MAG MANAGED LANES NETWORK DEVELOPMENT STRATEGY – PROJECT UPDATE

Transportation Policy Committee

October 17, 2012

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Managed Lanes Concept

- Managed Lanes are dedicated lanes for one or more user groups.
- Proactively managed to provide better reliability and/or level-of-service.
- **Primary benefit is travel time savings and reliability.**

Express Lanes, Orange County, CA.

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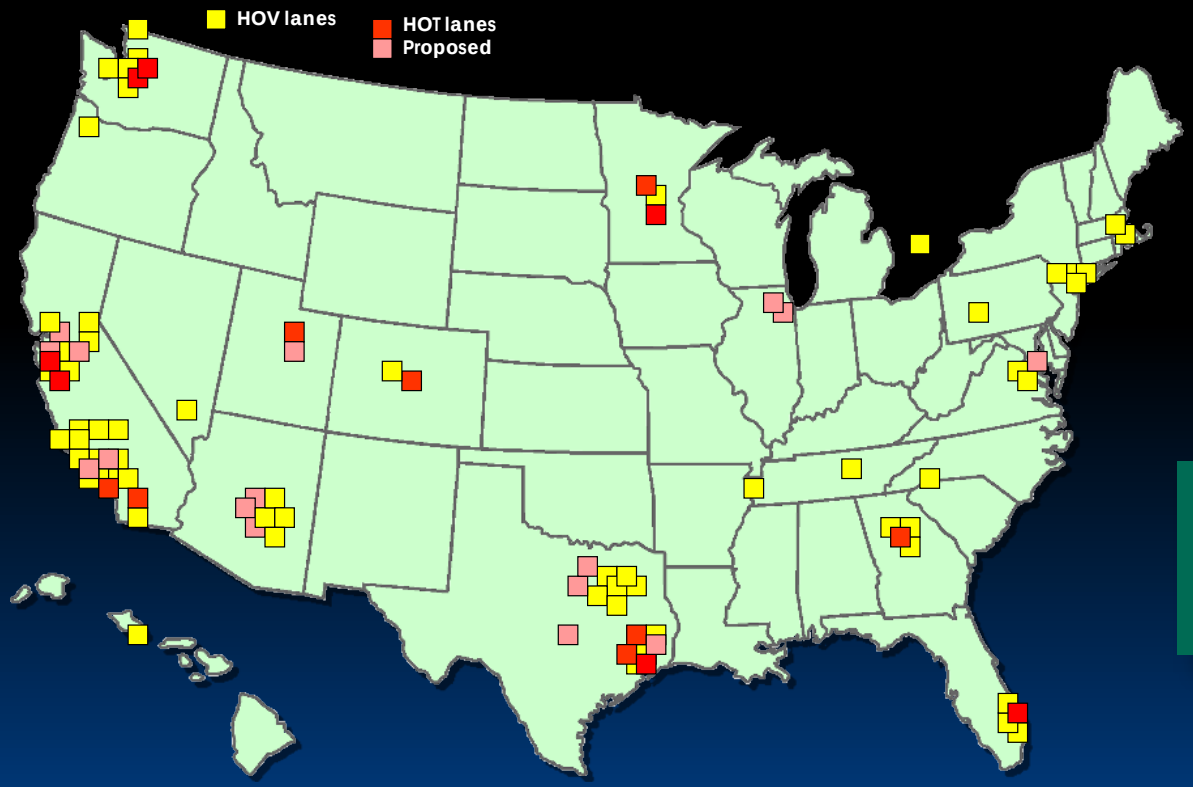
Lane Management Strategies



Fifteen projects in U.S. currently use congestion pricing.

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Lane Management Strategies

- Four mega-projects valued between **$1.8 billion and $2.6 billion** are currently being constructed in the U.S.:
  - Capital Beltway (I-495) in Northern Virginia (near Washington, DC).
  - IH-635 LBJ Freeway in Dallas, Texas.
  - North Tarrant Expressway in Dallas, Texas.
  - I-595 in Fort Lauderdale, Florida.

