Appendix O:

Riverside County – Orange County Major Investment Study

RIVERSIDE COUNTY - ORANGE COUNTY MAJOR INVESTMENT STUDY

EXECUTIVE SUMMARY

FINAL PROJECT REPORT: LOCALLY PREFERRED STRATEGY REPORT

Prepared for:

Orange County Transportation Authority

In cooperation with:

Riverside County Transportation Commission
Foothill-Eastern Transportation Corridor Agency

JE JACOBS

JANUARY 2006

EXECUTIVE SUMMARY: RIVERSIDE COUNTY – ORANGE COUNTY MAJOR INVESTMENT STUDY LOCALLY PREFERRED STRATEGY

The Orange County Transportation Agency (OCTA), in cooperation with the Riverside County Transportation Commission (RCTC) and the Foothill-Eastern Transportation Corridor Agency (TCA), initiated the Riverside County–Orange County Major Investment Study (MIS) to study a comprehensive mix of capital improvements to SR-91 (the Riverside Freeway) and other potential intercounty travel corridors. The MIS was an 18-month study that began in June 2004 and was concluded in December 2005 with the unanimous approval of a Locally Preferred Strategy (LPS) by the OCTA and RCTC Boards. The MIS assessed the potential benefits, costs, and consequences of alternative transportation investments in the Riverside County–Orange County MIS Corridor. The entire MIS planning process was cooperative and collaborative in nature, with governmental agencies and the wider community assisting in developing a preferred set of transportation strategies through the year 2030.

S.1 STUDY BACKGROUND AND DEVELOPMENT

The growing population and relatively affordable housing market in Riverside County, coupled with increasing employment opportunities in Orange County, have resulted in a large number of Riverside County residents commuting to jobs in Orange County each weekday. Based on regional population and employment projections, this commute pattern is expected to continue into the future.

State Route 91 (SR-91) is the only significant highway corridor that provides the home-to-work connection for Riverside County residents working in Orange County. SR-74, the Ortega Highway, well to the south, carries only about 12,000 vehicle trips per day. The SR-91 freeway is today utilized by more than 280,000 vehicles per day at the Orange/Riverside county line, and this volume continues to grow. At the same time, freeway travel speeds are well below 30 miles per hour during lengthy morning and evening peak periods. Traffic is forecast to increase by around 50 percent by year 2030 – which will further exacerbate the already long travel times.

The MIS examined a comprehensive range of capital improvement alternatives to SR-91 and other potential intercounty multimodal transportation corridors. The study addressed the potential benefits, costs, and consequences (economic, social, and environmental) of alternative transportation investment strategies in the Riverside County–Orange County MIS corridor. This *Final Project Report* documents the refined Locally Preferred Strategy (LPS) adopted by the OCTA Board and the RCTC Board in December 2005.

The *Final Project Report: Locally Preferred Strategy Report* builds upon the previously issued *Purpose and Need Statement, Evaluation Criteria Report, Constraints Report, Conceptual Alternatives Report, Screening Report* and, most recently, the *Alternatives*

Evaluation and Refinement Report that reported the detailed analysis results for three main "Strategic Alternatives" (including sub-alternatives and various options). The report findings were presented to the MIS Policy Committee. The Committee provided direction for the preparation of a Locally Preferred Strategy that was subsequently recommended to the OCTA Board of Directors and RCTC Board of Commissioners and unanimously approved by both.

S.2 PUBLIC OUTREACH AND AGENCY COORDINATION

The MIS process recognized the importance of building and maintaining political support, facilitating open communication with stakeholders and the public, identifying and evaluating viable alternatives, and finding solutions that meet the needs of stakeholders. Consensus building was a key challenge due to the number of stakeholders and their differing, sometimes competing objectives. Stakeholders include landowners, local jurisdictions, regional transportation agencies, federal and state resource agencies, special interest groups, and members of the general public. Consensus was successfully built in conjunction with the MIS standing committees (Project Development Team, consisting of technical staff from affected public agencies; Stakeholder Advisory, consisting of representatives from major interest groups; and MIS Policy Committee, consisting of elected officials from the two counties) and through coordination and outreach with various individual stakeholders, and members of the public. Three rounds of public meetings took place: during the fall of 2004, during the spring of 2005 and again during fall 2005.

S.3 PURPOSE AND NEED

The underlying theme of the MIS was to determine appropriate modal strategies to enhance the transportation system, enabling it to accommodate an additional 200,000 trips by the planning horizon year, 2030. Achieving this objective would reduce future traffic congestion and delay within the MIS Corridor while also providing improved mobility, enhanced travel time, increased safety, and improved goods movement between Riverside County and Orange County. The *Final Purpose and Need Statement* outlined the study mission, namely to develop a Locally Preferred Strategy (LPS) that meets five key goals, to the extent feasible:

1. Provide improvements to the transportation system that will improve mobility between Riverside County and Orange County;
2. Improve travel time and safety on the existing SR-91 facility;
3. Improve goods movement capability within the Riverside County-Orange County MIS Corridor;
4. Reduce and manage the diversion of inter-regional traffic from SR-91 to local streets; and
5. Expand modal options within the Riverside County-Orange County MIS Corridor.

S.4 CONSTRAINTS ANALYSIS

The *Final Constraints Report* was prepared to identify physical characteristics and natural resources that may pose constraints to implementing potential improvements. The constraints assessment incorporated important physical and environmental factors. The project team completed an initial assessment of the MIS study area by reviewing

aerial photographs, maps, and digital data. Descriptions of physical and environmental constraints (and opportunities) were compiled using publicly and commercially available data and information from local, regional, and state agencies. Potential environmental constraints were identified. Each constraint was then ranked into one of following five categories: low, moderately low, moderate, moderately high, and high.

Geographic Information System (GIS) technologies were also used to interpret and catalog available data on the MIS corridor. The *Final Constraints Report* furnishes source documentation and description of the data used in the constraints analysis and the categories used to "value" or cost the physical and environmental resources. Representatives of the resource agencies participated in and reviewed products of this effort.

S.5 EVALUATION CRITERIA

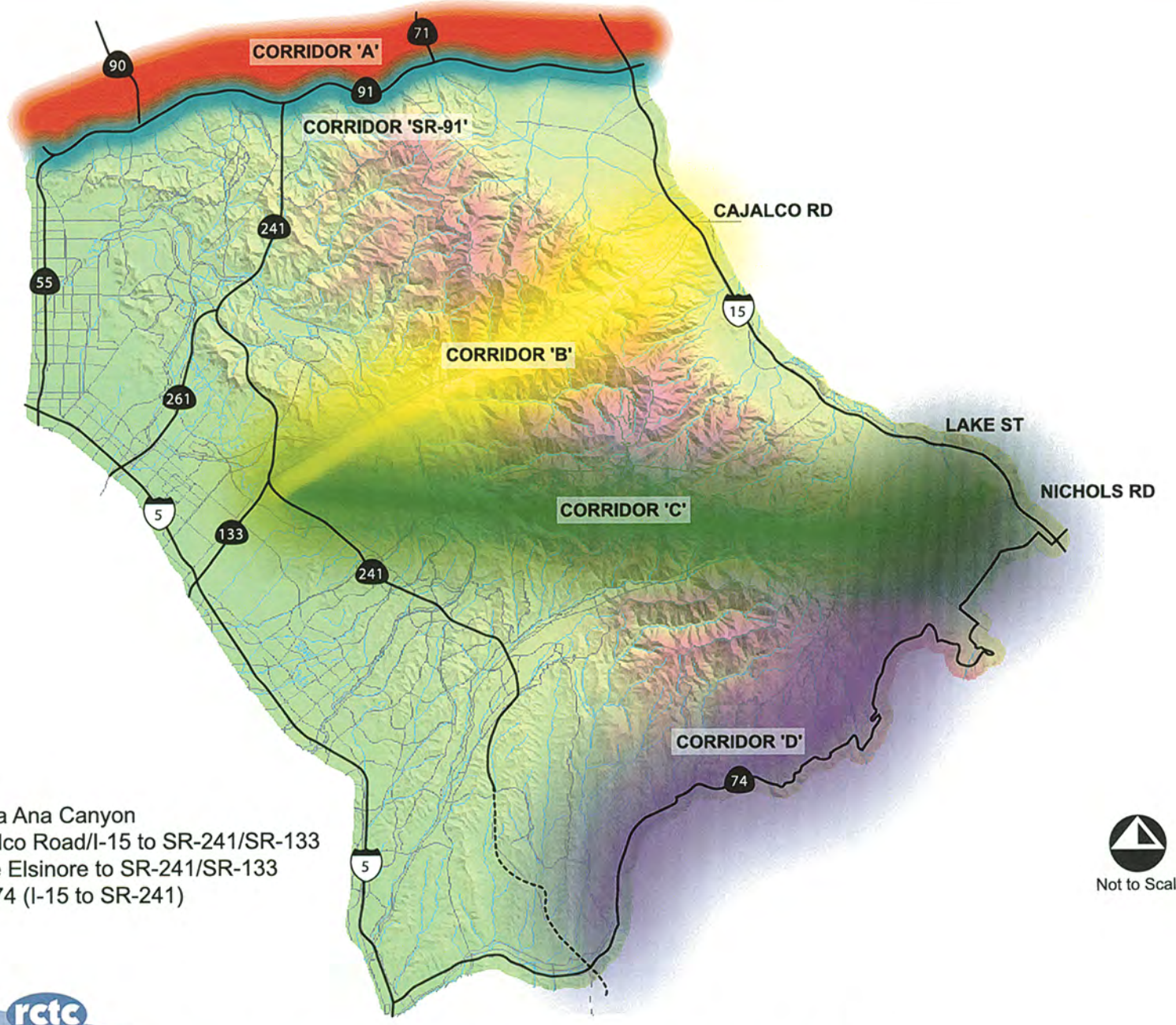
During the study, screening alternatives and strategic alternatives were subjected to testing and analysis. Criteria identified in the *Final Evaluation Criteria Report* (as updated during the study process) were applied to each of these alternative "packages". Evaluation criteria and performance measures were applied to conceptual screening alternatives and later to refined strategic alternatives. The evaluation criteria encompassed the following areas of assessment: (1) Travel Demand and Mobility; (2) Travel Time and Safety; (3) Goods Movement; (4) Engineering Issues; (5) Environmental Issues; and (6) Order-of-Magnitude Cost.

