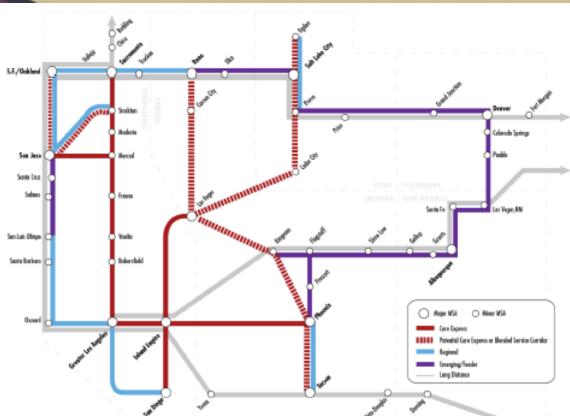
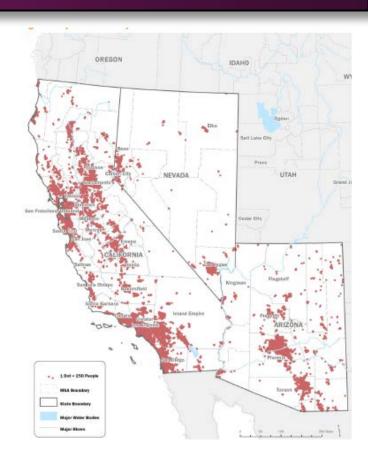
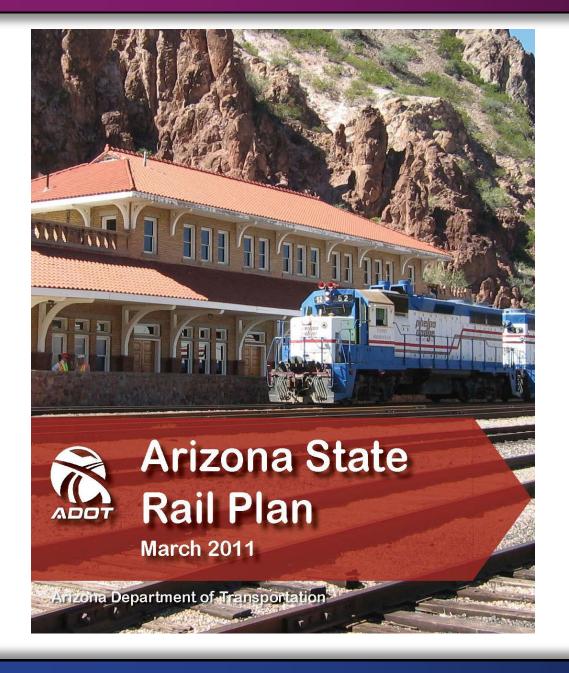
# Southwest Multi-State Rail Planning Study

