	10	92	0	185	2700
% App. Total	8.3	89	2.8	0		1	88.5	10.5	0		59.3	28.8	11.9	0		44.9	5.4	49.7	0		
PHF	.778	.910	.636	.000	.926	.938	.935	.899	.000	.953	.547	.708	.583	.000	.641	.769	.833	.885	.000	.873	.953



RDC
Ridgeview Data Collection

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
PM Peak
Filmore St and El Paso Street

File Name : Filmore and El Paso PM
Site Code : IPO 239
Start Date : 5/16/2017
Page No : 1

Groups Printed- Automobiles

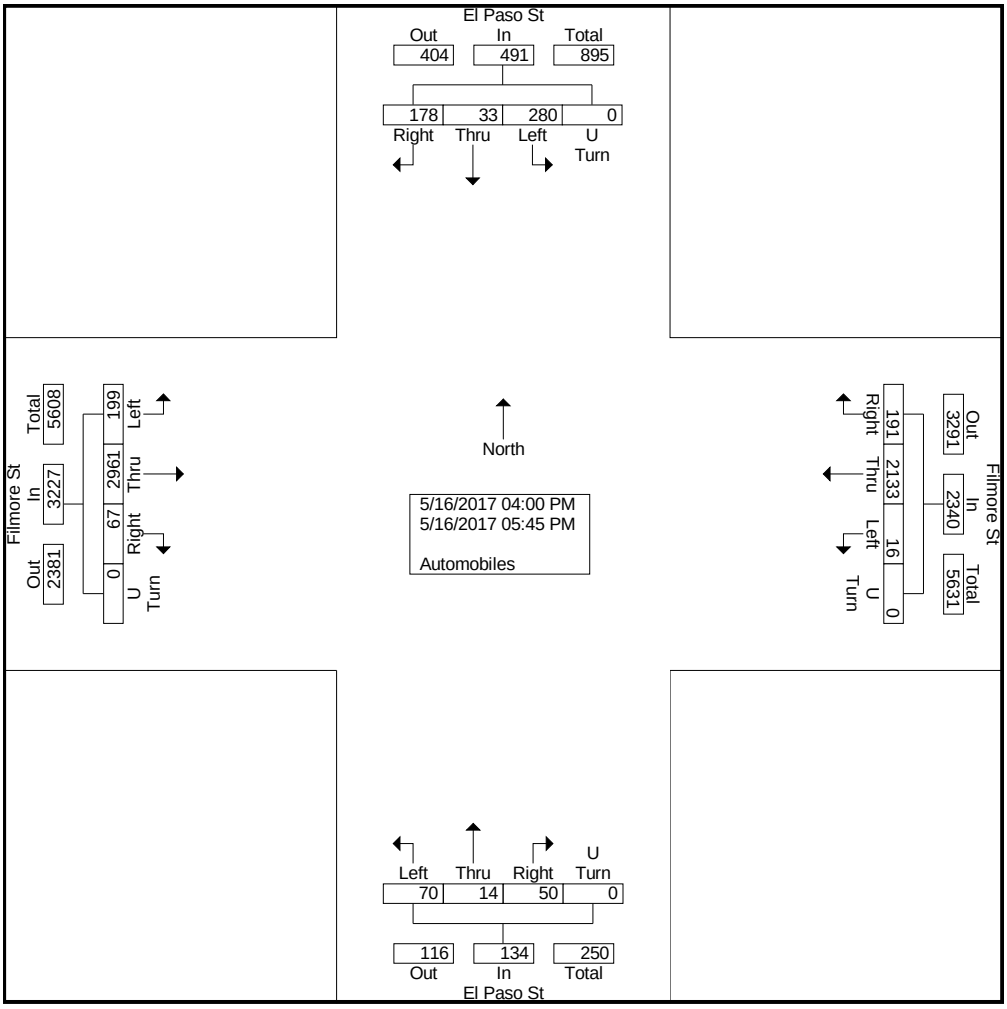
	Filmore St Eastbound					Filmore St Westbound					El Paso St Northbound					El Paso St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
04:00 PM	22	358	10	0	390	3	250	21	0	274	15	1	12	0	28	43	4	26	0	73	765
04:15 PM	22	401	12	0	435	2	291	22	0	315	12	3	4	0	19	34	5	17	0	56	825
04:30 PM	28	368	10	0	406	2	255	28	0	285	9	4	11	0	24	37	2	24	0	63	778
04:45 PM	24	391	4	0	419	0	279	23	0	302	7	2	6	0	15	41	4	16	0	61	797
Total	96	1518	36	0	1650	7	1075	94	0	1176	43	10	33	0	86	155	15	83	0	253	3165
05:00 PM	25	371	6	0	402	1	299	26	0	326	9	3	4	0	16	46	9	30	0	85	829
05:15 PM	30	397	10	0	437	1	282	23	0	306	8	0	7	0	15	38	3	25	0	66	824
05:30 PM	23	379	5	0	407	6	250	28	0	284	7	0	2	0	9	29	2	22	0	53	753
05:45 PM	25	296	10	0	331	1	227	20	0	248	3	1	4	0	8	12	4	18	0	34	621
Total	103	1443	31	0	1577	9	1058	97	0	1164	27	4	17	0	48	125	18	95	0	238	3027
Grand Total	199	2961	67	0	3227	16	2133	191	0	2340	70	14	50	0	134	280	33	178	0	491	6192
Apprch %	6.2	91.8	2.1	0		0.7	91.2	8.2	0		52.2	10.4	37.3	0		57	6.7	36.3	0		
Total %	3.2	47.8	1.1	0	52.1	0.3	34.4	3.1	0	37.8	1.1	0.2	0.8	0	2.2	4.5	0.5	2.9	0	7.9	

RDC
Ridgeview Data Collection

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
PM Peak
Filmore St and El Paso Street

File Name : Filmore and El Paso PM
Site Code : IPO 239
Start Date : 5/16/2017
Page No : 2



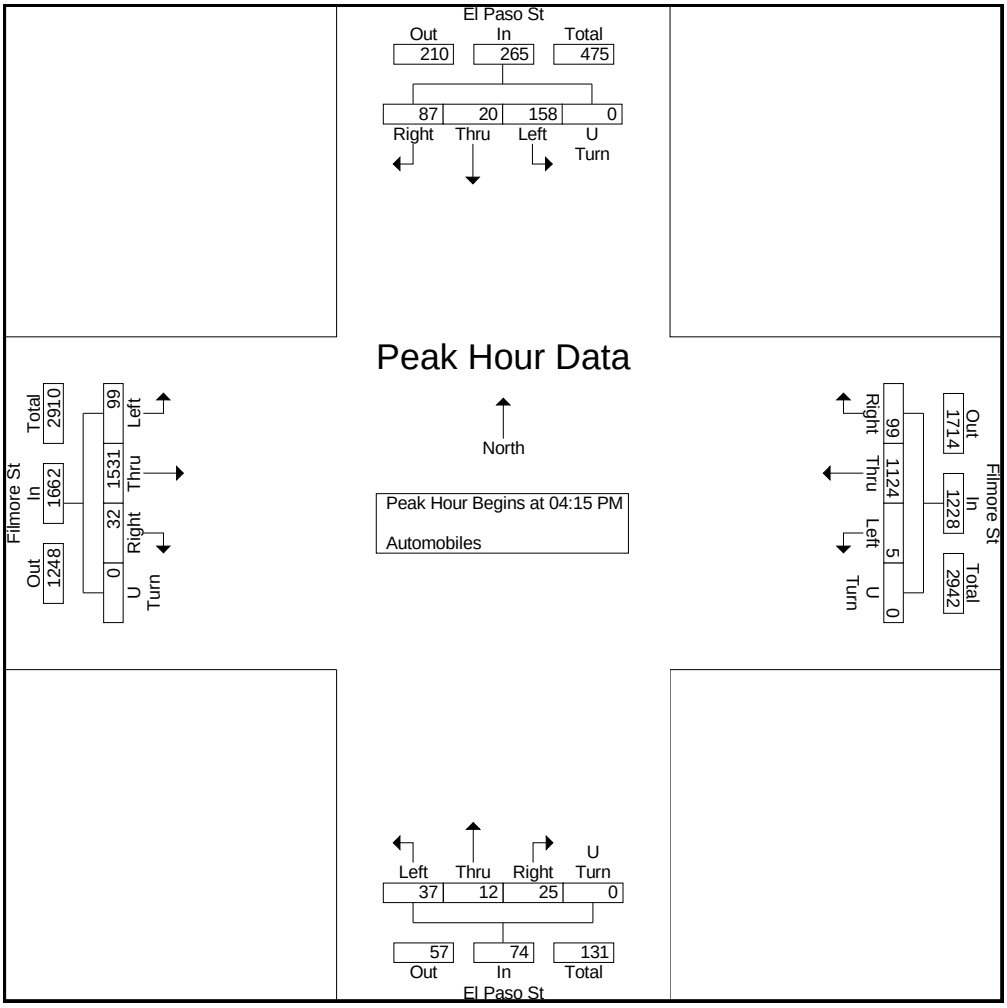
RDC
Ridgeview Data Collection

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
PM Peak
Filmore St and El Paso Street

