



AGENDA

Board of Directors Metro Valley Study Session

February 13, 2014

****** Start Time: 9:00 a.m. ******

Location:

SANBAG Offices

1st Floor Lobby

1170 W. 3rd Street

San Bernardino, CA 92410

Board of Directors

Valley Representatives

Study Session Chair

Dick Riddell, Council Member
City of Yucaipa

Study Session Vice-Chair

Michael Tahan, Council Member
City of Fontana

Dennis Yates, Mayor
City of Chino

Ed Graham, Mayor
City of Chino Hills

Frank Navarro, Council Member
City of Colton

Walt Stanckiewitz, Mayor
City of Grand Terrace

Larry McCallon, Mayor Pro Tem
City of Highland

Rhodes "Dusty" Rigsby, Mayor
City of Loma Linda

Paul M. Eaton, Mayor
City of Montclair

Alan Wapner, Mayor Pro Tem
City of Ontario

L. Dennis Michael, Mayor
City of Rancho Cucamonga

Pete Aguilar, Mayor
City of Redlands

Deborah Robertson, Mayor
City of Rialto

Pat Morris, Mayor
City of San Bernardino

Ray Musser, Mayor
City of Upland

Mountain/Desert Representatives

Cari Thomas, Mayor
City of Adelanto

Curt Emick, Mayor
Town of Apple Valley

Julie McIntyre, Mayor
City of Barstow

Bill Jahn, Council Member
City of Big Bear Lake

Mike Leonard, Council Member
City of Hesperia

Edward Paget, Mayor
City of Needles

Jim Harris, Council Member
City of Twentynine Palms

Ryan McEachron, Mayor
City of Victorville

George Huntington, Council Member
Town of Yucca Valley

County Board of Supervisors

Robert Lovingood, First District
Janice Rutherford, Second District

James Ramos, Third District
Gary Ovitt, Fourth District

Josie Gonzales, Fifth District

Ex-Officio Member - Basem Muallem, Caltrans District 8 Director
Ray Wolfe, SANBAG Executive Director
Eileen Teichert, SANBAG General Counsel

San Bernardino Associated Governments (SANBAG) is a council of governments formed in 1973 by joint powers agreement of the cities and the County of San Bernardino. SANBAG is governed by a Board of Directors consisting of a mayor or designated council member from each of the twenty-four cities in San Bernardino County and the five members of the San Bernardino County Board of Supervisors.

In addition to SANBAG, the composition of the SANBAG Board of Directors also serves as the governing board for several separate legal entities listed below:

The San Bernardino County Transportation Commission, which is responsible for short and long range transportation planning within San Bernardino County, including coordination and approval of all public mass transit service, approval of all capital development projects for public transit and highway projects, and determination of staging and scheduling of construction relative to all transportation improvement projects in the Transportation Improvement Program.

The San Bernardino County Transportation Authority, which is responsible for administration of the voter-approved half-cent transportation transactions and use tax levied in the County of San Bernardino.

The Service Authority for Freeway Emergencies, which is responsible for the administration and operation of a motorist aid system of call boxes on State freeways and highways within San Bernardino County.

The Congestion Management Agency, which analyzes the performance level of the regional transportation system in a manner which ensures consideration of the impacts from new development and promotes air quality through implementation of strategies in the adopted air quality plans.

As a Subregional Planning Agency, SANBAG represents the San Bernardino County subregion and assists the Southern California Association of Governments in carrying out its functions as the metropolitan planning organization. SANBAG performs studies and develops consensus relative to regional growth forecasts, regional transportation plans, and mobile source components of the air quality plans.

Items which appear on the monthly Board of Directors agenda are subjects of one or more of the listed legal authorities. For ease of understanding and timeliness, the agenda items for all of these entities are consolidated on one agenda. Documents contained in the agenda package are clearly marked with the appropriate legal entity.

San Bernardino Associated Governments
County Transportation Commission
County Transportation Authority
Service Authority for Freeway Emergencies
County Congestion Management Agency

**Board of Directors
Metro Valley Study Session**

**February 13, 2014
9:00 a.m.**

**LOCATION:
Santa Fe Depot
1170 W. 3rd Street, 1st Floor Lobby, San Bernardino**

CALL TO ORDER – 9:00 a.m.
(Meeting chaired by Mayor Dick Riddell.)

- I. Pledge of Allegiance
- II. Attendance
- III. Announcements
- IV. Agenda Notices/Modifications – Nessa Williams

**1. Possible Conflict of Interest Issues for the SANBAG Board of Directors Pg. 7
Metro Valley Study Session Meeting February 13, 2014.**

Note agenda item contractors, subcontractors and agents which may require member abstentions due to conflict of interest and financial interests. Member abstentions shall be stated under this item for recordation on the appropriate item.

Consent Calendar

Consent Calendar items shall be adopted by a single vote unless removed by Board member request. Items pulled from the consent calendar will be brought up at the end of the agenda.

**2. Board of Directors Metro Valley Study Session Attendance Roster Pg. 11
A quorum shall consist of a majority of the membership of the SANBAG Board of Directors.**

**3. Construction Contract Change Orders to on-going SANBAG Pg. 15
Construction Contracts with Skanska/Rados, A Joint Venture, Brutoco Engineering and Construction, Ortiz Enterprises Inc. and Riverside Construction Company, Inc.**

Review and ratify change orders. Garry Cohoe

This item is not scheduled for review by any other policy committee or technical advisory committee.

Notes/Action

Discussion Calendar

Administrative

4. **Budget Overview for proposed budget Fiscal Year 2014/2015** Pg. 17 (45 minutes)

Recommend the Metro Valley Study Session receive general overview of the proposed budget for Fiscal Year 2014/2015. **Williams Stawarski**

This item will be reviewed by the Mountain/Desert Committee on February 21, 2014.

Regional/Subregional Planning

5. **Process for Review of the Measure I 2010-2040 Expenditure Plan in 2015** Pg. 19

1. Receive information on the process for review of the Measure I 2010-2040 Expenditure Plan in 2015.
2. Consider and comment on a preliminary recommendation by the City/County Managers' Technical Advisory Committee (CCMTAC) that it is premature to entertain amendments to the Measure I 2010-2040 Expenditure Plan in 2015 because SANBAG is still in the initial years of a 30-year Measure, and experience with the Measure is limited. It is recommended that the Expenditure Plan be reviewed in the 2017-2018 timeframe, pending the outreach required by the Measure I Ordinance.
3. That the following be reviewed and recommended for final approval by the Board of Directors at a regularly scheduled Board meeting: Authorize an outreach process by SANBAG staff based on the requirement in Section XIV of San Bernardino County Transportation Authority Ordinance No. 04-01 that the Measure I 2015 review process "shall consider recommendations from local governments, transportation agencies and interest groups, and the general public." Following input from this outreach, a determination would be made by the SANBAG Board regarding whether to pursue Expenditure Plan amendments in 2015.
4. That the following be reviewed and recommended for final approval by the Board of Directors at a regularly scheduled Board Meeting: Direct staff to proceed with analysis of interchange priorities for the Valley subarea consistent with the direction provided by the SANBAG Board on November 3, 2010 and in conjunction with the interchange phasing analysis authorized by the Board on October 3, 2012. **Steve Smith**

This item is also scheduled for review by the Mountain/Desert Policy Committee on February 21, 2014. Information in this agenda item was presented to the Transportation Technical Advisory Committee on February 3, 2014, to the City/County Manager Technical Advisory Committee on January 30, 2014, and to the Measure I/Nexus Study Ad Hoc Committee of the CCMTC on December 3, 2013, January 7, 2014, and January 21, 2014.

Discussion Items Continued.....**Regional/Subregional Planning****6. Draft SANBAG Freight Strategy****Pg. 47**

Receive information and provide comments on the draft SANBAG Freight Strategy provided in Attachment 1. **Steve Smith**

This item is also scheduled for review by the Mountain/Desert Policy Committee on February 21, 2014. Information in this agenda item was presented to the Transportation Technical Advisory Committee on February 3, 2014.

Transportation Fund Administration**7. Fund Allocation and Exchange on I-10 Tippecanoe Interchange Phase II and I-215 Projects** **Pg. 65**

That the following be reviewed and recommended for final approval by the Board of Directors, acting in its capacity as the San Bernardino County Transportation Commission, at a regularly scheduled Board meeting:

1. Allocate the remaining balance of State Proposition 1B Trade Corridor Improvement Funds, estimated at \$10,535,002, to the I-10 Tippecanoe Interchange Phase II Construction project, which shall be applied to the project as follows:
 - a. First replace the SANBAG Public Share contribution, estimated at \$1,424,424.
 - b. Replace an estimated \$4,000,000 of Projects of National and Regional Significance funds and an estimated \$5,110,578 of High Priority Program Funds originally designated for the Inland Empire Goods Movement Project and allow those funds to retain the "buy-down" status of the Projects of National and Regional Significance funds and High Priority Program funds.
2. Approve allocation of an estimated \$4,000,000 of Projects of National and Regional Significance funds to the I-215 Landscaping project.
3. Approve replacing an estimated \$1,500,000 of federal Surface Transportation Program funds and an estimated \$3,250,578 of Measure I Valley Freeway Program funds for the I-215 Barton Road Interchange project with an estimated \$4,750,578 of High Priority Program Funds and allocate the remaining amount of High Priority Program Funds, estimated at \$360,000, to the I-215 Barton Road Interchange project for future cost increases.

Discussion Items Continued.....
Transportation Fund Administration
Agenda Item No. 7 Continued...

4. Approve Trade Corridors Improvement Fund Baseline Agreement No. C14131 for the I-10 Tippecanoe Interchange Improvement Phase II project and authorize the Executive Director to execute C14131 when final Trade Corridors Improvement Funds programming amount is determined including modifications to the Project Programming Request form to reflect the final programming amounts and technical and administrative changes that may be necessary following California Transportation Commission staff review. Should any policy issues arise, the Executive Director will consult with Board Officers. **Carrie Schindler**

The programming of TCIF savings on the I-10 Tippecanoe Phase II Construction project and subsequent movement of the Inland Empire Goods Movement federal earmark funding to the I-215 Landscaping project and I-215 Barton Road Interchange project was discussed at the December 2, 2013, and February 3, 2014, Transportation Technical Advisory Committee. This item is not scheduled for review by any other policy committee.

Public Comments

Additional Items from Committee Members

Director's Comments

Brief Comments by General Public

Additional Information

Acronym Listing

Pg. 140

ADJOURNMENT:

**The next Board of Directors Metro Valley Study Session will be:
March 13, 2014**

Complete packages of this agenda are available for public review at the SANBAG offices and our website: www.sanbag.ca.gov. Staff reports for items may be made available upon request. For additional information call (909) 884-8276.

Meeting Procedures and Rules of Conduct

Meeting Procedures

The Ralph M. Brown Act is the state law which guarantees the public's right to attend and participate in meetings of local legislative bodies. These rules have been adopted by the Board of Directors in accordance with the Brown Act, Government Code 54950 et seq., and shall apply at all meetings of the Board of Directors and Policy Committees.

Accessibility

The SANBAG meeting facility is accessible to persons with disabilities. If assistive listening devices or other auxiliary aids or services are needed in order to participate in the public meeting, requests should be made through the Clerk of the Board at least three (3) business days prior to the Board meeting. The Clerk's telephone number is (909) 884-8276 and office is located at 1170 W. 3rd Street, 2nd Floor, San Bernardino, CA.

Agendas – All agendas are posted at 1170 W. 3rd Street, 2nd Floor, San Bernardino at least 72 hours in advance of the meeting, Staff reports related to agenda items may be reviewed at the SANBAG offices located at 1170 W. 3rd Street, 2nd Floor, San Bernardino and our website: www.sanbag.ca.gov.

Agenda Actions – Items listed on both the "Consent Calendar" and "Items for Discussion" contain suggested actions. The Board of Directors will generally consider items in the order listed on the agenda. However, items may be considered in any order. New agenda items can be added and action taken by two-thirds vote of the Board of Directors.

Closed Session Agenda Items – Consideration of closed session items *excludes* members of the public. These items include issues related to personnel, pending litigation, labor negotiations and real estate negotiations. Prior to each closed session, the Chair will announce the subject matter of the closed session. If action is taken in closed session, the Chair may report the action to the public at the conclusion of the closed session.

Public Testimony on an Item – Members of the public are afforded an opportunity to speak on any listed item. Individuals wishing to address the Board of Directors or Policy Committee Members should complete a "Request to Speak" form, provided at the rear of the meeting room, and present it to the Clerk prior to the Board's consideration of the item. A "Request to Speak" form must be completed for *each* item an individual wishes to speak on. When recognized by the Chair, speakers should be prepared to step forward and announce their name and address for the record. In the interest of facilitating the business of the Board, speakers are limited to three (3) minutes on each item. Additionally, a twelve (12) minute limitation is established for the total amount of time any one individual may address the Board at any one meeting. The Chair or a majority of the Board may establish a different time limit as appropriate, and parties to agenda items shall not be subject to the time limitations.

The Consent Calendar is considered a single item, thus the three (3) minute rule applies. Consent Calendar items can be pulled at Board member request and will be brought up individually at the specified time in the agenda allowing further public comment on those items.

Agenda Times – The Board is concerned that discussion take place in a timely and efficient manner. Agendas may be prepared with estimated times for categorical areas and certain topics to be discussed. These times may vary according to the length of presentation and amount of resulting discussion on agenda items.

Public Comment – At the end of the agenda, an opportunity is also provided for members of the public to speak on any subject within the Board's authority. *Matters raised under "Public Comment" may not be acted upon at that meeting. "Public Testimony on any Item" still apply.*

Disruptive Conduct – If any meeting of the Board is willfully disrupted by a person or by a group of persons so as to render the orderly conduct of the meeting impossible, the Chair may recess the meeting or order the person, group or groups of person willfully disrupting the meeting to leave the meeting or to be removed from the meeting. Disruptive conduct includes addressing the Board without first being recognized, not addressing the subject before the Board, repetitiously addressing the same subject, failing to relinquish the podium when requested to do so, or otherwise preventing the Board from conducting its meeting in an orderly manner. *Please be aware that a NO SMOKING policy has been established for meetings. Your cooperation is appreciated!*

**SANBAG General Practices for Conducting Meetings
of
Board of Directors and Policy Committees**

Basic Agenda Item Discussion.

- The Chair announces the agenda item number and states the subject.
- The Chair calls upon the appropriate staff member or Board Member to report on the item.
- The Chair asks members of the Board/Committee if they have any questions or comments on the item. General discussion ensues.
- The Chair calls for public comment based on “Request to Speak” forms which may be submitted.
- Following public comment, the Chair announces that public comment is closed and asks if there is any further discussion by members of the Board/Committee.
- The Chair calls for a motion from members of the Board/Committee.
- Upon a motion, the Chair announces the name of the member who makes the motion. Motions require a second by a member of the Board/Committee. Upon a second, the Chair announces the name of the Member who made the second, and the vote is taken.

The Vote as specified in the SANBAG Bylaws.

- Each member of the Board of Directors shall have one vote. In the absence of the official representative, the alternate shall be entitled to vote. (Board of Directors only.)
- Voting may be either by voice or roll call vote. A roll call vote shall be conducted upon the demand of five official representatives present, or at the discretion of the presiding officer.

Amendment or Substitute Motion.

- Occasionally a Board Member offers a substitute motion before the vote on a previous motion. In instances where there is a motion and a second, the maker of the original motion is asked if he would like to amend his motion to include the substitution or withdraw the motion on the floor. If the maker of the original motion does not want to amend or withdraw, the substitute motion is not addressed until after a vote on the first motion.
- Occasionally, a motion dies for lack of a second.

Call for the Question.

- At times, a member of the Board/Committee may “Call for the Question.”
- Upon a “Call for the Question,” the Chair may order that the debate stop or may allow for limited further comment to provide clarity on the proceedings.
- Alternatively and at the Chair’s discretion, the Chair may call for a vote of the Board/Committee to determine whether or not debate is stopped.
- The Chair re-states the motion before the Board/Committee and calls for the vote on the item.

The Chair.

- At all times, meetings are conducted in accordance with the Chair’s direction.
- These general practices provide guidelines for orderly conduct.
- From time-to-time circumstances require deviation from general practice.
- Deviation from general practice is at the discretion of the Board/Committee Chair.

Courtesy and Decorum.

- These general practices provide for business of the Board/Committee to be conducted efficiently, fairly and with full participation.
- It is the responsibility of the Chair and Members to maintain common courtesy and decorum.

Adopted By SANBAG Board of Directors January 2008



- San Bernardino County Transportation Commission
- San Bernardino County Transportation Authority
- San Bernardino County Congestion Management Agency
- Service Authority for Freeway Emergencies

Minute Action

AGENDA ITEM 1

Date: February 13, 2014

Subject: Information Relative to Possible Conflict of Interest

Recommendation*: Note agenda items and contractors/subcontractors, which may require member abstentions due to possible conflicts of interest.

Background: In accordance with California Government Code 84308, members of the SANBAG Board may not participate in any action concerning a contract where they have received a campaign contribution of more than \$250 in the prior twelve months from an entity or individual, except for the initial award of a competitively bid public works contract. This agenda contains recommendations for action relative to the following contractors:

Item No.	Contract No.	Principals & Agents	Subcontractors
3-A	C09196	Skanska/Rados, A Joint Venture <i>Chad Mathes</i>	All American Asphalt Anderson Drilling CGO Construction Chrip Company Coffman Specialties Cleveland Wrecking CMC Fontana Steel

Approved
Board Metro Valley Study Session

Date: _____

Moved: _____ *Second:* _____

In Favor: _____ *Opposed:* _____ *Abstained:* _____

Witnessed: _____

COG	<input type="checkbox"/>	CTC	<input checked="" type="checkbox"/>	X	CTA	<input checked="" type="checkbox"/>	SAFE	<input type="checkbox"/>	CMA	<input type="checkbox"/>
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Check all that apply.
 MVSS1402z-gc

3-A (Cont.)	C09196		<p>D C Hubbs Dywidag-Systems Int. Elmore Pipe Jacking Foundation Pile Inc. Gerco Contracting Giken America Corp. Robert B. Longway Malcolm Drilling Co, Inc. Merli Concrete Pumping Modern Alloy MSL Electric Inc. Olivas Drilling Pacific Restoration Group Penhall Pomeroy Reycon Construction, Inc. Southwest V-ditch Statewide Safety & Sign Steve Bubalo Construction Valley Concrete Placing, Inc. VP Vertical Earthwork</p>
3-B	C12036	<p>Brutoco Engineering and Construction, Inc. <i>Andy Acosta</i></p>	<p>A.C. Dike Company ACL Construction, Inc. Alcorn Fence Company All American Asphalt AVAR Construction Systems, Inc. Cal-Stripe, Inc. Castle Walls LLC CGO Construction Company, Inc. Coffman Specialties, Inc. Cooper Engineering, Inc. C.P. Construction Company, Inc. Diversified Landscape Company Dywidag Systems International G & F Concrest Cutting Griffith Company</p>

3-B (Cont.)	C12036		Harber Companies, Inc. Integrity Rebar Placers KEC Engineering KRC Safety Co., Inc. LaLonde Equipment Rental Leinaia's Transportation S.D. Precast Concrete, Inc. dba Pomeroy South Coast Sweeping Sully-Miller Contracting Company Treesmith Enterprises, Inc. Truesdale Corporation of California Visual Pollution Technologies West Coast Boring, Inc.
3-C	C12224	Ortiz Enterprises, Inc. <i>Patrick A. Ortiz</i>	Alcorn Fence Company Bithell, Inc. Cal-Stripe, Inc. CGO Construction Cooper Engineering Coral Construction Coreslab Structures Diversified Landscape Griffith Company Harber Companies Hardy & Harper Hydro Sprout Integrity Rebar Placers L. Johnson Lincoln Pacific Mahaffey Companies Rogan Concrete Coring & Sawing SRD Engineering, Inc. Statewide Traffic Safety & Signs Superior Gunite Truesdell Corporation West Coast Welding, Inc

3-D	C12196	Ortiz Enterprises, Inc. <i>Patrick A. Ortiz</i>	A.C. Dike Company ACL All American Asphalt CGO Construction Co. Chrisp Company Cindy Trump Inc. DBA Lindy's Cold Planing Coral Construction Co. DC Hubbs Company Diversified Landscape Co. Dywidag Systems International EBS General Engineering, Inc. Foundation Pile Inc. Harber Companies, Inc. Hard Rock Equipment High Light Electrical, Inc. Integrity Rebar Placers KEC Engineering Malcolm Drilling Co. Maneri Traffic Control R.J. Lalonde Inc. SRD Engineering Statewide Traffic Safety & Signs
3-E	C13121	Riverside Construction Company, Inc. <i>Donald M. Pimm</i>	Caliagua, Inc. C.P. Construction Crown Fence Company Griffith Company High Light Electric Integrity Rebar Placers Malcolm Drilling Match Corporation Old Castle Precast

Financial Impact: This item has no direct impact on the SANBAG budget.

Reviewed By: This item is prepared monthly for review by SANBAG Board and Committee members.

BOARD OF DIRECTORS METRO VALLEY STUDY SESSION ATTENDANCE RECORD – 2014

Name	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Gary Ovitt Board of Supervisors												
James Ramos Board of Supervisors												
Janice Rutherford Board of Supervisors												
Josie Gonzales Board of Supervisors												
Robert Lovingood Board of Supervisors												
Cari Thomas City of Adelanto												
Curt Emick Town of Apple Valley												
Julie McIntyre City of Barstow												
Bill Jahn City of Big Bear Lake												
Dennis Yates City of Chino												
Ed Graham City of Chino Hills												
Frank Navarro City of Colton												
Michael Tahan City of Fontana												
Walt Stanckiewitz City of Grand Terrace												
Mike Leonard City of Hesperia												
Larry McCallon City of Highland												

X = member attended meeting. * = alternate member attended meeting. Empty box = Did not attend meeting. Crossed out box = not a Board Member at the time.

BOARD OF DIRECTORS METRO VALLEY STUDY SESSION ATTENDANCE RECORD – 2014

Name	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Rhodes 'Dusty' Riggsby City of Loma Linda												
Paul Eaton City of Montclair												
Edward Paget City of Needles												
Alan Wapner City of Ontario												
L. Dennis Michael City of Rancho Cucamonga												
Pete Aguilar City of Redlands												
Deborah Robertson City of Rialto												
Patrick Morris City of San Bernardino												
Jim Harris City of Twentynine Palms												
Ray Musser City of Upland												
Ryan McEachron City of Victorville												
Dick Riddell City of Yucaipa												
George Huntington Town of Yucca Valley												

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X = member attended meeting. * = alternate member attended meeting. Empty box = Did not attend meeting. Crossed out box = not a Board Member at the time.

BOARD OF DIRECTORS METRO VALLEY STUDY SESSION ATTENDANCE RECORD – 2013

Name	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Gary Ovitt Board of Supervisors	X	X			X	X		X		X		X
James Ramos Board of Supervisors	X	X	X		X			X	X	X		X
Janice Rutherford Board of Supervisors	X	X	X		X			X		X	X	X
Josie Gonzales Board of Supervisors			X								X	X
Robert Lovingood Board of Supervisors	X	X										
Cari Thomas City of Adelanto												
Curt Emick Town of Apple Valley												
Julie McIntyre City of Barstow												
Bill Jahn City of Big Bear Lake	X	X				X		X		X	X	X
Dennis Yates City of Chino	X	X			X	X		X	X	X	X	X
Ed Graham City of Chino Hills	X	X	X		X			X	X	X	X	X
Frank Navarro City of Colton		X	X		X	X		X	X	X	X	X
Michael Taban City of Fontana	X	X	X		X	X		X	X	X	X	*
Walt Stanckiewicz City of Grand Terrace	X	X	X		X	X		X	X	X	X	X
Mike Leonard City of Hesperia		X										
Larry McCallon City of Highland	X	X	X		X	X						X

X = member attended meeting. * = alternate member attended meeting. Empty box = Did not attend meeting. Crossed out box = not a Board Member at the time.

AGENDA ITEM 2

BOARD OF DIRECTORS METRO VALLEY STUDY SESSION ATTENDANCE RECORD – 2013

Name	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Rhodes 'Dusty' Rigsby City of Loma Linda	X	X	X		X	X		X	X	X	X	X
Paul Eaton City of Montclair	X		X		X	X		X	X	X	X	
Edward Paget City of Needles												
Alan Wapner City of Ontario		X	X		X			X		X		X
L. Dennis Michael City of Rancho Cucamonga		X	X					X		X	X	X
Pete Aguilar City of Redlands		X	X			X		X	X		X	X
Deborah Robertson City of Rialto					X	X		X		X		
Patrick Morris City of San Bernardino	X	X	X		X	X		X	X	X	X	X
Jim Harris City of Twentynine Palms		X	X		X			X	X		X	X
Ray Musser City of Upland		X	X		X	X				X	X	X
Ryan McEachron City of Victorville		X			X	X		X		X		
Dick Riddell City of Yucaipa	X	X	X		X	X		X	X	X	X	X
George Huntington Town of Yucca Valley												

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X = member attended meeting. * = alternate member attended meeting. Empty box = Did not attend meeting. Crossed out box = not a Board Member at the time.

by the City of Fontana for modifications to adjacent properties on Boyle Avenue to accommodate project) and CCO No. 25 (\$38,000.00 increase for improvements to business properties at the southeast corner of Citrus Avenue and Valley Boulevard as part of the Right of Way acquisition by the City of Fontana).

- C. CN C12224 with Ortiz Enterprises, Inc. for construction of the I-10 Cherry Avenue Interchange project: CCO No. 10 Supplement 1 (\$20,000.00 increase in additional funds for Maintain Existing and Temporary Electrical Systems as required in the contract Special Provisions), CCO No. 20 (\$11,148.00 increase for modifications to the new driveway approach to provide for correct ingress/egress of semi-trucks to the "Truck Stop" business) and CCO No. 23 (\$25,000.00 increase for modifications to Type 60 concrete barrier to allow for installation of street lighting on both westbound ramps as shown on the plans).
- D. CN C12196 with Ortiz Enterprises, Inc. for construction of the I-10 Tippecanoe Interchange, Phase 1 project: CCO No. 30 (\$5,000.00 increase for furnishing and installing pedestrian push button post for compliance with ADA requirements), CCO No. 31 (no cost/no credit change for the substitution of Liquid Asphalt (Prime Coat) for Slow Setting Asphaltic Emulsion (SSI)) and CCO No. 33 (\$3,684.00 increase to compensate contractor for removal and replacement of 57 linear feet of curb and gutter to provide for drainage from adjacent property to due to settlement).
- E. CN C13121 with Riverside Construction Company, Inc. for the construction of the Laurel Street Grade Separation project: CCO No. 3 (\$9,476.14 increase to compensate contractor for additional electrical work not shown on the plans and requested by the City of Colton Electrical Department) and CCO No 6 (\$4,515.00 increase for the installation of larger size Time Warner Vaults as requested by Time Warner. As Time Warner is responsible for the relocation costs the Agency will be reimbursed for this expense).

Financial Impact: This item imposes no financial impact, as all CCOs are within previously approved contingency amounts under Task No's. 0838, 0826, 0842 and 0884.

Reviewed By: This item is not scheduled for review by any other policy committee or technical advisory committee.

Responsible Staff: Garry Cohoe, Director of Project Delivery



- San Bernardino County Transportation Commission ■ San Bernardino County Transportation Authority
- San Bernardino County Congestion Management Agency ■ Service Authority for Freeway Emergencies

Minute Action

AGENDA ITEM: 4

Date: February 13, 2014

Subject: Budget Overview for proposed budget Fiscal Year 2014/2015

Recommendation: Recommend the Metro Valley Study Session receive general overview of the proposed budget for Fiscal Year 2014/2015.

Background: The SANBAG Budget Ad Hoc Committee recently conducted a survey of Board Members to receive input regarding the changes they would like to see in future budget documentation and processes. One of the short-term recommendations was a general overview of each major program by area (or subarea) before the presentation of the more detailed budget information.

Staff will provide a general overview of the Fiscal Year 2014/2015 budget for the Valley and Mountain/Desert areas at the February Board Metro Valley Study Session and Mountain/Desert Committee respectively. The overview will entail the following programs:

1. General/Council of Governments Support
2. Air Quality and Traveler Services
3. Regional and Subregional Planning
4. Transit and Passenger Rail
5. Major Projects Delivery
6. Fund Administration and Programming
7. Debt Service

Approved
 Board Metro Valley Study Session

Date: _____

Moved: _____ Second: _____

In Favor: _____ Opposed: _____ Abstained: _____

Witnessed: _____

COG	X	CTC	X	CTA	X	SAFE	X	CMA	X
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Check all that apply.
 MVSS1402b-wws

The overview presentation will include a description, major accomplishments, and goals for Fiscal Year 2014/2015. Estimated revenues and detailed budgetary information for the various tasks in the proposed 2014/2015 budget will be provided at the March General Policy Committee, Board Metro Valley Study Session, Commuter Rail and Transit Committee, and Mountain/Desert Committee meetings.

The general overview of the budget will be conducted each year prior to the completion of the budget document.

Financial Impact: The budget overview has no financial impact on the Fiscal Year 2013/2014 budget, but is a component of the Fiscal Year 2014/2015 budget.

Reviewed By: This item will be reviewed by the Mountain/Desert Committee on February 21, 2014.

Responsible Staff: William Stawarski, Chief Financial Officer



- San Bernardino County Transportation Commission
- San Bernardino County Transportation Authority
- San Bernardino County Congestion Management Agency
- Service Authority for Freeway Emergencies

Minute Action

AGENDA ITEM: 5

Date: February 13, 2014

Subject: Process for Review of the Measure I 2010-2040 Expenditure Plan in 2015

Recommendation: 1. Receive information on the process for review of the Measure I 2010-2040 Expenditure Plan in 2015.

