



EXECUTIVE SUMMARY

# ON BOARD MOBILITY PLAN



A wide-angle view of a city street during the day. A blue bus with 'RTC TRANSIT' on its front is driving in the center lane. Several cars are parked along the right side of the road. Two people are riding bicycles on a green-painted bike lane in the foreground. The street is lined with palm trees and modern buildings. A street lamp is visible on the right side of the road.



JULY 2020



# ACKNOWLEDGEMENTS

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# PREFACE

On Board is the vision for transportation and mobility in Southern Nevada for the next two decades. Implementing the strategies and projects in On Board will facilitate development of a strong and diverse regional economy.

## COVID-19

On Board was initiated in 2017, in the midst of rapid growth in Southern Nevada. Indeed, the pace of growth was so fast that congestion was limiting access, impacting regional quality of life, and constraining development. It was within this context that Southern Nevada stakeholders pursued On Board, a mobility plan designed to strengthen and diversify the region's transportation network, providing more options to meet the needs of the broader population. On Board accomplished these goals with a strategy targeted around 8 Big Moves and defined with 64 individual projects.

In Spring 2020, during the final stages of completing On Board, Southern Nevada, like the rest of the United States, faced an unprecedented challenge with the COVID-19 pandemic. "Stay home for Nevada" orders were imposed to control the spread of the virus, effectively putting a hold on local, regional, and international travel, and closing or significantly limiting entertainment and hospitality industries. The impacts on Southern Nevada's economy are expected to be severe, at least in the short term. Data collected in the early stages of the pandemic by the Las Vegas Convention and Visitor Association show that visitor volumes for April 2020 were a mere fraction of expected rates; Southern Nevada attracted 16,900 visitors in April 2020 as compared with 3,542,000 in April 2019. In

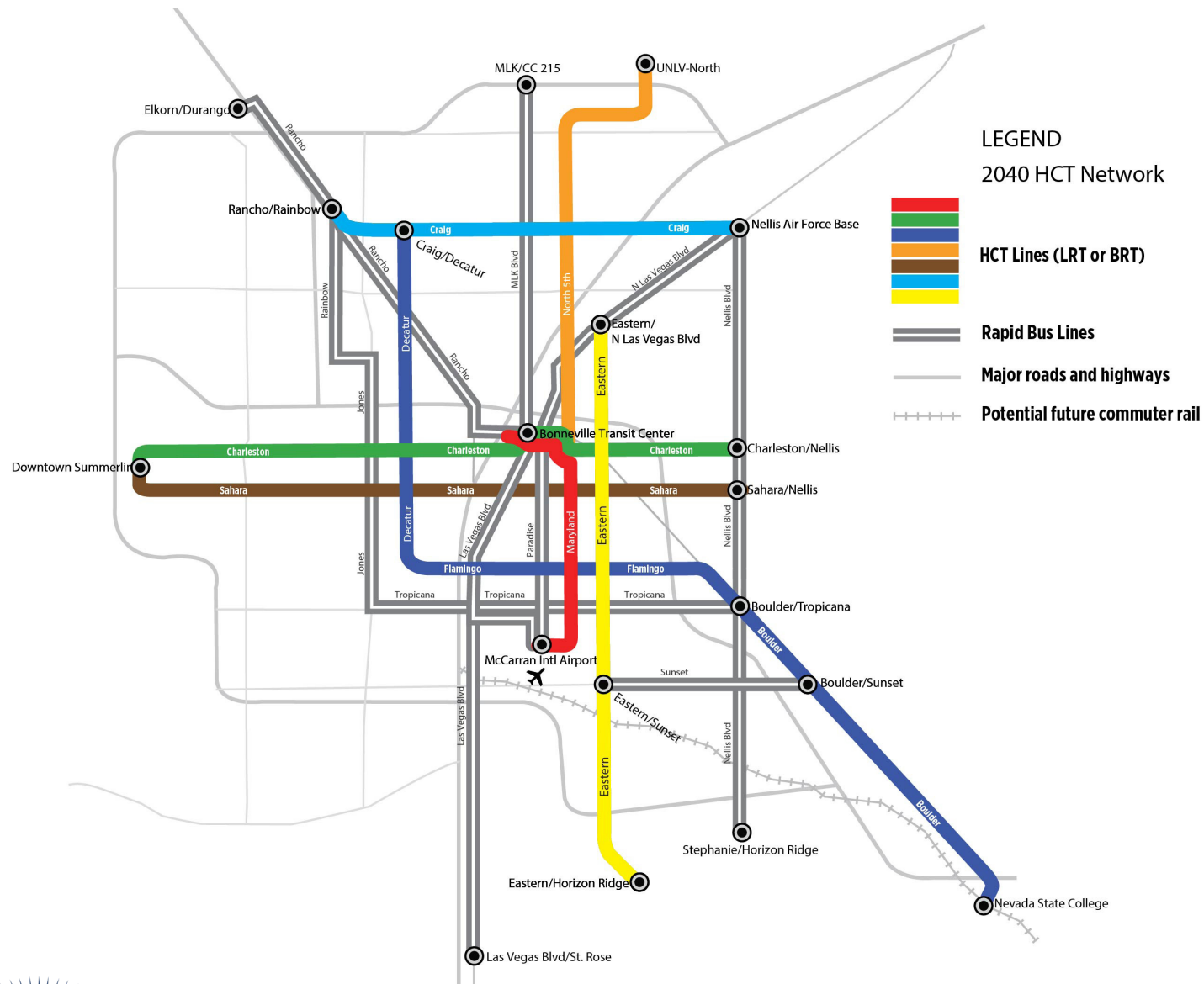
addition, gaming revenue in Clark County decreased by 99.5%.<sup>1</sup> Resorts and casinos began re-opening in June 2020, but the time and pace of recovery to pre-COVID-19 conditions remains uncertain.

Despite changes in the region's immediate economic forecasts, On Board remains relevant. The On Board Mobility Plan includes investments and strategies designed to diversify and expand regional travel opportunities and make it easier for people to get to work and moving forward with these strategies is critical to the region's recovery. As the immediate impacts of COVID-19 subside, On Board provides a roadmap for mobility improvements and a flexible and adaptable strategy that responds to short- and longer-term regional transportation needs. There is a strong body of research showing investment in public transportation generates local jobs during periods of construction and operations.<sup>2</sup> On Board provides an investment schedule that will both stimulate the local economy and support workers and employers as residents return to work and as the region begins to recover.

