VISION - PURPOSE & NEED

- **ASSIST MAG REGION AND NORTHERN PINAL COUNTY TO DETERMINE "HOW" TO IMPLEMENT COMMUTER RAIL TRANSIT**
- **ADDRESS PHYSICAL, OPERATIONAL, JURISDICTIONAL AND FINANCIAL OPPORTUNITIES AND CONSTRAINTS WITH STAKEHOLDERS**
- **PROVIDE A STRATEGIC PLAN FOR ADOPTION BY MAG REGIONAL COUNCIL**
- **CONVENE STAKEHOLDERS FROM AROUND THE REGION TO DEFINE REQUIREMENTS**
- **DEVELOP CONSENSUS FOR COMMUTER RAIL IN REGIONAL TRANSPORTATION PLAN**
  - Role in region travel market
  - Define requirements for successful system implementation

VISION - PURPOSE & NEED

KEY REASONS TO CONSIDER COMMUTER RAIL SERVICE

- Growth of population and employment in all parts of the metropolitan area.
- Travel demand growth and increasing congestion in the primary travel corridors of the region.
- Need to provide multimodal transportation opportunities in the primary travel corridors.
- Desire to reinforce local and regional land use plans and development opportunities.
- Potential availability of existing railroad alignments in the primary travel corridors.
- Increase in the cost of fuel and travel.
- Potential to promote sustainability.

CRITICAL CHALLENGES TO IMPLEMENTATION OF COMMUTER RAIL SERVICE

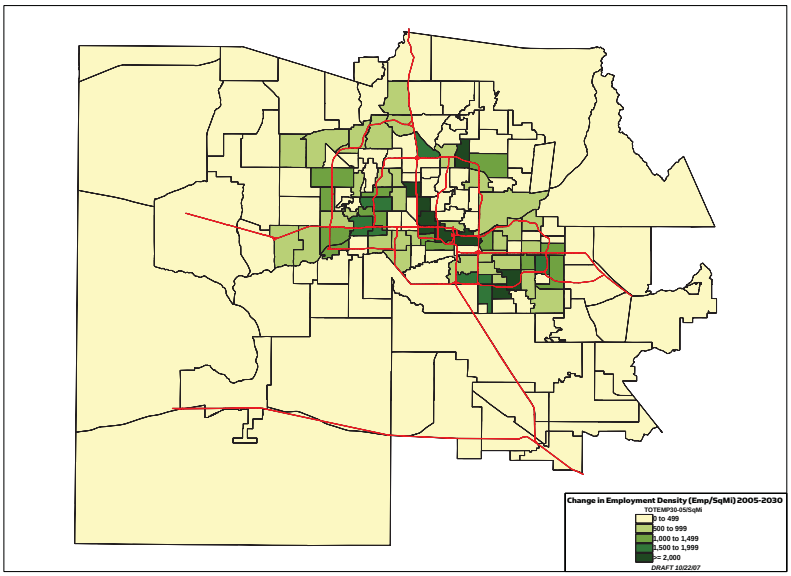
- Possible conflicts with current and planned freight railroad operations.
- Rapid development of land uses foreclosing opportunities for alignments and stations.
- Physical and geographic constraints limit locations for new alignments.
- Coordination with jurisdictional interests and policies.
- Availability and competition for regional, state and federal funding and resources.

REQUIREMENTS FOR SUCCESSFUL IMPLEMENTATION OF COMMUTER RAIL SERVICE

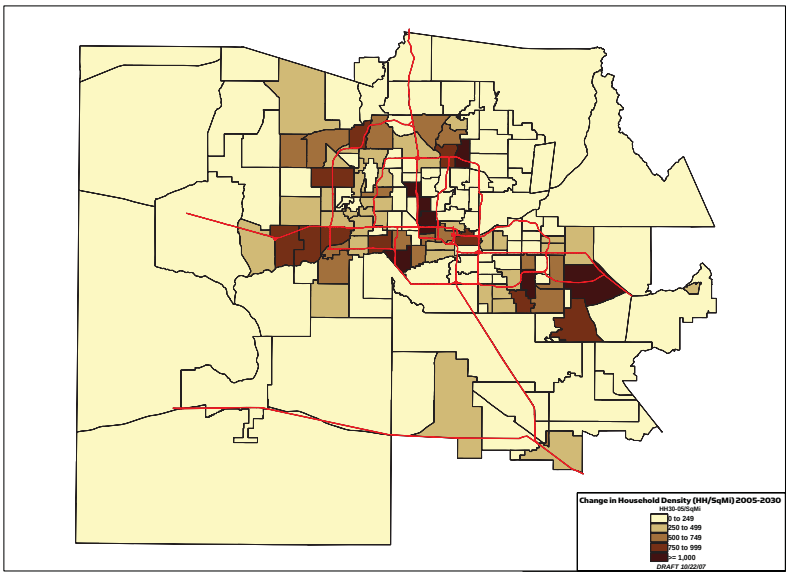
- Determine where commuter rail would be cost-effective to serve peak regional travel demand.
- Define options for shared and joint use of railway corridors and infrastructure.
- Develop working relationships and agreements with railroad owners and operators for alignments, stations and operations.
- Identify potential risk exposure from environmental issues and safety/ownership/liability issues.
- Develop system to integrate with other transportation system elements; LRT system; Bus and BRT system; highway and road network.
- Generate public and agency support for commuter rail service.
- Develop political support and leadership.
- Identify potential funding options and necessary legislative measures.
- Define an acceptable operating, administration and governance organization.