2. Consider and comment on a preliminary recommendation by the City/County Managers' Technical Advisory Committee (CCMTAC) that it is premature to entertain amendments to the Measure I 2010-2040 Expenditure Plan in 2015 because SANBAG is still in the initial years of a 30-year Measure, and experience with the Measure is limited. It is recommended that the Expenditure Plan be reviewed in the 2017-2018 timeframe, pending the outreach required by the Measure I Ordinance.

3. That the following be reviewed and recommended for final approval by the Board of Directors at a regularly scheduled Board meeting: Authorize an outreach process by SANBAG staff based on the requirement in Section XIV of San Bernardino County Transportation Authority Ordinance No. 04-01 that the Measure I 2015 review process "shall consider recommendations from local governments, transportation agencies and interest groups, and the general public." Following input from this outreach, a determination would be made by the SANBAG Board regarding whether to pursue Expenditure Plan amendments in 2015.

Approved
 Board Metro Valley Study Session

Date: _____

Moved: _____ Second: _____

In Favor: _____ Opposed: _____ Abstained: _____

Witnessed: _____

COG	<input type="checkbox"/>	CTC	<input type="checkbox"/>	CTA	<input checked="" type="checkbox"/>	SAFE	<input type="checkbox"/>	CMA	<input type="checkbox"/>
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Check all that apply.

MVSS1402a-ss

<http://portal.sanbag.ca.gov/mgmt/committee/mvss/mvss2014/mvss1402/AgendaItems/MVSS1402a1-ss.pdf>

4. That the following be reviewed and recommended for final approval by the Board of Directors at a regularly scheduled Board Meeting: Direct staff to proceed with analysis of interchange priorities for the Valley subarea consistent with the direction provided by the SANBAG Board on November 3, 2010 and in conjunction with the interchange phasing analysis authorized by the Board on October 3, 2012.

Background:

The purpose of this agenda item is to explain the process of considering amendments to the Measure I 2010-2040 Expenditure Plan, as required in 2015 by Section XIV of San Bernardino County Transportation Authority Ordinance No. 04-01 and to obtain initial input from the committee. Section XIV states:

SECTION XIV. EXPENDITURE PLAN AMENDMENTS. The Expenditure Plan may only be amended by the following process:

1. Beginning in 2015, and at least every ten years thereafter, the Authority shall review and, where necessary, propose revision to the Expenditure Plan. Such review shall consider recommendations from local governments, transportation agencies and interest groups, and the general public.
2. The Authority shall notify the cities/towns and Board of Supervisors of the proposed revision and initiation of an amendment, reciting findings of necessity.
3. Actions of the city/town councils and Board of Supervisors to approve or to oppose the amendment shall be formally communicated to the Authority within 60 days of notice of initiation of amendment.
4. The boundaries of subareas shall be amended only by unanimous approval of all the jurisdictions in the subareas where an amendment is proposed to include or exclude territory.
5. Approval of the amendment by a majority of the cities/towns constituting a majority of the incorporated population provided, however, that any amendment of the Victor Valley Expenditure Plan (Schedule E) shall also require a two-thirds vote of the jurisdictions within the Victor Valley subarea.
6. Approval of the amendment by the Board of Supervisors.
7. Approval of the amendment by the Authority.

The complete Measure I Expenditure Plan is included as Attachment 1. The Transportation Expenditure Plan sets forth requirements for how Measure I revenue is to be allocated by subarea and program and how the revenue is to be expended. Modifications to this allocation and expenditure process are subject to the amendment procedures described above.

Overall Concept for Consideration of Amendments

The approval of Measure I 2010-2040 by the voters of San Bernardino County in 2004 set in motion subsequent activities to implement the Measure I Expenditure Plan. The inaugural version of the Development Mitigation Nexus Study was adopted by the SANBAG Board in October 2005. The Nexus

Study documents the development mitigation commitments for Valley and Victor Valley jurisdictions necessary to match Measure I funds for the Valley Freeway Interchange Program, Valley Major Street Program, and Victor Valley Major Local Highways Program. The Measure I Strategic Plan was adopted by the SANBAG Board in April 2009 and contains the policies by which Measure I expenditures are governed.

As evident from the steps described in Section XIV of the ordinance, amendment of the Expenditure Plan is not a trivial process. However, modifications might be made to the Measure I Strategic Plan or Nexus Study that could achieve certain objectives the Board desires to accomplish, and amendments to these documents are much easier than amendment of the Expenditure Plan.

Therefore, SANBAG staff proposes to consider potential modifications to the Measure I Expenditure Plan, Measure I Strategic Plan policies, and Nexus Study together in integrated fashion. The reason for this is to demonstrate what can be achieved without modification of the Expenditure Plan and what actions would require the Expenditure Plan to be changed. Measure I Strategic Plan policies and Nexus Study policies may be modified by the Board without the much more elaborate process required to amend the Measure I Expenditure Plan. Some "early action" changes to Measure I Strategic Plan policy and the Nexus Study could come out of this process.

An Ad Hoc committee of the City/County Managers Technical Advisory Committee has already made some recommendations for changes to the Nexus Study and the Strategic Plan. These will be taken through the SANBAG policy committees in the near future once they are developed in sufficient detail and reviewed by other technical advisory committees. In addition, after discussing the amendment process, the Ad Hoc Committee has made a preliminary recommendation to SANBAG staff that it is premature to entertain amendments to the Measure I 2010-2040 Expenditure Plan in 2015, given that SANBAG is still in the initial years of a 30-year Measure and experience with the Measure is limited. This recommendation was confirmed by the full City/County Manager Technical Advisory Committee at its meeting on January 30, 2014. However, "recommendations from local governments, transportation agencies and interest groups, and the general public" will still be solicited as required by Section XIV.1 of the Measure I Ordinance. Methods by which these recommendations could be solicited include e-mail notifications to stakeholder groups on SANBAG's extensive contact lists and posting of the comment opportunity on the SANBAG website.

Following this input, a determination would be made by the SANBAG Board regarding whether to pursue Expenditure Plan amendments in 2015. It should be

noted that amendments to the Expenditure Plan may be considered at any time following 2015. The CCMTAC suggested that 2017-2018 would be a reasonable timeline for consideration of such amendments, rather than 2015.

Possible Schedule

The following is proposed as a working schedule to obtain input and make recommendations on the 2015 review of the Expenditure Plan required by the Measure I ordinance:

- Initial discussions with the Transportation Technical Advisory Committee (TTAC) and City/County Managers Ad Hoc Committee in December 2013 and January 2014
- Presentation to SANBAG Metro Valley Study Session and Mountain/Desert Policy Committee in February 2014, initiating discussions on the Expenditure Plan amendment process
- February through March 2014 - Solicit input from “local governments, transportation agencies, interest groups and the public,” per the directive in the Measure I Ordinance. Input would likely be solicited through a structured e-mail request to a range of stakeholders. A public workshop could be held, if the SANBAG Board deems it to be appropriate.
- By the end of March 2014 – Prepare a Measure I/Nexus Study “Issues Paper” based on initial policy committee, TTAC, and City/County Manager TAC input on possible modifications to the Expenditure Plan, Measure I Policies, and Nexus Study.
- April/May, 2014 - Review Measure I/Nexus Study Issues Paper with TTAC and City/County Manager TAC. The Ad Hoc Committee will continue to provide advice throughout these review periods.
- May/June 2014 – Provide recommendations to SANBAG policy committees and Board regarding whether/when potential amendments to the Expenditure Plan should be evaluated and brought back to the SANBAG policy committees. This would be the “go/no-go decision” regarding whether to pursue one or more formal Expenditure Plan amendments. Include specific recommendations on changes to the Measure I Strategic Plan policies and Nexus Study, if applicable.
- Fall 2014 – If the SANBAG Board determines that one or more formal Expenditure Plan amendments should move forward, discuss specific approach with SANBAG policy committees. Define milestone schedule, prepare materials, and organize education/outreach program.
- Early 2015 – Make presentations to city/town councils and Board of Supervisors regarding amendments and the amendment approval process. Provide sample resolutions and support materials. Track progress on city council approvals.

Input Being Sought at this Time

SANBAG staff is seeking input from the committee regarding the following questions:

1. Does the approach and schedule outlined above seem reasonable?
2. Does the committee concur with recommendation No. 2 above?
3. If not, are there specific changes in the Expenditure Plan Board members would like to have considered as part of the 2015 review process?
4. In addition to e-mail and website notifications, are there any other stakeholder outreach methods the committee would want staff to consider?
5. What information is needed about Measure I implementation thus far to better inform decision makers as changes to the Expenditure Plan, Measure I policies, and Nexus Study are considered?
6. What other comments do Board members have about the amendment process?

Additional Notes on Valley Interchange Issues

Recommendation No. 4 references the need to re-evaluate interchange priorities in the Valley Freeway Interchange Program, per Measure I Strategic Plan Policy 40005/VFI-15. The policy states that:

“The prioritization list shall be considered for updates in conjunction with the reviews of the Expenditure Plan required in SECTION XIV. EXPENDITURE PLAN AMENDMENTS of the Measure I 2010-2040 ordinance. However, the SANBAG Board may request a re-evaluation of the prioritization list at any time.”

In addition, staff is engaged in a Valley interchange phasing analysis as authorized by the Board on October 3, 2012. The intent of the phasing analysis is to identify constructible portions of interchanges, leaving construction of the ultimate design to a later date. The phasing analysis was initiated because revenues anticipated for the interchange program were not projected to be sufficient to construct all the interchanges in the Nexus Study list to their ultimate configuration. Building individual phases could be a way to maximize the public benefit of the funding projected to be available. The phasing analysis and options for prioritization will be considered in an integrated fashion.

It should also be noted that 30 out of the 38 Valley interchanges listed in the Nexus Study were originally listed in the Measure I Expenditure Plan. Although Paragraph D (Freeway Interchange Projects) of the San Bernardino Valley portion of the Measure I Expenditure Plan states that the 30 interchanges constitute the

“projects to be constructed with Freeway Interchange Projects funds,” funding projections show that funds will not be sufficient to construct even the original Expenditure Plan list of projects. That said, it is important to note the progress that has already been made. Seven of the Valley interchanges in the original Expenditure Plan list have either already been constructed or are under construction, and project development is underway for 7 more. This progress is a credit to jurisdictions that took the initiative to begin project development well prior to the initiation of Measure I 2010-2040.

The scope of work for the phasing analysis approved by the SANBAG Board on December 5, 2012 indicated that the top nine interchanges in the priority list would be exempt from examination of phasing options. However, it should be noted that, even for these highest priority interchanges, SANBAG staff is working with local jurisdictions to identify project scopes that address traffic needs while also minimizing cost to both Measure I and local funding shares. SANBAG is making an effort to work simultaneously on the cost management, phasing, and fund management fronts to obtain the greatest level of public benefit from the funds available for the interchange program. Current funding scenarios assume no additional state and federal funds, beyond what is currently committed, going to the Freeway Interchange Program because of other needs in the freeway and rail programs, as reflected in Strategic Plan policy. This will be discussed further in the update of the 10-Year Delivery Plan. It is conceivable that other state/federal funding opportunities could become available as they did for several of the interchanges recently constructed or in construction. Future extensions of Measure I could also be contemplated to fully complete the entire set of interchanges in the program.

The phasing analysis, combined with a re-evaluation of the priority list, will position SANBAG to make best use of Measure I dollars available to the Valley interchange program. The original priority list for Valley interchanges was based on relief of existing congestion and total interchange cost. In the re-evaluation, options will be considered to include future growth within interchange areas and alternate methods of considering cost. Options for the re-evaluation of interchange priorities could include: re-prioritizing complete interchanges based on modified criteria; prioritizing based on individual interchange phases; moving forward on a phased program while maintaining the current priority list, or some combination of the above. Staff is at the initial stage of developing options for reconsidering the priority list, and will provide information on the various options to technical and policy committees in 2014.

Financial Impact: This item has no financial impact on the SANBAG Fiscal Year 2013/2014 Budget.

Reviewed By: This item is also scheduled for review by the Mountain/Desert Policy Committee on February 21, 2014. Information in this agenda item was presented to the Transportation Technical Advisory Committee on February 3, 2014, to the City/County Manager Technical Advisory Committee on January 30, 2014, and to the Measure I/Nexus Study Ad Hoc Committee of the CCMTC on December 3, 2013, January 7, 2014, and January 21, 2014.

Responsible Staff: Steve Smith, Director of Planning

MEASURE "I"

**SAN BERNARDINO COUNTY TRANSPORTATION AUTHORITY
ORDINANCE NO. 04-01**

**AN ORDINANCE PROVIDING FOR THE CONTINUATION OF A ONE-HALF OF ONE
PERCENT RETAIL TRANSACTIONS AND USE TAX BY THE SAN BERNARDINO COUNTY
TRANSPORTATION AUTHORITY FOR LOCAL TRANSPORTATION PURPOSES AND THE
TRANSPORTATION EXPENDITURE PLAN**

PREAMBLE

This one-half of one percent retail transactions and use tax is statutorily dedicated for transportation planning, design, construction, operation and maintenance only in San Bernardino County and cannot be used for other governmental purposes or programs. There are specific safeguards in this Ordinance to ensure that funding from the Measure "I" one-half of one percent transactions and use tax is used in accordance with the specified voter-approved transportation project improvements and programs. These safeguards include:

- The specific projects and programs included in the Expenditure Plan will be funded by revenue raised by this transactions and use tax. The transportation Expenditure Plan can be changed only upon approval by a majority of all cities in the County representing a majority of the incorporated population and approval by the San Bernardino County Board of Supervisors.
- An Independent Taxpayer Oversight Committee is created to provide for citizen review to ensure that all Measure "I" funds are spent in accordance with provisions of the Expenditure Plan and Ordinance.
- Continuation of San Bernardino County's one-half of one percent transactions and use tax is for transportation programs only and is not intended to replace traditional revenues generated through locally-adopted development fees and assessment districts. Collection of the one-half of one percent transactions and use tax will start upon the expiration of the Existing Tax.
- The San Bernardino County Transportation Authority will continue to seek maximum funding for transportation improvements through State and federal programs. The Authority will not provide transactions and use tax revenue to any city or to the County unless all transportation revenues currently used by that agency are continued to be used for transportation purposes.

The San Bernardino County Transportation Authority ordains as follows:

SECTION I. SUMMARY. This Ordinance provides for the continued imposition of a retail transactions and use tax of one-half of one percent for local transportation purposes for a period of thirty (30) years, the authority to issue limited tax bonds secured by such taxes, the administration of the tax proceeds and a county transportation Expenditure Plan.

SECTION II. MANDATED TAXPAYER SAFEGUARDS.

A. Independent Taxpayer Oversight Committee. Beginning on April 1, 2010, an Independent Taxpayer Oversight Committee will be established as specified in Exhibit B of this Ordinance to provide citizen review and to ensure that all Measure "I" funds are spent in accordance with provisions of the Expenditure Plan and Ordinance. Exhibit B contains the specific terms and conditions for an Independent Taxpayer Oversight Committee and its review of periodic independent financial audits.

B. Administrative Costs. The Authority shall expend only that amount of funds generated from the tax that is necessary and reasonable to carry out its responsibilities for audit, administrative expenses, staff support, and contract services. In no case shall the funds expended for salaries and benefits exceed one percent (1%) of the annual net amount of revenue raised by the tax.

C. Maintenance of Effort. The Authority, by the enactment of this Ordinance, intends the additional funds provided government agencies by this measure to supplement existing local revenues being used for street and highway purposes. Transactions and use tax revenue shall not be used to replace existing road funding programs or to replace requirements for new development to provide for its own road needs. Under this Measure, funding priorities should be given to addressing current road needs, easing congestion, and improving roadway safety.

The government agencies shall maintain their existing commitment of transportation funds for street, highway and public transit purposes, and the Authority shall enforce this provision by appropriate actions, including fiscal audits of the local agencies.

SECTION III. DEFINITIONS. The following definitions shall apply in this Ordinance:

A. "The Expenditure Plan" means the San Bernardino County Transportation Authority Expenditure Plan (attached as Exhibit A and adopted as part of this Ordinance) including any future amendments thereto.

B. "County" means the County of San Bernardino.

C. "Authority" means the San Bernardino County Transportation Authority. The San Bernardino County Transportation Commission has been designated to serve as the Authority under the provisions of Public Utilities Code Section 180050.

D. "Existing Tax" means the one-half of one percent retail transactions and use tax adopted pursuant to Ordinance No. 89-01 and Ordinance No. 90-01.

SECTION IV. AUTHORITY. This Ordinance is enacted, pursuant to the provisions of Division 19 (commencing with Section 180000) of the Public Utilities Code, and Section 7252.16 of the Revenue and Taxation Code.

SECTION V. CONTINUED IMPOSITION OF RETAIL TRANSACTIONS AND USE TAX.

Upon voter approval of Measure "I," the Authority shall continue to impose, in the incorporated and unincorporated territory of the County of San Bernardino, a transactions and use tax for transportation purposes (referred to as "the tax") at the rate of one-half of one percent (0.5%) for a period of thirty (30) years beginning April 1, 2010. There shall be no coincidental assessment of the current tax (which will expire on March 31, 2010) and the tax to be imposed pursuant to this Ordinance. The tax shall be imposed by the Authority in accordance with Section 180201 of the

Public Utilities Code and Part 1.6 (commencing with Section 7251) of Division 2 of the Revenue and Taxation Code. The provisions of Revenue and Taxation Code Sections 7261 and 7262 are incorporated herein by reference as though fully set forth herein. The tax shall be in addition to any other taxes authorized by law, including any existing or future state or local sales tax or transactions and use tax.

SECTION VI. PURPOSES. Revenues from the tax shall be used for transportation purposes only and may include, but are not limited to, the administration of this division, including legal actions related thereto and costs of the initial preparation and election, the construction, maintenance, improvements, and operation of local streets, roads, and highways, state highways and freeways, public transit systems including rail, and related purposes. These purposes include expenditures for planning, environmental reviews, engineering and design costs, and related right-of-way acquisition. Expenditures also include, but are not limited to, debt service on bonds and expenses in connection with issuance of bonds.

SECTION VII. RETURN TO SOURCE. After deduction of required Board of Equalization fees and authorized administrative costs, revenues generated from each specified subarea within San Bernardino County as outlined in the Expenditure Plan will be expended on projects of direct benefit to that subarea. Revenues will be accounted for separately for each subarea and then allocated to specified project categories in each subarea. Decisions on how revenues are expended within the subareas will be made by the Authority Board of Directors, based upon recommendations of local representatives. Other than the projects identified in the Cajon Pass Expenditure Plan, revenues generated within a subarea shall be expended outside of that subarea only upon approval of two-thirds (2/3) of the jurisdictions within the affected subarea.

SECTION VIII. CONTRIBUTIONS FROM NEW DEVELOPMENT. No revenue generated from the tax shall be used to replace the fair share contributions required from new development. Each local jurisdiction identified in the Development Mitigation Program must adopt a development financing mechanism within 24 months of voter approval of this Measure "I" that would:

1. Require all future development to pay its fair share for needed transportation facilities as a result of the development, pursuant to California Government Code Section 66000 et seq. and as determined by the Congestion Management Agency.
2. Comply with the Land Use/Transportation Analysis and Deficiency Plan provisions of the Congestion Management Program pursuant to California Government Code Section 65089.

The Congestion Management Agency shall require fair share mitigation for regional transportation facilities through a Congestion Management Program update to be approved within 12 months of voter approval of this Measure "I."

SECTION IX. ADMINISTRATION OF PLANS. The Authority shall impose and collect the tax, and shall administer the Expenditure Plan consistent with the provisions and priorities of the Expenditure Plan and consistent with the authority cited herein.

SECTION X. BONDING AUTHORITY. Upon voter approval of Measure "I", the Authority shall have the power to sell or issue, from time to time, on or before the collection of taxes, bonds, or other evidence of indebtedness, including, but not limited to, capital appreciation bonds, in the aggregate principal amount at any one time outstanding of not to exceed the estimated proceeds of the tax, as determined by the Expenditure Plan, and to secure such indebtedness solely by

way of future collection of taxes, for capital outlay expenditures for the purposes set forth in Section V hereof, including the carrying out of transportation projects described in the Expenditure Plan.

SECTION XI. ANNUAL APPROPRIATIONS LIMIT. The annual appropriations limit has been established pursuant to Ordinance 89-01 pursuant to Section 4 of Article XIII B of the California Constitution and Section 180202 of the Public Utilities Code. The appropriations limit has and shall be subject to adjustment as provided by law.

SECTION XII. EFFECTIVE AND OPERATIVE DATES. Subject to voter approval, this Ordinance shall become operative on the first day of the first calendar quarter commencing more than 110 days after adoption of this Ordinance. Prior to the operative date of this Ordinance, the Authority shall contract with the State Board of Equalization to perform all functions incidental to the administration and operation of this Ordinance.

SECTION XIII. ELECTION. The Authority requests the Board of Supervisors to call an election for voter approval of the attached proposition Measure "I" (Exhibit C), which election shall be held on November 2, 2004, and consolidated with other elections to be held on that same date, that the measure retains its designation as Measure "I," and that it appear first in order on the local San Bernardino County ballot before all other local measures. The election shall be called and conducted in the same manner as provided by law for the conduct of elections by a county. The sample ballot to be mailed to the voters shall be the full proposition as set forth in this Ordinance, and the voter information handbook shall include the entire Expenditure Plan. Approval of the attached proposition and the imposition of the tax shall require the affirmative vote of 2/3rds of the electors voting on the attached proposition at the election described in this section.

SECTION XIV. EXPENDITURE PLAN AMENDMENTS. The Expenditure Plan may only be amended by the following process:

1. Beginning in 2015, and at least every ten years thereafter, the Authority shall review and, where necessary, propose revision to the Expenditure Plan. Such review shall consider recommendations from local governments, transportation agencies and interest groups, and the general public.
2. The Authority shall notify the cities/towns and Board of Supervisors of the proposed revision and initiation of an amendment, reciting findings of necessity.
3. Actions of the city/town councils and Board of Supervisors to approve or to oppose the amendment shall be formally communicated to the Authority within 60 days of notice of initiation of amendment.
4. The boundaries of subareas shall be amended only by unanimous approval of all the jurisdictions in the subareas where an amendment is proposed to include or exclude territory.
5. Approval of the amendment by a majority of the cities/towns constituting a majority of the incorporated population provided, however, that any amendment of the Victor Valley Expenditure Plan (Schedule E) shall also require a two-thirds vote of the jurisdictions within the Victor Valley subarea.
6. Approval of the amendment by the Board of Supervisors.
7. Approval of the amendment by the Authority.

SECTION XV. SEVERABILITY. If any tax or provision of this Ordinance is for any reason held invalid or unenforceable by a court of competent jurisdiction, that holding shall not affect the validity or enforceability of the remaining taxes or provisions, or the existing tax and the Authority declares that it would have passed each part of this Ordinance irrespective of the validity of any other part.

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SECTION XVI. THE EXISTING TAX. Nothing in the Ordinance is intended to modify, repeal, alter or increase the Existing Tax. The provisions of this Ordinance shall apply solely to the retail transactions and use tax adopted herein and not to the collection or administration of the Existing Tax.

APPROVED AND ADOPTED by the San Bernardino County Transportation Authority at its meeting on June 2, 2004 by the following vote:

AYES: Alexander, Burgnon, Dale, Hertzmann, Ulloa, Norton-Perry, Chastain, Nuaimi, Cortes, Lindley, McCallon, Christman, Eaton, Valentine, Ovitt, Gilbreath, Wilson, Bagley, Rothschild, Riddell, Cook, Biane, Hansberger, Postmus, Aguiar, Young

NOES: None

ABSENT: Nehmens, Valles, Pomierski

ABSTENTION: None

By: _____
William J. Alexander, Chairman
San Bernardino County Transportation Authority

Attested: _____
Vicki Watson
Clerk of the Board

Exhibit A

Transportation Expenditure Plan

Revenue Estimates and Distribution. Allocation of revenue authorized by Ordinance No. 04-01 is established within this Expenditure Plan. Funds shall be allocated by percentage of the actual revenue received. An estimate of revenues and allocation among categories is reflected in Schedule A – Transportation Improvement Program. The estimated revenue is based upon 2004 value of money and is not binding or controlling.

Return to Source. After deduction of required Board of Equalization fees and authorized costs, revenues generated from each specified subarea within San Bernardino County will be expended on projects of direct benefit to that subarea. Revenues will be accounted for separately for each subarea and then allocated to specified project categories. Decisions on how revenues are expended within the subareas will be made by the Authority Board of Directors, based upon recommendation of local representatives.

Subarea Identification. The San Bernardino Valley Subarea will include the cities of Chino, Chino Hills, Colton, Fontana, Grand Terrace, Highland, Loma Linda, Montclair, Ontario, Rancho Cucamonga, Redlands, Rialto, San Bernardino, Upland and Yucaipa and unincorporated areas in the east and west portions of the San Bernardino valley urbanized area. The Mountain-Desert area will include the following subareas: (1) The North Desert Subarea, which includes the City of Barstow and surrounding unincorporated areas; (2) The Colorado River Subarea, which includes the City of Needles and the surrounding unincorporated areas of the East Desert; (3) The Morongo Basin Subarea, which includes the City of Twentynine Palms, Town of Yucca Valley, and surrounding unincorporated areas; (4) The Mountain Subarea, which includes the City of Big Bear Lake and surrounding unincorporated areas of the San Bernardino Mountains; and (5) the Victor Valley Subarea, which includes the Cities of Adelanto, Hesperia, and Victorville; the Town of Apple Valley; and surrounding unincorporated areas including Wrightwood.

Contribution from New Development. No revenue generated from the tax shall be used to replace the fair share contributions required from new development.

Requirement for Annual Financial and Compliance Audits of Measure “I” Funds. The San Bernardino County Transportation Authority and each agency receiving an allocation of Measure “I” revenue authorized in this Expenditure Plan shall undergo an annual financial audit performed in accordance with generally accepted auditing standards and government auditing standards issued by the Comptroller General of the United States. Compliance audits also shall be conducted to ensure that each agency is expending funds in accordance with the provisions and guidelines established for Measure “I” revenue.

Cajon Pass Expenditure Plan. Three percent of the revenue generated in the San Bernardino Valley Subarea and the Victor Valley Subarea will be reserved in advance of other allocations specified in this plan in an account for funding of the I-15/I-215 Interchange in Devore, I-15 widening through Cajon Pass, and truck lane development. Cajon Pass serves as the major transportation corridor connecting the two urbanized areas within San Bernardino County and is in need of the identified improvements. These improvements are critical components to intra-county travel for residents of both the Victor Valley and San Bernardino Valley. Projects to be constructed from the Cajon Pass Expenditure Plan are listed in Schedule C.

San Bernardino Valley Subarea Expenditure Plan. In that area described as the Valley Subarea, project categories shall be established as specified below. The San Bernardino Valley Subarea Expenditure Plan is illustrated in Schedule D.

A. State and Federal Transportation Funds. A proportional share of projected state and federal transportation funds shall be reserved for use solely within the Valley subarea.

B. Revenue Estimates. Tax revenues generated by Ordinance No. 04-01 for the Valley subarea over a thirty year period are estimated to be \$4,520 million. Approximately \$881 million in state and federal funds and approximately \$777 million in contributions from new development are projected for the area over this period, for an estimated total Valley area revenue of \$6,178 million for transportation improvements. Revenue estimates are not binding or controlling.

C. Freeway Projects. 29% of revenue collected in the San Bernardino Valley Subarea shall fund freeway projects within the San Bernardino Valley Subarea. Projects to be constructed with Freeway Projects funds are listed in Schedule D1. Cost estimates for such projects are not binding or controlling.

D. Freeway Interchange Projects. 11% of revenue collected in the Valley Subarea shall fund Freeway Interchange Projects. Projects to be constructed with Freeway Interchange Projects funds are listed in Schedule D2. Equitable geographic distribution of projects shall be taken into account over the life of the program.

E. Major Street Projects. 20% Over the thirty-year life of Measure "I," the Major Street Projects category will accrue approximately 18% of revenue collected in the Valley. Upon initial collection of revenue, the Major Street Projects category will receive 20% of revenue collected in the Valley. Effective ten years following initial collection of revenue, the Major Street Projects allocation shall be reduced to no more 17% but to not less than 12% upon approval by the Authority Board of Directors and the Express Bus/Bus Rapid Transit Service allocation shall be increased by a like amount. Amendments beyond those authorized in this section shall require a formal amendment as provided in the Measure "I" Ordinance.

Major Street Projects are defined as congestion relief and safety improvements to major streets that connect communities, serve major destinations, and provide freeway access. The Major Street Projects portion of the San Bernardino Valley program shall be expended pursuant to a five-year project list to be annually adopted by the Authority after being made available for public review and comment. Funding priorities shall be given to improving roadway safety, relieving congestion, street improvements at rail crossings and shall take into account equitable geographic distribution over the life of the program.

F. Local Street Projects. 20% of revenue collected in the Valley Subarea shall be distributed among local jurisdictions in the Valley Subarea for Local Street Projects. Allocations to local jurisdictions shall be on a per capita basis using the most recent State Department of Finance population estimates for January 1, with the County's portion based upon unincorporated population in the Valley Subarea. Estimates of unincorporated population within the Valley Subarea shall be determined by the County Planning Department, reconciled with the State Department of Finance population estimate for January 1 of each year.