File Name : Filmore and El Paso PM
Site Code : IPO 239
Start Date : 5/16/2017
Page No : 3

	Filmore St Eastbound					Filmore St Westbound					El Paso St Northbound					El Paso St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	22	401	12	0	435	2	291	22	0	315	12	3	4	0	19	34	5	17	0	56	825
04:30 PM	28	368	10	0	406	2	255	28	0	285	9	4	11	0	24	37	2	24	0	63	778
04:45 PM	24	391	4	0	419	0	279	23	0	302	7	2	6	0	15	41	4	16	0	61	797
05:00 PM	25	371	6	0	402	1	299	26	0	326	9	3	4	0	16	46	9	30	0	85	829
Total Volume	99	1531	32	0	1662	5	1124	99	0	1228	37	12	25	0	74	158	20	87	0	265	3229
% App. Total	6	92.1	1.9	0		0.4	91.5	8.1	0		50	16.2	33.8	0		59.6	7.5	32.8	0		
PHF	.884	.954	.667	.000	.955	.625	.940	.884	.000	.942	.771	.750	.568	.000	.771	.859	.556	.725	.000	.779	.974



RDC
Ridgeview Data Collection

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
AM Peak
Filmore St and Nevada Ave

File Name : Filmore and Nevada AM
Site Code : IPO 239
Start Date : 5/16/2017
Page No : 1

Groups Printed- Automobiles

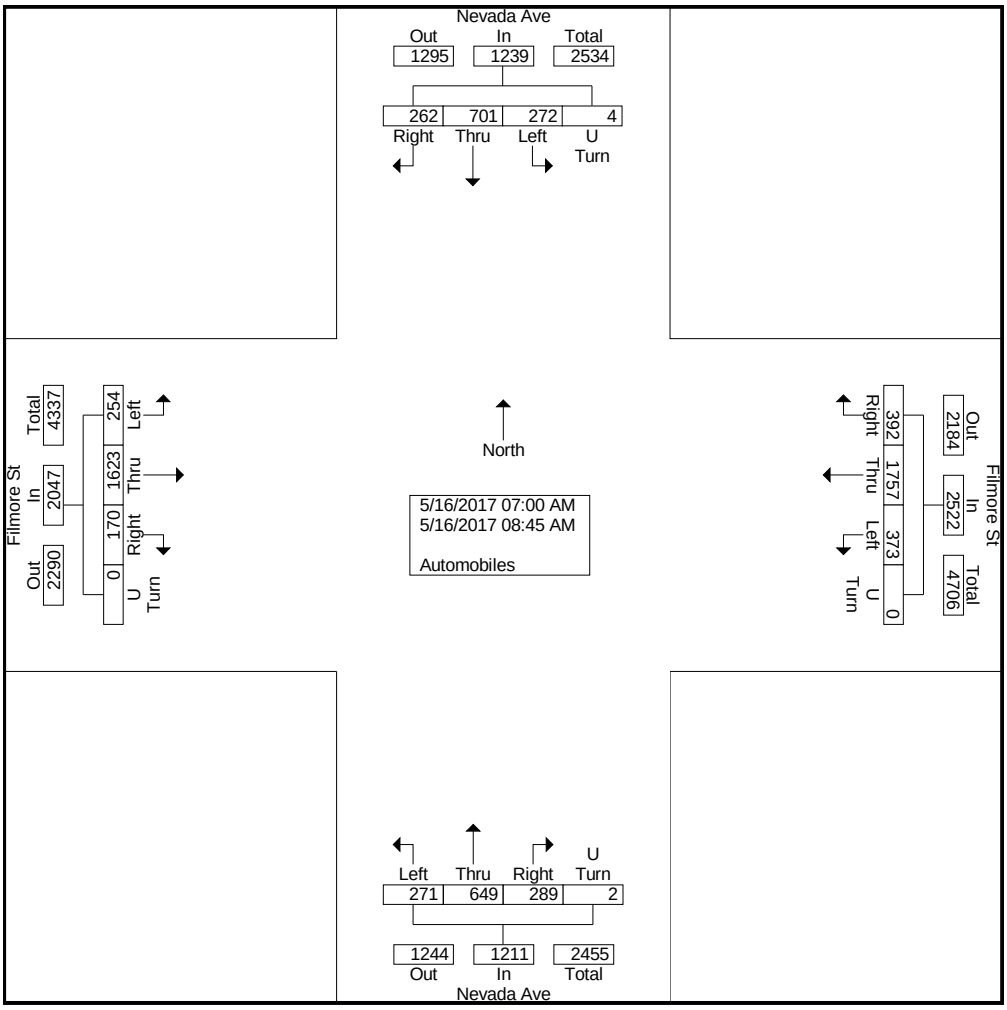
	Filmore St Eastbound					Filmore St Westbound					Nevada Ave Northbound					Nevada Ave Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
07:00 AM	31	158	12	0	201	31	200	45	0	276	22	44	21	0	87	29	58	25	1	113	677
07:15 AM	23	195	17	0	235	41	211	49	0	301	34	74	27	0	135	29	69	29	0	127	798
07:30 AM	31	230	26	0	287	42	266	61	0	369	39	76	48	0	163	24	112	40	0	176	995
07:45 AM	39	210	18	0	267	62	253	51	0	366	38	116	40	1	195	38	108	44	1	191	1019
Total	124	793	73	0	990	176	930	206	0	1312	133	310	136	1	580	120	347	138	2	607	3489
08:00 AM	41	235	23	0	299	53	248	53	0	354	36	100	40	0	176	40	73	33	0	146	975
08:15 AM	32	182	23	0	237	47	201	55	0	303	39	81	31	0	151	33	117	28	0	178	869
08:30 AM	30	192	29	0	251	45	195	41	0	281	31	82	44	1	158	44	66	27	2	139	829
08:45 AM	27	221	22	0	270	52	183	37	0	272	32	76	38	0	146	35	98	36	0	169	857
Total	130	830	97	0	1057	197	827	186	0	1210	138	339	153	1	631	152	354	124	2	632	3530
Grand Total	254	1623	170	0	2047	373	1757	392	0	2522	271	649	289	2	1211	272	701	262	4	1239	7019
Apprch %	12.4	79.3	8.3	0		14.8	69.7	15.5	0		22.4	53.6	23.9	0.2		22	56.6	21.1	0.3		
Total %	3.6	23.1	2.4	0	29.2	5.3	25	5.6	0	35.9	3.9	9.2	4.1	0	17.3	3.9	10	3.7	0.1	17.7	

RDC
Ridgeview Data Collection

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
AM Peak
Filmore St and Nevada Ave

File Name : Filmore and Nevada AM
Site Code : IPO 239
Start Date : 5/16/2017
Page No : 2