S.6 CONCEPTUAL ALTERNATIVES

The *Final Conceptual Alternatives Report* documents the identification of corridor location options within the MIS study area, candidate connections to the wider regional network, development of individual improvement options, and "packaging" of conceptual screening alternatives.

Improvements to existing SR-91 (the Riverside Freeway) were taken as the first priority. Given its physical and development constraints, however, SR-91 could not in and of itself provide a satisfactory Level of Service in the year 2030. Therefore other nearby, more or less parallel corridors were considered. This led to examination of a corridor through the Santa Ana Canyon, adjacent to SR-91. Five candidate corridors were ultimately identified (see Exhibit 1):

- Corridor SR-91, the existing freeway between SR-55 and I-15;
- Corridor A in the vicinity of SR-91 in the Santa Ana Canyon;
- Corridor B west from Cajalco Road at I-15 to (or near) the junction of SR-241 and SR-133;
- Corridor C west from the Lake Elsinore area to (or near) the junction of SR-241 and SR-133; and
- Corridor D along or adjacent to the existing SR-74 (Ortega Highway) from I-15 on the east to SR-241 on the west.



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RIVERSIDE COUNTY - ORANGE COUNTY MIS
CONCEPTUAL CORRIDORS

EXHIBIT 1

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Development of conceptual screening "packages" was based on the following:

- Build on top of the 2030 "No Build" (Baseline) network, which assumes construction of certain limited SR-91 and other MIS corridor improvements already slated for implementation.
- Plan for additional capacity in the overall MIS corridor – over and above that offered by the 2030 No Build (Baseline) network – that would accommodate at least 200,000 more daily trips in the year 2030 time frame.
- Maximize capacity enhancements to SR-91 to the maximum extent feasible.
- Once SR-91's potential has been maximized, identify improvement combinations for other corridors that meet MIS *Purpose and Need.*

Twelve (12) conceptual alternatives, or representative "Screening Alternatives", were developed for further study using various combinations of individual candidate options. Total added ADT capacity ranged from 210,000 to 260,000, incorporating both highway and transit improvements. Each transit improvement option was thought to offer an equivalent 20,000 to 30,000 additional ADT. The options incorporated in each alternative package were representative of ways to meet the additional capacity target; they did not necessarily reflect all plausible combinations of options. Screening Alternatives were presented to the Project Development Team (PDT), the Stakeholders Advisory Committee (SAC), and the MIS Policy Committee. Comments and recommended revisions from these committees were incorporated, and the Screening Alternatives were updated accordingly.

S.7 SCREENING OF ALTERNATIVES

The *Final Screening Report* documented the assessment of each candidate MIS corridor, and each representative Screening Alternative. It principally entailed environmental constraints analysis, engineering constraints analysis, and transportation system analysis. Environmental and engineering analyses were conducted to address MIS evaluation criteria.

Based upon these environmental, engineering and traffic analyses, recommendations for "Strategic Alternatives" followed from the key findings of screening evaluation. The more crucial findings indicated that:

- Maximum feasible widening of the SR-91 freeway continues to be of high priority and should be carried forward.
- Maximization of the transit system to optimize transit capture continues to be a high priority and should be carried forward.
- Highway improvements in Corridor A continue to show promise and should therefore be carried forward.
- Corridor C should *not* be carried forward. Owing to its more easterly location, it diverts insufficient traffic from SR-91, underperforms relative to Corridor B in serving MIS corridor traffic demand and costs more than Corridor B due to its greater length in similarly rugged terrain. Corridors B and C were also found to be basically comparable in level of environmental impact.
- Highway improvements in Corridor B should be carried forward.

- Pure surface alignments for Corridor B should be avoided in favor of configurations that include significant tunneling. Pure surface alignments would be far too damaging to the mountainous environment.
- Corridor D continues to have merit and should be carried forward – especially surface/tunnel combination configurations.

S.8 STRATEGIC ALTERNATIVES ADVANCED TO DETAILED EVALUATION

The Strategic Alternatives recommended for detailed analysis involve three distinctly different concepts regarding how travel demand is to be distributed throughout the greater MIS corridor. Approved by the MIS Policy Committee for in-depth analysis (including dropping Corridor C from further study), two of these offer sub-alternatives relative to their respective basic Strategic Alternative.

The 2030 "No Build" Alternative (see Exhibit 2) and several "build" alternatives were carried forward for detailed evaluation. Among the "build" alternatives – labeled as Strategic Alternatives I, II, and III – there are consistent capacity improvement features shared by all (see Exhibits 3 through 6). These consistent improvement features include:

- *Maximum widening to SR-91:* All build Strategic Alternatives include what has been established as the maximum reasonable number of lanes to be added to SR-91 (that is, reasonable in not requiring significant right-of-way acquisition and not involving significant displacements). This includes adding one to two lanes in each direction.

- *Maximize transit system:* All build Strategic Alternatives include maximization of transit with a target demand of 10,000 daily vehicle equivalents through the MIS Corridor. For all build alternatives this includes a new Intermodal Transportation Center.

- *Managed lane changes for SR-91:* This could encompass a variety of strategies including toll, high-occupancy vehicle and reversible lanes, or combinations thereof – however specifics would be determined later, during formal project development/preliminary engineering studies.

S.9 ALTERNATIVES EVALUATION AND REFINEMENT

The *Final Alternatives Evaluation and Refinement Report* documented the comparative assessment of the Strategic Alternatives using transportation criteria and performance measures laid out in the *Evaluation Criteria Report*, as updated. The MIS project team developed individual highway improvement "projects" (whether in SR-91, Corridor A, Corridor B or Corridor D/SR-74) in sufficient engineering detail to enable sound comparison of alternatives – including capital cost comparisons. Environmental analyses were carried out at a level of detail well beyond that performed earlier for the *Final Screening Report.* Traffic analyses were conducted at a more detailed level as well, assessing downstream impacts plus analyzing peak hour performance of interchanges and major arterials in addition to mainline facilities.

