TRAC

TRANSPORTATION
RESOURCE ADVISORY
COMMITTEE & COMMUNITY
COLLABORATION

April 7, 2016

TRAC

Item #1

CITIZENS PARTICIPATION

TRAC

Item #2

APPROVAL OF MINUTES

TRAC

Item #3

OVERVIEW OF TRAC AGENDA

Committee Goals

- Learn about the RTC including its roadway and transit priorities, as well as projects and priorities of state and local governments
  - Pre-summer: Roadway
  - Post-summer: Transit
- Provide input on our transportation and mobility priorities and projects
- Determine if additional funding is necessary and if so provide recommendations on funding mechanisms for projects.

Item #4

PRIORITIZATION OVERVIEW

Metrics, Dashboards and Stakeholders: Connecting Performance Measures to Community Values

John V. Thomas, PhD
US EPA Office of Sustainable Communities

Transportation Resource Advisory Committee
April 7, 2016

Smart Growth
PROGRAM

A Wide Range of Uses for Metrics

- Prospective / Forecast Performance of a Plan
- Project Evaluation
- Project / Plan Monitoring
- **Identification of Gaps and Priority Areas for Investment**

Sources of Metrics

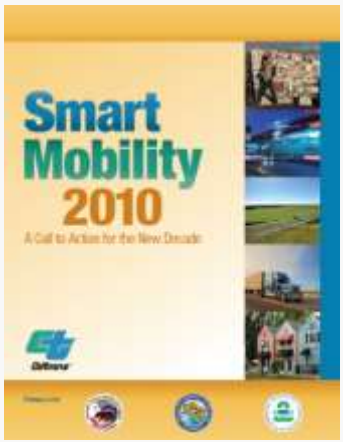
- Models
  - Estimated based on a scenario
- Studies
  - Anticipated outcomes of projects
- Monitoring Data
  - Tracking metrics over time
- Qualitative "Scoring"
  - Rating points for consistency with regional priorities or supporting key goals

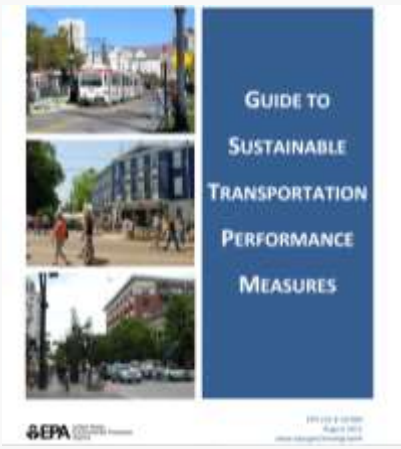
Effective Use of Metrics

- A meaningful process
  - Regional – Vision Plans, Long Range Plans, Capital Plans, System Wide Planning, Individual Projects
  - City – General Plans, Capital Plans, Projects, Evaluation of Policies
  - Neighborhood – Corridor Plans, Station Area Plans, Neighborhood Design / Redevelopment, Individual Development Projects
- The right measures
  - Rigorous and detailed but easy to use and maintain
  - Transparent
  - Ability to visualize at a regional and community scale
  - Connect to community values

RTC is Laying the Foundation

Examples of Performance Measures





How Performance Measures Can Help

- Priority setting when project needs are greater than available resources
- Provide a view of the potential co-benefits of investment choices
- Provide a way to structure a conversation about the shared vision and how the project portfolio can best match with those priorities

Figure 22: Mid-America Regional Council – Vision and Goals in the Transportation Outlook 2040 Plan

Regional Vision

Greater Kansas City is a sustainable region that increases the vitality of our society, economy and environment for current residents and future generations.

Transportation Vision

A safe, balanced, regional, multimodal transportation system that is coordinated with land use planning, supports equitable access to opportunities, and protects the environment.

Transportation Goals

Accessibility - Maximize mobility and access to opportunities for all area residents.

Climate Change and Energy Use - Decrease the use of fossil fuels through reduced travel demand, technology advancements and a transition to renewable energy sources.

Economic Vitality - Support an innovative, competitive 21st century economy.

Environment - Protect and restore the region's natural resources (land, water and air) through proactive environmental stewardship.

Place Making - Coordinate transportation and land-use planning as a means to create quality places in existing and developing areas and to strengthen the quality of the region.

Public Health - Facilitate healthy, active living.

Safety and Security - Improve safety and security for all transportation users.

System Condition - Ensure transportation system is maintained in good condition.

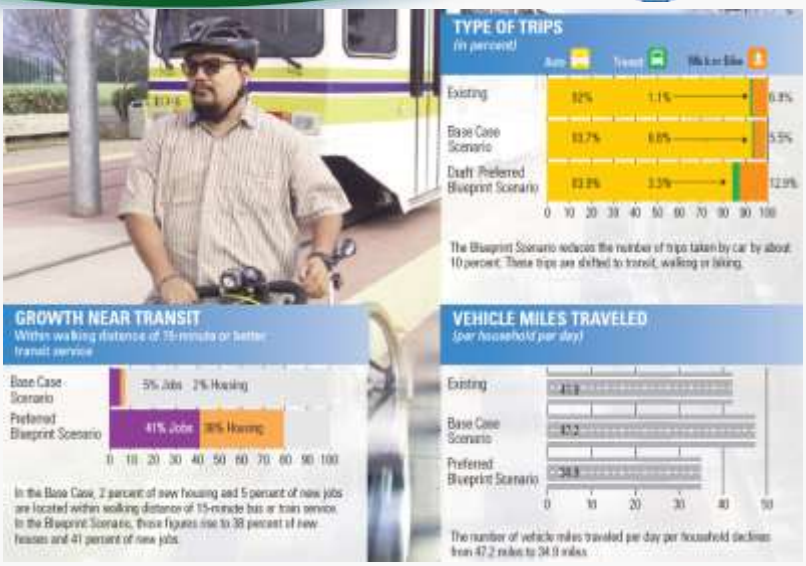
System Performance - Manage the system to achieve reliable and efficient performance.

Transportation Objectives

Figure 28: Southwestern Pennsylvania Commission – CMAQ Project Rating Scorecard
Image source: ICF International

Factors	Weight	Score 1=low 2=med 3=high	Weighted Score	Best Possible Score
1. Consistency with 2035 Long Range Plan Vision and Policies that Impact Air Quality	10			30
2. CMP Congested Corridor Rating	10			30
3. Deliverability / Project Readiness	10			30
4. Raise Public Awareness of Transportation Demand Management Options	7			21
5. Grouped Projects	5			15
6. Safety Improvements	7			21
7. Sustainable Development Benefits	5			15
8. Projects that bring Non-Traditional Funding to TIP	5			15
9. Non-Federal Funding Share	5			15

Communicating plan outcomes with a dashboard of metrics



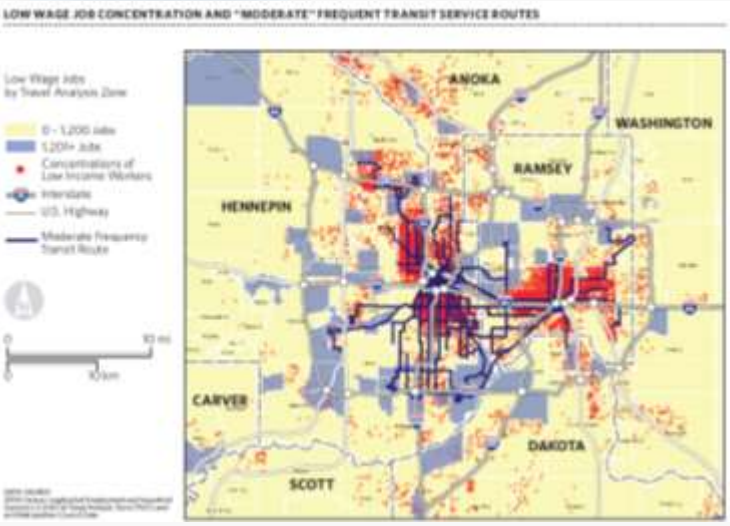
Source: Sacramento Regional Blueprint (2010) Blueprint's Impact on the Region and Resident's Quality of Life

Source: Sacramento Regional Blueprint (2010) Blueprint's Impact on the Region and Resident's Quality of Life

Figure 3: Delaware Valley Regional Planning Commission – Performance Monitoring Results

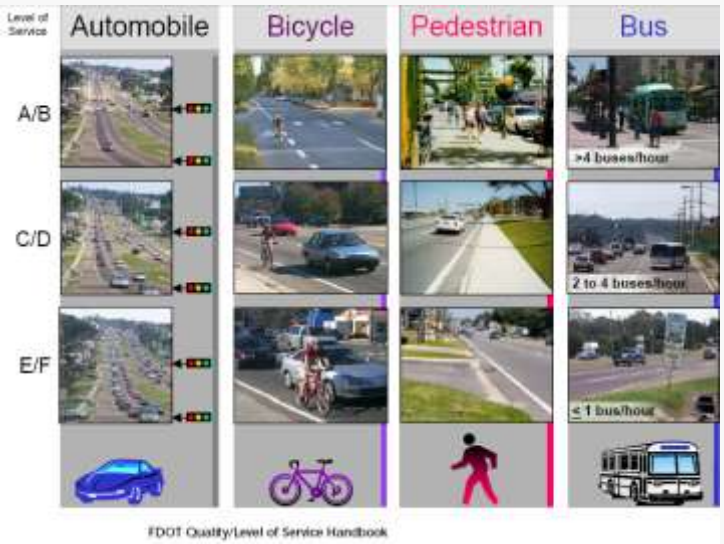
What We Track	How is the DVRPC Region Performing?	Trend
TR 1: Have vehicle crashes and fatalities declined?	Between 2001 and 2005, the DVRPC region experienced an 10% decrease in fatalities per million VMT and less than 1% decrease in all crashes per million VMT. However, the overall number of crashes rose by 4.6% during this same time period.	
TR 2: Is congestion getting worse?	Congestion appears to be stable – neither improving nor worsening, though VMT has increased.	
TR 3: Is transit ridership increasing?	While transit ridership has experienced some fluctuation, it has increased in the last 5 years.	
TR 4: Has the number of deficient bridges in need of rehabilitation or replacement decreased?	The number of bridges identified as structurally deficient in the DVRPC region has remained steady, but remains twice as high as the acceptable level set by FHWA in its current strategic plan.	
TR 5: Are roads better maintained?	The region saw a slight increase in road miles considered to be deficient, mostly due to NJDOT's stricter standards.	
TR 6: Are fewer people driving to work alone?	The number of people driving to work by themselves continues to increase and is now 73% of all commuters.	
TR 7: Are people driving less?	There are more cars and more drivers driving more miles every year in the region. The region appears to be more auto-dependent.	
TR 8: Are DVRPC's TIP investments in keeping with the LRP goals?	Approximately 97% of the mapped 2007-2010 TIP project funding supports the Long Range Plan and its stated goals.	

