

NDOT Reno Spaghetti Bowl Charrette Report

June 2016





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About the Charrette

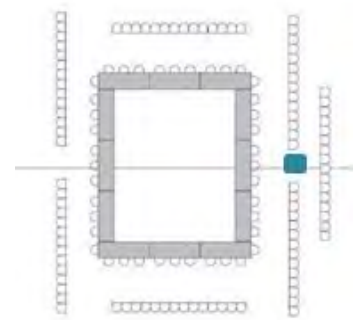
The Nevada Department of Transportation (NDOT) has begun the Reno-Sparks Freeway Traffic Study to identify future transportation improvements. As part of this study, NDOT is exploring potential changes to Interstate 80, Interstate 580 and U.S. 395, including the I-80/I-580 Spaghetti Bowl. NDOT is looking to work with key stakeholders and the public while determining concepts for potential changes to the Reno Spaghetti Bowl.

As part of their effort to keep the community involved in this process, NDOT hosted the Reno Spaghetti Bowl Charrette on May 28, 2016 at the Reno-Sparks Convention Center. The charrette was an all day event that facilitated conversation between the traffic study team, key stakeholders and the public. Those who attended were able to hear from the traffic study team, learn about, comment and vote on potential short-term and mid-term concepts for the Spaghetti Bowl and provide comments to the study. A major component of the Charrette was allowing stakeholders to vote on functional priorities for the Spaghetti Bowl during the ensuing design and rehabilitation process.

Charrette Format & Attendees

Key stakeholders from partnering agencies and organizations attended the charrette as well as members of the public. The charrette was organized to host an inner table of stakeholders, who could comment on the needs, challenges and proposed concepts presented by the traffic study team. Participants were allowed to comment or make statements during two Questions and Clarifications segments during the day.

The public surrounded the inner table and were able to participate in the breakout sessions, public comment and via court reporter. To the right is a layout of the main room.



Attending Stakeholders

Of those invited, 47 key stakeholders sent an RSVP and 31 stakeholders attended the charrette. The box on the following page displays who attended from each agency/organization.

Key Stakeholders

The key stakeholders were personally invited to the charrette through a formal Save the Date invitation and in-person phone calls. There were 74 key stakeholders invited from the following agencies and organizations:

- Associated General Contractors
- City of Reno
- City of Sparks
- Community Representatives
- Department of Public Safety
- Federal Highway Administration (FHWA)
- Governor's Office
- Grand Sierra Resort
- Highway Patrol
- NDOT
- Nevada Transportation Board
- Nevada Trucking Association
- Reno Police Department
- Reno-Sparks Convention and Visitors Authority
- Reno-Sparks Indian Colony
- Reno-Tahoe Airport Authority
- RTC Board
- The Regional Transportation Commission of Washoe County (RTC)
- Truckee Meadows Regional Planning Agency (TMRPA)
- Union Pacific Railroad (UPRR)
- Wal-Mart
- Washoe County

Public

Community members were encouraged to attend through news broadcasts, a newspaper notice in the Reno Gazette-Journal, social media and marquee advertisements at the Reno-Sparks Convention Center (See Appendix). A total of 64 community members attended the charrette from the following organizations:

- Ames Construction
- CA Group
- City of Sparks
- Federal Highway Administration (FHWA)
- Granite Construction
- HDR
- Kimley-Horn
- KLS Planning
- Marriot
- Milan Institute
- National Highway Patrol
- NDOT
- News Channel 2
- News Channel 4
- Q&D Construction
- Regional Transportation Commission (RTC)
- Reno-Sparks Indian Colony
- RTC Washoe County
- WSP/PB

There were also a few members of the community who attended without any affiliation to an agency or organization.

