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PLANNING AND PROGRAMMING COMMITTEE
APRIL 16, 2008

**SUBJECT: ORANGE AND LOS ANGELES INTER-COUNTY
TRANSPORTATION STUDY – STATUS REPORT**

ACTION: RECEIVE AND FILE

RECOMMENDATION

Receive and file this status report on the OC/LA Inter-County Transportation Study's Purpose and Need Summary (Attachment A), Corridor Mobility Problem and Purpose and Need Report – Executive Summary (Attachment B) and the Initial Set of Conceptual Alternatives (Attachment C).

ISSUE

In June 2006, the Board approved funding for a joint study with Orange County Transportation Authority (OCTA) to develop, evaluate and recommend transportation improvements focused on issues at the OC/LA border, and for regional system integration planning for the West Santa Ana Main Branch Right-of-Way Project. Both of these projects were combined with matching funds by the OCTA to initiate the OC/LA Inter-County Transportation Study. This is the first time the two agencies have cooperated on a joint transportation study. The study area is approximately one mile on either side of the OC/LA County line and encompasses 17 cities.

The study will identify and evaluate a broad range of multi-modal transportation opportunities and improvements. The objective of this study is to identify and narrow down potential transportation improvements through a screening process and public outreach effort into reasonable alternatives that can be carried forward into separate engineering and environmental analysis.

The 12 month study started in July 2007 and is jointly managed by us and OCTA. The technical work conducted on the study was presented to the Technical Working Group comprised of the various city staff, as well as Caltrans and the Council of Governments; in addition, a public survey was conducted beginning September 2007 to seek larger public input. On December 13, 2007 an Elected Officials Workshop was held where our Board and OCTA Board Members as well as many Mayors and other elected officials and their representatives provided input for the study. As a result the project team prepared the Purpose and Need Report and developed an Initial Set of Alternative Strategies.

DISCUSSION

Purpose and Need Summary

Six Key Themes were identified in the Purpose and Need Statement:

1. Interagency Coordination;
2. Freeway Congestion;
3. Arterial Roadway Congestion;
4. Optimization of Existing Transportation Infrastructure;
5. Transit Connectivity; and
6. Use of Pacific Electric Right-of-Way.

Corridor Mobility Problem and Purpose and Need Report – Executive Summary

The following transportation systems network is examined in the report:

- Freeways;
- Arterial Roadways;
- Bus Transit;
- Rail Transit; and
- Bicycle and Pedestrian Transportation Systems.

The 2030 Baseline Condition consists of funded and committed projects to be completed prior to 2030:

- Freeway Enhancement Projects;
- OCTA Renewed Measure M Early Action Plan Freeway Projects;
- Arterial Roadway Improvements Identified in Capital Improvement Programs;
- Planned Improvements by OCTA and us to Local Bus Routes in the Study Area;
- New OCTA Bus Rapid Transit Routes;
- New Metro Rapid Routes; and
- Weekday 30-minute Headways on Metrolink between Fullerton and Laguna Niguel.

Mobility Problem:

- The substantial current traffic congestion will continue to increase;
- Vehicle Hours Traveled and Vehicle Hours of Delay is forecasted to increase at a faster rate than Vehicle Miles Traveled;
- A majority of the freeway segments in the OC/LA study area are forecast to operate at an unacceptable level of service during the AM and PM peaks in 2030;
- Local and regional transit services are limited and not coordinated;
- Demand exists for regional transit services;
- Freight goods movement has an impact on traffic as well as rail operations and capacity; and
- The existing network of bikeway facilities needs improvement including better connectivity.

Initial set of Conceptual Alternative Strategies

There are five progressive levels of Conceptual Alternative Strategies layered on top of the 2030 Baseline Network:

1. TSM/TDM Concept;
2. Arterial/Rapid Bus Concept;
3. Freeway Concept;
4. Transit Concept; and
5. Public Private Partnership Concept.

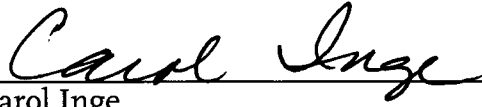
NEXT STEPS

Over the next several months, the study team will conduct further outreach including an Elected Officials Workshop in late April and two public workshops in May where the Initial Set of Conceptual Alternative Strategies will be further developed and refined to the Final Set of Conceptual Alternatives. This study is scheduled to be completed in July 2008. At the conclusion of the OC/LA Inter-County Transportation Study we will consider funding a following study to further examine selected Conceptual Alternatives in greater depth including travel demand and capital and operating cost analysis.

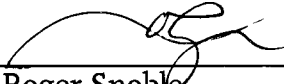
ATTACHMENT(S)

- A. Purpose and Need Summary
- B. Corridor Mobility Problem and Purpose and Need Report – Executive Summary
- C. Initial Set of Conceptual Alternative Strategies

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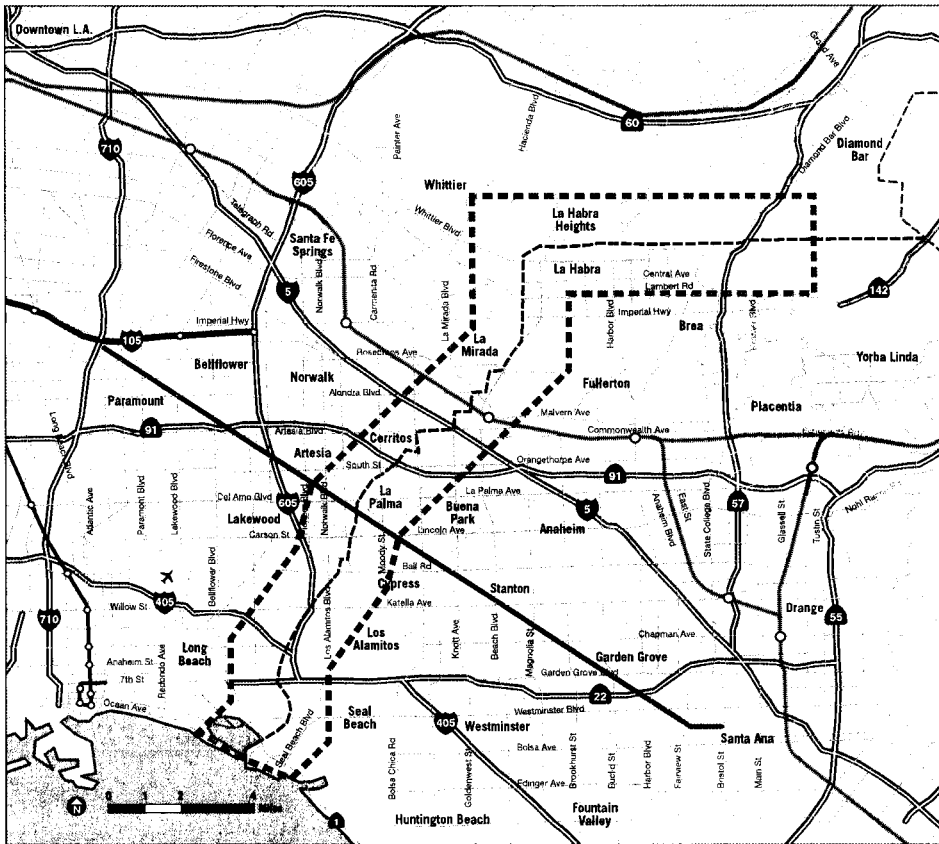


Carol Inge
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OC/LA Intercounty Transportation Study

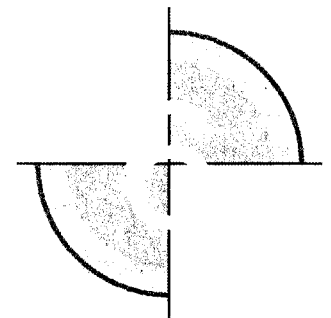


Orange County and Los Angeles County together are working on a landmark study to explore transportation improvements along the county line – one of the most traveled areas in the nation. We have compiled the following information thanks to your comments and suggestions as well as feedback from hundreds of residents, business leaders, elected and non-elected officials and other stakeholders.

Purpose and Need Summary

Between July 2007 and January 2008, OCTA and Metro conducted an analysis of existing and future transportation issues. We found the following six key needs:

- 1. Interagency Coordination** - The study is an important first step for OCTA and Metro to work together to improve transportation infrastructure and services between Los Angeles and Orange counties.
- 2. Freeway Congestion** - Improve freeway traffic operations and increase capacity.
- 3. Arterial Roadway Congestion** - Address roadway capacity constraints near I-405 and SR-57.
- 4. Optimization of Existing Transportation Infrastructure** - Make more efficient use of existing transportation infrastructure through traffic signal coordination, intelligent transportation systems, and traffic management.
- 5. Transit Connectivity** - Increase transit services across the O.C./L.A. county line and begin to coordinate transit policies between agencies.
- 6. Use of Pacific Electric Right-of-Way** - Strong demand exists for travel between both counties near the corridor. Evaluation of potential transit technologies (Bus Rapid Transit and Rail Transit) is the next step.