Measures that Identify Gaps



Source - Metropolitan Council, *Transportation Performance in the Twin Cities Region*

Evaluating Opportunities to Improve Performance Across Modes



TRAC

Item #5

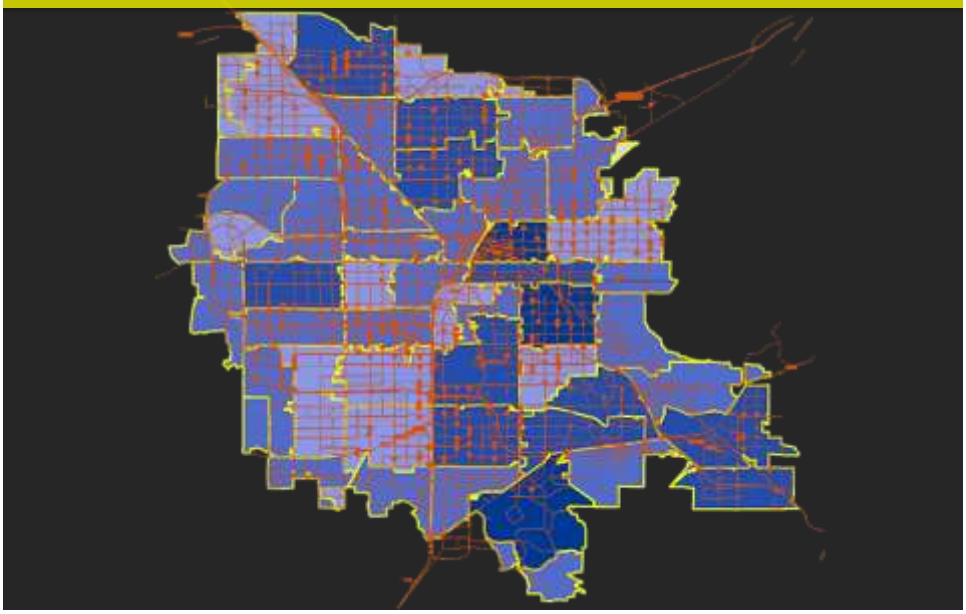
OUTREACH AND PRELIMINARY SURVEY RESULTS

VALUE PRIORITIZATION SURVEY

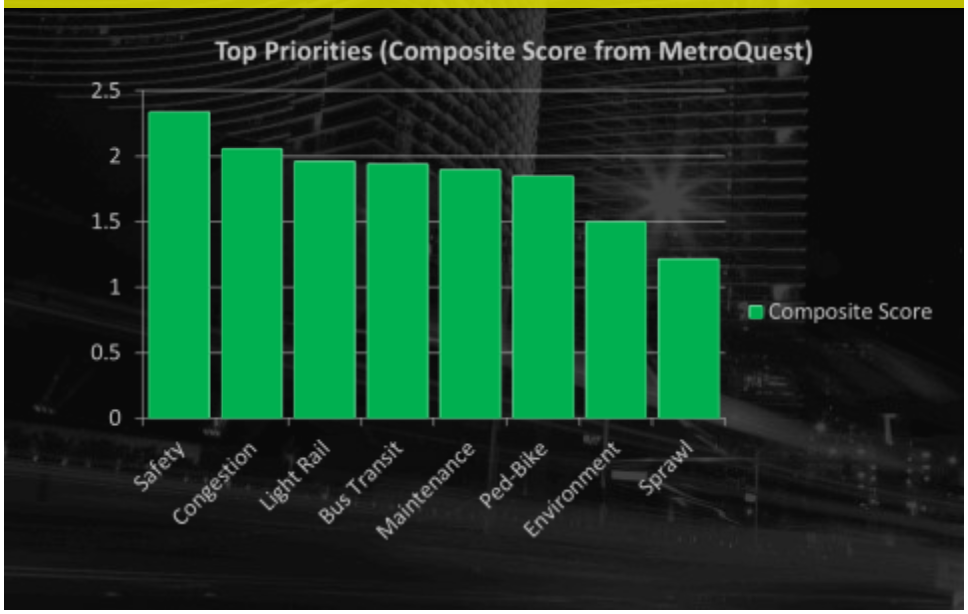
rtcvision.metroquest.com

VALUE PRIORITIZATION SURVEY

4500+ Responses



Main Findings



RTC Values Ranked (Based on Survey Results)

1. Increase Safety
2. Congestion Management
3. Enhance Modal Connectivity *(transit & ped-bike)*
4. Increase Accessibility
5. Maintain Current Infrastructure
6. Improve Freight Movement
7. Support Economic Vitality
8. Promote Efficient System Operation
9. Protect Environment

TRAC

Item #6

OVERVIEW OF VALUES

TRANSPORTATION VALUES

THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

RTC

RTC Transportation Values

Improve Economic Vitality

Support economic growth and opportunity.

Improve Economic Vitality

1. Capture Economic Impact

Cost = Up to $12 B

Impact = Up to 178 B

Improve Economic Vitality

2. Avoid Economic Loss

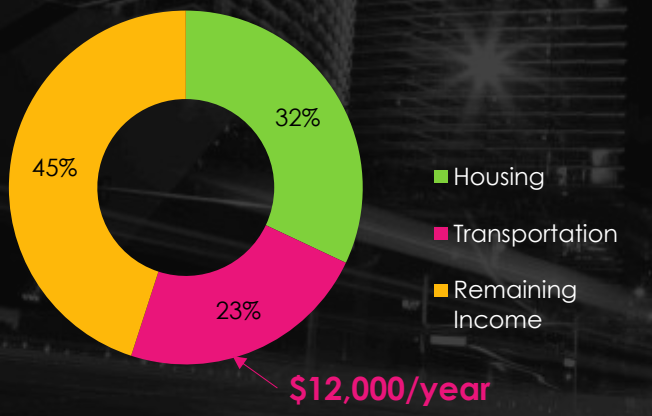
If We Do Nothing…..

Economic Loss = Up to $79 B over 30 years

Improve Economic Vitality

3. Reduce Transportation Costs

Average Housing + Transportation Costs as % of Income



Improve Economic Vitality

4. Reduce Commute Times

Improve Economic Vitality

5. Attract the Next Generation of Workers

Improve Economic Vitality

How Transit Improves Economic Vitality:

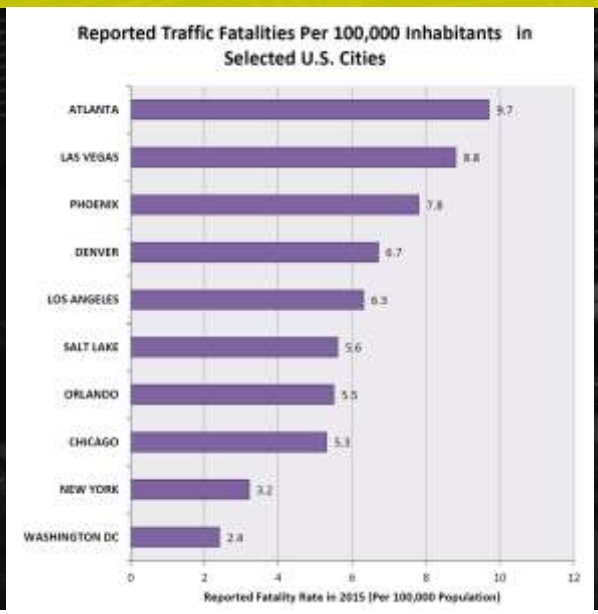
1. Capturing Economic Impact
2. Avoiding Economic Loss
3. Reducing Transportation Costs
4. Reducing Commute Times
5. Attract the Next Generation of Workers

RTC Transportation Values

Increase Safety

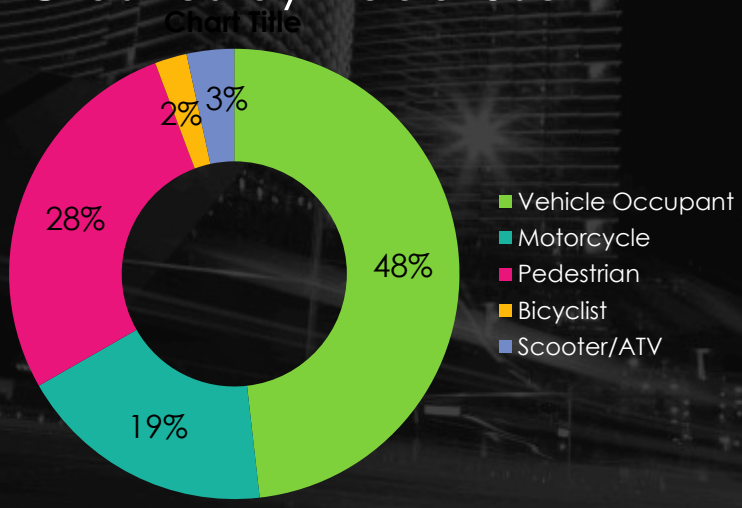
Reduce serious crashes.

