SR - 710 Tunnel Technical Study

City of San Marino Community Meeting

June 2, 2009

Caltrans

STATE ROUTE 710 TUNNEL TECHNICAL STUDY

Metro

Introductions

- Elected Officials
- Caltrans
- Metro
- Community Outreach Team
- Technical Team

Purpose of Meeting

- Learn why we are doing the Study
- Describe the Exploration Program
- Engage in two-way conversation
- Learn the best ways to communicate to you and involve you

Agenda Overview

- Tunnel Technology
- Exploration Program
- Questions, Answers, Comments
- Next Steps

Ground Rules

- Maintain mutual respect
- Maintain a respectful environment
- Listen to each other; learning from each other
- Keep an open mind – all ideas are valid
- Opinions need to be respected

Why Tunnels?

- Reduce impacts to communities and sensitive areas

Modern Tunnel Systems

- Lighting
- Communications
- Traffic Surveillance
- Ventilation
- Air Monitoring
- Motorist Aid Stations
- Emergency Egress/Refuge
- Public Address/Radio Rebroadcast

Tunnel Safety

Lighting and Communication

Traffic Surveillance and Communication

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Motorist Assistance

Motorist Aid Station

Cross Passage for Emergency Access

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OMC Building

Jet Fan Ventilation

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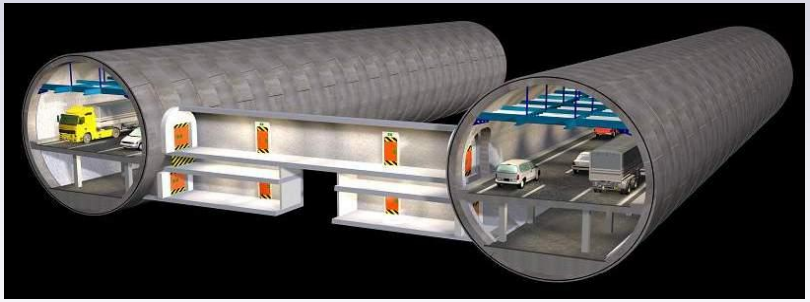
Two Basic Options

- **Tunnel Boring Machines (TBM)**
- **New Austrian Tunneling Method/Sequential Excavation Method (NATM/SEM)**

Madrid – “Calle” 30 Highway Tunnel

- **Tunnel on M-30 highway to relieve inner-city traffic congestion**
- **Twin bores 3.6 km long**
- **3 traffic lanes on top of 2 emergency lanes**

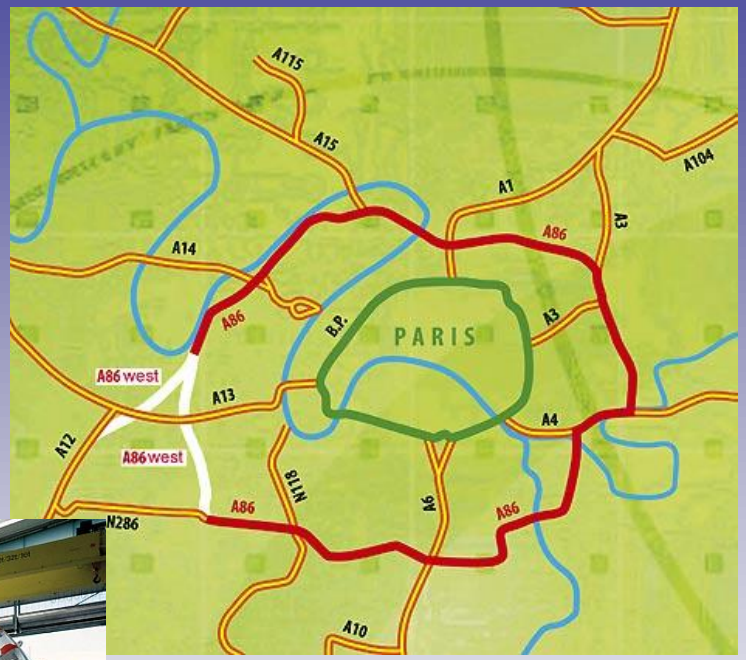


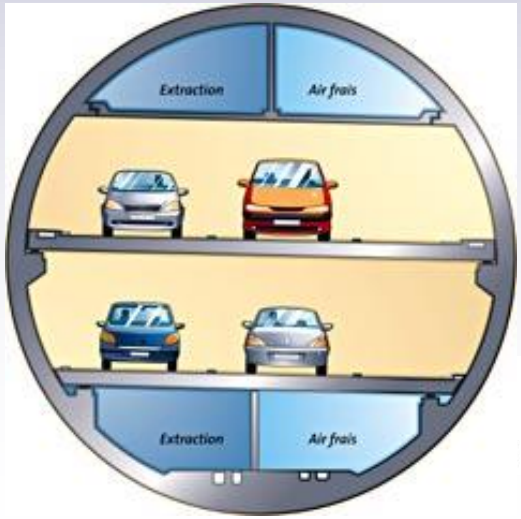
Shanghai – Yangtse River Crossing

- **Twin bores 7.2 km each**
- **3 traffic lanes in each direction**
- **Mass transit trains run on lower level**