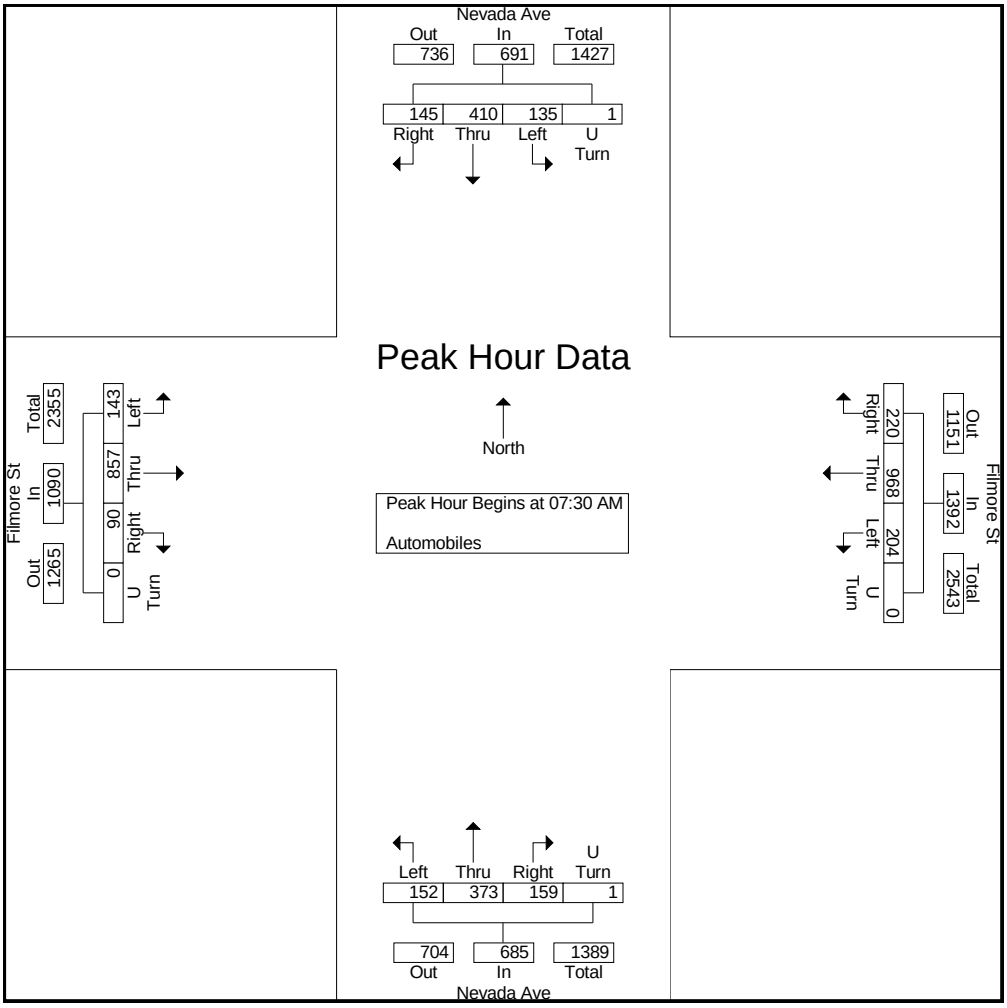
RDC
Ridgeview Data Collection

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
AM Peak
Filmore St and Nevada Ave

File Name : Filmore and Nevada AM
Site Code : IPO 239
Start Date : 5/16/2017
Page No : 3

	Filmore St Eastbound					Filmore St Westbound					Nevada Ave Northbound					Nevada Ave Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	31	230	26	0	287	42	266	61	0	369	39	76	48	0	163	24	112	40	0	176	995
07:45 AM	39	210	18	0	267	62	253	51	0	366	38	116	40	1	195	38	108	44	1	191	1019
08:00 AM	41	235	23	0	299	53	248	53	0	354	36	100	40	0	176	40	73	33	0	146	975
08:15 AM	32	182	23	0	237	47	201	55	0	303	39	81	31	0	151	33	117	28	0	178	869
Total Volume	143	857	90	0	1090	204	968	220	0	1392	152	373	159	1	685	135	410	145	1	691	3858
% App. Total	13.1	78.6	8.3	0		14.7	69.5	15.8	0		22.2	54.5	23.2	0.1		19.5	59.3	21	0.1		
PHF	.872	.912	.865	.000	.911	.823	.910	.902	.000	.943	.974	.804	.828	.250	.878	.844	.876	.824	.250	.904	.947



RDC
Ridgeview Data Collection

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
PM Peak
Filmore St and Nevada Ave

File Name : Filmore and Nevada PM
Site Code : IPO 239
Start Date : 5/16/2017
Page No : 1

Groups Printed- Automobiles

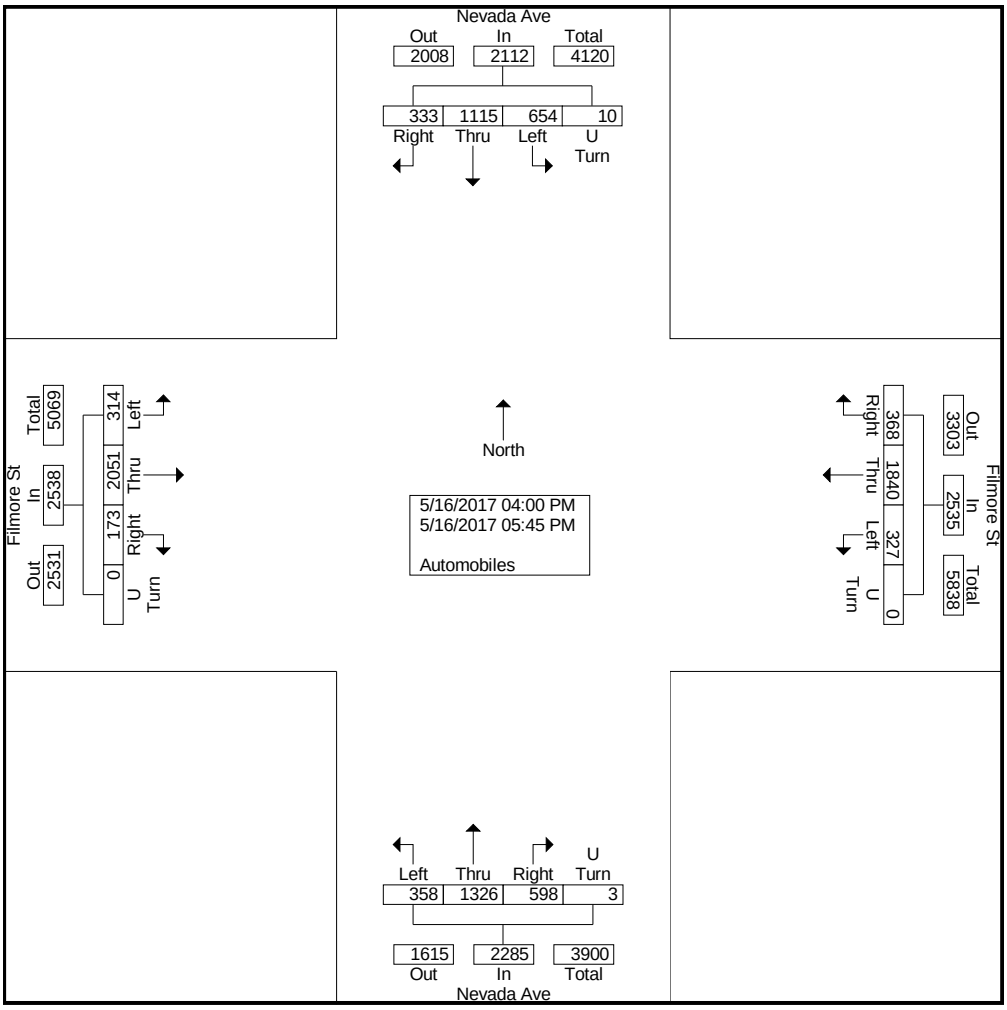
	Filmore St Eastbound					Filmore St Westbound					Nevada Ave Northbound					Nevada Ave Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
04:00 PM	30	283	20	0	333	37	243	43	0	323	36	146	68	1	251	75	122	48	1	246	1153
04:15 PM	36	268	26	0	330	39	232	46	0	317	46	146	58	0	250	81	126	41	3	251	1148
04:30 PM	48	264	23	0	335	44	223	49	0	316	44	119	85	0	248	86	143	45	1	275	1174
04:45 PM	24	266	30	0	320	31	233	51	0	315	40	205	77	0	322	83	125	38	0	246	1203
Total	138	1081	99	0	1318	151	931	189	0	1271	166	616	288	1	1071	325	516	172	5	1018	4678
05:00 PM	41	260	13	0	314	52	255	53	0	360	45	174	86	1	306	84	140	39	2	265	1245
05:15 PM	35	256	20	0	311	43	229	49	0	321	47	198	82	0	327	106	183	48	2	339	1298
05:30 PM	59	278	16	0	353	47	232	46	0	325	51	180	74	0	305	76	149	35	0	260	1243
05:45 PM	41	176	25	0	242	34	193	31	0	258	49	158	68	1	276	63	127	39	1	230	1006
Total	176	970	74	0	1220	176	909	179	0	1264	192	710	310	2	1214	329	599	161	5	1094	4792
Grand Total	314	2051	173	0	2538	327	1840	368	0	2535	358	1326	598	3	2285	654	1115	333	10	2112	9470
Apprch %	12.4	80.8	6.8	0		12.9	72.6	14.5	0		15.7	58	26.2	0.1		31	52.8	15.8	0.5		
Total %	3.3	21.7	1.8	0	26.8	3.5	19.4	3.9	0	26.8	3.8	14	6.3	0	24.1	6.9	11.8	3.5	0.1	22.3	