495 Capital Beltway, Northern Virginia.

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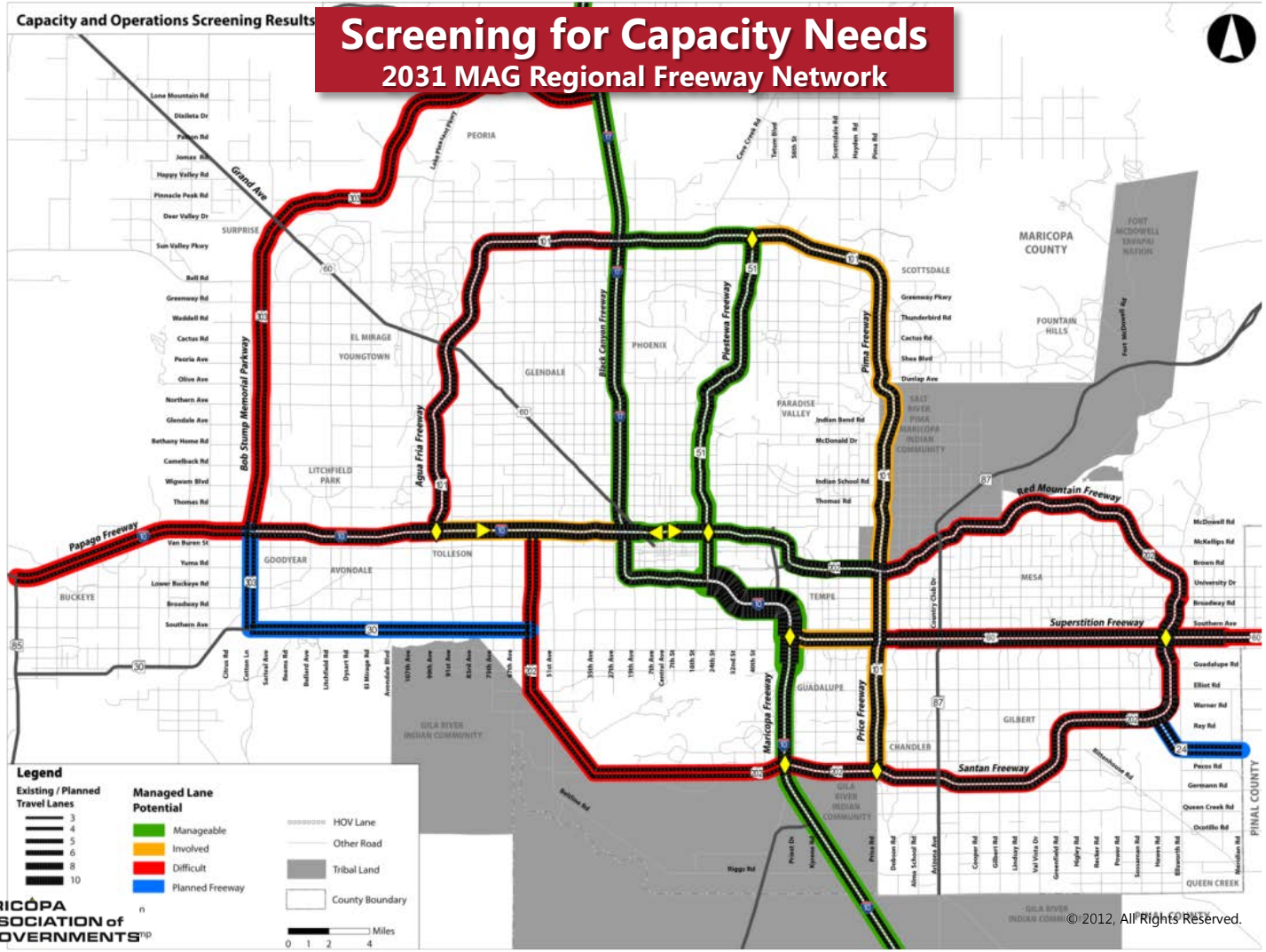
Screening for Capacity Needs