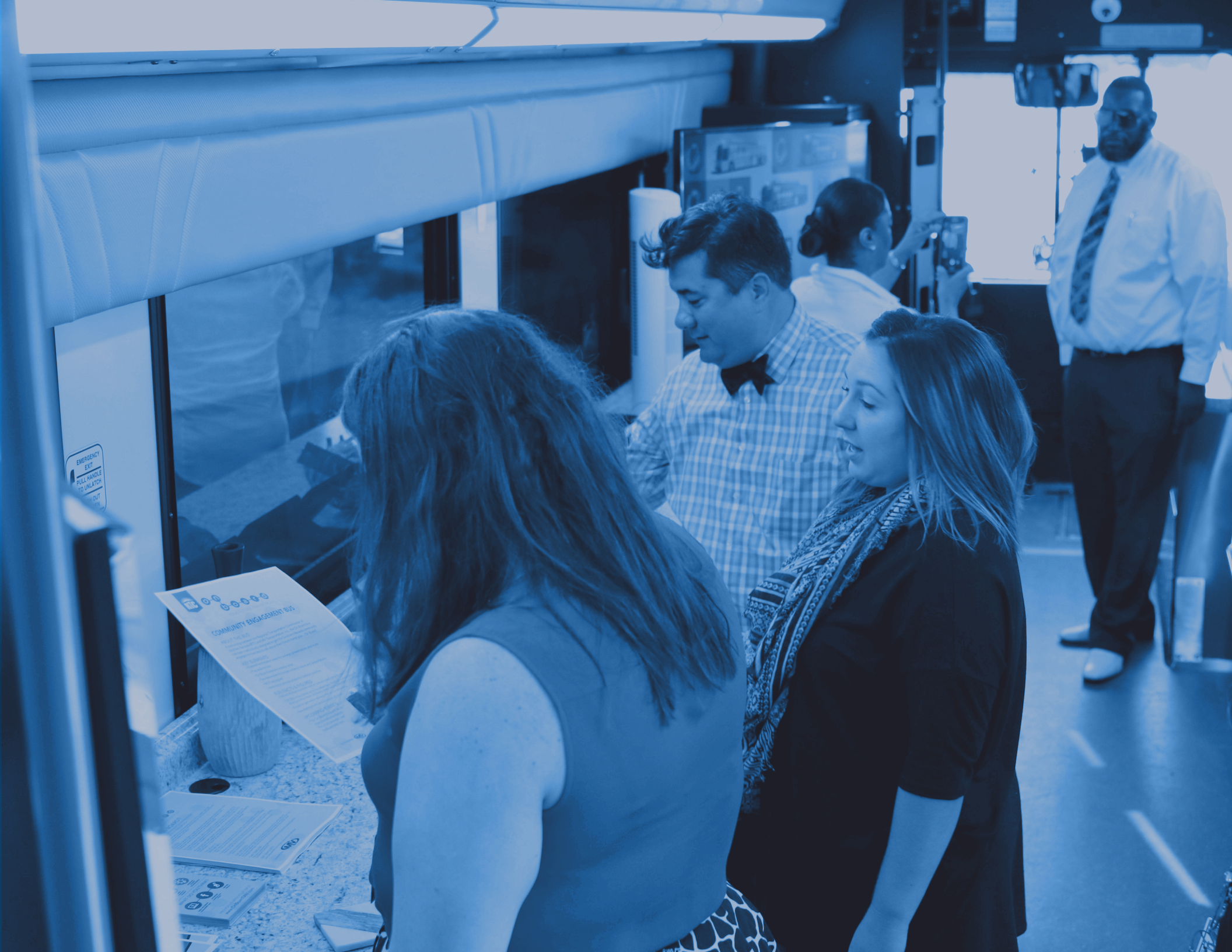
<sup>1</sup> Las Vegas Convention and Visitors Authority (LVCVA) April 2020 Executive Summary (<https://www.lvcva.com/stats-and-facts/visitor-statistics/>)

<sup>2</sup> 2020 APTA Economic Impact of Public Transit Investment, AASHTO EconWorks database and General Accountability Office (GAO) report Bus Rapid Transit: Projects Improve Transit Service and Can Contribute to Economic Development

# Proposed Southern Nevada High Capacity Transit System







# INTRODUCTION

## Overview

Southern Nevada's population and economy have grown rapidly, with economic activity expanding in nearly every sector. In the past several years, Southern Nevada added new sports teams, hospitals, master planned communities, employment centers, resorts and a convention center, and education facilities. Forecasts prior to COVID-19 projected the region attracting 640,000 new residents by 2035, increasing Southern Nevada residents from 2.28 million to 2.82 million.<sup>1</sup> While the COVID-19 pandemic dampens these forecasts, regional economists expect Southern Nevada to begin growing again. On Board lays out a plan for regional mobility infrastructure that will stimulate growth in the short term and prepare for continued development in the longer term.

## On Board Development

On Board was developed through a combination of technical analysis and input from stakeholders, elected officials, and over 80,000 Southern Nevada residents. The technical analysis spanned numerous analytical and evaluation steps, including peer reviews, transit demand analysis, market assessments, and cost estimations. Other technical work reflected ridership forecasts and the detailing of local, regional, and corridor-specific transit markets. On Board also encompassed rigorous economic impact analysis.

On Board was prepared with extensive engagement from stakeholders and the general public. Stakeholders participated in interviews, surveys, public meetings, and pop-up events. A Technical Advisory Group included staff from local planning and public works departments and representatives from business groups, community organizations, and regional authorities like McCarran Airport. The TAG met more than 20 times during the On Board process and participated in all parts of plan development. The project team made more than 100 presentations, with residents participating in multiple surveys and over 250 community events, encouraging residents to share their perceptions, priorities, and aspirations about expanded mobility options and reaching over 80,000 people during the outreach phase.

## SOUTHERN NEVADA'S REGIONAL PLANNING CONTEXT

### 2012-2015



**Southern Nevada's Strong:** establishes the valley's first regional plan to build complete communities that provide transportation choices, employment opportunities, housing options and quality education.

### 2014-2016

#### TRANSPORTATION INVESTMENT BUSINESS PLAN

**Transportation Investment Business Plan:** develops a vision linking the health and growth of the valley's resort and tourist economy with critical transportation improvements in the Resort Corridor and Downtown areas.

### 2014-2016



**Fuel Revenue Indexing Program:** implements and funds a program of street and highway construction and maintenance projects to address the region's backlog of unfunded projects and keep pace with growth.

### 2016-2017



**Access2040 Regional Transportation Plan:** links Southern Nevada's growth, travel patterns, and transportation system into overarching performance goals including improving safety, managing congestion, improving connectivity, and maintaining infrastructure in good condition.

### 2017-2020



**On Board Regional Mobility Plan:** Identifies a vision to address the changing mobility needs for Southern Nevada including future high capacity transit lines, an expanded bus network, and more transportation options through new technologies and services.

<sup>1</sup> 2019-2060 Population Forecasts Long-Term Projections for Clark County, Nevada, June 2019. Center for Business and Economic Research, University of Las Vegas.



# EIGHT BIG MOVES

- ✓ **Big Move #1:**  
Build High Capacity Transit System
- ✓ **Big Move #2:**  
Expand Transit Service to Maximize Access to Jobs and Housing
- ✓ **Big Move #3:**  
Make All Travel Options Safer and More Secure
- ✓ **Big Move #4:**  
Make Short Trips Easier
- ✓ **Big Move #5:**  
Expand Service for Seniors, Veterans and People with Disabilities
- ✓ **Big Move #6:**  
Improve Connections to Major Destinations
- ✓ **Big Move #7:**  
Provide Reliable Transit for Resort Corridor Employees
- ✓ **Big Move #8:**  
Leverage New Technology to Improve Mobility



**These Big Moves** will improve the quality of life for Southern Nevada's residents, workers, and visitors as the region emerges from the COVID-19 pandemic and prepares for growth. Investments recommended in On Board will make transportation more convenient, more comfortable, and safer. By providing more choices for more people, the investment strategy will strengthen the regional transportation system by making it more reliable, sustainable, and equitable. An economic impact analysis conducted as part of the strategy demonstrates that On Board maximizes regional economic competitiveness and improves transportation sustainability. Recommendations will generate economic benefits that greatly exceed costs.

# ON BOARD'S BENEFITS AND ECONOMIC IMPACTS

On Board, as discussed, is organized into 8 Big Moves that collectively and individually increase mobility in Southern Nevada. Strategies and projects will increase the intensity and diversity of mobility infrastructure, making it more convenient, easier, and safer for people to travel. Investments are designed to encourage using transit, biking, and walking for short trips as well as commuting. Southern Nevada residents who drive will benefit from reduced congestion, improved safety, and better air quality. On Board analyzed the collective economic value of the proposed investments and the resulting changes in behavior. The analysis evaluated the impact through four lenses:

- ✓ **Spending impacts** that capture the jobs and business sales in the regional economy supported by money spent on building, operating, and maintaining the transit system as well as mobility services and infrastructure.
- ✓ **Societal benefits** that reflect time and money savings accruing to people and businesses, plus regional benefits associated with improved safety, and fewer negative environmental effects from vehicle emissions. Societal benefits capture these performance effects and their value to society in monetary (dollar value) terms.<sup>1</sup>

- ✓ **Long-term economic impacts.** Transportation system performance improvements will support long-term economic growth in the Southern Nevada region. Long-term economic impacts represent changes in regional economic activity from improved regional productivity and competitiveness.
- ✓ **Land value and local development.** Transportation performance improvements from High Capacity Transit (HCT) can lead to increased land values and changes in local development along HCT corridors. This represents a “capitalization” of transportation benefits. With targeted local development policies and support, HCT can also serve as a catalyst for transformative impact in station areas, supporting local and regional land use and economic development goals.