Ridgeview Data Collection

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
PM Peak
Filmore St and Nevada Ave

File Name : Filmore and Nevada PM
Site Code : IPO 239
Start Date : 5/16/2017
Page No : 2



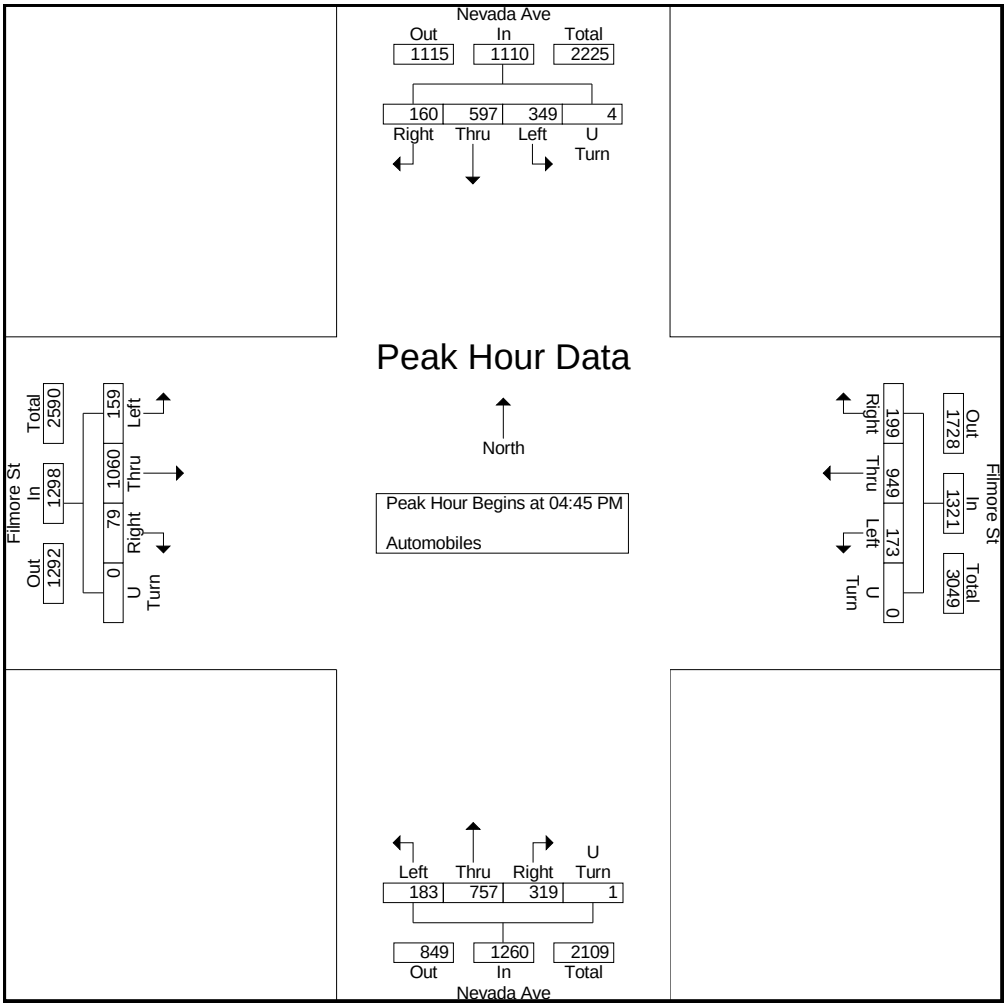
RDC
Ridgeview Data Collection

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
PM Peak
Filmore St and Nevada Ave

File Name : Filmore and Nevada PM
Site Code : IPO 239
Start Date : 5/16/2017
Page No : 3

	Filmore St Eastbound					Filmore St Westbound					Nevada Ave Northbound					Nevada Ave Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	24	266	30	0	320	31	233	51	0	315	40	205	77	0	322	83	125	38	0	246	1203
05:00 PM	41	260	13	0	314	52	255	53	0	360	45	174	86	1	306	84	140	39	2	265	1245
05:15 PM	35	256	20	0	311	43	229	49	0	321	47	198	82	0	327	106	183	48	2	339	1298
05:30 PM	59	278	16	0	353	47	232	46	0	325	51	180	74	0	305	76	149	35	0	260	1243
Total Volume	159	1060	79	0	1298	173	949	199	0	1321	183	757	319	1	1260	349	597	160	4	1110	4989
% App. Total	12.2	81.7	6.1	0		13.1	71.8	15.1	0		14.5	60.1	25.3	0.1		31.4	53.8	14.4	0.4		
PHF	.674	.953	.658	.000	.919	.832	.930	.939	.000	.917	.897	.923	.927	.250	.963	.823	.816	.833	.500	.819	.961



RDC
Ridgeview Data Collection

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
AM Peak
Filmore St and Stone Ave

File Name : Filmore and Stone AM
Site Code : IPO 239
Start Date : 5/16/2017
Page No : 1

Groups Printed- Automobiles

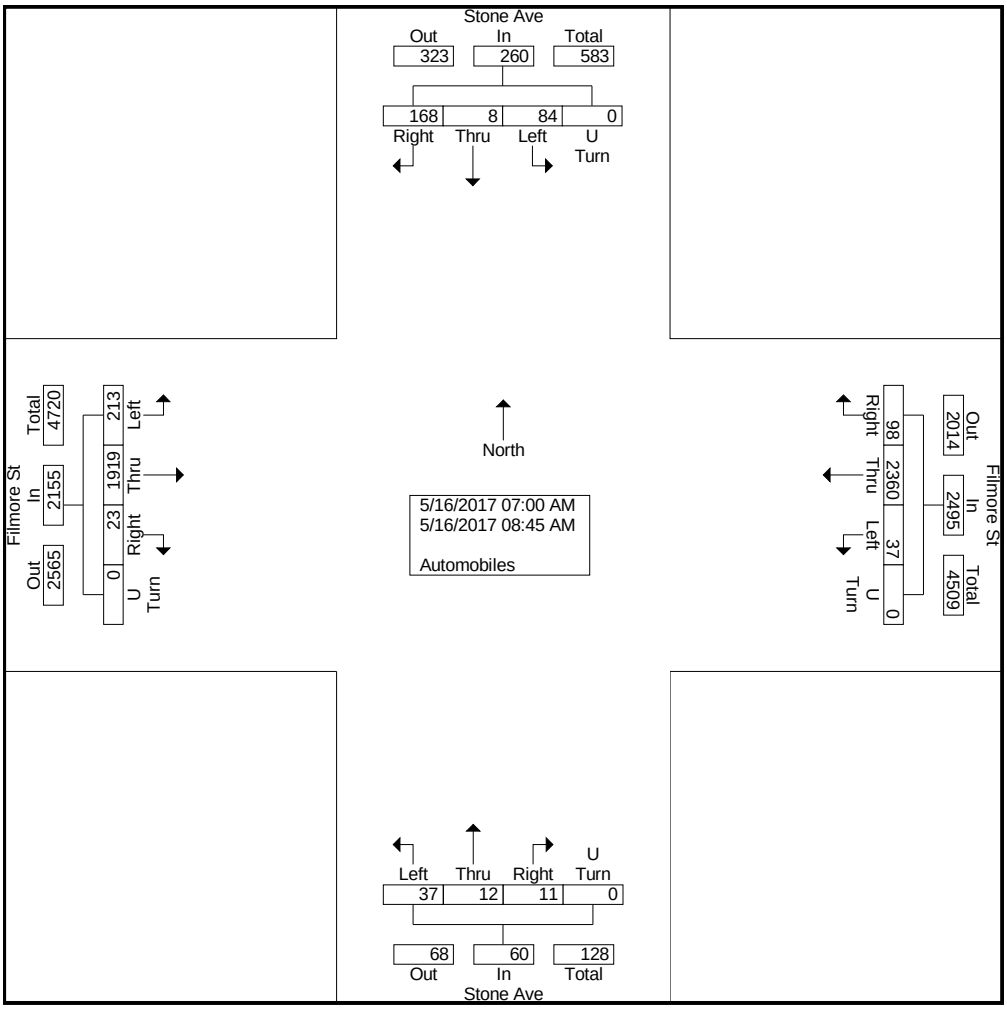
	Filmore St Eastbound					Filmore St Westbound					Stone Ave Northbound					Stone Ave Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
07:00 AM	25	174	1	0	200	7	246	11	0	264	7	1	1	0	9	6	0	20	0	26	499
07:15 AM	31	211	4	0	246	1	304	13	0	318	2	0	0	0	2	7	0	22	0	29	595
07:30 AM	17	273	4	0	294	6	362	10	0	378	3	0	1	0	4	9	1	25	0	35	711
07:45 AM	33	255	1	0	289	2	337	24	0	363	5	1	3	0	9	12	3	27	0	42	703
Total	106	913	10	0	1029	16	1249	58	0	1323	17	2	5	0	24	34	4	94	0	132	2508
08:00 AM	40	267	5	0	312	11	302	20	0	333	8	2	2	0	12	14	0	22	0	36	693
08:15 AM	23	225	3	0	251	2	278	9	0	289	1	4	1	0	6	7	0	20	0	27	573
08:30 AM	19	256	2	0	277	4	271	6	0	281	4	1	2	0	7	12	1	12	0	25	590
08:45 AM	25	258	3	0	286	4	260	5	0	269	7	3	1	0	11	17	3	20	0	40	606
Total	107	1006	13	0	1126	21	1111	40	0	1172	20	10	6	0	36	50	4	74	0	128	2462
Grand Total	213	1919	23	0	2155	37	2360	98	0	2495	37	12	11	0	60	84	8	168	0	260	4970
Apprch %	9.9	89	1.1	0		1.5	94.6	3.9	0		61.7	20	18.3	0		32.3	3.1	64.6	0		
Total %	4.3	38.6	0.5	0	43.4	0.7	47.5	2	0	50.2	0.7	0.2	0.2	0	1.2	1.7	0.2	3.4	0	5.2	