Conceptual Alternatives Summary

2030 Baseline Improvements - Transportation projects included in the 2030 Baseline have a committed funding source and are planned for completion prior to the Year 2030. The components include the following:

- Freeway enhancement projects as identified in the adopted OCTA and Metro Long Range Transportation Plans (LRTP) (Baseline and Constrained projects only)
- In Orange County, Renewed Measure M Early Action Plan freeway projects
- Arterial roadway improvements as identified in study area city Capital Improvement Programs (CIPs)
- Proposed OCTA and Metro Bus Rapid Transit (BRT) routes
- 30-minute service for Metrolink between Fullerton and Laguna Niguel/Mission Viejo in Orange County

To address the six key areas from the "Purpose and Need Statement," following are the proposed five transportation concepts for further technical and public review.

Transportation Systems Management/Transportation Demand Management (TSM/TDM) Concept

(Includes 2030 Baseline Improvements)

Strategies to increase the efficiency of the transportation system and improve mobility across the O.C./L.A. county line. Projects include:

- Increased local bus coordination
- Traffic signal coordination implemented on streets near and across the county line
- Freeway traffic operations improvements (traffic surveillance, ramp metering, interlink Caltrans traffic management centers)
- Additional park-and-ride and transit center facilities

Street and Rapid Bus Concept

(Includes 2030 Baseline and TSM/TDM Improvements)

A multimodal concept concentrated on increasing arterial roadway capacity, improving freeway interchanges, and enhancing transit services. Projects include:

- Improved arterial roadway capacity; focused near I-405 and SR-57 corridors
- Improved freeway interchanges
- New Rapid Bus (mixed flow) services on arterial roadways near and across the O.C./L.A. county line
- BRT (grade separated) service in the Pacific Electric Right-of-Way from Santa Ana Metrolink Station to Metro Green Line
- Improved bus shuttle services to Metrolink stations

Freeway Concept

(Includes 2030 Baseline, TSM/TDM and Street and Rapid Bus Improvements)

The Freeway Concept proposes improvements to freeways (SR-22, SR-57, SR-91, I-5, I-405, I-605) that increase capacity and reduce traffic congestion in the Year 2030. The concept adds capacity to all study area freeways in the form of additional general purpose lanes.

Transit Concept

(Includes 2030 Baseline, TSM/TDM and Street and Rapid Bus Improvements)

The Transit Concept focuses on new and improved transit services to meet anticipated future travel demand. Projects include:

- Metrolink service frequency increased from Orange County to downtown Los Angeles
- Additional Rapid Bus routes on arterial roadways
- Bus Rapid Transit services offered in exclusive lanes or corridors
- Fully elevated transit service in the Pacific Electric Right-of-Way

Public Private Partnership Concept

(Includes 2030 Baseline, TSM/TDM and Street and Rapid Bus Improvements)

The Public-Private Concept focuses on identifying privately financed improvements to freeways, streets, and transit that could supplement the improvements that are possible with public funds. Projects include:

- Truck toll lanes on I-710
- Toll lanes or high occupancy toll lanes on I-5 (in Los Angeles County), I-105, I-605, SR-91 and SR-57
- High-speed elevated transit service in the Pacific Electric ROW
- Private high-frequency bus shuttle services between airports

Next Steps

- | | |
|--------------|---|
| March | OCTA Highway Committee,
OCTA Board of Directors,
Metro Board of Directors |
| April | Gateway Cities Council of
Governments Transportation
Committee,
Elected Officials Workshop |
| May | Public Open Houses |
| June | Final Presentations to OCTA
& Metro Board of Directors |

ORANGE AND LOS ANGELES INTERCOUNTY TRANSPORTATION STUDY

Corridor Mobility Problem and Purpose and Need Report - Executive Summary Task 3.3

February 6, 2008



in association with
Fehr & Peers, Arellano Associates, and Sarah Catz

TABLE OF CONTENTS

S1	INTRODUCTION	1
S2	STUDY AREA TRANSPORTATION SYSTEM.....	3
S3	STUDY AREA DEMOGRAPHICS AND LAND USE	5
S4	RELATED TRANSPORTATION STUDIES	5
S5	TRAVEL DEMAND DATA.....	6
S6	SYSTEM PERFORMANCE/MOBILITY PROBLEM	6
S7	STUDY PURPOSE AND NEED STATEMENT	8

S1 INTRODUCTION

The Orange and Los Angeles (OC/LA) Intercounty Transportation Study is exploring alternatives for improving transportation infrastructure and services across the border between Orange and Los Angeles counties. The study is jointly funded and managed by the Orange County Transportation Authority (OCTA) and the Los Angeles County Metropolitan Transportation Authority (Metro). This is the first time the two agencies are cooperatively conducting a transportation planning study. This study lays the groundwork for future, more detailed studies.

The objectives of the OC/LA Intercounty Transportation Study are to identify transportation needs and issues within the study area and to develop conceptual transportation improvements and strategies to address these needs. The study includes extensive coordination with technical staff and elected officials from cities located along the county line, as well as with the general public.

This report describes existing and future transportation conditions in the study area. The purpose and need for transportation improvements in the OC/LA study area is established based on technical analysis of travel demand data for the study area and local input. The purpose and need serves as the basis for developing conceptual alternatives and further analysis of future transportation improvements in the study area.

The OC/LA study area follows the county line from the Pacific Ocean in the southwest to the Chino Hills in the northeast. The study area includes all existing transportation corridors that travel between Orange and Los Angeles counties. Exhibit S-1 illustrates the study area, along with major transportation corridors serving the area.

Input Received from Local Agencies

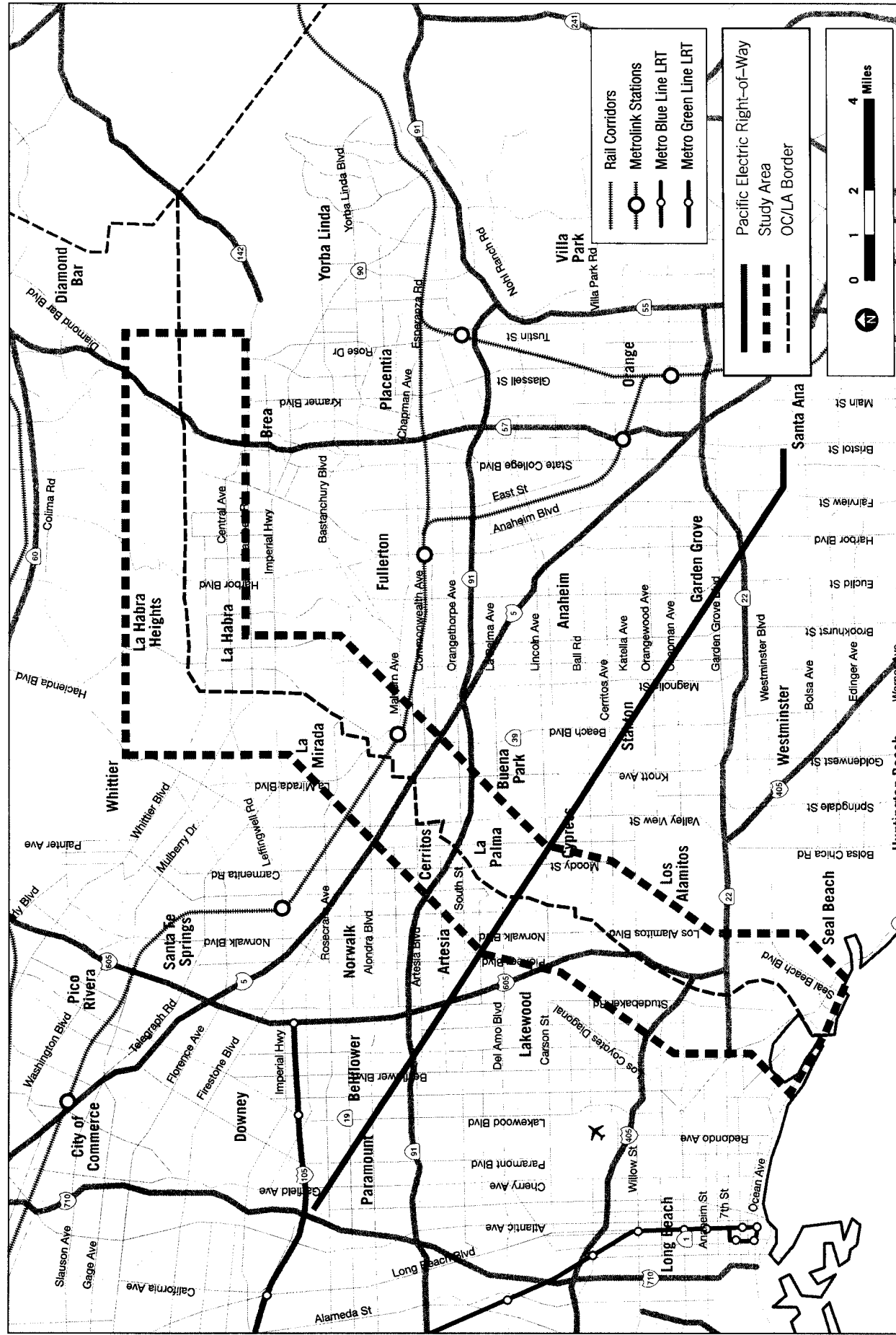
The public involvement plan for the study includes meetings with local agencies and the general public to provide information on the study and to provide an opportunity for feedback and public participation. Input for the Purpose and Need Report was provided through three Technical Working Group (TWG) meetings held with city staff and local agencies, and an Elected Officials Workshop that included OCTA and Metro Board Members along with elected officials from cities located along the county line.

