



Passenger Rail Workshop

September 30, 2009

Las Cruces Metropolitan Planning Organization (MPO)

Passenger Rail Workshop

- Welcome
- Overview of rail transport
- Discussion of Commuter Rail planning and implementation from Las Cruces to El Paso
- Discussion of inter-city rail (Connections to Albuquerque and Santa Fe)
- National High Speed Rail Corridor (El Paso / Ciudad Juarez- Denver)



Rail Transport Definitions

Light Rail - Typically electric engine that operates on fixed rail in shared right-of-way. Frequent, local trips



Rail Transport Definitions

Commuter Rail - Electric or diesel engine operating in separate right-of-way. Typical distances 30-50 miles. Several trips per day.



Rail Transport Definitions

Regional Rail - Intercity rail with distances that are greater than typical commute distances. Only a few trips per day.



*Indiana DOT is evaluating additional passenger rail service to South Bend and to Louisville.

**In Missouri, current restrictions limit train speeds to 79 mph.

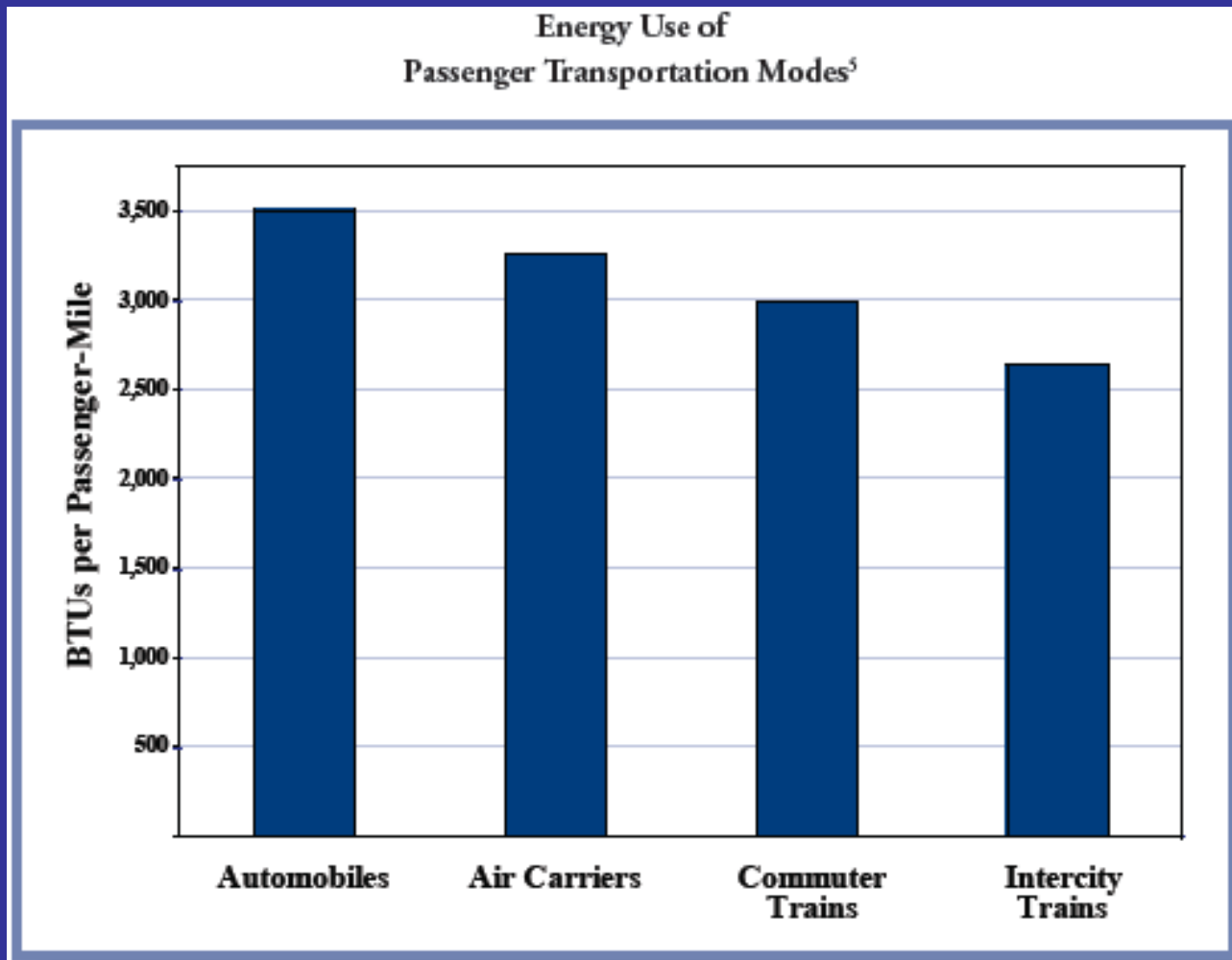


Rail Transport Definitions

High Speed Rail - Operating Speeds up to 220 miles per hour. Corridors 100-600 miles



Why Passenger Rail?