The economic impact analysis evaluated the collective impact of the 8 Big Moves using cost, ridership, and travel characteristics (e.g. travel time, service frequency); changes in these characteristics were used in conjunction with the TREDIS® “Transportation Economic Development Impact System”<sup>2</sup> to understand societal benefits and impacts on the Southern Nevada economy.

On Board will create both short- and long-term benefits and economic opportunities for Southern Nevada. HCT corridors—roads where light rail, bus rapid transit, and rapid bus operate—are the backbone of the On Board Plan and the single largest source of benefits and economic impacts. The 7 other Big Moves were designed to deliver mutually supportive strategies that stimulate the regional economy through their construction and operations, deliver benefits to transit users and non-users, and support long-term economic growth long past the 2040 plan horizon.

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<sup>1</sup> The full economic analysis report includes additional qualitative and non-monetized but quantified measures

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of benefit.  
<sup>2</sup> Inside [TREDIS](#)..



## Summary of Economic Findings

1



**Spending Impact**  
supporting business  
in SNV

2



**Societal Benefits**  
monetized social  
benefits

3



**Economic Growth**  
from more efficient  
transportation

4



**Land Value & Development**  
capitalization and  
transformation

**BIG MOVE 1:**  
High Capacity Transit

Every dollar spent  
on HCT will  
generate **1.5 to 1.6**  
times that amount  
for the regional  
economy

HCT will also create  
**between \$700 and  
\$800 million** in  
annual societal  
benefits

**\$2.8-\$3.5 billion**  
added business  
output over first 20  
years of  
implementation

**+1-6%** property  
value increase in  
HCT corridors,  
**+10-15%** for  
commercial office  
rents. **\$1-4 x** private  
investment per  
public \$

**BIG MOVE 2-8:**  
Supportive Mobility  
Strategies

All 8 Big Moves will  
generate between  
**\$19.4 and \$26.9  
billion** in business  
sales

Transportation  
performance  
improvements will  
provide between  
**\$800 and \$900  
million** in annual  
societal benefits\*

**\$300-\$350 million**  
added in business  
sales each year to  
the overall output of  
the economy

\* At full implementation (2040). NOTE: The range of outcomes reflect the fact that the final HCT network may take the form of a "low scenario," in which the network is mostly bus-based forms of transit or "high scenario" which is a mix of BRT and light rail.

# BIG MOVE #1:

## Build High Capacity Transit System

### Overview

High Capacity Transit (HCT) provides faster, more frequent and convenient service for passengers on high demand routes. It includes Light Rail, Bus Rapid Transit, which is light rail-like service provided with buses, and Rapid Bus, which consists of a mix of transit measures. HCT also generates economic development for the region and along the corridors where it operates. On Board would build a total of about 200 miles of HCT in Southern Nevada on 17 different routes (which will take five to 10 years for the first projects).

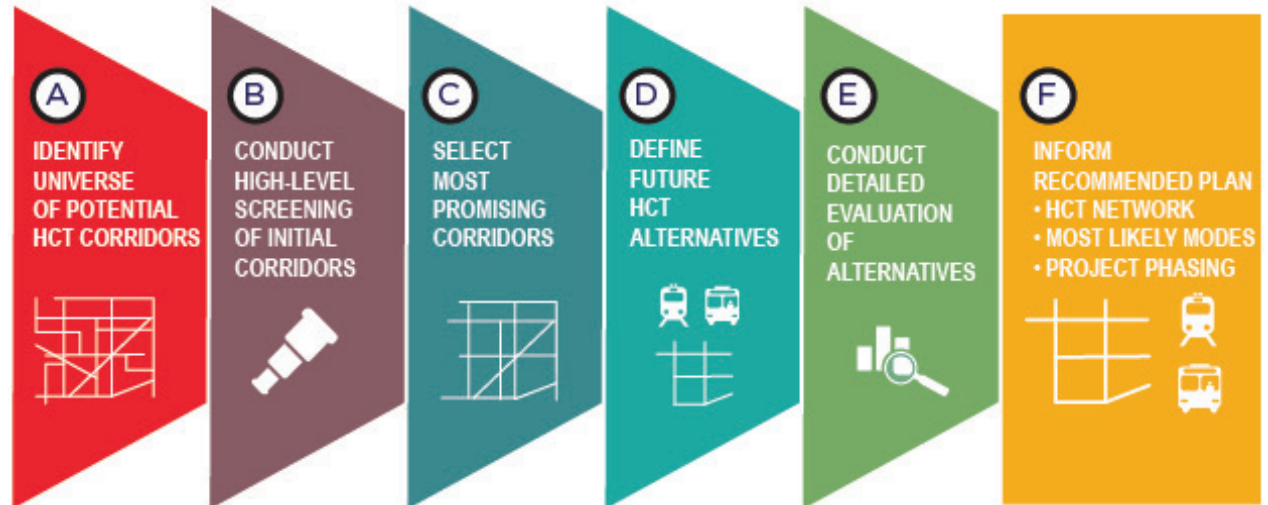
### Implementation

The first step in the development of HCT will be completion of High Capacity Transit on Maryland Parkway. Additional development will be in two phases over about 20 years. A proposed system map is on the inside cover, and each project is listed on the next page.

#### In addition:

- Until HCT is developed, existing local bus service would be improved to operate frequently to start providing improved service to future HCT passengers
- RTC would pursue public-Private Partnerships to build Transit-Oriented Developments (TOD) along High Capacity Transit routes that could generate on-going revenue and increase transit use.

#### Evaluation Framework



RTC On Board Strategies Survey (January-March 2020)  
11,221 respondents





## Projects and Programs

### Complete Maryland Parkway BRT

#### Phase One Projects\*:

- Charleston (LRT or BRT)
- Cross-Valley Connector [Boulder Highway-Flamingo-Decatur] (BRT or LRT)
- North 5th (BRT or LRT)
- 6 Rapid Bus (Rancho, Craig, Nellis, Eastern, Sunset, Paradise)

#### Phase Two Projects (10+ years)\*:

- Sahara (BRT)
- Craig Road (BRT)
- Eastern (BRT)
- 5 Rapid Bus (Tropicana/Jones/Rainbow, Martin Luther King, Jr, North Las Vegas, South Las Vegas, extend Nellis Corridor south to Stephanie Street)

Develop Resort Corridor Rail-Based Transit (“Euro-Tram”) between Downtown Las Vegas and McCarran Intl Airport Via the Strip (Long-term; ~20-year)



## Key Benefits

All mobility strategies generate benefits for individual travelers, the regional economy and the environment. The graphic below provides a relative scale of the benefits..



**Travel Choices  
& Reliability**



**Safety, Security  
& Comfort**



**Economic Benefits  
& Sustainability**



\*See proposed system map, inside cover.



## Effectiveness in Addressing Regional Priorities

Building a High Capacity Transit System in Southern Nevada will directly help achieve the following priorities identified through extensive public outreach with nearly 80,000 people and multiple surveys that had almost 25,000 combined responses:

### REGIONAL MOBILITY PRIORITIES

1	Improved Road & Transit Safety	●
2	Fewer Traffic Jams	●
3	High Capacity Transit (including light rail)	●
4	Better Connectivity	●
5	Well-Maintained Roads	○
6	Frequent Bus Service	●
7	More Transportation Choices	●
8	Expanded Service for Seniors, Veterans, & People with Disabilities	●
9	Improved Job & Housing Access	●
10	Better Walking & Biking Conditions	○
11	New Modal Technologies & Investments	●
12	Expanded Transit Service Area	○
13	New Information Technologies	○
14	Better Transit Stops & Stations	●
15	Improved Transit Security	●