Input received from these meetings included observations on the transportation modes and corridors most in need of improvement, opportunities for reducing traffic congestion across the county line, and areas where additional coordination is needed between OCTA, Metro, and other local agencies. The primary needs and areas of improvement noted in both the technical meetings and the Elected Officials Workshop included study area freeways, Metrolink service, regional transit service, and studying the potential use of the Pacific Electric right-of-way, which extends across the the county line between Orange and Los Angeles counties.

OC/LA Intercounty Transportation Study

Exhibit S-1: Study Area

February 2008



S2 STUDY AREA TRANSPORTATION SYSTEM

The transportation system in the OC/LA study area consists of freeways, roadways, rail systems, transportation centers, and park and ride facilities. Available modes of transportation include automobiles, bus and rail transit, and non-motorized (bicycling and pedestrian) transportation. A brief description of the existing study area transportation network is provided below:

- **Freeways:** Orange and Los Angeles counties are linked by six major freeways. The freeways are the Santa Ana Freeway (I-5), the San Diego Freeway (I-405), the San Gabriel River Freeway (I-605), the Garden Grove Freeway (SR-22), the Orange Freeway (SR-57), and the Riverside/Artesia Freeway (SR-91).
- **Arterial Roadways:** Numerous arterial roadways traverse the OC/LA county line and the project study area. Major roadways serving east-west traffic include Katella Avenue/Willow Street, Del Amo Boulevard/La Palma Avenue, and Imperial Highway. Major roadways serving north-south traffic include Los Alamitos Boulevard/Norwalk Boulevard, Valley View Street, and Harbor Boulevard.
- **Bus Transit:** Existing bus transit services consist primarily of local bus routes, operating on arterial roadways near the OC/LA county line. Transit providers operating in the study area include OCTA, Metro, Long Beach Transit, Montebello Bus Lines, Norwalk Transit, Cerritos on Wheels, and Foothill Transit.
- **Rail Transit:** Study area regional rail transit services are provided by Metrolink and Amtrak. Services include the Metrolink Orange County Line between Oceanside and Downtown Los Angeles, the Metrolink 91 Line between Riverside and Downtown Los Angeles, and the Amtrak Pacific Surfliner from San Diego to San Luis Obispo.
- **Bicycle and Pedestrian Transportation:** Several on-street and off-street bikeways are located in the study area. OCTA and several of the local cities have adopted bikeway plans that guide the implementation of future bicycle routes.

2030 Baseline Condition

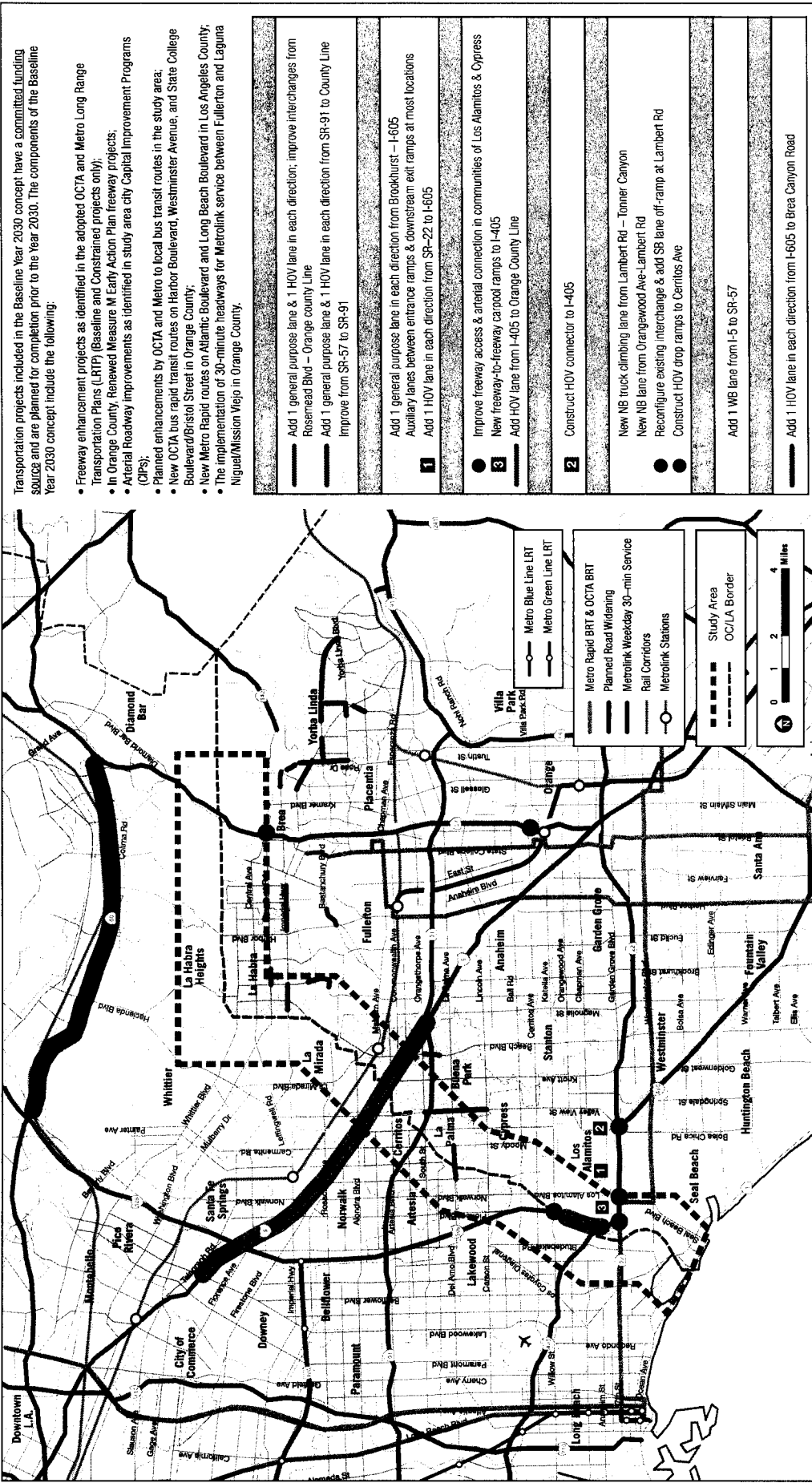
Projects included in the 2030 Baseline condition have a committed funding source and are planned for completion prior to the study planning horizon of 2030. The projects included in the 2030 Baseline are summarized below and shown in Exhibit S-2 on the following page.

- Freeway enhancement projects as identified in the adopted OCTA and Metro Long Range Transportation Plans (Baseline and Constrained projects only);
- Orange County Renewed Measure M Early Action Plan freeway projects;
- Arterial roadway improvements as identified in study area city capital improvement programs (CIPs);
- Planned improvements by OCTA and Metro to local bus routes in the study area;
- New OCTA bus rapid transit routes on Harbor Boulevard, Westminster Avenue, and State College Boulevard/Bristol Street;
- New Metro Rapid routes on Atlantic Boulevard and Long Beach Boulevard; and
- Weekday 30-minute headways on Metrolink between Fullerton and Laguna Niguel.

OC/LA Intercounty Transportation Study

Exhibit S-2: 2030 Baseline Improvements

February 2008



Transportation projects included in the Baseline Year 2030 concept have a committed funding source and are planned for completion prior to the Year 2030. The components of the Baseline Year 2030 concept include the following:

- Freeway enhancement projects as identified in the adopted OCTA and Metro Long Range Transportation Plans (LRT) (Baseline and Constrained projects only);
- In Orange County, Renewed Measure M Early Action Plan Freeway projects;
- Arterial Roadway improvements as identified in study area city Capital Improvement Programs (CIPs);
- Planned enhancements by OCTA and Metro to local bus transit routes in the study area;
- New OCTA bus rapid transit routes on Harbor Boulevard, Westminster Avenue, and State College Boulevard/Bristol Street in Orange County;
- New Metro Rapid routes on Atlantic Boulevard and Long Beach Boulevard in Los Angeles County;
- The implementation of 30-minute headways for Metrolink service between Fullerton and Laguna Niguel/Mission Viejo in Orange County.



S3 STUDY AREA DEMOGRAPHICS AND LAND USE

Existing and forecast population and employment data for the project study area were obtained from OCTA and Metro. In the existing condition, there are about 410,000 residents living within one mile of the OC/LA county line. About 175,000 jobs are located within the study area. Steady growth in both population and employment levels within the OC/LA study area is anticipated in the time period between Year 2000 and Year 2030. The highest population densities for the Year 2000 and Year 2030 are observed in the central portions of the study area in Buena Park, Cerritos, Lakewood and La Mirada. The central portion of the study area also has the highest concentrations of employment along the OC/LA county line. The greatest percentage of population and employment growth between Year 2000 and Year 2030 is anticipated to occur in the northern portions of the study area (Diamond Bar, Brea, La Habra) and in the areas near the coast (Long Beach, Los Alamitos). Exhibit S-3 illustrates the forecasted population growth within the project study area between 2000 and 2030. Project study area employment growth for the same 30-year time period is illustrated in Exhibit S-4.