2005 vs. 2030 DEMOGRAPHICS

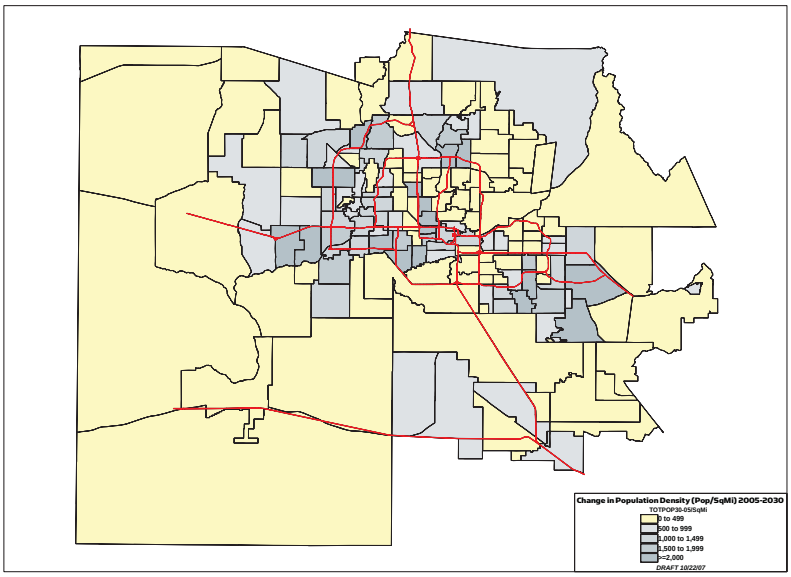
CHANGE IN EMPLOYMENT 2005-2030



CHANGE IN HOUSEHOLDS 2005-2030



CHANGE IN POPULATION 2005-2030

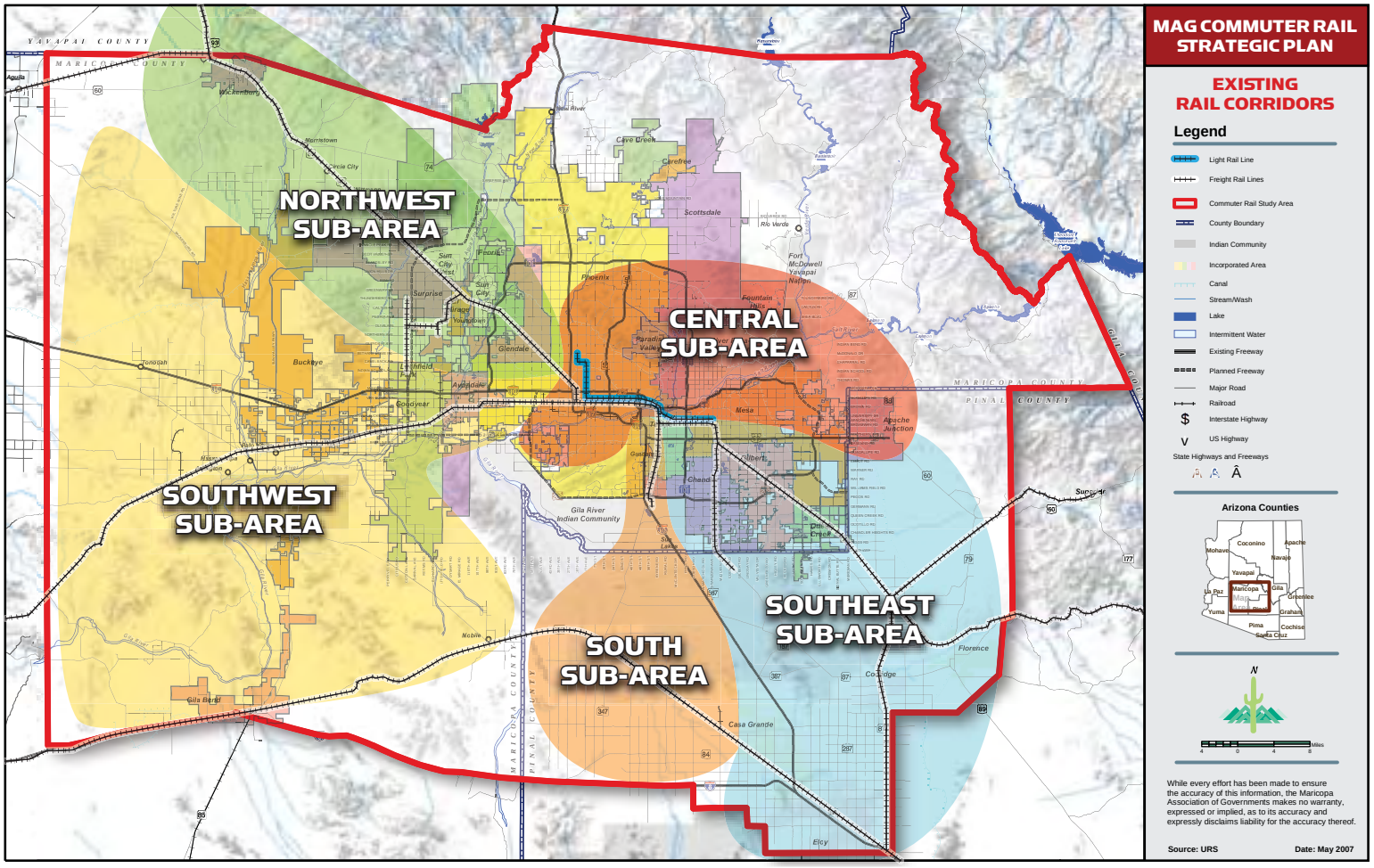


IMPLEMENTATION FRAMEWORK

DESCRIPTION OF IMPLEMENTATION FRAMEWORK

The Conceptual Implementation Framework presents an outline of implementation scenarios for consideration in the Maricopa County and northern Pinal County study area. The implementation scenarios were developed to present a range of possible options for the region to move forward with a commuter rail program to help serve travel demands in the congested corridors around the region.

