Herding Many Cats

Midwest High Speed Rail Association
Networks, Many Paths to Success

Midwest High Speed Rail Association
California Rail Services: Both Regional and High Speed
Investment Strategy: Phasing of the Vision Plan

<table>
<thead>
<tr>
<th>Time Horizon</th>
<th>Base Year</th>
<th>Near Term (2022)</th>
<th>Mid Term (2027)</th>
<th>Vision (2040)</th>
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<tbody>
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2040 Vision for Passenger Rail

» **Integrated Statewide Network**
  » High Speed Rail
  » Intercity and Regional Services
  » Integrated Express Bus

» **Coordinated Schedules**
  » Regular pulsed service
  » Key transfer hubs
  » Public Transit Connections

» **Customer Focus**
  » Seamless First/Last-Mile Access
  » Integrated Ticketing
  » Auto and air competitive

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**Service Categories**
- Rail Service - Operating Speed Over 125 Miles Per Hour
- Rail Service - Operating Speed Up To 125 Miles Per Hour
- Express Bus / Urban Rail Transit Network
- Amtrak Long Distance Trains
- Ferry Boat
Example of an Integrated Network - Wetzikon

– Network Map
Example of an Integrated Network - Wetzikon

1. Buses arrive in advance of the trains
2. Trains arrive in the station
3. All services are in the station
4. Trains depart from the station
5. Buses depart from the station
Comparing Metrics – Existing v. 2040

Cost per Train Mile

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>$80</td>
<td>$0</td>
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</table>

Cost per Seat Mile

<table>
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<tr>
<th>Year</th>
<th>2015</th>
<th>2040</th>
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<tbody>
<tr>
<td>Cost</td>
<td>$0.20</td>
<td>$0.05</td>
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</table>

All costs are in 2015$
Driving Operating and Maintenance Costs Down

Changes in rolling stock

Changes in speed

Changes in turnaround time

Changes in travel distances
Rail Plan Vision: Ridership

» Results show moderate increase in rail ridership demand due to population growth

» However, market potential for networked services is **unrealized**
Rail Plan Vision: Ridership – Market Potential

» Result of integration and HSR shows huge increase in rail ridership demand

» Satisfies a large market potential for networked services
2022 Vision:
Southern California
2027 Vision:
Northern California
2027 Vision: Southern California
2040 Vision:
Northern California
2040 Vision: Southern California

Core Rail Services (Frequency)
- High Speed Rail
- Intercity Rail: (30 minutes), (≥ 60 minutes)
- Regional Rail: (≤ 15 minutes), (30 minutes), (≥ 60 minutes)

Supplemental Connectivity
- Integrated Rail Transit and/or Bus
- Amtrak Long Distance
State Public Transportation Account
- Intercity Rail Operating, Equipment and Administration (from 2.375% diesel sales and use tax)
- State Transit Assistance (STA) (4.125% diesel sales and use tax)

Local Transportation Fund for Transit (0.25% general sales tax)

State Transportation Improvement Program
- Interregional (rail minimum 15% of state 25% share)
- Regional (75%, sometimes partnered with interregional)

Transit and Intercity Rail Capital Program
- 10% Cap and Trade Auction Proceeds (continuous; amount varies)
- One-Time Budget Appropriations ($144 million in 2016)

High Speed Rail Funding (see 2016 Business Plan for details)

Local Measure Funding (most between 0.25% and 2% general sales tax, with a portion to transit)

Federal Grants and FTA Formula Funds
New Funding in 2017

- **SB 1 of 2017**
  - Augments STA, STIP and TIRCP, Commuter/Intercity
    - 3.5% diesel sales and use tax for transit ($3.1B over 10 yrs.)
    - 0.25% diesel sales and use tax for commuter rail ($220M over 10 yrs.)
    - 0.25% diesel sales and use tax for intercity rail ($220M over 10 yrs.)
    - About $1.1 billion in new STIP capacity over 10 years
    - $25-175 per year Transportation Improvement Fee (per vehicle; indexed)
      - $105 million (indexed) to Transit SGR ($1.2B over 10 yrs.)
      - $245 million (indexed) to TIRCP ($2.7B over 10 yrs.)
  - $236 million one-time funding to TIRCP from debt repayment
  - Solutions for Congested Corridors Program ($250 million/yr)
  - Trade Corridor Enhancement Account (10 cents per diesel fuel gallon (CPI-indexed); about $3 billion over first 10 years)