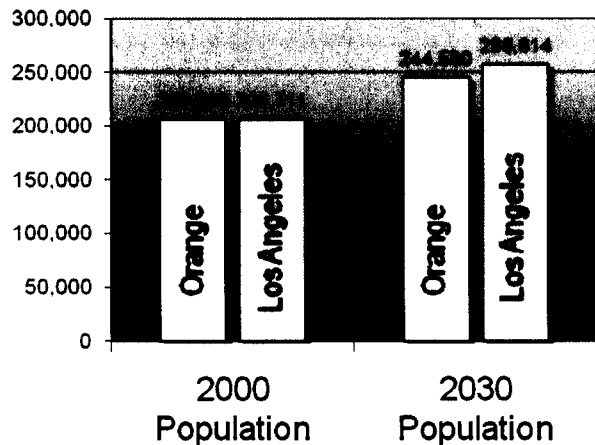


EXHIBIT S-3
STUDY AREA POPULATION GROWTH
YEAR 2000 TO YEAR 2030

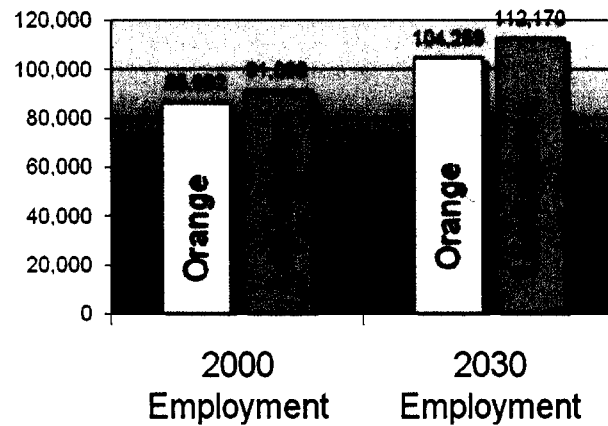


EXHIBIT S-4
STUDY AREA EMPLOYMENT GROWTH
YEAR 2000 TO YEAR 2030

S4 RELATED TRANSPORTATION STUDIES

Several transportation planning studies have been or are currently being conducted in portions of the OC/LA study area. These studies help to identify the various transportation needs in the study area and provide valuable input into the process of developing recommendations for transportation improvements. Major studies include the following:

- Regional studies: Multi-County Goods Movement Action Plan, Four Corners Transportation Study, and Metrolink Commuter Rail Strategic Plan.
- Los Angeles County studies: SR-91/I-605/I-405 Major Corridor Study, Eastside Transit Corridor Study Phase 2, Caltrans Interstate 5 Major Improvement Project EIS/EIR.
- Orange County studies: OCTA Go Local Program, I-405 Major Investment Study, West Orange County Project Definition Study, North Orange County Cities Transit Feasibility Study.

S5 TRAVEL DEMAND DATA

Forecast year 2030 travel demand data for the study area was generated using the Orange County Transportation Analysis Model (OCTAM), version 3.2, the regional model for transportation planning in Orange County. Input was also received from Metro regarding the transportation network and travel forecasts in Los Angeles County. The travel demand data showed a strong attraction between Orange and Los Angeles counties in regard to trips across the county line. This pattern is particularly apparent in cities located along the OC/LA county line. In the Year 2030, about 9% of the total daily vehicle trips generated in Orange County are forecast to travel to destinations in Los Angeles County. By comparison, about 3% of the vehicle trips generated in Los Angeles County are destined for Orange County.

An estimated two million trips cross the OC/LA county line on a daily basis in the existing condition. Additionally, trips between the two counties are forecast to increase by 26% from the existing condition to the Year 2030. It is important to note that trips across the county line include not only the trips between Orange and Los Angeles counties, but trips with origins in San Bernardino County, Riverside County, San Diego County, or other locations in Southern California. These regional trip origins must also be considered when developing improvements to address transportation needs between Orange and Los Angeles counties.

Related to the anticipated increase in trips across the OC/LA county line, a large increase in vehicle miles traveled (VMT) and vehicle hours traveled (VHT) is also forecast. Weekday VMT in the project study area is estimated to increase by 25% between 2000 and 2030. By comparison, weekday VHT in the project study area is forecast to increase by 47% over the same time period. The forecast increases for VHT in the study area are significantly higher than the forecast increases in VMT. This means that commuters traveling between Orange and Los Angeles counties are forecast to be making longer and more frequent trips, and spending a greater amount of time to complete these trips. The forecast Year 2030 PM peak period volume to capacity ratios illustrate these findings and show the substantial congestion forecast for the study area. Exhibit S-5 on the following page shows the forecast PM peak period volume to capacity ratios on freeways and arterial roadways in the study area.

S6 SYSTEM PERFORMANCE/MOBILITY PROBLEM

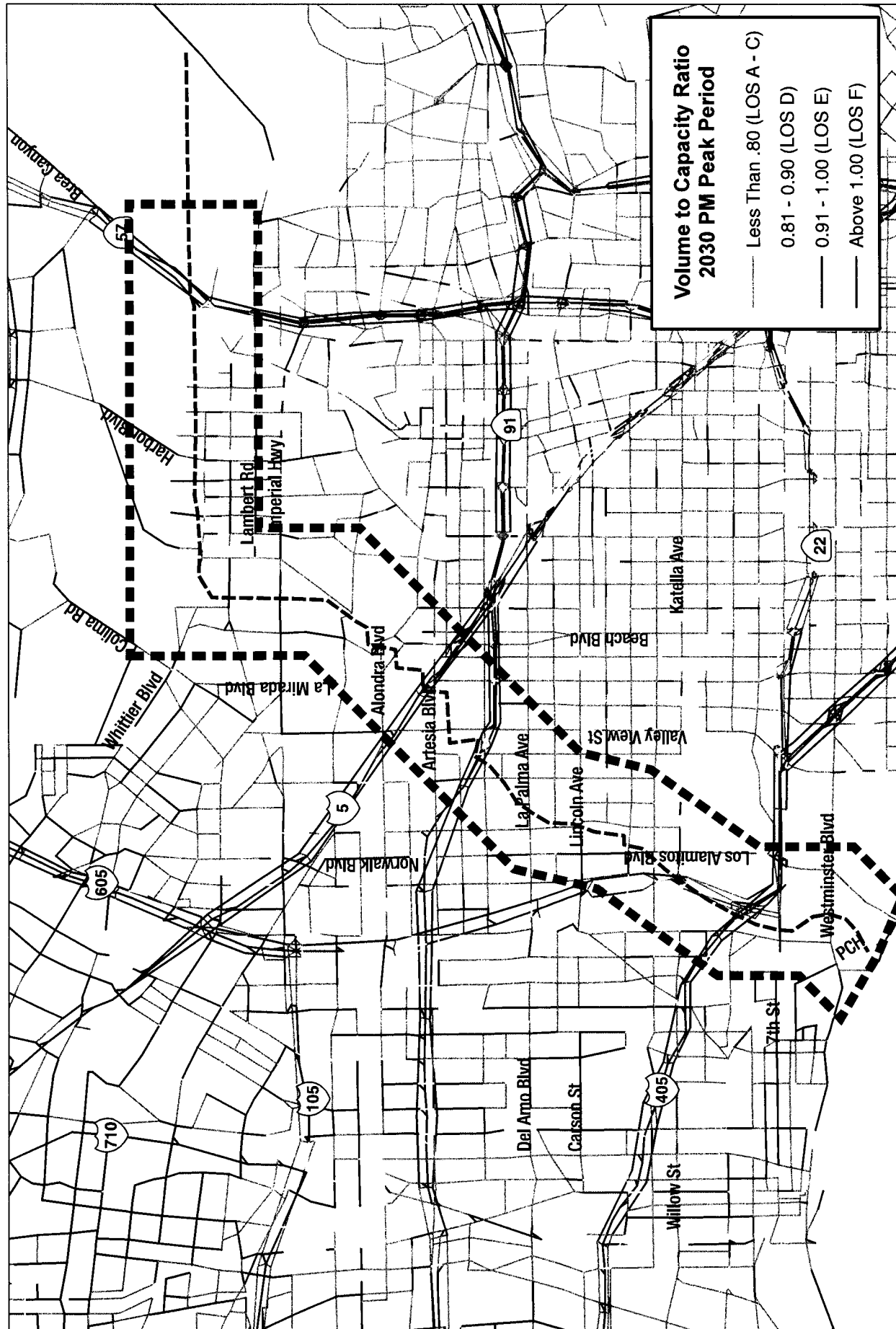
The performance of the existing and future transportation system within the project study area was analyzed to establish the purpose and need for transportation improvements across the OC/LA county line. The major findings of the system performance analysis are:

- In the year 2030, traffic operates at a poor level of service on a majority of study area freeway segments and on several major arterial roadways including: Katella Avenue, Imperial Highway, Whittier Boulevard, and Brea Canyon Road.
- The highest freeway daily traffic volume increases between 2007 and 2030 are forecast to occur on the SR-57 and I-5 freeways.
- The highest arterial daily traffic volume increases between 2007 and 2030 are forecast to occur on Imperial Highway, Rosecrans Avenue, Katella Avenue, and 7th Street.
- Demand for transit services (local bus, regional bus, and Metrolink) is forecast to increase in the Year 2030.