Benefits of Passenger Rail

Rail is well positioned to address many of the Nation's strategic transportation goals:

Safe and efficient transportation options. Rail is a cost-effective means for serving transportation needs in congested intercity corridors.

Foundation for economic competitiveness. America's transportation system is the lifeblood of the economy.

Energy efficiency and environmental quality. Rail is already among the cleanest and most energy-efficient of the passenger transportation modes.



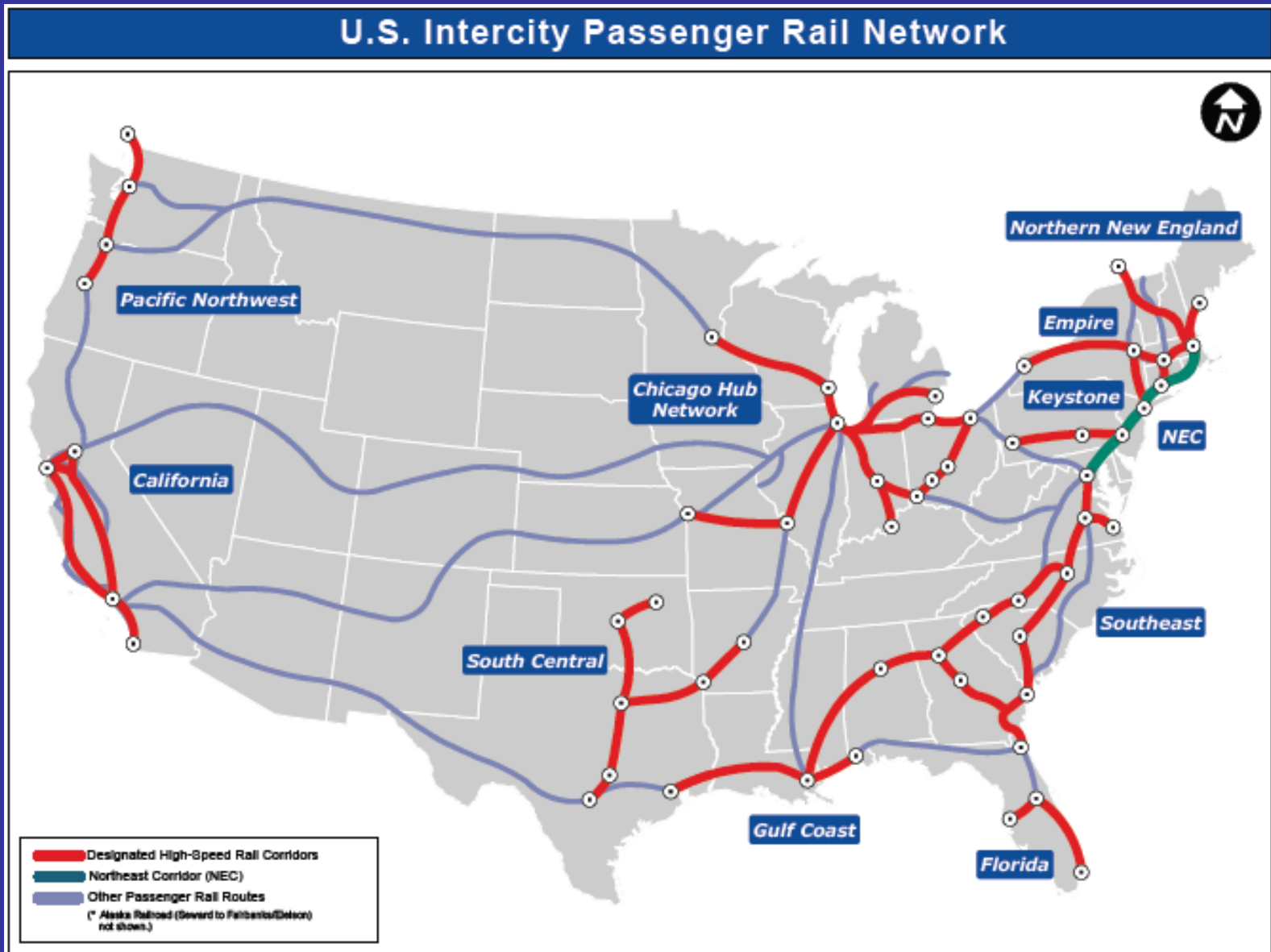
Commuter rail to El Paso



Regional Rail to Albuquerque and Santa Fe



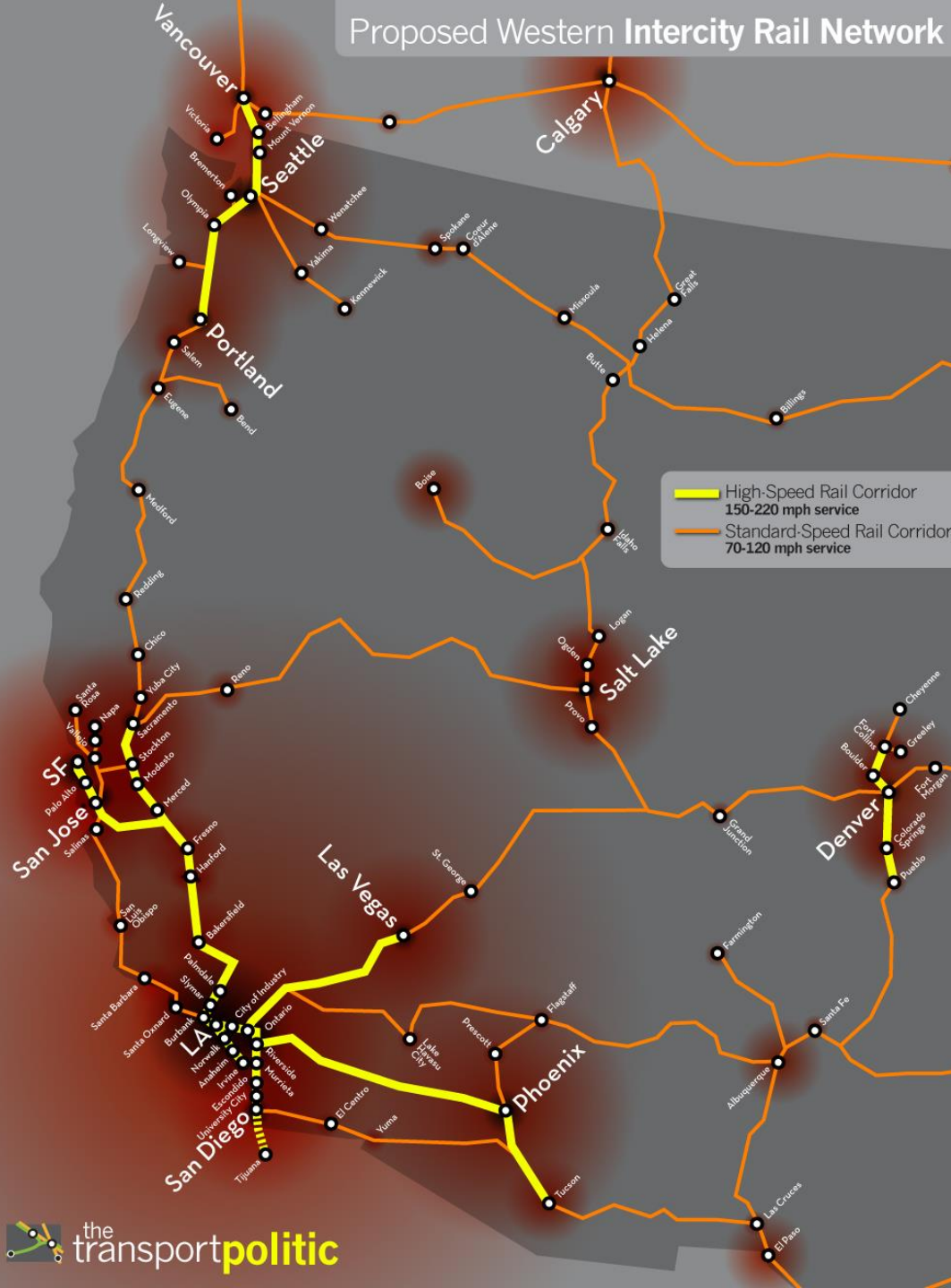
Designated High Speed Rail Network



Proposed Southwest Corridor



Proposed Western Intercity Rail Network



Thank you

For more information:

South Central Regional Transit District - Draft
Rail Feasibility Study

<http://www.scnmtransit.com/LinkClick.aspx?fileticket=Oz5yp8Ytsul%3d&tabid=59&mid=385>