Agency / Organization	Attendees		
 Associated General Contractors (AGC)	Craig Madole		
 City of Reno	John Flansberg Steve Bunnell		
 City of Sparks	Jon Ericson		
 Federal Highway Administration	Jin Zhen Paul Schneider		
 Governor's Office	Cathy Erskine Alex Quagge		
 Grand Sierra Resort	Kent Vaughan		
 Highway Patrol	Kevin Larsen Rob Stepien		
 Nevada Department of Transportation	<table border="0"> <tr> <td> Bill Hoffman Denise Inda Jeff Lerud Sondra Rosenberg Jessen Mortensen </td> <td style="border-left: 1px solid black; padding-left: 10px;"> Ruth Borrelli Steve Cooke Thor Dyson Paul Frost </td> </tr> </table>	Bill Hoffman Denise Inda Jeff Lerud Sondra Rosenberg Jessen Mortensen	Ruth Borrelli Steve Cooke Thor Dyson Paul Frost
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 Nevada Transportation Board	Len Savage		
 Regional Transportation Commission	Amy Cummings Lee Gibson Neoma Jardon Paul McKenzie Jeff Hale		
 Reno-Sparks Indian Colony	Arlan Melendez Joel Korotkin Scott Nebesky Steve Moran		
 Reno-Tahoe Airport Authority	Daniel P. Bartholomew		
 Truckee Meadows Regional Planning Agency	Jeremy Smith		
 Washoe County Sheriff's Department	Chuck Allen		



Charrette Presentation

Truckee Meadows Regional Planning Agency

GIS Coordinator, Jeremy Smith, from the Truckee Meadows Regional Planning Agency (TMRPA) presented on their 2016 assessment of forecasted population and employment growth through 2036. This consensus forecast is performed every two years to inform planning efforts across the region. TMRPA uses the following sources for this assessment:

- Nevada State Demographer
- Truckee Meadows Water Authority
- Woods and Poole
- HIS – Global Insight

The 2016 assessment predicts a large increase in population and employment in Washoe County over the next 20 years, including a steady increase in population through 2036 resulting in 100,000 additional residents. The employment forecast also increases over time, with an estimated 75,000 additional jobs by 2036.

TMRPA is working with the traffic study to use these results while determining spatial allocation of housing units and employment locations. They are evaluating four housing growth scenarios that simulate different spatial and temporal patterns. The results of the assessment are also being collected to use for Traffic Analysis Zones.

Background

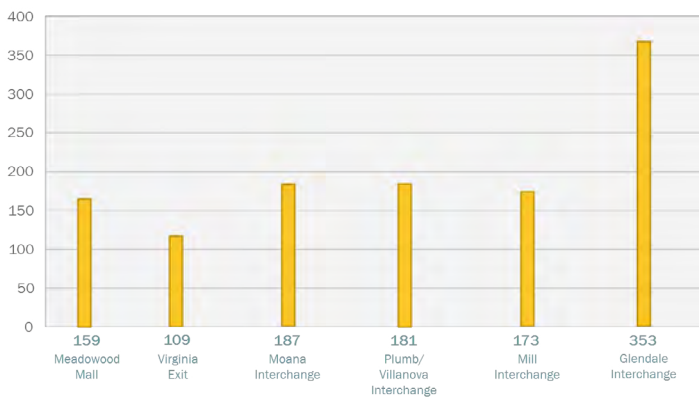
The Reno Spaghetti Bowl was originally constructed between 1969 and 1971 for a population of about 130,000 people. Currently, Washoe County has increased in population to approximately 420,000 people.

There have been some improvements made since the original construction; however, the Spaghetti Bowl is nearing its planned design capacity and will be in need of replacement, improvements or additions to accommodate increased traffic demands. Many of the standards under which the existing system-to-system Interchange was built under are now outdated. To meet current standards, major revisions will be required.