Increase Safety

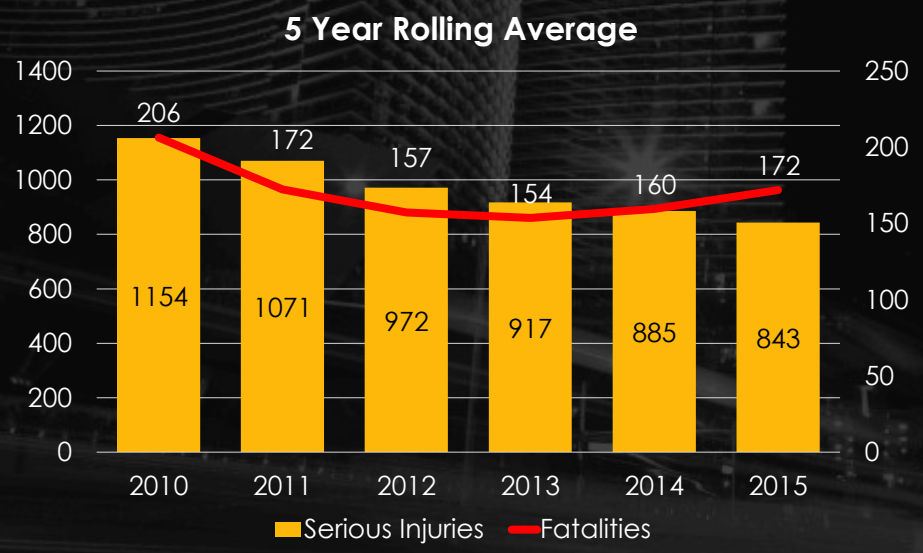


Increase Safety

Crashes by Road User



Increase Safety



Increase Safety

No Level of Fatalities or Critical Injuries on the Road are Acceptable

In Every Situation a Person Might Fail….

The Road System Should Not

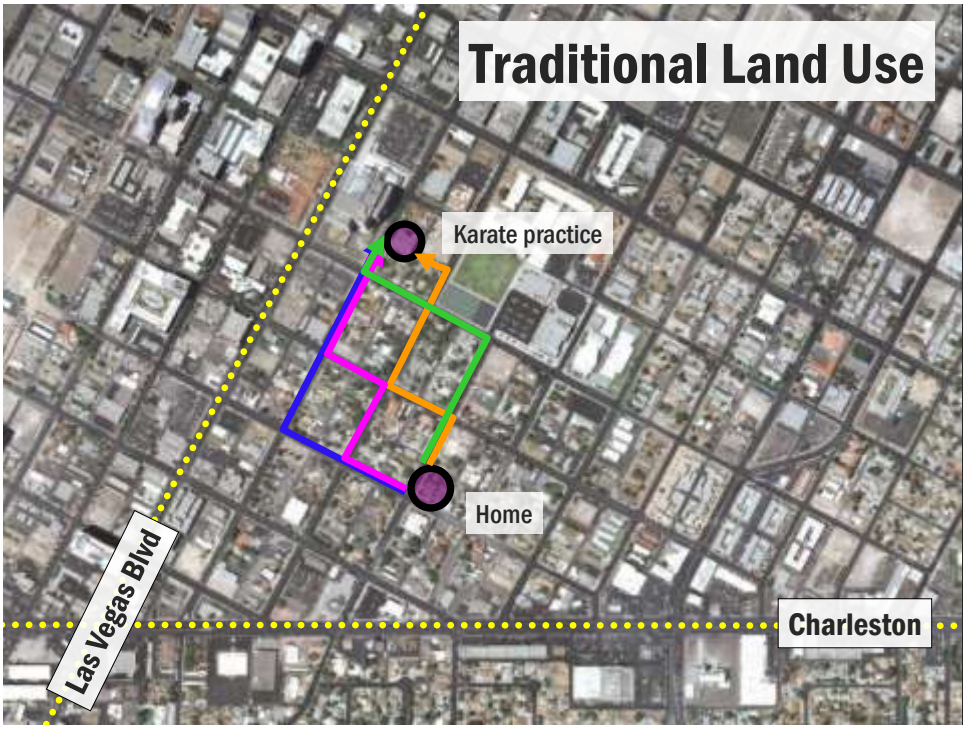
Visionzeroinitiative.com


Increase Safety


RTC Transportation Values
Increase Accessibility
Get people where they want to go.


Increase Accessibility

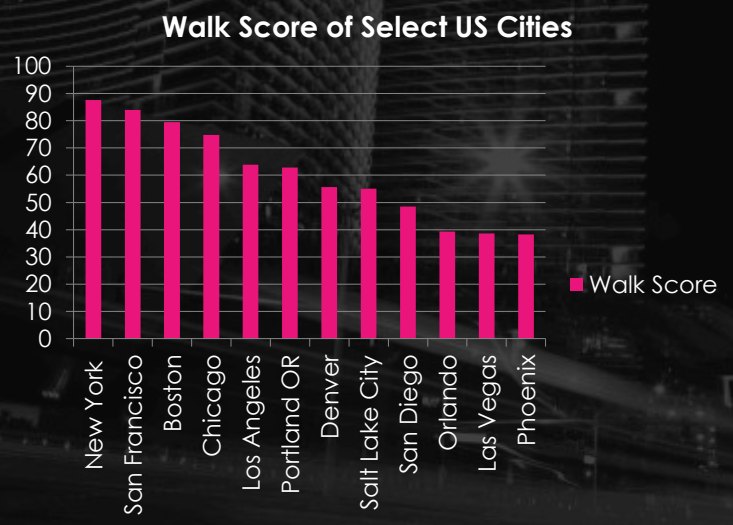

Karate practice
W Charleston
0.28 miles
1.14+ miles
Home
Fort Apache
Conventional Land Use


Traditional Land Use
Karate practice
Home
Las Vegas Blvd
Charleston


Increase Accessibility

Increase Accessibility

Increase Accessibility



RTC Transportation Values

Protect Environment

Protect natural resources and conserve energy.

The mission of the Outside Las Vegas Foundation is to connect people to Southern Nevada's special outdoor places.

OLVF envisions a community that enjoys, values and protects Southern Nevada's special outdoor places.

OLVF Programs Achieve our Mission and Vision

OLVF has three major program areas:

Education Programs

Volunteer programs

Outreach Programs

2015 Accomplishments

Over **80** field trips for schools and after school programs were sponsored by Outside Las Vegas Foundation, connecting over **3,000** young people to the outdoors!

Outside Las Vegas Foundation hosted **70** events generating over **5,500** volunteer hours in our urban parks and trails, helping to care for these special outdoor places!

277 educational programs were held at events & community centers introducing over **23,000** people to the Nevada outdoors

Importance of Environment as it relates to TRAC:

Negative effects of congestion

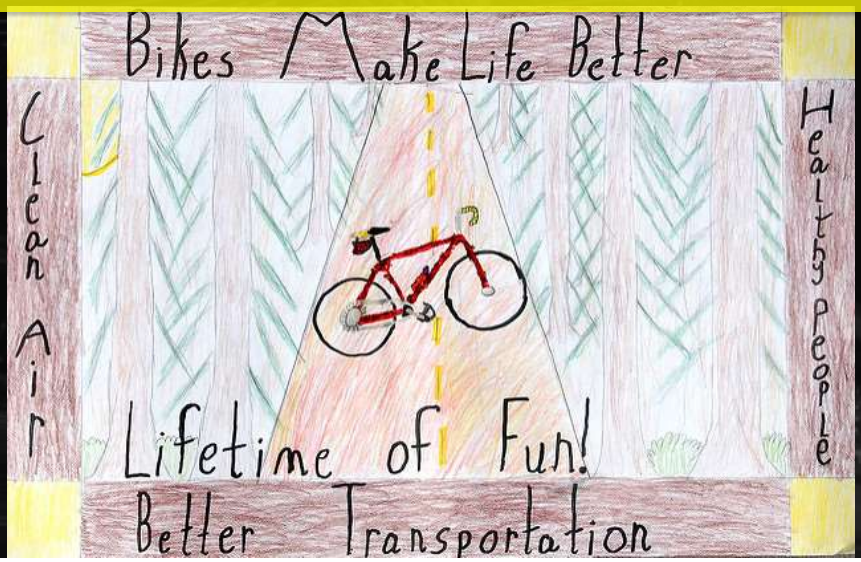
- CO_2 Emissions – Greenhouse gases
- Health effects of traffic congestion

Benefits of well-cared for outdoor assets:

- Health & wellness benefits of the outdoors
- Education benefits of the outdoors
- Economic benefits of outdoor resources

OUTSIDE LAS VEGAS FOUNDATION

Complete Streets and Transportation Alternatives can contribute to a comprehensive strategy to address climate change