2031 MAG Regional Freeway Network



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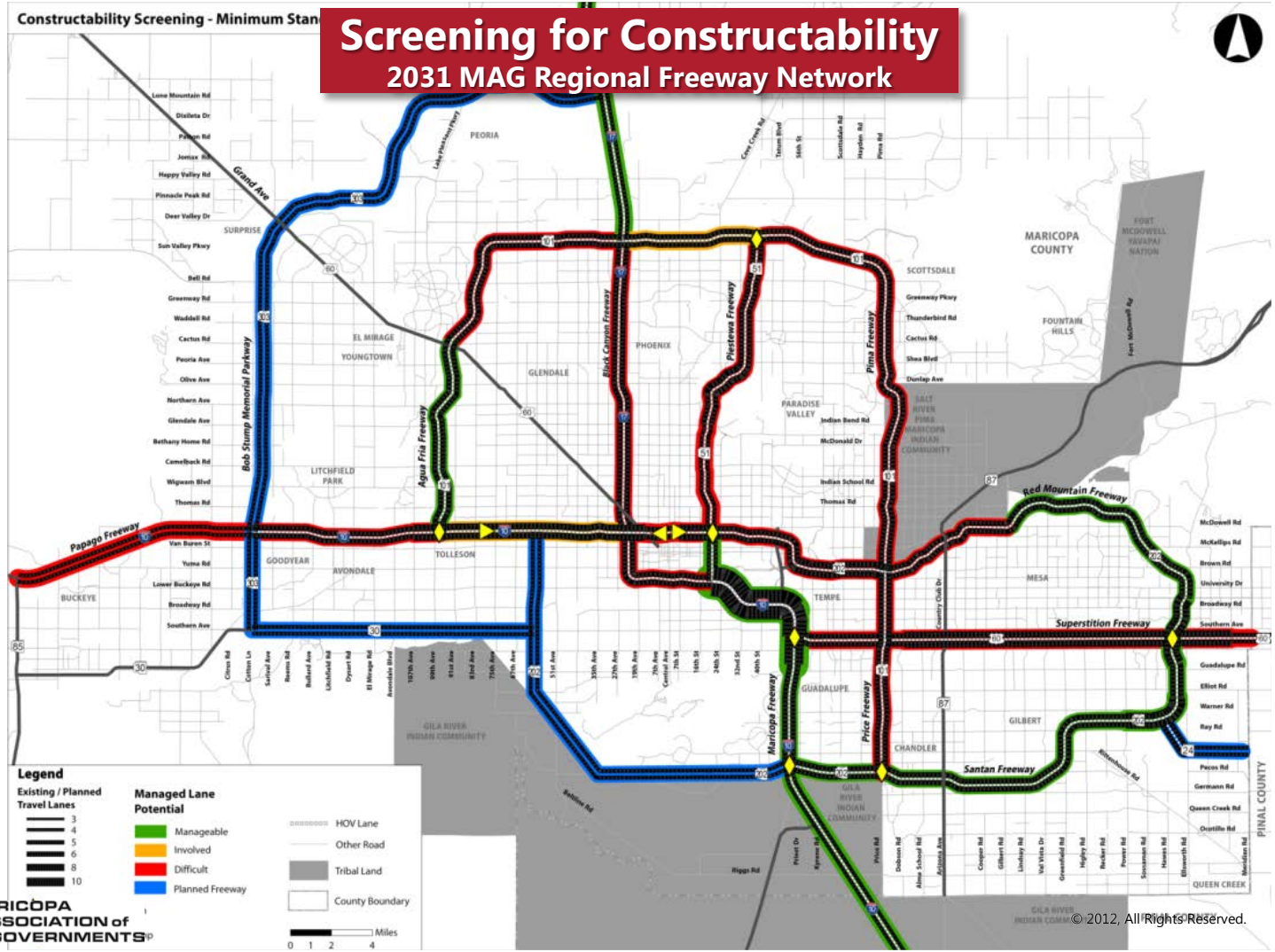
Screening for Constructability