OC/LA Intercounty Transportation Study

Exhibit S-5: Year 2030 PM Peak Period V/C Map

February 2008



**Volume to Capacity Ratio
2030 PM Peak Period**

- Less Than .80 (LOS A - C)
- - - 0.81 - 0.90 (LOS D)
- · · 0.91 - 1.00 (LOS E)
- Above 1.00 (LOS F)



Defining the intercounty mobility problems is an essential part of establishing the purpose and need for transportation improvements near the county line. The following are the findings and conclusions regarding the mobility problem between Orange and Los Angeles counties:

- Traffic congestion is substantial in the existing condition, particularly on study area freeways, and congestion levels will continue to increase in the year 2030 Baseline condition.
- Vehicle hours traveled (VHT) and vehicle hours of delay (VHD) are forecast to increase at a faster rate than vehicle miles traveled (VMT) in the study area between the existing condition and Year 2030. Commuters and travelers in the study area will experience increased levels of congestion and delay compared to the existing condition.
- A majority of the freeway segments in the OC/LA study area are forecast to operate at an unacceptable level of service during the AM and PM peak periods in the Year 2030.
- Significant traffic congestion and poor levels of service are observed on several arterial roadways in the Year 2030. This situation severely constrains intercounty travel.
- Only a limited number of local and regional transit services provide connections across the OC/LA county line. Transit services that do cross the county line are not necessarily coordinated to connect with transit services operating in the neighboring county.
- Demand exists for regional transit services such as Metrolink commuter rail, bus rapid transit, and express bus services, but these services are limited in their timeframes and areas of service. This condition limits the regional transit options available to residents and commuters seeking to travel across the county line.
- Freight goods movement has an impact on traffic operations and rail capacity within the study area. Improvements to the transportation network must factor in the impacts associated with goods movement and address goods movement within the overall context of improving transportation between Orange and Los Angeles counties.
- The existing network of bikeways serving the study area is in need of better connections across the county line and more continuous corridors that link major activity centers. The presence of bikeway facilities varies on a city by city basis, creating gaps and reducing the ability of bicycle commuters to make longer regional trips. The Coyote Creek Bikeway is a good candidate for improvement to connect bikeways in the study area.

S7 STUDY PURPOSE AND NEED STATEMENT

Given the projected increase in travel demand in the study area, it is essential for OCTA, Metro, Caltrans, and local cities along the OC/LA county line to work together to improve planning and coordination efforts and to implement enhancements and improvements to the transportation system near the county line. The purpose and need for the OC/LA Intercounty Transportation Study is summarized below.

Interagency Coordination

The OC/LA Intercounty Transportation Study is the first significant joint planning effort undertaken by OCTA and Metro that specifically looks at transportation issues along the OC/LA county line. This study is an important first step for OCTA and Metro to work together to improve transportation infrastructure and services between Orange and Los Angeles counties. Increased coordination between agencies is essential for the successful implementation of transportation improvements. There are also significant opportunities for cities located along the county line to use this study effort to increase coordination and cooperation on local transportation issues. Issues such as traffic signal synchronization, roadway improvements, and bicycle and pedestrian facilities are typically handled at the city level.

Freeway Congestion

Traffic congestion is already a substantial constraint on mobility for all freeways in the OC/LA study area. Forecasted increases in traffic volumes, delay, and travel demand for the Year 2030 condition will only further exacerbate the pressure on the freeway network serving Los Angeles and Orange counties. In 2030, the majority of freeway segments in the OC/LA study area are forecast to operate at an unacceptable level of service (LOS E or F). A range of improvements for the freeway network needs to be explored to meet forecast travel demand. Improving the operating efficiency of the existing freeway infrastructure will be important in order to maximize traffic flow. However, operational improvements alone will not be able to serve forecasted Year 2030 traffic volumes. Additional freeway capacity is necessary to serve anticipated traffic volumes and to ensure the continued economic growth of Southern California.

Arterial Roadway Congestion

The Year 2030 traffic forecasts identify future traffic congestion on arterial roadways crossing the OC/LA county line. However, due to land use and geographic constraints, there is insufficient arterial roadway capacity available to meet travel demand in many portions of the study area. Limitations in arterial roadway capacity cause substantial impacts to the mobility of residents and commuters across the county line. The capacity limitations also contribute to higher levels of forecasted delay and traffic congestion.

Optimization of Existing Transportation Infrastructure

There is local support for improving traffic operations in existing corridors through the implementation of intelligent transportation measures. Cities located along the county line have expressed reservations about significant freeway and roadway widening that could have adverse impacts to their communities and adjacent land uses. Based on this input, improvements and capacity enhancements within existing public rights-of-way need to be explored during the development of conceptual alternatives.

Traffic signal coordination and improved transit services are two strategies deserving additional consideration. The implementation of traffic signal coordination and synchronization across the county line should be explored to improve traffic flow on arterial roadways. Improving the frequency and volume of transit services within an existing freeway and arterial roadway network would increase the capacity of these facilities and optimize existing transportation corridors and infrastructure.

Transit Connectivity

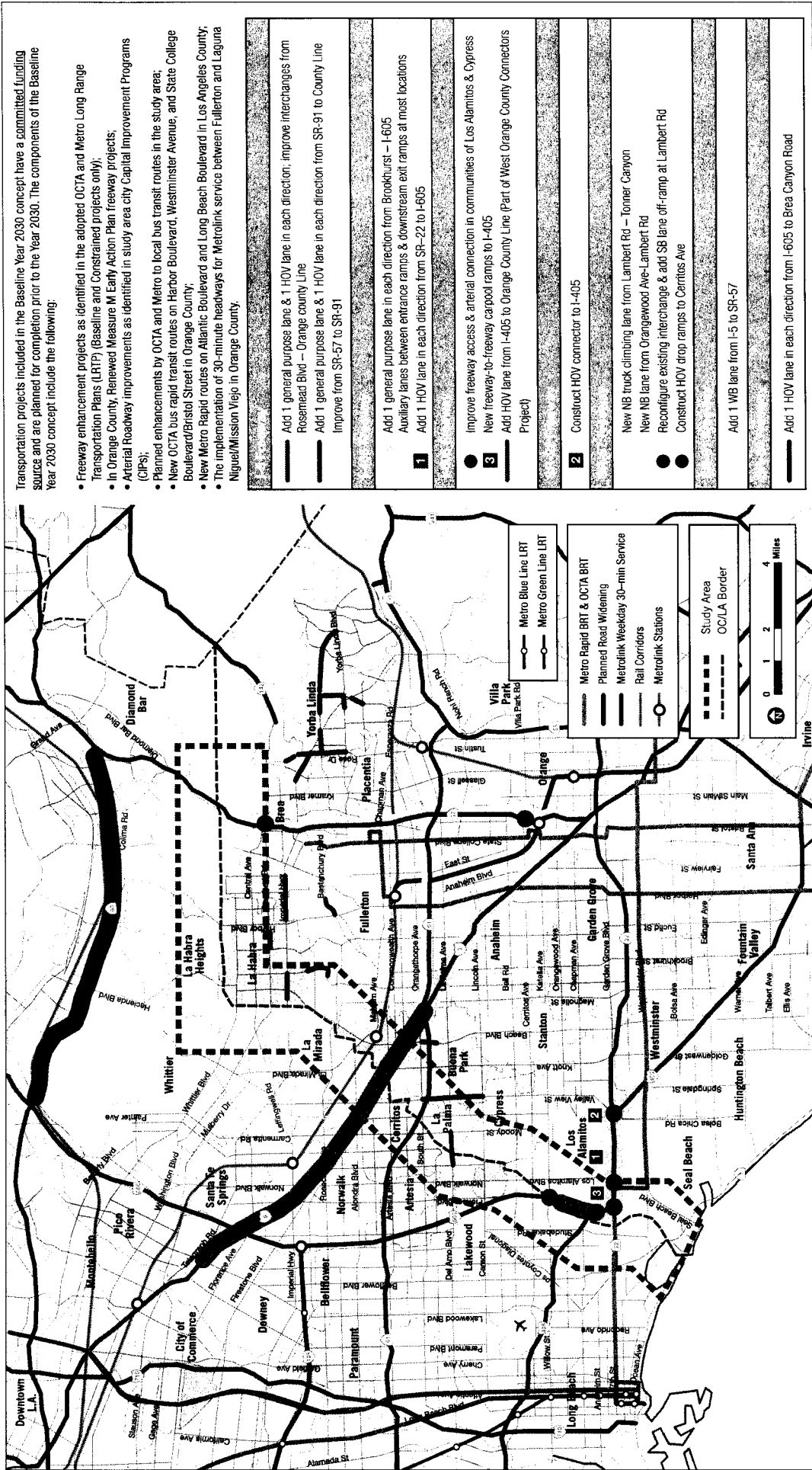
Improvements to regional transit services between Orange and Los Angeles counties are necessary to meet existing and future travel demand. There are a limited number of transit services that cross the county line, and many of these services operate primarily or exclusively during peak hours and in peak directions only. This condition limits the potential to carry a significant amount of travelers across the county line. Additional regional transit services are needed to meet forecast demand for transit service, particularly in portions of the study area that are not well-served by the Metrolink commuter rail system.

Use of Pacific Electric Right-of-Way

The Pacific Electric right-of-way (PE ROW) provides OCTA and Metro an opportunity to implement a regional transit service to connect Orange and Los Angeles counties. A project in this corridor would also increase the capacity of the transportation network within an area that has a limited number of parallel or alternative routes. The travel demand data for the Year 2030 shows a significant number of trips between Orange and Los Angeles counties from the cities that border the PE ROW. These travel forecasts suggest a healthy potential market for transit services in the Year 2030 in and near the PE ROW corridor. Therefore, transportation improvements should be explored to serve this travel market.