#### KEY

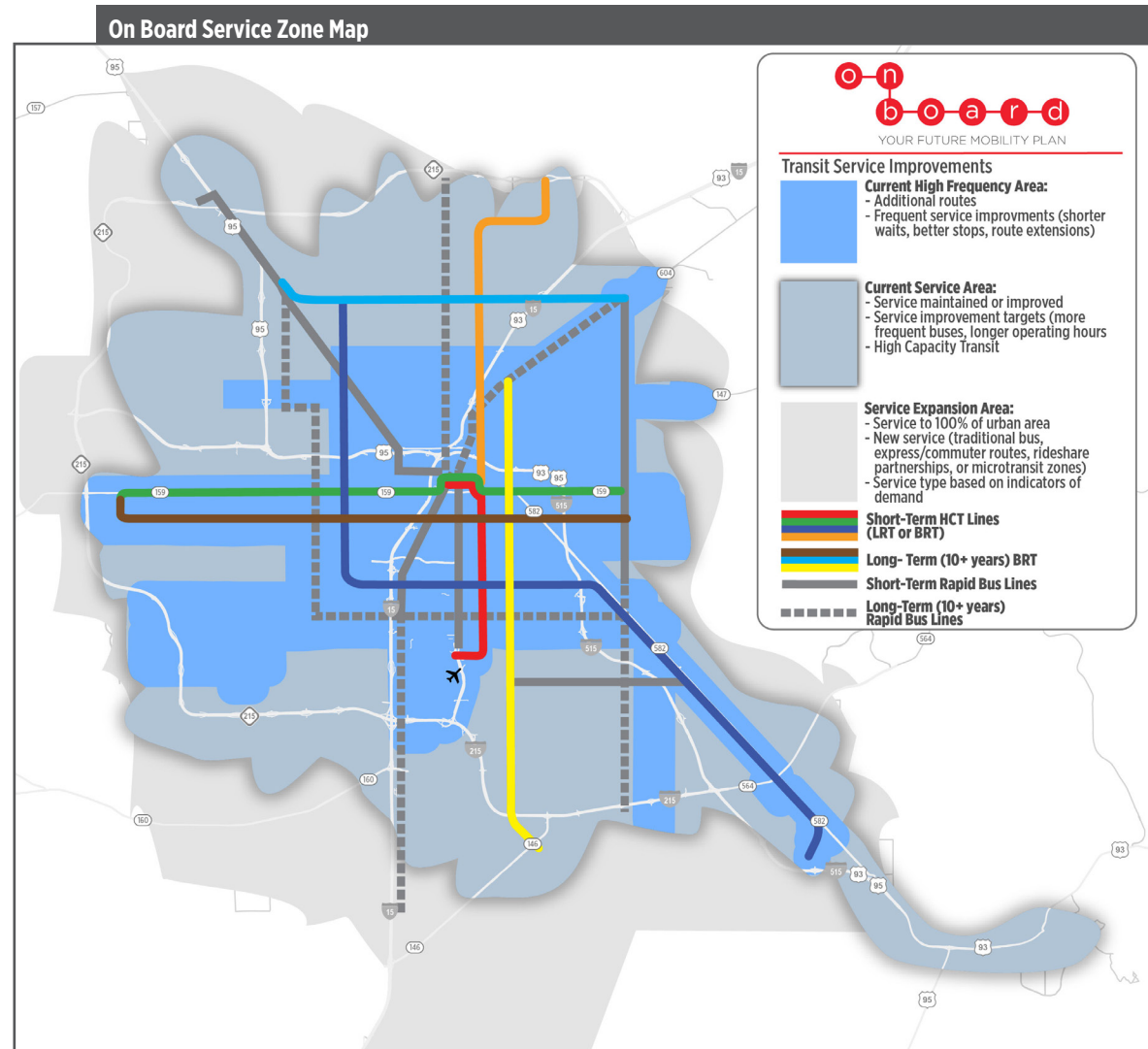
- Strongest
- Strong
- Less Strong

# BIG MOVE #2:

## Expand Transit Service to Maximize Access to Jobs and Housing

### Overview

On Board will improve existing transit services to complement investments in High Capacity Transit (Big Move 1). Big Move 2 will also expand transit to new areas, increasing the availability and accessibility of transit to Southern Nevada. These investments are designed to support regional growth that has occurred over the past decade, as well as future growth, including economic recovery in the wake of the COVID-19 pandemic. As part of investing in existing and new transit services, On Board proposes to develop and implement new transit service models, such as demand-responsive services and partnerships with companies like Uber and Lyft. These service models are designed to reflect local needs while also being cost effective.







## Projects and Programs

- 2-1: Develop Regional Service Goals
- 2-2: Implement Program to Fill Identified Current Transit Service Needs
- 2-3: Expand Frequent Transit Network in High Demand Areas
- 2-4: Implement Frequency and Operating Hours Improvements on Existing Service
- 2-5: Rideshare Partnerships First Mile/Last Mile Connections to Transit in Suburban Areas
- 2-6: Micro-Circulator Zones with Suburban Express Connectors to High Frequency Service or Major Transit Hubs
- 2-7: Rideshare Partnerships for Non-Suburban First Mile/Last Mile Services
- 2-8: Develop Service Buy-Up Options
- 2-9: Implement Transit Fare Capping Program
- 2-10: Reduced Fare Program for Students, Seniors, and Veterans



## Key Benefits

All mobility strategies generate benefits for individual travelers, the regional economy and the environment. The graphic below provides a relative scale of the benefits.



Travel Choices  
& Reliability



Safety, Security  
& Comfort



Economic Benefits  
& Sustainability



## Effectiveness in Addressing Regional Priorities

Expanding Transit Service to Maximize Access to Jobs and Housing will directly help achieve the following priorities identified through extensive public outreach with nearly 80,000 people and multiple surveys that had almost 25,000 combined responses:

### REGIONAL MOBILITY PRIORITIES

1	Improved Road & Transit Safety	○
2	Fewer Traffic Jams	●
3	High Capacity Transit (including light rail)	●
4	Better Connectivity	●
5	Well-Maintained Roads	○
6	Frequent Bus Service	●
7	More Transportation Choices	●
8	Expanded Service for Seniors, Veterans, & People with Disabilities	●
9	Improved Job & Housing Access	●
10	Better Walking & Biking Conditions	◐
11	New Modal Technologies & Investments	●
12	Expanded Transit Service Area	●
13	New Information Technologies	●
14	Better Transit Stops & Stations	●
15	Improved Transit Security	●

#### KEY

- Strongest
- ◐ Strong
- Less Strong

# BIG MOVE #3:

## Make All Travel Options Safer and More Secure

### Overview

On Board emphasizes safety and security as core values for RTC's operations and planning. The RTC has advanced its Lights, Camera, Action! Program to communicate the agency's commitment to safety and security. In addition to recent investments in transit rider safety, there are opportunities to continue existing programs and expand on others. Stakeholders and members of the public consistently identified safety and security as priority concerns associated with moving throughout Southern Nevada. This Big Move is oriented around safety and security measures that focus on transit riders. Safety measures aimed at pedestrians, people who bike, and other roadway users are described in **Big Move #4: Make Short Trips Easier**.

Making travel more secure refers to a person's sense of safety and security, including public health protections. Concerns include the communication of public health-related information and reminders, the distribution of masks and disinfectant, and the deep cleaning of touch points at bus stops.

Many of these projects and strategies have increased in importance during the COVID-19 pandemic, which has underscored the importance of safety in terms of public health. While short- and medium-term public health concerns are discussed in other parts of On Board, they are also included in Projects 3-1, 3-2, 3-4, and 3-5.