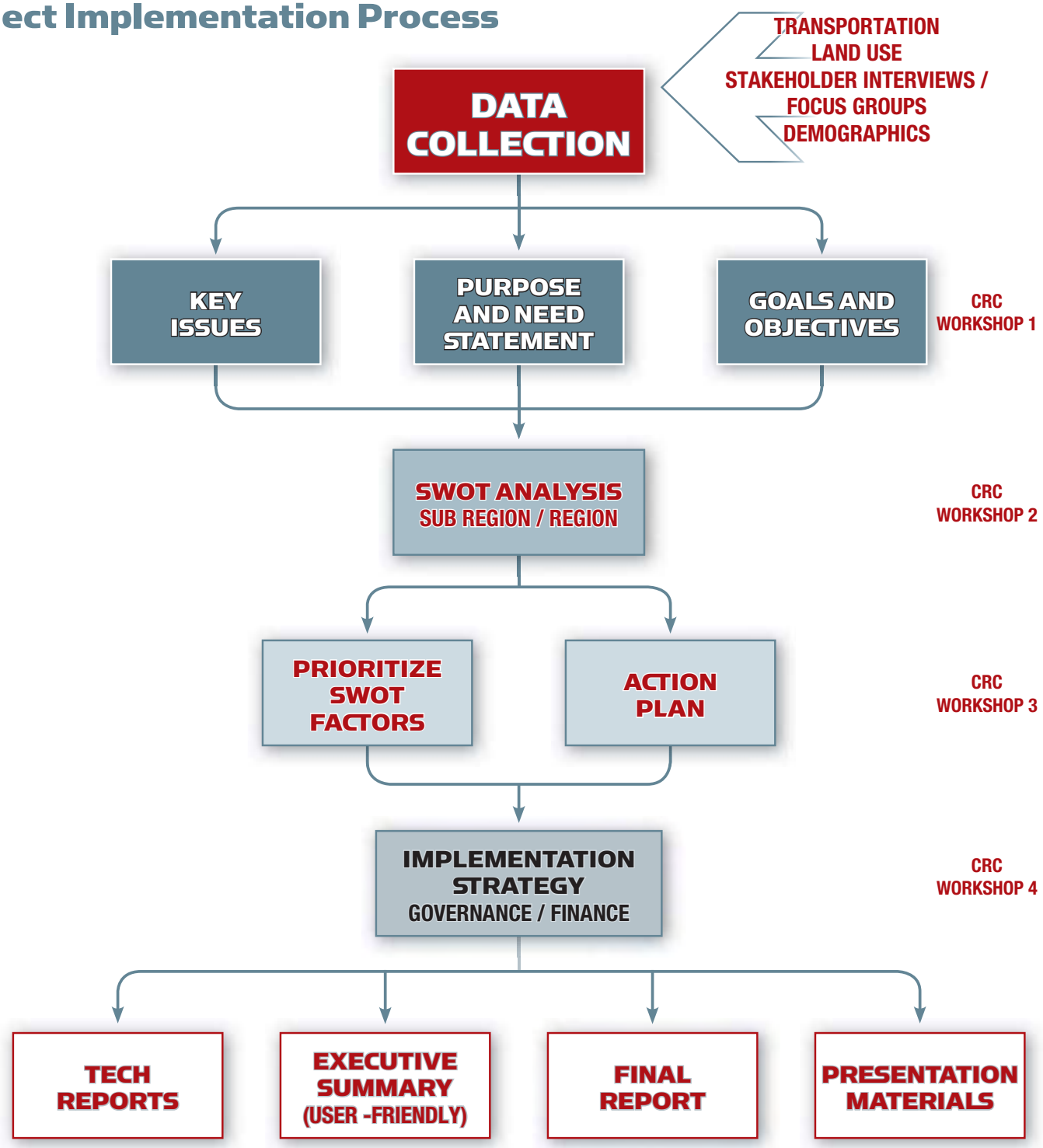
The Implementation Framework presents three scenarios that were developed using examples from other locations in the United States. The scenarios range from Get Started in a single corridor, to a Starter System with more than one line, to a full Regional System with multiple rail lines in operation.



STAKEHOLDER INVOLVEMENT

Commuter Rail Stakeholders Group - The Commuter Rail Stakeholders Group (CRSG) consists of public and private agencies and entities involved in past studies. The CRSG met throughout the course of the project to review progress, provide comments and help shape major recommendations for the MAG Commuter Rail Strategic Plan.

Project Implementation Process



STRATEGIC PLAN DEVELOPMENT PROCESS

SWOT PROCESS (Strengths, Weaknesses, Opportunities, Threats)

- Identification of SWOT factors
- Definition of Proposed Goals and Objectives
- Development of Action Plans

RESULTS OF SWOT PROCESS - Organized into six "high priority" factors:

Regional Growth

- Strengths: Relieve congestion, and reduce "time tax"
- Weaknesses: Polycentric employment, and lost options – rapid development
- Opportunities: Use to focus growth, and redevelop, intensify at nodes
- Threats: Development incentives from other regions and states

Multimodal Opportunities

- Strengths: Improved multi-modal connection, and travel time reliability
- Weaknesses: None defined
- Opportunities: Becomes development "spine", and mitigate freeway construction
- Threats: None defined

Existing Land and Right-of-Way

- Strengths: Several existing rail corridors, and ahead of development curve
- Weaknesses: Limited capacity for joint operation, and need ROW in developed areas
- Opportunities: Ability to plan integrated corridors, and large scale joint development
- Threats: Continued increase in freight traffic

Cost and Affordability

- Strengths: Alternate mode as gasoline price increases
- Weaknesses: No defined funding sources, and costs for infrastructure
- Opportunities: PM-10 preservation of funding
- Threats: Competition for available funds, and fares and on-going costs

Sustainability

- Strengths: Promotes "nodal" development, and environmental friendly – Quality of life factors
- Weaknesses: None defined
- Opportunities: Utilize existing rail corridors, and Creative transit planning to result in Transit Oriented Development
- Threats: Sustainability of region and Quality of Life

Public and Private Cooperation

- Strengths: Growing community support
- Weaknesses: Lack of multi-jurisdiction planning, and Partnering with railroads
- Opportunities: Regional planning for regional success – "change the paradigm"
- Threats: Political will, funding commitment, and inter-regional cooperation, priorities, and public perceptions

GOALS FOR COMMUTER RAIL STRATEGIC PLAN

1. EMPLOY COMMUTER RAIL TO SHAPE GROWTH
2. IMPROVE TRANSPORTATION MOBILITY OPPORTUNITIES BY IMPLEMENTING COMMUTER RAIL
3. PROVIDE A SEAMLESS AND COST EFFECTIVE COMMUTER RAIL OPTION
4. PROMOTE SUSTAINABILITY THROUGH THE IMPLEMENTATION OF COMMUTER RAIL
5. INCREASE PUBLIC/PRIVATE COOPERATION TO IMPLEMENT COMMUTER RAIL