2031 MAG Regional Freeway Network



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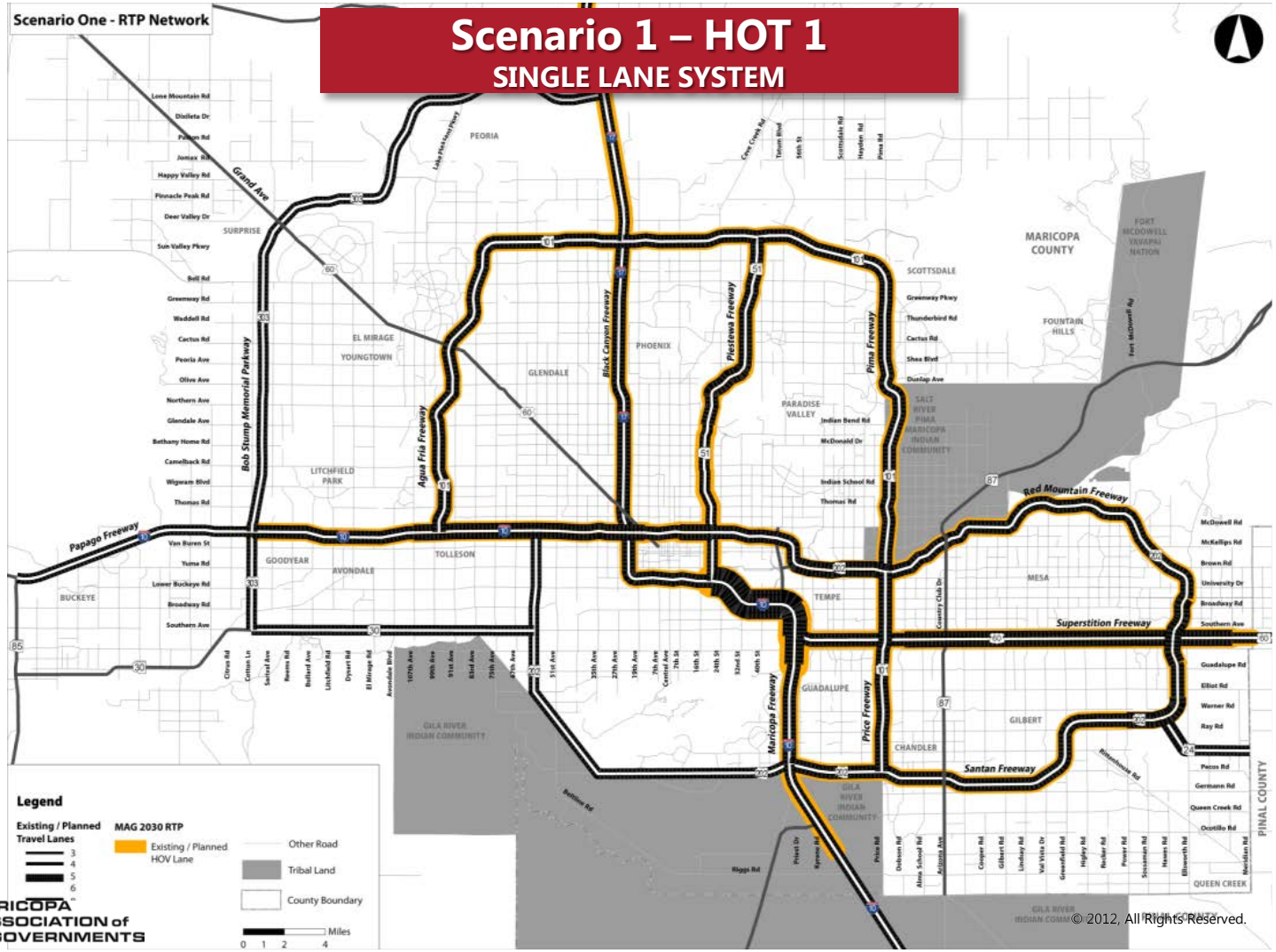
Scenario 1 – HOT 1