OC/LA Intercounty Transportation Study - Initial Set of Conceptual Alternative Strategies

2030 Baseline March 18, 2008



Transportation projects included in the Baseline Year 2030 concept have a committed funding source and are planned for completion prior to the Year 2030. The components of the Baseline Year 2030 concept include the following:

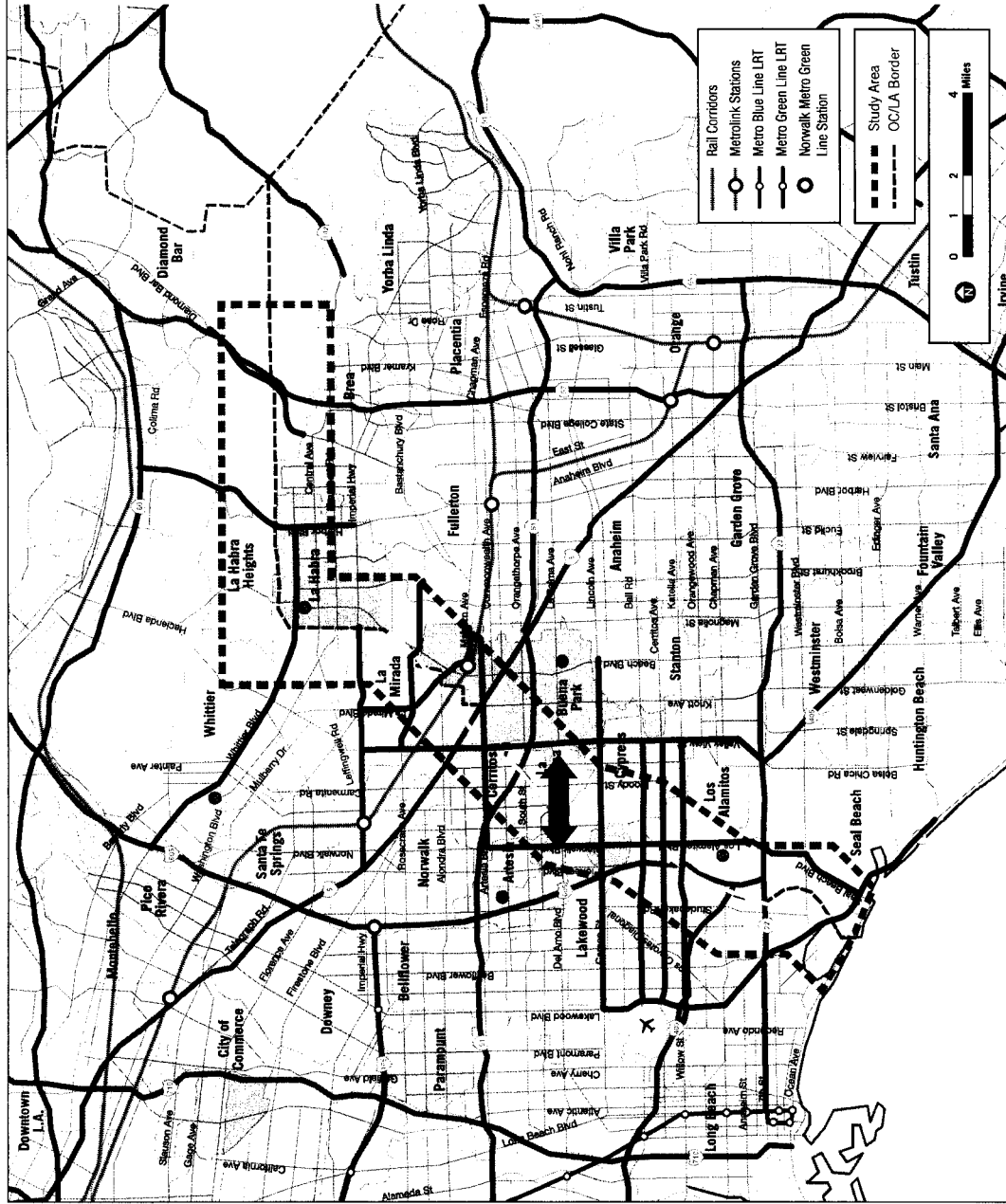
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- Planned enhancements by OCTA and Metro to local bus transit routes in the study area;
- New OCTA bus rapid transit routes on Harbor Boulevard, Westminster Avenue, and State College Boulevard/Bristol Street in Orange County;
- New Metro Rapid routes on Atlantic Boulevard and Long Beach Boulevard in Los Angeles County;
- The implementation of 30-minute headways for Metrolink service between Fullerton and Laguna Niguel/Mission Viejo in Orange County.

	Add 1 general purpose lane & 1 HOV lane in each direction; improve interchanges from Rosemead Blvd - Orange county Line
	Add 1 general purpose lane & 1 HOV lane in each direction from SR-91 to County Line
	Improve from SR-57 to SR-91
	Add 1 general purpose lane in each direction from Brookhurst - I-605
	Auxiliary lanes between entrance ramps & downstream exit ramps at most locations
	Add 1 HOV lane in each direction from SR-22 to I-605
	Improve freeway access & arterial connection in communities of Los Alamitos & Cypress
	New freeway-to-freeway carpool ramps to I-405
	Add HOV lane from I-405 to Orange County Line (Part of West Orange County Connectors Project)
	Construct HOV connector to I-405
	New NB truck climbing lane from Lambert Rd - Toner Canyon
	New NB lane from Orangewood Ave-Lambert Rd
	Reconfigure existing interchange & add SB lane off-ramp at Lambert Rd
	Construct HOV drop ramps to Cerritos Ave
	Add 1 WB lane from I-5 to SR-57
	Add 1 HOV lane in each direction from I-605 to Brea Canyon Road



OC/LA Intercounty Transportation Study - Initial Set of Conceptual Alternative Strategies

TSM/TDM Concept | March 18, 2008



The Transportation System Management (TSM) and Transportation Demand Management (TDM) Concept includes strategies to increase the efficiency of the transportation system and improve mobility across the OC/LA county line. The TSM/TDM concept focuses on increasing local bus coordination, implementing traffic signal coordination on streets near and across the county line to reduce congestion, and increased freeway traffic monitoring. This alternative also includes the construction of additional park-and-ride and transit center facilities. The TSM/TDM Concept is included in all of the following alternatives.

Note: Includes Year 2030 Baseline Improvements

Freeways/Roadways

- Goods Movement ITS Integration
- Upgrade freeway traffic surveillance on all study area freeways
- Upgrade freeway ramp metering at various locations
- Arterial roadway enhancements (Traffic Signal Coordination, bus turn-outs, and other improvements) on the following corridors:
 - Pacific Coast Hwy from Warner Ave to Lakewood Blvd
 - 7th St from SR-22 to Long Beach Blvd
 - Willow St/Katella Ave from Valley View St to Redondo Ave
 - Carson St/Lincoln Ave from Beach Blvd to Lakewood Blvd
 - Lakewood Blvd from Pacific Coast Hwy to Carson St
 - Artesia Blvd from Gilbert St to Norwalk Blvd
 - Rosecrans Ave from Gilbert St to Valley View St
 - La Mirada Blvd from Burlingame Ave to Imperial Hwy
 - Imperial Hwy from County line to Pioneer Blvd
 - Whittier Blvd from Harbor Blvd to I-605
 - Harbor Blvd from Imperial Hwy to SR-60
 - Cerritos Ave/Spring St from Valley View St to Lakewood Blvd
 - Ball Rd/Wardlow Rd from Valley View St to Lakewood Blvd
 - Seal Beach Blvd/Los Alamitos Blvd from Pacific Coast Hwy to Artesia Blvd
- Carpool/Vanpool Incentives
- Interlink city TMCs and Caltrans District 7 and 12 TMCs
- Increase CCTV locations
- Real-time traffic information
- Alternative work hours
- Incident Management
- Safety and Operational Improvements consistent with Caltrans State Highway Operation and Protection Plan on Brea Canyon Road.

Transit

- Increase local bus coordination between counties
- Increase local bus service frequency and span of service
- Park and Ride Lots in cities of Artesia/Cerritos, Buena Park, La Habra, Seal Beach/Los Alamitos and Whittier
- New bicycle corridors over Coyote Creek and along rail lines
- Transit service improvements (i.e. kiosks at malls and transit centers)

Bike/Pedestrian

- Enhance Coyote Creek Bikeway

- ↔ Increase Local Bus Coordination
- Arterial Corridor Improvements
- Safety and Operational Improvements
- Bikeway Enhancement
- New Park-and-Ride Lot



OC/LA Intercounty Transportation Study - Initial Set of Conceptual Alternative Strategies

Arterial/Rapid Bus Concept | March 18, 2008



The Arterial/Bus Rapid Concept is a multimodal concept that concentrates on increasing arterial roadway capacity, especially in the congested areas of the Coastal and Northern Sub Areas, and improving freeway interchanges. New Rapid Bus services near and across the OC/LA county line are proposed, along with a grade-separated Bus Rapid Transit service in the Pacific Electric ROW and improved bus shuttle services to Metrolink Stations. The Arterial/Rapid Bus Concept is included in all of the following alternatives.