Local Street Projects are defined as local street and road construction, repair, maintenance and other eligible local transportation priorities. Local Street Project funds can be used flexibly for any eligible transportation purpose determined to be a local priority, including local streets, major highways, state highway improvements, transit, and other improvements/programs to maximize use of transportation facilities. Expenditure of Local Street Project funds shall be based upon a Five Year Plan adopted annually by the governing body of each jurisdiction after being made

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available for public review and comment. Local Street Project funds shall be disbursed to local jurisdictions upon receipt of the annually adopted Five Year Plan. The local adopted Five Year Plan shall be consistent with local, regional, and state transportation plans.

G. Metrolink/Rail Service. 8% of revenue collected in the Valley Subarea shall fund Metrolink/Rail Service. Eligible expenditures of Metrolink/Rail Service funds include purchase of additional commuter rail passenger cars and locomotives for use on Metrolink lines serving San Bernardino County; construction of additional track capacity necessary to operate more passenger trains on Metrolink lines serving San Bernardino County; construction of additional parking spaces at Metrolink stations in San Bernardino County; and provision of funds to match State and Federal funds used to maintain the railroad track, signal systems, and road crossings for passenger rail service in San Bernardino County, construction and operation of a new passenger rail service between the cities of San Bernardino and Redlands, and construction and operation of an extension of the Gold Line to Montclair Transit Center for San Bernardino County passengers traveling to San Gabriel Valley cities, Pasadena, and Los Angeles. Projects to be funded by Metrolink/Rail Service funds are listed in Schedule D5.

H. Senior and Disabled Transit Service. 8% of revenue collected in the Valley Subarea shall fund Senior and Disabled Transit Service. 6% of revenue collected in the Valley Subarea in this category shall be expended to reduce fares and enhance service for senior citizens and persons with disabilities. Eligible expenditures in the Senior and Disabled Transit Service category shall include: (1) The provision of funding to off-set a portion of future senior and disabled fare increases that would apply to fixed route, Community Link and complementary paratransit services. (2) The provision of local funds to help off-set operating and capital costs associated with special transit services provided by transit operators, cities and non-profit agencies for seniors and persons with disabilities. (3) At least 2% of the revenue collected in the Valley Subarea in this category will be directed to the creation of a Consolidated Transit Service Agency which will be responsible for the coordination of transit services provided to seniors and persons with disabilities.

I. Express Bus/Bus Rapid Transit Service. 2% Over the thirty-year life of Measure "I," the Express Bus/Bus Rapid Transit Service category will accrue approximately 4% of revenue collected in the Valley. Upon initial collection of revenue, the Express Bus/Bus Rapid Transit Service category will receive 2% of revenue collected in the Valley. Effective ten years following initial collection of revenue, the Express Bus/Bus Rapid Transit Service category shall be increased to at least 5%, but no more than 10% upon approval by the Authority Board of Directors. The Major Street Projects category shall be reduced by a like amount. Amendments beyond those authorized in this section shall require a formal amendment as provided by the Measure "I" Ordinance.

Funds in this category shall be expended for the development, implementation and operation of express bus and bus rapid transit service, to be jointly developed by the Authority and transit service agencies serving the Valley Subarea. Eligible projects to be funded by Express Bus/Bus Rapid Transit Service funds shall include contributions to operating and capital costs associated with implementing high-speed, express-type bus service in high-density travel corridors.

J. Traffic Management Systems. 2% of revenue collected in the Valley Subarea shall fund traffic management systems. Eligible projects under this category shall include signal synchronization, systems to improve traffic flow, commuter assistance programs, freeway service patrol, and projects which contribute to environmental enhancement associated with transportation facilities.

Mountain/Desert Expenditure Plan. In that area described as the Mountain/Desert Area, the following Expenditure Plan requirements shall apply. Schedules E, F, G, H, I illustrate estimated revenue and projects to be constructed in each Mountain/Desert subarea.

A. State and Federal Transportation Funds. A proportional share of projected state and federal transportation funds shall be reserved for use solely within the Mountain/Desert subareas.

B. Revenue Estimates. Tax revenues generated by Ordinance No. 04-01 for the Mountain/Desert region over a thirty year period are estimated to be **\$1,250 million**. Approximately **\$165 million** in state and federal funds and approximately **\$369 million** in contributions from new development are projected for the area over this period, for an estimated total Mountain-Desert area revenue of **\$1,784 million** for transportation improvements. Revenue estimates are not binding or controlling.

C. Local Street Projects. 70% of revenue collected within each subarea shall be apportioned for Local Street Projects within each subarea. 2% of revenue collected within each subarea shall be reserved in a special account to be expended on Project Development and Traffic Management Systems. Eligible Project Development and Traffic Management Systems projects may include, at the discretion of local subarea representatives, costs associated with corridor studies and project study reports, projects to improve traffic flow and maximize use of transportation facilities, congestion management, commuter assistance programs, and projects which contribute to environmental enhancement associated with highway facilities. Expenditure of Project Development and Traffic Management Systems funds shall be approved by the Authority Board of Directors, based upon a recommendation of subarea representatives and the Mountain/Desert Committee. If, after five years of revenue collection and every five years thereafter, the local representatives and the Mountain/Desert Committee make a finding that Project Development and Traffic Management Systems funds are not required for improvements of benefit to the subarea, then revenue in the Project Management and Traffic Management Systems category may be returned to the general Local Street Projects category. Such return shall be allocated and expended based upon the formula and requirements established in the general Local Street Projects category.

After reservation of 2% collected in each subarea for Project Development and Traffic Management Systems, the remaining amount of funds in the general Local Street Projects category shall be allocated to local jurisdictions based upon population (50 percent) and tax generation (50 percent). Population calculations shall be based upon the most current State Department of Finance estimates for January 1 of each year. Estimates of unincorporated population within each subarea shall be determined by the County Planning Department, reconciled with the State Department of Finance population estimate. Tax generation calculations shall be based upon State Board of Equalization data. Schedules E, F, G, H, I reflect the estimate of revenue available for Local Street Projects in each Mountain/Desert subarea.

Projects in the general Local Street Projects category are defined as local street and road construction, repair, maintenance and other eligible local transportation priorities. Local Transportation Project funds may be used flexibly for any eligible transportation purpose determined to be a local priority, including local roads, major streets, state highway improvements, transit, including but not limited to, fare subsidies and service enhancements for seniors and persons with disabilities, and other improvements/programs to maximize use of transportation facilities. Expenditure of Local Transportation Project Funds shall be based upon the Five Year Plan adopted annually by resolution of the governing body of each jurisdiction after being made available for public review and comment. Local Street Project funds shall be disbursed to local jurisdictions upon receipt of the annually adopted Five Year Plan. The locally adopted Five Year Plans shall be consistent with other local, regional, and state transportation plans.

D. Major Local Highway Projects. 25% of revenue collected within each subarea shall be reserved in a special account to be expended on Major Local Highway Projects of benefit to the subarea. Major Local Highway Projects are defined as major streets and highways serving as primary routes of travel within the subarea, which may include State highways and freeways, where appropriate. Major Local Highway Projects funds can be utilized to leverage other state and federal funds for transportation projects and to perform advance planning/project reports. Expenditure of Major Local Highway Projects funds shall be approved by the Authority Board of Directors, based upon a recommendation of subarea representatives and the Mountain/Desert Committee. If, after five years of revenue collection and every five years thereafter, the local representatives and the Mountain/Desert Committee make a finding that Major Local Highway Projects funds are not required for improvements of benefit to the subarea, then revenue in the Major Local Highway Projects category may be returned to jurisdictions within the subarea. Such return shall be allocated and expended based upon the formula and requirements established in the general Local Street Projects category.

E. Senior and Disabled Transit Service. 5% of revenue collected within each subarea shall be reserved in an account for Senior and Disabled Transit Service. Senior and Disabled Transit is defined as contributions to transit operators for fare subsidies for senior citizens and persons with disabilities or enhancements to transit service provided to seniors and persons with disabilities. In the Victor Valley subarea, the percentage for Senior and Disabled Transit Service shall increase by .5% in 2015 with additional increases of .5% every five years thereafter to a maximum of 7.5%. Such increases shall automatically occur unless each local jurisdiction within the subarea makes a finding that such increase is not required to address unmet transit needs of senior and disabled transit users. In the North Desert, Colorado River, Morongo Basin, and Mountain Subareas, local representatives may provide additional funding beyond 5% upon a finding that such increase is required to address unmet transit needs of senior and disabled transit services. All increases above the 5% initial revenue collected for Senior and Disabled Transit Service shall come from the general Local Street Projects category of the subarea.

Expenditure of Senior and Disabled Transit Service funds shall be approved by the Authority Board of Directors, based upon recommendation of subarea representatives and the Mountain/Desert Committee.

F. Mountain/Desert Committee. The Mountain-Desert Committee of the Authority shall remain in effect and provide oversight to implementation of the Mountain/Desert Expenditure Plan.

Measure "I" Transportation Expenditure Plan Schedules

SCHEDULE A

Countywide Measure "I" Revenue and Distribution

Estimated Countywide Measure "I" Distribution	Amount
Cajon Pass Expenditure Plan (3% of San Bernardino Valley Subarea and Victor Valley Subarea Revenues - See Schedule C)	\$ 170 Million
Total San Bernardino Valley Subarea Expenditure Plan (See Schedule D)	\$ 4,520 Million
Total Mountain-Desert Expenditure Plan	\$ 1,250 Million
Victor Valley Subarea (See Schedule E)	\$ 852 Million
North Desert Subarea (See Schedule F)	\$ 95 Million
Mountains Subarea (See Schedule G)	\$ 119 Million
Morongo Basin Subarea (See Schedule H)	\$ 125 Million
Colorado River Subarea (See Schedule I)	\$ 59 Million

SCHEDULE B

Transportation Improvement Revenues

Total Countywide Transportation Revenues	Amount
Estimated Countywide Measure "I" Revenue	\$ 6,120 Million
(Less 1% Administration and 2% Board of Equalization Collection Charge)	<u>(\$ 180) Million</u>
Countywide Measure "I" Revenue Available for Transportation Projects (See Schedule A)	\$ 5,940 Million
Estimated State and Federal Revenues	\$ 1,106 Million
Estimated Contributions from New Development	<u>\$ 1,146 Million</u>
Total Estimate Revenue Available for Transportation Projects	\$ 8,192 Million

SCHEDULE C

Cajon Pass Expenditure Plan

Project Description	Amount
<i>I-15 Widening and Improvement through Cajon Pass</i>	<i>\$ 170 Million</i>
<i>Devore Interchange Widening and Improvements at I-15/I-215</i>	<i>\$ 40 Million</i>
<i>I-15 Dedicated Truck Lane Development</i>	<i>\$ 20 Million</i>
<i>Total Cajon Pass Projects Cost</i>	<i>\$ 230 Million</i>
Cajon Pass Measure "I" Revenue	\$ 170 Million
State and Federal Revenues	\$ 60 Million
Total Cajon Pass Projects Revenues	\$ 230 Million

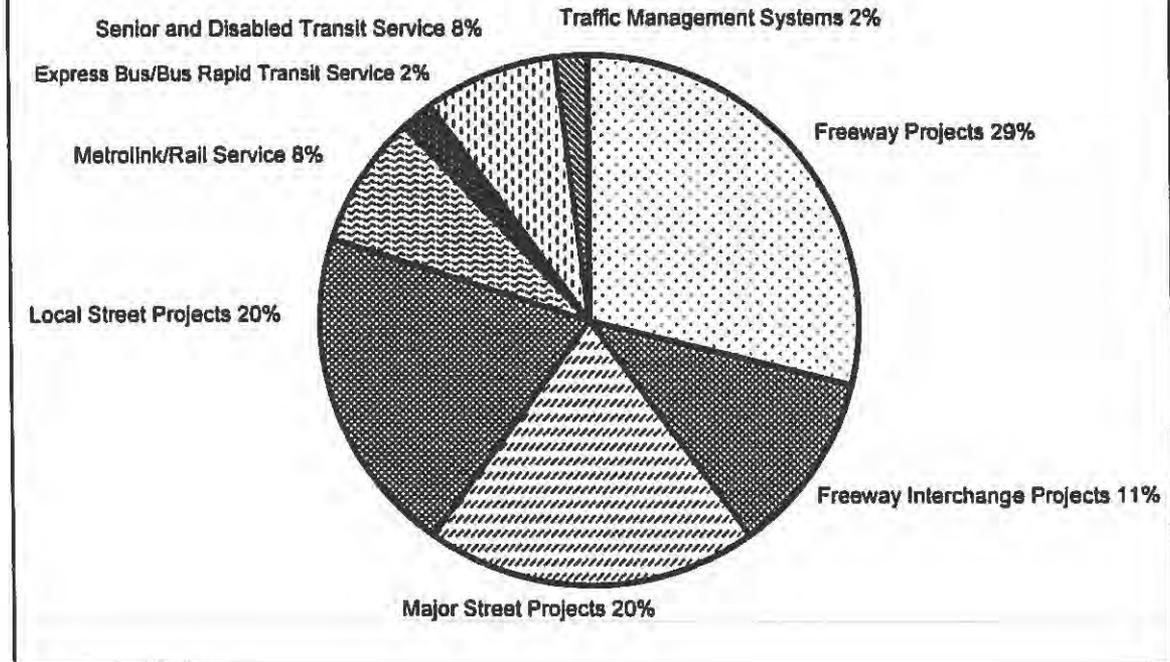
SCHEDULE D

San Bernardino Valley Subarea Expenditure Plan

Project Category	Measure "I" Percentage	Amount
Freeway Projects (See Schedule D1)	29%	\$ 1,311 Million
Freeway Interchange Projects (See Schedule D2)	11%	\$ 497 Million
Major Street Projects* (See Schedule D3)	20%	\$ 814 Million
Local Street Projects (See Schedule D4)	20%	\$ 904 Million
Metrolink/Rail Service (See Schedule D5)	8%	\$ 362 Million
Express Bus/Bus Rapid Transit Service* (See Schedule D6)	2%	\$ 180 Million
Senior and Disabled Transit Service	8%	\$ 362 Million
Traffic Management Systems	<u>2%</u>	<u>\$ 90 Million</u>
Total San Bernardino Valley Subarea Measure "I" Revenue	100%	\$4,520 Million

* Percentage distribution adjusts to serve transportation needs. Amount shown is average over 30-year Measure.

FIGURE D
San Bernardino Valley Subarea Expenditure Plan



SCHEDULE D1

San Bernardino Valley Expenditure Plan Freeway Projects Detail

Freeway Projects	Amount
<i>I-10 Widening from I-15 to Riverside County Line</i>	\$ 610 Million
<i>I-15 Widening from Riverside County Line to I-215</i>	\$ 180 Million
<i>I-215 Widening from Riverside County Line to I-10</i>	\$ 300 Million
<i>I-215 Widening from SR-30/210 to I-15</i>	\$ 120 Million
<i>SR-30/210 Widening from I-215 to I-10</i>	\$ 140 Million
<i>Carpool Lane Connectors</i>	\$ 90 Million
Total Freeway Projects Cost	\$ 1,440 Million
Freeway Projects Measure "I" Revenue	\$ 1,311 Million
State and Federal Revenues	\$ 129 Million
Total Freeway Projects Revenues	\$ 1,440 Million

SCHEDULE D2

San Bernardino Valley Expenditure Plan Freeway Interchange Projects Detail

Freeway Interchange Projects	Amount
<i>Improvements including but not limited to:</i>	
<i>I-10 Interchanges at Monte Vista, Grove/Fourth St, Vineyard, Cherry, Citrus, Cedar, Riverside, Mt. Vernon, Tippecanoe, Mountain View, California, Alabama, Wabash, Live Oak Canyon, Wildwood Canyon</i>	
<i>I-15 Interchanges at 6th St/Arrow, Baseline, Duncan Canyon, Sierra</i>	
<i>SR-60 Interchanges at Ramona, Central, Mountain, Grove, Vineyard</i>	
<i>I-215 Interchanges at University Parkway and Palm</i>	
<i>SR-30/210 Interchanges at Waterman, Del Rosa, Highland, 5th St, and Baseline</i>	
Freeway Interchange Projects Measure "I" Revenue	\$ 497 Million
State and Federal Revenues	\$ 32 Million
Contribution from New Development	<u>\$ 333 Million</u>
Total Interchange Projects Revenues	\$ 862 Million

SCHEDULE D3

San Bernardino Valley Expenditure Plan Major Street Projects Detail

Major Street Projects	Amount
<i>Improvements to major streets that connect communities, serve major destinations, and provide freeway access, such as but not limited to:</i>	
<i>Edison, Pine, Central, Mountain, Grove</i>	
<i>Foothill/Fifth, Baseline, Valley, Slover, Jurupa</i>	
<i>Tippecanoe, Anderson, University, Palm</i>	
<i>Lugonia, Barton, improvements to relieve traffic on Yucaipa Blvd</i>	
<i>Railroad Crossing Improvements, such as but not limited to Milliken and Hunts Ln</i>	
Major Street Projects Measure "I" Revenue	\$ 814 Million
State and Federal Revenues	\$ 82 Million
Contribution from New Development	<u>\$ 444 Million</u>
Total Major Street Projects Revenues	\$ 1,340 Million

SCHEDULE D4

San Bernardino Valley Expenditure Plan Local Street Projects Detail

Local Street Projects	Amount
<i>Distribution to cities and County for street repair and improvements</i>	
Local Street Projects Measure "I" Revenue	\$ 904 Million
State and Federal Revenues	<u>\$ 187 Million</u>
Total Local Street Projects Revenues	\$ 1,091 Million

SCHEDULE D5

San Bernardino Valley Expenditure Plan Metrolink/Rail Service Detail

Metrolink/Rail Service	Amount
<i>Contributions to the following projects:</i>	
<i>Metrolink</i>	
<i>Redlands Extension</i>	
<i>Gold Line Extension</i>	
Metrolink/Rail Service Measure "I" Revenue	\$ 362 Million
State and Federal Revenues	<u>\$ 330 Million</u>
Total Metrolink/Rail Service Revenues	\$ 692 Million

SCHEDULE D6

San Bernardino Valley Expenditure Plan Express Bus/Bus Rapid Transit Service Detail

Express Bus/Bus Rapid Transit Service	Amount
Express Bus/Bus Rapid Transit Service Measure "I" Revenue	\$ 180 Million
State and Federal Revenues	<u>\$ 121 Million</u>
Total Express Bus/Bus Rapid Transit Service Revenues	\$ 301 Million

SCHEDULE E

Victor Valley Subarea Expenditure Plan

Project Category	Measure "I" Percentage	Amount
Local Street Projects	70%	\$ 596 Million
Major Local Highway Projects	25%	\$ 213 Million
Senior and Disabled Transit Service	5%	<u>\$ 43 Million</u>
Total Victor Valley Subarea Measure "I" Revenue	100%	\$852 Million
<hr/>		
Victor Valley Expenditure Plan Detail		
Local Street Projects		
<i>Distribution to cities and County for street repair and improvements</i>		
<i>New construction to relieve Bear Valley Rd, Ranchero Rd, new east/west roadways</i>		
	Local Street Projects Measure "I" Revenue	\$ 596 Million
	State and Federal Revenues	\$ 39 Million
	Contribution from New Development, Major Streets	<u>\$ 281 Million</u>
	Total Local Street Projects Revenues	\$ 916 Million
<hr/>		
Major Local Highway Projects		
<i>Contributions to Projects including but not limited to:</i>		
<i>New Interchanges at I-15 and Ranchero, Eucalyptus, LaMesa/Nisqualli</i>		
<i>High Desert Corridor</i>		
<i>I-15 Widening through Victor Valley</i>		
<i>SR-138 Widening and Improvements</i>		
<i>US-395 Widening and Improvements</i>		
	Major Local Highway Projects Measure "I" Revenue	\$ 213 Million
	State and Federal Revenues	\$ 112 Million
	Contribution from New Development, Freeway Interchanges	<u>\$ 88 Million</u>
	Total Major Local Highway Projects Revenues	\$ 413 Million
<hr/>		
	Senior and Disabled Transit Service	\$ 43 Million

SCHEDULE F

North Desert Subarea Expenditure Plan

Project Category	Measure "I" Percentage	Amount
Local Street Projects	70%	\$ 66 Million
Major Local Highway Projects	25%	\$ 24 Million
Senior and Disabled Transit Service	5%	\$ 5 Million
Total North Desert Subarea Measure "I" Revenue	100%	\$ 95 Million
<hr/>		
North Desert Expenditure Plan Detail		
Local Street Projects		
<i>Distribution to cities and County for street repair and improvements</i>		
<i>Improvements including but not limited to Lenwood Rd, Armory Rd, Rimrock Rd and Main St</i>		
Local Street Projects Measure "I" Revenue		\$ 66 Million
State and Federal Revenues		\$ 2 Million
Total Local Street Projects Revenues		\$ 68 Million
<hr/>		
Major Local Highway Projects		\$ 24 Million
<i>Contributions to Projects including but not limited to:</i>		
<i>SR-58 Widening and Improvements</i>		
<i>US-395 Widening and Improvements</i>		
<i>Lenwood Rd and Vista Rd Grade Separations in Barstow</i>		
<hr/>		
Senior and Disabled Transit Service		\$ 5 Million

SCHEDULE G

Mountains Subarea Expenditure Plan

Project Category	Measure "I" Percentage	Amount
Local Street Projects	70%	\$ 83 Million
Major Local Highway Projects	25%	\$ 30 Million
Senior and Disabled Transit Service	5%	<u>\$ 6 Million</u>
Total Mountains Subarea Measure "I" Revenue	100%	\$119 Million
<hr/>		
Mountains Expenditure Plan Detail		
Local Street Projects		
<i>Distribution to cities and County for street repair and improvements</i>		
Local Street Projects Measure "I" Revenue		\$ 83 Million
State and Federal Revenues		<u>\$ 5 Million</u>
Total Local Street Projects Revenues		\$ 88 Million
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Major Local Highway Projects		\$ 30 Million
<i>Contributions to Projects including but not limited to:</i>		
<i>SR-18 & SR-38 Safety and Traffic Flow Improvements</i>		
<i>SR-330 Safety and Traffic Flow Improvements</i>		
<i>SR-138 Safety and Intersection Improvements</i>		
<i>SR-18 Safety and Intersection Improvements</i>		
<i>Realignment and Rehabilitation of Daley Canyon Rd and Kuffel Canyon Rd</i>		
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Senior and Disabled Transit Service (5%)		\$ 6 Million

SCHEDULE H

Morongo Basin Subarea Expenditure Plan

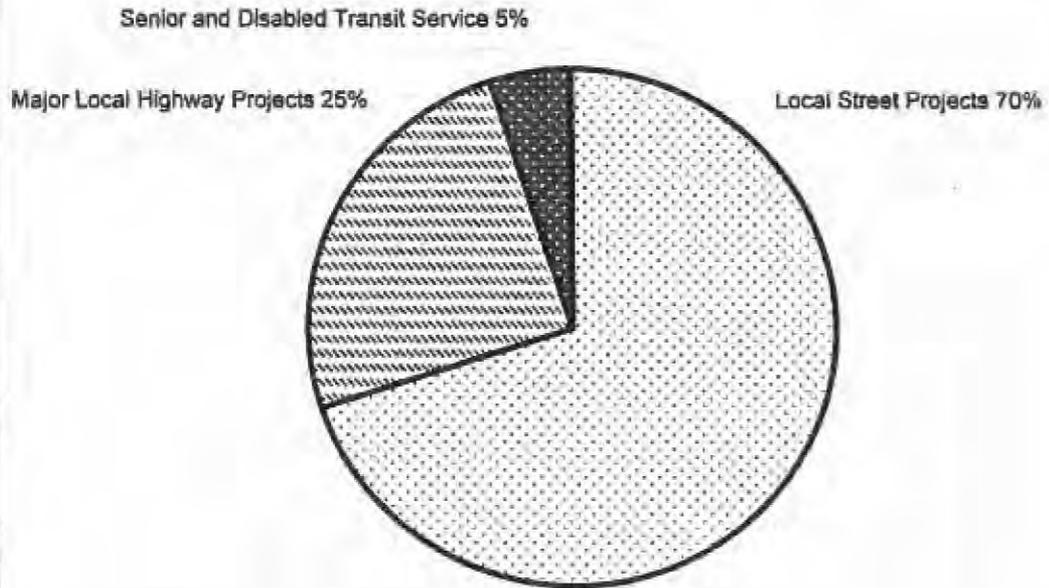
Project Category	Measure "I" Percentage	Amount
Local Street Projects	70%	\$ 88 Million
Major Local Highway Projects	25%	\$ 31 Million
Senior and Disabled Transit Service	5%	\$ 6 Million
Total Morongo Basin Subarea Measure "I" Revenue	100%	\$ 125 Million
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Morongo Basin Expenditure Plan Detail		
Local Street Projects		
<i>Distribution to cities and County for street repair and improvements</i>		
Local Street Projects Measure "I" Revenue		\$ 88 Million
State and Federal Revenues		\$ 5 Million
Total Local Street Projects Revenues		\$ 93 Million
<hr/>		
Major Local Highway Projects		\$ 31 Million
<i>Contributions to Projects including but not limited to:</i>		
<i>SR-62 & SR-247 Widening and Safety Improvements</i>		
<i>SR-62 Widening and Safety Improvements between the Morongo Basin and the Coachella Valley</i>		
<hr/>		
Senior and Disabled Transit Service		\$ 6 Million

SCHEDULE I

Colorado River Subarea Expenditure Plan

Project Category	Measure "I" Percentage	Amount
Local Street Projects	70%	\$ 41 Million
Major Local Highway Projects	25%	\$ 15 Million
Senior and Disabled Transit Service	5%	<u>\$ 3 Million</u>
Total Colorado River Subarea Measure "I" Revenue	100%	\$ 59 Million
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Colorado River Expenditure Plan Detail		
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Local Street Projects		
<i>Distribution to cities and County for street repair and improvements</i>		
Local Street Projects Measure "I" Revenue		\$ 41 Million
State and Federal Revenues		<u>\$ 2 Million</u>
Total Local Street Projects Revenues		\$ 43 Million
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Major Local Highway Projects		\$ 15 Million
<i>Contributions to Projects Including but not limited to:</i>		
<i>Needles Highway Widening and Realignment from I-40 to the Nevada State Line</i>		
<i>Reconstruction of J Street and Construction of new Bridge in Needles connecting I-40 to Arizona</i>		
<hr/>		
Senior and Disabled Transit Service (5%)		\$ 3 Million

FIGURE J
Mountain/Desert Expenditure Plan





- San Bernardino County Transportation Commission
- San Bernardino County Transportation Authority
- San Bernardino County Congestion Management Agency
- Service Authority for Freeway Emergencies

Minute Action

AGENDA ITEM: 6

Date: February 13, 2014

Subject: Draft SANBAG Freight Strategy

Recommendation: Receive information and provide comments on the draft SANBAG Freight Strategy provided in Attachment 1.

Background: Attachment 1 provides a working draft of a freight strategy that could guide SANBAG in both its own freight-related initiatives and in its collaborative efforts with other agencies and the private sector. It is intended as a means to foster discussion among SANBAG technical and policy committees and external stakeholders as well.

Part of the basis of the working paper is a series of interviews with a cross-section of public and private entities with involvement in the freight and logistics industry and environmental community. Interviews were conducted in late Summer and Fall 2013, covering a range of topics, with a slightly different focus based on the sector being interviewed.

The overarching question asked of interviewees was: "What could or should SANBAG be doing to support the economic vitality of the County as it relates to the logistics sector, while also seeking to minimize the impacts the sector can have on the population in general?" Information was also gathered from freight

Approved
 Board Metro Valley Study Session

Date: _____

Moved: _____ Second: _____

In Favor: _____ Opposed: _____ Abstained: _____

Witnessed: _____

COG	CTC	CTA	X	SAFE	CMA
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Check all that apply.

MVSS1402b-ss

<http://portal.sanbag.ca.gov/mgmt/committee/mvss/mvss2014/mvss1402/AgendaItems/MVSS1402b1-ss.pdf>

studies, research, and freight-related conferences sponsored by regional agencies in 2013.

The working paper in Attachment 1 is a draft intended for review and discussion by SANBAG policy and technical committees and by interested stakeholders across the spectrum of freight-related issues. SANBAG staff will be receiving input and comments on the working paper through approximately April 2014. A revised draft will be submitted for approval to SANBAG policy committees and the Board in approximately June 2014. The SANBAG Freight Strategy will become a consideration in the Countywide Transportation Plan being developed for San Bernardino County and ultimately in the SCAG 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).

Financial Impact: This item has no financial impact on the SANBAG Fiscal Year 2013/2014 Budget.

Reviewed By: This item is also scheduled for review by the Mountain/Desert Policy Committee on February 21, 2014. Information in this agenda item was presented to the Transportation Technical Advisory Committee on February 3, 2014.

Responsible Staff: Steve Smith, Director of Planning

**SAN BERNARDINO ASSOCIATED GOVERNMENTS (SANBAG)
- DRAFT FREIGHT STRATEGY WORKING PAPER -
JANUARY 29, 2014**

SAN BERNARDINO COUNTY – HISTORICAL GATEWAY TO SOUTHERN CALIFORNIA

San Bernardino County has long been a gateway to the Southland. The Cajon Pass from the north and the San Geronio Pass (also known as the Banning Pass) from the east were logical locations for the establishment of transnational routes into and out of the Southern California region in the 1800s.

In 1829, traders opened a route between Los Angeles and Santa Fe via the Cajon Pass, providing a vital economic link between the two Mexican cities of that day. The trade route was later used by the American adventurer John C. Frémont and his guide, Kit Carson, who named the corridor the Old Spanish Trail and advertised it as a link between the coast and the interior of the new American West. This later became known as part of the National Old Trails Road, which was designated Route 66 in 1926. After coming down Cajon Pass, Route 66 generally followed the alignment of today's Interstate 215 to downtown San Bernardino and then turned due west toward Los Angeles and Santa Monica. Route 66 and U.S. 395 at one time merged in Hesperia and diverged in San Bernardino as U.S. 395 headed south toward San Diego. Interstate 15 (the Mojave Freeway) was built over the Cajon Summit in 1969 and together with Interstate 40 is now one of the primary truck corridors to and from the Midwest.