Current Conditions

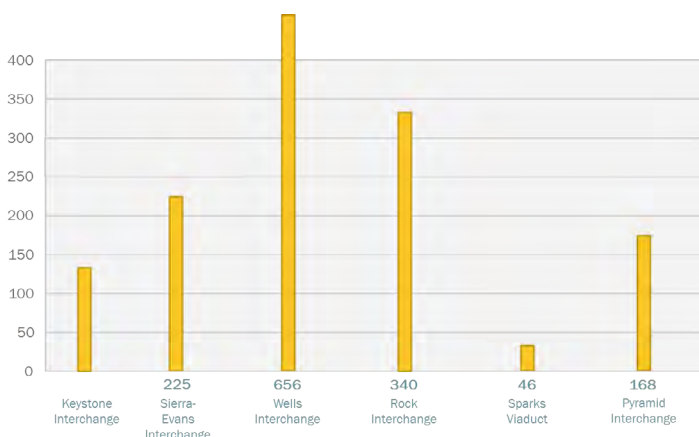
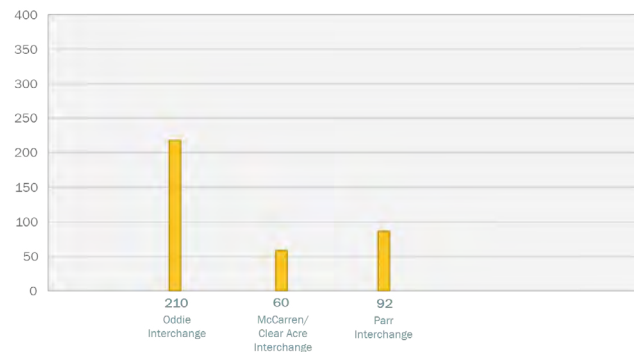
Washoe County is now a diverse and vibrant community and has potential for becoming an inland port for commercial and industrial services. Crash severity is a prominent concern and rising population numbers indicate that higher levels of congestion will lead to an increased number of crashes. Because of this, safety improvements have also been identified as a high priority for the Spaghetti Bowl.

The following charts display crash data collected from October 1, 2010 to September 30, 2015.



I-580 Crash Severity

US 395 Crash Severity



I-80 Crash Severity

Considerations



Environmental review and permitting

The National Environmental Policy Act (NEPA) ensures that agencies adequately evaluate a study area and the potential effects, impacts and benefits before implementing a project. The different NEPA levels could potentially impact the timeline of Spaghetti Bowl improvements; however, the Federal Highway Administration (FHWA) and NDOT have set a new goal to have the Environmental Impact Statement take no longer than four years. NEPA considerations include the following:

- 4F Parks & Recreation
- Air quality
- Concepts
- Environmental Justice
- Historic
- Noise
- Plants/Animals
- Right-of-Way (ROW)
- Traffic
- Water

Right-of-way/ access management

Properties will need to be acquired for future long-term improvements to the Spaghetti Bowl; therefore, new right-of-way (ROW) will be necessary. Federal regulations and the Department's ROW Division ensure that property owners and tenants who experience property acquisitions will be treated fairly and equitably. ROW has the following required steps:

1. Project need identified
2. Project alignments proposed
3. Environmental document completed
4. Project alignment selected
5. Design completed to a level that is sufficient to determine property impacts
6. Project General Information Notices issued
7. Acquisition/relocation

The ROW process takes time and requires significant coordination with affected property owners.

Utilities and Union Pacific Railroad

Union Pacific Railroad (UPRR) is a separate entity that operates within its own governance and processes. Any improvements that will take place at or by UPRR ROW will require in-depth coordination. Additional time should be factored into a project schedule as UPRR's timeline can vary from other agencies.

Funding

Funding is viewed as a major hurdle. It was discussed that funding may need to come from local, state and federal levels. Prioritization of the Spaghetti Bowl can help to secure the required funding; however, competing needs and priorities within the state can prolong funding commitments.



Schedule - time restraints

Short-term

Short-term improvements can begin as quickly as 1-3 years depending on the complexity and requirements shown below.

