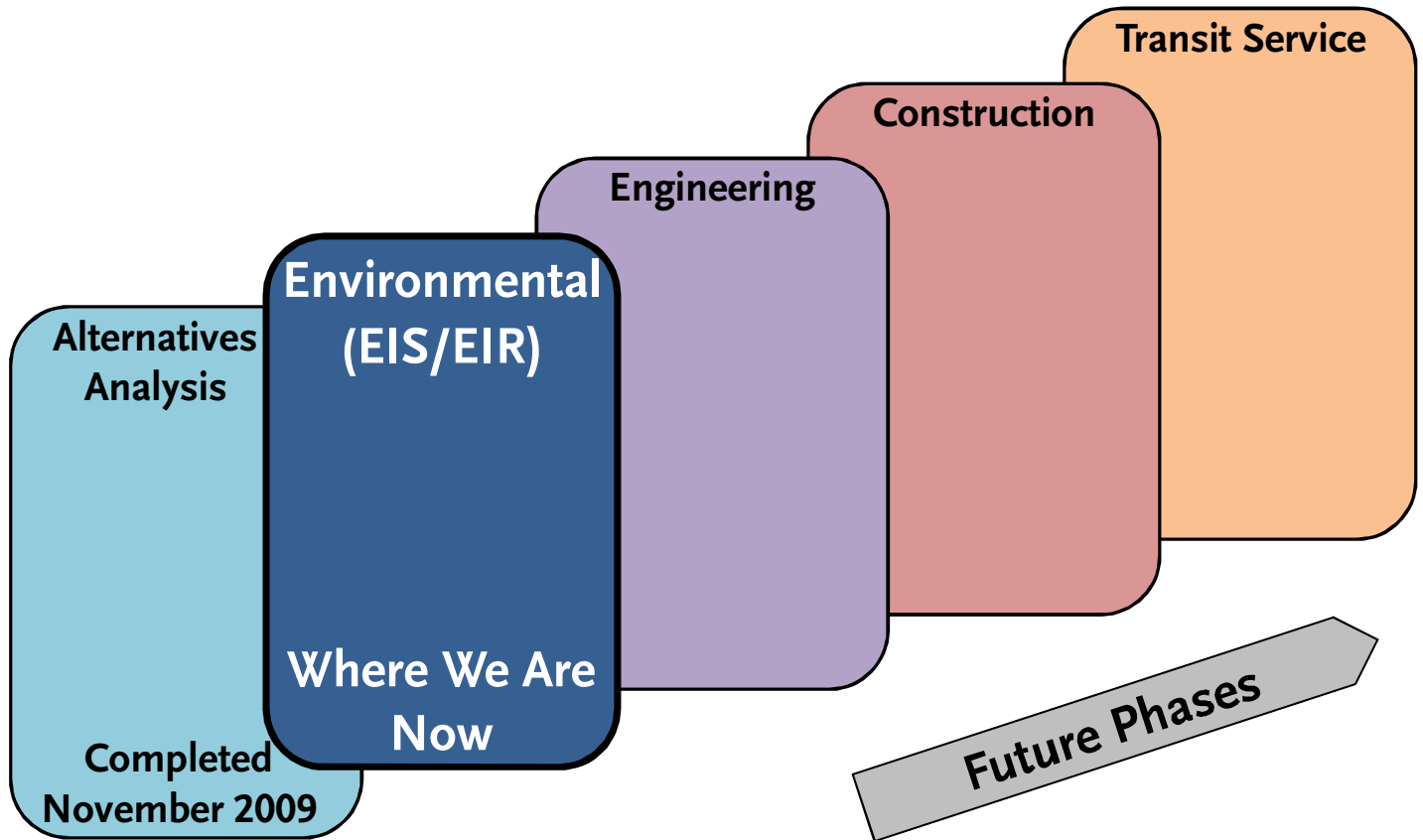




# South Bay Metro Green Line Extension

## 5 Stages of Project Development





# South Bay Metro Green Line Extension

## Development of Phased Implementation Strategy Harbor Subdivision Alternatives Analysis



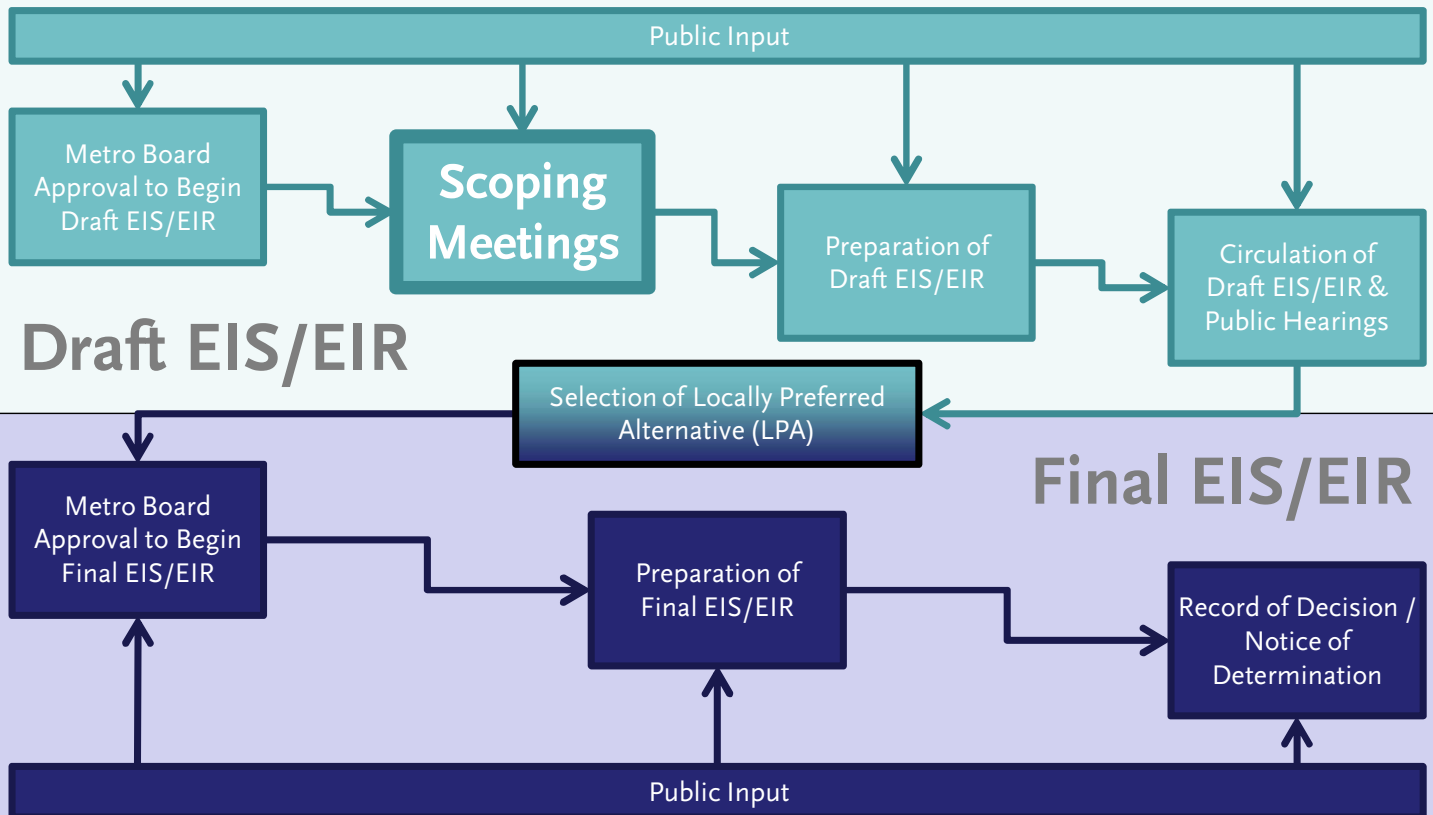


# South Bay Metro Green Line Extension

## EIS/EIR Purpose

- Identify the Purpose and Need of the project
- Define/refine alternatives
- Study potential environmental benefits/impacts of alternatives
- Evaluate measures to avoid, minimize and mitigate adverse impacts

## EIS/EIR Process



What is an EIS/EIR?



# South Bay Metro Green Line Extension

## Evaluation Criteria

- **Transportation System Performance**
  - Travel Time / Reliability
  - System Connectivity
  - Intermodal Compatibility
  - Accessibility
  - Vehicle Efficiency
- **Environmental Benefits / Impacts**
  - See Below
- **Community Acceptability**
  - Service Attractiveness
  - Community Integration
  - Public Meeting Input
- **Cost Effectiveness**
  - Capital & Operating Costs
  - Ridership & User Benefits
  - Financial Feasibility