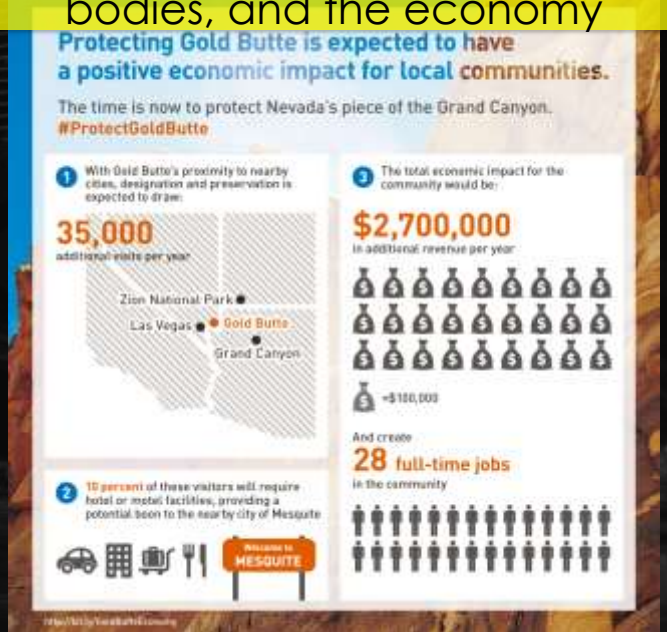


Congestion Mitigation Air Quality Improvement Program
Air Quality and Congestion Mitigation Measure
Outcomes Assessment Study:
Final Technical Report

Health and Wellness and the Outdoors

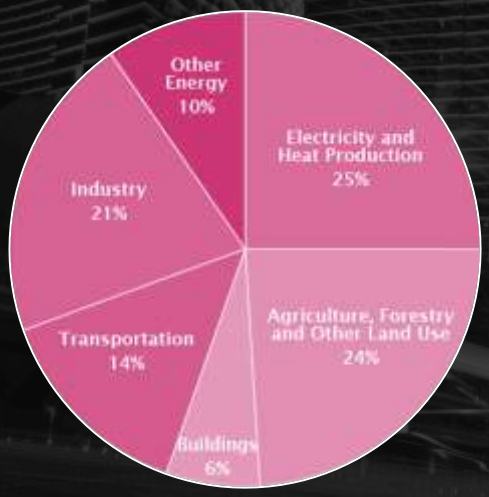
Research on Education and the Outdoors

Getting outside is good for minds, bodies, and the economy



Protect Environment

Protect Environment



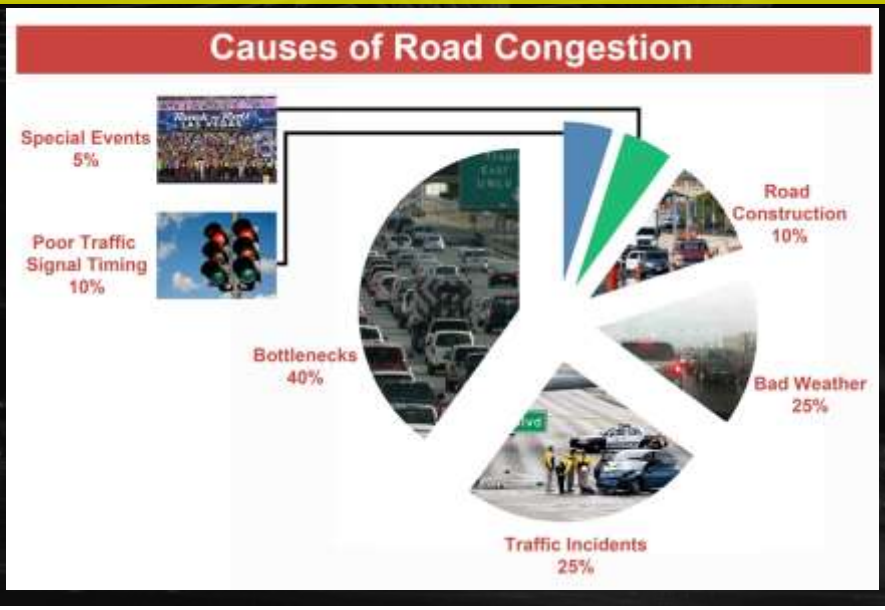
Protect Environment

RTC Transportation Values

Reduce Congestion

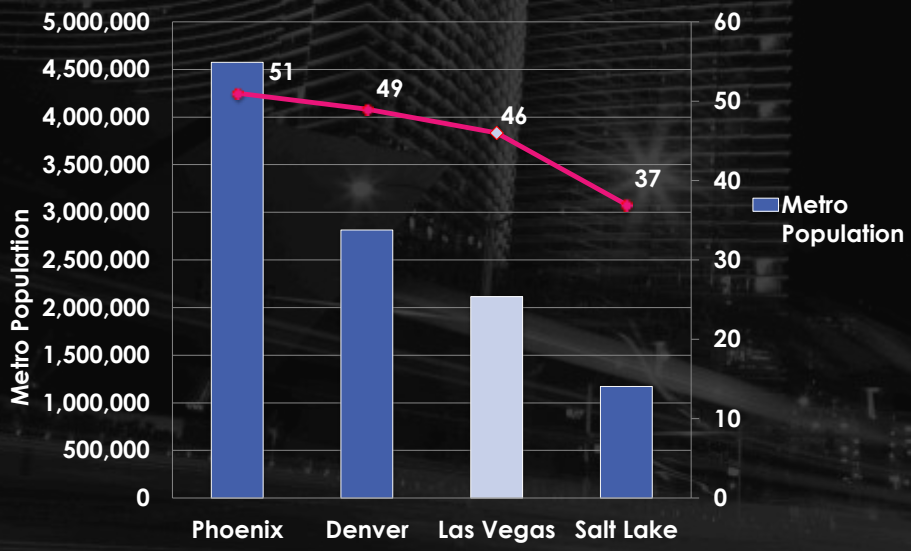
Reduce traffic delays.

Reduce Congestion



Reduce Congestion

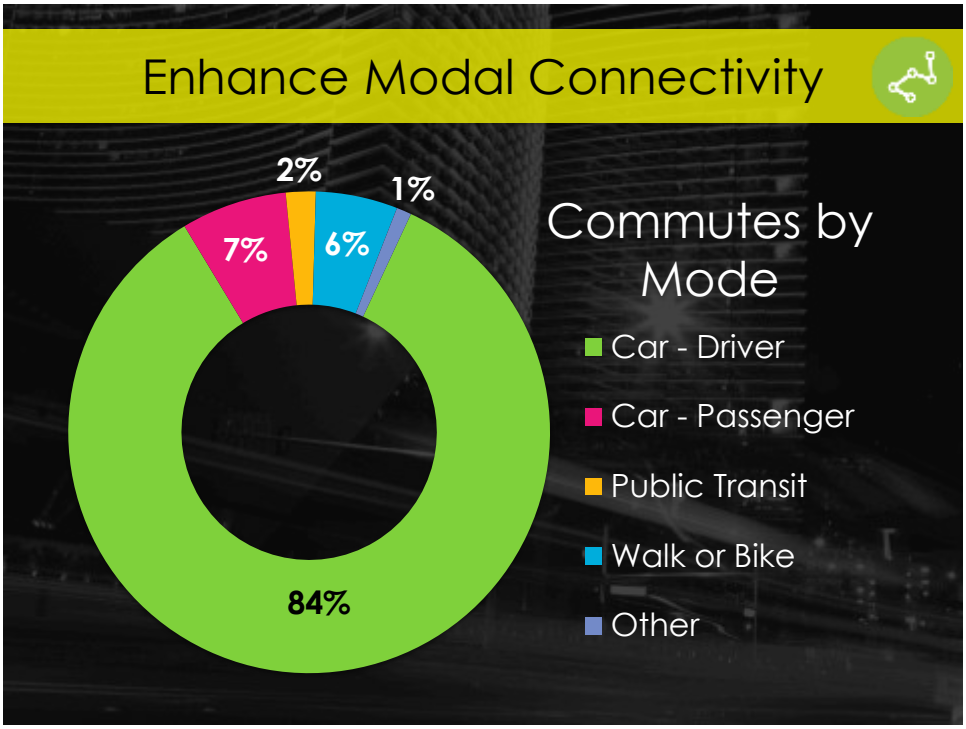
Reduce Congestion



RTC Transportation Values

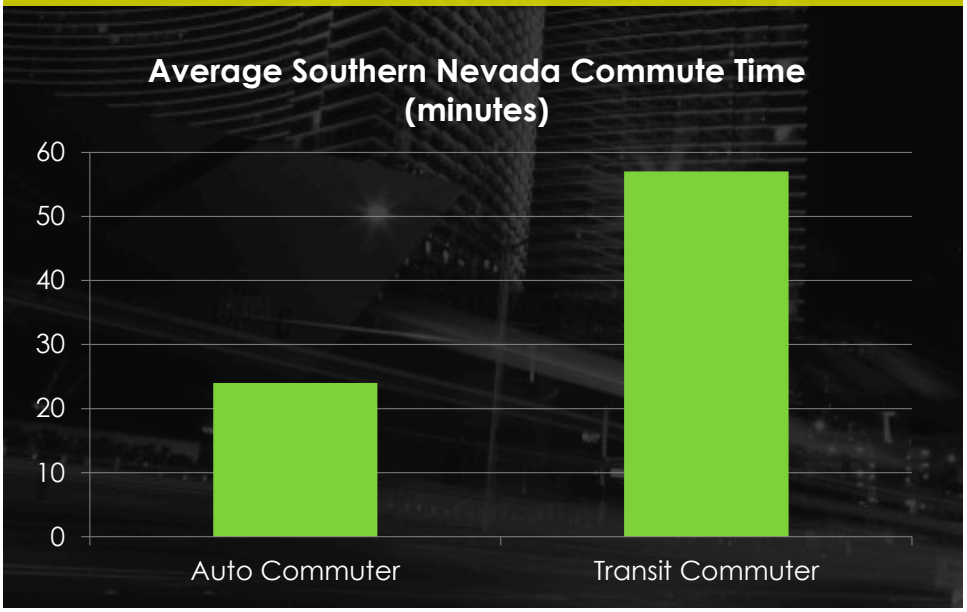
Enhance Modal Connectivity

Give people transportation choices.