This concept includes Year 2030 Baseline and TSM/TDM improvements

Freeway/Roadway

- Improve interchanges at the following locations: SR-57/SR-60, SR-57/Imperial Hwy, I-5/SR-91 and I-605/SR-91
- New HOV connector at I-5/I-605 and I-105/I-605 interchanges
- Extend truck climbing lane on northbound SR-57
- Add one general purpose lane in each direction on various streets, including:
 - Pacific Coast Hwy from Edinger Ave to 7th St
 - Willow St from the I-605 to Studebaker Rd
 - Carson St/Lincoln Ave from Moody St to Pioneer Blvd
 - Artesia Blvd from Beach Blvd to Knott Ave and Valley View St to SR-91
 - Rosecrans Ave from Gilbert St to La Mirada Blvd
 - Whittier Blvd from Euclid St to Colima Rd
 - Harbor Blvd from La Habra Blvd to Pathfinder Rd
 - Brea Canyon Road from Central Ave to Pathfinder Rd
 - Extend Tommer Canyon Rd to Grand Ave
- Improve bridges on Carritos Ave over Coyote Creek and on Los Alamitos Blvd between Los Alamitos and Long Beach

Transit

- Increase transit frequencies and coordination on local bus routes
- Shuttles/Feeders to Metrolink stations
- Implement grade-separated Bus Rapid Transit on the Pacific Electric Right-of-Way (PE ROW) with connection to Norwalk Green Line Station
- Implement Rapid Bus along:
 - Imperial Hwy from Brea Mall to the Green Line Station
 - Del Amo Blvd/La Palma Ave from the Anaheim Canyon Metrolink Station to Metro Blue Line Del Amo Blvd stop
 - Willow St/Katella St from Anaheim Metrolink Station to Metro Blue Line Willow St stop
 - Seal Beach Blvd/Norwalk Blvd from Pacific Coast Hwy to the Norwalk/Santa Fe Springs Metrolink Station
 - Beach Blvd from downtown Huntington Beach to Whittier Blvd
 - Harbor Blvd from Fullerton Metrolink Station to West Covina Mall

	Tommer Canyon Corridor Connection		HOV Connector
	Add One Lane in Each Direction		Extend Truck Climbing Lane
	Bus Rapid Transit & Pedestrian/Bike Path		Interchange Improvement
	Rapid Bus		New Bus Shuttle Services to Metrolink Stations



OC/LA Intercounty Transportation Study - Initial Set of Conceptual Alternative Strategies

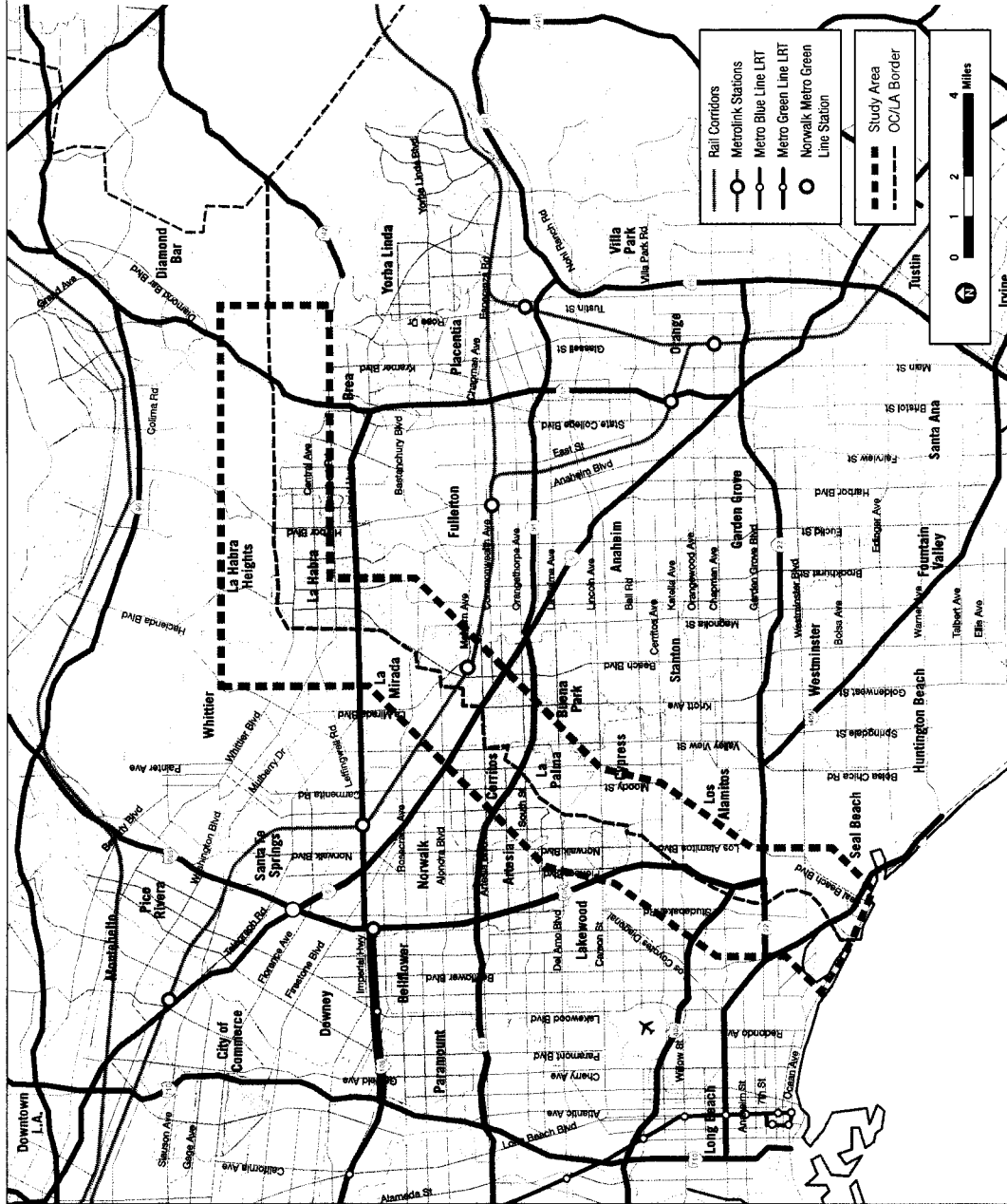
Freeway Concept | March 18, 2008

The Freeway Concept proposes improvements to freeways that increase capacity with the objective of improving traffic conditions in the year 2030. The concept includes adding capacity to all study area freeways through new general purpose lanes, High Occupancy Vehicle (HOV) lanes, or High Occupancy Toll (HOT) lanes.

This concept includes Year 2030 Baseline, TSM/TDM, and Arterial/Rapid Bus improvements

Freeway/Roadway

- Add one general purpose lane in each direction on:
 - I-5 from SR-91 to I-605
 - I-405 from I-605 to I-710
 - I-605 from I-405 to I-5
 - SR-22 from I-405 to Pacific Coast Hwy
 - SR-91 from I-5 to I-710
 - I-105 from I-605 to I-710
- Add one southbound lane on SR-57 from Diamond Bar Boulevard to I-5
- Convert arterial roadways to Parkways (grade separated intersections, exclusive lanes, and other improvements) on the following corridors:
 - Pacific Coast Hwy from Warner Ave to I-710
 - Imperial Hwy from SR-57 to I-605



OC/LA Intercounty Transportation Study - Initial Set of Conceptual Alternative Strategies