The California Southern Railroad, a subsidiary of the Atchison, Topeka and Santa Fe Railway, built the first rail line to use the Cajon Pass as a route through the mountains. The line was built in the early 1880s as part of a connection between the present day cities of Barstow and San Diego. The Southern Pacific Railroad Company built its own track, known as the Palmdale-Colton Cutoff, through the pass in 1966/1967.

In terms of the eastern gateway, the first stagecoach line came through the Banning Pass in 1862. The pass is named for Phineas Banning, stagecoach line owner, founder of Wilmington, and known as the "Father of Los Angeles Harbor." The east-west U.S. Route 99 was built in 1923, generally following the route of today's Interstate 10. The Southern Pacific railroad followed in the late 1870s, eventually purchased by the Union Pacific railroad of today.

This legacy as a gateway has lived on today, shaping not only the San Bernardino Valley, but the High Desert communities as well. The growth of freight movement in San Bernardino County has generally tracked the growth of the Ports of Los Angeles and Long Beach, together the largest port complex in the United States. The significance of the gateway through San Bernardino County has increased as the ports have grown.

The combination of geographic location, relationship to the ports, and world-class transportation infrastructure continue to provide San Bernardino County with economic opportunities into the future. But these opportunities must be managed well, if the County is to continue to benefit from its ongoing strategic advantages as the gateway to Southern California.

PURPOSE OF THIS WORKING PAPER

This paper provides a working draft of a freight strategy that could guide SANBAG in both its own freight-related initiatives and in its collaborative efforts with other agencies and the private sector. It is intended as a means to foster discussion among SANBAG technical and policy committees and external stakeholders as well. It will be a living document that can be modified from year to year as issues and conditions change over time.

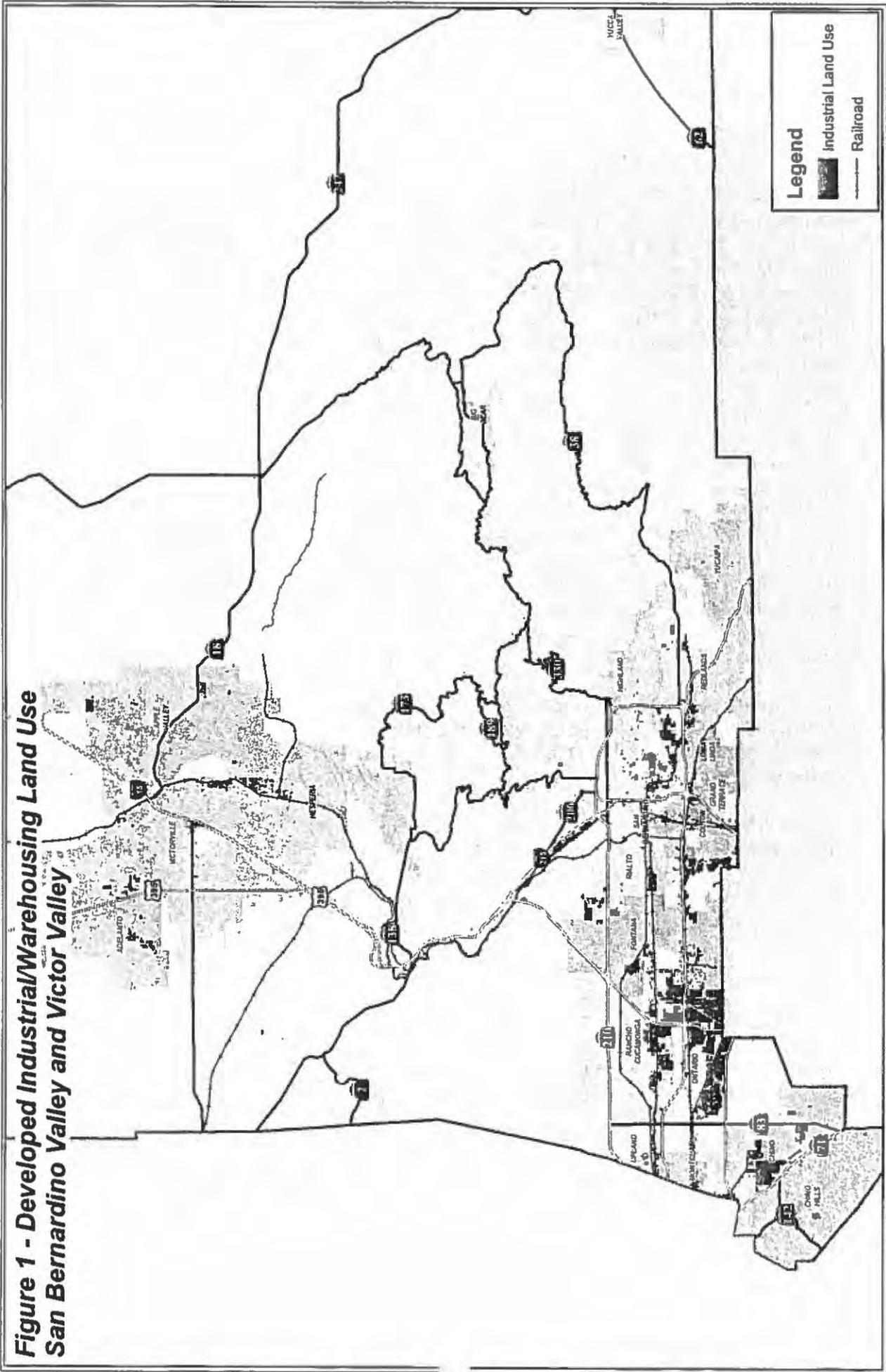
It is not the intent of this paper to provide detailed statistics on the operation of the supply chain that runs within and through San Bernardino County, although a statistical overview is provided for context. The details of current operations are well explained in other reports and analyses such as the Southern California Association of Governments (SCAG) report “*Comprehensive Regional Goods Movement Plan and Implementation Strategy*” dated February 2013. Rather, the purpose is to articulate those things SANBAG can and should focus on with regard to the freight and logistics enterprise in San Bernardino County. It primarily addresses the question: “what can SANBAG do, within the freight-related portion of its partnership with other stakeholders, to help San Bernardino County’s citizens and businesses succeed?”

GOODS MOVEMENT IN SAN BERNARDINO COUNTY – AN OVERVIEW

Freight Flows Through San Bernardino County

The introductory section highlighted the importance of San Bernardino County as a gateway and of the relationship between the County’s logistics sector and the Ports of Los Angeles and Long Beach. Approximately 40% of the nation’s containerized freight flows through the ports, and 80% of that funnels through San Bernardino County by rail and truck. The County is home to some 200 million square feet of warehouse facilities, or approximately 25% of the regional total. Many of these are large high-cube facilities designed to meet demands for automation and adaptability to the dynamics of today’s supply chains. Some of the most well-known players in wholesaling, retailing, and e-commerce are housed here, examples of which include: Amazon, Ashley Furniture, Best Buy, Coca-Cola, COSTCO, Dr. Pepper, Kohls, Mattel, Pep Boys, Pepsi, Stater Brothers, Target, and Walmart. Both UPS and FedEx run major operations out of Ontario International Airport. Figure 1 shows the extent of developed industrial/warehousing land use in the Valley and Victor Valley.

**Figure 1 - Developed Industrial/Warehousing Land Use
San Bernardino Valley and Victor Valley**



The Network

San Bernardino County is host to a truly world-class multimodal transportation network for passengers and freight. Two Class 1 railroads (Burlington Northern/Santa Fe and Union Pacific) carry freight to the rest of the U.S. through the Cajon and Banning passes, as previously discussed. There are 450 centerline miles of freeways in the County (I-10, I-15, I-40, SR-60, SR-210, and I-215), all of which carry substantial truck traffic. SR-60 carries the highest volumes, almost 35,000 trucks per day near Ontario Airport. The total daily east-west truck volume on the 10, 60, and 210 freeways is over 75,000 through the west Valley. Figure 2 shows a map of the highway and freight rail network in the Valley and Victor Valley.

The freeway system is supported by a high-capacity arterial system connecting the freeways to warehouse/logistics centers, trucking facilities, and airports. San Bernardino County has three airports with large capacity for cargo: LA/Ontario International Airport (ONT), San Bernardino International Airport (SBIA), and Southern California Logistics Airport (SCLA). A major BNSF intermodal facility, handling 600,000 container lifts per year, is located in San Bernardino, and a large UP switching yard is located in Colton. The fact that so many logistics firms have located in the Inland Empire attests to the mobility and access that the rail and highway systems provide.

Employment

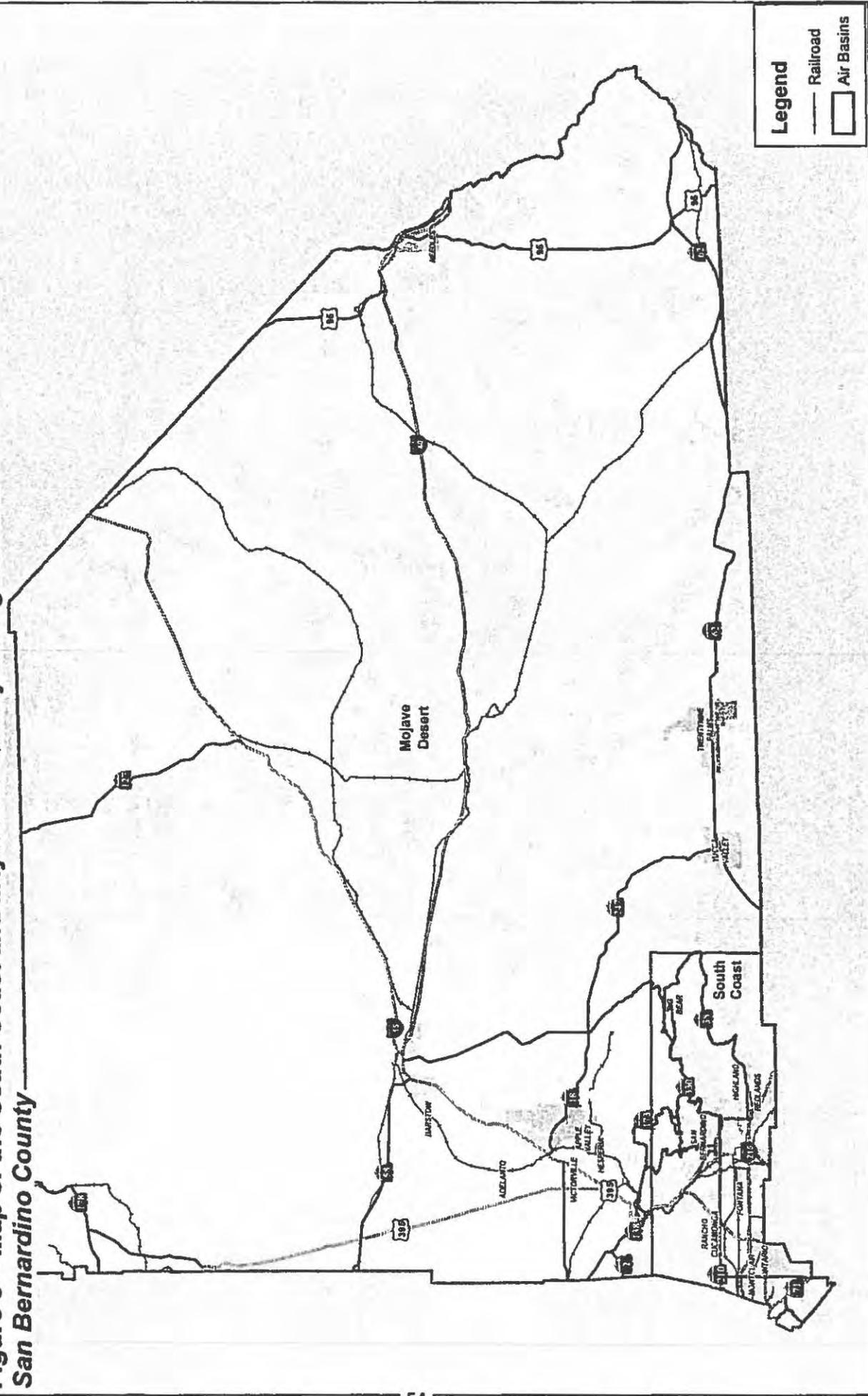
The distribution and logistics sector employs 123,000 workers in San Bernardino County and is currently the fastest growing sector, representing approximately 20% of the County's employment. However, the economic recovery is lagging behind that of coastal areas, with unemployment still almost 10% as of the end of 2013.

The poverty rate in San Bernardino County has risen from about 12% in 1990 to 20% today. Logistics jobs are an important point of entry into the job market for blue collar workers and for eventual movement into the middle class. This is a reminder that a thriving economy, including a thriving logistics sector, is critical to the future of San Bernardino County.

Environment

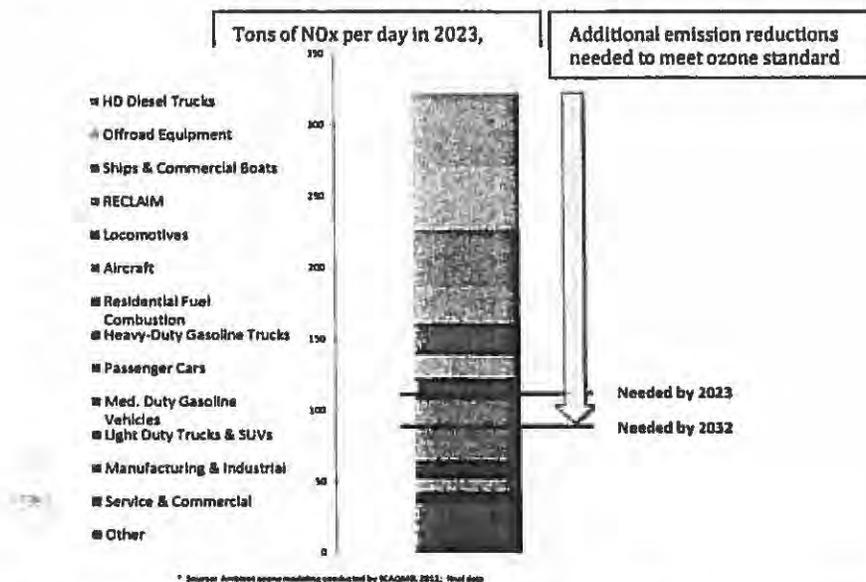
San Bernardino County is covered by both the South Coast and Mojave Air Quality Management Districts (AQMDs). Figure 3 shows the coverage of the two districts. The South Coast AQMD is a federally designated "extreme non-attainment area." The South Coast AQMD portion of San Bernardino County suffers from the worst 24-hour PM 2.5 concentrations and worst 1-hour and 8-hour ozone concentrations in Southern California – between 130 and 180 percent of federal standards, with a significant portion of this impact stemming from goods movement activities.

**Figure 3 – Map of the South Coast and Mojave Air Quality Management Districts
San Bernardino County**



Southern California will need to reduce NOx emissions by two-thirds by 2023 and three-quarters by 2032 to meet federal ozone standards. Projected emissions of NOx from three goods movement sources alone – ships, trains and heavy duty diesel trucks – will be above what is needed to achieve the federal 8-hour ozone standard by 2023, under existing regulations. See Figure 4.

Figure 4. NOx Emission Reductions Needed to Meet Federal Ozone Standards



Tremendous progress has been made on air quality over the last several decades. For example, maximum levels of ozone, one of the South Coast’s worst smog problems, have been cut to less than one quarter of what they were in the 1950s, even though today the region has nearly three times as many people and four times as many vehicles. In the past decade, Stage I smog alerts have been eliminated, which previously occurred 100-120 times a year. The South Coast has not reached Stage II levels since the 1980s.

However, the freight sector (ships, intermodal facilities, trains, and trucks) will require further advances for the region to reach federal attainment goals for particulates and ozone. This will require a balanced approach to maintain regional and national competitiveness in manufacturing/logistics while at the same time cleaning up the freight sector from an air quality standpoint. San Bernardino County, although it has some of the worst air quality in the region, cannot afford to lose the jobs associated with the logistics industry while this transition occurs.

Conflicts between industrial/warehouse development and residential communities are of concern as well. Impacts include noise from trucks and trains, localized traffic congestion, and visual impacts, among others.

Freight-Related Investments

SANBAG and Caltrans, in partnership with local governments, have invested approximately \$2.5 billion in the County's transportation network since 2000, significantly benefitting freight mobility. Noteworthy investments include:

Freeways:

- SR-210 from LA County line to I-215 (\$714 million - new freeway completed in 2007, providing substantial traffic relief to Interstate 10 and SR-60)
- Widening of I-215 in San Bernardino, completed in early 2014 (\$830 million)
- Devore Junction (I-15/I-215 interchange) - \$323 million in construction initiated in 2013

I-10 Interchanges:

- Cherry, Citrus, Riverside, and Tippecanoe/Anderson Avenues (\$250 million)

Rail/Highway Grade Separations:

- UP at Ramona Avenue, Hunts Lane, N. Milliken Avenue, S. Milliken Avenue, Vineyard Avenue (\$255M)
- BNSF at State Street., Glen Helen Parkway, Palm Avenue, Laurel Avenue (\$144M)
- Colton Crossing – Grade separation of the east-west UP and north-south BNSF lines that had existed as an at-grade crossing since the 1800s (\$103M)

This represents almost \$2.5 billion in investment in projects benefitting San Bernardino County's freight corridors since year 2000. The largest source of funds for the above projects (40%) has been from local Measure I sales tax revenue. Federal funds comprise 25% and state funds the remaining 35%. This speaks to the serious commitment SANBAG and its local and state partners have made to building and maintaining the highway network for both passenger car traffic and trucks.

INTERVIEWS WITH STAKEHOLDERS

In the late summer and fall of 2013 SANBAG staff conducted interviews with a cross-section of public and private entities with involvement in the freight and logistics industry and environmental community. The interviews covered a range of topics, with a slightly different focus based on the sector being interviewed. The overarching question asked of interviewees was: "What could or should SANBAG be doing to support the economic vitality of the County as it relates to the logistics sector, while also seeking to minimize the impacts the sector can have on the population in general?"

The sectors for which interviews were conducted include:

- Local economic development and planning directors
- State and local air quality agencies
- Railroads
- Trucking interests (including a sample of individual truck drivers)
- Environmental advocates
- Warehouse development interests

Economic development directors were asked about their strategy toward attracting and retaining logistics businesses and concerns they have about business retention. The railroads, trucking representatives, and logistics companies were asked about concerns and issues they have in running their businesses and remaining competitive. Regional and state air quality agencies and environmental advocates were queried with respect to what SANBAG could do to promote the attainment of air quality objectives and minimizing other freight-related impacts.

Additional insights were derived from freight, air quality, and health-related conferences and panels held in 2013, including: AQMD freight technology symposium (April), freight panel for Mobility 21 (October); Sustainable Goods Movement Symposium, Palm Desert (November); SCAG Economic Summit (December); California Economic Summit (November); and San Bernardino County's Live Well, Age Well Summit (November).

Some of the observations from these interviews and supplemental research included the following:

Infrastructure

- Economic development directors indicated that SANBAG should continue its investments in highway construction that benefit the freight industry. The importance of the logistics industry to the County's economy was heavily emphasized, although concern was expressed about the reduced number of jobs per unit of floor area as automation increases.
- Trucking interests supported the addition of highway lanes and improvement of interchanges, but had concerns about safety issues in construction zones. They stated that auto drivers are not sensitive to the limitations in truck maneuverability. They indicated that dedicated lanes for trucks could be beneficial, but were concerned about the costs. Congestion can be severe in Los Angeles, but trips from LA easterly to other states are not greatly affected by congestion. Pavement maintenance problems were noted on local truck routes.
- Economic development directors noted that information on SANBAG's prior and planned investments would be helpful as a supplement to local agency marketing material.
- Public agencies acknowledged that the trucks are hard on local roads.
- Trucking interests indicate that greater clarity and local education is needed regarding Surface Transportation Assistance Act (STAA) truck definition and routes. STAA trucks may travel up to 1.5 miles off the national network, but network maps have been described as being like a

giant jigsaw puzzle of where trucks may and may not travel. There is a need to develop well-defined and clear national, regional and local truck route maps. Enforcement of STAA truck routes is currently difficult for both industry and law enforcement.

Environment

- Air quality agencies restated that they are required to adopt plans that lead to attainment of air quality goals.
- The SCAQMD stated a recognition that the District needs to make the business case for the freight industry to embrace initiatives to clean up their fleets, which is one of the reasons AQMD is investing heavily in technology research.
- Trucking interests acknowledged that compliance with emission regulations is part of the cost of doing business and indicated that some companies do not do business in California because of those costs.
- Small trucking companies and owner/operators find that new regulations are coming on line faster than they can deal with them, and that retrofits of their trucks are just not affordable with the margins on which they operate.
- The environmental community stated that zero and near-zero emission technology is essential to address our air quality problem. Agencies should require trucks serving rail yards to have clean trucks. In addition, better buffers are needed between warehousing/trucking areas and residential communities. They believe agencies have been too pro-warehouse in the past, and that these developments are not necessarily the best use of scarce land resources.
- Some researchers have cited the diminishing returns of tighter regulations and question the benefit of further regulation compared to the harm it will likely cause to the economy. Air quality agencies have documented the benefits of improved air quality to the economy, in terms of lower health costs, fewer lost work days, and improved productivity. Other research has also been cited indicating that the environment is a relatively minor factor in health outcomes and that socio-economic conditions (e.g. income, education, poverty, and unemployment) are by far the most important contributors to an area's public health.

Economy

- Economic development directors expressed grave concerns that over-regulation of business, including logistics businesses, will continue to impact the San Bernardino County economy. San Bernardino County's high unemployment rate and slow recovery from the recession were cited.
- The need was cited for job growth in sectors that are easier to enter from an educational standpoint and that provide employment opportunities for migration to the middle class. Logistics is cited as one of those sectors.
- Trucking interests indicated that air quality regulations are driving small operators out of business. Large, multi-state corporations can usually absorb it with turnover in their truck fleets, but small operators cannot.

- Private warehouse developers cited the challenges of development in California and the relative ease of comparable development in other states.
- Private logistics operators expressed concerns that students coming out of schools today are not equipped with some of the basic skills to make them able to perform the jobs that are available. Private companies can train for their positions, but they cannot afford to do all the remedial work needed.
- The logistics industry has generally indicated that it is willing to pay for cost-effective infrastructure improvements that directly benefit their business.

AN EVALUATION OF SAN BERNARDINO COUNTY'S CURRENT AND FUTURE ROLE IN GOODS MOVEMENT

San Bernardino County has benefitted from its location advantages and the overall growth of the logistics sector. Although many opportunities remain, future success is not assured. The Great Recession of the late 2000s demonstrates how fragile the economy can be, as San Bernardino County still lags behind the pace of recovery of coastal counties. A critical review of assets, liabilities, and opportunities is needed to assess what actions SANBAG should take in the future in the areas of freight and logistics.

One useful way to structure this evaluation is a “SWOT analysis” with respect to freight – What **Strengths** does the County have, what are its **Weaknesses**, what **Opportunities** are likely to be available in the future, and what are the **Threats** to future success?

Below is a summary of the “SWOTs” derived from interviews, technical studies, conferences, and other data.

Strengths

- Location advantages as a gateway – San Bernardino County is both proximate to the ports and is on the way to and from the rest of America, as described in the introduction.
- Presence of distribution facilities for thousands of businesses, large and small, including most of the high-profile wholesalers and retailers in the U.S. Examples include: Amazon, Ashley Furniture, Best Buy, Coca-Cola, COSTCO, Dr. Pepper, Kohl's, Mattel, Pep Boys, Pepsi, Stater Brothers, Target, Walmart, There is a critical mass of activity here that sends a message to other prospective businesses that San Bernardino County is a great place to locate.
- World-class multimodal transportation network (two Class 1 railroads, extensive freeway network and high-capacity arterial system, three airports with large capacity for cargo, BNSF intermodal facility and major UP rail switching yard in Colton) – The fact that so many logistics firms have located in the Inland Empire speaks to the mobility and access that the rail and highway systems provide.
- Proactive local economic development agencies – Economic development departments are working hard to attract and retain quality businesses.

- A substantial labor force. A pool of labor is available for many of the jobs that the logistics sector needs to fill, though the educational system could be better preparing those potential workers.
- Excellent regional partners. SANBAG is working extensively with its 25 local jurisdictions, the private sector, SCAG, the air quality management districts (South Coast and Mojave), Metrolink, the environmental community, and other agencies on multiple fronts. The communications channels for partnerships don't need to be created – they already exist.
- Substantial funding for infrastructure through the County's half-cent sales tax (Measure D), state, and federal funding.
- A substantial supply of developable land that is more affordable than locations closer to the coast.

Weaknesses

- The K-12 educational system is not yet adequately equipping students for some of the jobs the County is capable of attracting. Although logistics employers can train new employees in the skills needed for specific jobs, there is a sense that many students come through the K-12 environment needing remediation in basic skills such as reading, writing, and math.
- Impacts of the logistics sector have not always been managed well. Lack of foresight in planning has resulted in trucks passing by or through neighborhoods, with spillover noise, pollution, and impacts on residential communities at the edges of warehousing districts. This makes it more difficult for other proposed projects to be approved.
- Difficulty competing with coastal communities for the more attractive jobs. The Inland Empire must compete largely on the basis of lower costs and its location advantages for logistics. It is more difficult to attract high-tech jobs.
- Land for logistics facility development, though still available, is becoming more scarce.
- The extent of industrial/warehouse/logistics development and the associated trucks, trains, and air quality problems sometimes casts a negative image of San Bernardino County in general.

Opportunities

- International trade is poised to expand further – despite the Panama Canal expansion and increased competition from other North American ports, forecasts show a near tripling of container volume through the ports in the next 25 years. Experts indicate that some of the lower value and less time-sensitive freight from Asia may divert to the expanded canal, but that transport across the country by land (rail or truck) still provides significant time and cost advantages coming through Southern California.
- The Inland transportation network is, so far, keeping pace with expansion of the logistics sector. The extensive network continues to be one of the County's major assets. The transportation system can continue to be used as a major marketing point for the county.

- Southern California is a stable and growing market for products and services that county businesses can provide. San Bernardino County can be a beneficiary from the goods that are manufactured here and shipped to both local and national markets as well as from freight that stops in the county, even momentarily, for value-added features with subsequent shipping by rail or truck through the gateways.
- If local control of Ontario International Airport is obtained, this area can become an even greater economic engine, particularly for the Valley subarea. Local entities will be in a better position to make business decisions that increase the potential for growth in passenger travel and the flow of goods through the Inland Empire.
- Over time, it can be expected that the cost advantages of production in eastern Asia will lessen, creating more opportunities for production and manufacturing in North America, including Southern California.

Threats

- State and regional regulation. California is near the bottom of the national list of states in terms of friendliness for business. There are a number of factors involved, but regulation is a major one, with both direct and indirect impacts on the cost and speed of doing business.
- Other states are eager to capture Southern California's logistics jobs. Although the Panama Canal expansion is not projected to substantially alter the economic advantages Southern California holds as the dominant port of entry and distribution center for most products from the Pacific Rim, other states will seize whatever additional advantages they can. Some diversion of business to Mexico must also be anticipated. Southern California cannot assume its inherent cost and time advantages will last forever.
- Although the region, including the logistics sector, has made enormous strides in cleaning up the air, achievement of National Ambient Air Quality Standards remains a daunting and expensive challenge. Overly aggressive regulatory timelines, though well-intentioned, could undermine the very economy that would enable the necessary air quality investments to occur.
- The supply of affordable land is not inexhaustible. Failure to plan well for the land we have could result in a backlash of public opinion against the further expansion of logistics.
- Trucks are hard on roadway infrastructure, and with declining revenue streams, funding is projected to fall far short of maintenance needs in the future. Sustainable sources of funding for both maintenance and capital projects are needed.
- Automation could lessen the job-creation benefits of portions of the logistics sector. Automation is vital to productivity and competition on the global stage. Though a threat to some of the traditional jobs, it brings with it also an opportunity for technology jobs. But the County must better position itself to be a player in the technology arena.
- Attaining the federal ozone standards is likely to require a complete transformation of our transportation and energy sectors. Based on a joint

visioning exercise by ARB, SCAQMD, and San Joaquin Valley Unified APCD, one path to attainment requires a nearly complete transformation of passenger vehicles to zero-emission technologies, approximately 80 percent of the truck fleet to zero-or near-zero technology, and nearly all locomotives operating in the South Coast Air Basin to be using some form of zero-emission technology. Such dramatic changes will inevitably require huge investment in and fundamental change to the regional transportation and energy infrastructure. It is questionable whether these transformational changes are physically and economically feasible within the timeframes defined by the federal government.

- San Bernardino County welcomes the improvements in air quality that would result from these investments, but is highly concerned that this will undermine the economic growth associated with the logistics industry, which the County desperately needs. The livelihood of truck owner-operators and other logistics-related businesses, particularly small businesses, is threatened unless there is a business-friendly approach, substantial financial assistance, and possible forgiveness in timelines at the federal level. Southern California should not be disadvantaged from an economic development perspective because of the uniquely difficult challenges in meeting air quality requirements here in our region.