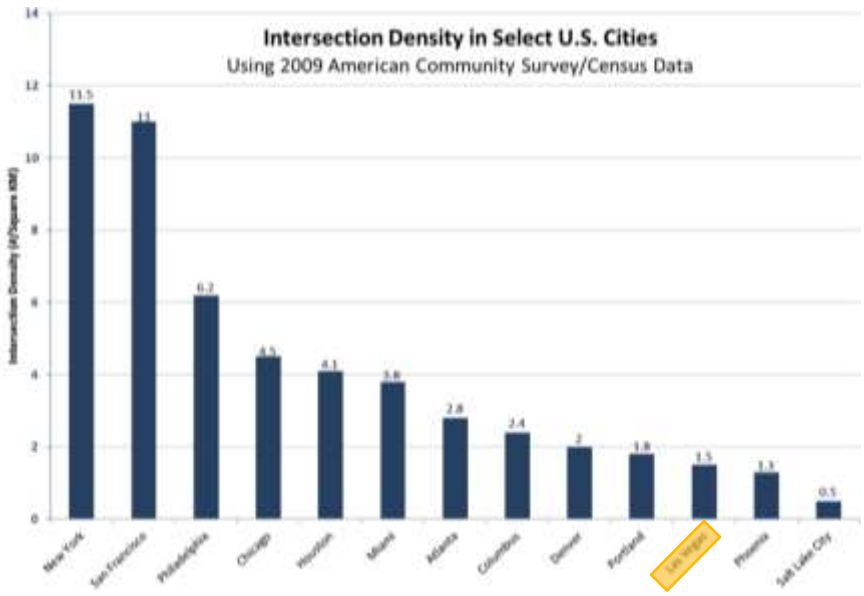

Enhance Modal Connectivity
2%
1%
7%
6%
84%
Commutes by Mode
Car - Driver
Car - Passenger
Public Transit
Walk or Bike
Other


Enhance Modal Connectivity

Enhance Modal Connectivity



Enhance Modal Connectivity

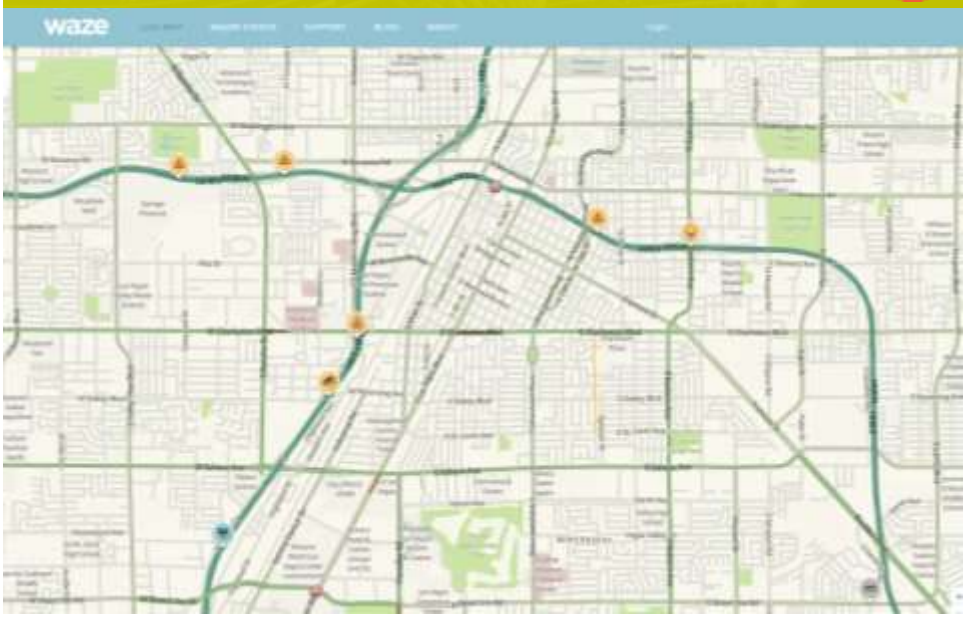


RTC Transportation Values

Promote Efficient System Operation

Help traffic flow better.

Promote Efficient System Operation



Promote Efficient System Operation

Promote Efficient System Operation

Promote Efficient System Operation

RTC Transportation Values

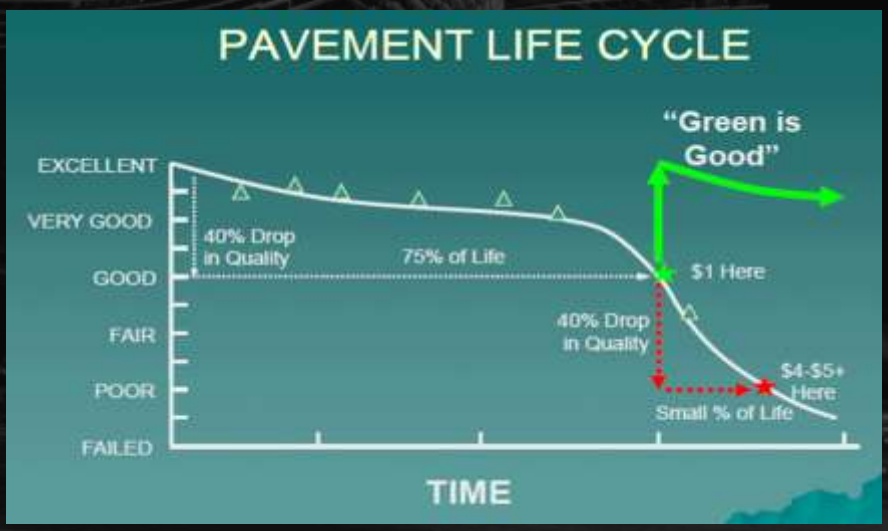
Maintain Current Infrastructure

More than fixing bumps and potholes.

Maintain Current Infrastructure

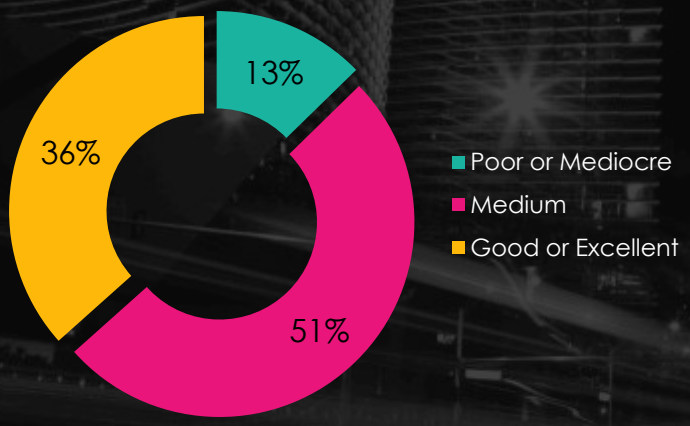
- Transportation system is a MAJOR public asset:
  ~**$110 billion** (estimated cost to build current network in current dollars)
- Regular maintenance is 25% the cost of reconstruction
- Regular average vehicle maintenance costs are about $500/year. Poor roads cost average Las Vegas drivers an additional $440/year
  - This totals about $660 million/year!

Maintain Current Infrastructure



Maintain Current Infrastructure

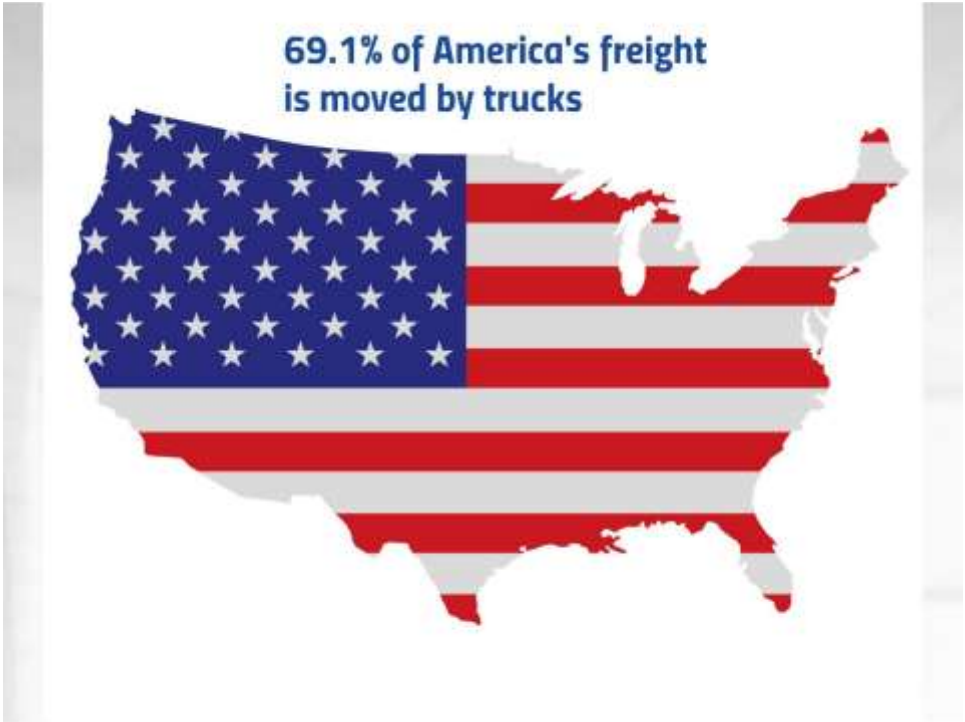
Quality of Minor Roads



RTC Transportation Values

Improve Freight Movement

Reduce freight delays.