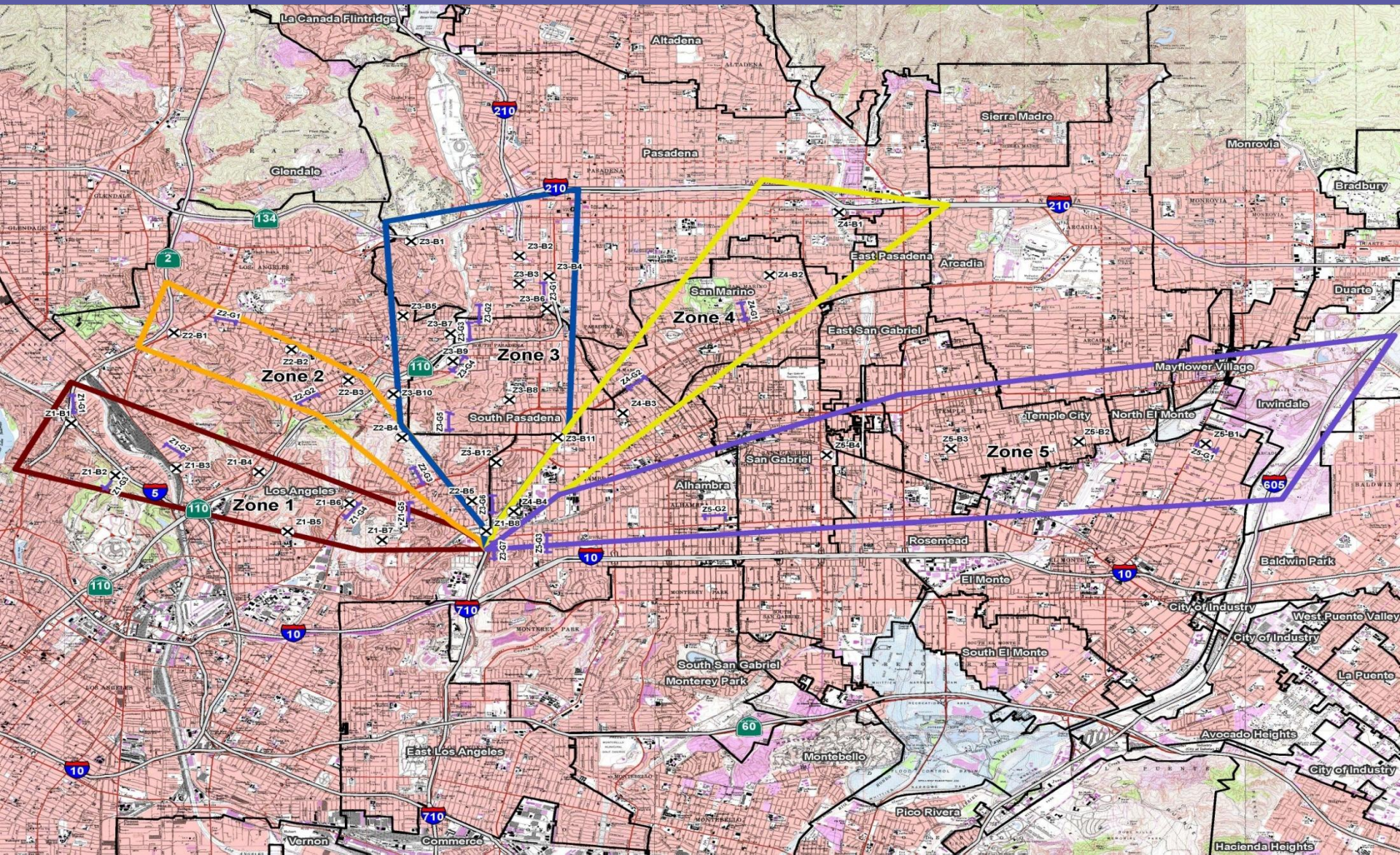
Paris – A86 Tunnel

- Two tunnels 7.5 and 10 km long
- 6 traffic lanes in each tunnel (3 in each direction)





Objective of the Exploration Program

- A total of 5 potential zones were investigated
- Collected geotechnical, geological, and hydro-geological information for each zone
- Information to be used for screening purposes

Exploration Plan Zones