Description of the Strategic Alternative

The 2030 No Build Strategic Alternative provides additional capacity between Riverside and Orange Counties by including improvement projects that are currently planned and expected to be constructed within the near-term. The 2030 No Build Strategic Alternative transit improvements include ARTIC and associated transit improvement projects as well as Maglev (Cal-Nev). Highway improvements include an eastbound auxiliary lane from SR-241 to SR-71, one additional lane in each direction from SR-241 to I-15 (Measure A), the extension of the SR-241 to I-5 from the current terminus at Oso Parkway, a new partial interchange to be located at Fairmont Boulevard and SR-91, and the extension of Jeffrey Road to SR-241.

Transit Improvements

- ARTIC and associated transit improvement projects
- A-T2 (or 91-T3): Maglev (Cal-Nev)

Highway Improvements

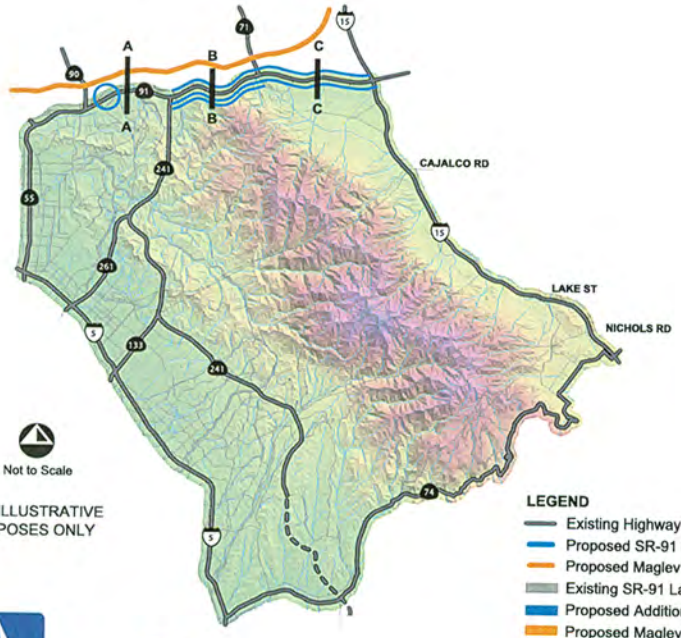
- Eastbound SR-91 auxiliary lane from SR-241 to SR-71
- One additional lane in each direction from SR-241 to I-15
- Extension of SR-241 from Oso Parkway to I-5

Potential Arterial Improvements to Increase Accessibility

- Partial interchange to be located at Fairmont Boulevard/SR-91
- Jeffrey Road extension to SR-241

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

- There are no planned TDM/TSM improvements under the No Build Strategic Alternative



Not to Scale

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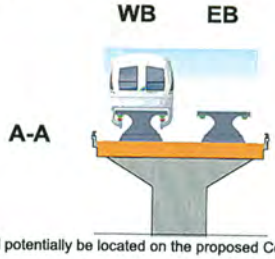
LEGEND

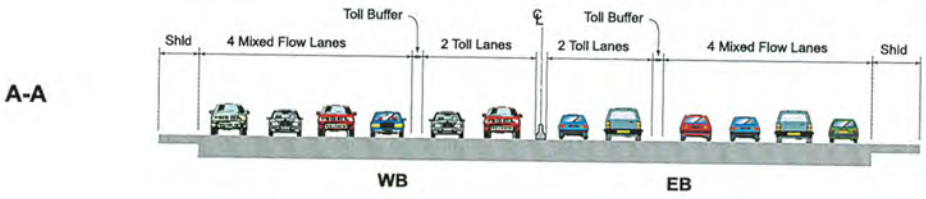
- Existing Highway
- Proposed SR-91 Improvements
- Proposed Maglev Alignment
- Existing SR-91 Lanes
- Proposed Additional SR-91 Baseline Lanes
- Proposed Maglev Transit Improvements
- Proposed Extension of SR-241
- Proposed Fairmont Boulevard Interchange Location

PROPOSED CORRIDOR 'A' ELEVATED STRUCTURE WITH MAGLEV

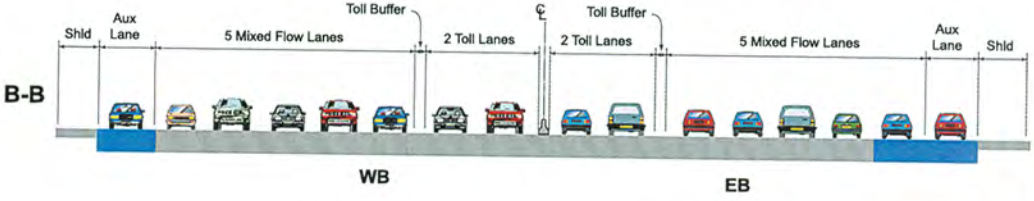


Note: Maglev could potentially be located on the proposed Corridor 'A' 6-lane elevated structure

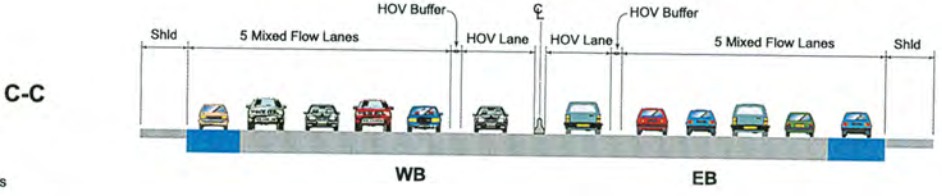
PROPOSED SR-91 CORRIDOR - NO ADDITIONAL LANES FROM SR-55 TO SR-241



PROPOSED SR-91 CORRIDOR - ADDITIONAL 3 LANES FROM SR-241 TO SR-71



PROPOSED SR-91 CORRIDOR - ADDITIONAL 2 LANES FROM SR-71 TO I-15



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2030 NO BUILD STRATEGIC ALTERNATIVE

EXHIBIT 2

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Description of the Strategic Alternative

Strategic Alternative I provides a capacity increase between Riverside and Orange Counties by incorporating a suite of transit, highway, and TDM/TSM improvements to SR-91, Corridor A (Santa Ana Canyon), and Corridor D (Lake Elsinore/I-15 to SR-74). Strategic Alternative I transit improvements include SR-91 commuter bus service, Corridor A Metrolink improvements, and mixed-traffic commuter bus operations in Corridor D. In addition to expanding Metrolink service, and improving/facilitating goods movement, all strategic alternatives accommodate a third track and possible fourth track within the BNSF right-of-way. Highway improvements generally include one additional general purpose lane on SR-91 westbound from SR-55 to SR-241 and eastbound from SR-55 to Lakeview Avenue, two additional general purpose lanes on SR-91 eastbound from Lakeview Avenue to SR-241, one additional general purpose lane in each direction between SR-71 and I-15, a new six-lane facility in Corridor A, a four-lane arterial highway construction in Corridor D, and managed lanes on SR-91 between SR-55 and I-15. Corridor D construction could include a partially-new alignment - either with or without tunnels - that would deviate from existing SR-74 to connect with I-15 at Lake Street/Nichols Road.

Transit Improvements

- 91-T1: HOV/HOT lane(s) commuter bus service on SR-91
- A-T1: Expanded Metrolink commuter rail service (doubling Metrolink operations to 30-minute service with additional third track)
- D-T1: Mixed-traffic commuter bus service within Corridor D

Highway Improvements

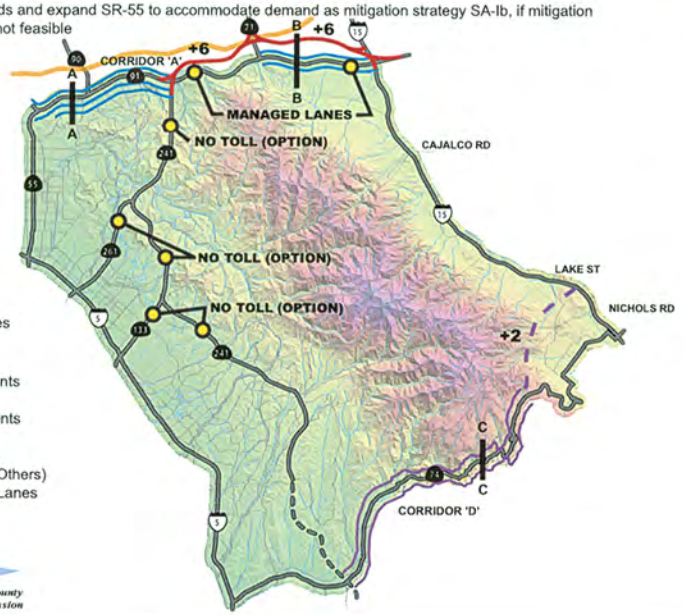
- 91-1: One additional general purpose lane westbound from SR-55 to SR-241, and one additional general purpose lane eastbound from SR-55 to Lakeview Avenue
- 91-3: One additional general purpose lane in each direction (SR-71 to I-15)
- 91-12: Two additional general purpose lanes eastbound from Lakeview Avenue to SR-241
- A-2: Elevated (potentially reversible) six-lane grade-separated facility (directly linking SR-241 to I-15 and SR-91, with the only interchange being located at SR-71)
- D-3 (or D-4): Four-lane arterial with (or without) tunnel sections