SINGLE LANE SYSTEM



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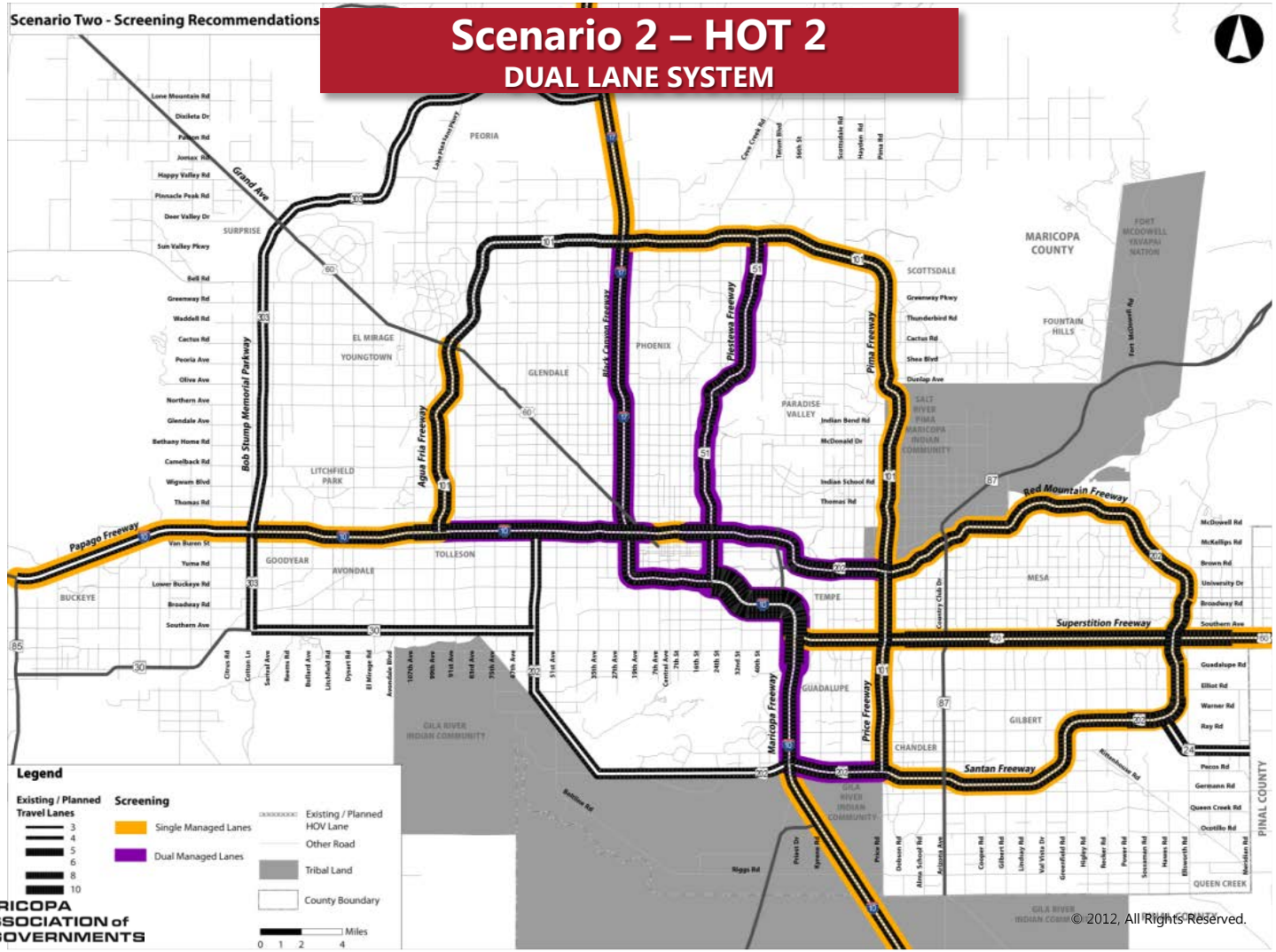
Scenario 2 – HOT 2
DUAL LANE SYSTEM



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Toll and Revenue Modeling

- Used ECONorthwest's Rapid Toll Optimization Model (RapidTOM).
- Based on MAG Travel Demand Model – accounts for competition from existing arterial street network.
- Assumes HOV 2+ Operation.
- Results developed on a time-of-day basis.

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Construction and Operation Assumptions

- Tolling Infrastructure
- Roadway and Structural
- Network Operations and Maintenance
  - Toll Systems
  - Roadway Systems

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Performance Summary Criterion

- Level of Service.
- Peak Period Travel Time Savings:
  - Per mile.
  - In minutes.
- Travel Speed.
- Monetary:
  - Annual Revenue.
  - Single Lane Construct.
  - Dual Lane Construct.