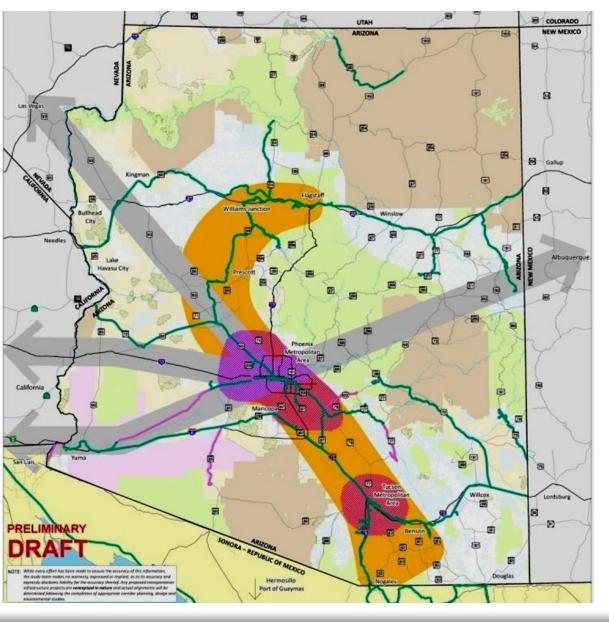




Michael Kies - ADOT Assistant Director Multimodal Planning Division



### Arizona's 1st Rail Plan



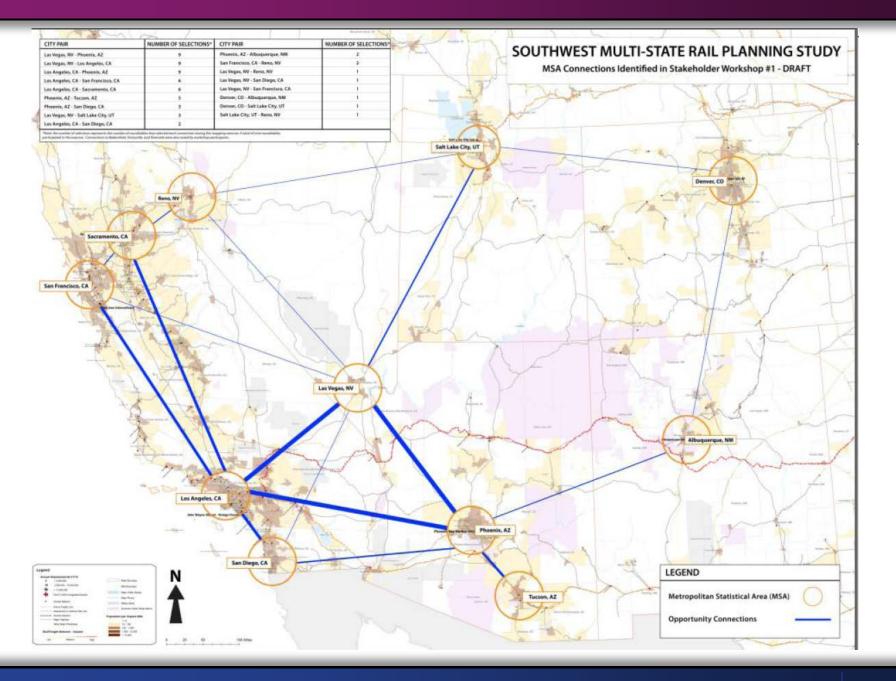
# Arizona Passenger Rail Vision

- Intercity Rail provides transit backbone for Sun Corridor
  - Northern Arizona to Nogales
- Higher Speed ICR connecting adjacent Metro areas
- Phoenix to Tucson highest priority
  - ADOT Intercity Rail Study

### Southwest Mega Region (LA-Phoenix-Las Vegas)







# **Corridor Configurations**





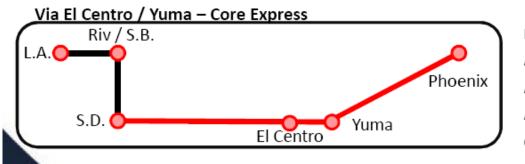
Infra. Capital Cost	\$12 – \$16 B
Annual Ridership	10.7 -14.2 M
Annual Ticket Revenue	\$1,000- 1,280 M
Annual O & M	\$480 – 690 M
Operating Recovery Ratio	1.5 - 2.7