#### RTC's Existing "Light, Camera, Action" Program

##### LIGHTS



##### LIGHTING In Progress

Of **1,670 SHELTERS, 2/3**  
currently have lighting

##### CAMERA



##### SURVEILLANCE Complete

**\$200,000** to install surveillance software  
that provides local law enforcement  
**REAL-TIME ACCESS** to live video stream  
on transit vehicles

##### ACTION



##### SHELTERS Complete

**\$1.81 MILLION** in federal funding to move  
shelters five feet behind the curb to enforce  
the safety of transit riders

**1,113 SHELTERS**  
moved

**900 NEW  
SHELTERS**  
purchased and installed

Source: RTC

# 86%

rated Big Move 5 at least



RTC On Board Strategies Survey (January-March 2020)  
11,221 respondents

#### Floating Bus Stop



Image from Adam Copolia Photography

#### Bus Stop with Safety Bollards



Image from Google Maps



## Projects and Programs

- 3-1: Utilize established Crime Prevention Through Environmental Design (CPTED) strategies during design of transit facilities**
- 3-2: Increase transit security staff presence**
- 3-3: Develop technology-based active security monitoring at bus stops**
- 3-4: Install emergency Blue Light call boxes at high risk locations**
- 3-5 Expand RTC Transit Watch program**
- 3-6 Review criminal codes to ensure appropriate treatment of transit-related criminal activity**

Closely related to the above strategies are projects that protect users of all travel options from crashes with motorized vehicles:

- 3-7: Traffic crash review and countermeasures program**
- 3-8: Accelerate efforts to move bus stops back from fast moving traffic**
- 3-9: Install bollards at high-volume stops with fast moving traffic**



## Key Benefits

All mobility strategies generate benefits for individual travelers, the regional economy and the environment. The graphic below provides a relative scale of the benefits.



**Travel Choices  
& Reliability**



**Safety, Security  
& Comfort**



**Economic Benefits  
& Sustainability**



## Effectiveness in Addressing Regional Priorities

Making All Travel Options Safer and More Secure will directly help achieve the following priorities identified through extensive public outreach with nearly 80,000 people and multiple surveys that had almost 25,000 combined responses:

### REGIONAL MOBILITY PRIORITIES

1	Improved Road & Transit Safety	●
2	Fewer Traffic Jams	◐
3	High Capacity Transit (including light rail)	●
4	Better Connectivity	◐
5	Well-Maintained Roads	○
6	Frequent Bus Service	◐
7	More Transportation Choices	●
8	Expanded Service for Seniors, Veterans, & People with Disabilities	◐
9	Improved Job & Housing Access	◐
10	Better Walking & Biking Conditions	●
11	New Modal Technologies & Investments	◐
12	Expanded Transit Service Area	◐
13	New Information Technologies	●
14	Better Transit Stops & Stations	●
15	Improved Transit Security	●

#### KEY

- Strongest
- ◐ Strong
- Less Strong



# BIG MOVE #4:

## Make Short Trips Easier

### Overview

The On Board Mobility Plan integrates transit and multimodal transportation investments to strengthen mobility and accessibility, ensuring that transportation programs and projects connect people, places, and opportunities in ways that are easy, safe, and affordable. It is crucial to ensure that people feel comfortable making all types of trips—traveling by car, walking, biking, and riding the bus. On Board makes investments in alternatives to the private automobile, including projects and programs for pedestrians and cyclists that also support investments in high-capacity transit (**Big Move 1**), expand transit services (**Big Move 2**) and make all travel options safe and secure (**Big Move 3**).

This recommendation includes a combination of infrastructure investments, policies and programs to influence and change the Southern Nevada urban environments, making it safer, easier, and more comfortable for people to walk and bike or use transit. Additionally, these recommendations would provide a more compelling environment for micro mobility strategies like bike share.



RTC On Board Strategies Survey (January-March 2020)  
11,221 respondents

Complete Street Concept for Boulder Highway



HAWK Signal Crossings

# HAWK

HIGH-INTENSITY ACTIVATED CROSSWALK

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### HOW TO USE HAWK

PEDESTRIANS		DRIVERS	
Will see...	Will do...	Will see...	Will do...
	<b>PUSH</b> THE BUTTON TO CROSS		<b>PROCEED WITH CAUTION</b>
	<b>WAIT</b>		<b>SLOW DOWN</b>
	<b>CONTINUE TO WAIT</b>		<b>PREPARE TO STOP</b>
	<b>START CROSSING</b>		<b>STOP</b>
	<b>CONTINUE CROSSING</b>		<b>STOP</b> PROCEED WITH CAUTION IF CROSSWALK IS CLEAR
	<b>PUSH</b> THE BUTTON TO CROSS		<b>PROCEED IF CLEAR</b>



## Projects and Programs

- 4-1 Upgrade Streets to Be Safe for All Users (Complete Streets)
- 4-2 Offer Mid-Block Pedestrian Crossings at Long Block Segments and High Traffic Volumes
- 4-3 Develop a Walkability Infrastructure Funding Program
- 4-4 Make Bus Stops Inviting and Safe
- 4-5 Develop Regional Mobility Hubs
- 4-6 Develop Neighborhood Mobility Hubs
- 4-6 Improve Wayfinding in High Volume Pedestrian Locations



## Key Benefits

All mobility strategies generate benefits for individual travelers, the regional economy and the environment. The graphic below provides a relative scale of the benefits.



**Travel Choices  
& Reliability**



**Safety, Security  
& Comfort**



**Economic Benefits  
& Sustainability**



## Effectiveness in Addressing Regional Priorities

Making Short Trips Easier and Safer will directly help achieve the following priorities identified through extensive public outreach with nearly 80,000 people and multiple surveys that had almost 25,000 combined responses:

### REGIONAL MOBILITY PRIORITIES

1	Improved Road & Transit Safety	●
2	Fewer Traffic Jams	●
3	High Capacity Transit (including light rail)	○
4	Better Connectivity	●
5	Well-Maintained Roads	◐
6	Frequent Bus Service	●
7	More Transportation Choices	●
8	Expanded Service for Seniors, Veterans, & People with Disabilities	◐
9	Improved Job & Housing Access	●
10	Better Walking & Biking Conditions	●
11	New Modal Technologies & Investments	◐
12	Expanded Transit Service Area	○
13	New Information Technologies	○
14	Better Transit Stops & Stations	●
15	Improved Transit Security	◐

#### KEY

- Strongest
- ◐ Strong
- Less Strong

# BIG MOVE #5:

## Expand Service for Seniors, Veterans, and People with Disabilities

### Overview

Southern Nevada has repeatedly expressed its support for vulnerable residents, including older adults, veterans, and people with disabilities. Surveys conducted by the RTC underscore the importance of these services; in 2018, roughly half of all responses identified specialized senior services or improved paratransit as the RTC's most important service.

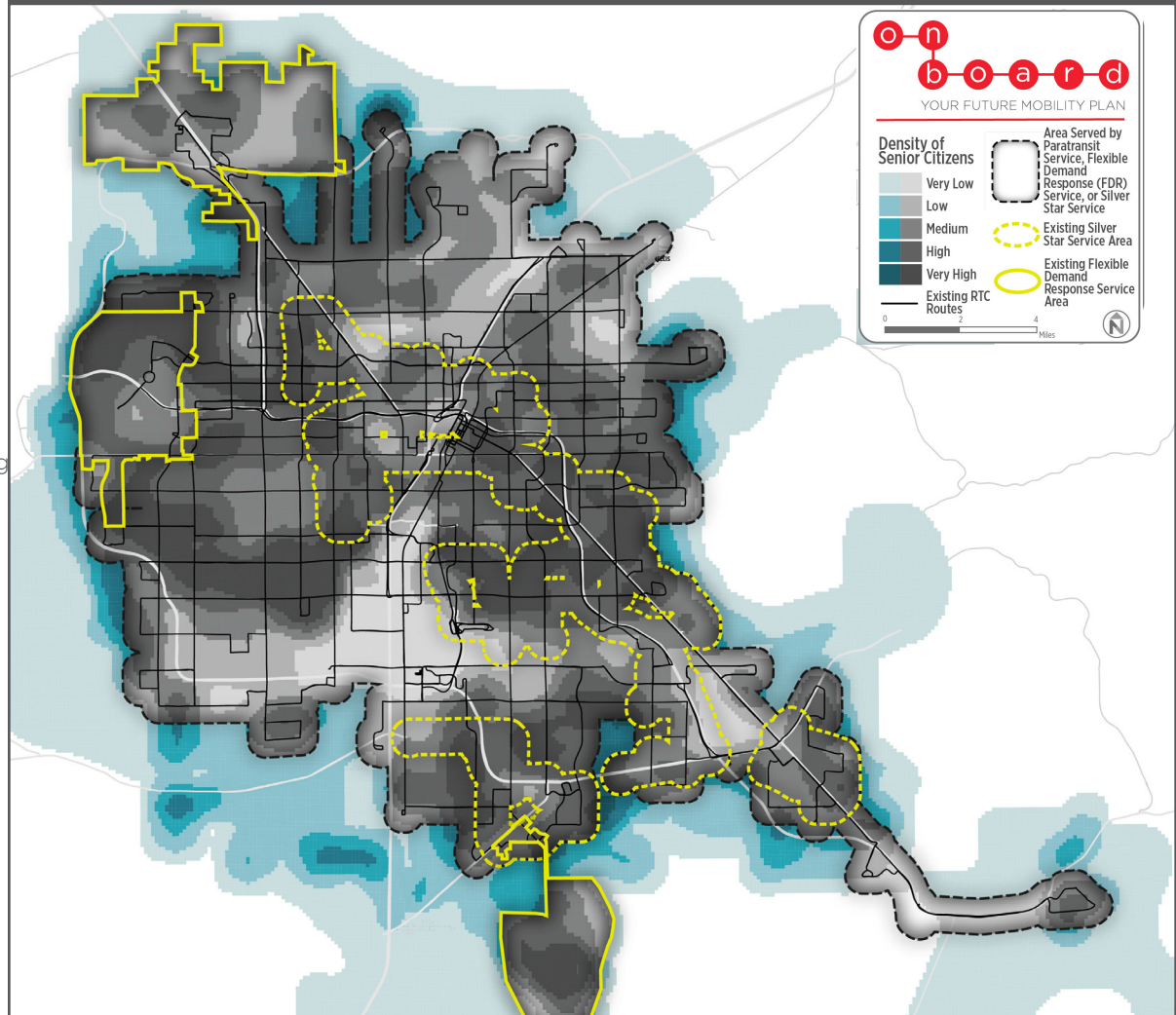
**RTC currently provides several services designed to support seniors, veterans, and people with disabilities.**