RTP GOALS

1. System Preservation and Safety
2. Access and Mobility
3. Sustaining the environment
4. Accountability and Planning

CRSP GOALS

1. Employ Commuter Rail to shape growth
2. Improve Transportation Mobility Opportunities by Implementing Commuter Rail
3. Provide a Seamless and Cost Effective Commuter Rail Option
4. Promote Sustainability through the Implementation of Commuter Rail
5. Increase Public/Private Cooperation to Implement Commuter Rail

CONCEPT SYSTEM PLAN

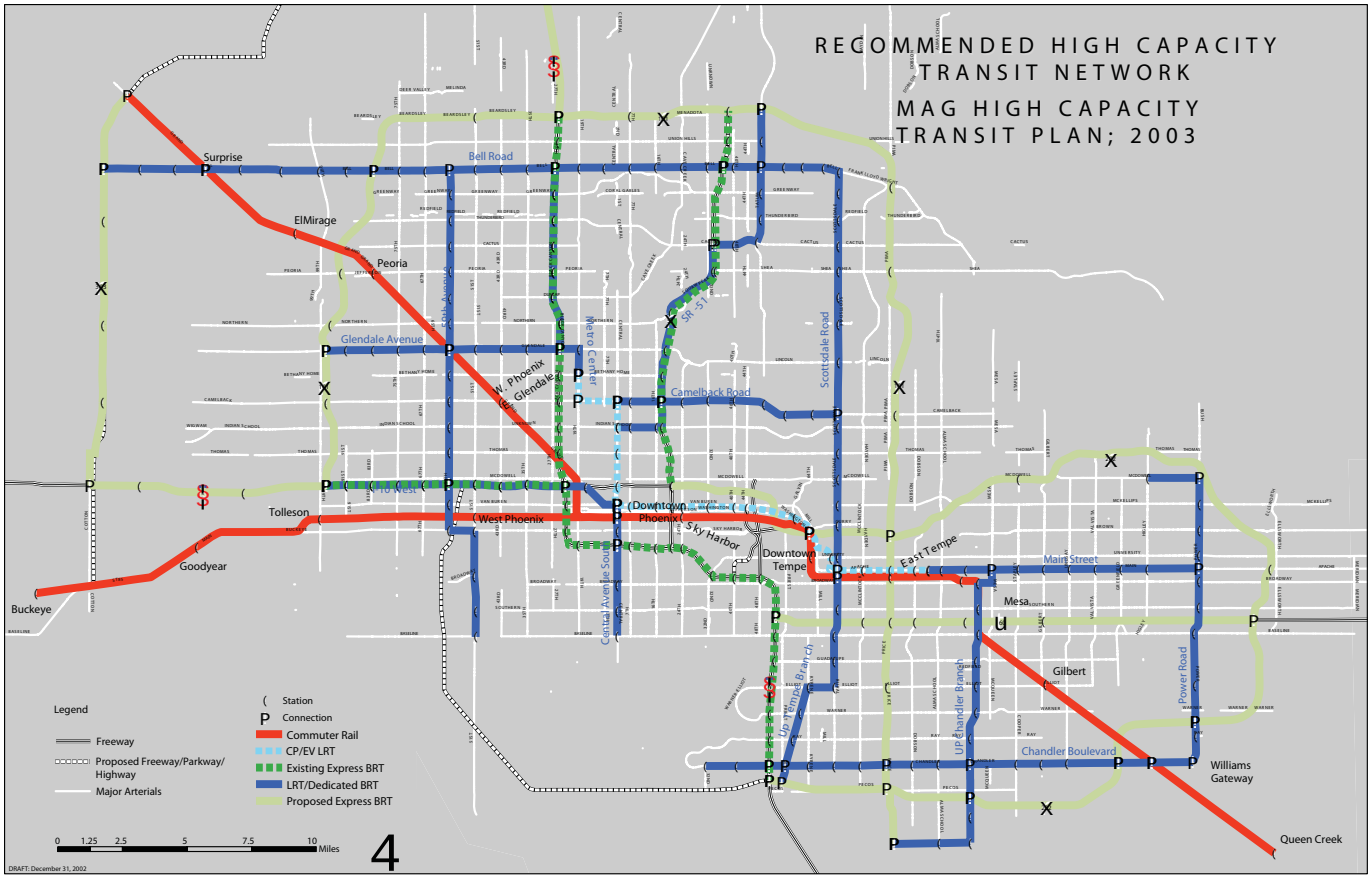
DESCRIPTION OF CONCEPT PLAN

A Concept Plan illustrates the potential scope and the context for commuter rail in the Maricopa County and northern Pinal County region.

The Concept System Plan is oriented around the five freight rail lines that are currently in place in the study area:

- BNSF – Grand Avenue
- UP Mainline – Chandler Branch
- UP Mainline – Southeast
- UP Mainline – Yuma/West
- UP Mainline – Tempe Industrial Lead

The Concept Plan was developed from information in the MAG "High Capacity Transit Study", 2003 and input from stakeholders that have been received during the Commuter Rail Stakeholders workshop sessions.