Riverside via Yuma – Core Express

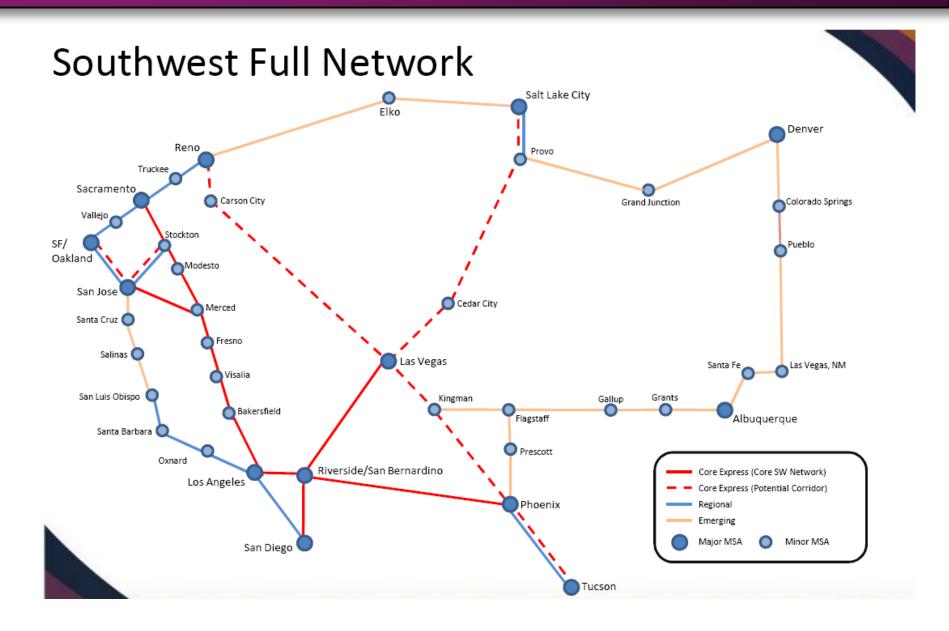
Riv / S.B.

Phoenix
S.D.

		Dif from Opt 1
Infra. Capital Cost	\$13 – 18 B	\$1.1 – 1.7 B
Annual Ridership	10.6 – 14.2 M	
Annual Ticket Revenue	\$1,010 – 1,310 M	\$10 – 30 M
Annual O & M	\$500 – 730 M	\$20 – 40 M
Operating Recovery Ratio	1.4 - 2.6	(0.1)



		Dif from Opt 1
Infra. Capital Cost	\$14 - 20 B	\$2.5 - 4.5 B
Annual Ridership	9.4 – 13.7 M	(0.5 - 1.3 M)
Annual Ticket Revenue	\$770 - <b>1</b> ,070 M	(\$210 – 230 M)
Annual O & M	\$440 - \$650	(\$40 M)
Operating Recovery Ratio	1.2 - 2.4	(0.3)

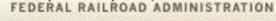


# **Top Performing Corridors**

Corridors	Rank if Stand Alone*	Rank if Network*	Multi-State Corridor
CHSR (SD – SF) (C.E.)	1	2	
Las Vegas – Los Angeles (C.E.)	2	1	✓
Los Angeles – Phoenix (C.E.)	3	3	✓
San Diego – Phoenix (C.E.)	4	5	✓
Las Vegas — PHX — Tucson(C.E.)	5	6	✓
SF/Oakland – Reno (Reg.)	6	4	✓
Las Vegas — Salt Lake City (C.E.)	7	8	✓
Phoenix – Tucson (Reg.)	8	9	
Las Vegas – Reno (C.E.)	9	7	
Phoenix – Albuquerque (Emg.)	10	10	✓
Reno – Salt Lake City (Emg.)	11	11	✓

<sup>\*</sup> As measured by operating recovery ratio for the infrastructure corridor

Operating Recover Ratio: X = < 1; 1 < X < 2; X > 2; FEDERAL RAILROAD ADMINISTRATION







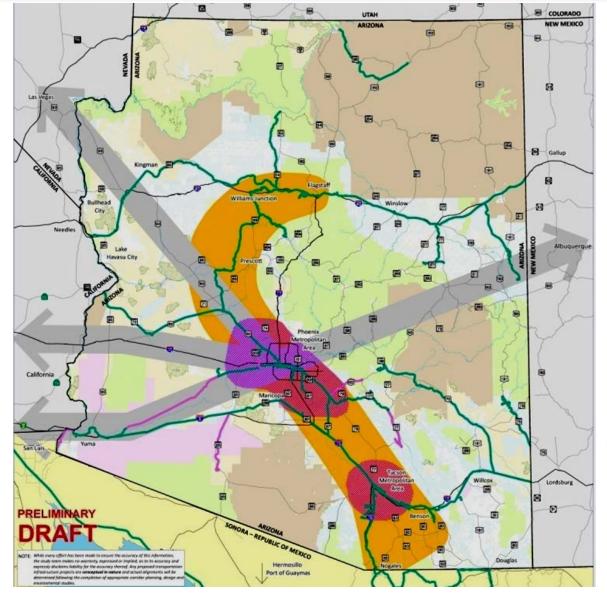
## Southwest Multi-State Rail Planning Study