69.1% of America's freight
is moved by trucks


OVERSIZE LOAD


Trucking in Nevada

Trucks Transport
94% of total manufactured tonage in Nevada
That is 132,817 tons per day
Over 80% of Nevada communities depend exclusively on trucks.

The Trucking Industry in Nevada

- Provides approx. 49,270 Jobs
- Average salary $45,409

There are a total of 6098 Nevada Trucking Companies

59.8% of Nevada trucking companies have 1 truck

85.4% of Nevada trucking companies have 5 trucks or less

25 Nevada trucking
or .06% have 100 tru

59.8% of Nevada trucking companies have 1 truck

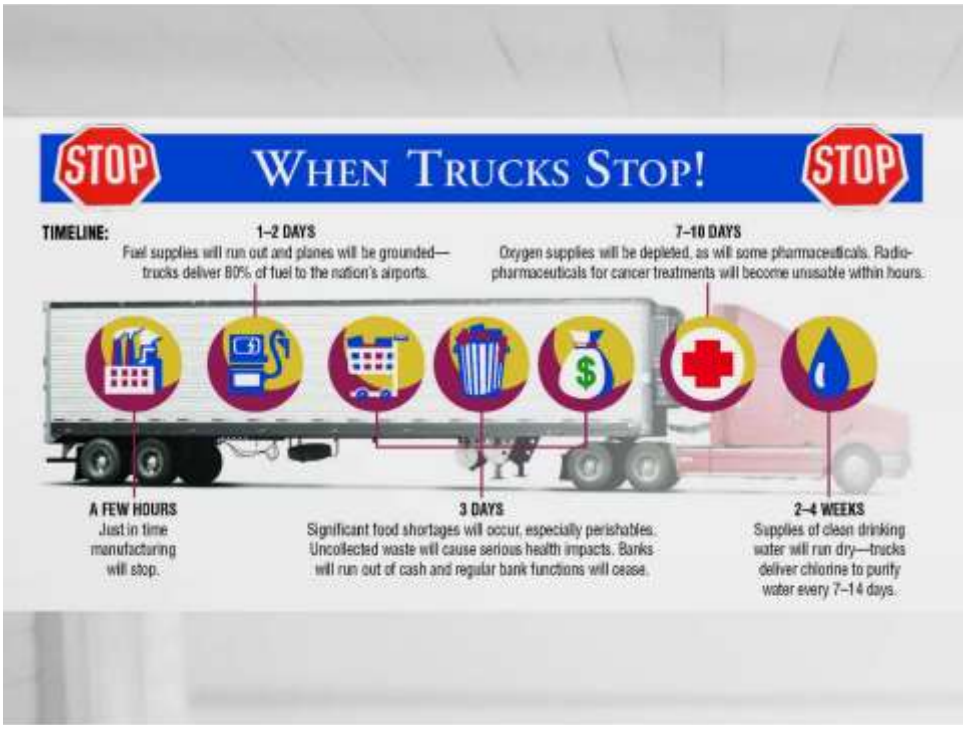
85.4% of Nevada trucking companies have 5 trucks or less

95.4% of Nevada companies trucking have 10 trucks or less

g Companies

25 Nevada trucking companies
or .06% have 100 trucks or more

Essentiality


STOP
WHEN TRUCKS STOP!
STOP
TIMELINE:
1–2 DAYS
Fuel supplies will run out and planes will be grounded—trucks deliver 80% of fuel to the nation's airports.
7–10 DAYS
Oxygen supplies will be depleted, as will some pharmaceuticals. Radio-pharmaceuticals for cancer treatments will become unusable within hours.
A FEW HOURS
Just in time manufacturing will stop.
3 DAYS
Significant food shortages will occur, especially perishables. Uncollected waste will cause serious health impacts. Banks will run out of cash and regular bank functions will cease.
2–4 WEEKS
Supplies of clean drinking water will run dry—trucks deliver chlorine to purify water every 7–14 days.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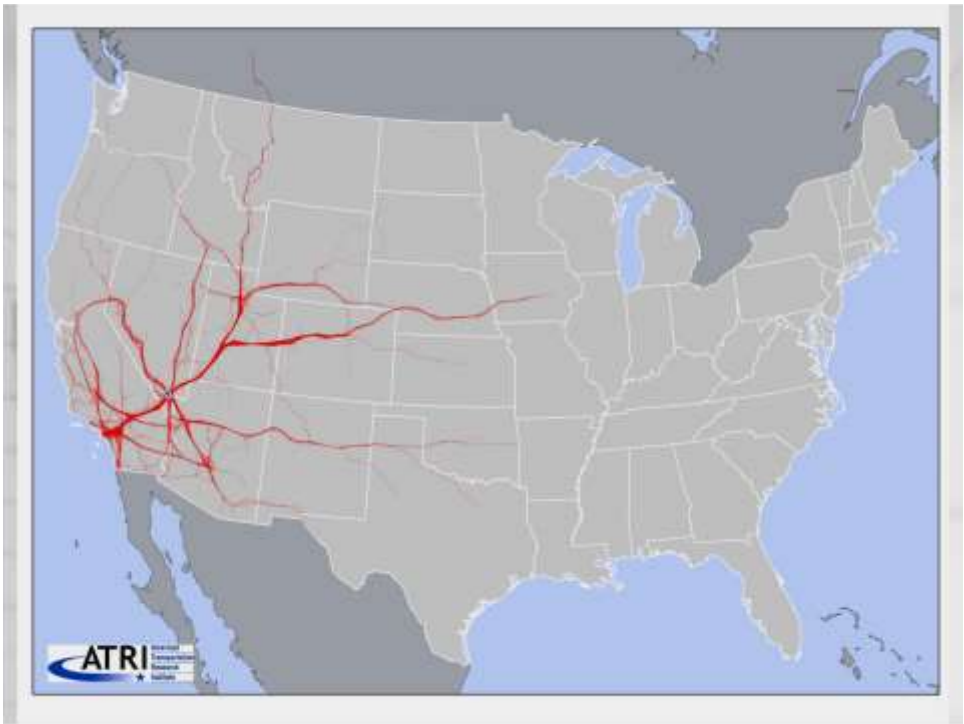
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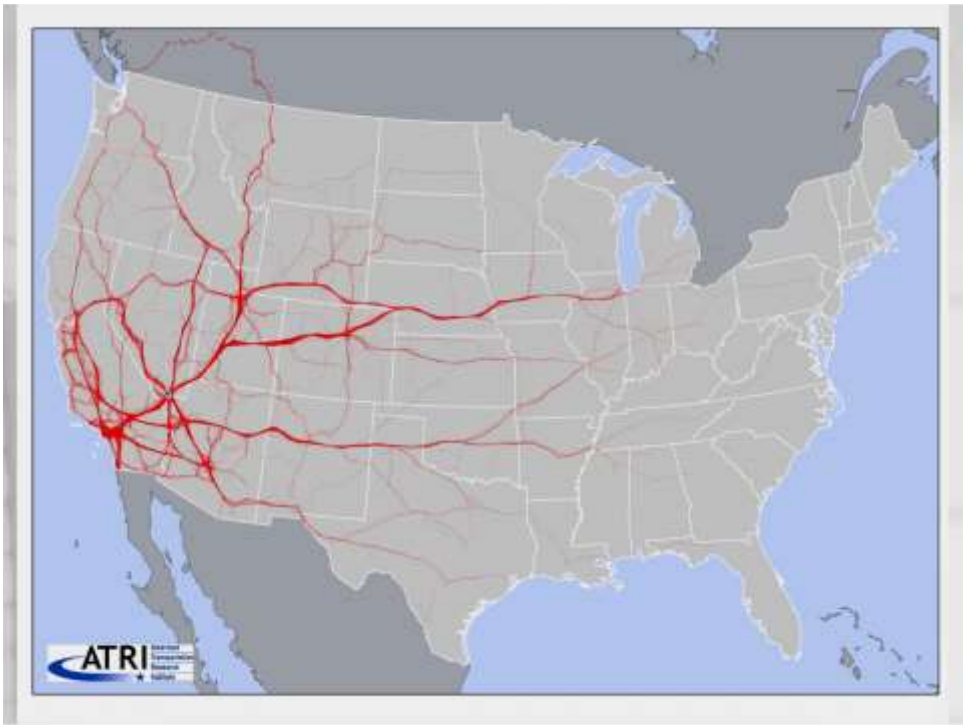
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Same 2,000 Trucks After 72 Hours
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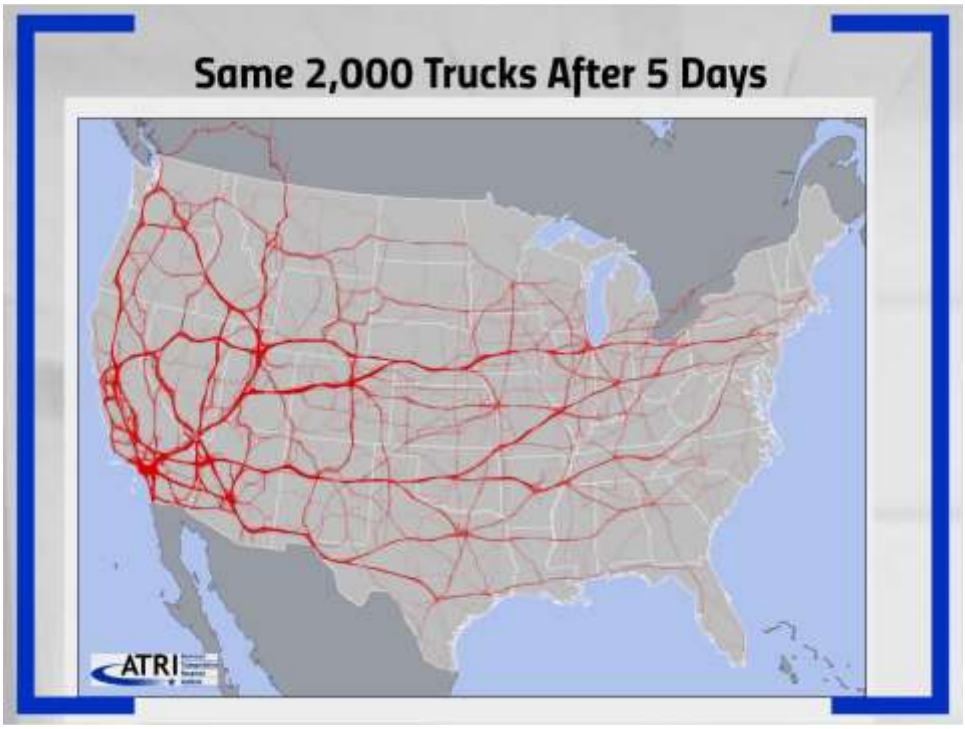
Same 2,000 Trucks After 5 Days
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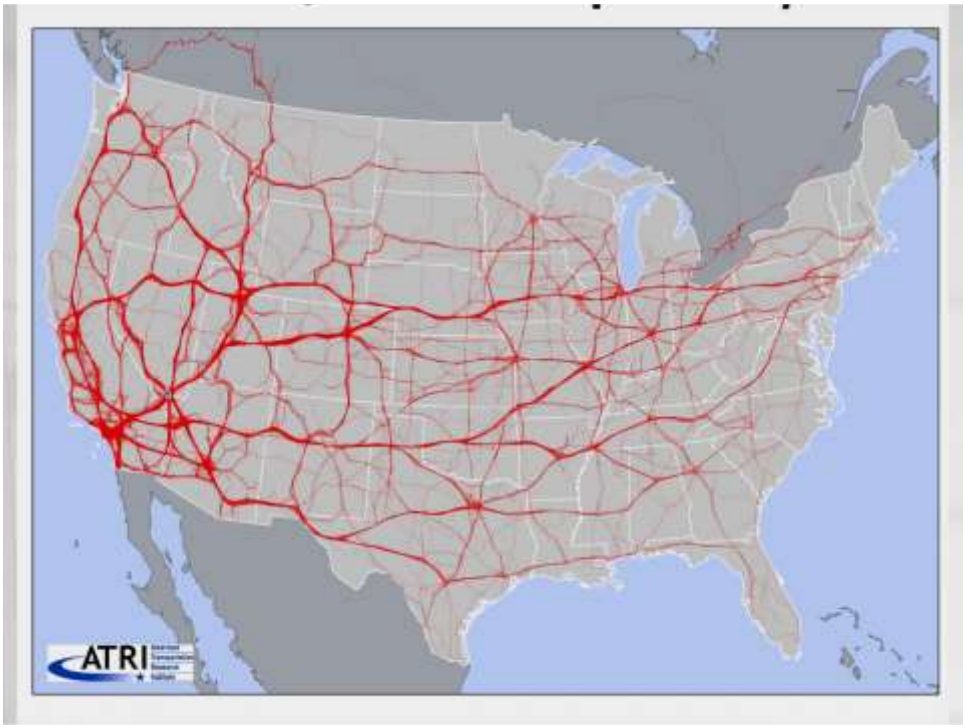
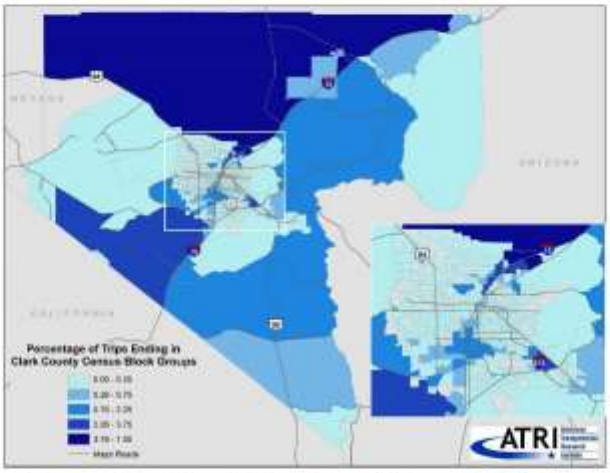