RDC
Ridgeview Data Collection

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
AM Peak
Filmore St and Stone Ave

File Name : Filmore and Stone AM
Site Code : IPO 239
Start Date : 5/16/2017
Page No : 2



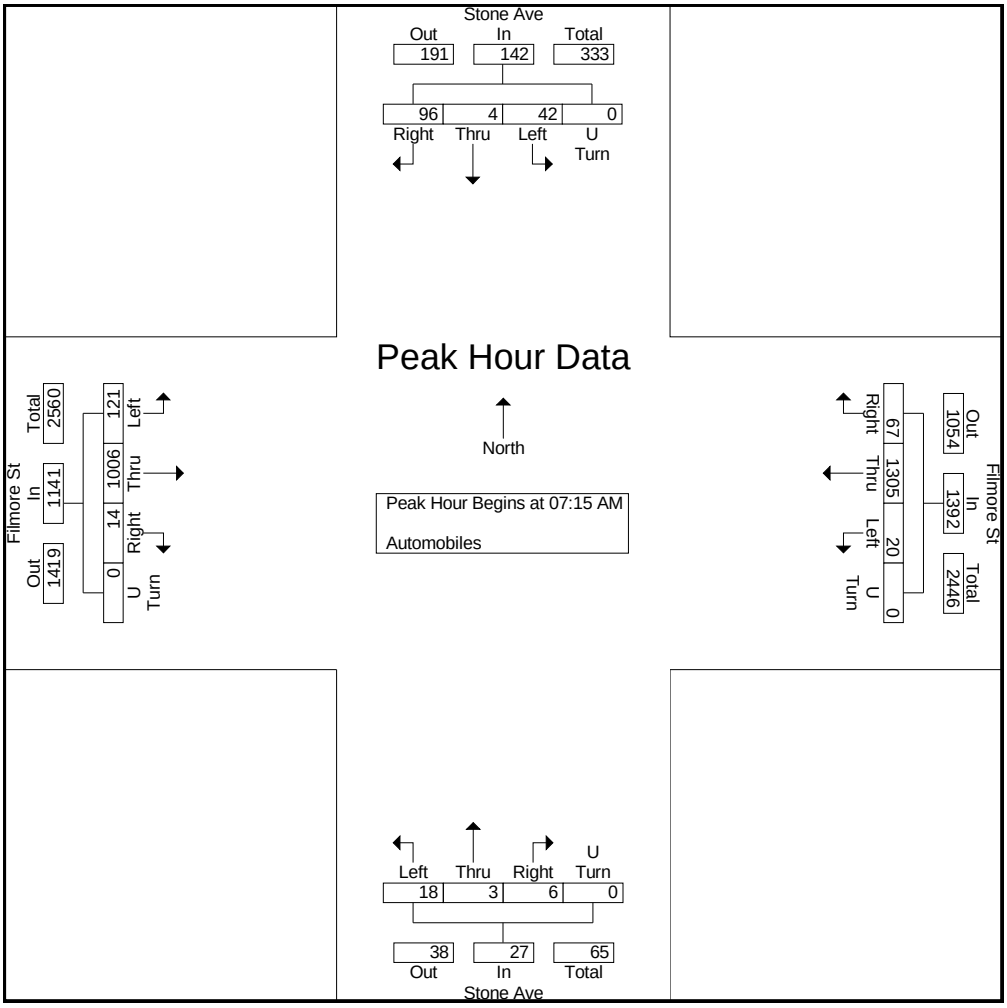
RDC
Ridgeview Data Collection

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
AM Peak
Filmore St and Stone Ave

File Name : Filmore and Stone AM
Site Code : IPO 239
Start Date : 5/16/2017
Page No : 3

	Filmore St Eastbound					Filmore St Westbound					Stone Ave Northbound					Stone Ave Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	31	211	4	0	246	1	304	13	0	318	2	0	0	0	2	7	0	22	0	29	595
07:30 AM	17	273	4	0	294	6	362	10	0	378	3	0	1	0	4	9	1	25	0	35	711
07:45 AM	33	255	1	0	289	2	337	24	0	363	5	1	3	0	9	12	3	27	0	42	703
08:00 AM	40	267	5	0	312	11	302	20	0	333	8	2	2	0	12	14	0	22	0	36	693
Total Volume	121	1006	14	0	1141	20	1305	67	0	1392	18	3	6	0	27	42	4	96	0	142	2702
% App. Total	10.6	88.2	1.2	0		1.4	93.8	4.8	0		66.7	11.1	22.2	0		29.6	2.8	67.6	0		
PHF	.756	.921	.700	.000	.914	.455	.901	.698	.000	.921	.563	.375	.500	.000	.563	.750	.333	.889	.000	.845	.950



RDC
Ridgeview Data Collection

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
PM Peak
Filmore St and Stone Ave

File Name : Filmore and Stone PM
Site Code : IPO 239
Start Date : 5/16/2017
Page No : 1