## Environmental Topics

- **Transportation**
- **Land Use & Development**
- **Real Estate & Acquisitions**
- **Communities & Neighborhoods**
- **Visual & Aesthetics**
- **Air Quality**
- **Noise & Vibration**
- **Ecosystems & Biological Resources**
- **Geotechnical / Subsurface / Seismic / Hazardous Materials**
- **Water Resources**
- **Energy**
- **Historical, Archaeological & Paleontological Resources**
- **Parklands & Community Facilities**
- **Economic Development & Fiscal**
- **Safety & Security**
- **Construction Impacts**
- **Growth Inducing Impacts**
- **Environmental Justice**
- **Climate Change**
- **Cumulative Impacts**



## Proposed Evaluation Criteria / Environmental Topics



## South Bay Metro Green Line Extension

### Project Need

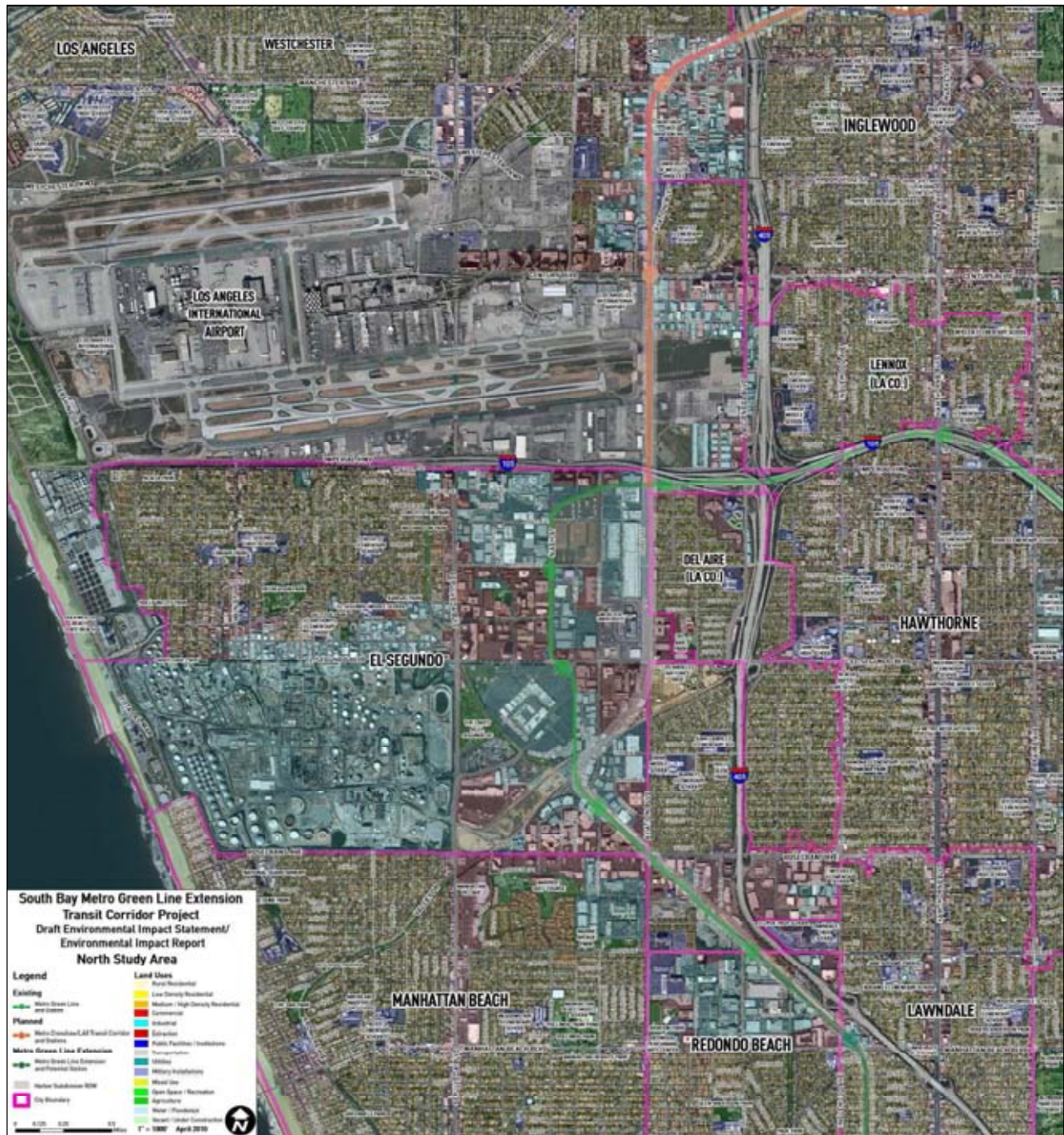
- **Access to Major Activity Centers:** High concentrations of commercial, industrial, residential, and institutional uses
- **Heavy Traffic Congestion:** Travel demand outpaced highway and roadway capacity
- **Long Transit Travel Times:** Transit travel times often twice as long as comparable auto trips
- **Challenging Transit Connections:** Numerous operators with varying schedules and fares
- **Limited Access to the Metro Rail System:** Metro Rail only serves the northern portion of the South Bay