These include ADA paratransit service, Silver STAR, Flexible Demand Response (FDR), the Veterans Medical Transportation Network, and the Downtown & Veterans, Medical Center Express (DVX) routes. RTC also offers a variety of discount programs that reduce the cost of using fixed route services for these populations. The On Board Plan would significantly increase investment in these services, including offering more service and increasing service quality.



RTC On Board Strategies Survey (January-March 2020)  
11,221 respondents

Southern Nevada Transit and Specialized Service Areas







## Projects and Programs

- 5-1: Double transportation services for seniors
- 5-2: Double specialized transportation services
- 5-3 Double service for veterans
- 5-4 Provide full regional coverage for people with disabilities (ADA paratransit)
- 5-5 Provide app-based reservations and fare payment for specialized services
- 5-6 Provide app-based vehicle tracking for specialized service



## Key Benefits

All mobility strategies generate benefits for individual travelers, the regional economy and the environment. The graphic below provides a relative scale of the benefits.



## Effectiveness in Addressing Regional Priorities

Expanding Service for Seniors, Veterans, & People with Disabilities will directly help achieve the following priorities identified through extensive public outreach with nearly 80,000 people and multiple surveys that had almost 25,000 combined responses:

### REGIONAL MOBILITY PRIORITIES

1	Improved Road & Transit Safety	○
2	Fewer Traffic Jams	○
3	High Capacity Transit (including light rail)	◐
4	Better Connectivity	●
5	Well-Maintained Roads	○
6	Frequent Bus Service	◐
7	More Transportation Choices	●
8	Expanded Service for Seniors, Veterans, & People with Disabilities	●
9	Improved Job & Housing Access	●
10	Better Walking & Biking Conditions	○
11	New Modal Technologies & Investments	●
12	Expanded Transit Service Area	●
13	New Information Technologies	●
14	Better Transit Stops & Stations	◐
15	Improved Transit Security	◐

#### KEY

- Strongest
- ◐ Strong
- Less Strong

# BIG MOVE #6:

## Improve Connections to Major Destinations

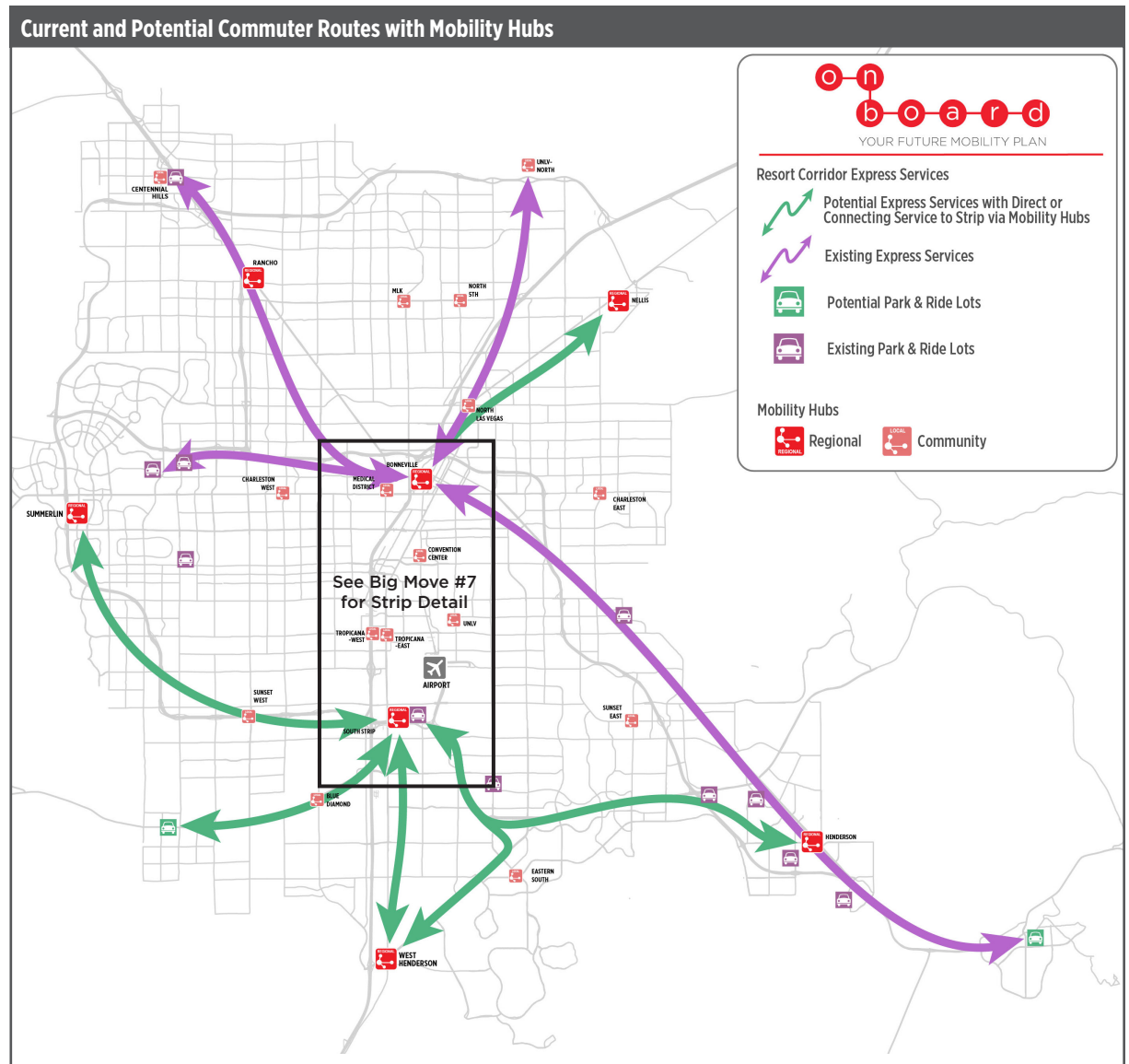
### Overview

On Board's Big Move #6 will improve connections to and between major destinations in Southern Nevada. New services will connect riders directly to important locations using a combination of express bus routes, commuter services, and game day and event shuttles. These improvements will help both visitors and workers. People visiting Las Vegas will be able to better navigate the RTC transit system, starting from when they arrive at the airport. The airport and other major event centers also employ many residents of the Valley, so improving services will help more workers get to and retain their jobs.