Groups Printed- Automobiles

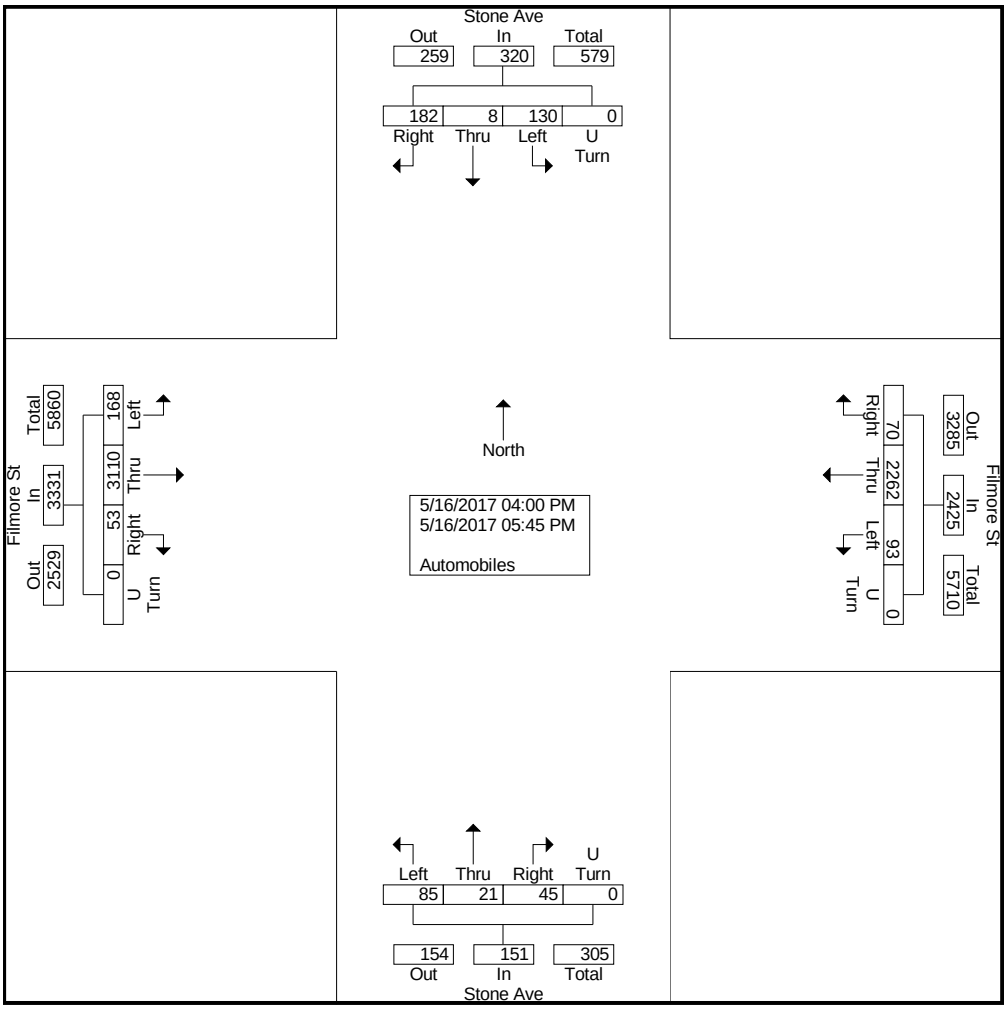
	Filmore St Eastbound					Filmore St Westbound					Stone Ave Northbound					Stone Ave Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
04:00 PM	12	402	4	0	418	11	276	10	0	297	6	2	10	0	18	20	0	22	0	42	775
04:15 PM	38	399	5	0	442	10	302	7	0	319	10	1	4	0	15	22	1	24	0	47	823
04:30 PM	12	397	7	0	416	12	284	5	0	301	9	4	5	0	18	16	1	30	0	47	782
04:45 PM	26	348	5	0	379	10	272	12	0	294	5	2	2	0	9	12	0	30	0	42	724
Total	88	1546	21	0	1655	43	1134	34	0	1211	30	9	21	0	60	70	2	106	0	178	3104
05:00 PM	21	452	8	0	481	15	331	6	0	352	12	1	2	0	15	19	4	33	0	56	904
05:15 PM	22	414	4	0	440	14	276	13	0	303	18	3	10	0	31	11	0	12	0	23	797
05:30 PM	20	390	14	0	424	12	277	9	0	298	16	3	4	0	23	17	1	13	0	31	776
05:45 PM	17	308	6	0	331	9	244	8	0	261	9	5	8	0	22	13	1	18	0	32	646
Total	80	1564	32	0	1676	50	1128	36	0	1214	55	12	24	0	91	60	6	76	0	142	3123
Grand Total	168	3110	53	0	3331	93	2262	70	0	2425	85	21	45	0	151	130	8	182	0	320	6227
Apprch %	5	93.4	1.6	0		3.8	93.3	2.9	0		56.3	13.9	29.8	0		40.6	2.5	56.9	0		
Total %	2.7	49.9	0.9	0	53.5	1.5	36.3	1.1	0	38.9	1.4	0.3	0.7	0	2.4	2.1	0.1	2.9	0	5.1	

RDC
Ridgeview Data Collection

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
PM Peak
Filmore St and Stone Ave

File Name : Filmore and Stone PM
Site Code : IPO 239
Start Date : 5/16/2017
Page No : 2



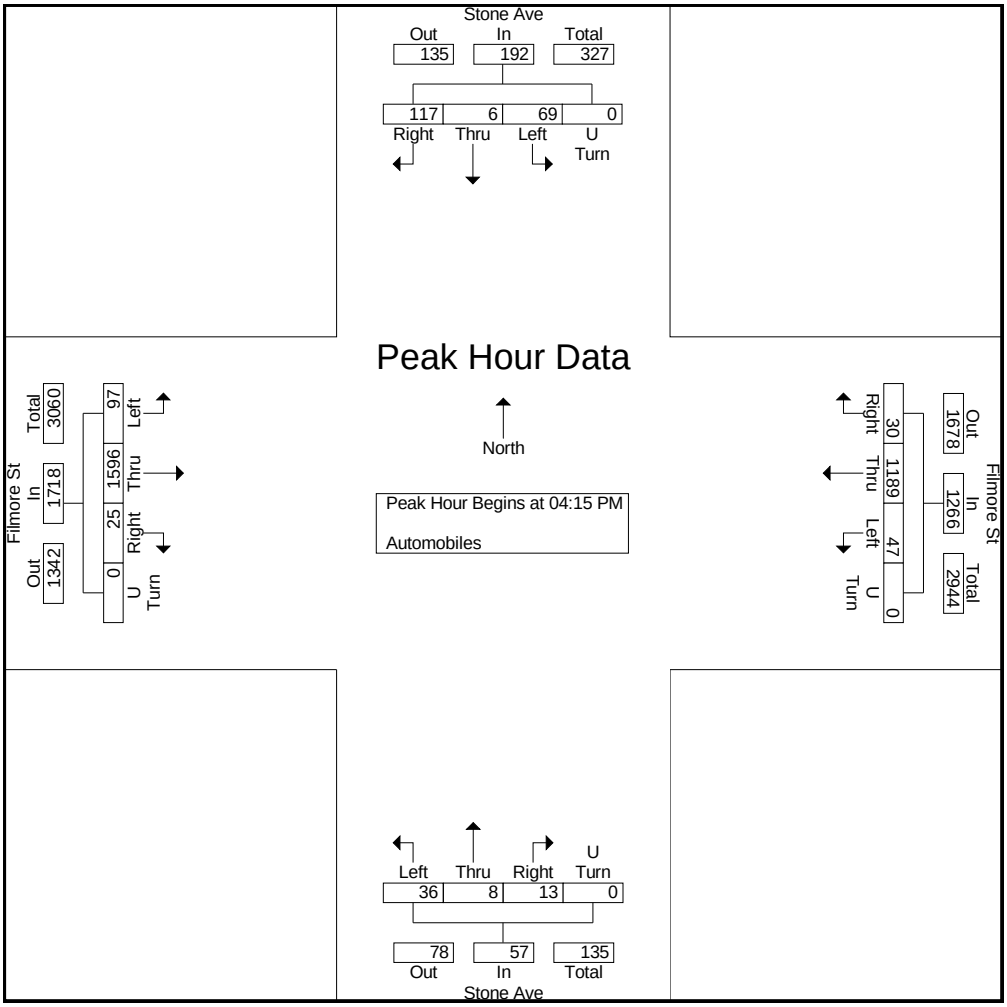
RDC
Ridgeview Data Collection

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
PM Peak
Filmore St and Stone Ave

File Name : Filmore and Stone PM
Site Code : IPO 239
Start Date : 5/16/2017
Page No : 3

	Filmore St Eastbound					Filmore St Westbound					Stone Ave Northbound					Stone Ave Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	38	399	5	0	442	10	302	7	0	319	10	1	4	0	15	22	1	24	0	47	823
04:30 PM	12	397	7	0	416	12	284	5	0	301	9	4	5	0	18	16	1	30	0	47	782
04:45 PM	26	348	5	0	379	10	272	12	0	294	5	2	2	0	9	12	0	30	0	42	724
05:00 PM	21	452	8	0	481	15	331	6	0	352	12	1	2	0	15	19	4	33	0	56	904
Total Volume	97	1596	25	0	1718	47	1189	30	0	1266	36	8	13	0	57	69	6	117	0	192	3233
% App. Total	5.6	92.9	1.5	0		3.7	93.9	2.4	0		63.2	14	22.8	0		35.9	3.1	60.9	0		
PHF	.638	.883	.781	.000	.893	.783	.898	.625	.000	.899	.750	.500	.650	.000	.792	.784	.375	.886	.000	.857	.894



RDC
Ridgeview Data Collection

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
AM Peak
Garden of Gods/Austin Bluffs and Nevada

File Name : Garden Gods and Nevada AM
Site Code : IPO 239
Start Date : 5/16/2017
Page No : 1