- NEPA (CE)
- Selection/Design (Variances, etc.)
- Funding
- Contract
- Construction

Mid-term

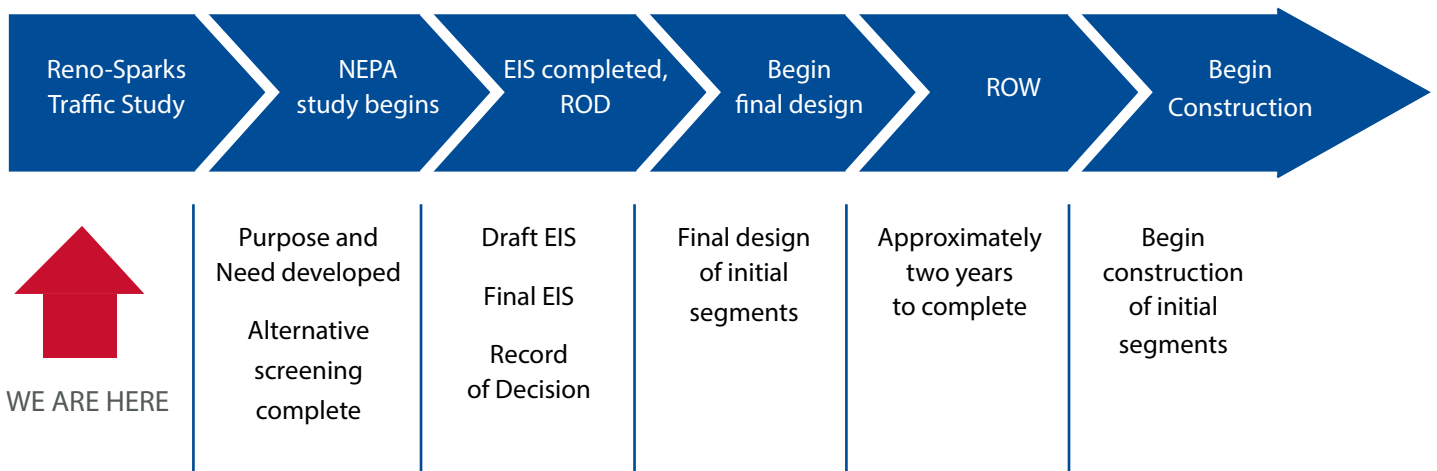
Mid-term improvements can begin as quickly as 3-5 years, again depending on the associated factors shown below.

- NEPA (CE/EA)
- Selection/Design (Variances, etc.)
- Funding
- Contract
- Construction

Long-term

Long-term and/or full reconstruction of this important Interchange is dependent upon funding and NEPA. This charrette acted as the kick-off for public information to meet NEPA EIS requirements. An exact time frame for starting construction will further depend on possible phasing and traffic disruption to the interchange area.

- NEPA (EIS)
- Phasing (accelerated construction)
- Funding



Feedback

City of Reno

The City of Reno expressed the following concerns:

- Balancing access control benefits with business impacts
- Managing impacts to surface streets
- Improving traffic flow
- Improving safety
- Funding

City of Sparks

The City of Sparks addressed concerns in the westbound direction of I-80 into the Spaghetti Bowl such as the Pyramid/McCarran intersection and the Nugget bottle neck. Future projects such as the Pyramid Way/U.S. 395 Connector project need to be considered as part of any solutions. Other addressed concerns were:

- Safety and capacity — consider peak morning commute
- Minimizing impacts — especially to the Oddie Blvd. Redevelopment Corridor
- Increased traffic demand — with the completion of the Pyramid Way/McCarran Blvd intersection improvements
- Prioritizing future traffic demand — consider demand of Pyramid Way/U.S. 395 Connector

Federal Highway Administration

The Federal Highway Administration (FHWA) is in support of NDOT's future endeavors at this location. They recognize that the environmental process can be lengthy and challenging, especially while determining concepts that will be successful. NDOT and the FHWA have an overall goal to complete project EIS's in less than four years. Historically the average timeframe is around 44 months.

The FHWA also recognizes that the Spaghetti Bowl is a big challenge and is not just a matter of being able to design a new system. When reviewing concepts, access, political influence, businesses and local government concerns need to be considered as well. They understand that there will not be one solution that is universally accepted; therefore, these changes will require compromise from partnering agencies and stakeholders.

