Planned California High Speed Train Routes
San José Diridon Station Area Today
High Speed Rail in the World Today
US East Coast Rail Network & European HSR Network
Investment in HSR by Country

China: $62.9 billion from 2004 to 2007
  $300 billion by 2020
  16,000 miles HSR network by 2020
  Max. train speed 220 mph

Spain: $100 billion by 2020
  4,300 miles HSR network by 2010
  6,200 miles HSR network by 2020
  Max. train speed 186 mph

U.S.: $13 billion by 2014
  California: $2.35 billion/ 9.95 billion Prop. 1A
  800 miles HSR network
  Max. train speed 220 mph
Proposed US High-Speed Rail Corridors
High-speed rail lines

The White House has outlined a plan for a high-speed rail system that could eventually link most major cities in the U.S. Plans include links to and from Miami, New York, Chicago, New Orleans, Houston, Charlotte and Washington, D.C., as well a local line from Nashville to Atlanta through Chattanooga.

Source: Whitehouse.gov  Staff Graphic by Laura W. McNutt

Washington Union Station, 1907, renovated 1981-1989
Boston South Station (1899/ renov. 1989)
## 8 Principles of Development at HSR Stations

1. **The Station:** Fit the Station within city fabric
2. **Station Area:** Develop an area plan with the Station
3. **Connections:** Connect the Station with transit modes
4. **Mode Shares:** Shift mode share to walk, bike & transit
5. **Car Parking:** Minimize auto parking at Station
6. **Bike Parking:** Maximize bicycle parking at Station
7. **The Tracks:** Add uses in structure & minimize impact
8. **Cultural Shift:** Promote transport alternatives to the car
Kyoto Station, Japan (1997)
Kyoto Station South Side
<table>
<thead>
<tr>
<th>Category</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>HST Routes:</td>
<td>Tokyo-Osaka</td>
</tr>
<tr>
<td>Population:</td>
<td>1.5 million/ region 16.7 million</td>
</tr>
<tr>
<td>Kyoto-Tokyo:</td>
<td>2:15 hrs (186 mph max.)</td>
</tr>
<tr>
<td>Station Parking:</td>
<td>2 parking structures</td>
</tr>
<tr>
<td>Number of Passengers:</td>
<td>270,000 per day</td>
</tr>
<tr>
<td>Cost:</td>
<td>$1.25 Billion</td>
</tr>
<tr>
<td>Station Building:</td>
<td>15 stories, 2.56 million sf includes shopping mall, hotel, movie theater, department store, museums, galleries, and several local government facilities</td>
</tr>
</tbody>
</table>

Kyoto Station Mixed-Use
Kyoto Station Front Plaza and Interior
Kyoto Station – Building Layout
Berlin Central Station, Germany (2006)
Berlin Central Station Interior
<table>
<thead>
<tr>
<th><strong>HST Route:</strong></th>
<th>Hamburg, Hanover, Frankfurt, Munich</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Population:</strong></td>
<td>3.5 million/ 5 million metro area</td>
</tr>
<tr>
<td><strong>Berlin-Frankfurt:</strong></td>
<td>4 hrs (205 mph max.)</td>
</tr>
<tr>
<td><strong>Berlin-Amsterdam:</strong></td>
<td>6:10 hrs (205 mph max.)</td>
</tr>
<tr>
<td><strong>Station Parking:</strong></td>
<td>860 underground spaces</td>
</tr>
<tr>
<td><strong>Number of Passengers:</strong></td>
<td>350,000 per day</td>
</tr>
<tr>
<td><strong>Cost:</strong></td>
<td>€ 1 billion (incl. new approaches)</td>
</tr>
</tbody>
</table>

**Station Area Development:**

- **Station Quarter**
  - 4.3 acres, mixed-use
  - 160,000 sf retail/ office in station
  - 1.5 million sf office/ hotel/ retail
- **“EuropaCity” (north of station)**
  - 40 acres total, mixed-use
  - 6.5 m sf residential/ office/ retail/ cultural uses
  - 1,200 residential units/ 14,000 jobs
Berlin Central Station – New Station
Central Station