### Project Objectives

- **Improve mobility in South Bay area by introducing high-frequency transit service options**
- **Enhance the regional transit network by providing more direct connections to regional destinations**
- **Provide an alternative mode of transportation for commuters who currently use the congested I-405 corridors**
- **Improve transit accessibility for residents**
- **Encourage a mode shift to transit, reducing air pollution and greenhouse gas emissions**



# South Bay Metro Green Line Extension



**Existing Conditions  
North Study Area**



# South Bay Metro Green Line Extension



**Existing Conditions  
South Study Area**



# South Bay Metro Green Line Extension

## Study Area Crossings



## Example: At-Grade Crossing



## Example: Grade Separation



- 18 existing at-grade crossings between LAX and Torrance
- Detailed grade crossing analysis completed during the Draft EIS/EIR



**Grade Crossings**





# South Bay Metro Green Line Extension

## No Build Alternative



- Represents the Study Area in 2035, if the Project is not built
- Includes all existing highway and transit service facilities, and the committed highway and transit projects specified in:
  - Southern California Association of Governments (SCAG) 2008 Regional Transportation Plan (RTP)
  - Metro 2009 Long Range Transportation Plan (LRTP)

## TSM Alternative



- Low cost improvements to the No Build
- Includes:
  - Intersection improvements
  - Signal synchronization
  - Rapid bus line that resembles service of the Build Alternatives



## No Build and Transportation Systems Management (TSM) Alternatives



# South Bay Metro Green Line Extension

## Light Rail Alternative



- Extend Metro Green Line 4.6 miles from the existing Redondo Beach Station to the proposed Torrance Regional Transit Center (RTC)
- Operate on two light rail tracks next to existing freight track within Harbor Subdivision ROW
- Serve up to four new stations with bus transfer facilities and potential park-and-ride lots:
  - Manhattan Beach/Inglewood
  - Redondo Beach RTC
  - Hawthorne/190th
  - Torrance RTC

## Freight Track Alternative



- 8.7-mile rail line from LAX area to proposed Torrance RTC
- Operate on upgraded freight track in the Harbor Subdivision ROW
- Serve up to four new stations with bus transfer facilities and potential park-and-ride lots:
  - Century/Aviation or Aviation/LAX
  - Douglas or Redondo Beach Station
  - Redondo Beach RTC
  - Torrance RTC



**Build Alternatives**



# South Bay Metro Green Line Extension

## Light Rail Transit (LRT) Vehicle

- Electrically powered by overhead wires
- Vehicles can be linked together to accommodate up to 500 passengers per 3-car train
- Requires traction power substations every mile along tracks
- Example: Existing Metro Blue, Green and Gold Lines



## Light Self-Propelled Railcar (SPR)

- Railcars powered by non-electric sources (diesel, fuel cell, hybrid technology, etc)
- Cannot operate at same time as freight – freight service would be moved to late night/early morning hours
- Accommodates up to 675 passengers per three-car train
- Example: Sprinter (San Diego County)



## Freight-Compatible SPR

- Similar to Light SPR, but heavier vehicles that can operate at same time as freight
- Accommodates up to 380 passengers per three-car train
- Example: Westside Express Service (Portland, OR)



## Commuter Rail Transit (CRT)

- Locomotives pushing or pulling unpowered passenger coaches
- Can operate at same time as freight
- Accommodates up to 426 passengers per three-car train
- Example: Metrolink



## Potential Vehicle Technologies



## South Bay Metro Green Line Extension

**Please submit comments by May 28, 2010 to Metro by following methods:**

- **Complete Comment Card**

- **By Mail:**

Randy Lamm, Project Manager  
One Gateway Plaza – MS 99-22-3  
Los Angeles, CA 90012

- **By Phone:**

(213) 922-4004

- **Email:**

[southbayextension@metro.net](mailto:southbayextension@metro.net)

- **On the web at:**

<http://www.metro.net/projects/southbayextension>  
(Click on “Contact Us”)

- **On Facebook at:**

South Bay Metro Green Line Extension



**Comments**