CORRIDOR COMMUNITY & LAND USE DESCRIPTIONS

Corridor/ Line	Limits	One-Way Miles	Major Activity Centers	Regional Thoroughfares	Community Acceptance
BNSF – Grand Avenue	Downtown Phoenix to Loop 303	26	› Downtown Phoenix (transfer to LRT) › ASU Downtown Center › State Capitol › State Fairgrounds › Downtown Glendale › Concentra Medical Hospital › Boswell Memorial hospital › El Mirage Village Square › Sun Health Del E Webb Memorial Hospital › Grand Canyon College › Phoenix Community College	› I-10 West › I-17 › Loop 101 › Loop 303 › US 60	**Support** Wickenburg- General Plan supports use of BNSF for commuter rail Surprise- General Plan supports use of BNSF for commuter rail El Mirage- Supports use of BNSF for commuter rail Glendale- General Plan supports multimodal options (lists light rail and bus but not commuter rail **No Comments/No General Plan** Peoria- General Plan does not mention Commuter Rail Youngtown- Jurisdiction does not have General Plan
UP Main/ Chandler Branch	Downtown Phoenix to Queen Creek Road	28	› Downtown Phoenix (transfer to LRT) › Chase Ballpark › US Airways Arena › Civic Plaza Convention Center › ASU Downtown Campus › St. Joseph's Hospital and Medical Center › Phoenix Sky Harbor International Airport › Pueblo Grande Museum › Carraro Cactus Gardens › Papago Park › Phoenix Stadium › Rio Salado Park › Downtown Tempe (transfer to LRT) › ASU Main Campus › Sun Devil Stadium › Wells Fargo Arena › Packard Stadium › Arizonia State College › Tri-City Mall › Fiesta Mall › Downtown Chandler	› I-10 East › Loop 101 › Loop 202 › US 60 › LRT Starter Line	Tempe- General Plan supports commuter rail along existing corridors and new alignments from Scottsdale to Tempe and form Chandler to Tempe Mesa- General Plan generally supports commuter rail
UP Main/ Southeast	Downtown Phoenix to Ellsworth Road	32	› Chase Ballpark › US Airways Arena › Civic Plaza Convention Center › ASU Downtown Campus › St. Joseph's Hospital and Medical Center › Pueblo Grande Museum › Carraro Catus Gardens › Papago Park › Phoenix Stadium › Rio Salado Park › Downtown Tempe (transfer to LRT) › ASU Main Campus › Sun Devil Stadium › Wells Fargo Arena › Packard Stadium › Arizonia State College › Tri-City Mall › Fiesta Mall › Phoenix Mesa Gateway Airport	› I-10 East › Loop 101 › US 60 › Loop 202 › LRT Starter Line	Tempe- General Plan supports commuter rail along existing corridors Gilbert- General Plan supports commuter rail and a station along UP Southeast Queen Creek- General Plan supports Commuter rail on UP through town center
UP Yuma/ West	Downtown Phoenix to Buckeye	31	› Downtown Phoenix (transfer to LRT) › Chase Ballpark › US Airways Arena › Civic Plaza Convention Center › ASU Downtown › State Capitol › Toleson › Westridge mall › Banner Estrella Medical Center › Litchfield Airport, Goodyear airport › Avondale › Buckeye	› I-10 West › Loop 101 › Loop 303	Tolleson- General Plan generally supports transit Avondale- General Plan supports commuter rail and wants to pursue funding to convert existing rail line into commuter rail system Goodyear- General Plan supports commuter rail. City's policy is to continue to work with START committee to identify and implement Union Pacific/Southern Pacific RR tracks as commuter rail
UP Main/ Tempe Branch	Downtown Phoenix to Chandler Boulevard	17	› Downtown Phoenix (transfer to LRT) › Chase Ballpark › US Airways Arena › Civic Plaza Convention Center › ASU Downtown Campus › St. Joseph's Hospital and Medical Center › Phoenix Sky Harbor International Airport › Pueblo Grande Museum › Carraro Catus Gardens › Papago Park › Phoenix Stadium › Rio Salado Park › Downtown Tempe (transfer to LRT) › ASU Main Campus › Gammage Auditorium › Tempe St. Luke's Hospital › Chandler Mall	› I-10 East › Loop 101 › US 60 Loop 202 › LRT Starter Line	Tempe- General Plan supports commuter rail along existing corridors Chandler- General Plan generally supports high capacity transit networks

IMPLEMENTATION ISSUE: GOVERNANCE

Description of Governance Requirements

One of the recurring challenges or issues to implement commuter rail in the MAG region and northern Pinal County is the question of who will be the responsible party in advancing the concept beyond this Strategic Plan? A critical element is the administration of the system when the corridor passes through several jurisdictions.

Examples from other regions

SYSTEM	AGENCY	GOVERNANCE	TRACK MILES LENGTH	ANNUAL PASSENGERS
Anchorage	Alaska Railroad Corporation	State	46	96,000
Baltimore	Maryland Transit Admin	State	471	6.7 m.
Boston	MBTA	State	648	39.9 m.
Chicago	Northern Illinois Regional Commuter	Region	1144	67.7 m.
Chicago	Northern Indiana Commuter Transit District	Region	130	3.5 m.
Dallas	DART	Transit Agency	20	1.3 m.
Dallas	Fort Worth Transit Authority	Transit Agency	22	823,000
Hartford	Conn. Dept. of Trans.	State	106	399,000
Los Angeles	SCRRA	Single Purpose Agency	631	9.7 m.
Miami	Tri-Tail	Single Purpose Agency(JT Powers)	104	2.8 m.
New York	Metro-North	Region	802	72.3 m.
New York	Long Island RR	Region	701	96.2 m
New Jersey	NJT	State	1016	68.7 m.
Philadelphia	Penn DOT	State	144	235,000
Philadelphia	SEPTA	Regional Transit Agency	695	30.2 m.
San Diego	NCTD	Local Transit Agency	83	1.4 m.
San Francisco	JT Powers Board	Single Purpose Agency(JT Powers)	136	6.7 m.
Seattle	Sound Transit	Regional Transit Agency	146	955,000
Stockton	Altamont Commuter Exp.	Single Purpose	90	616,000
Washington D.C.	Virginia RR Express	State	190	3.4 m.

IMPLEMENTATION ISSUE: GOVERNANCE

TYPICAL RESPONSIBILITIES OF COMMUTER RAIL AUTHORITY

- Provide a seamless transportation service;
- Coordinate with other transit providers regarding schedules, public information and integrated fare systems;
- Participate in priority setting in RTP process;
- Raise funds from a variety of sources including: fares, local/state/federal transit programs, private developers, etc.;
- Facilitate growth of the network and provide transit options in off-peak periods;
- Develop long-range plans for system development;
- Coordinate with private freight railways;
- Manage operations (often through contracts with private operators);
- Build ridership by encouraging development at stations.