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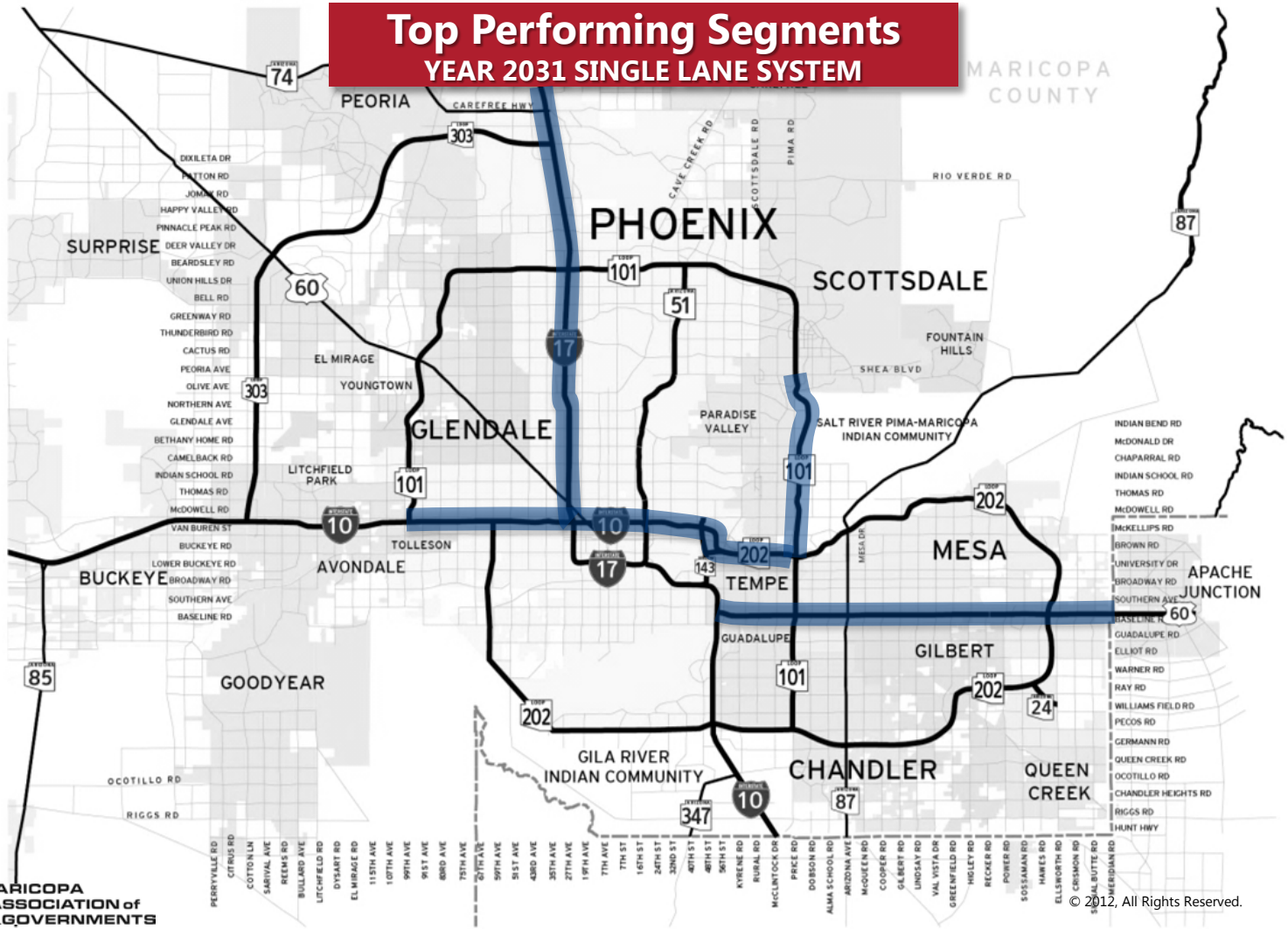
Top Performing Segments