Big Move #6 will develop new mobility services and options for getting to the Resort Corridor, McCarran Airport, and Downtown Las Vegas, which are Southern Nevada's largest job centers. Expanding connections to these locations is a critical part of the region's future success. In the wake of COVID-19, when the region is focused on economic recovery, these routes will help connect people and jobs.



RTC On Board Strategies Survey (January-March 2020)  
11,221 respondents





## Projects and Programs

- 6-1: Provide Rapid Bus Services to McCarran Airport
- 6-2: Develop Airport Mobility Hub
- 6-3: Serve Both Terminals with All Airport Connections
- 6-4: Improve Transit-Related Airport Wayfinding and Onsite Information
- 6-5: Implement Express Routes to Resort Corridor or Downtown
- 6-6: Improve Commuter Facilities & Services: Develop Park-and-Ride Lots with Express Service Connections to Major Destinations
- 6-7: Provide Game Day and Major Event Shuttles

## Key Benefits



All mobility strategies generate benefits for individual travelers, the regional economy and the environment. The graphic below provides a relative scale of the benefits.



Travel Choices  
& Reliability



Safety, Security  
& Comfort



Economic Benefits  
& Sustainability



## Effectiveness in Addressing Regional Priorities

Improving Connections to Major Destinations will directly help achieve the following priorities identified through extensive public outreach with nearly 80,000 people and multiple surveys that had almost 25,000 combined responses:

### REGIONAL MOBILITY PRIORITIES

1	Improved Road & Transit Safety	●
2	Fewer Traffic Jams	●
3	High Capacity Transit (including light rail)	●
4	Better Connectivity	●
5	Well-Maintained Roads	○
6	Frequent Bus Service	●
7	More Transportation Choices	●
8	Expanded Service for Seniors, Veterans, & People with Disabilities	●
9	Improved Job & Housing Access	●
10	Better Walking & Biking Conditions	○
11	New Modal Technologies & Investments	●
12	Expanded Transit Service Area	●
13	New Information Technologies	○
14	Better Transit Stops & Stations	●
15	Improved Transit Security	●

#### KEY

- Strongest
- Strong
- Less Strong



# BIG MOVE #7:

## Provide Reliable Transit for Resort Corridor Employees

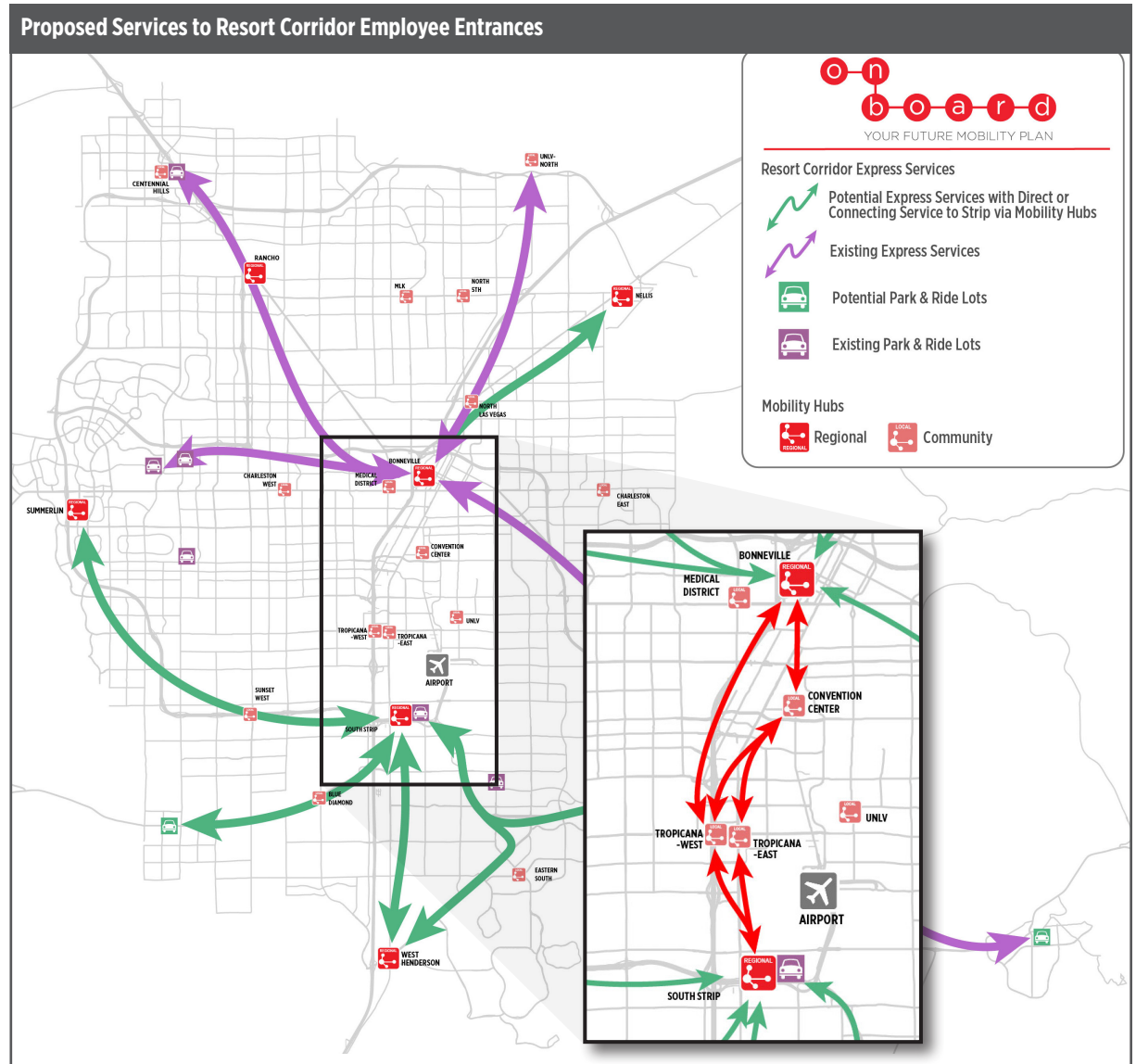
### Overview

The Resort Corridor is the largest employment center in Southern Nevada, with 24% of regional employment and 27% of private sector jobs<sup>1</sup>. As the region's densest job center, it should be one of the region's strongest transit markets—but transit ridership among employees commuting to and from work is relatively low.

The On Board Mobility Plan includes strategies to ensure people can easily and reliably get to work, enhancing employer access to a large regional employment pool. These investments will be important during periods of economic growth, and are also a critical part of regional economic recovery from the COVID-19 pandemic. As the region transitions back to work, investments that offer reliable and affordable access to employment will help prevent people from falling into poverty and homelessness.



<sup>1</sup> The Economic Impact of Southern Nevada's Tourism Industry and Convention Sector, June 2019 Revised Economic Impact Series Brief (Applied Analysis).





## Projects and Programs

- 7-1: Develop Mobility Hubs Focused on Resort Corridor & Downtown Connections.**
- 7-2: Develop Direct Service Shuttles to “Back of House” Resort Corridor Employee Entrances.**
- 7-3: Construct Pedestrian Connections for Grade-Separated “Back of House” Locations on West Side of Strip.**



## Key Benefits

All mobility strategies generate benefits for individual travelers, the regional economy and the environment. The graphic below provides a relative scale of the benefits.