GOVERNANCE STRUCTURES

Existing Governance Structures

- State of Arizona, Department of Transportation (ADOT): The Transit Division has responsibility for planning major intercity rail initiatives and distributing federal funds to rural transit providers.
- Maricopa Association of Governments (MAG): The Regional Council is comprised of representatives from 25 incorporated cities and towns within Maricopa County and has responsibility for the Regional Transportation Plan (RTP) that will have to be amended to include commuter rail. MAG is the designated Metropolitan Planning Organization for the region to serve as the principal planning agency for programming regional transportation funds.
- Regional Public Transportation Authority/Valley Metro: This organization was created in 1986 to manage transit investments on a regional basis. With the approval of Prop 400, Valley Metro has increased the bus fleet and the service area substantially, including bus service to areas outside Maricopa County.
- Valley Metro Rail (METRO): This agency is charged with the design, construction and operation of rail transit services within the County. METRO is currently completing the first phase of the light rail project and planning for future extensions.
- City Transit Systems: Phoenix, Tempe, Scottsdale, Glendale and Mesa have local bus systems that are managed by City staff.

Possible Governance Structures

- ADOT: possibly in conjunction with a state-sponsored high-speed rail connection between Tuscon and Phoenix; and positioning for passenger rail service between Arizona and adjoining states, such as California and Nevada.
- A new Regional Commuter Rail Agency: involving membership from both Maricopa and Pinal counties, focused on commuter rail; most likely would require participation.
- Valley Metro: expanding the mandate of this agency to include commuter rail with Board representation from Pinal County for example.
- Valley Metro Rail: building on the existing staff resources that are focused on rail services, METRO could expand the Board to include representation from cities on the corridors.
- City Partnerships: in order to move quickly in one corridor the Cities in the corridor could work together (through a joint powers agreement) to start a commuter rail line.

IMPLEMENTATION ISSUES - RAILROAD COORDINATION

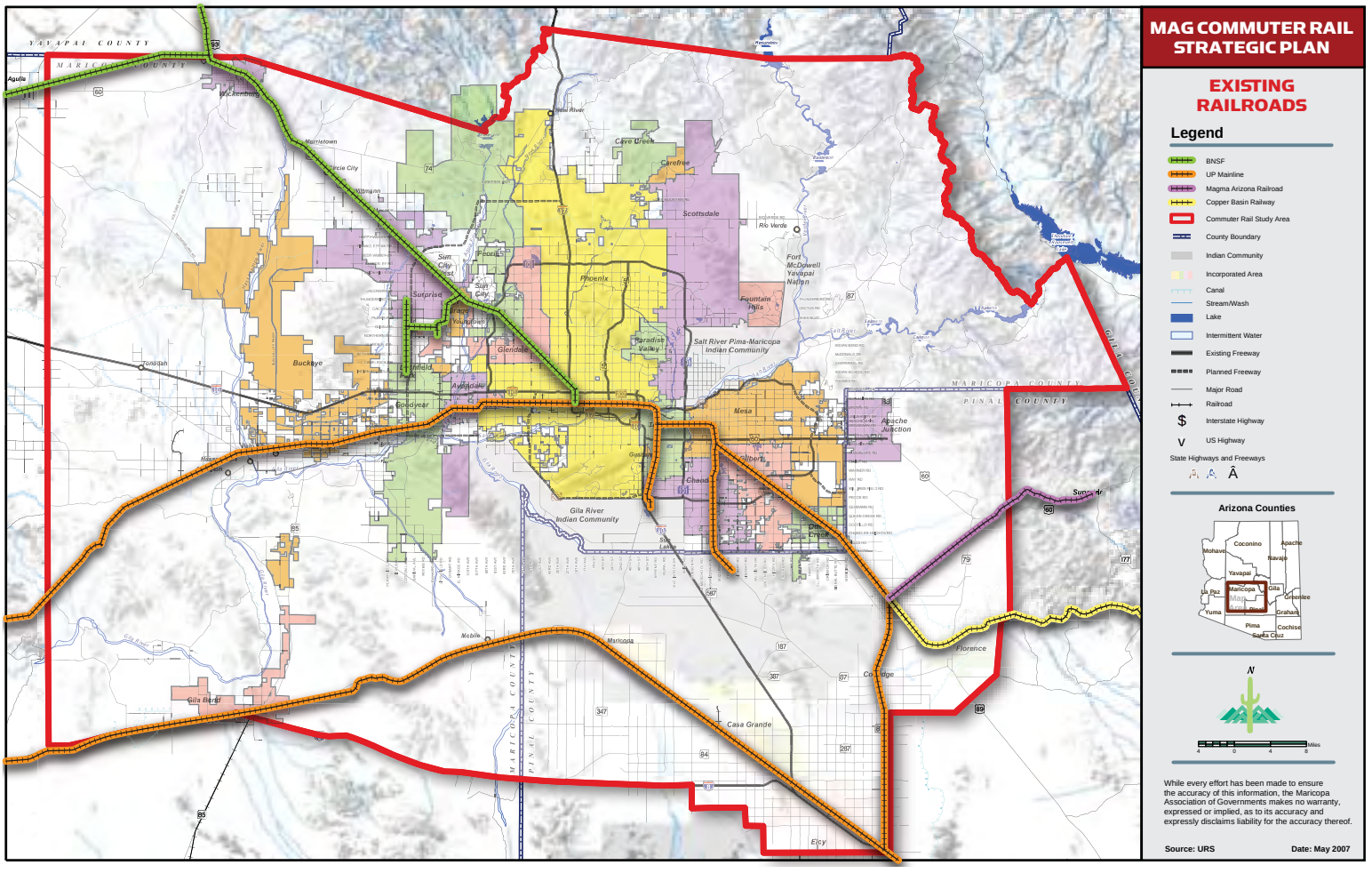
EXISTING RAILROADS IN MARICOPA COUNTY

Burlington Northern and Santa Fe Railway (BNSF)

The BNSF line is a branch line originating in Williams, Arizona entering the MAG region from the northwest near Wickenburg. The BNSF Phoenix Line connects with the main transcontinental line of the BNSF at West Williams Junction near I-40 and then leads south to Phoenix.