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

- Variable message signing for motorist guidance, enhancing transit transfer centers, adding park-and-ride spaces and related measures, including retaining peak-period toll congestion-pricing options

Optional Considerations [To be Studied]

- SR-241 from SR-91 to SR-133 to be toll-free as a potential mitigation strategy SA-Ia. May require additional capacity on SR-241
- Maintain toll on ETC toll roads and expand SR-55 to accommodate demand as mitigation strategy SA-Ib, if mitigation strategy SA-Ia is not feasible



Not to Scale

FOR ILLUSTRATIVE PURPOSES ONLY

LEGEND

- Existing Highway
- Proposed SR-91 Improvements
- Proposed Additional SR-91 Lanes
- Existing SR-91 Lanes
- Proposed Corridor A Alignment
- Proposed Corridor A Improvements
- Proposed Extension of SR-241
- Proposed Corridor D Improvements
- Proposed Corridor D Route
- Proposed Corridor D Lanes
- Proposed Maglev Alignment (By Others)
- +2 Proposed Number of Additional Lanes

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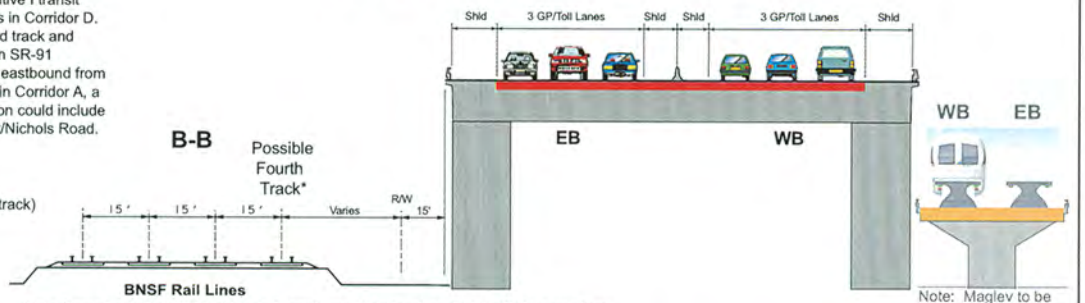
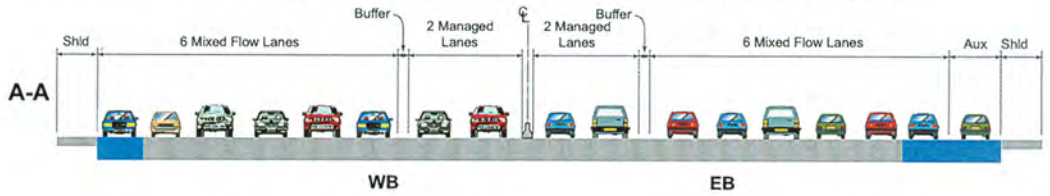
PROPOSED CORRIDOR 'A' 6-LANE ELEVATED STRUCTURE

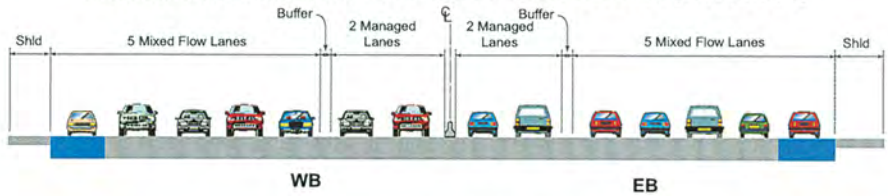


Note: Structure could be located either north, south, or split north and south of the BNSF right-of-way. Corridor 'A' improvements would be constructed outside of BNSF right-of-way.
*Allows for construction of fourth track for freight expansion.

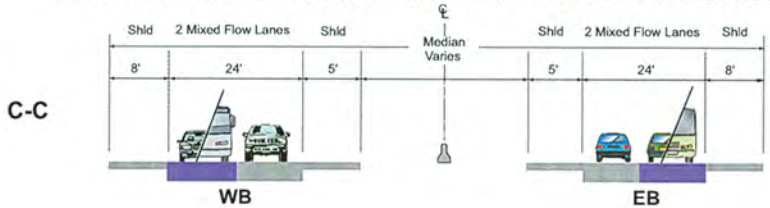
PROPOSED SR-91 CORRIDOR - ADDITIONAL 3 LANES FROM SR-55 TO SR-241



PROPOSED SR-91 CORRIDOR - ADDITIONAL 2 LANES BETWEEN SR-71 AND I-15



PROPOSED CORRIDOR 'D' CONVENTIONAL 4-LANE ARTERIAL - TUNNEL/SURFACE



RIVERSIDE COUNTY - ORANGE COUNTY MIS

STRATEGIC ALTERNATIVE I

EXHIBIT 3

Description of the Strategic Alternative

Strategic Alternative II provides a capacity increase between Riverside and Orange Counties by incorporating a suite of transit, highway, and TDM/TSM improvements to SR-91 and Corridor B (Cajalco Road/I-15 to SR-241/SR-133 Vicinity). Strategic Alternative II transit improvements include SR-91 commuter bus service, Corridor A Metrolink improvements, and mixed-traffic commuter bus operations in Corridor B. In addition to expanding Metrolink service, and improving/facilitating goods movement, all strategic alternatives accommodate a third track and a possible fourth track within the BNSF right-of-way. Strategic Alternative II highway improvements generally include one additional general purpose lane on SR-91 westbound from SR-55 to SR-241 and eastbound from SR-55 to Lakeview Avenue, two additional general purpose lanes on SR-91 eastbound from Lakeview Avenue to SR-241, one additional general purpose lane in each direction from SR-71 to I-15, managed lanes on SR-91 between SR-55 and I-15, and a new six-lane toll-free highway in Corridor B. Corridor B construction could include a new alignment either with or without near full-length tunnels and would be reversible.

Transit Improvements

- 91-T1: HOV/HOT lane(s) commuter bus service on SR-91
- A-T1: Expanded Metrolink commuter rail service (doubling Metrolink operations to 30-minute service with additional third track)
- B-T1: Mixed-traffic commuter bus service

Highway Improvements

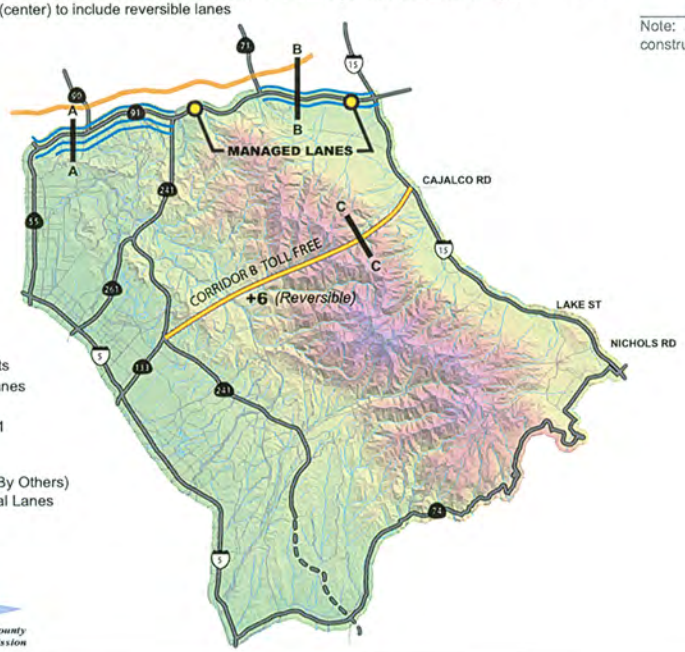
- 91-1: One additional general purpose lane westbound from SR-55 to SR-241, and one additional general purpose lane eastbound from SR-55 to Lakeview Avenue
- 91-3: One additional general purpose lane in each direction (SR-71 to I-15)
- 91-12: Two additional general purpose lanes eastbound from Lakeview Avenue to SR-241
- B-2: Reversible six-lane toll-free freeway with (or without) full-length tunnel