In summary, San Bernardino County and its logistics-driven economy exist in a highly competitive environment. We live within a dynamic world economy with intense competition for the jobs and revenue that are derived from the flow of goods. All the environmental advances we seek cannot be achieved without a strong economy to finance them. SANBAG and its regional agency partners must pursue environmental objectives in ways that do not undermine the economic means to achieve them. At the same time, we must thoughtfully plan for continued expansion of logistics capacity in ways that insulate communities from their impacts. This will require collaboration across multiple disciplines and more comprehensive approaches than in the past.

THE STRATEGY

In light of this analysis, how then should SANBAG respond? In large part, SANBAG plays a support role in what is a private logistics enterprise. The following are proposed as priorities or initiatives that SANBAG could pursue in the context of the agency's role as transportation authority, county transportation commission, and council of governments.

1. **Infrastructure** - Continue to build the highway infrastructure needed to support efficient freight movement. An effective supply chain consists of many parts, one of which involves building and maintaining the infrastructure. Cost-effective transportation system upgrades improve productivity and competitiveness. Continued expansion is needed for freeway mainlines, freight-serving freeway interchanges, and rail/highway grade separations.
2. **Land Use Planning** - Encourage proper planning by local jurisdictions at the interfaces of residential areas with warehouse/distribution areas through wise land

use decisions, buffering, and effective truck routing. Improper planning leads to later problems for all concerned. The logistics sector needs to grow to keep up with demand, but it can still be a good neighbor as it grows.

3. **Promotion** - Promote the merits of San Bernardino County's world-class transportation system by providing information to economic development departments regarding SANBAG, Caltrans, and local jurisdiction investments in infrastructure.
4. **Economic Development and Air Quality** - Work with other regional agencies to structure economic development and air quality initiatives as a "win-win." Advances in air quality are important, but they can only be afforded when the economy is also strong. The region must be careful not to undermine the economic means to solve the air quality problem by trying to impose upon industry requirements they cannot afford. SANBAG should participate in regional conversations on how to strike a balance between maintaining jobs and cleaning the air. The air quality successes of the last several decades have taught us that air quality goals are best achieved through incentivizing adoption of advances in clean vehicles and fuels, not by regulating land use. The great strides in air quality improvement over the last several decades have been made at the same time that regional vehicle miles of travel (VMT) have more than doubled.
5. **Incentives/Grants for Air Quality Improvement** - Seek grants and provide information on opportunities for financial assistance to San Bernardino County trucking companies and truck owner/operators in maintaining compliance with air quality requirements.
6. **Anticipate Future Trends** - Technology is changing rapidly, and the ability to adapt to those changes will keep San Bernardino County competitive. For example, trends in automation of warehousing should be monitored to assess their impact on the economic value and local costs of permitted warehouse development. Partnerships with the private sector will become ever more important as the region seeks to keep pace with competition in the global economy.
7. **Education and Employment** - Through the Countywide Vision, improve employment pathways to the logistics industry. This will take guidance from the industries and the primary/secondary educational systems upon which they depend for their labor pool. There are a number of reasons why poverty rates have increased in San Bernardino County, but the logistics industry can be part of the solution as a relatively stable and growing source of jobs with pathways to the middle class.
8. **Truck Routes** - Work with State and local partners to provide greater clarity and local education regarding Surface Transportation Assistance Act (STAA) truck routes and clear national, regional and local truck route maps.
9. **Funding** - With regional, state, and federal partners, seek equitable ways to continue to fund freight-related infrastructure and its maintenance. The logistics industry has generally indicated that it is willing to pay for cost-effective infrastructure improvements that directly benefit their business.

10. **Airports** - Work with local jurisdiction partners to define policies that will lead to greater use of the three airports in San Bernardino County by freight-related businesses. Continue to support local control of Ontario International Airport.
11. **Project Readiness** - Position SANBAG for state and federal funding opportunities by developing as many freight-related projects as possible through the Project Approval and Environmental Documentation (PA&ED) stage. Include clearance under the National Environmental Policy Act (NEPA) where there are opportunities for substantial federal funds.
12. **Awareness** - Create and maintain greater awareness about goods movement issues affecting San Bernardino County among the SANBAG Board of Directors, state and federal elected and appointed officials, local agency technical staff, and the public.

NEXT STEPS

This working paper is a draft intended for review and discussion by SANBAG policy and technical committees and by interested stakeholders across the spectrum of freight-related issues. SANBAG staff will be receiving input and comments on the working paper through approximately April 2014. A revised draft will be submitted to SANBAG policy committees and the Board for approval in approximately June 2014. The SANBAG Freight Strategy will become a consideration in the Countywide Transportation Plan being developed for San Bernardino County and ultimately in the SCAG 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).



- San Bernardino County Transportation Commission
- San Bernardino County Transportation Authority
- San Bernardino County Congestion Management Agency
- Service Authority for Freeway Emergencies

Minute Action

AGENDA ITEM: 7

Date: February 13, 2014

Subject: Fund Allocation and Exchange on I-10 Tippecanoe Interchange Phase II and I-215 Projects

Recommendation: That the following be reviewed and recommended for final approval by the Board of Directors, acting in its capacity as the San Bernardino County Transportation Commission, at a regularly scheduled Board meeting:

1. Allocate the remaining balance of State Proposition 1B Trade Corridor Improvement Funds, estimated at \$10,535,002, to the I-10 Tippecanoe Interchange Phase II Construction project, which shall be applied to the project as follows:

- a. First replace the SANBAG Public Share contribution, estimated at \$1,424,424.
- b. Replace an estimated \$4,000,000 of Projects of National and Regional Significance funds and an estimated \$5,110,578 of High Priority Program Funds originally designated for the Inland Empire Goods Movement Project and allow those funds to retain the "buy-down" status of the Projects of National and Regional Significance funds and High Priority Program funds.

2. Approve allocation of an estimated \$4,000,000 of Projects of National and Regional Significance funds to the I-215 Landscaping project.

*

Approved
Board Metro Valley Study Session

Date: _____

Moved: _____ *Second:* _____

In Favor: _____ *Opposed:* _____ *Abstained:* _____

Witnessed: _____

COG	CTC	X	CTA	X	SAFE	CMA
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Check all that apply.

MVSS1402a-cs

<http://portal.sanbag.ca.gov/mgmt/APOR-Mgmt/Shared%20Documents/C14131.doc>

3. Approve replacing an estimated \$1,500,000 of federal Surface Transportation Program funds and an estimated \$3,250,578 of Measure I Valley Freeway Program funds for the I-215 Barton Road Interchange project with an estimated \$4,750,578 of High Priority Program Funds and allocate the remaining amount of High Priority Program Funds, estimated at \$360,000, to the I-215 Barton Road Interchange project for future cost increases.

4. Approve Trade Corridors Improvement Fund Baseline Agreement No. C14131 for the I-10 Tippecanoe Interchange Improvement Phase II project and authorize the Executive Director to execute C14131 when final Trade Corridors Improvement Funds programming amount is determined including modifications to the Project Programming Request form to reflect the final programming amounts and technical and administrative changes that may be necessary following California Transportation Commission staff review. Should any policy issues arise, the Executive Director will consult with Board Officers.

Background:

The California Transportation Commission (CTC) adopted the initial State Proposition 1B Trade Corridor Improvement Fund (TCIF) program in April 2008, which resulted in approximately \$211 million for SANBAG projects. In accordance with the TCIF Guidelines, all TCIF projects were to begin construction by December 2013, which required TCIF be allocated by the June 2013 CTC meeting. As the program progressed it became apparent that there was going to be TCIF savings identified as construction bids were received after the June 2013 allocation deadline. Subsequently, at the June 2013 CTC meeting, the CTC approved a proposal to utilize TCIF savings that become available as a result of project award savings or project failures. In order for a project to be considered for TCIF savings, the project must receive an allocation by June 2014 and begin construction by December 2014.

The construction bids have been received on all SANBAG TCIF projects and \$9,352,000 in TCIF savings has been identified. There are also additional TCIF savings expected from the Colton Crossing project which is nearing completion. The TCIF savings from the Colton Crossing project are redistributed among the TCIF Southern California Regional Consensus Group. SANBAG's share of the Colton Crossing project savings is estimated at \$1,183,002. The combined saving available to SANBAG for reprogramming is estimated at \$10,535,002.

I-10 Tippecanoe Phase II Construction is the only eligible SANBAG project that can meet the new funding deadline requirement of allocation by June 2014. The I-10 Tippecanoe Phase II Construction project is ready for programming and allocation at the March 2014 CTC meeting. As such, staff is requesting that the TCIF savings, estimated at \$10,535,002, be allocated to the I-10 Tippecanoe Interchange Phase II Construction project. Staff is also requesting that the

Executive Director be authorized to execute TCIF Baseline Agreement No. C14131 with the CTC, Inland Valley Development Agency, city of Loma Linda and city of San Bernardino, which details parameters of the TCIF programming when the TCIF programming amount is finalized.

Currently, the I-10 Tippecanoe Phase II Construction project is estimated at \$21 million and has \$18 million of federal "buy down" funds programmed on it resulting in a Developer Share contribution of \$1.2 million and Public Share contribution of \$1.6 million. Approximately \$16.5 million of these federal funds are eligible for use on the I-215 Landscaping project and I-215 Barton Road Interchange project as part of the Inland Empire Goods Movement project.

In accordance with Measure I Strategic Plan Policy, TCIF counts as Public Share. However, since I-10 Tippecanoe Interchange Phase II Construction project is the only project that can meet the June 2014 allocation deadline and there are excess TCIF funds available beyond what is needed for the Public Share, staff is recommending that TCIF beyond what can be maximized as Public Share be used as "buy down" funds and a like amount of federal "buy down" funds be reprogrammed on the I-215 Landscaping project and the I-215 Barton Road Interchange project.

Staff acknowledges that this is not consistent with other similar situations in the recent past, such as occurred with the allocation of excess Public Share funds to Duncan Canyon Interchange and Ranchero Road Interchange. In those cases, the cities will be reimbursing the Valley Freeway Interchange and Victor Valley Major Local Highway Programs, respectively, for the excess Public Share. However, designating all of the TCIF funds as Public Share funds on the I-10 Tippecanoe Phase II Construction project would adversely affect the local agencies that have already committed to developer funding shares based on the availability of the original federal "buy down" funds that staff is proposing to move. Additionally, freeing up of the Inland Empire Goods Movement Project funds is of great benefit to the Freeway Program. Because the I-215 North project is not eligible for Measure I 2010-2040 funds, and there aren't sufficient Measure I 1990 funds remaining, all of the landscaping costs will have to be funded with Federal formula funds, which would affect the federal funds programmed on other Freeway Program projects. Staff recommends that the Board allow an exception to policy in this case.

Financial Impact: This item does not impact the adopted SANBAG Fiscal Year 2013/2014 budget. Any fund changes to the I-10 Tippecanoe Interchange Phase II project, I-215 Landscaping project, and I-215 Barton Road project will be reflected in future budgets.

Reviewed By: The programming of TCIF savings on the I-10 Tippecanoe Phase II Construction project and subsequent movement of the Inland Empire Goods Movement federal earmark funding to the I-215 Landscaping project and I-215 Barton Road Interchange project was discussed at the December 2, 2013, and February 3, 2014, Transportation Technical Advisory Committee. This item is not scheduled for review by any other policy committee.

Responsible Staff: Carrie Schindler, Chief of Fund Administration and Programming

CONTRACT SUMMARY SHEET

Contract No. C 14131 Amendment No. _____

By and Between

San Bernardino County Transportation Commission, Caltrans, California Transportation
 Commission, City of Loma Linda, City of San Bernardino and IVDA

Contract Description TCIF Baseline Agreement for I-10 Tippecanoe Interchange Improvement
 Project Phase II

Board of Director's Meeting Date: 3/5/2014	
Overview of BOD Action: Approve Trade Corridor Improvement Fund Baseline Agreement R14131 for the I-10 Tippecanoe Interchange Improvement Phase II and authorize Executive Director to sign final agreement after Caltrans and CTC review.	
Is this a Sole-Source procurement? <input type="checkbox"/> Yes <input type="checkbox"/> No	

CONTRACT OVERVIEW			
Original Contract Amount	\$	0	Original Contingency Amount
Revised Contract Amount <i>Inclusive of prior amendments</i>	\$		Revised Contingency Amount <i>Inclusive of prior amendments</i>
Current Amendment Amount	\$		Contingency Amendment
TOTAL CONTRACT VALUE	\$	0	TOTAL CONTINGENCY VALUE
TOTAL BUDGET AUTHORITY (contract value + contingency)			\$ 0

Contract Start Date 3/5/2014	Current Contract Expiration Date 3/5/2019	Revised Contract Expiration Date
Has the contract term been amended? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - please explain.		

FINANCIAL INFORMATION				
<input checked="" type="checkbox"/> Budget authority for this contract currently exists in Task No. <u>0842</u>				
<input type="checkbox"/> A Budget Amendment is required.				
How are we funding current FY?				
<input checked="" type="checkbox"/> Federal Funds	<input checked="" type="checkbox"/> State Funds	<input checked="" type="checkbox"/> Local Funds	<input type="checkbox"/> TDA Funds	<input checked="" type="checkbox"/> Measure I Funds
Provide Brief Overview of the Overall Funding for the duration of the Contract: TCIF, Federal, Measure I and Local				
<input type="checkbox"/> Payable <input type="checkbox"/> Receivable				

CONTRACT MANAGEMENT INFORMATION
Check all applicable boxes:
<input type="checkbox"/> Retention? If yes, indicate % _____.
<input type="checkbox"/> Disadvantaged Business Enterprise (DBE) Goal _____ %

Project Manager (Print Name)	Signature	Date
Task Manager (Print Name)	Signature	Date
Dir. of Fund Admin. & Programming (Print Name)	Signature	Date
Contract Administrator (Print Name)	Signature	Date
Chief Financial Officer (Print Name)	Signature	Date

SANBAG Agreement No. C14131
TRADE CORRIDORS IMPROVEMENT FUND
PROJECT BASELINE AGREEMENT

1. PARTIES AND DATE

- 1.1** This Project Baseline Agreement (Agreement) for the I-10 Tippecanoe Interchange Improvement Phase II, effective on March 20, 2014, is made by and between the California Transportation Commission (Commission), the California Department of Transportation (Caltrans), and the San Bernardino County Transportation Commission (SANBAG), Inland Valley Development Agency (IVDA), City of Loma Linda and the City of San Bernardino (Project Sponsors), sometimes collectively referred to as the "Parties".

2. RECITAL

- 2.1** Whereas at its April 10, 2008, meeting the California Transportation Commission programmed the Trade Corridors Improvement Fund and included in this program of projects the I-10 Tippecanoe Interchange Improvement Phase II, the parties are entering into this Project Baseline Agreement to document the project cost, schedule, scope and benefits, as detailed on the Project Programming Request Form attached hereto as Exhibit A, the Draft Project Study Report or Equivalent attached hereto as Exhibit B, and the Project Benefits Form attached hereto as Exhibit C, as the baseline for project monitoring by the California Transportation Commission and its Project Delivery Council. The undersigned Project Sponsor certifies that the funding sources cited are committed and expected to be available; the estimated costs represent full project funding; and the scope and description of benefits is the best estimate possible.

3. GENERAL PROVISIONS

The Project Sponsor and Caltrans agree to abide by the following provisions:

- 3.1** To meet the requirements of Government Code Section 8879.23(c)(1), as added by Proposition 1B, and of Government Code Section 8879.50, as enacted through implementing legislation in 2007 (Senate Bill 88 and Assembly Bill 193).
- 3.2** To adhere to the provisions of the California Transportation Commission Resolution TCIP-P-0708-01, "Adoption of Program of Projects for the Trade Corridors Improvement Fund (TCIF)," dated April 10, 2008.
- 3.3** To adhere to the California Transportation Commission's Trade Corridors Improvement Fund Guidelines.
- 3.4** To adhere to the California Transportation Commission's Accountability Implementation Plan and Policies, and program and baseline amendment processes.

- 3.5 The Sponsoring Agency agrees to secure funds for any additional costs of the project. Any change to the funding commitments outline in this agreement requires an amendment.
- 3.6 To report to the California Transportation Commission on a quarterly basis on the progress made toward the implementation of the project, including scope, cost and schedule.
- 3.7 To report to the California Transportation Commission on the progress, on a quarterly basis, and outcomes, at the end of the environmental phase, of the environmental process with regard to air quality impacts due to emissions from diesel or other particulates and related mitigation strategies. Whereas the Bond Act mandates that the Commission shall allocate TCIF for trade infrastructure improvements in a manner that places emphasis on projects that improve trade corridor mobility while reducing emissions of diesel particulate and other pollutant emissions, the Department of Transportation, the Sponsoring Agency, and the Corridor Coalition understand and agree that the California Transportation Commission will only allocate TCIF to projects that can demonstrate compliance with applicable environmental requirements. If environmental clearance is conditioned to the implementation of mitigation measures, the sponsoring agency must commit, in writing, to the implementation of those mitigation measures.
- 3.8 To maintain and make available to the California Transportation Commission and/or its designated representative, all work related documents, including engineering and financial data, during the course of the project and retain those records for four years from the date of the final closeout of the project. Financial records will be maintained in accordance with Generally Accepted Accounting Principles.
- 3.9 The California Transportation Commission and/or its designated representative, has the right to audit the project records, including technical and financial data, of the Department of Transportation, the Sponsoring Agency, and any sub consultants at any time during the course of the project and for four years from the date of the final closeout of the project. Audits will be conducted in accordance with Generally Accepted Government Auditing Standards.

4. SPECIFIC PROVISIONS AND CONDITIONS

- 4.1 **Project Schedule and Cost**
See Project Programming Request Form, (Exhibit A.)
- 4.2 **Project Scope**
See Project Study Report/Project Study Report Equivalent
- 4.3 **Project Scope**
See Project Benefits Form
- 4.4 **Other Project Specific Provisions and Conditions**

Raymond Wolfe
Executive Director
San Bernardino Associated Governments

DATE

Allen Parker, City Manager
City of San Bernardino

DATE

AJ Wilson, Executive Director
Inland Valley Development Agency

DATE

Rhodes Rigsby, Mayor
City of Loma Linda

DATE

Malcolm Dougherty, Director
California Department of Transportation

DATE

Andre Boutros
Executive Director
California Transportation Commission

DATE

Approved as to Form by:
Eileen Monaghan Teichert
SANBAG General Counsel

DATE

Concurrence:
Jeffery Hill
SANBAG Contract Administrator

Exhibit A

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST

DTP-0001 (Revised September 2013)

General Instructions

<input checked="" type="checkbox"/> Amendment (Existing Project)					Date:	1/28/14
District	EA	Project ID	PPNO	MPO ID	TCRP No.	
08	44812	0800020487	0154D	44810		
County	Route/Corridor	PM: Blc	PM: Ahd	Project Sponsor/Lead Agency		
SBD	10	26.0	27.3	San Bernardino Associated Governments (SANBAG)		
				MPO	Element	
				SCAG	CO	
Project Manager/Contact		Phone		Email Address		
Barbara Fortman		(909)884-8278		bfortman@sanbag.ca.gov		
Project Title						
Tippecanoe Ave Interchange Improvements Phase II						
Location, Project Limits, Description, Scope of Work						
In the City of San Bernardino West of Tippecanoe Avenue to East of Tippecanoe Avenue. Modification and realignment of westbound I-10 ramps and improve local streets.						
<input checked="" type="checkbox"/> Includes ADA Improvements <input type="checkbox"/> Includes Bike/Ped Improvements						
Component Implementing Agency						
PA&ED		San Bernardino Associated Governments				
PS&E		San Bernardino Associated Governments				
Right of Way		Caltrans				
Construction		San Bernardino Associated Governments				
Purpose and Need						
Development in the Cities of San Bernardino and Loma Linda has caused increased traffic congestion in the vicinity of the freeway interchange. The congestion is impacting the operation of the I-10 freeway. In addition, the congestion is increasing the response time for emergency vehicles accessing Loma Linda Hospital located south of the interchange. The proposed improvements will mitigate the existing congestion, relieve the impacts to the freeway, and provide capacity for future development in the area including San Bernardino International Airport.						
Project Benefits						
The project will improve operational deficiencies and increase capacity at the interchange						
<input checked="" type="checkbox"/> Supports Sustainable Communities Strategy (SCS) Goals <input checked="" type="checkbox"/> Reduces Greenhouse Gas Emissions						
Project Milestones						
					Existing	Proposed
Project Study Report Approved						
Begin Environmental (PA&ED) Phase					12/19/05	
Circulate Draft Environmental Document					02/01/08	
Draft Project Report					01/30/08	
End Environmental Phase (PA&ED Milestone)					12/01/08	01/27/11
Begin Design (PS&E) Phase					12/03/08	12/03/08
End Design Phase (Ready to List for Advertisement Milestone)					01/10/11	01/28/14
Begin Right of Way Phase					05/05/09	01/27/11
End Right of Way Phase (Right of Way Certification Milestone)					12/13/10	01/27/14
Begin Construction Phase (Contract Award Milestone)					06/13/11	08/06/14
End Construction Phase (Construction Contract Acceptance Milestone)					12/17/12	02/01/17
Begin Closeout Phase					12/18/12	02/02/17
End Closeout Phase (Closeout Report)					03/17/14	08/01/17

PROJECT PROGRAMMING REQUEST

DTP-0001 (Revised September 2013)

Date: 1/28/14

District: 08	County: SBD	Route: 10	EA: 44812	Project ID: 0800020467	PPNC: 0154D	TCRP No.:
Project Title: Tippecanoe Ave Interchange Improvements Phase I						

Existing Total Project Cost (\$1,000s)									Implementing Agency
Component	Prior	12/13	13/14	14/15	15/16	16/17	17/18+	Total	
E&P (PA&ED)	2,427							2,427	San Bernardino Associated
PS&E	5,563							5,563	San Bernardino Associated
R/W SUP (CT)	3,000							3,000	Caltrans
CON SUP (CT)									San Bernardino Associated
R/W	31,588							31,588	Caltrans
CON	37,943							37,943	San Bernardino Associated
TOTAL	80,521							80,521	
Proposed Total Project Cost (\$1,000s)									Notes
Component	Prior	12/13	13/14	14/15	15/16	16/17	17/18+	Total	
E&P (PA&ED)									
PS&E	5,189							5,189	
R/W SUP (CT)	538	2,500	500					3,538	
CON SUP (CT)									
R/W	30,640							30,640	
CON			20,727					20,727	
TOTAL	36,364	2,500	21,227					60,091	

Fund No. 1: IIP - National Hwy System (NH)									Program Code
Existing Funding (\$1,000s)									20.XX.025.700
Component	Prior	12/13	13/14	14/15	15/16	16/17	17/18+	Total	Funding Agency
E&P (PA&ED)									Caltrans
PS&E									
R/W SUP (CT)	3,000							3,000	
CON SUP (CT)									
R/W									
CON									
TOTAL	3,000							3,000	
Proposed Funding (\$1,000s)									Notes
Component	Prior	12/13	13/14	14/15	15/16	16/17	17/18+	Total	
E&P (PA&ED)									
PS&E									
R/W SUP (CT)		2,500	500					3,000	
CON SUP (CT)									
R/W									
CON									
TOTAL		2,500	500					3,000	

Fund No. 2: Demo - Demonstration - TEA21 (DEMOT21)									Program Code
Existing Funding (\$1,000s)									20.30.010.680
Component	Prior	12/13	13/14	14/15	15/16	16/17	17/18+	Total	Funding Agency
E&P (PA&ED)	1,815							1,815	
PS&E	4,250							4,250	
R/W SUP (CT)									
CON SUP (CT)									
R/W	18,575							18,575	
CON	27,793							27,793	
TOTAL	53,333							53,333	
Proposed Funding (\$1,000s)									Notes
Component	Prior	12/13	13/14	14/15	15/16	16/17	17/18+	Total	
E&P (PA&ED)									
PS&E	515							515	
R/W SUP (CT)									
CON SUP (CT)									
R/W	5,361							5,361	
CON									
TOTAL	5,876							5,876	

Fund No. 3: SANBAG- MEASURE I									Program Code
Existing Funding (\$1,000s)									LOCAL FUNDS
Component	Prior	12/13	13/14	14/15	15/16	16/17	17/18+	Total	Funding Agency
E&P (PA&ED)	912							912	San Bernardino Associated Gov
PS&E	1,313							1,313	
RW SUP (CT)									
CON SUP (CT)									
RW	12,013							12,013	
CON	10,150							10,150	
TOTAL	24,388							24,388	
Proposed Funding (\$1,000s)									Notes
E&P (PA&ED)									\$235k CT ROW SUPP + \$300k Transystems ROW Supp
PS&E	4,674							4,674	
RW SUP (CT)	535							535	
CON SUP (CT)									
RW	1,396							1,396	
CON				156				156	
TOTAL	6,605			156				6,761	

Fund No. 4: Trade Corridor Improvement Funds TCIF									Program Code
Existing Funding (\$1,000s)									
Component	Prior	12/13	13/14	14/15	15/16	16/17	17/18+	Total	Funding Agency
E&P (PA&ED)									Caltrans
PS&E									
RW SUP (CT)									
CON SUP (CT)									
RW									
CON									
TOTAL									
Proposed Funding (\$1,000s)									Notes
E&P (PA&ED)									
PS&E									
RW SUP (CT)									
CON SUP (CT)									
RW									
CON				10,535				10,535	
TOTAL				10,535				10,535	

Fund No. 5: DEMO SAFETEA-LU									Program Code
Existing Funding (\$1,000s)									
Component	Prior	12/13	13/14	14/15	15/16	16/17	17/18+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
RW SUP (CT)									
CON SUP (CT)									
RW									
CON									
TOTAL									
Proposed Funding (\$1,000s)									Notes
E&P (PA&ED)									
PS&E									
RW SUP (CT)									
CON SUP (CT)									
RW	5,517							5,517	
CON				7,370				7,370	
TOTAL	5,517			7,370				12,887	

Fund No. 6:		SEC 115							Program Code	
Existing Funding (\$1,000s)										
Component	Prior	12/13	13/14	14/15	15/16	16/17	17/18+	Total	Funding Agency	
E&P (PA&ED)										
PS&E										
R/W SUP (CT)										
CON SUP (CT)										
R/W										
CON										
TOTAL										
Proposed Funding (\$1,000s)										
Component	Prior	12/13	13/14	14/15	15/16	16/17	17/18+	Total	Notes	
E&P (PA&ED)										
PS&E										
R/W SUP (CT)										
CON SUP (CT)										
R/W	2,999							2,999		
CON										
TOTAL	2,999							2,999		

Fund No. 7:		SEC 117							Program Code	
Existing Funding (\$1,000s)										
Component	Prior	12/13	13/14	14/15	15/16	16/17	17/18+	Total	Funding Agency	
E&P (PA&ED)										
PS&E										
R/W SUP (CT)										
CON SUP (CT)										
R/W										
CON										
TOTAL										
Proposed Funding (\$1,000s)										
Component	Prior	12/13	13/14	14/15	15/16	16/17	17/18+	Total	Notes	
E&P (PA&ED)										
PS&E										
R/W SUP (CT)										
CON SUP (CT)										
R/W	4,914							4,914		
CON										
TOTAL	4,914							4,914		

Fund No. 8:		SEC 330							Program Code	
Existing Funding (\$1,000s)										
Component	Prior	12/13	13/14	14/15	15/16	16/17	17/18+	Total	Funding Agency	
E&P (PA&ED)										
PS&E										
R/W SUP (CT)										
CON SUP (CT)										
R/W										
CON										
TOTAL										
Proposed Funding (\$1,000s)										
Component	Prior	12/13	13/14	14/15	15/16	16/17	17/18+	Total	Notes	
E&P (PA&ED)										
PS&E										
R/W SUP (CT)										
CON SUP (CT)										
R/W	1,490							1,490		
CON			1,490					1,490		
TOTAL	1,490		1,490					2,980		

Fund No. 9: Federal IMD									Program Code
Existing Funding (\$1,000s)									
Component	Prior	12/13	13/14	14/15	15/16	16/17	17/18+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding (\$1,000s)									Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W	2,108							2,108	
CON									
TOTAL	2,108							2,108	

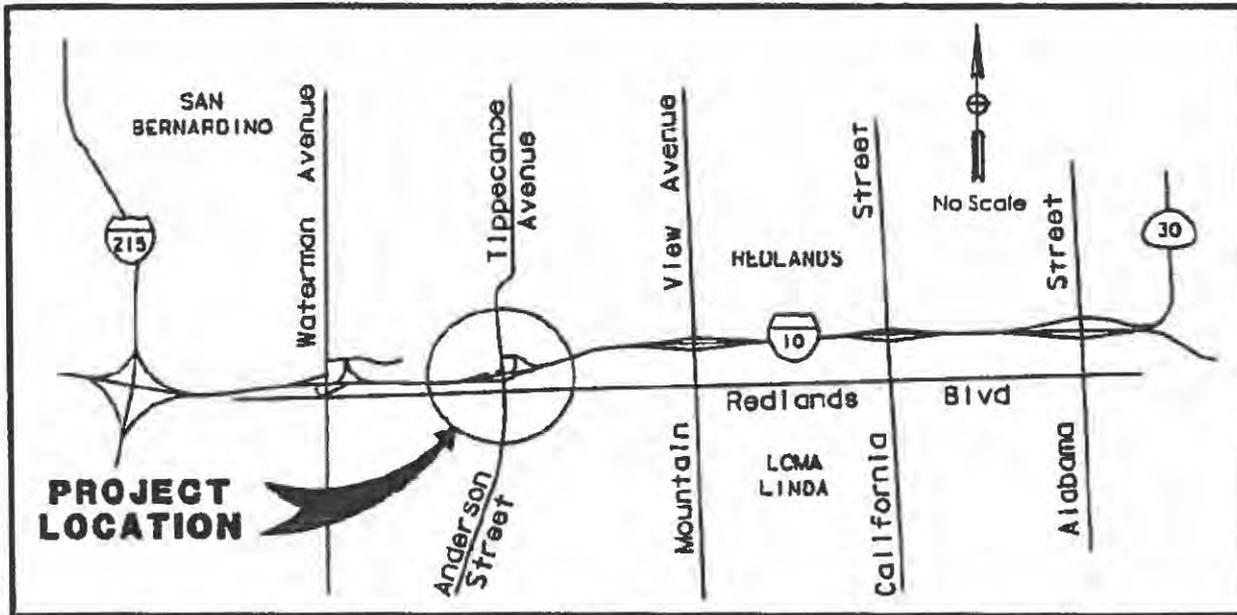
Fund No. 10: Local Funds- City of San Bernardino									Program Code
Existing Funding (\$1,000s)									
Component	Prior	12/13	13/14	14/15	15/16	16/17	17/18+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding (\$1,000s)									Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W	2,285							2,285	
CON			392					392	
TOTAL	2,285		392					2,677	

Fund No. 11: Local Funds- IVDA									Program Code
Existing Funding (\$1,000s)									
Component	Prior	12/13	13/14	14/15	15/16	16/17	17/18+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding (\$1,000s)									Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W	2,285							2,285	
CON			392					392	
TOTAL	2,285		392					2,677	

Fund No. 12: Local Funds- City of Loma Linda		Existing Funding (\$1,000s)							Program Code
Component	Prior	12/13	13/14	14/15	15/16	16/17	17/18+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
RW SUP (CT)									
CON SUP (CT)									
RW									
CON									
TOTAL									
Proposed Funding (\$1,000s)									Notes
E&P (PA&ED)									
PS&E									
RW SUP (CT)									
CON SUP (CT)									
RW	2,285							2,285	
CON			392					392	
TOTAL	2,285		392					2,677	

Exhibit B
Approved Project Report (attached)

SUPPLEMENTAL PROJECT REPORT



On Route 10 in the Cities of Loma Linda and San Bernardino, County of San Bernardino
 From 1.01 miles west of Tippecanoe Avenue to 1.02 miles east of Tippecanoe Avenue

I have reviewed the right of way information contained in this Supplemental Project Report and the R/W Data Sheet attached hereto, and have found the data to be complete, current, and accurate:

Basem Muallem

Basem Muallem
 DEPUTY DISTRICT DIRECTOR, RIGHT OF WAY

APPROVAL RECOMMENDED:

Meardey Tim

Meardey Tim
 PROJECT MANAGER

APPROVAL RECOMMENDED:

David Bricker

David Bricker
 DEPUTY DISTRICT DIRECTOR,
 ENVIRONMENTAL PLANNING

APPROVAL RECOMMENDED:

Christy Connors

Christy Connors
 DEPUTY DISTRICT DIRECTOR, DESIGN

APPROVED:

Raymond W. Wolfe

Raymond W. Wolfe, PhD
 DISTRICT DIRECTOR

2/14/12
 DATE

This Supplemental Project Report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

Michael C. Han 12/12/11
MICHAEL C. HAN DATE
REGISTERED CIVIL ENGINEER



CONCURRENCE:
Jon Bumps 12/15/11
JON BUMPS DATE
OFFICE CHIEF, DESIGN OVERSIGHT

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- Attachment A – Project Location Map
- Attachment B – Project Cost Estimates
- Attachment C – Right-of-Way Data Sheets
- Attachment D – Transportation Management Plan Data Sheets
- Attachment E – Stage Construction Index Sheets
- Attachment F – Approved Project Report

1 INTRODUCTION

This Supplemental Project Report addresses project scope changes to the original Project Report approved on January 27, 2011.