Union Pacific Railroad (UPRR)

The UP main transcontinental line is located south of the MAG region, passing through Yuma and Tucson. A branch of the UP line passes through the MAG region between a point east of Yuma to Picacho, southeast of Gilbert. The portion of this line between Yuma and the Palo Verde Nuclear Generating Station has been abandoned by the UP. All UP freight traffic enters the MAG region from the east via Picacho. Two industrial branch lines, the South Tempe/West Chandler Branch and the Chandler Branch are also operated by UP.



RAILROAD ACCESS AGREEMENTS

KEY QUESTION: SALE OR CAPACITY RIGHTS?

SALE AGREEMENTS

- Compensation
- Level of Service
- Rail Freight Rights
- Capacity Improvements
- Indemnification and Insurance
- Maintenance and Dispatch
- Environmental Conditions
- Train Operation

CAPACITY RIGHTS AGREEMENTS

- Compensation
- Level of Passenger Service
- Capacity Improvements
- Indemnification and Insurance
- Environmental Conditions
- Maintenance and Dispatch
- Train Operation

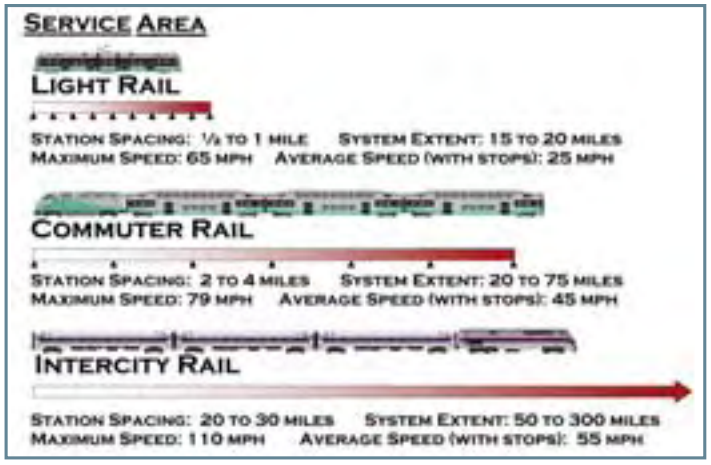
NEXT STEPS

- Unify Efforts
- Identify Corridor Capacity Improvements
- Prioritization

CONCEPT SYSTEM PLAN - COMMUTER RAIL DESCRIPTION

WHAT CAN COMMUTER RAIL PROVIDE FOR THE CONSUMER?

- Carry longer trips in congested corridors
- Offer relief in peak periods to parallel highways
- Provide service to urban centers
- Link to developing outlying areas
- Offer connections to other modes



COMMUTER RAIL MARKET

- Service for Commuters - Regular Routine
- Home-to-Destination Trip Time Important
- Features that are important to patrons:
  - On-time Performance
  - Competitive travel time with private auto
  - Clean Equipment
  - Secure Stations/Parking Lots

TRIP PURPOSES SERVED BY COMMUTER RAIL

- Commuters – Daily – Morning & Afternoon
- Mid-Day, Evenings, Weekends – Occasional Trips/Events
- Transfer Connections to Other Transit Services (Bus/LRT/AT)