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

- Variable message signing for motorist guidance, enhancing transit transfer centers, adding park-and-ride spaces and related measures, including retaining peak-period toll congestion-pricing options

Optional Considerations [To be Studied]

- SR-91 improvements for two HOV lanes and five mixed flow lanes in each direction from SR-71 to I-15
- The SR-91 express and HOV lanes to be considered for reconstruction to incorporate a reversible lane(s)
- Proposed Corridor B tunnel (center) to include reversible lanes



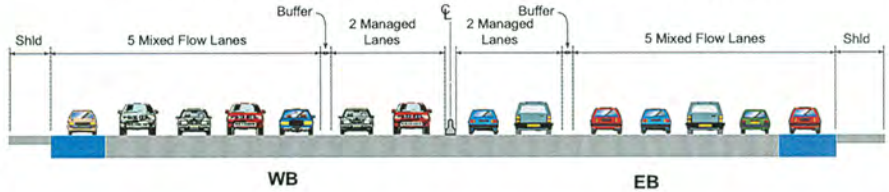
PROPOSED SR-91 CORRIDOR - ADDITIONAL 3 LANES FROM SR-55 TO SR-241

A-A

B-B

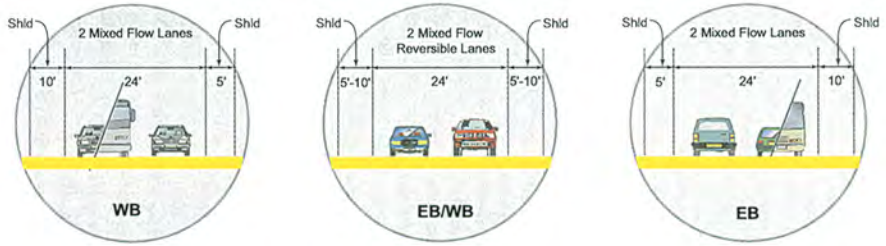
Note: Maglev to be constructed by others.

PROPOSED SR-91 CORRIDOR - ADDITIONAL 2 LANES FROM SR-71 TO I-15



PROPOSED CORRIDOR 'B' CONVENTIONAL 6 LANE FREEWAY - TUNNEL/SURFACE

C-C



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STRATEGIC ALTERNATIVE II

EXHIBIT 4

Description of the Strategic Alternative

Strategic Alternative III-A provides a capacity increase between Riverside and Orange Counties by incorporating a suite of transit, highway, and TDM/TSM improvements to SR-91, Corridor A (Santa Ana Canyon), Corridor B (Cajalco Road/I-15 to SR-241/SR-133 Vicinity), and Corridor D (Lake Elsinore/I-15 to SR-74). Strategic Alternative III-A transit improvements include SR-91 commuter bus service, Corridor A Metrolink improvements, and mixed-traffic commuter bus operations in Corridors B and D. In addition to expanding Metrolink service, and improving/ facilitating goods movement, all strategic alternatives accommodate a third track and a possible fourth track within the BNSF right-of-way. Strategic Alternative III-A highway improvements generally include one additional general purpose lane on SR-91 westbound from SR-55 to SR-241 and eastbound from SR-55 to Lakeview Avenue, two additional general purpose lanes on SR-91 eastbound from Lakeview Avenue to SR-241, one additional general purpose lane in each direction from SR-71 to I-15, managed lanes on SR-91 between SR-55 and I-15, four-lanes in Corridor A with lessened connections to SR-91, and a new four-lane tollway in Corridor B.

Transit Improvements

- 91-T1: HOV/HOT lane(s) commuter bus service on SR-91
- A-T1: Expanded Metrolink commuter rail service (doubling Metrolink operations to 30-minute service with additional third track)
- B-T1: Mixed-traffic commuter bus service within Corridor B
- D-T1: Mixed-traffic commuter bus service within Corridor D

Highway Improvements

- 91-1: One additional general purpose lane westbound from SR-55 to SR-241, and one additional general purpose lane eastbound from SR-55 to Lakeview Avenue
- 91-3: One additional general purpose lane in each direction (SR-71 to I-15)
- 91-12: Two additional general purpose lanes eastbound from Lakeview Avenue to SR-241
- A-4: Elevated four-lane grade-separated facility (directly linking SR-241 to I-15 [with lessened access to SR-91], with the only interchange being located at SR-71)
- B-4: Four-lane toll freeway with (or without) full-length tunnels
- D-3 (or D-4): Four-lane arterial with (or without) tunnel sections

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

- Variable message signing for motorist guidance, enhancing transit transfer centers, adding park-and-ride spaces and related measures, including retaining peak-period toll congestion-pricing options

Optional Considerations [To be Studied]

- Option A-4 will be considered for construction within SR-91 right-of-way as illustrated by Strategic Option 91-14
- Proposed elevated structures (e.g. 91-14, A-4) to include reversible lane(s) between SR-241 and I-15

Not to Scale

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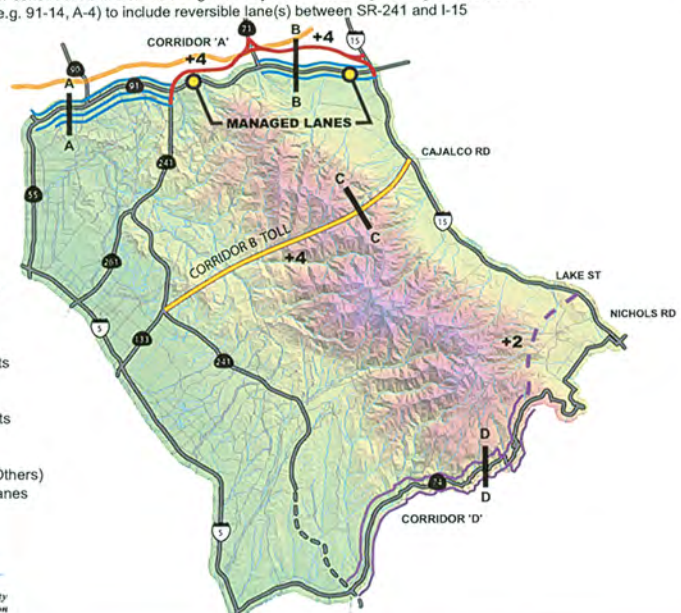

LEGEND

- Existing Highway
- Proposed SR-91 Improvements
- Proposed Additional SR-91 Lanes
- Existing SR-91 Lanes
- Proposed Extension of SR-241
- Proposed Corridor A Alignment
- Proposed Corridor A Improvements
- Proposed Corridor B Route
- Proposed Corridor B Lanes
- Proposed Corridor D Improvements
- Proposed Corridor D Route
- Proposed Corridor D Lanes
- Proposed Maglev Alignment (By Others)
- +2 Proposed Number of Additional Lanes

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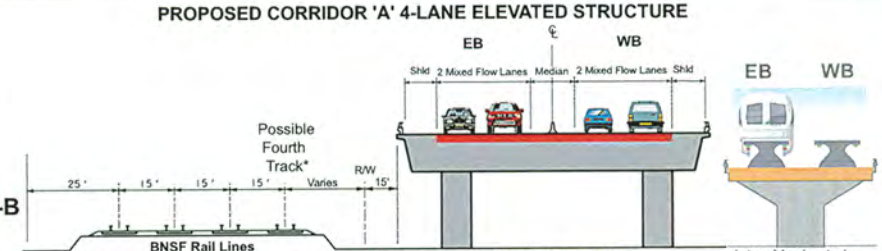
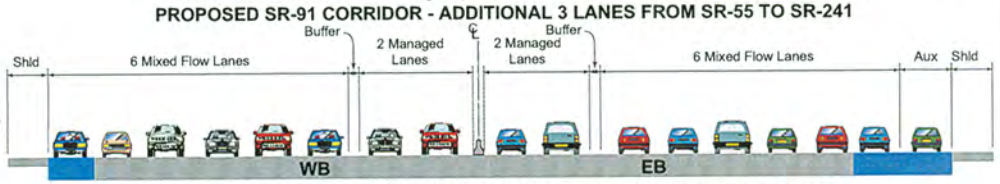
PROPOSED CORRIDOR 'A' 4-LANE ELEVATED STRUCTURE



Note: Structure could be located either north, south, or split north and south of the BNSF right-of-way.
Corridor 'A' improvements would be constructed outside of BNSF right-of-way.
*Allows for construction of fourth track for freight expansion.