San Bernardino Associated Governments (SANBAG), in cooperation with the California Department of Transportation (Caltrans), the City of Loma Linda, and the City of San Bernardino, is proposing to reconstruct the Interstate 10 (I-10)/Tippecanoe Avenue interchange. In order to accelerate the start of construction, SANBAG, with concurrence from Caltrans on April 7, 2011, proposed to split the project into two construction phases, Phase 1 and Phase 2. Phase 1 consists of improvements that can be constructed with no impacts to existing utilities and right-of-way, thereby allowing construction to be expedited. Phase 2 consists of the improvements that require utility relocations and right-of-way acquisitions. Construction of Phase 1 and Phase 2 will collectively meet the project objectives to reduce the weave between the Waterman Avenue eastbound (EB) on-ramp and the Tippecanoe Avenue EB off-ramp; improve merge/diverge operations; and reduce congestion at the ramp intersections, thereby providing adequate access to facilities served by the interchange, including the regional hospital, the airport, residences and business facilities.

The Phase 1 project limits on EB I-10 extend from 1,200 feet east of Waterman Avenue to Tippecanoe Avenue. The Phase 2 project limits on westbound (WB) I-10 extend from 1,500 feet west of Tippecanoe Avenue to 2,200 feet east of Tippecanoe Avenue. The Phase 2 project limits on Tippecanoe Avenue/Anderson Street extend from the Anderson Street/Court Street intersection at the south to the Tippecanoe Avenue/ Hospitality Lane-Coulston Street intersection at the north. In addition, Redlands Blvd. would be improved in Phase 2 approximately 400 feet west and 500 feet east of Anderson Street.

2 RECOMMENDATION

It is recommended that the Supplemental Project Report be approved to document acceptance of the original project being constructed in two phases, which was approved January 27, 2011 with Alternative 1 (preferred alternative) being selected to proceed to the final design phase.

3 BACKGROUND

There are no changes to this section from the Project Report approved on January 27, 2011.

4 NEED AND PURPOSE

There are no changes to this section from the Project Report approved on January 27, 2011.

5 ALTERNATIVES

5.1 Alternative 1 - Preferred Alternative

The preferred alternative, Alternative 1, will be constructed in two phases, Phase 1 and Phase 2, which consist of the following improvements:

Phase 1

- Widen EB I-10 mainline from the Waterman Avenue EB on-ramp to the Tippecanoe Avenue EB off-ramp.
- Widen the existing I-10 bridge structure over San Timoteo Creek. This would require extension of the pier wall within San Timoteo Creek.
- Widen the Tippecanoe Avenue EB off-ramp by providing an additional left-turn lane and right-turn lane at the ramp intersection.

Phase 2

- Reconfigure the WB off-ramp from a tight diamond to a partial cloverleaf configuration, increasing the intersection spacing by over 400 feet. The ramp intersection would align with the existing Harriman Place/Tippecanoe Avenue intersection.
- Add a Tippecanoe Avenue WB loop on-ramp. Addition of this ramp would allow for the removal of the existing left-turn lane for traffic heading NB on Tippecanoe Avenue to access WB I-10. This would provide the room needed to add double left-turn lanes for SB traffic on Tippecanoe Avenue onto the EB on-ramp and EB Redlands Blvd.
- Widen the existing I-10 bridge structure over Tippecanoe Avenue in the WB direction to accommodate the WB loop on-ramp.
- Widen Tippecanoe Avenue from I-10 to just north of Lee Street to provide lane taper length.
- Widen Anderson Street from I-10 to south of Court Street to accommodate additional turn lanes at the Anderson Street/EB ramps intersection and Anderson Street/Redlands Blvd. intersection.
- Widen Redlands Blvd. to accommodate a six-lane facility with dual left-turn lanes, striped medians, and sidewalks between approximately 450 feet west and 800 feet east of the intersection at Anderson Street.
- Modify and interconnect traffic signals at the intersection of Anderson Street and Redlands Blvd.; the intersection of Anderson Street and the EB on- and off-ramps; and the intersection of Tippecanoe Avenue and the WB on- and off-ramps/Harriman Place.
- Add a residential road, Conejo Drive, connecting East Coulston Street, East Lee Street, and East Laurelwood Drive.
- Eliminate the South Ferree Street connection to East Rosewood Drive by providing a cul-de-sac at East Laurelwood Drive and South Ferree Street.
- Relocate wet and dry utility facilities to accommodate street widening and realignment.
- Provide a Class II bicycle lane within the project limits, with the exception of (1) the NB direction of Anderson Street south of Redlands Blvd., and (2) the segment of Anderson Street between the EB ramps and Redlands Blvd., where 5 ft outside shoulders would be provided.

5.2 Nonstandard Mandatory and Advisory Design Features

Fact Sheets for nonstandard mandatory and advisory design exceptions under Alternative 1 have been reviewed and approved by Caltrans. There are no additional design exceptions as a result of splitting Alternative 1 into Phase 1 and Phase 2.

5.3 Cost Estimates

A detailed cost breakdown for Phase 1 and Phase 2 is included in Attachment B. The following table summarizes the cost for the construction, right-of-way, and support components:

	<u>Phase 1</u>	<u>Phase 2</u>
CONSTRUCTION COST		
Roadway	\$13,811,000	\$13,686,000
Structures	\$1,300,000	\$740,000
RIGHT-OF-WAY	<u>\$0</u>	<u>\$32,143,000</u>
Total Project Capital Outlay	<u>\$15,111,000</u>	<u>\$46,569,000</u>
SUPPORT COST		
PS&E	\$2,124,000	\$3,035,000
Right-of-Way	\$0	\$2,735,000
Construction Management	<u>\$1,967,000</u>	<u>\$2,404,000</u>
Total Project Cost	<u>\$19,202,000</u>	<u>\$54,743,000</u>

5.4 Right-of-Way Data

Right-of-Way Data Sheets have been prepared for both Phase 1 and Phase 2 and are included in Attachment C, which include cost estimates for right-of-way and utilities relocation.

6 CONSIDERATIONS REQUIRING DISCUSSION

6.1 Right-of-Way Issues

Right-of-Way Data Sheets have been prepared for both Phase 1 and Phase 2 and are included in Attachment C.

Phase 1 would not require any temporary or permanent right-of-way.

Phase 2 would require new permanent right-of-way in all four quadrants of the interchange. The proposed WB on- and off-ramps would require full and partial acquisitions of residences and businesses in the northeast quadrant. In the southwest and southeast quadrants, the major construction work involves widening of Redlands Blvd. and Anderson Street, requiring partial acquisitions. In the northwest quadrant, partial acquisitions would be required to reconstruct the northwest and southwest corners of the Harriman Place/Tippecanoe Avenue intersection. In general, the partial acquisitions consist of several feet of frontage area along major arterials. Temporary construction easements would also be required in all four quadrants to construct and widen local streets. Improvements to commercial driveways along Anderson Street and Redlands Blvd. would be required as a result of roadway widening.

6.2 Environmental Issues

Caltrans is the California Environmental Quality Act (CEQA) Lead Agency and the National Environmental Policy Act (NEPA) Lead Agency for this project. As owner-operator of the State Highway System (SHS), Caltrans is the CEQA Lead Agency for all improvement projects on the SHS. Effective July 1, 2007, Caltrans has been assigned environmental review and consultation responsibilities under NEPA pursuant to 23 U.S.C. 327. The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327.

Caltrans has determined for this project that the appropriate environmental documentation for CEQA compliance is an Initial Study (IS), and for NEPA compliance, an Environmental Assessment (EA). Caltrans has adopted a Mitigated Negative Declaration (MND) for the IS and a Finding of No Significant Impact (FONSI) for the EA on January 27, 2011.

Environmental Re-Validation Forms were completed and approved on November 29, 2011 for both Phase 1 and Phase 2, which concluded that the original environmental document remains valid and no further documentation is necessary.

7 OTHER CONSIDERATIONS AS APPROPRIATE

7.1 Permits

The following permits will be required for Phase 1:

- County of San Bernardino Flood Control District Encroachment Permit
- State Right of Way Encroachment Permit
- Section 401 RWQCB Certification
- Section 404 ACOE Nationwide Permit (NWP)
- CDFG Streambed Alteration Notification (agreement or letter of non-jurisdiction)
- General Construction Activity NPDES Permit (SWRCB)

The following permits will be required for Phase 2:

- State Right of Way Encroachment Permit
- General Construction Activity NPDES Permit (SWRCB)

Both phases are subject to the Caltrans Statewide NPDES Storm Water Permit and Waste Discharge Requirements (Order No. 99-06-DWQ, NPDES No. CAS000003 and CAS000002).

7.2 Cooperative Agreements

Cooperative Agreement Number 8-1229 A/4, which was amended on October 24, 2011, sets forth the terms and conditions for Caltrans and SANBAG, outlining responsibilities for the PA/ED phase of the project (EA 448100) and the PS&E phases for both Phase 1 (EA 448111) and Phase 2 (EA 448121). A separate agreement will be required for the construction phase of the project.

7.3 Transportation Management Plan

TMP Data Sheets (Attachment D) have been developed for both Phase 1 and Phase 2 to provide recommendations to minimize the traffic impacts of construction activities so as to provide the highest level of traffic circulation and access during the construction periods. Based on the TMP Data Sheets information, the impacts of the project to the freeway mainline, ramps, and local roads are estimated to be medium. Various elements, as well as the associated cost for each strategy, are outlined in the TMP Data Sheets.

7.4 Stage Construction

The Phase 1 project will require two construction stages to construct the proposed improvements. Stage Construction Index Sheets are included in Attachment E.

Stage 1 construction involves widening the San Timoteo Creek structure along EB I-10, replacing the existing concrete lined trapezoidal channel with an underground RCB culvert between San

Timoteo Creek and Anderson Street, widening the EB I-10 mainline, and realigning the Tippecanoe Avenue EB off-ramp. Detours would be required for temporary closure of the Waterman Avenue EB on-ramps due to the bridge widening at San Timoteo Creek. Motorists can use Redlands Blvd. and Tippecanoe Avenue as detours to access EB I-10.

Stage 2 construction involves completing construction of the realigned EB off-ramp and concrete ramp terminus. In this stage, detours would be required for temporary closure of the I-10 EB off-ramp and construction of the off-ramp concrete termini. Motorists can use Waterman Avenue, Hospitality Lane, Mountain View Avenue, and Redlands Blvd. to bypass the construction site. Traffic impacts are anticipated to be minor as the closure of the EB off-ramp at Tippecanoe Avenue would be done overnight and during the weekend. Construction of the EB off-ramp concrete terminus would require a weekend closure.

The **Phase 2** project will require three construction stages to construct the proposed improvements.

Stage 1 construction involves widening the Tippecanoe Avenue Undercrossing structure along WB I-10, widening SB Anderson Street and Redlands Blvd. west of Anderson Street. During construction, driveway access to local businesses would be maintained. Pedestrian access can be maintained during construction by constructing the street widening improvements in halves. Bus stops may need to be relocated temporarily outside the construction area. Existing raised medians will be removed and reconstructed in their proposed locations.

Stage 2 construction is comprised of the realignment of Laurelwood Drive, constructing the new WB off-ramp at Tippecanoe Avenue, and widening Tippecanoe Avenue north of the Harriman Avenue intersection. No closure is anticipated as motorists would be able to continue utilizing the existing WB off-ramp while the new ramp is being constructed. Northbound Anderson Street and Redlands Blvd. east of Anderson Street would also be widened in this stage.

Stage 3 construction includes construction of the new WB loop on-ramp at Tippecanoe Avenue and widening of NB Tippecanoe Avenue north of I-10. The existing WB off-ramp would be removed in this stage after traffic has been shifted to the newly constructed WB off-ramp. No closures are anticipated for this stage of construction. Southbound Tippecanoe Avenue would be widened and existing medians would be removed and reconstructed in their proposed locations in this stage.

7.5 Federal Involvement

The Modified Access Report (MAR) was prepared to obtain FHWA approval on the modified access to WB I-10. FHWA provided the Engineering and Operational Acceptability Determination on October 15, 2009. No revisions to the approved MAR are required as a result of splitting the project into Phase 1 and Phase 2. The construction phase of the Phase 2 project is classified as a High Profile Project and is subject to oversight by FHWA.

8 PROGRAMMING

8.1 Programming

This project is programmed in the SCAG adopted 2011 FTIP. An amendment to update the funding amounts for Phase 1 and Phase 2 were submitted as part of the 2011 FTIP Amendment #18, which is expected to be approved by FHWA in December 2011. Funding sources per the 2011 FTIP

Amendment #18 are shown in Table 1. SANBAG is committed to completing the PS&E (EA Phase Code 1) for both Phase 1 (EA 448111) and Phase 2 (EA 448121).

8.2 Funding

Table 1 shows the project funding amounts per the 2011 FTIP Amendment #18.

Table 1: Project Funding

Year	Fund	Phase 1			Phase 2		
		Engineering	R/W	Construction	Engineering	R/W	Construction
Prior	Federal				515	23,848	
Prior	State					2,500	
Prior	Measure I / Local	3,849			4,674	7,727	
2011/2012	Federal			15,549			12,902
2011/2012	Measure I / Local			3,052			4,904
Subtotal		3,849		18,601	5,189	34,075	17,806
Total		22,450			57,070		

Values are in 1,000's of dollars

8.3 Schedule

Table 2 lists the major project milestones for this project.

Table 2: Project Milestones

Milestone	Phase 1 Project		Phase 2 Project	
	Start	Completion	Start	Completion
Plans, Specifications & Estimates	June 2010	January 2012	June 2010	July 2012
Right-of-Way	N/A	N/A	June 2010	June 2013
Construction	July 2012	May 2013	September 2013	November 2014

9 REVIEWS

This Supplemental Project Report was reviewed by the following:

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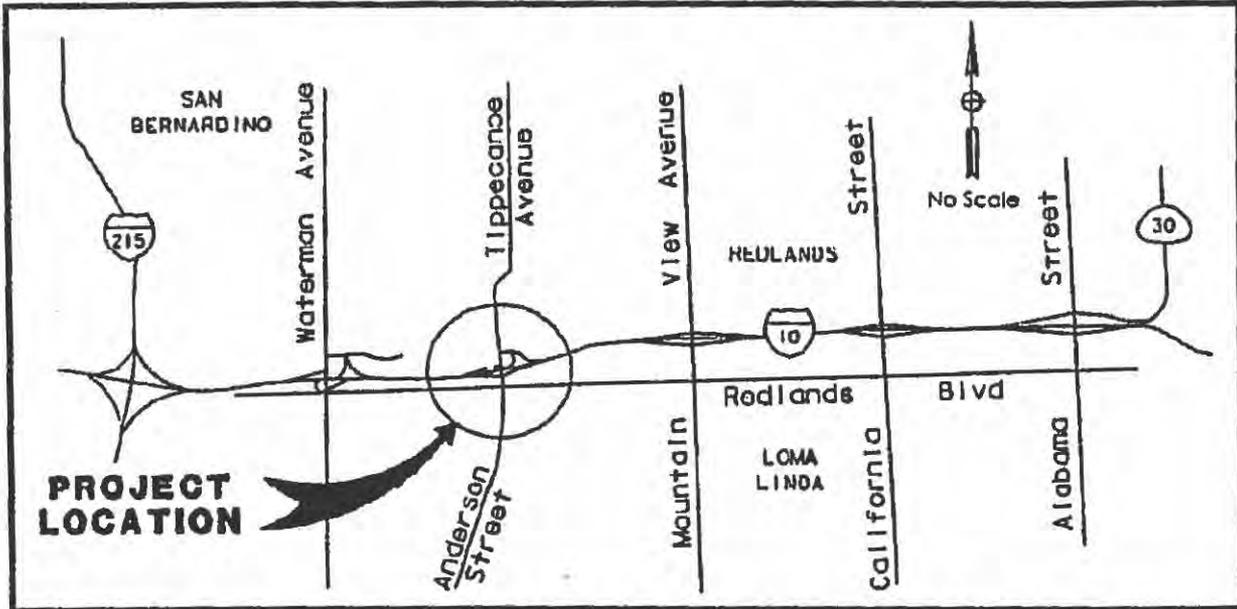
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PROJECT REPORT



On Route 10 in the Cities of Loma Linda and San Bernardino, County of San Bernardino
 From 1.01 miles west of Tippecanoe Avenue to 1.02 miles east of Tippecanoe Avenue

I have reviewed the right of way information contained in this Project Report and the R/W Data Sheet attached hereto, and have found the data to be complete, current, and accurate:

[Signature]
 Basem Muallem
 DEPUTY DISTRICT DIRECTOR, RIGHT OF WAY

APPROVAL RECOMMENDED:

[Signature]
 Meadey Tim
 PROJECT MANAGER

APPROVAL RECOMMENDED:

[Signature]
 David Bricker
 DEPUTY DISTRICT DIRECTOR,
 ENVIRONMENTAL PLANNING

APPROVAL RECOMMENDED:

[Signature]
 GAM Christy Connors
 DEPUTY DISTRICT DIRECTOR, DESIGN

APPROVED:

[Signature] Raymond W. Wolfe, PhD
 DISTRICT DIRECTOR
 1/27/11
 DATE

This Project Report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

Michael Han 1/17/11
MICHAEL C. HAN DATE
REGISTERED CIVIL ENGINEER



CONCURRENCE:

Jon Bumps 1/20/11
JON BUMPS DATE
OFFICE CHIEF, DESIGN OVERSIGHT

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Attachment C – Approved PSR (Cover)
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Attachment N – Stage Construction Index Sheets
Attachment O – Life Cycle Cost Analysis Forms

1 INTRODUCTION

San Bernardino Associated Governments (SANBAG), in cooperation with the California Department of Transportation (Caltrans), the City of Loma Linda, and the City of San Bernardino, is proposing to reconstruct the Interstate 10 (I-10)/Tippecanoe Avenue interchange. This Project Report (PR) is prepared to address the needs of the interchange improvements. The project objectives are to reduce congestion at the ramp intersections, thereby providing adequate access to facilities served by the interchange, including the regional hospital, airport, residences and business facilities; and to improve merge/diverge operations and reduce the weave between the Waterman Avenue eastbound on-ramp and the Tippecanoe Avenue eastbound off-ramp. The project limits extend from the Anderson Street/Court Street intersection at the south to the Tippecanoe Avenue/Hospitality Lane-Coulston Street intersection at the north. The project limits on I-10 extend from 1,390 feet east of Waterman Avenue to 2,170 feet east of Tippecanoe Avenue. In addition, Redlands Boulevard would be improved approximately 450 feet west and 800 feet east of Anderson Street. A Project Location Map is included in Attachment A. The project has been assigned as Project Development Processing Category 3 because it is a modification of an existing interchange and local access, and requires revisions to the existing freeway agreements for the cities of Loma Linda and San Bernardino. A signed Category Determination Letter is included as Attachment B. The cost for the preferred alternative, Alternative 1, is estimated at approximately \$76,878,000, which includes \$32,482,000 for construction, \$33,442,000 for right of way acquisition and utility relocation, and \$10,954,000 for Plans, Specifications, and Estimate (PS&E), Right-of-Way, and Construction Management support costs. The program codes are 010.680 and 400.146 since the project will be funded by Federal funds and local measure matching funds, respectively. The project is scheduled to begin construction in fiscal year 2012/13.

Several Build Alternatives have been studied over the past nine years, and only Alternative 1 was found to be viable. The No Build Alternative is also being evaluated. The preferred alternative, Alternative 1, includes the following improvements:

- Widen the existing I-10/Tippecanoe Avenue Undercrossing (Bridge No. 54-0598) on the north side to accommodate the new westbound (WB) loop on-ramp.
- Add an eastbound (EB) auxiliary lane on I-10 from the Waterman Avenue EB on-ramp to the Tippecanoe Avenue EB off-ramp.
- Widen the existing I-10 bridge over San Timoteo Creek (Bridge No. 54-0599) to accommodate the EB auxiliary lane, and structurally retrofit the existing bridge supports.
- Add a WB loop on-ramp and reconfigure the WB off-ramp.
- Widen Tippecanoe Avenue/Anderson Street and Redlands Boulevard.
- Modify traffic signals at intersections along Tippecanoe Avenue/Anderson Street.
- Add a residential road connecting East Coulston Street, East Lee Street, and East Laurelwood Drive.
- Eliminate the South Ferree Street connection to East Rosewood Drive by providing a cul-de-sac at East Laurelwood Drive and South Ferree Street.

2 RECOMMENDATION

This PR recommends that the project be approved using the preferred alternative, Alternative 1, and that the project proceed to the final design phase. The cities of Loma Linda and San Bernardino have been consulted with respect to the preferred alternative, their views have been considered, and the local agencies are in general accord with the proposed project. After completion of the

public circulation of the Draft Environmental Document (DED) and consideration of all public review comments, the Project Development Team selected Alternative 1 as the preferred alternative on December 1, 2009. The preferred alternative was selected because it will meet the project purpose and need by improving operational deficiencies, increasing capacity at the interchange, and improving access to local businesses, residences, and major facilities served by the interchange. The preferred alternative will also accommodate future widening on I-10 for HOV lanes in both directions.

3 BACKGROUND

3.1 Project History

A Project Study Report (Project Development Support) [PSR (PDS)] was initiated by SANBAG to mitigate existing and projected capacity and operational deficiencies at the I-10/Tippecanoe Avenue interchange and adjacent local roads resulting from the increasing traffic demand generated by the accelerated growth and development in the cities of Loma Linda and San Bernardino. The PSR (PDS) recommended upgrading the I-10/Tippecanoe Avenue interchange with the addition of new ramps and widening of existing ramps. The PSR (PDS) also recommended adding through and turn lanes and increasing the distance between ramp intersections along Tippecanoe Avenue and Anderson Street to reduce congestion. A total of four alternatives were investigated during the PSR (PDS) phase, including the No Build alternative. After approval of the PSR (PDS) in August 2002, the Project Approval and Environmental Document (PA/ED) phase of project development was initiated by SANBAG in 2004. The approved PSR (PDS) cover sheet is included as Attachment C.

3.2 Community Interaction

A Project Development Team (PDT) was identified to ensure collaborative communication among the stakeholders which includes representatives from Caltrans, City of San Bernardino, City of Loma Linda, and Loma Linda University Medical Center. The representatives have actively participated in the engineering and environmental studies leading up to the development of this PR. On March 18, 2008, council members from the cities of San Bernardino and Loma Linda and the County of San Bernardino agreed with the proposed project geometrics.

A Notice of Intent to Adopt a Mitigated Negative Declaration and Availability of Initial Study/Environmental Assessment, Notice of Public Hearing was published on October 21, 2009. The Draft Initial Study/Environmental Assessment (IS/EA) was circulated for a 30-day public review period. The public hearing was held at Victoria Elementary School in the City of San Bernardino on November 5, 2009. Public comments received during the review period have been incorporated into the final environmental document (FED). Adjacent property owners have approached the cities and SANBAG and have had discussions with them regarding the proposed project and its impacts to potential access and right of way. There has been no contact from special interest groups. The needs of pedestrians, bicyclists, and physically-challenged individuals have been considered and accommodated during development of the proposed geometrics.

3.3 Existing Facility

I-10 serves as a major east-west freeway that originates at the junction with State Routes 1 and 2 in the city of Santa Monica in Los Angeles County and extends easterly through the Los Angeles metropolitan area and terminates at the east coast in the state of Florida. East of the junction with State Route 60, I-10 has been identified in the 1998 Interregional Transportation Strategic Plan as a

High Emphasis Route included in the Arizona Gateway Route. I-10 is also included in the State Freeway and Expressway System with the Federal Functional classifications of Rural Principal Arterial and extension of a Rural Principal Arterial into an urban area. I-10 is designated in the National Highway System, Department of Defense Rural Interstates and Single Routing in Urban Areas, and the Strategic Highway Corridor Network.

I-10 is a major corridor for interstate and interregional movement of people and goods and is one of the major commuter routes between Los Angeles and the Inland Empire (San Bernardino and Riverside Counties). In addition, the I-10 corridor is the major link between the rural areas in eastern Riverside County to the urban centers in the western part of San Bernardino County. It also serves the recreational traffic from Los Angeles and western San Bernardino and Riverside Counties to the resorts in the Coachella Valley, the Salton Sea area, and recreational facilities along the Colorado River.

Through the cities of Loma Linda and San Bernardino, I-10 is an eight-lane facility with four mixed flow lanes in each direction separated by a median 35 feet in width with concrete barrier. An existing auxiliary lane is provided along WB I-10 between Tippecanoe Avenue and Waterman Avenue. The average daily traffic volume (ADT) through the project area based on 2007 Caltrans historic data is approximately 212,000 vehicles. The existing EB and WB exits at the Tippecanoe Avenue interchange are single-lane off-ramps that open up to two and three lanes, respectively, at their intersections with Tippecanoe Avenue / Anderson Street.

Tippecanoe Avenue is a major north-south four-lane roadway in the city of San Bernardino. Per the city of San Bernardino Roadway Functional Classification, Tippecanoe Avenue is classified as a major arterial. Tippecanoe Avenue turns into Anderson Street south of I-10. Within the project limits, there are four major intersections which are signalized: Redlands Boulevard, EB ramps, WB ramps, and Harriman Place-Laurelwood Drive. The existing I-10/Tippecanoe Avenue interchange is a compact diamond (Type L-1) interchange with single-lane entrance and exit ramps. The existing intersection spacings between the WB ramps, EB ramps, and Redlands Boulevard are approximately 330 feet and 200 feet, respectively.

Anderson Street is a major north-south four-lane roadway with a two-way center turn lane or left-turn pockets from the I-10 freeway to Barton Road in the city of Loma Linda. The city of Loma Linda has designated this route as a truck route. Per the city of Loma Linda's Roadway Functional Classification, Anderson Street is classified as a major arterial. The city of Loma Linda recently modified the raised median on Anderson Street between the EB ramps and Redlands Boulevard to provide two through lanes and a right-turn pocket on NB Anderson Street.