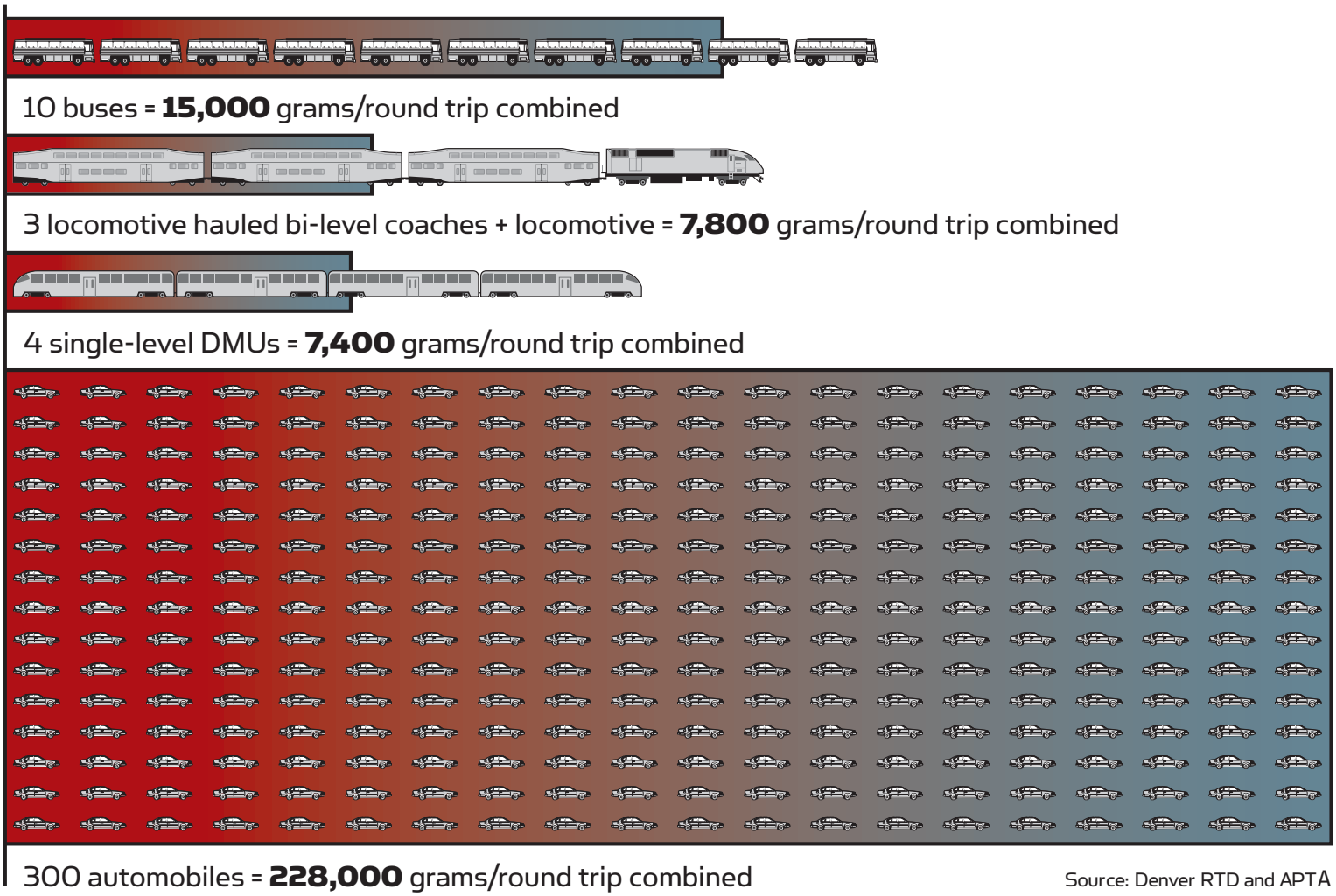
CONCEPT SYSTEM PLAN - COMPARISON OF TRANSIT OPTIONS

BENEFITS OF TRAVEL REDUCTIONS

Commuter Rail offers reductions in automobile vehicle-miles of travel. For each commuter rail car, between 9,000 and 10,000 VMT could be eliminated each day with ridership at capacity. Reduced VMT saves energy, air pollutant emissions and can help reduce peak period congestion.

Overall net benefit to regional air quality for commuter rail due to reduction in regional vehicle miles traveled (VMT).

Relative level of pollutants (combined PM10, NOx+ HC, CO, grams/round trip) to carry 300-400 passengers 50 miles round-trip:



10 buses = **15,000** grams/round trip combined

3 locomotive hauled bi-level coaches + locomotive = **7,800** grams/round trip combined

4 single-level DMUs = **7,400** grams/round trip combined

300 automobiles = **228,000** grams/round trip combined

Source: Denver RTD and APTA

IMPLEMENTATION ISSUE: FUNDING

MAG COMMUTER RAIL STRATEGIC PLAN FUNDING IMPLEMENTATION STRATEGY

The critical decisions that will determine the MAG Commuter Rail Strategic Plan's funding implementation strategy include:

Government / Agency Roles and Responsibilities

Definition of System Plan

- Facilities
- Operations
- Phasing

Funding

- Federal
- State
- Local

Public Commitment

Railroad Coordination

IMPLEMENTATION ISSUE: FUNDING

THE CONCEPT OF PUBLIC VALUE CAPTURE

The value capture funding mechanism "captures" a portion of the increased value of real estate along a transit corridor, which is due to the presence of said corridor, to fund the transit project. In most cases, value capture is used to underwrite bonds that fund construction of the transit project.

- Transit-oriented development increases property values. Building near a transit stop is not only good for the transit system; it is good for property owners and interested developers. Residential and commercial projects near transit typically appreciate in value more rapidly than other projects. As demand for scarce properties near transit stops increases, this trend will continue.

- Development near transit stops increases tax revenues. As the value of property near transit appreciates, property taxes collected by local governments also increase. In fact, some cities take advantage of this by using tax increment financing to help fund area capital improvements.

- Transit-oriented development provides retail opportunities and increases sales tax revenues. Pedestrian activity around transit stops can support retail activity. Not only does this improve the viability of small businesses, but it also translates into increased sales tax revenues for local governments.

- Transit-oriented development provides local special purpose development organizations (redevelopment agencies, economic development groups, etc.) with an opportunity to directly participate in the ongoing price appreciation of properties affected by station development. Joint development, special connection fees, cost sharing agreements and other mechanisms available to local governments can provide direct non-tax revenues to local governments.

- Transit-oriented development can help revitalize downtown and neighborhood areas. By attracting new development, transit can be a catalyst for revitalizing deteriorating and economically blighted areas. Transit-oriented development by itself is unlikely to cause the turnaround of an area bypassed by the local market, but used in concert with other economic development tools, transit-oriented development can provide a catalytic effect promoting new life in previously bypassed sections of the community.

IMPLEMENTATION ISSUE: FUNDING

POTENTIAL FUNDING SOURCE: VALUE CAPTURE MECHANISMS

Benefits Assessment Districts - assessment charges imposed on property owners in a designated area, based on the specific benefits to those properties, as generated by the transit facilities.

- Tax Increment Financing - incremental property tax receipts (above a pre-determined base) which can be attributed to infrastructure improvements, such as transit facilities. These incremental receipts will typically be captured through a redevelopment agency (which could dedicate some of its own tax increment funds for transit facilities in a designated redevelopment area), or through the establishment of infrastructure financing districts.
- Development Exactions - additional requirements placed on the developer during the discretionary approval process to assist in funding improvements. An example is the reservation of right-of-way for alignments or stations.
- Density Bonuses - permitted increases in density at transit sites in order to create additional value on those properties. A development agency could then capture some of this incremental value by negotiating for additional financial support by the property owner or by placing other requirements on the developer of the site.
- Development Impact Fees - established fees places on new development which has been shown to have a direct relationship to the impact of that development on local infrastructure, including the transportation system. Could be used to fund station or park & ride development costs of a rail transit facility that serves the development.

IMPLEMENTATION ISSUE: FUNDING

POTENTIAL FUNDING SOURCE: PUBLIC PRIVATE PARTNERSHIPS

Public-private partnerships refer to the contractual agreements that are formed between a public agency and private sector entity that can allow for grater private sector participation in the delivery of transportation projects. These types of partnerships are increasingly becoming part of the overall considerations for future funding of the highway and transit systems in the United States.

The U.S. Department of Transportation has outlined some of the key benefits in using public-private partnerships to deliver transportation projects including:

- Expedited completion compared to conventional project delivery methods;
- Project cost savings;
- Improved quality and system performance from the use of innovative materials and management techniques;
- Substitution of private resources and personnel for constrained public resources; and,
- Access to new sources of private capital.