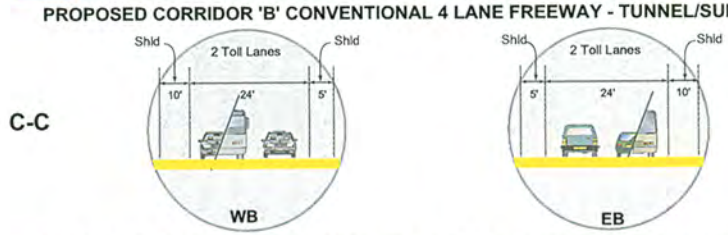
lote: Maglev to be onstructed by others.

PROPOSED SR-91 CORRIDOR - ADDITIONAL 3 LANES FROM SR-55 TO SR-241

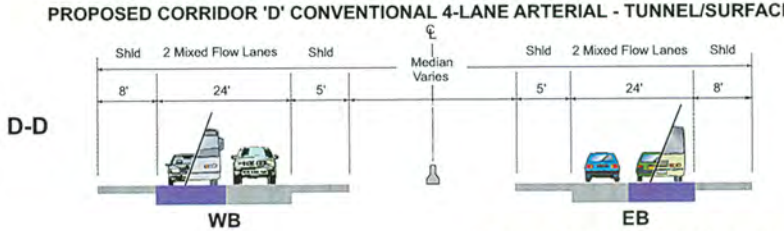


PROPOSED SR-91 CORRIDOR - ADDITIONAL 2 LANES FROM SR-71 TO I-15

PROPOSED CORRIDOR 'B' CONVENTIONAL 4 LANE FREEWAY - TUNNEL/SURFACE



PROPOSED CORRIDOR 'D' CONVENTIONAL 4-LANE ARTERIAL - TUNNEL/SURFACE



RIVERSIDE COUNTY - ORANGE COUNTY MIS

STRATEGIC ALTERNATIVE III-A

EXHIBIT 5

Description of the Strategic Alternative

Strategic Alternative III-B provides a capacity increase between Riverside and Orange Counties by incorporating a suite of transit, highway, and TDM/TSM improvements to SR-91, Corridor A (Santa Ana Canyon), Corridor B (Cajalco Road/I-15 to SR-241/SR-133 Vicinity), and Corridor D (Lake Elsinore/I-15 to SR-74). Strategic Alternative III-B transit improvements include SR-91 commuter bus service, Corridor A Metrolink improvements, and mixed-traffic commuter bus operations in Corridors B and D. In addition to expanding Metrolink service, and improving/facilitating goods movement, all strategic alternatives accommodate a third track and a possible fourth track within the BNSF right-of-way. Strategic Alternative III-B highway improvements generally include one additional general purpose lane on SR-91 westbound from SR-55 to SR-241 and eastbound from SR-55 to Lakeview Avenue, two additional general purpose lanes on SR-91 eastbound from Lakeview Avenue to SR-241, one additional general purpose lane in each direction from SR-71 to I-15, a four-lane managed facility in Corridor A with connections to SR-91, and a new four-lane tollway construction in Corridor B. Corridor A could include an intermediate interchange in Corona at a Transportation Center.

Transit Improvements

- 91-T1: HOV/HOT lane(s) commuter bus service on SR-91
- A-T1: Expanded Metrolink commuter rail service (doubling Metrolink operations to 30-minute service with additional third track)
- B-T1: Mixed-traffic commuter bus service within Corridor B
- D-T1: Mixed-traffic commuter bus service within Corridor D

Highway Improvements

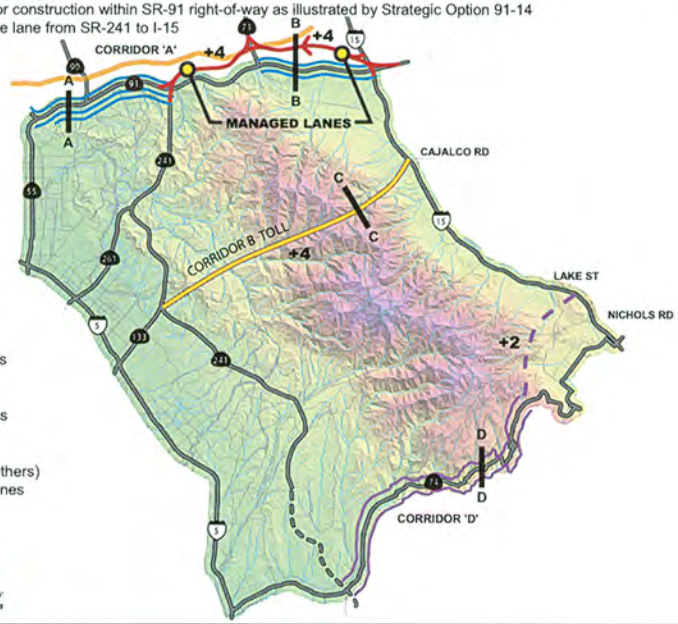
- 91-1: One additional general purpose lane westbound from SR-55 to SR-241, and one additional general purpose lane eastbound from SR-55 to Lakeview Avenue
- 91-3: One additional general purpose lane in each direction (SR-71 to I-15)
- 91-12: Two additional general purpose lanes eastbound from Lakeview Avenue to SR-241
- A-4: Elevated four-lane, grade-separated, managed lane facility (directly linking SR-241 to I-15 and SR-91, with the only interchanges being located at SR-71 and in Corona)
- B-4: Four-lane toll freeway with (or without) full-length tunnels
- D-3 (or D-4): Four-lane arterial with (or without) tunnel sections

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

- Variable message signing for motorist guidance, enhancing transit transfer centers, adding park-and-ride spaces and related measures, including retaining peak-period toll congestion-pricing options

Optional Considerations [To be Studied]

- Option A-4 will be considered for construction within SR-91 right-of-way as illustrated by Strategic Option 91-14
- SR-91 could include a reversible lane from SR-241 to I-15



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FOR ILLUSTRATIVE PURPOSES ONLY

LEGEND

- Existing Highway
- Proposed SR-91 Improvements
- Proposed Additional SR-91 Lanes
- Existing SR-91 Lanes
- Proposed Extension of SR-241
- Proposed Corridor A Alignment
- Proposed Corridor A Improvements
- Proposed Corridor B Route
- Proposed Corridor B Lanes
- Proposed Corridor D Improvements
- Proposed Corridor D Route
- Proposed Corridor D Lanes
- Proposed Maglev Alignment (By Others)
- +2 Proposed Number of Additional Lanes

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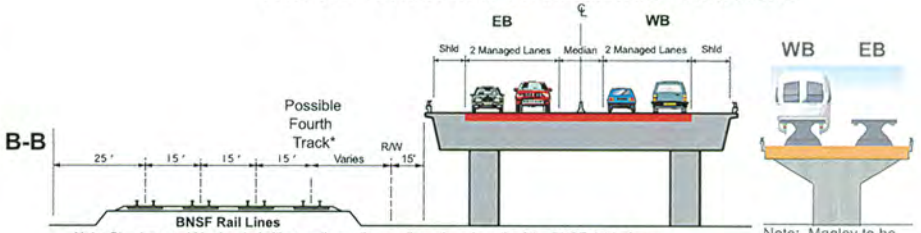
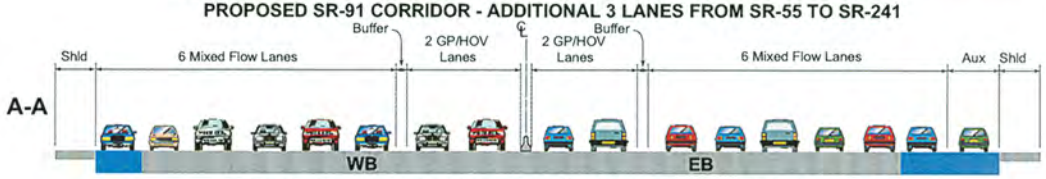
PROPOSED CORRIDOR 'A' 4-LANE ELEVATED STRUCTURE



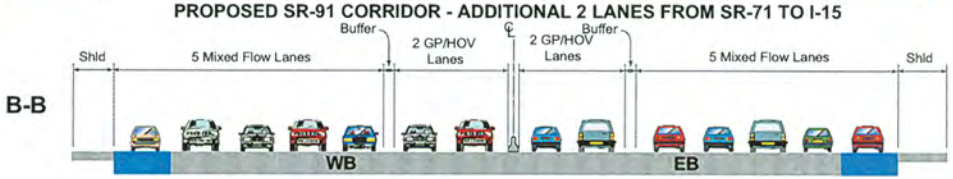
Note: Structure could be located either north, south, or split north and south of the BNSF right-of-way. Corridor 'A' improvements would be constructed outside of BNSF right-of-way.
*Allows for construction of fourth track for freight expansion.