Existing Structures

There are two existing bridge structures within the project limits. The I-10/San Timoteo Creek structure (Bridge No. 54-0599), built in 1962 and widened in 1990, consists of two spans and is approximately 187 feet in length. The superstructure consists of a reinforced concrete box girder at the original bridge and cast-in-place/prestressed concrete box girder at the widened bridge supported on reinforced concrete cantilever abutments and pier wall. The I-10/Tippecanoe Avenue Undercrossing (Bridge No. 54-0598), built in 1962 and widened in 1990, consists of three spans and is approximately 162 feet in length. The superstructure consists of reinforced concrete box girder at the original bridge and cast-in-place/prestressed concrete box girder at the widened bridge supported on reinforced concrete end diaphragm abutments and pier walls. Closure walls are included at the end spans.

4 NEED AND PURPOSE

4.1 Problem, Deficiencies, Justification

The purpose of the I-10/Tippecanoe Avenue Interchange Improvement project is to improve operational deficiencies and increase capacity at the interchange due to rapidly increasing traffic demand generated by the substantial growth and development that has occurred, and will continue to occur, in the cities of Loma Linda and San Bernardino. It is also designed to provide adequate access to local businesses, residences, and major facilities served by the interchange (e.g., Loma Linda University Medical Center, Loma Linda University, the Jerry Pettis Veterans Administration Hospital, San Bernardino International Trade Center, and the San Bernardino International Airport).

The objectives of the project are to:

- Reduce congestion at the ramp intersections, thereby providing adequate access to facilities served by the interchange, including the regional hospital, airport, and residences and business facilities; and
- Improve merge/diverge operations and reduce the weave between the Waterman Avenue EB on-ramp and the Tippecanoe Avenue EB off-ramp.

The interchange currently consists of three closely spaced intersections. These intersections include the WB I-10 ramps/Tippecanoe Avenue intersection, the EB I-10 ramps/Tippecanoe Avenue intersection, and the Anderson Street/Redlands Boulevard intersection. Traffic queuing spillover at these closely spaced intersections results in deficient operations. Without improvements, they would operate at inadequate levels of service (LOS) in both the AM and PM peak hours in 2035: WB I-10 ramps/Tippecanoe Avenue (LOS E), EB I-10 ramps/Tippecanoe Avenue (LOS F), and Anderson Street/Redlands Boulevard (LOS F).

Ramp accident data indicates that the actual rate of accidents on the WB on-ramp at Tippecanoe Avenue exceeds the average rates for similar type facilities. The primary collision factor was failure to yield.

In the existing and 2035 conditions, the peak demand on I-10 in the vicinity of Tippecanoe Avenue is in the eastbound direction during the PM peak hour. Demand volumes are projected to increase 50 percent in 2035 when compared to the existing condition. Heavy weaving occurs between the eastbound on-ramp at Waterman Avenue and the eastbound off-ramp at Tippecanoe Avenue in both the AM and PM peak hours.

Unless improvements are implemented at the I-10/Tippecanoe Avenue interchange, traffic congestion is expected to worsen over time, resulting in increased commuter delays and frustration, higher travel costs, and increased air pollution. In addition, inadequate LOS at local intersections are expected to increase demand on adjacent interchanges and the local street network as motorists seek less congested alternate routes. The elevated levels of traffic congestion exacerbate emergency vehicle access problems to Loma Linda University Medical Center.

4.2 Regional & System Planning

4.2.1 Identify System

I-10 is designated in the National Highway System, Department of Defense Rural Interstates and

Single Routing in Urban Areas, and the Strategic Highway Corridor Network. I-10 is also included in the State Freeway and Expressway System with the Federal Functional classifications of Rural Principal Arterial and extension of a Rural Principal Arterial into an urban area. Through the cities of Loma Linda and San Bernardino, I-10 is an eight-lane facility with four mixed flow lanes in each direction with a divided median.

4.2.2 State Planning

The proposed project is consistent with the I-10 Route Concept Fact Sheet, dated March 2000. The I-10 Route Concept Fact Sheet shows I-10 as an ultimate 10-lane facility with four mixed flow lanes and one HOV lane in each direction. As part of the I-10/Tippecanoe Avenue interchange improvements, the proposed bridge widenings at San Timoteo Creek and Tippecanoe Avenue, the proposed retaining wall locations, and ramp alignments have been designed to accommodate the future HOV lanes.

4.2.3 Regional Planning

The I-10/Tippecanoe Avenue Interchange Improvements project is included in the Southern California Association of Governments (SCAG) adopted 2008 Regional Transportation Plan (RTP) and currently adopted 2011 Federal Transportation Improvement Program (FTIP) as *"I-10 Tippecanoe Reconfigure Interchange & Add Eastbound Off Ramp Auxiliary Ln From Waterman On-Ramp To Tippecanoe Off-Ramp, Widen Bridge (Non-capacity), & Local Rd Imp/Mod (HP1366)"*. This project is also identified in the SANBAG 2007 Congestion Management Plan.

The adopted RTP and FTIP include a High Occupancy Vehicle (HOV) project through the project area, which would add one HOV lane in each direction along I-10 from west of Haven Avenue (PM 8.16) to Ford Street (PM 33.13). This HOV project is currently in the PA/ED phase (EA 0C2500, RTP ID #4H01001, FTIP ID 0C2500) and is scheduled to be constructed by 2018. The proposed I-10/Tippecanoe Avenue interchange improvements are consistent with the improvements proposed by the HOV project.

4.2.4 Local Planning

This proposed interchange improvement is located within the cities of Loma Linda and San Bernardino in San Bernardino County. This project is consistent with the City of Loma Linda General Plan which shows Anderson Street as a four-lane roadway between I-10 and Barton Road, and Redlands Boulevard as a four-lane roadway through the city. The project is also consistent with the City of San Bernardino General Plan which shows Tippecanoe Avenue as a six-lane roadway north of I-10. Both cities have identified in their Circulation Plan that the I-10/Tippecanoe Avenue interchange will be improved and I-10 will be improved to an ultimate 10-lane facility with HOV lanes.

The City of Loma Linda Master Plan of Bikeways identifies Anderson Street south of Court Street as a Class II bicycle facility. The project proposes to extend Class II bicycle facilities along Tippecanoe Avenue/Anderson Street within the project limits with the exception of (1) the northbound direction of Anderson Street south of Redlands Boulevard, and (2) the segment of Anderson Street between the EB ramps and Redlands Boulevard. Consistent with the City of Loma Linda Circulation Plan, the proposed improvements facilitate pedestrian travel by providing ADA-compliant sidewalks, access ramps and crosswalks throughout the project limits

Over the past several years, the former Norton Air Force Base was converted into San Bernardino International Trade Center and the San Bernardino International Airport. The Inland Valley

Development Agency (IVDA) was established with the intent to redevelop the former Norton Air Force Base properties and an additional 14,000 acres (ac) within a 3 mile radius of the base, including the I-10/Tippecanoe Avenue interchange vicinity in the cities of San Bernardino and Loma Linda. The city of San Bernardino has approved the San Bernardino International Trade Center Specific Plan, which identifies redevelopment for this area. In addition, the City of San Bernardino General Plan identifies appropriate land uses (commercial and industrial) within that airport influence area. Finally, the city of San Bernardino has established the area around the interchange as a San Bernardino Enterprise Zone; this designation allows tax and other incentives for business development in order to redevelop economically depressed areas. Because the interchange provides access to regional educational, hospital, trade, and airport areas and is located in a regional redevelopment area, it is important that the interchange accommodate the transportation needs associated with existing and planned development.

4.2.5 Transit Operator Planning

Omnitrans is the major regional Public Transit Operator for San Bernardino County. The proposed project improvements accommodate bus facilities served by Omnitrans along routes that include Tippecanoe Avenue/Anderson Street. A meeting was held on June 18, 2009 to discuss design consistency with the project team for the E Street Corridor sbX Bus Rapid Transit Project, which will utilize Tippecanoe Avenue/Anderson Street as part of the sbX corridor.

4.3 Traffic Volumes and Operational Analysis

A Traffic Operation Analysis (March 2008) was performed by SANBAG to study the existing traffic conditions (Year 2004), forecast future traffic demand (Year 2035), and assess the impact on traffic conditions of the proposed improvements. A Supplemental Traffic Operations Analysis (August 2009) was prepared to analyze updated existing conditions in 2009 and opening year in 2015. Detailed methodologies and analysis results can be referenced in the traffic report and subsequent supplement.

4.3.1 Current and Forecasted Traffic

Table 1 shows the 2009 AM and PM peak hour traffic volumes for the freeway mainline between the adjacent interchanges and the ramp volumes of the I-10/Tippecanoe Avenue interchange. The traffic counts were recorded for passenger cars, 2-axle trucks, 3-axle trucks, and 4-axle trucks. The trucks were factored into Passenger Car Equivalents (PCEs) that convert traffic volumes to an equivalent number of passenger cars based on the type of truck. The conversion factors for 2-axle, 3-axle, and 4-axle trucks were 1.5, 2, and 3, respectively.

Table 1: Existing Year 2009 Mainline and Ramp Volumes

Location	AM Peak Hour (PCE per hour)	PM Peak Hour (PCE per hour)
Eastbound		
Waterman Avenue On-Ramp	345	369
Freeway from Waterman Avenue On-Ramp to Tippecanoe Avenue Off-Ramp	8,497	8,251
Tippecanoe Avenue Off-Ramp	1,073	870
Freeway from Tippecanoe Avenue Off-Ramp to Tippecanoe Avenue On-Ramp	7,424	7,381

Location	AM Peak Hour (PCE per hour)	PM Peak Hour (PCE per hour)
Tippecanoe Avenue On-Ramp	273	775
Freeway from Tippecanoe Avenue On-Ramp to Mountain View Avenue Off-Ramp	7,697	8,156
Westbound		
Freeway from Mountain View Avenue On- Ramp to Tippecanoe Avenue Off-Ramp	7,319	7,328
Tippecanoe Avenue Off-Ramp	1,005	739
Freeway from Tippecanoe Avenue Off-Ramp to Tippecanoe Avenue On-Ramp	6,314	6,589
Tippecanoe Avenue On-Ramp	689	1,080
Freeway from Tippecanoe Avenue On-Ramp to Waterman Avenue Off-Ramp	7,003	7,669
Waterman Avenue Off-Ramp	728	735

2009 freeway segment volumes were developed from linear interpolation between 2007 Caltrans Traffic Counts and 2035 traffic volumes
 PCE = Passenger Car Equivalents

Tables 2 and 3 present the forecast volumes for the No Build and Alternative 1 conditions, respectively, in year 2015 (project opening year) based on the forecasts obtained from SCAG. Volumes for year 2015 were developed by interpolating between the 2009 and 2035 traffic volumes.

Table 2: Year 2015 Mainline and Ramp Volumes – No Build

Location	AM Peak Hour (PCE per hour)	PM Peak Hour (PCE per hour)
Eastbound		
Waterman Avenue On-Ramp	445	525
Freeway from Waterman Avenue On-Ramp to Tippecanoe Avenue Off-Ramp	9,026	9,591
Tippecanoe Avenue Off-Ramp	1,437	1,112
Freeway from Tippecanoe Avenue Off-Ramp to Tippecanoe Avenue On-Ramp	7,590	8,480
Tippecanoe Avenue On-Ramp	360	905
Freeway from Tippecanoe Avenue On-Ramp to Mountain View Avenue Off-Ramp	7,949	9,385
Westbound		
Freeway from Mountain View Avenue On- Ramp to Tippecanoe Avenue Off-Ramp	8,539	8,252
Tippecanoe Avenue Off-Ramp	1,108	821

Location	AM Peak Hour (PCE per hour)	PM Peak Hour (PCE per hour)
Freeway from Tippecanoe Avenue Off-Ramp to Tippecanoe Avenue On-Ramp	7,431	7,432
Tippecanoe Avenue On-Ramp	855	1,244
Freeway from Tippecanoe Avenue On-Ramp to Waterman Avenue Off-Ramp	8,286	8,676
Waterman Avenue Off-Ramp	836	865

2015 volumes were developed from linear interpolation between 2009 and 2035 traffic volumes

PCE = Passenger Car Equivalents

Table 3: Year 2015 Mainline and Ramp Volumes - Alternative 1

Location	AM Peak Hour (PCE per hour)	PM Peak Hour (PCE per hour)
Eastbound		
Waterman Avenue On-Ramp	445	525
Freeway from Waterman Avenue On-Ramp to Tippecanoe Avenue Off-Ramp	9,026	9,591
Tippecanoe Avenue Off-Ramp	1,437	1,112
Freeway from Tippecanoe Avenue Off-Ramp to Tippecanoe Avenue On-Ramp	7,590	8,480
Tippecanoe Avenue On-Ramp	360	905
Freeway from Tippecanoe Avenue On-Ramp to Mountain View Avenue Off-Ramp	7,949	9,385
Westbound		
Freeway from Mountain View Avenue On-Ramp to Tippecanoe Avenue Off-Ramp	8,539	8,252
Tippecanoe Avenue Off-Ramp	1,108	820
Freeway from Tippecanoe Avenue Off-Ramp to Tippecanoe Avenue Loop On-Ramp	7,431	7,432
Tippecanoe Avenue Loop On-Ramp	419	391
Freeway from Tippecanoe Avenue Loop On-Ramp to Tippecanoe Avenue On-Ramp	7,850	7,823
Tippecanoe Avenue On-Ramp	435	853
Freeway from Tippecanoe Avenue On-Ramp to Waterman Avenue Off-Ramp	8,285	8,676
Waterman Avenue Off-Ramp	836	865

2015 volumes were developed from linear interpolation between 2009 and 2035 traffic volumes

PCE = Passenger Car Equivalents

Tables 4 and 5 present the forecast volumes for the No Build and Alternative 1 conditions, respectively, in year 2035 based on the forecasts obtained from SCAG.

Table 4: Year 2035 Mainline and Ramp Volumes - No Build

Location	AM Peak Hour (PCE per hour)	PM Peak Hour (PCE per hour)
Eastbound		
Waterman Avenue On-Ramp	778	1046
Freeway from Waterman Avenue On-Ramp to Tippecanoe Avenue Off-Ramp	9,141	12,410
Tippecanoe Avenue Off-Ramp	2,650	1,917
Freeway from Tippecanoe Avenue Off-Ramp to Tippecanoe Avenue On-Ramp	6,491	10,493
Tippecanoe Avenue On-Ramp	648	1,340
Freeway from Tippecanoe Avenue On-Ramp to Mountain View Avenue Off-Ramp	7,139	11,833
Westbound		
Freeway from Mountain View Avenue On-Ramp to Tippecanoe Avenue Off-Ramp	10,952	9,682
Tippecanoe Avenue Off-Ramp	1,451	1,092
Freeway from Tippecanoe Avenue Off-Ramp to Tippecanoe Avenue On-Ramp	9,501	8,590
Tippecanoe Avenue On-Ramp	1,406	1,791
Freeway from Tippecanoe Avenue On-Ramp to Waterman Avenue Off-Ramp	10,907	10,381
Waterman Avenue Off-Ramp	1,194	1,296

PCE = Passenger Car Equivalents

Table 5: Year 2035 Mainline and Ramp Volumes - Alternative 1

Location	AM Peak Hour (PCE per hour)	PM Peak Hour (PCE per hour)
Eastbound		
Waterman Avenue On-Ramp	778	1046
Freeway from Waterman Avenue On-Ramp to Tippecanoe Avenue Off-Ramp	9,141	12,410
Tippecanoe Avenue Off-Ramp	2,650	1,917
Freeway from Tippecanoe Avenue Off-Ramp to Tippecanoe Avenue On-Ramp	6,491	10,493
Tippecanoe Avenue On-Ramp	648	1,340
Freeway from Tippecanoe Avenue On-Ramp to Mountain View Avenue Off-Ramp	7,139	11,833

Location	AM Peak Hour (PCE per hour)	PM Peak Hour (PCE per hour)
Westbound		
Freeway from Mountain View Avenue On-Ramp to Tippecanoe Avenue Off-Ramp	10,952	9,682
Tippecanoe Avenue Off-Ramp	1,451	1,092
Freeway from Tippecanoe Avenue Off-Ramp to Tippecanoe Avenue Loop On-Ramp	9,501	8,590
Tippecanoe Avenue Loop On-Ramp	769	722
Freeway from Tippecanoe Avenue Loop On-Ramp to Tippecanoe Avenue On-Ramp	10,270	9,312
Tippecanoe Avenue On-Ramp	637	1,069
Freeway from Tippecanoe Avenue On-Ramp to Waterman Avenue Off-Ramp	10,907	10,381
Waterman Avenue Off-Ramp	1,194	1,296

PCE = Passenger Car Equivalents

4.3.2 Intersection Level of Service Analysis

Table 6 shows the 2009, 2015, and 2035 volume-based LOS and average control delay in seconds per vehicle for the No Build condition resulting from Highway Capacity Manual (HCM) analyses at the intersections along Tippecanoe Avenue / Anderson Street and at the adjacent interchanges during the AM and PM peak hours.

Table 6: Intersection Levels of Service - No Build

Study Intersection	Existing (2009)				Opening Year (2015)				Future (2035)			
	AM		PM		AM		PM		AM		PM	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Tippecanoe Ave / Hospitality Ln-Coulston St	37.8	D	37.1	D	33.2	C	38.2	D	36.9	D	45.7	D
2. Tippecanoe Ave/ Laurelwood Dr-Harriman Pl	12.2	B	24.3	C	24.6	C	36.9	D	28.5	C	33.3	C
3. Tippecanoe Ave / WB Ramps	19.9	B	24.6	C	31.6	C	21.0	C	65.0	E	106.5	F
4. Tippecanoe Ave / EB Ramps	21.7	C	21.1	C	40.4	D	60.4	F	361.8	F	517.1	F
5. Anderson St / Redlands Blvd	23.1	C	30.6	C	29.1	C	50.3	D	199.0	F	367.6	F
6. Waterman Ave EB Off-Ramp / Redlands Blvd	20.8	C	24.2	C	20.8	C	25.2	C	21.7	C	32.3	C
7. Waterman Ave / Hospitality Ln	23.0	C	36.3	D	24.2	C	37.6	D	29.3	C	50.8	D
8. Waterman Ave / I-215 On-Ramp	10.5	B	22.5	C	11.3	B	28.4	D	18.4	C	127.0	F
9. Waterman Ave / EB Ramps	244.9	F	25.7	D	219.1	F	60.2	F	281.8	F	†	F
10. Waterman Ave / Redlands Blvd	27.8	C	41.9	D	31.3	C	63.2	F	55.7	E	220.2	F
11. Carnegie Dr-Hospitality Ln / WB Ramps	14.7	B	14.8	B	14.9	B	15.5	B	16.3	B	20.4	C
12. Mountain View Ave / WB Ramps	24.9	C	20.5	C	29.8	C	25.1	C	206.9	F	160.4	F
13. Mountain View Ave / EB Ramps	20.8	C	18.1	B	26.2	C	20.6	B	166.3	F	132.1	F

† Delay is greater than can be calculated by HCM methodologies.

The Tippecanoe Avenue/EB ramps intersection would operate at an unacceptable level of service in 2015. Further, in 2035 both the EB ramps and WB ramps intersection and the Tippecanoe Avenue/Redlands Boulevard intersection would operate at LOS E or F.

Table 7 shows the 2015 and 2035 volume-based LOS and average control delay in seconds per vehicle for the Alternative 1 condition.

Table 7: Intersection Levels of Service – Alternative 1

Study Intersection	Opening Year (2015)				Future (2035)			
	AM		PM		AM		PM	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Tippecanoe Ave / Hospitality Ln-Coulston St	23.4	C	35.9	D	34.3	C	41.3	D
2. Tippecanoe Ave/ Harriman Pl- WB Off-Ramp	20.0	B	26.5	C	29.7	C	34.9	C
3. Tippecanoe Ave / WB On-Ramp	N/A*		N/A*		N/A*		N/A*	
4. Tippecanoe Ave / EB Ramps	14.6	B	18.4	B	33.8	D	34.0	C
5. Anderson St / Redlands Blvd	21.7	C	29.1	C	31.0	C	45.9	D
6. Waterman Ave EB Off-Ramp / Redlands Blvd	20.8	C	25.2	C	21.7	C	32.3	C
7. Waterman Ave / Hospitality Ln	24.2	C	37.6	D	29.3	C	50.8	D
8. Waterman Ave / I-215 On-Ramp	11.3	B	28.4	D	18.4	C	127.0	F
9. Waterman Ave / EB Ramps	219.1	F	60.2	F	281.8	F	†	F
10. Waterman Ave / Redlands Blvd	31.3	C	63.2	F	55.7	E	220.2	F
11. Carnegie Dr-Hospitality Ln / WB Ramps	14.9	B	15.5	B	16.3	B	20.4	C
12. Mountain View Ave / WB Ramps	29.8	C	25.1	C	206.9	F	160.4	F
13. Mountain View Ave / EB Ramps	26.2	C	20.6	B	166.3	F	132.1	F

* There are no conflicting movements and the location is no longer a controlled intersection

† Delay is greater than can be calculated by HCM methodologies.

Although LOS calculations indicate that intersections along Tippecanoe Avenue/Anderson Street currently operate at satisfactory LOS, field observations indicated that they operate at LOS F in the PM peak hour. SANBAG's estimate of average queue delay for the Tippecanoe Avenue/EB ramps intersection is 90 seconds per vehicle in the PM peak hour (LOS F) based on queue counts conducted in June 2008. Inefficiencies caused by queue spillover at closely spaced intersections inhibit throughput at upstream locations and make volume-based calculation of the LOS appear to be better than what actually exists. Therefore, a queuing analysis was conducted as part of the Supplemental Traffic Operations Analysis to further analyze the 2009, 2015 No Build, and 2015 Alternative 1 conditions. The queuing analysis results are summarized in Table 8 and Table 9 for the No Build and Alternative 1 conditions, respectively. The results indicate that the available storage lengths proposed in Alternative 1 accommodate the 95th percentile queue lengths in 2015 at all intersections within the project limits of improvement.

Table 8: Queue Lengths (95th Percentile) – No Build

Study Intersection	Available Storage (feet per lane)	Existing (2009) (feet per lane)		Opening Year (2015) (feet per lane)	
		AM	PM	AM	PM
1. Tippecanoe Ave / Hospitality Ln-Coulston St					
<i>Eastbound Left Turn</i>	210	47	249	84	294
<i>Eastbound Through</i>	950	56	256	85	307
<i>Eastbound Right Turn</i>	590	30	80	52	155
<i>Westbound Left Turn</i>	100	81	92	89	156
<i>Westbound Through</i>	1240	60	66	104	110
<i>Northbound Left Turn</i>	250	188	153	228	196
<i>Northbound Through</i>	810	176	142	235	271
<i>Southbound Left Turn</i>	110	35	66	49	90
<i>Southbound Through</i>	670	110	307	191	391
2. Tippecanoe Ave / Laurelwood Dr-Harriman Pl					
<i>Eastbound Left Turn</i>	250	32	207	75	268
<i>Eastbound Through</i>	925	8	32	10	42
<i>Eastbound Right Turn</i>	200	15	101	28	163
<i>Westbound Left Turn</i>	100	31	32	42	43
<i>Westbound Through</i>	1225	10	21	13	26
<i>Northbound Left Turn</i>	200	43	283	144	403
<i>Northbound Through</i>	539	82	217	305	310
<i>Southbound Left Turn</i>	200	4	19	6	27
<i>Southbound Through</i>	810	106	237	191	397
3. Tippecanoe Ave / WB Ramps					
<i>Westbound Left Turn</i>	150	211	154	332	274
<i>Westbound Right Turn</i>	150	169	85	272	161
<i>Northbound Left Turn</i>	260	18	112	235	190
<i>Northbound Through</i>	341	185	172	186	3
<i>Southbound Right Turn</i>	520	228	320	196	185
<i>Southbound Through</i>	539	72	189	114	135
4. Tippecanoe Ave / EB Ramps					
<i>Eastbound Left Turn</i>	991	422	374	786	589
<i>Eastbound Right Turn</i>	991	367	254	704	611
<i>Northbound Through</i>	300	103	112	407	276
<i>Southbound Left Turn</i>	261	16	40	173	625
<i>Southbound Through</i>	341	256	40	248	91
5. Anderson St / Redlands Blvd					
<i>Eastbound Left Turn</i>	150	47	166	123	253
<i>Eastbound Through</i>	5190	116	283	165	420
<i>Westbound Left Turn</i>	300	81	142	168	222
<i>Westbound Through</i>	2560	145	217	167	394
<i>Northbound Left Turn</i>	150	188	69	35	61
<i>Northbound Through</i>	440	129	148	265	323
<i>Southbound Left Turn</i>	210	35	183	91	324
<i>Southbound Through</i>	300	333	301	246	353

Study Intersection	Available Storage (feet per lane)	Existing (2009) (feet per lane)		Opening Year (2015) (feet per lane)	
		AM	PM	AM	PM
6. Waterman Ave EB Off-Ramp / Redlands Blvd					
<i>Eastbound Through</i>	585	136	216	136	227
<i>Westbound Left Turn</i>	172	65	81	59	76
<i>Westbound Through</i>	755	92	148	91	149
<i>Northbound Right Turn</i>	220	0	0	0	0
<i>Southbound Left Turn</i>	305	323	325	330	342
<i>Southbound Through</i>	1009	211	339	351	359
<i>Southbound Right Turn</i>	100	95	198	242	172
7. Waterman Ave / Hospitality Ln					
<i>Eastbound Left Turn</i>	150	115	177	139	226
<i>Eastbound Through</i>	960	123	415	114	350
<i>Eastbound Right Turn</i>	170	62	277	89	353
<i>Westbound Left Turn</i>	220	114	217	119	208
<i>Westbound Through</i>	1074	190	219	198	207
<i>Northbound Left Turn</i>	188	124	133	154	171
<i>Northbound Through</i>	1009	252	235	267	339
<i>Northbound Right Turn</i>	290	24	88	23	97
<i>Southbound Left Turn</i>	130	90	236	108	237
<i>Southbound Through</i>	960	106	259	138	282
<i>Southbound Right Turn</i>	228	47	86	78	101
8. Waterman Ave / I-215 On-Ramp					
<i>Northbound Left Turn</i>	300	30	113	34	142
9. Waterman Avenue/I-10 EB Ramps					
<i>Westbound Right Turn</i>	700	1446	210	1272	369
10. Waterman Ave / Redlands Blvd					
<i>Eastbound Left Turn</i>	408	132	170	140	220
<i>Eastbound Through</i>	755	156	250	180	334
<i>Westbound Left Turn</i>	125	171	276	202	377
<i>Westbound Through</i>	5190	69	141	71	259
<i>Northbound Left Turn</i>	165	91	142	79	126
<i>Northbound Through</i>	465	315	426	365	496
<i>Northbound Right Turn</i>	85	65	59	71	68
<i>Southbound Left Turn</i>	175	128	289	117	307
<i>Southbound Through</i>	1009	171	289	177	301

Study Intersection	Available Storage (feet per lane)	Existing (2009) (feet per lane)		Opening Year (2015) (feet per lane)	
		AM	PM	AM	PM
11. Carnegie Dr-Hospitality Ln / WB Ramps					
<i>Eastbound Left Turn</i>	100	185	80	193	86
<i>Eastbound Through</i>	1074	129	192	98	214
<i>Eastbound Right Turn</i>	250	39	102	40	125
<i>Westbound Left Turn</i>	296	28	99	29	109
<i>Westbound Through</i>	530	50	111	30	123
<i>Northbound Left Turn</i>	600	147	122	162	150
<i>Northbound Through</i>	1530	98	52	44	61
<i>Northbound Right Turn</i>	203	15	19	16	21
<i>Southbound Left Turn</i>	122	12	34	14	39
<i>Southbound Through</i>	640	20	124	7	152
<i>Southbound Right Turn</i>	122	14	20	15	22
12. Mountain View Ave / WB Ramps					
<i>Westbound Left Turn</i>	1470	277	173	433	262
<i>Westbound Right Turn</i>	70	65	40	116	96
<i>Northbound Left Turn</i>	100	190	72	212	129
<i>Northbound Through</i>	240	171	64	208	128
<i>Southbound Through</i>	420	124	170	237	262
13. Mountain View Ave / EB Ramps					
<i>Eastbound Left Turn</i>	1620	116	117	144	127
<i>Eastbound Right Turn</i>	132	291	65	460	75
<i>Northbound Through</i>	410	237	243	308	353
<i>Southbound Left Turn</i>	100	82	78	138	108
<i>Southbound Through</i>	240	61	61	24	64

Table 9: Queue Lengths (95th Percentile) – Alternative 1

Study Intersection	Available Storage (feet per lane)	Opening Year (2015) (feet per lane)	
		AM	PM
1. Tippecanoe Ave / Hospitality Ln-Coulston St			
<i>Eastbound Left Turn</i>	210	76	266
<i>Eastbound Through</i>	950	77	276
<i>Eastbound Right Turn</i>	590	47	101
<i>Westbound Left Turn</i>	100	101	170
<i>Westbound Through</i>	1240	89	85
<i>Northbound Left Turn</i>	250	111	164
<i>Northbound Through</i>	810	118	157
<i>Southbound Left Turn</i>	110	50	98
<i>Southbound Through</i>	670	180	335