Europacity Masterplan – 6 New Neighborhoods
Melbourne SC Station, Melbourne, Australia (2006)
Southern Cross Station – Roof, Front and Interior
HST Route: Planned (Melbourne-Sydney-Brisbane)
Population: 4 million metro area
Melbourne-Sydney: 10.5 hrs currently; 4 hours with HST
Station Parking: 800 shared spaces
Number of Passengers: 55,000 per day (200,000 by 2050)
Cost: $380 million

Station Area Development: 767 acres total, 10 districts
Shopping center at station
3,400 residential units
5.4 m sf office space
325 retail units
6,500 residents; 24,000 employees (2010)
17,000 residents; 40,000 employees (2025)

Southern Cross Station and Docklands
Docklands Redevelopment Plan
Docklands – Built and Planned Projects
Utrecht Central Station, The Netherlands (1973)
Utrecht Central Station - Existing
Utrecht Central Station – Planned (2008-2013)
<table>
<thead>
<tr>
<th><strong>HST Route:</strong></th>
<th>Amsterdam – Germany (HSL-East)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Population:</strong></td>
<td>300,000 (+100,000 by 2025)</td>
</tr>
<tr>
<td><strong>Planned Speed:</strong></td>
<td>124 mph</td>
</tr>
<tr>
<td><strong>Station Parking:</strong></td>
<td>9,000 bicycle spaces</td>
</tr>
<tr>
<td><strong>Number of Passengers:</strong></td>
<td>135,000; 270,000 per day (projected by 2025)</td>
</tr>
<tr>
<td><strong>Cost:</strong></td>
<td>€ 227 million</td>
</tr>
</tbody>
</table>

**Station Area Development:**
- **222 acres total, 6 subareas**
- 1,890 residential units
- 1.9 million sf office
- 460,000 sf retail
- 95,000 sf restaurants
- 273,000 sf hotel
- 330,000 sf cultural uses
- 340,000 sf recreational uses
- 8,700 spaces; 22,000 bicycle parking spaces

**Utrecht New Station and Station Area**
Utrecht Station Area Redevelopment (2030)
Utrecht Station Area – Existing and Proposed
Liège-Guillemins Station, Liege, Belgium (2009)
<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
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<tbody>
<tr>
<td>HST Route:</td>
<td>Paris/ London-Brussels-Cologne</td>
</tr>
<tr>
<td>Population:</td>
<td>200,000/ 600,000 metro area</td>
</tr>
<tr>
<td>Liège-Brussels:</td>
<td>38 minutes</td>
</tr>
<tr>
<td>Liège-Paris:</td>
<td>2:10 hrs</td>
</tr>
<tr>
<td>Station Parking:</td>
<td>800 shared spaces in station parking garage, direct connection to E40 freeway</td>
</tr>
<tr>
<td>Number of Passengers:</td>
<td>36,000 per day</td>
</tr>
<tr>
<td>Cost:</td>
<td>$430 million (incl. new railway infrastructure)</td>
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<tr>
<td>Station Area Development:</td>
<td>New mixed-use district, 52 acres total</td>
</tr>
<tr>
<td></td>
<td>500 new residential units</td>
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<tr>
<td></td>
<td>1.1m sf office</td>
</tr>
<tr>
<td></td>
<td>27,000 sf retail</td>
</tr>
<tr>
<td></td>
<td>107,000 sf hotel</td>
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<tr>
<td></td>
<td>10 acres “Esplanade” open space</td>
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Liège-Guillemins Station
Liège-Guillemins Station - Front and Back Side
Liège-Guillemins Station – View from Station
Esplanade de Guillemins – A New Urban Axis
New L’Esplanade des Guillemins
Planned California High Speed Train Routes
San José Diridon Station Area Today
San Jose – Mode Share

- 92% drive to work
- 3% take public transit
- 5% walk
San José Diridon Station Area Boundaries
San José – California High Speed Rail Authority – Visualization
San José – Diridon Station Area Plan
Alternatives
San José
Diridon Station Area – Draft Preferred Land Use Plan
San José Diridon Station Area – Draft Preferred Plan
Iconic Station

Functional Station

Elevated Structure Visual Design Guidelines
Santa Clara Street Section

Elevated Structure Visual Design Guidelines
Elevated Structure Visual Design Guidelines
Elevated Structure Precedents
Elevated Structure Precedents
Elevated Structure Precedents
Transit-Oriented Development Near High-Speed Train Stations

THANK YOU
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**High Speed Rail & Station Area Development**