#### Recommendation #1;

Integrate the Southwest Multi-State Rail Planning Study into Existing and Ongoing Transportation Planning

#### Recommendation #2;

Establish a Southwest Rail Working Group to Initiate Implementation of the Study's Governance Recommendations



# Arizona's Passenger Rail Vision?

- High Speed Connections
  - Phoenix to LAX; Feasible
  - Phoenix to LAS; Served by LA Hub
  - Phoenix to ABQ; emerging
- Phoenix to Tucson highest priority for Arizona
  - Regional Service
  - Future Extension to LA

# Corridor Performance > Phoenix - Tucson

#### **General Performance Characteristics**

- Market generally captured by Regional service. Hourly Regional service attracts 16 percent of total intercity market; Core Express attracts 17 percent.
- Connections to Las Vegas and Southern California increase ridership on this segment by > 3X.
- Thru Core Express service could increase ridership by a total of 5X.
- Early development of Emerging or Regional could serve point-to-point travel between Phoenix and Tucson.
- Later stage extension of Core Express to Tucson after other key corridors in the network are complete may prove viable.

#### **Performance Summary**

 $\odot$ 

Stand Alone Performance •

Network Performance 0

Enabling Corridor 0

Dependant Corridor

OF THERE

# PHX to TUC Tier 1 EIS



# Phoenix to Tucson—Regional System Blended Service (125 MPH), with extensions

Alternative	Annual Ridership (2035) 3.5 M – 5.5 M		Length (miles)	
Green	3,750,000		113	
Orange	4,500,000		132	
Yellow	5,500,000		120	
Travel Time (Phoenix – Tucson)	Green	Orange		Yellow
	I-10 Rail	Central Pinal/ E. Valley		UP Tracks
Commuter travel time (min)	83	104		95
Intercity travel time (min)	73	90		83



## Southwest Multi-State Rail Planning Study

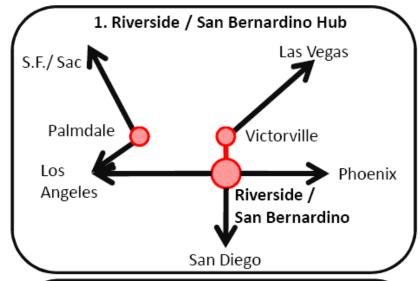
#### Recommendation #1;

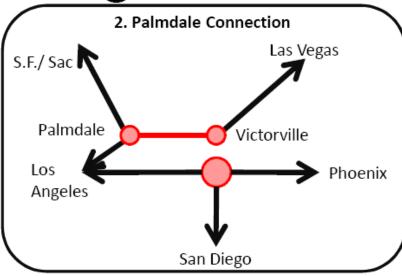
Integrate the Southwest Multi-State Rail Planning Study into Existing and Ongoing Transportation Planning

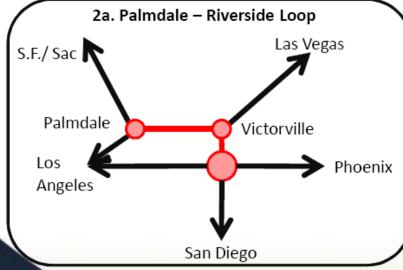
#### Recommendation #2;