Groups Printed- Automobiles

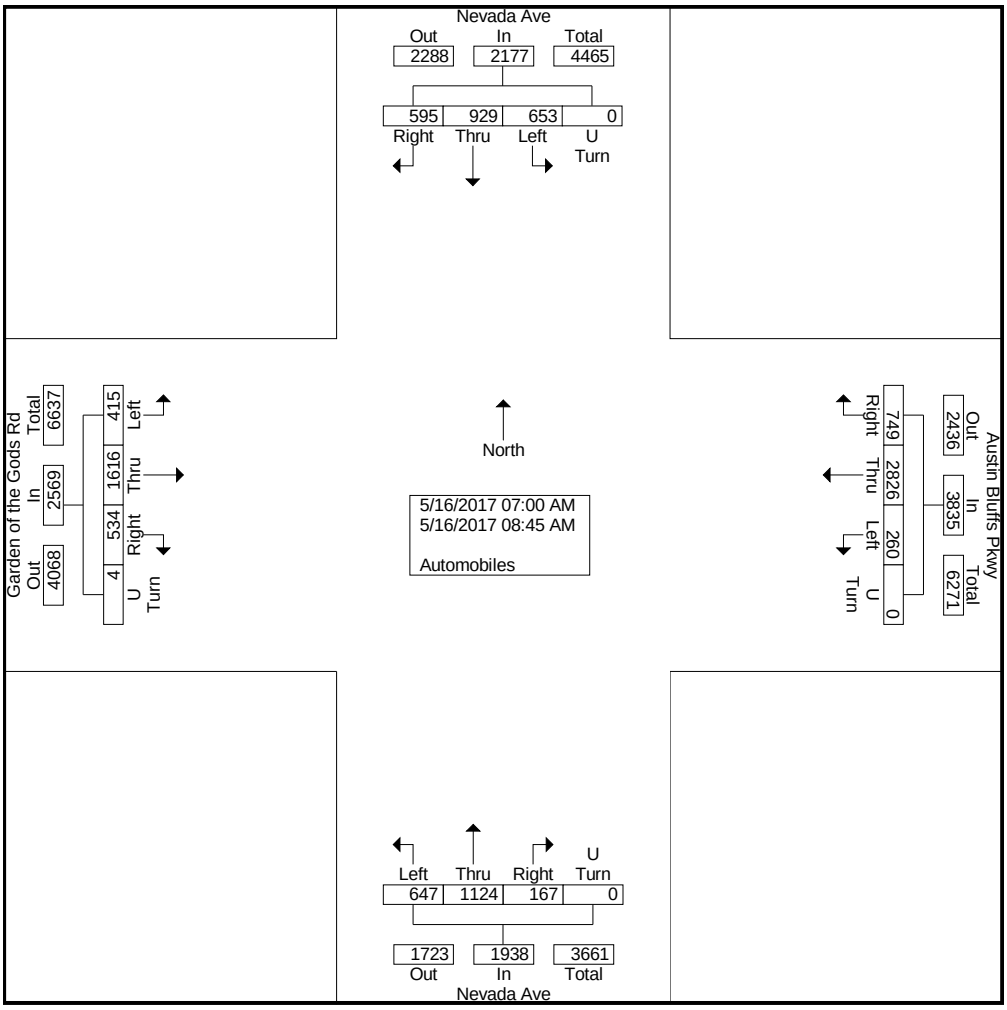
	Garden of the Gods Rd Eastbound					Austin Bluffs Pkwy Westbound					Nevada Ave Northbound					Nevada Ave Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
07:00 AM	23	151	56	0	230	27	303	58	0	388	48	84	7	0	139	54	84	53	0	191	948
07:15 AM	48	162	60	0	270	43	360	75	0	478	89	133	22	0	244	62	120	68	0	250	1242
07:30 AM	41	283	76	1	401	31	449	113	0	593	104	140	28	0	272	127	125	83	0	335	1601
07:45 AM	58	211	67	1	337	43	405	124	0	572	92	193	22	0	307	123	153	113	0	389	1605
Total	170	807	259	2	1238	144	1517	370	0	2031	333	550	79	0	962	366	482	317	0	1165	5396
08:00 AM	52	232	73	1	358	31	365	92	0	488	114	136	28	0	278	86	114	86	0	286	1410
08:15 AM	60	195	74	0	329	36	356	115	0	507	71	178	23	0	272	58	119	63	0	240	1348
08:30 AM	56	180	67	1	304	20	327	81	0	428	69	132	23	0	224	72	112	62	0	246	1202
08:45 AM	77	202	61	0	340	29	261	91	0	381	60	128	14	0	202	71	102	67	0	240	1163
Total	245	809	275	2	1331	116	1309	379	0	1804	314	574	88	0	976	287	447	278	0	1012	5123
Grand Total	415	1616	534	4	2569	260	2826	749	0	3835	647	1124	167	0	1938	653	929	595	0	2177	10519
Apprch %	16.2	62.9	20.8	0.2		6.8	73.7	19.5	0		33.4	58	8.6	0		30	42.7	27.3	0		
Total %	3.9	15.4	5.1	0	24.4	2.5	26.9	7.1	0	36.5	6.2	10.7	1.6	0	18.4	6.2	8.8	5.7	0	20.7	

RDC
Ridgeview Data Collection

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
AM Peak
Garden of Gods/Austin Bluffs and Nevada

File Name : Garden Gods and Nevada AM
Site Code : IPO 239
Start Date : 5/16/2017
Page No : 2



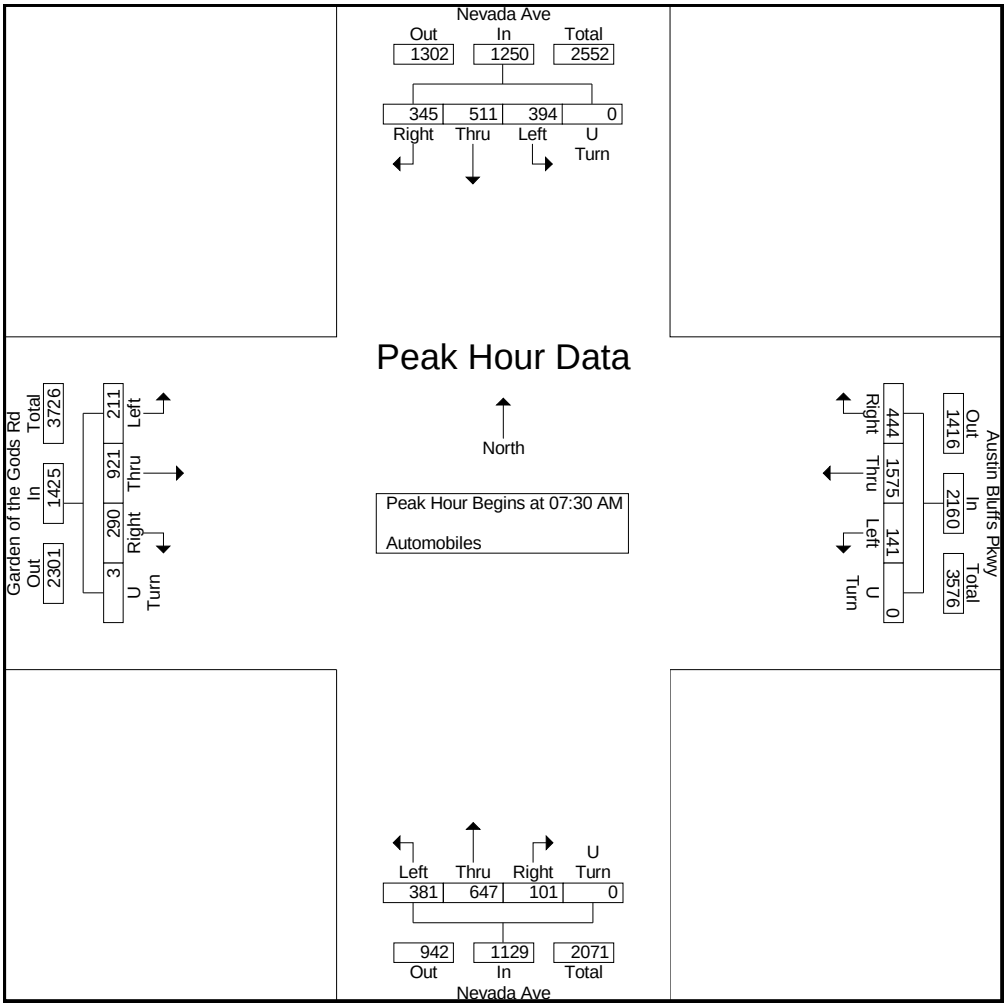
RDC
Ridgeview Data Collection

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
AM Peak
Garden of Gods/Austin Bluffs and Nevada