Highway Patrol

The Highway Patrol acknowledges that the Spaghetti Bowl experiences a lot of traffic demands, crashes and safety concerns. They view themselves as representing the commuters that use the Spaghetti Bowl and they have noticed that the commuters would like a change to make the roadways safer. They are happy to be involved in this process and help shape the direction of the project.

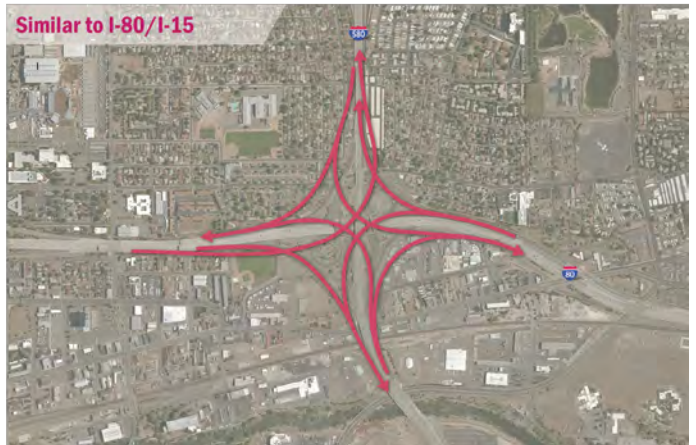
Reno-Sparks Indian Colony

The Reno-Sparks Indian Colony is concerned about the safety of the Glendale exits and how construction there would affect the nearby housing community. Wal-Mart is also a main economic driver in their community and the Indian Colony wants to mitigate impacts to Wal-Mart as much as possible. They are more than willing to work with everyone to find solutions for these concerns. They expressed concerns over long-term closures of both on-and-off ramps at 2nd Street/Glendale.