Note: Maglev to be constructed by others.

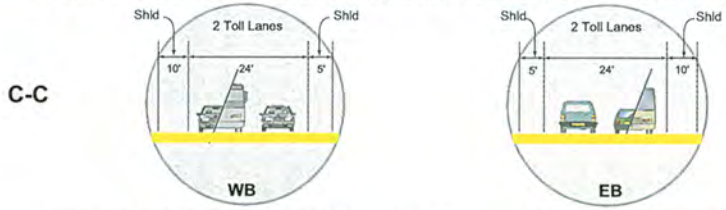
PROPOSED SR-91 CORRIDOR - ADDITIONAL 3 LANES FROM SR-55 TO SR-241



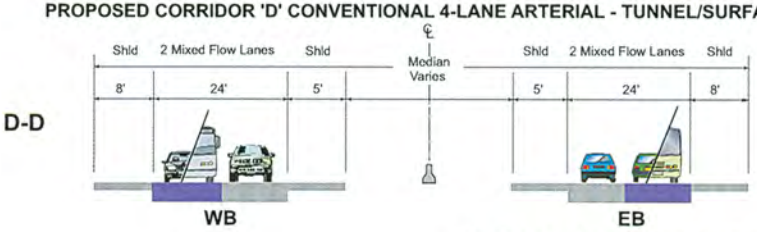
PROPOSED SR-91 CORRIDOR - ADDITIONAL 2 LANES FROM SR-71 TO I-15



PROPOSED CORRIDOR 'B' CONVENTIONAL 4-LANE FREEWAY - TUNNEL/SURFACE



PROPOSED CORRIDOR 'D' CONVENTIONAL 4-LANE ARTERIAL - TUNNEL/SURFACE



RIVERSIDE COUNTY - ORANGE COUNTY MIS

STRATEGIC ALTERNATIVE III-B

EXHIBIT 6

Many detailed findings, both quantitative and qualitative, are presented in the *Alternatives Evaluation Report.* Comparative findings involve capital cost estimates, benefit/cost ratios, and qualitative assessments including criteria relating to system balance, community impacts (built environment), environmental impacts (natural environment), goods movement, travel mode choices, regional mobility, corridor benefits and risks. The findings and recommendations detailed in the *Final Alternatives Evaluation and Refinement Report* are summarized below:

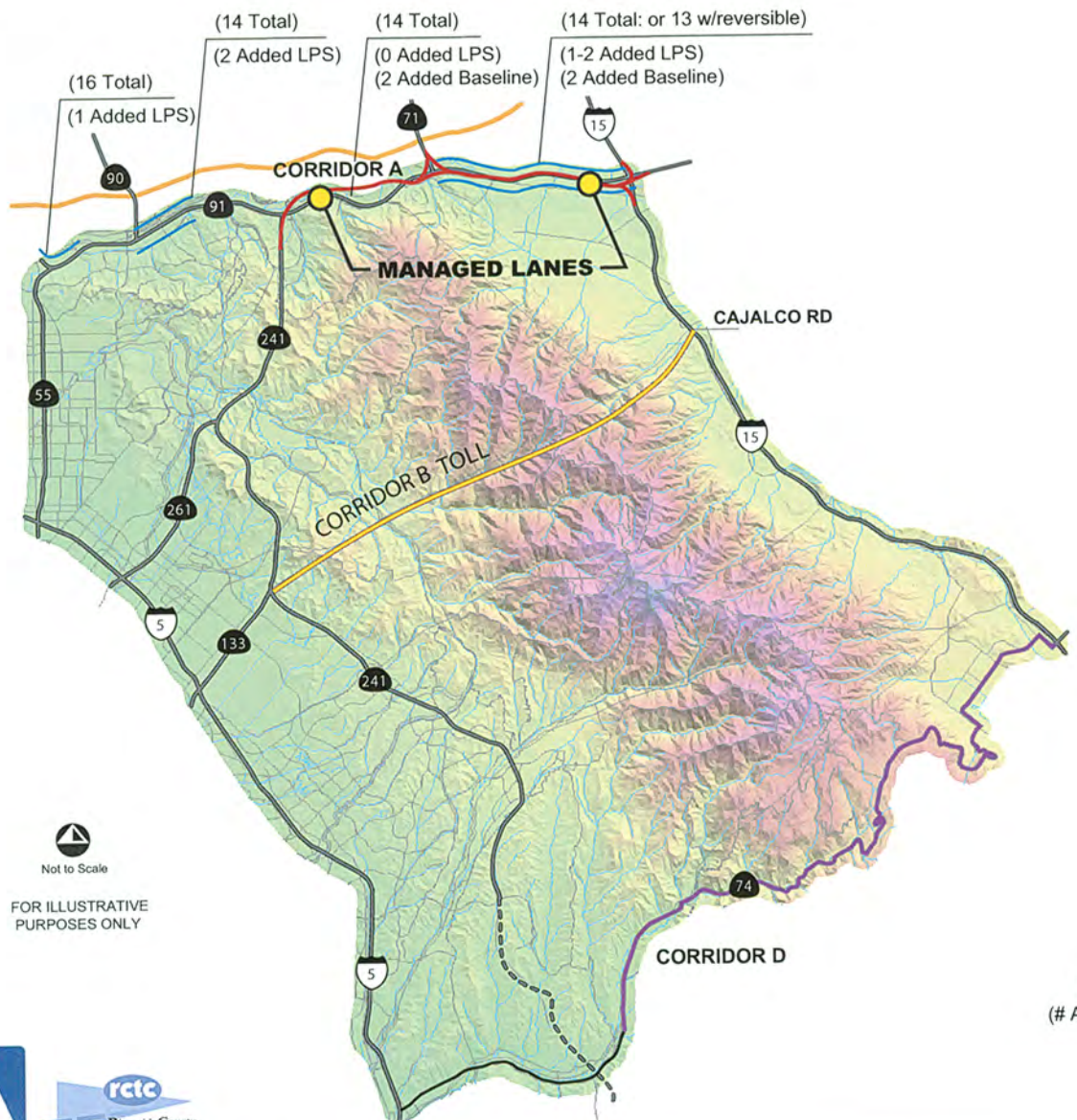
- All "build" Strategic Alternatives achieve the agreed upon mobility objective.
- Eliminate Ortega Highway (SR-74) realignment and widening concepts due to high costs and significant environmental impacts and focus instead on operational improvements.
- Eliminate Strategic Alternative I-B (Corridor A with SR-55 widening) from further analysis.
- A multi-corridor approach distributes impacts and provides a secondary route.
- There are benefits and risks associated with new corridors.

S.10 THE ADOPTED LOCALLY PREFERRED STRATEGY (LPS)

The MIS project team presented results of the detailed evaluation of strategic alternatives to the MIS Policy Committee. As presented, the evaluation demonstrated that each Strategic Alternative met *Purpose and Need* and objectives of the study. The Policy Committee provided guidance to the project team as to which components might best move towards a Locally Preferred Strategy (LPS). The preliminary LPS was presented to the Policy Committee and refined based on input received and then provided to the OCTA Board of Directors and the RCTC Board of Commissioners for approval.