Federal Rail Administration - High Speed Rail

<http://www.fra.dot.gov/US/content/31>



- Definitions:
- High-Speed Rail (HSR) and Intercity Passenger Rail (IPR)*
- HSR – Express. Frequent, express service between major population centers 200–600 miles apart, with few intermediate stops. Top speeds of at least 150 mph on completely grade-separated, dedicated rights-of-way (with the possible exception of some shared track in terminal areas). Intended to relieve air and highway capacity constraints.
- HSR – Regional. Relatively frequent service between major and moderate population centers 100–500 miles apart, with some intermediate stops. Top speeds of 110–150 mph, grade-separated, with some dedicated and some shared track (using positive train control technology). Intended to relieve highway and, to some extent, air capacity constraints.
- Emerging HSR. Developing corridors of 100–500 miles, with strong potential for future HSR Regional and/or Express service. Top speeds of up to 90–110 mph on primarily shared track (eventually using positive train control technology), with advanced grade crossing protection or separation. Intended to develop the passenger rail market, and provide some relief to other modes.
- Conventional Rail. Traditional intercity passenger rail services of more than 100 miles with as little as one to as many as 7–12 daily frequencies; may or may not have strong potential for future highspeed rail service. Top speeds of up to 79 mph to as high as 90 mph generally on shared track. Intended to provide travel options and to develop the passenger rail market for further development in the future.

* Corridor lengths are approximate; slightly shorter or longer intercity services may still help meet strategic goals in a cost effective manner.



Potential Modal Comparative Advantage by Market⁴

		Intercity Distance (in miles)		
		0-100	100-600	600-3,000
Population Density	Light	1) Auto	1) Auto 2) Conventional Rail	1) Auto 2) Air
	Moderate	1) Auto 2) Commuter Rail	1) High-Speed Rail 2) Auto	1) Auto 2) Air
	High	1) Commuter Rail 2) Auto	1) High-Speed Rail 2) Air	1) Air



ESTIMATED ONE-WAY TRAVEL TIMES

SERVICE OPTION	DISTANCE (IN MILES)	NUMBER OF ASSUMED STATIONS	ESTIMATED ONE-WAY TRAVEL TIME
El Paso – Downtown Las Cruces	42.6	8	58 minutes
El Paso – Dona Ana	48.2	9	66 minutes
El Paso – Spaceport	222.7	3	2 hours, 16 minutes
El Paso – Albuquerque	252.7	6	5 hours, 26 minutes



VEHICLE REQUIREMENTS

SERVICE OPTION	DAILY TRAINS	LOCOMOTIVES	PASSENGER CARS
El Paso – Downtown Las Cruces	4	4 + 1 spare = 5	8 + 2 spares = 10
El Paso – Dona Ana	4	4 + 1 spare = 5	8 + 2 spares = 10
El Paso – Spaceport	1	1 + 1 spare = 2	2 + 1 spare = 3
El Paso – Albuquerque	1	1 + 1 spare = 2	2 + 1 spare = 3



QUANTITIES BY ALTERNATIVE

COST ITEM	El Paso - Las Cruces (base project)	El Paso - Dona Ana	El Paso - Spaceport	El Paso - Albuquerque
Right-of-Way	fixed	fixed	0 (assumes base)	0 (assumes base)
Trackwork, Signals	42.6 miles	48.2 miles	61.1 miles (assumes base)	180.1 miles (assumes base)
Locomotives	5	5	2	2
Passenger Cars	10	10	3	3
Stations	8	9	1 (assumes base)	2 (assumes base)
Maintenance Facility	1	1	0 (assumes base)	0 (assumes base)

Table 5-3 provides the resulting order-of-magnitude capital costs. *Again, it is important to note that quantities for the regional routes from El Paso to Spaceport or Albuquerque assume that a base project from El Paso to Las Cruces already exists.*



ORDER-OF-MAGNITUDE CAPITAL COST SUMMARY

SERVICE OPTION	LOW ESTIMATE (IN MILLIONS)	HIGH ESTIMATE (IN MILLIONS)
El Paso – Downtown Las Cruces (base project)	\$175	\$735
El Paso – Dona Ana	\$185	\$790
El Paso – Spaceport (assumes base project)	\$75	\$625
El Paso – Albuquerque (assumes base project)	\$200	\$1,800



2007 Commuter Rail Weekday Ridership Forecasts

Endpoints	Stations	Daily One-Way Trips	Weekday Riders
El Paso - Las Cruces	8	16	4,700 - 8,000
El Paso - Dona Ana	9	16	4,800 - 8,100



CAPITAL COST BASIS FOR LOW AND HIGH ESTIMATES

COST ITEM	LOW ESTIMATE	HIGH ESTIMATE
Right-of-Way	\$75 million fixed cost	\$250 million fixed cost
Trackwork, Signals	\$1 million/mile	\$10 million/mile
Locomotives	\$2.2 million/vehicle	\$2.2 million/vehicle
Passenger Cars	\$2.5 million/vehicle	\$2.5 million/vehicle
Stations	\$2 million/station	\$2 million/station
Maintenance Facility	\$6 million	\$6 million