The Regional Transportation Commission of Washoe County

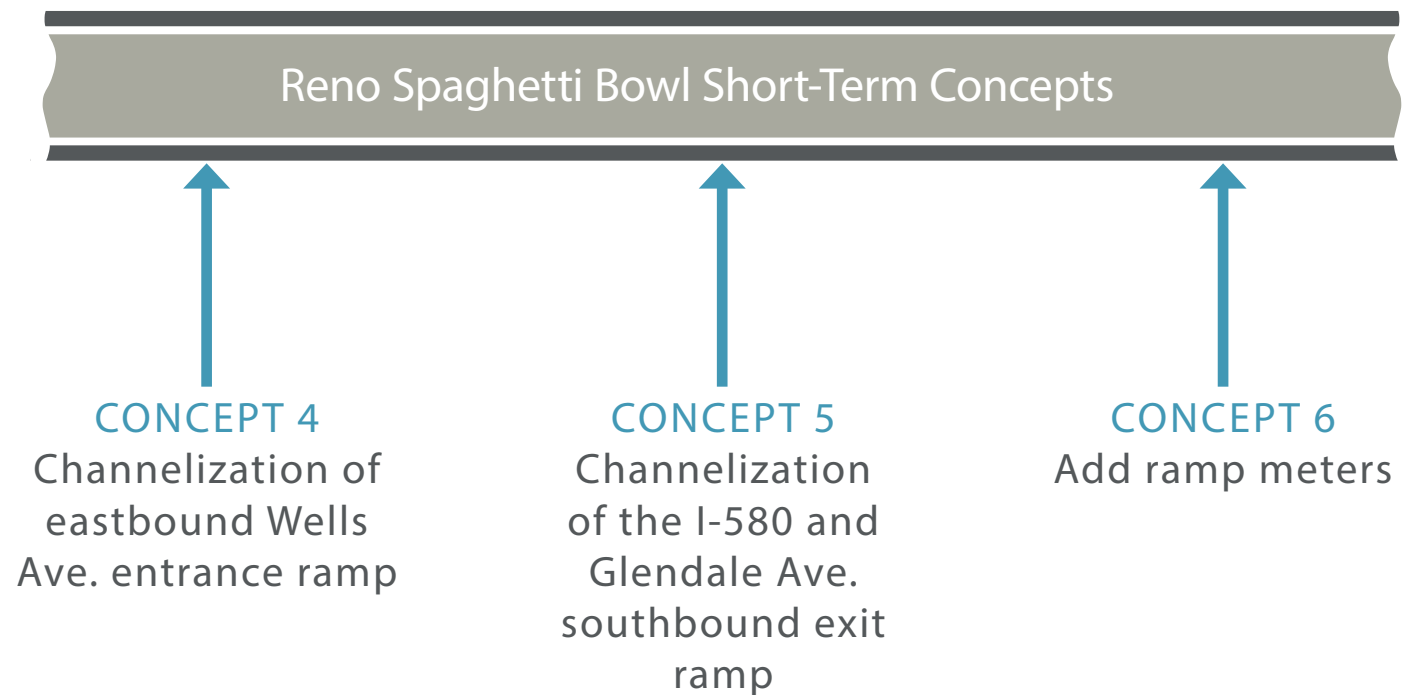
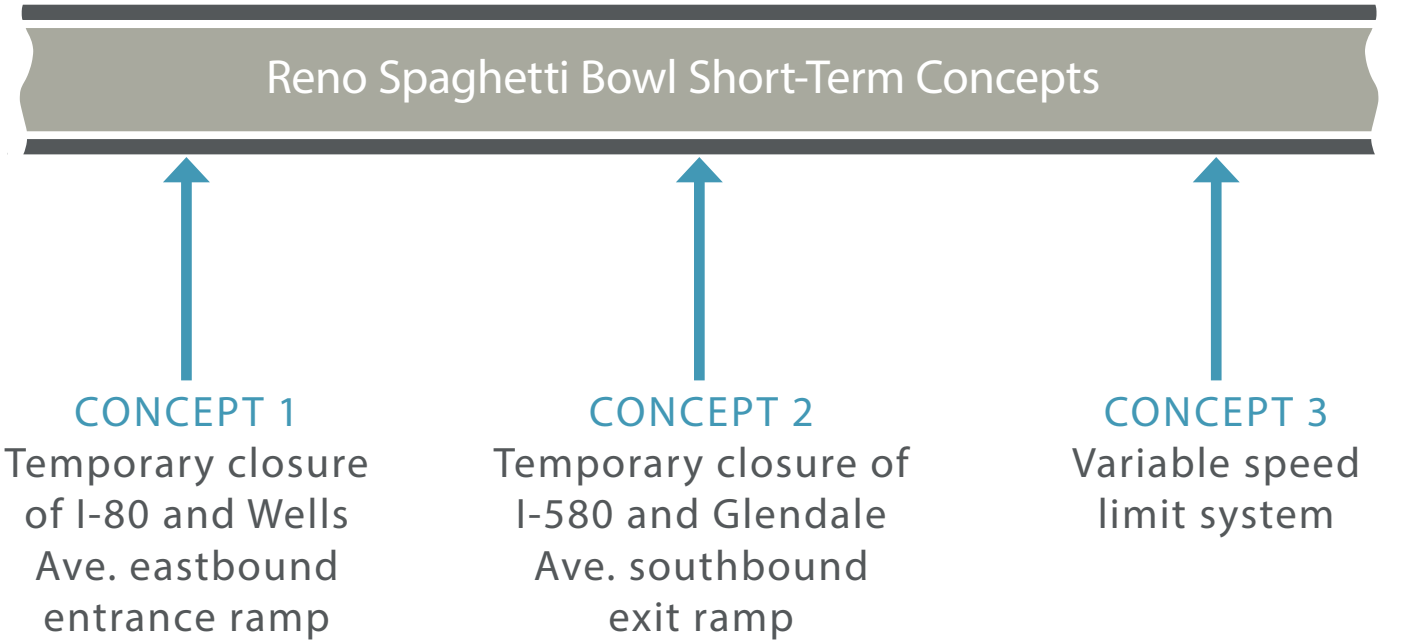
The Regional Transportation Commission of Washoe County (RTC) is more concerned about finding short-term solutions. RTC identified shorter term solutions as a priority over long-term solutions because they see a great need for improvements in the Spaghetti Bowl now. The RTC also reviewed the Regional Transportation Plan and how changes that were made three to four years ago are relevant today.