YEAR 2031 SINGLE LANE SYSTEM



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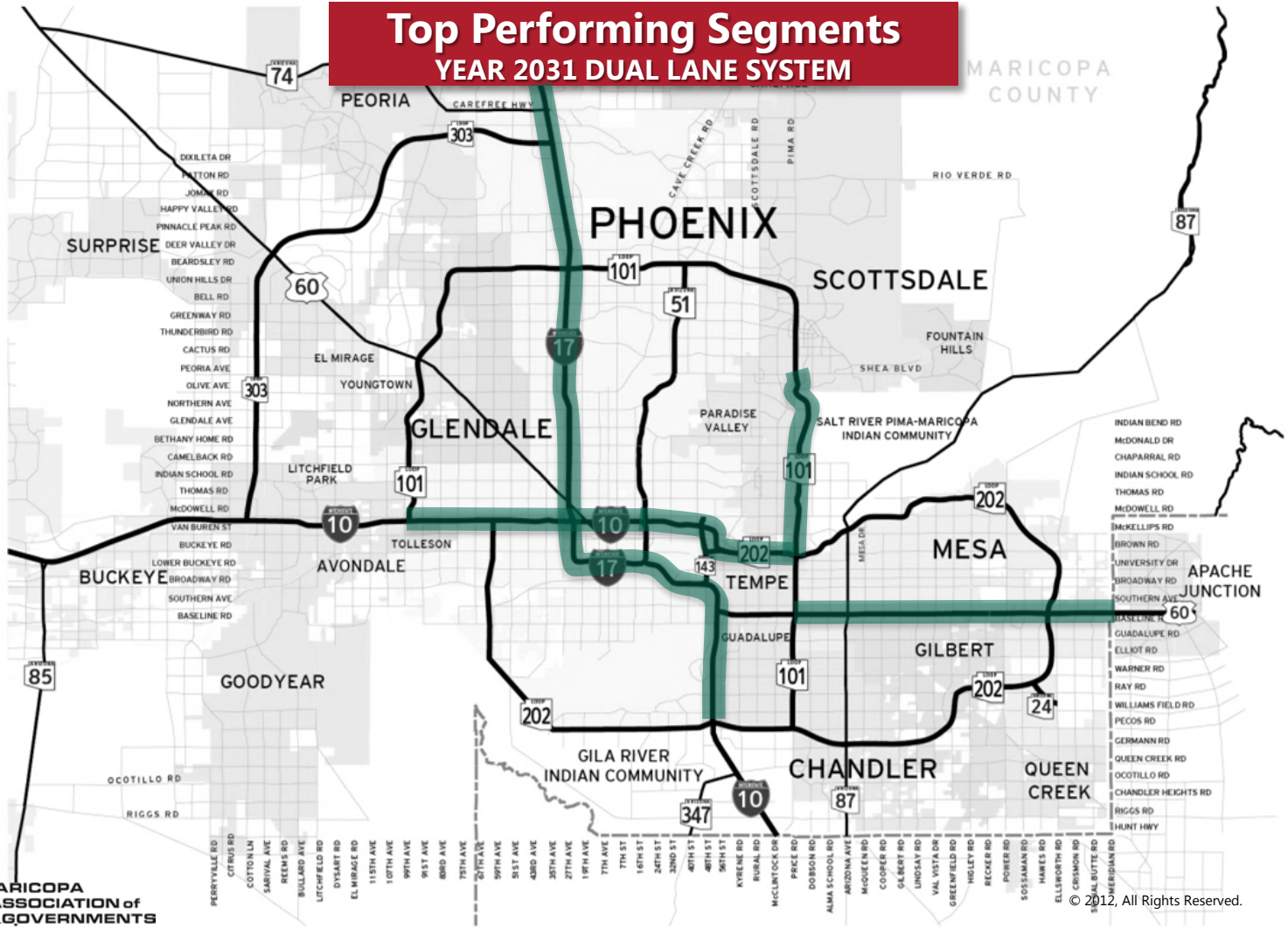
Top Performing Segments

YEAR 2031 DUAL LANE SYSTEM



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MAG Managed Lanes Network Summary

Topic	Comment
Does Network provide reliability?	Yes.
Is it possible to construct?	Yes. ▪ Lane Separation. ▪ Access Treatments.
Are there legislative issues?	Yes. ▪ Hours of Operation. ▪ Toll enforcement. ▪ Rate setting.
Is there sufficient revenue recovery?	Toll and Revenue forecasts favorable.
Is this network feasible?	Yes. ▪ Policy recommendation needed. ▪ Additional studies needed for implementation.

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