File Name : Garden Gods and Nevada AM
Site Code : IPO 239
Start Date : 5/16/2017
Page No : 3

	Garden of the Gods Rd Eastbound					Austin Bluffs Pkwy Westbound					Nevada Ave Northbound					Nevada Ave Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	41	283	76	1	401	31	449	113	0	593	104	140	28	0	272	127	125	83	0	335	1601
07:45 AM	58	211	67	1	337	43	405	124	0	572	92	193	22	0	307	123	153	113	0	389	1605
08:00 AM	52	232	73	1	358	31	365	92	0	488	114	136	28	0	278	86	114	86	0	286	1410
08:15 AM	60	195	74	0	329	36	356	115	0	507	71	178	23	0	272	58	119	63	0	240	1348
Total Volume	211	921	290	3	1425	141	1575	444	0	2160	381	647	101	0	1129	394	511	345	0	1250	5964
% App. Total	14.8	64.6	20.4	0.2		6.5	72.9	20.6	0		33.7	57.3	8.9	0		31.5	40.9	27.6	0		
PHF	.879	.814	.954	.750	.888	.820	.877	.895	.000	.911	.836	.838	.902	.000	.919	.776	.835	.763	.000	.803	.929



RDC
Ridgeview Data Collection

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
PM Peak
Garden of Gods/Austin Bluffs and Nevada

File Name : Garden Gods and Nevada PM
Site Code : IPO 239
Start Date : 5/16/2017
Page No : 1

Groups Printed- Automobiles

	Garden of the Gods Rd Eastbound					Austin Bluffs Pkwy Westbound					Nevada Ave Northbound					Nevada Ave Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
04:00 PM	117	383	115	0	615	27	275	108	0	410	74	190	42	0	306	109	176	101	0	386	1717
04:15 PM	96	358	105	0	559	22	243	83	0	348	76	212	42	0	330	131	186	136	0	453	1690
04:30 PM	109	398	89	0	596	35	272	101	0	408	85	200	32	0	317	112	149	109	0	370	1691
04:45 PM	95	327	100	0	522	30	246	102	0	378	92	230	42	0	364	122	191	116	0	429	1693
Total	417	1466	409	0	2292	114	1036	394	0	1544	327	832	158	0	1317	474	702	462	0	1638	6791
05:00 PM	107	419	125	0	651	31	303	128	0	462	90	198	37	0	325	121	163	107	0	391	1829
05:15 PM	93	393	128	0	614	23	262	114	0	399	108	243	50	0	401	137	241	134	0	512	1926
05:30 PM	110	368	101	0	579	29	234	105	0	368	72	211	58	0	341	126	209	130	0	465	1753
05:45 PM	90	287	85	0	462	11	193	77	0	281	81	246	46	0	373	130	191	112	0	433	1549
Total	400	1467	439	0	2306	94	992	424	0	1510	351	898	191	0	1440	514	804	483	0	1801	7057
Grand Total	817	2933	848	0	4598	208	2028	818	0	3054	678	1730	349	0	2757	988	1506	945	0	3439	13848
Apprch %	17.8	63.8	18.4	0		6.8	66.4	26.8	0		24.6	62.7	12.7	0		28.7	43.8	27.5	0		
Total %	5.9	21.2	6.1	0	33.2	1.5	14.6	5.9	0	22.1	4.9	12.5	2.5	0	19.9	7.1	10.9	6.8	0	24.8	

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
PM Peak
Garden of Gods/Austin Bluffs and Nevada

File Name : Garden Gods and Nevada PM
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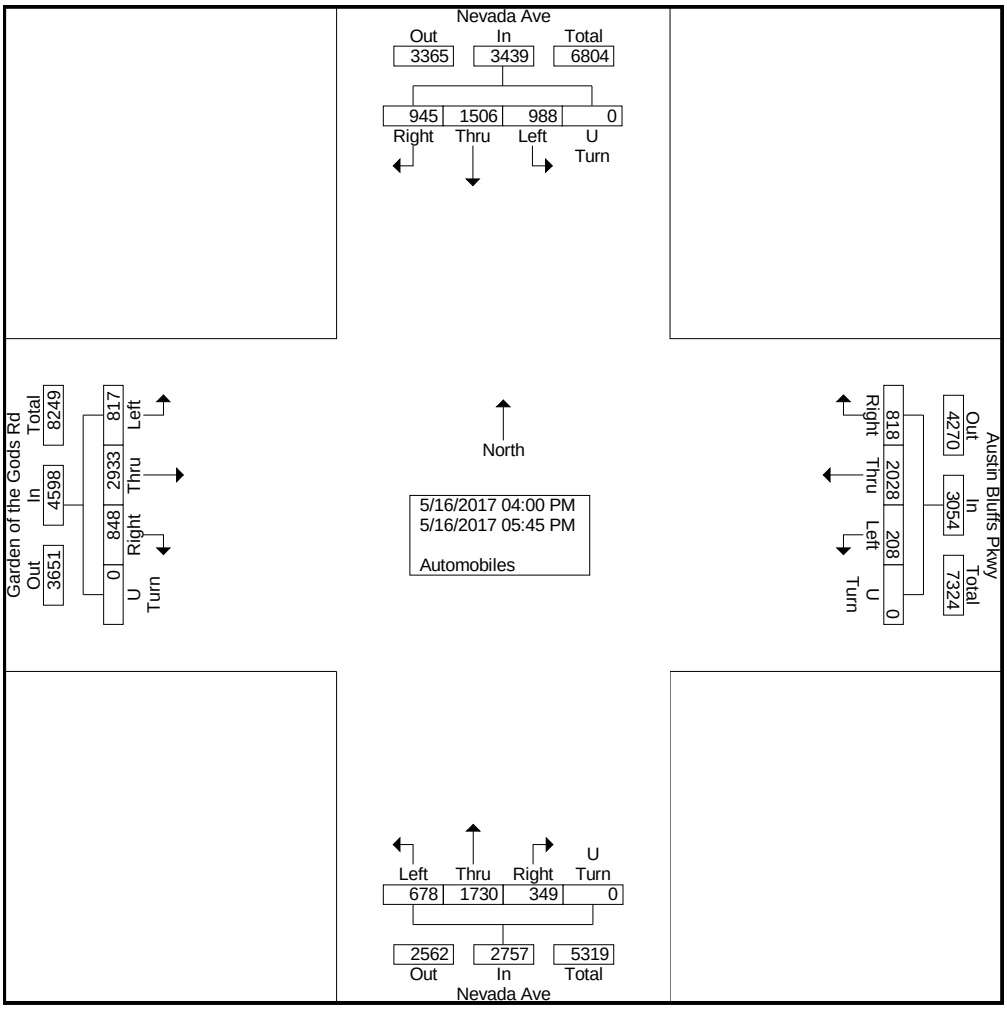
Start Date : 5/16/2017
Page No : 2



RDC
Ridgeview Data Collection

Morrison, CO 80465

Colorado Springs, CO
Nevada Ave Corridor Study
PM Peak
Garden of Gods/Austin Bluffs and Nevada

File Name : Garden Gods and Nevada PM
Site Code : IPO 239
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Page No : 3

	Garden of the Gods Rd Eastbound					Austin Bluffs Pkwy Westbound					Nevada Ave Northbound					Nevada Ave Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	95	327	100	0	522	30	246	102	0	378	92	230	42	0	364	122	191	116	0	429	1693
05:00 PM	107	419	125	0	651	31	303	128	0	462	90	198	37	0	325	121	163	107	0	391	1829
05:15 PM	93	393	128	0	614	23	262	114	0	399	108	243	50	0	401	137	241	134	0	512	1926
05:30 PM	110	368	101	0	579	29	234	105	0	368	72	211	58	0	341	126	209	130	0	465	1753
Total Volume	405	1507	454	0	2366	113	1045	449	0	1607	362	882	187	0	1431	506	804	487	0	1797	7201
% App. Total	17.1	63.7	19.2	0		7	65	27.9	0		25.3	61.6	13.1	0		28.2	44.7	27.1	0		
PHF	.920	.899	.887	.000	.909	.911	.862	.877	.000	.870	.838	.907	.806	.000	.892	.923	.834	.909	.000	.877	.935