Concepts



New interchange configurations were presented to give participants an idea on the footprint that may be required for a new build out. Everyone was advised that no formal plans have been made yet for the interchange and future designs will incorporate comments from today's charrette including access, mobility, phasing, EIS requirements and funding constraints.

SHORT-TERM CONCEPTS PRESENTED



Reno Spaghetti Bowl Mid-Term Concepts



CONCEPT 1

Two-lane eastbound to southbound ramp



CONCEPT 2

Partial two-lane eastbound to northbound ramp

Reno Spaghetti Bowl Mid-Term Concepts



CONCEPT 3

Nugget "Gap"



CONCEPT 4

Wells braided ramp



CONCEPT 5

Reversible lanes



Breakout sessions

The hour-long breakout sessions provided an opportunity for community members and the key stakeholders to review the short-term and mid-term concepts and vote on their most and least preferred concepts. Each participant was given two green stickers (like) and two red stickers (dislike) to vote on the concept boards. Participants were also given two purple stickers to vote on the priorities that were most important to them while reconstructing the Reno Spaghetti Bowl. Those priorities included access, mobility and traffic flow, safety, and schedule (delivery time).

Priorities Results

The key stakeholders and community members were invited to vote for their top two priorities on both short and mid-term solutions. The options were as follows:

- Access
- Mobility and traffic flow
- Safety
- Delivery timeframe

Mobility and traffic flow along with safety were overwhelmingly the top priorities for both the short and mid-term concepts.



The short-term and mid-term concepts were broken into two separate rooms with technical experts in each room available to answer any questions.

Concepts Results

The following were the four most popular concepts:

Short-Term Concept #1 - Temporary closure of I-80 and Wells Ave. Eastbound entrance ramp

Short-Term Concept #3 - Variable speed limit system

Mid-Term Concept #3 - Nugget "Gap"

Mid-Term Concept #4 - Wells braided ramp



Conclusion

The charrette determined the concepts that are most popular with stakeholders and community members and explained the process and timeline for a project of this size. Those who attended were able to review and discuss all potential options for short and mid-term concepts and vote on the priorities that are most important to them during this project. Although mobility and safety were identified as the top priorities for the community and stakeholders, charrette participants acknowledged that all four options are important. A balanced approach must be considered for future improvements at the Spaghetti Bowl.

Most preferred short-term and mid-term concepts are listed below:

Short-term concept #1 - Temporary closure of I-80 and Wells Ave. Eastbound entrance ramp

- This concept would improve I-80 Eastbound and Southbound to I-580 Southbound by reducing congestion and crashes on I-80. The closure would only be implemented during peak periods when high congestion thresholds are met. This would require commuters to use alternate routes during closures and would increase traffic on surface streets.

Short-Term Concept #3 - Variable speed limit system

- This system would improve I-80 Eastbound and Westbound to I-580 Southbound by decreasing freeway speeds approaching the Spaghetti Bowl. The lower speeds will improve safety and capacity and make it easier for commuters to merge. Additional resources for the Road Operations Center might be needed to manage the system and increased enforcement could be necessary.

Mid-Term Concept #3 - Nugget "Gap"

- This concept would require a new bridge structure to provide additional lanes in each direction along I-80. This would impact the Nugget but would allow for additional lanes to be striped from Rock to Pyramid. The new bridge structure could assist with traffic control for the reconstruction of existing bridges.

Mid-Term Concept #4 - Wells braided ramp

- The braided ramp concept would remove Wells traffic from weaving with I-80 traffic going to I-580 Southbound. This would require a new structure over Sutro Street and would provide grade separation for Wells and I-80 Eastbound traffic. This could eliminate the connection from Wells to US 395 Northbound and might impact East to South merge congestion.

The Charrette ended with the opportunity for the public to comment on record in front of the forum or via a court reporter. Contact information for future Reno Sparks Traffic Study events was given and contact information for the Department's Charrette team was provided.

CONTACT

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