At their respective meetings, the OCTA Board of Directors (December 12, 2005) and the RCTC Board of Commissioners (December 14, 2005) approved recommendations for the refined Locally Preferred Strategy (LPS). Components of the adopted LPS (see Exhibit 7) are listed below:

- *"Establish Riverside Freeway (State Route 91) from the Costa Mesa Freeway (State Route 55) to Corona Freeway (Interstate 15) as a priority for improving transportation between Riverside and Orange counties. Emphasize Riverside Freeway (State Route 91) improvements between the Foothill/Eastern Transportation Corridor (State Route 241) and the Corona Freeway (Interstate 15) first, followed by improvements between the Costa Mesa Freeway (State Route 55) and the Foothill/Eastern Transportation Corridor (State Route 241)."*
- *"Continue to work with the Foothill/Eastern Transportation Corridor Agency to develop a mutually acceptable plan to improve the connection between the Foothill/Eastern Transportation Corridor (State Route 241) and Riverside Freeway (State Route 91) corridors and accelerate capacity improvements on Eastern Toll Road (State Route 133), Foothill/Eastern Transportation Corridor (State Route 241), and Eastern Toll Road (State Route 261) to optimize utilization of the toll roads to improve transportation between Riverside and Orange counties."*



LPS COMPONENTS

- Maximize transit system
- Ultimate widening to SR-91*
- Possible managed lane changes for SR-91 or Corridor A (including reversible lanes)
- Continued study of Corridor A
- Continued study of Corridor B
- SR-74 operational improvements

NOTES

*Baseline SR-91 improvements include two lanes from SR-241 to I-15, and an EB auxiliary lane from SR-241 to SR-71 (Not shown on diagram at left).

**Maglev representative seed alignment shown (Illustrative only).

LEGEND

- Existing Highway
- Proposed SR-91 LPS Improvements
- Proposed Extension of SR-241
- Proposed Corridor A Alignment
- Proposed Corridor B Route
- Proposed SR-74 Improvements
- Proposed Maglev Alignment (By others)**

(# Total) Number of Total SR-91 Lanes (Incl. baseline*)

(# Added LPS) Number of Added SR-91Project Lanes (Does not incl. aux. lanes)

(# Added Baseline) Number of Added Baseline Lanes*

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LOCALLY PREFERRED STRATEGY

EXHIBIT 7

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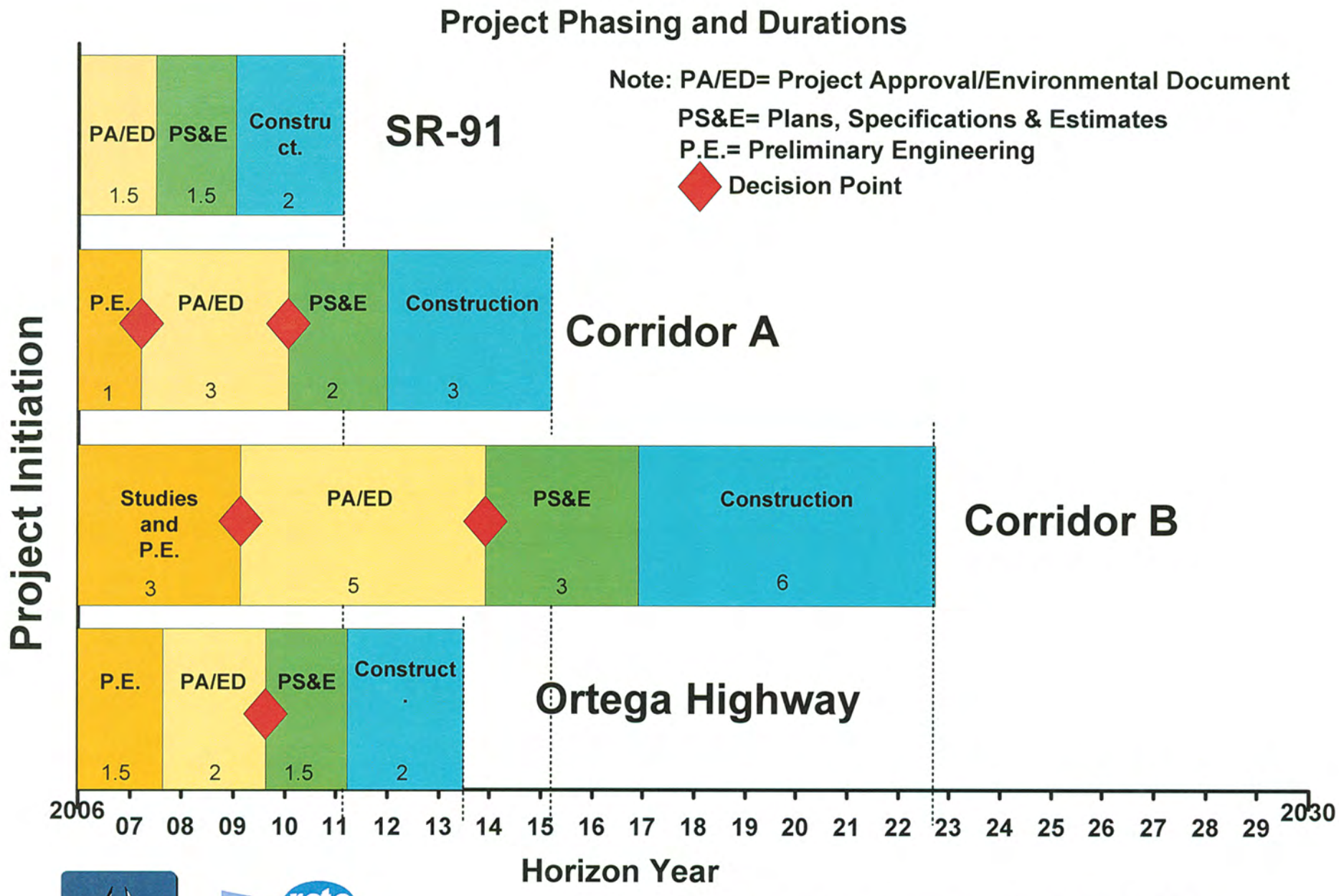
- *"Continue to evaluate costs and impacts with Corridor A in the Riverside Freeway (State Route 91) right of way through a future preliminary engineering process in cooperation with other agencies."*
- *"Continue to study the technical feasibility of the Corridor B concept including costs, risks, joint-use opportunities, benefits, and potential funding options in cooperation with ... other interested agencies."*
- *"Continue work with the Cal-Nevada Super Speed Train Commission on Anaheim to Ontario Maglev alignments in the Santa Ana Canyon or alternate corridors as appropriate."*
- *"Eliminate Strategic Alternative 1B (Corridor A with the Costa Mesa Freeway [State Route 55] widening) from further analysis due to high number of residential right-of-way impacts adjacent to the Costa Mesa Freeway (State Route 55)."*
- *"Eliminate from further analysis the Ortega Highway (State Route 74) widening and realignment concept due to high cost and environmental impacts, and direct staff to focus on Ortega Highway (State Route 74) operational improvements."*
- *"Direct staff to return with an updated State Route 91 Implementation Plan by June 30, 2006."*

S.11 LPS IMPLEMENTATION PLAN

Appendix E of the *Final Project Report* details components of the adopted Locally Preferred Strategy along with their anticipated project phasing and implementation schedules (duration of developmental activities). This covers full project development from Preliminary Engineering through Environmental Approval (Project Approval and Environmental Document) through Final Design (Plans, Specifications & Estimates) to eventual construction. The duration of each phase for each improvement project (see Exhibit 8) was estimated based on engineering judgment, taking into consideration actual experience with other recent, similar projects. The timing of when each LPS component is to come on line (be open to traffic) was determined by comparing travel demand with system capacity from present through the planning horizon year, 2030. Project phasing, project sequencing, and estimated duration for SR-91 widening, a new Corridor A elevated highway in the SR-91 right-of-way, a new Corridor B facility mostly in tunnels through the Santa Ana Mountains, and Ortega Highway (SR-74) operational improvements are discussed at length in the Main Body (and illustrated in exhibits presented in *Appendix E*).



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Riverside County-Orange County MIS
Project Phasing and Durations

Exhibit 8