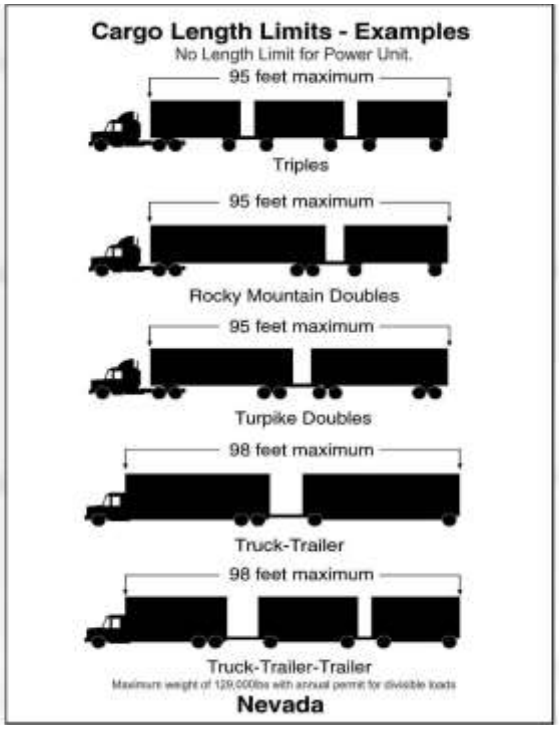
Clark County, NV Truck Operations

- 40,765,625 truck GPS points used to determine truck origins, destinations and routes
- 21,893 total truck trips determined for analysis
- 3 weeks of 2015 data were used
  - One week from October, November and December

State origins of truck trips
Truck routes from originating states to Clark County



Percentage of truck trips ending in each census block group of Clark County


Cargo Length Limits - Examples
No Length Limit for Power Unit.
95 feet maximum
Triples
95 feet maximum
Rocky Mountain Doubles
95 feet maximum
Turpike Doubles
98 feet maximum
Truck-Trailer
98 feet maximum
Truck-Trailer-Trailer
Nevada


Costs and taxes

Average 2014 operating costs:

- Per mile--$1.68
- Hourly--$67.00

$277 million in federal and state roadway taxes and fees. The industry paid 36 percent of all taxes and fees owed by Nevada motorists.

- $7,322 paid in state highway user fees and taxes on a typical five-axle tractor-semitrailer combination .
- $8,906 in federal user fees and taxes over and above the typical taxes paid by businesses in Nevada.

Total: $15,093

Nevada had 33,907 miles of public roads over which all motorists traveled 22 billion miles. Trucking's use of 2008 public roads was 1.6 billion miles.

- Trucking accounts for 7% of all miles traveled in Nevada.

Truck Taxes—IFTA

IFTA-International Fuel Tax Agreement
- Implemented in 1997
- 48 contiguous States and Canada
- Base state concept
- Registers fleet, not individual vehicles
- Quarterly reporting and payment
- Carrier records must be kept in base state for audit
- Only collects taxes imposed statewide


NEVADA
00000A
SAMPLE
APPORTIONED


Safety
$ 7,000,000,000

$ 7,000,000,000

Is spent each year by the Trucking Industry on Safety

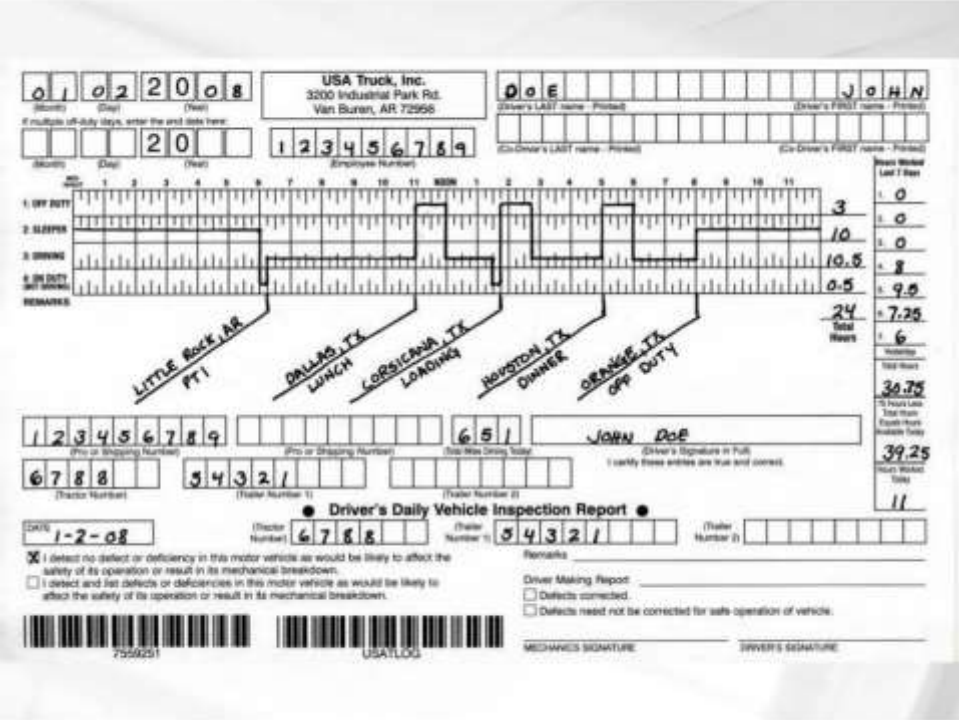
Drivers are required to carry medical cards and be enrolled in a drug testing consortium.