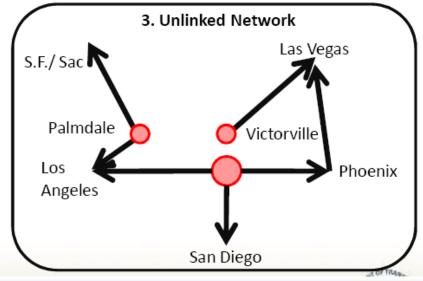
Establish a Southwest Rail Working Group to Initiate Implementation of the Study's Governance Recommendations

# Southern California Configuration









### **Governance and Regional Coordination**

Multi-phase

Ownership

Knowledge sharing

Operations

Marketing and customer service

Service standards

Cost and revenue sharing

Design and Construction

Interoperability standards

#### Planning

Multi-State Vision

Data for Project

Evaluation

**Grant Applications** 

Operating Standards

Safety Standards

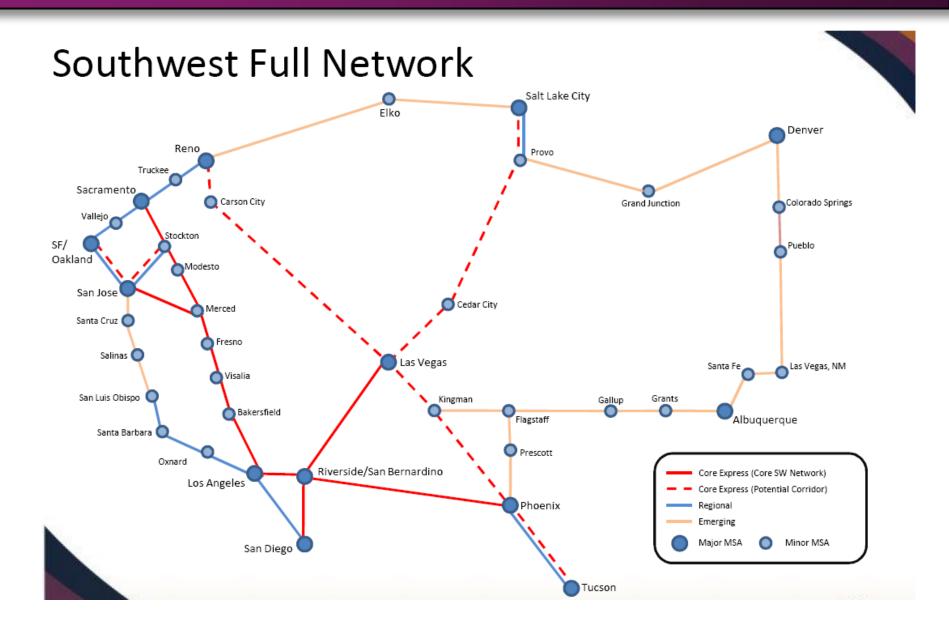
### **Southwest Rail Working Group**

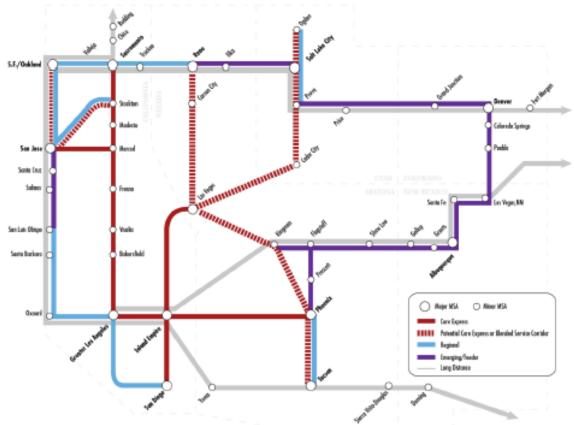
**Strategic Implementation Plan** 

Initiate a Business Case for SW Rail Network

Champion the creation of a Blue Ribbon Commission for the Phoenix – Southern California Corridor Study







**Michael Kies** 

**ADOT; Multimodal Planning Division** 

mkies@azdot.gov

602-712-8143