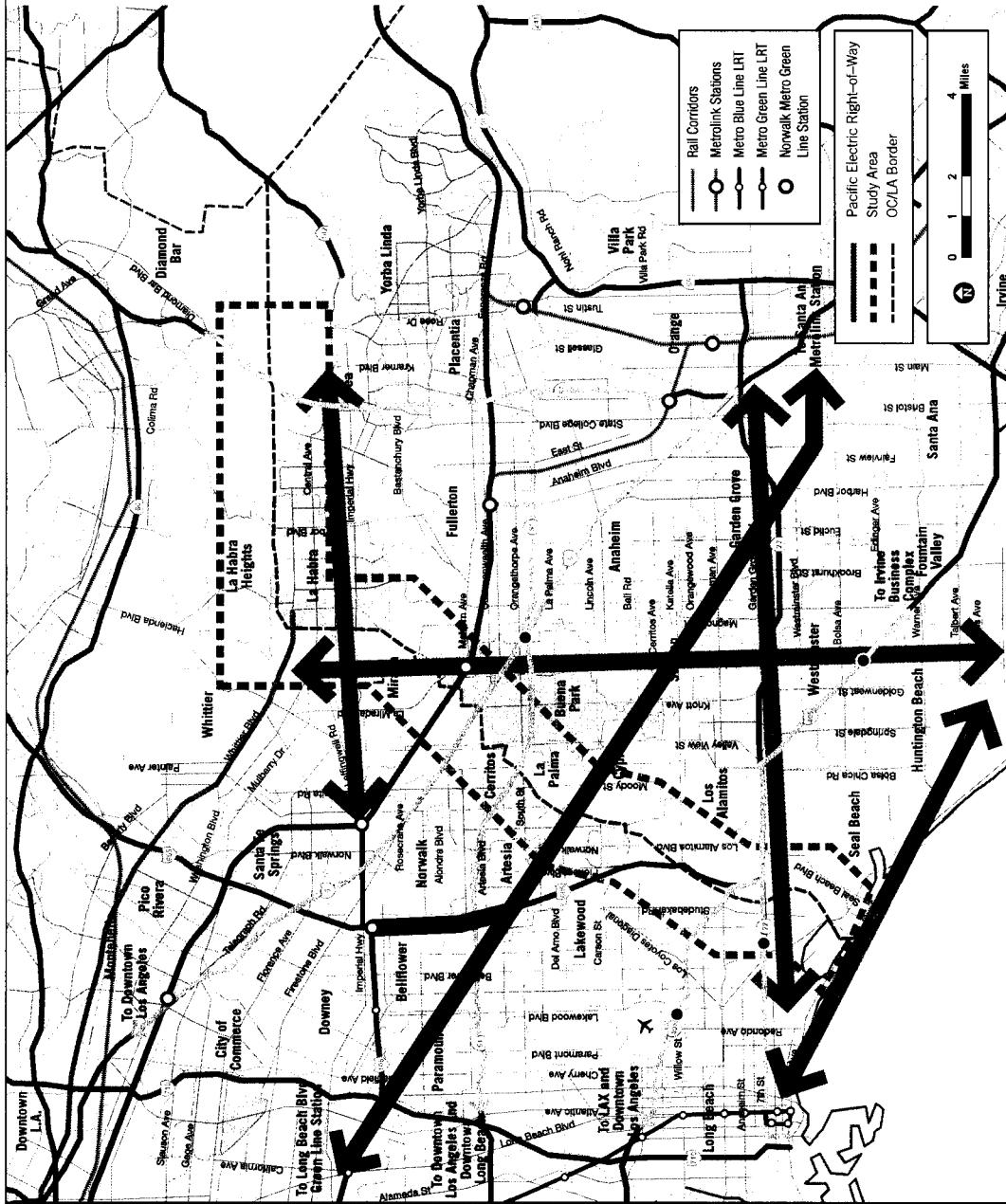
Transit Concept | March 18, 2008

The Transit Concept looks exclusively at transit oriented alternatives to accommodate future travel demand. The objectives of this concept are to improve transit services for both short and long distance trips, improve the efficiency of local transit services, increase Metrolink service, enhance planned Rapid Bus routes, and provide connections between different modes of transportation.

This concept includes Year 2030 Baseline, TSM/TDM, and Arterial/Rapid Bus improvements

Transit

- Increase Metrolink Weekday frequency on the Orange County Line from Fullerton to Downtown Los Angeles and 91 Line from Corona to Downtown Los Angeles (Assumes 3rd main track and grade separations)
- Rapid Bus on Whittier Blvd from Beach Blvd to Downtown Los Angeles
- Extend Metro Green Line LRT to Norwalk/Santa Fe Springs Metrolink Station
- Express bus services along the following corridors:
 - Irvine Business Complex to Downtown Los Angeles via I-405 and SR-22
 - Irvine Business Complex to Downtown Los Angeles via I-405 and I-110
 - Santa Ana Metrolink Station to Downtown Los Angeles via SR-91 and I-710
 - Anaheim Metrolink Station to Diamond Bar via SR-57
- Replace the grade separated BRT service in the PE ROW with a fully elevated transit service (bus or rail). Maintain the proposed connection to the Metro Green Line and an at-grade pedestrian / bike path within the corridor.
- Enhance selected rapid bus lines proposed in the Arterial / Bus Rapid Concept to full Bus Rapid Transit service operating in exclusive rights-of-way (specific alignment to be determined) connecting:
 - Huntington Beach to Whittier
 - Brea to Norwalk
 - Long Beach to Anaheim/Santa Ana
 - Long Beach to Irvine



	Bus Rapid Transit		Increase Metrolink Service
	Rapid Bus		Elevated Transit and Pedestrian/Bike Path
	Express Bus Service		Green Line LRT Extension to Norwalk/Santa Fe Springs Metrolink Station
	Express Bus Service Stop		



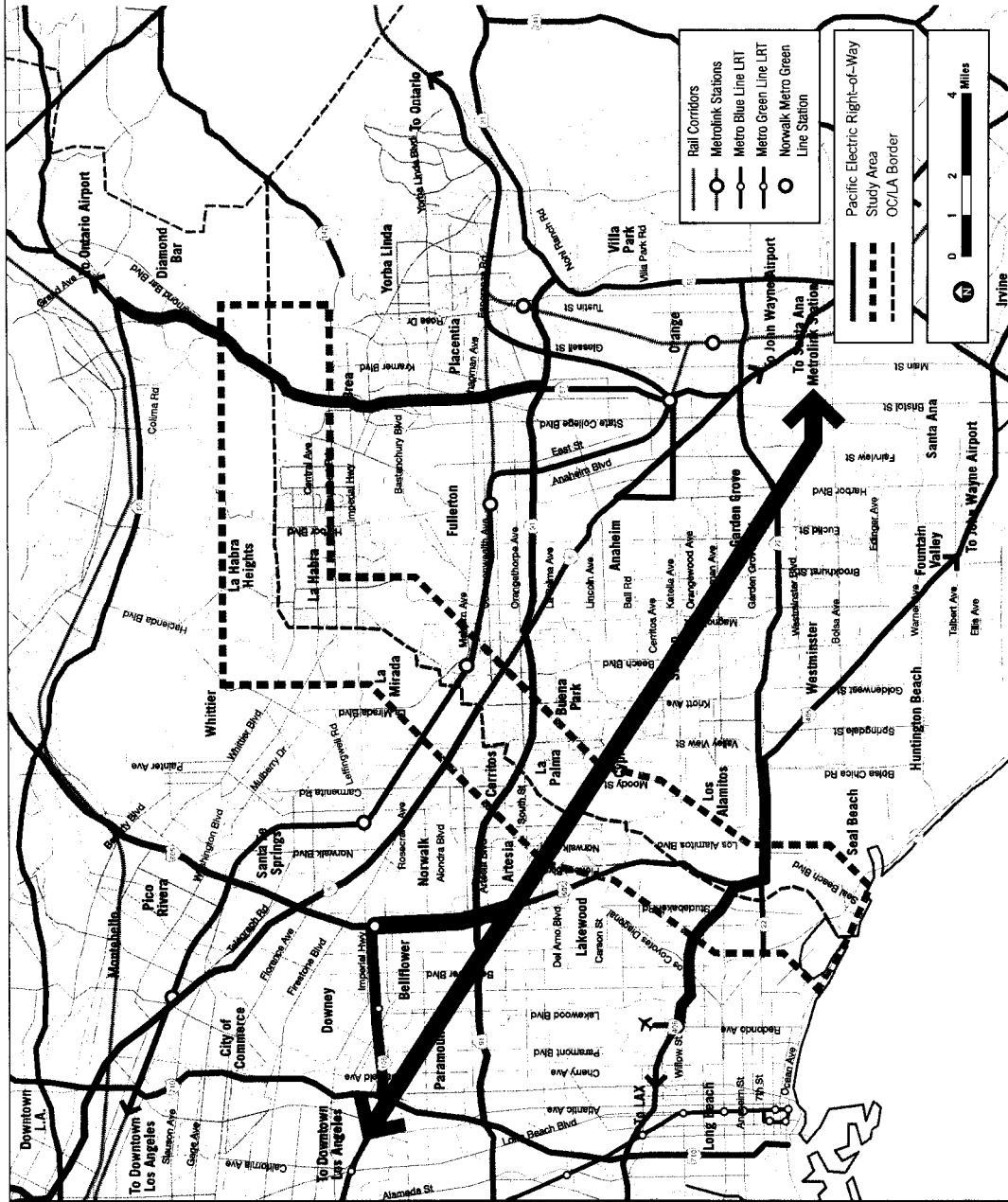
OC/LA Intercounty Transportation Study - Initial Set of Conceptual Alternative Strategies

Public Private Partnership Concept | March 18, 2008

The Public Private Partnership Concept focuses on identifying privately financed improvements to freeways, streets, and transit that could supplement the improvements that are possible with public funds. Concepts include toll lanes and truck toll lanes on freeway corridors and high-speed transit service in the Pacific Electric ROW.

This concept includes Year 2030 Baseline, TSM/TDM and Arterial/Rapid bus improvements

- Add truck toll lanes on I-710 from Ocean Ave to SR-60
- Add High Occupancy Toll (HOT) or Toll Lanes on:
 - I-5 from OC/LA County Line to downtown Los Angeles
 - I-105 from I-605 to I-710
 - I-605 from SR-91 to SR-60
 - SR-91 from SR-55 to I-710
- Add High Occupancy Toll (HOT) or Toll Lanes on I-5 from SR-22 to downtown Los Angeles
- Add High Occupancy Toll (HOT) or Toll Lanes on SR-57 from SR-91 to SR-60
- Bus Shuttle Service connection from John Wayne Airport to Anaheim and Long Beach Airport via I-405 and SR-22
- Bus Shuttle Service connection from John Wayne Airport to Long Beach Airport and Los Angeles International Airport via I-405
- Bus Shuttle Service connection from Anaheim to Ontario Airport via SR-57
- Elevated High Speed Transit system on the PE ROW with possible connection to Norwalk Green Line Station



- High Speed Transit
- High Speed Rail (Proposed by others. Alignment to be determined.)
- HOT or Toll Lanes
- Truck Toll Lanes
- John Wayne Airport - Anaheim - Long Beach Airport Bus Shuttle
- John Wayne Airport - Long Beach Airport - LAX Bus Shuttle
- Anaheim - Ontario Airport Bus Shuttle