Required to perform Daily Vehicle Inspections pre and post-trip.

Hours of Service –daily driving time of 11 hours, 14 hours on duty.

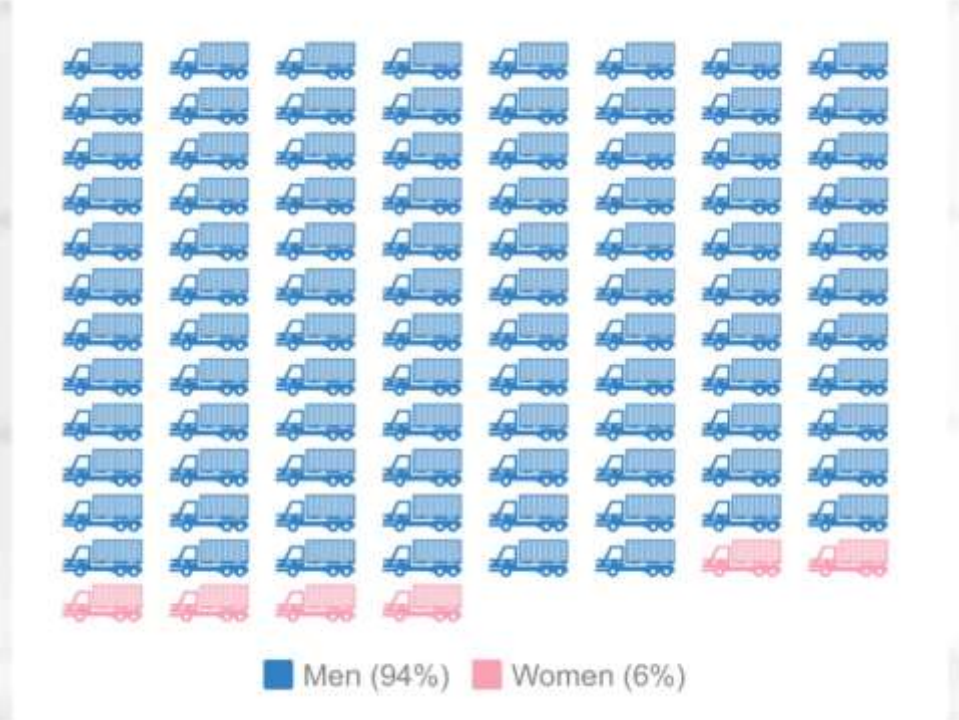

NEVADA
58528 A

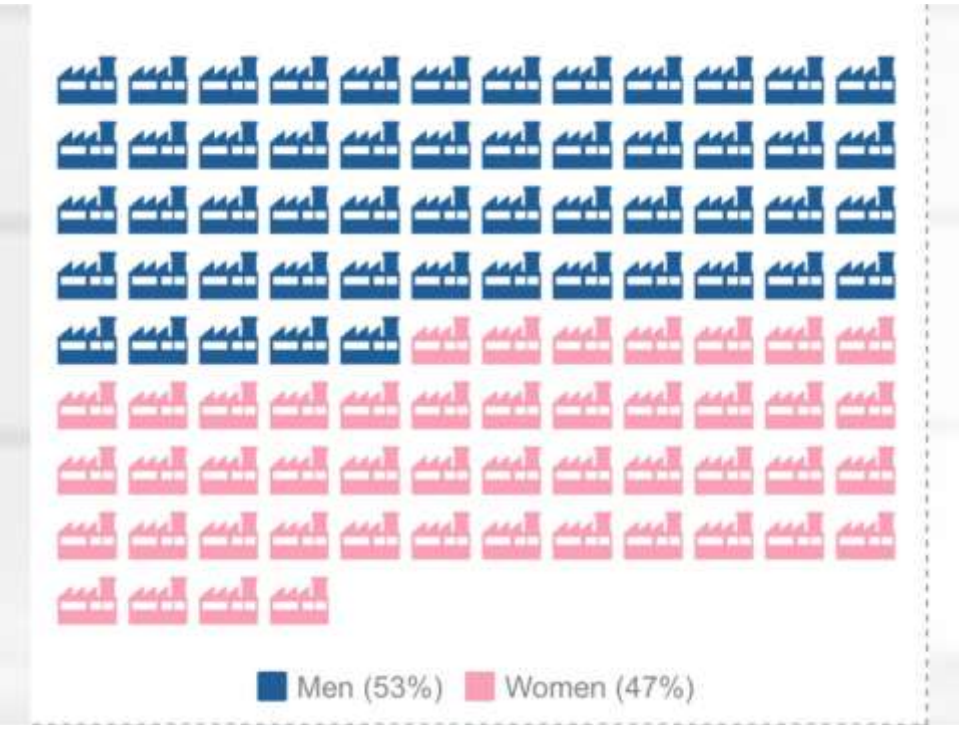

Bendix


USA Truck, Inc.
3200 Industrial Park Rd.
Van Buren, AR 72956
DOE
JOHN
LITTLE ROCK, AR
PTI
DALLAS, TX
LUNCH
LORSICANA, TX
LOADING
HOUSTON, TX
DINNER
ORANGE, TX
OFF DUTY
JOHN DOE
Driver's Daily Vehicle Inspection Report
USATLOG


Home » eDriver Logs » Review HOS
Summary | 1 Day | 7 Day | 8 Day | 15 Day
1 Day Graph For:
3Km N of VERNON, BC
12/9/2009 10:49 AM


Truck Driver Shortage


Men (94%)
Women (6%)


Men (53%)
Women (47%)

Average Truck Driver Age:
49
Average American Worker Age:
42

Chronicle / Paul Chinn


BOMAG


97¢
FEDERAL RESERVE NOTE
THE UNITED STATES OF AMERICA
B03542754F
ONE DOLLAR

Future


Walmart


Walmart
Walmart

Motion and purpose are a truck's greatest virtue.

TRAC

Item #7

PRIORITIZATION OF VALUES WORKSHOP

RTC Transportation Values

TRAC

Item #8

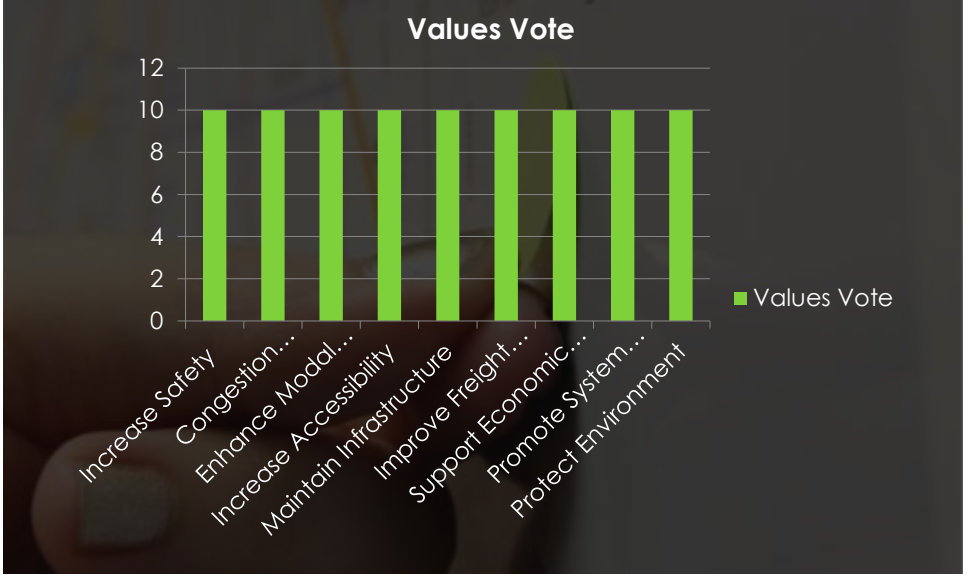
PRIORITIZATION RESULTS AND RECOMMENDATIONS

RTC Transportation Values

TRAC Prioritization Results:

1. Improve Economic Vitality (x votes)
2. Increase Safety (x votes)
3. Increase Accessibility (x votes)
4. Protect Environment (x votes)
5. Reduce Congestion (x votes)
6. Enhance Modal Connectivity (x votes)
7. Promote Efficient System Ops (x votes)
8. Maintain Infrastructure (x votes)
9. Improve Freight Movement (x votes)

RTC Transportation Values



Item #9

OPEN DISCUSSION

TRAC

Item #10

FINAL CITIZENS PARTICIPATION

TRAC

RTC