## Effectiveness in Addressing Regional Priorities

Providing Reliable Transit for Resort Corridor Employees will directly help achieve the following priorities identified through extensive public outreach with nearly 80,000 people and multiple surveys that had almost 25,000 combined responses:

### REGIONAL MOBILITY PRIORITIES

1	Improved Road & Transit Safety	●
2	Fewer Traffic Jams	●
3	High Capacity Transit (including light rail)	●
4	Better Connectivity	●
5	Well-Maintained Roads	○
6	Frequent Bus Service	●
7	More Transportation Choices	●
8	Expanded Service for Seniors, Veterans, & People with Disabilities	○
9	Improved Job & Housing Access	●
10	Better Walking & Biking Conditions	○
11	New Modal Technologies & Investments	●
12	Expanded Transit Service Area	●
13	New Information Technologies	○
14	Better Transit Stops & Stations	●
15	Improved Transit Security	●

#### KEY

- Strongest
- Strong
- Less Strong

# BIG MOVE #8:

## Leverage New Technology to Improve Mobility and Sustainability

### Overview

Emerging transportation technologies are creating new opportunities for RTC to improve and augment all modes of transportation across Southern Nevada. On Board includes a variety of projects and recommendations that would leverage new, emerging, and next generation technologies that are already influencing and will continue to change the way we travel. These systems will make it easier to plan, book or schedule, and pay for trips and travel; they will create more ways to track and watch vehicles arrive at their destinations, and integrate travel choices across a variety of modes, such as transit, rideshare and micro mobility. There are also a multitude of technologies that will change our vehicles and roadways, including connected and autonomous vehicles and alternative fuels and fueling systems.

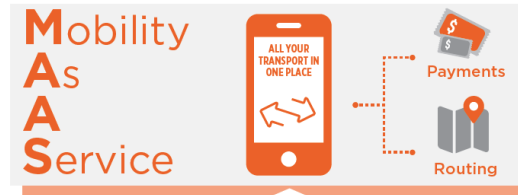
On Board is designed to prepare Southern Nevada to move forward with new systems and technologies as they prove viable and effective. RTC and Southern Nevada's transportation providers can begin to prepare for these technologies and future proof investments so the region can adapt and respond.

Electric buses are quieter, cleaner and less expensive to operate



RTC On Board Strategies Survey (January-March 2020)  
11,221 respondents

### Mobility as a Service Components



### Transportation Providers



### Infrastructure







## Projects and Programs

Leveraging new technology to improve mobility and sustainability will require monitoring technology developments, and carefully determining how to implement them across the region:

- 8-1: Provide Real-Time Arrival Information at Major Transit Stops
- 8-2: Improve Payment Options and Information Sharing
- 8-3: Implement "Mobility as a Service" Program
- 8-4: Develop Public Solar Electric Vehicle Charging Network
- 8-5: Shift to Electric Transit Vehicles
- 8-6: Expand Solar Charging for RTC's Transit Vehicles and Facilities
- 8-7: Expand Travel Demand Management (TDM) Programs
- 8-8: Evolve the Region's Advanced Traffic Management System
- 8-9: Implement Autonomous Vehicles as Technology Permits (10+ years)
- 8-10: Monitor and Incorporate Emerging Transportation Technologies and Update Road Design as Needed



## Key Benefits

All mobility strategies generate benefits for individual travelers, the regional economy and the environment. The graphic below provides a relative scale of the benefits.



**Travel Choices  
& Reliability**



**Safety, Security  
& Comfort**



**Economic Benefits  
& Sustainability**



## Effectiveness in Addressing Regional Priorities

Improving Regional Connections to Major Destinations will directly help achieve the following priorities identified through extensive public outreach with nearly 80,000 people and multiple surveys that had almost 25,000 combined responses:

### REGIONAL MOBILITY PRIORITIES

1	Improved Road & Transit Safety	●
2	Fewer Traffic Jams	●
3	High Capacity Transit (including light rail)	●
4	Better Connectivity	○
5	Well-Maintained Roads	○
6	Frequent Bus Service	◐
7	More Transportation Choices	●
8	Expanded Service for Seniors, Veterans, & People with Disabilities	●
9	Improved Job & Housing Access	●
10	Better Walking & Biking Conditions	○
11	New Modal Technologies & Investments	●
12	Expanded Transit Service Area	○
13	New Information Technologies	●
14	Better Transit Stops & Stations	◐
15	Improved Transit Security	●

#### KEY

- Strongest
- ◐ Strong
- Less Strong

# MOVING FORWARD TO IMPLEMENTATION



## DEVELOP FUNDING PLAN

On Board will require major investments in Southern Nevada's transportation infrastructure and programs. Some improvements may begin immediately using eligible funding sources. However, larger projects and service upgrades will require funding that goes beyond what is currently available. Consistent with how the Fuel Revenue Indexing program developed a source of funding for road-related improvements, RTC and the region will need to develop new funding sources for On Board's projects.

There are potential funding options, but no single approach that works for every region. However, there is no single approach that works for every region. Instead, Southern Nevada will need to develop a mobility funding plan that will engender broad-based support from the public and community leaders (see Appendix A for an overview of existing and potential funding programs).

## DEVELOP A DETAILED SHORT-TERM IMPLEMENTATION PLAN

On Board presents implementation timeframes for recommended projects and programs within the 8 Big Moves in terms of the short term (the next 10 years) and long term (beyond 2030). RTC and its partners will need to develop a more detailed short-term implementation plan that specifies schedules for implementation and key milestones, responsible parties, and funding sources, among other elements.

## BEGIN PROJECT DEVELOPMENT FOR FIRST HIGH CAPACITY TRANSIT LINES

The High Capacity Transit element of On Board includes LRT and BRT lines that would be strong candidates for Federal Transit Administration New Starts funding, as well Rapid Bus lines that would be strong candidates for Small Starts funding. FTA requires that these projects undergo a project development process that consists of developing and reviewing alternatives and selecting a Locally Preferred Alternative (LPA). This process can take 12 to 18 months and full implementation of HCT lines can take eight to 10 years. RTC will need to begin project development for the highest priority HCT lines soon.



## INCORPORATE HCT ELEMENTS INTO UPCOMING ROADWAY PROJECTS

Roadway improvements are currently planned in some of the corridors where HCT is also planned and may precede HCT development. Incorporating HCT elements into the roadway improvement projects can expedite transit improvements and result in cost savings. The first opportunity will be along Boulder Highway, where early implementation of bus lanes would benefit existing service and expedite the development of full BRT service.

## FUTURE-PROOF THE PLAN

On Board reflects the best and most up-to-date information about consumer and transportation system technologies available at the time it was developed. It reflects insights into short-term consumer technologies, such as Mobility as a Service (MaaS), fare capping, and application-based reservation systems, and recommends projects that will take advantage of emerging technologies related to autonomous and connected vehicles, electrification, and clean energy. The pace and schedule for advancing these systems and technologies is not well known. Other factors not directly considered by On Board include the region's desire to be at the leading edge of technology development and the extent to which some of the interest in leading may be hampered by economic factors resulting from COVID-19.

In all cases, however, as implementation progresses, transportation stakeholders in Southern Nevada need to monitor emerging technologies and transportation disruptions, identify "trigger points" for when to make course corrections, and keep the plan "future proof" as it is implemented.





# COMMUNITY ENGAGEMENT ACTIVITY

On Board was prepared with input from stakeholders (representatives from local governments, business and tourist organizations, nonprofit agencies, and regional authorities), elected officials, and over 80,000 Southern Nevada residents. Stakeholders were involved in numerous meetings, workshops, and presentations, while residents participated in multiple surveys and attended over 250 events. This input revealed how residents feel about existing and emerging technologies, like ride-hailing, autonomous vehicles, and using mobile applications to plan, book, and pay for more of their trips. Input from stakeholders and the public also provided information on impressions of high capacity transit and the importance of investments in expanded mobility options. Community engagement activities were organized around three phases with reports available for each phase:

- ☑ **Phase 1: State of the System** – The initial round of engagement focused on understanding residents' perceptions of Southern Nevada's existing transportation network. Surveys asked questions about the types of improvements needed and where additional services are required, and tested attitudes about technology. The findings and insights were used to develop the State of the System.

- ☑ **Phase 2: Mobility Vision** – The second round of engagement focused on understanding residents' vision for the future of mobility in Southern Nevada. Questions posed at pop-up events, community meetings, and surveys asked about future modes of travel, investment preferences, and their goals and priorities for Southern Nevada's transportation network.
- ☑ **Phase 3: Draft Recommendations** – The third round of engagement focused on understanding residents' attitudes and opinions on the draft recommendations emerging from On Board. In part because of the COVID-19 pandemic, most community engagement in this final round was conducted virtually, using an online survey that asked respondents to rate individual strategies and projects. Over 12,000 people completed the surveys, which included a broad cross section of Southern Nevada's population.