Study Intersection	Available Storage (feet per lane)	Opening Year (2015) (feet per lane)	
		AM	PM
2. Tippecanoe Ave / Harriman PI-WB Ramps			
<i>Eastbound Left Turn</i>	260	71	251
<i>Eastbound Right Turn</i>	500	57	139
<i>Westbound Left Turn</i>	330	197	105
<i>Westbound Through</i>	1225	136	317
<i>Westbound Right Turn</i>	330	132	135
<i>Northbound Left Turn</i>	220	77	202
<i>Northbound Through</i>	539	120	19
<i>Northbound Right Turn</i>	500	42	3
<i>Southbound Through</i>	810	60	97
<i>Southbound Right Turn</i>	500	1	1
3. Tippecanoe Ave / EB Ramps			
<i>Eastbound Left Turn</i>	500	260	216
<i>Eastbound Right Turn</i>	500	176	142
<i>Northbound Through</i>	300	84	143
<i>Northbound Right Turn</i>	100	1	8
<i>Southbound Left Turn</i>	261	72	193
<i>Southbound Through</i>	550	175	77
4. Anderson St / Redlands Blvd			
<i>Eastbound Left Turn</i>	300	44	82
<i>Eastbound Through</i>	5190	90	248
<i>Eastbound Right Turn</i>	300	80	36
<i>Westbound Left Turn</i>	225	62	88
<i>Westbound Through</i>	2560	111	185
<i>Westbound Right Turn</i>	340	67	105
<i>Northbound Left Turn</i>	240	39	47
<i>Northbound Through</i>	440	182	213
<i>Northbound Right Turn</i>	400	22	27
<i>Southbound Left Turn</i>	220	118	164
<i>Southbound Through</i>	300	176	220
<i>Southbound Right Turn</i>	200	12	47
5. Waterman Ave EB Off-Ramp / Redlands Blvd			
<i>Eastbound Through</i>	585	136	227
<i>Westbound Left Turn</i>	172	59	76
<i>Westbound Through</i>	755	91	149
<i>Northbound Right Turn</i>	220	0	0
<i>Southbound Left Turn</i>	305	330	342
<i>Southbound Through</i>	1009	351	359
<i>Southbound Right Turn</i>	100	242	172

Study Intersection	Available Storage (feet per lane)	Opening Year (2015) (feet per lane)	
		AM	PM
6. Waterman Ave / Hospitality Ln			
<i>Eastbound Left Turn</i>	150	139	226
<i>Eastbound Through</i>	960	114	350
<i>Eastbound Right Turn</i>	170	89	353
<i>Westbound Left Turn</i>	220	119	208
<i>Westbound Through</i>	1074	198	207
<i>Northbound Left Turn</i>	188	154	171
<i>Northbound Through</i>	1009	267	339
<i>Northbound Right Turn</i>	290	23	97
<i>Southbound Left Turn</i>	130	108	237
<i>Southbound Through</i>	960	138	282
<i>Southbound Right Turn</i>	226	78	101
7. Waterman Ave / I-215 On-Ramp			
<i>Northbound Left Turn</i>	300	34	142
8. Waterman Ave / I-10 EB Ramps			
<i>Westbound Right Turn</i>	700	1272	369
9. Waterman Ave / Redlands Blvd			
<i>Eastbound Left Turn</i>	408	140	220
<i>Eastbound Through</i>	755	180	334
<i>Westbound Left Turn</i>	125	202	377
<i>Westbound Through</i>	5190	71	259
<i>Northbound Left Turn</i>	165	79	126
<i>Northbound Through</i>	465	365	496
<i>Northbound Right Turn</i>	85	71	68
<i>Southbound Left Turn</i>	175	192	307
<i>Southbound Through</i>	1009	177	301
10. Carnegie Dr-Hospitality Ln / WB Ramps			
<i>Eastbound Left Turn</i>	100	193	86
<i>Eastbound Through</i>	1074	96	214
<i>Eastbound Right Turn</i>	250	0	125
<i>Westbound Left Turn</i>	296	15	109
<i>Westbound Through</i>	530	30	123
<i>Northbound Left Turn</i>	600	81	160
<i>Northbound Through</i>	1530	44	61
<i>Northbound Right Turn</i>	203	0	21
<i>Southbound Left Turn</i>	122	3	39
<i>Southbound Through</i>	640	7	152
<i>Southbound Right Turn</i>	122	0	22

Study Intersection	Available Storage (feet per lane)	Opening Year (2015) (feet per lane)	
		AM	PM
11. Mountain View Ave / WB Ramps			
<i>Westbound Left Turn</i>	1470	433	262
<i>Westbound Right Turn</i>	70	116	96
<i>Northbound Left Turn</i>	100	212	129
<i>Northbound Through</i>	240	208	128
<i>Southbound Through</i>	420	237	262
12. Mountain View Ave / EB Ramps			
<i>Eastbound Left Turn</i>	1620	144	127
<i>Eastbound Right Turn</i>	132	460	75
<i>Northbound Through</i>	410	308	353
<i>Southbound Left Turn</i>	100	138	108
<i>Southbound Through</i>	240	24	64

4.4 Accident Analysis

Traffic Accident Surveillance and Analysis System (TASAS)-Transportation System Network (TSN) data were provided by Caltrans District 8, which includes accidents that occurred during the three-year period from July 1, 2005 to June 30, 2008 on I-10 from PM 24.8 to 27.5 and the Tippecanoe Avenue interchange ramps.

Table 10: TASAS-TSN Accident Rates

Location	Actual			Average		
	Fatal	F+I	Total	Fatal	F+I	Total
Eastbound						
Mainline (PM 24.8 to 27.5)	0.003	0.38	1.13	0.005	0.34	1.10
Tippecanoe Avenue EB Off-Ramp (PM 26.03)	0.000	0.23	1.10	0.005	0.61	1.50
Tippecanoe Avenue EB On-Ramp (PM 26.53)	0.000	0.17	0.69	0.002	0.32	0.80
Westbound						
Mainline (PM 24.8 to 27.5)	0.006	0.32	0.77	0.005	0.34	1.10
Tippecanoe Avenue WB On-Ramp (PM 26.02)	0.000	0.80	1.86	0.002	0.32	0.80
Tippecanoe Avenue WB Off-Ramp (PM 26.51)	0.000	0.21	1.23	0.005	0.61	1.50

F+I = Fatal+Injury

Accident rates for mainline expressed as: number of accidents/million vehicle miles

Accident rates for ramps expressed as: number of accidents/million vehicles

As shown in Table 10, the accident data indicates that accidents occurred at a lower rate than the statewide average for similar facilities on the EB ramps, WB off-ramp, and the WB mainline, while accidents occurred at a higher rate on the EB mainline and the WB on-ramp. In particular, the accident rate is more than twice the statewide average rate on the WB on-ramp. Analysis of the TASAS-TSN data for the WB on-ramp shows that most of the accidents were broadside collisions, and failure to yield was the primary collision factor for most accidents. The majority of accidents on the WB on-ramp occurred near the ramp terminus, where the SB and northbound (NB) Tippecanoe Avenue turning movements onto the on-ramp may conflict. It is anticipated that the project would reduce the accident rate on the existing WB on-ramp since a new WB loop on-ramp would be constructed for NB Tippecanoe Avenue vehicles, which would eliminate the conflict at the existing WB on-ramp. It is also anticipated that the proposed project would reduce the accident rate on the EB mainline as a result of the proposed addition of an EB auxiliary lane between Waterman Avenue and Tippecanoe Avenue.

5 ALTERNATIVES

5.1 Viable Alternatives

5.1.1 No Build Alternative

The "No Build" Alternative proposes to maintain the existing configuration. This alternative would not accommodate the anticipated growth in the area or alleviate traffic congestion. The interchange is currently operating at an unacceptable LOS and traffic congestion would continue to worsen through the design year 2035.

5.1.2 Alternative 1 - Preferred Alternative

The preferred alternative, Alternative 1, proposes to modify the existing tight diamond configuration to a partial cloverleaf interchange for the north half of the interchange. Alternative 1 includes the following improvements:

- Add an EB auxiliary lane on I-10 from the Waterman Avenue EB on-ramp to the Tippecanoe Avenue EB off-ramp.
- Widen the existing I-10 bridge structure over San Timoteo Creek to accommodate the EB auxiliary lane. This would require retrofits to the bridge abutments and extension of the pier wall within San Timoteo Creek.
- Widen the Tippecanoe Avenue EB off-ramp by providing an additional left-turn lane and right-turn lane at the ramp intersection.
- Reconfigure the WB off-ramp from a tight diamond to a partial cloverleaf configuration, increasing the intersection spacing over 400 feet. The ramp intersection would align with the existing Harriman Place/Tippecanoe Avenue intersection.
- Add a Tippecanoe Avenue WB loop on-ramp. Addition of this ramp would allow for the removal of the existing left-turn lane for traffic heading northbound on Tippecanoe Avenue to access WB I-10. This would provide the room needed to add double left-turn lanes for southbound traffic on Tippecanoe Avenue onto the EB on-ramp and eastbound Redlands Boulevard.
- Widen the existing I-10 bridge structure over Tippecanoe Avenue in the WB direction to accommodate the WB loop on-ramp.
- Widen Tippecanoe Avenue from I-10 to just north of East Lee Street to provide lane taper length.

- Widen Anderson Street from I-10 to south of Court Street to accommodate additional turn lanes at the Anderson Street/EB ramps intersection and Anderson Street/Redlands Boulevard intersection.
- Widen Redlands Boulevard to accommodate a six-lane facility with dual left-turn lanes, striped medians, and sidewalks between approximately 450 feet west and 800 feet east of the intersection at Anderson Street.
- Modify and interconnect traffic signals at the intersection of Anderson Street and Redlands Boulevard; the intersection of Anderson Street and the EB on- and off-ramps; and the intersection of Tippecanoe Avenue and the WB on- and off-ramps/Harriman Place.
- Add a residential road connecting East Coulston Street, East Lee Street, and East Laurelwood Drive.
- Eliminate the South Ferree Street connection to East Rosewood Drive by providing a cul-de-sac at East Laurelwood Drive and South Ferree Street.
- Relocate wet and dry utility facilities to accommodate street widening and realignment.
- Provide a Class II bicycle lane within the project limits, with the exception of (1) the northbound direction of Anderson Street south of Redlands Boulevard, and (2) the segment of Anderson Street between the eastbound ramps and Redlands Boulevard, where 5 ft outside shoulders would be provided.

A rigid pavement section of 1.25' Jointed Plain Concrete Pavement (JPCP) over 0.10' Hot Mixed Asphalt (HMA) Bond Breaker over 0.50' Lean Concrete Base (LCB) over 0.70' Aggregate Subbase (AS) is proposed for the eastbound I-10 mainline widening and portions of the westbound I-10 mainline along ramp gore areas. A flexible pavement section of 0.20' Rubberized Hot Mixed Asphalt (RHMA) over 0.80' HMA over 0.50' Aggregate Base (AB) is proposed for the I-10 ramps and Tippecanoe Avenue. The pavement sections will be reviewed and finalized during the PS&E phase of the project.

Geometric drawings including Typical Cross Sections, Layouts, and Profiles are included in Attachment D. The Advance Planning Studies (APS) for the I-10/Tippecanoe Avenue Undercrossing and the I-10/San Timoteo Creek structure are included as Attachment E.

5.1.2.1 Nonstandard Mandatory and Advisory Design Features

Exceptions to advisory and mandatory design standards are required for this project. Fact Sheets for the following nonstandard mandatory and advisory design exceptions have been reviewed and approved by Caltrans:

Mandatory Design Exceptions

Design Exception Feature #1 – Stopping Sight Distance: Index 201.1 of the Highway Design Manual (HDM) states that Table 201.1 shows the standards for stopping sight distance related to design speed, and these shall be the minimum values used in design.

Nonstandard stopping sight distance is present on the mainline from Sta. 223+17.79 to Sta. 234+67.79. Based on the 80 mph design speed for the freeway, the standard stopping sight distance is 930 feet. However, the existing vertical crest curve on the freeway at this location provides a stopping sight distance of only 583 feet.

Design Exception Feature #2 – Superelevation Rates: Index 202.2 of the HDM states that maximum superelevation rates for various highway conditions are shown on Table 202.2. Based on

an e_{max} selected by the designer for one of the conditions, superelevation rates from Table 202.2 shall be used within the given range of curve radii. If less than standard superelevation rates are approved, Figure 202.2 shall be used to determine superelevation based on the curve radius and maximum comfortable speed.

Nonstandard superelevation rate is proposed at Tippecanoe Avenue WB off-ramp, "R-3" Line, from Sta. 30+28.93 to Sta. 32+15.49. Based on the curve radius of 335 feet, the standard superelevation rate is 12%. However, the proposed superelevation rate for this curve is 10%.

Design Exception Feature #3 – Corner Sight Distance: Index 405.1(2)(b) of the HDM states that at signalized intersections the values for corner sight distances given in Table 405.1A should be applied whenever possible. Where restrictive conditions exist, similar to those listed in Index 405.1(2)(a), the minimum value for corner sight distance at both signalized and unsignalized intersections shall be equal to the stopping sight distance as given in Table 201.1, measured as previously described.

Due to the proposed retaining wall, the driver from the inside left turn lane on the EB off-ramp at Tippecanoe Avenue, "R-1" Line, with a setback distance of 10 feet from the major road edge of shoulder, is allowed a sight line to approaching southbound vehicles on Tippecanoe Avenue with a Stopping Sight Distance of about 127 feet, while the inside right turn lane provides a Stopping Sight Distance of about 177 feet. This is less than the standard stopping sight distance of 360 feet based on a design speed of 45 mph.

Design Exception Feature #4 – Lane Width: Index 405.2(2)(a) of the HDM states that the lane width for both single and double left-turn lanes on State highways shall be 12 feet.

Nonstandard left-turn lane widths are proposed at the following locations along southbound Tippecanoe Avenue and Anderson Street:

Description	Station Limits		Standard Width (feet)	Proposed Width (feet)
	From	To		
Inside Southbound Left-Turn Lane to EB On-Ramp	"T" 228+25	"T" 231+50	12	11
Both Southbound Left-Turn Lanes to Redlands Blvd	"T" 224+04	"T" 225+70	12	11

Design Exception Feature #5 – Location and Design of Ramp Intersections on the Crossroads: Index 504.3(3) of the HDM states that for new construction or major reconstruction of interchanges, the minimum distance (curb return to curb return) between ramp intersections and local road intersections shall be 400 feet.

The distance between the Tippecanoe Avenue/EB ramps intersection and the Anderson Street/Redlands Boulevard intersection is about 166 feet and 167 feet (curb return to curb return) for NB and SB directions, respectively.

The distance between the Tippecanoe Avenue/WB ramps intersection and the Tippecanoe Avenue/East Lee Street intersection is about 238 feet (curb return to curb return).

Design Exception Feature #6 – Cross Slope: Index 301.2(a) of the HDM states that the standard cross slope to be used for new construction on the traveled way for all types of surfaces shall be 2%.

The proposed cross-slope of the EB mainline widening in the tangent section between Waterman Avenue and Tippecanoe Avenue is 3% in order to improve drainage flow off the traveled way.

Advisory Design Exceptions

Design Exception Feature #1 – Superelevation Transition: Index 202.5(1) of the HDM states that a superelevation transition should be designed in accordance with the diagram and tabular data shown in Figure 202.5A to satisfy the requirements of safety, comfort, and pleasing appearance.

Nonstandard superelevation transitions are proposed at the following locations:

Description	Station Limits		Standard Runoff Length (feet)	Proposed Runoff Length (feet)
	From	To		
WB Off-Ramp	"R-3" 29+50.92	"R-3" 31+20.00	240.00	169.08
WB Loop On-Ramp	"R-4" 39+40.00	"R-4" 41+44.05	300.00	204.05

Design Exception Feature #2 – Superelevation Runoff: Index 202.5(2) of the HDM states that two-thirds of the superelevation runoff should be on the tangent and one-third within the curve.

Nonstandard superelevation runoffs are proposed at the following locations:

Description	Station Limits		Standard Runoff Length (feet)	Proposed Runoff Length (feet)
	From	To		
WB Off-Ramp	"R-3" 29+50.92	"R-3" 31+20.00	160.00 - 80.00	78.01 - 91.07
WB Loop On-Ramp	"R-4" 39+40.00	"R-4" 41+44.05	136.00 - 68.00	65.00 - 139.05

Design Exception Feature #3 – Vertical Curves: Index 204.4 of the HDM states that for algebraic grade differences of 2 percent and greater, and design speeds equal to or greater than 40 miles per hour, the minimum length of vertical curve in feet should be equal to 10V, where V = design speed.

Nonstandard minimum vertical curve lengths are proposed at the following locations:

Description	Station Limits		Standard VC Length (feet)	Proposed VC Length (feet)
	From	To		
I-10	"A" 214+64.78	"A" 218+64.78	800	400
I-10	"A" 237+44.50	"A" 241+44.50	800	400

Design Exception Feature #4 – Side Slope Standards: Index 304.1 of the HDM states that slopes should be designed as flat as is reasonable. For new construction, widening, or where slopes are otherwise being modified, embankment (fill) slopes should be 4:1 or flatter.

The proposed WB loop on-ramp does not provide the standard Side Slope Rate 4:1 or flatter starting at the ramp merge with the WB mainline to the areas adjacent to the Tippecanoe Avenue Undercrossing. The ramp side slope rates from station "A" 218+00 to station "A" 230+00 will be approximately 2:1.

Design Exception Feature #5 – Angle of Intersection: Index 403.3 of the HDM states that a right angle intersection provides the most favorable conditions for intersecting and turning traffic movements. When a right angle cannot be provided due to physical constraints, the interior angle should be designed as close to 90 degrees as is practical, but should not be less than 75 degrees. Mitigation should be considered for the affected intersection design features.

The existing EB on-ramp does not provide the standard intersection angle. The existing intersection angle between EB on-ramp alignment and Tippecanoe Avenue alignment is about 70 degrees.

Design Exception Feature #6 – Distance Between Successive On-Ramps: Index 504.3(9) of the HDM states that the minimum distance between two successive on-ramps to a freeway lane should be the distance needed to provide the standard on-ramp acceleration taper shown on Figure 504.2A. This distance should be about 1,000 feet unless the upstream ramp adds an auxiliary lane in which case the downstream ramp should merge with the auxiliary lane in a standard 50:1 (longitudinal to lateral) convergence.

A nonstandard distance, 840 feet, would exist between the proposed WB loop on-ramp, "R-4" Line, and the existing WB on-ramp. After the ultimate widening of the mainline is implemented, the merge point for the WB loop-on ramp, "R-4" Line, would move further to the east thus providing the standard 1,000 feet distance between the successive on-ramps.

Design Exception Feature #7 – Weaving Sections: Index 504.7 of the HDM states that weaving sections in urban areas should be designed for LOS C or D. Weaving sections in rural areas should be designed for LOS B or C.

The proposed project does not provide the Level of Service (LOS) C or D, as required by the HDM, during Year 2035 PM peak period for the weaving section between Waterman Avenue EB on-ramp and Tippecanoe Avenue EB off-ramp. Traffic analysis shows LOS E during this period.

Design Exception Feature #8 – Access Control: Index 504.8 of the HDM states that for new construction or major reconstruction, access rights should be acquired on the opposite side of the local road from ramp terminals to preclude the construction of future driveways or local roads within the ramp intersection.

Access rights cannot be acquired on the opposite side of the WB off-ramp and WB loop on-ramp at Tippecanoe Avenue. The ramps begin and end at the Harriman Place/Tippecanoe Avenue intersection.

Index 504.8 of the HDM states that for new construction, access control should extend 100 feet beyond the end of the curb return or ramp radius in urban areas and 300 feet in rural areas, or as far as necessary to ensure that entry onto the facility does not impair operational characteristics.

At the southeast quadrant of the existing EB on-ramp terminus, the overall length of access control is 169.65 feet. However, at 88 feet away from the curb return a break for the driveway entrance to Baker's Burgers is maintained. The 100 foot access control was obtained at the other three quadrants of the ramp terminus.

Design Exception Feature #9 - Superelevation of Compound Curves: Index 202.6 of the Highway Design Manual (HDM) states that Superelevation of compound curves should follow the procedure as shown in Figure 206.6. Where feasible, the criteria in Index 202.5 should apply.

A nonstandard superelevation transition is proposed for the compound horizontal curve on the westbound loop on-ramp ("R-4" Line).

5.1.2.2 Interim Features

There are no proposed interim improvements within the project limits.

5.1.2.3 High Occupancy Vehicle (HOV) Lanes

An HOV preferential lane would be included as part of Alternative 1 on the proposed WB loop on-ramp.

5.1.2.4 Ramp Metering

Ramp metering is currently provided on the existing I-10 WB and EB on-ramps. The proposed WB loop on-ramp in Alternative 1 would provide the necessary geometry to accommodate ramp metering with an HOV bypass lane.

5.1.2.5 California Highway Patrol (CHP) Enforcement Areas

A CHP enforcement area is proposed on the WB loop on-ramp in conformance with Caltrans Highway Design Manual.

5.1.2.6 Park and Ride Facilities

There is no existing Park and Ride Facility located within the project limits, and none are proposed as part of Alternative 1. The Omnitrans E Street Corridor sbX Bus Rapid Transit Project includes a new Park and Ride facility at the west side of Anderson Street north of San Timoteo Creek.

5.1.2.7 Utilities

Preliminary utility verification research and mapping have been completed. Facilities owned by the following utility companies have been identified within the project limits, including overhead and underground lines:

- Southern California Edison Transmission and Distribution
- The Gas Company
- Verizon
- Time Warner Cable
- Sprint
- Golden State for Time Warner Telecommunication
- City of Loma Linda

- City of San Bernardino Water and Sewer
- The Gage Canal Company
- Loma Linda University Medical Center

Formal notices will be provided to affected utility owners indicating the need to pothole, protect, and/or relocate their utility facilities to accommodate the proposed project. The affected utility owners will then enter into a Utility Agreement concerning the work to be performed on the affected utility facility.

This project will environmentally clear all utility relocation work needed to construct the proposed improvements.

A utility information sheet for Alternative 1 has been prepared and included with the Right-of-Way Data Sheet in Attachment F. Preliminary mapping of existing utilities is included in Attachment G.

5.1.2.8 Railroad Involvement

There is no railroad involvement on this project.

5.1.2.9 Highway Planting

The proposed interchange improvements would require the removal of existing vegetation and the installation of new highway planting and irrigation facilities for erosion control and beautification. Proposed highway planting would be developed based on the I-10 Corridor Master Planting Plan and would comply with the Caltrans Plant Setback and Spacing Guide. Highway planting would consist of installing new planting, irrigation systems, maintenance vehicle pullouts, maintenance access drives, and special paving in gore points and raised medians. Planting designs would use context sensitive solutions to achieve the goals of the I-10 Corridor Planting Master Plan. Exhibits illustrating the project landscaping concept are included in Attachment H. Highway planting would take into consideration proposed treatment BMPs in order to provide a consistent and cohesive design. Plant materials and seed mixes would be suitable for the existing soils, climatic conditions, and be tolerant of poor air quality. Drought tolerant plants and seed mixes would be used to promote water conservation and early plant establishment. It is anticipated that proposed seed mixes would comply with Executive Order 13112 to prevent, to the extent practicable, the introduction of invasive species.

Landscape improvements outside of Caltrans right-of-way would be designed per City of San Bernardino and City of Loma Linda standards and would represent the existing streetscape planting themes.

The proposed project improvements include the installation of a fully automated irrigation system. The irrigation system would include the installation of water meters, irrigation controllers, flow sensors, gate valves, crossovers, piping, and electrical wiring. Automatic irrigation controllers capable of communicating to an off-site computer base station would be used to provide irrigation water management after the three-year plant establishment period. There are no existing or proposed recycled water supply lines near the project site. The design of the irrigation system would allow recycled water to be used when it becomes available in the future. Costs for highway planting and irrigation have been included in the project cost estimate.

5.1.2.10 Erosion Control

Erosion control would be implemented during and after construction where required to protect the transportation facility, and to meet water quality discharge requirements set forth by the Santa Ana Regional Water Quality Control Board. An Erosion Control Plan, and applicable specifications, would be incorporated as part of the PS&E package. Costs for erosion control have been included in the project cost estimate.

Slopes would be planted to minimize erosion. Potential erosion control measures during construction could include timing of grading to avoid the windy and rainy seasons; use of sandbags and/or hay bales in graded areas; silt fences; temporary drainage facilities; containment and settling ponds; and prompt seeding or re-vegetation of graded areas. Permanent vegetative erosion control would be applied to all finished slopes. Seed mixes for temporary erosion control areas would be composed of ornamental native and non-native wildflower and grass species to control erosion and enhance the freeway edge until the ultimate highway configuration is constructed. The use of low fuel seed mixes would reduce the propensity for wildfires.

Potential construction site BMPs include temporary fiber rolls, street sweeping, drainage inlet protection, concrete washout bins, and others listed in the Storm Water Data Report (SWDR). Storm water runoff within the project boundaries does not drain to any 303(d) listed water bodies. Therefore, there are no targeted design constituents and the treatment strategy is aimed at general pollutant removal. Potential permanent treatment BMPs include biofiltration swales along the south side of I-10 along the EB auxiliary lane and north of I-10 between the WB off-ramp and loop on-ramp. In addition, potential treatment BMPs to be constructed within the proposed WB loop-ramp include a biofiltration swale, media filter, or an extended detention basin.

A Storm Water Pollution Prevention Plan (SWPPP) will be required prior to grading any part of this project. The SWDR cover sheet is included as Attachment I.

5.1.2.11 Noise Barrier

A Noise Study Report (NSR) (LSA Associates, Inc., May 2009) was prepared for the project. The NSR evaluated impacts of the proposed project on noise sensitive receivers in the project vicinity and developed noise abatement measures. Approximate lengths, heights, reasonable allowance per benefited residence, and total reasonable allowance were developed for sound barriers that were determined to be feasible.

A Noise Abatement Decision Report (NADR) was prepared for this project to compile information from the NSR, other relevant environmental studies, and design considerations. The NADR includes construction cost estimates which are compared to reasonable allowances to identify which sound barriers are reasonable from a cost perspective. A preliminary noise abatement decision was made based on the reasonableness determination of the feasible sound barriers and nonacoustical feasibility issues, which were included in the DED for public circulation and review. A summary of the noise abatement decision is included in Section 6.8. The final decision of the noise abatement will be made upon completion of the project design and the public involvement processes.

5.1.2.12 Non-Motorized and Pedestrian Features

Anderson Street south of Court Street is identified as a Class II bicycle facility in the city of Loma Linda Master Plan of Bikeways. Class II bicycle facilities are proposed along Tippecanoe Avenue/Anderson Street within the project limits with the exception of (1) the northbound direction of Anderson Street south of Redlands Boulevard, and (2) the segment of Anderson Street

between the EB ramps and Redlands Boulevard. Traffic signal modifications along Tippecanoe Avenue/Anderson Street may include automatic detection systems for bicycles. Street lighting along Tippecanoe Avenue, Anderson Street and Redlands Boulevard will be provided to improve pedestrian and bicycle visibility and safety.

The project would remove existing sidewalk along the west side and reconstruct sidewalk along the east side of Tippecanoe Avenue/Anderson Street between Redlands Boulevard and Harriman Place. All access ramps and crosswalks impacted by the proposed improvements would be reconstructed in compliance with ADA accessibility guidelines. Crosswalk marking removal associated with the removal of the westerly sidewalk will require 30 days notice to the public prior to removal and will comply with California Vehicle Code 21950.5.

During construction, continuous access for pedestrians, individuals with disabilities, and bicyclists will be maintained and will be included in the development of stage construction and traffic handling plans during PS&E.

5.1.2.13 Needed Roadway Rehabilitation and Upgrading

The condition of the existing pavement was evaluated by reviewing the latest available Caltrans Pavement Condition Survey Inventory from 2007. Review of the survey results for existing rigid pavements where widening is proposed on this project indicate that only 1% of Lane 3 slabs and 4% of Lane 4 slabs exhibit 1st Stage slab cracking. No slabs exhibited 3rd Stage slab cracking. 1% of Lane 4 slabs exhibited corner slab cracking. Based on these results and field verification conducted in March 2009, rehabilitation of existing mainline pavement is not required as part of the interchange improvements.

The EB off-ramp and the WB off-ramp would be removed and reconstructed as part of the proposed interchange improvements. The existing EB on-ramp and WB on-ramp, which would not be impacted by the interchange improvements, have recently been rehabilitated by Caltrans. Additional rehabilitation to these ramps would not be required.

5.1.2.14 Cost Estimates

A detailed cost breakdown for the preferred alternative, Alternative 1, is included in Attachment J. The following table summarizes the cost for the construction and support components:

CONSTRUCTION COST*	
Roadway	\$28,513,000
Structures	\$3,969,000
RIGHT-OF-WAY*	\$33,442,000
Total Project Capital Outlay	\$65,924,000
SUPPORT COST	
PS&E	\$3,848,000
Right-of-Way	\$2,735,000
Construction Management	\$4,371,000
Total Project Cost	\$76,878,000

* Construction and Right-of-Way costs include 2% escalation for two years

5.1.2.15 Right-of-Way Data

A Right-of-Way Data Sheet has been prepared for the preferred alternative, Alternative 1, and is included in Attachment F, which includes a cost estimate for right-of-way and utilities relocation.

5.1.2.16 Effects of Projects Funded by Others on State Highway

This project will be funded by Federal and local measure matching funds. As presented in the Supplemental Traffic Operations Analysis, freeway segments within the project limits operate at LOS E or better during the existing (2009) AM and PM peak hours. For the 2035 No Build and Alternative 1 conditions, all freeway segments would operate at LOS F during at least one of the peak hours. The impact is not caused by nor aggravated by the proposed project, and the volumes, density, and LOS are the same in both conditions. As an interchange project, the proposed improvements are not intended to improve traffic operations on the freeway mainline. However, the project would improve EB mainline operations between Waterman Avenue and Tippecanoe Avenue by adding an auxiliary lane, which would eliminate the Waterman Avenue EB on-ramp merge and the Tippecanoe Avenue EB off-ramp diverge, and add a weaving segment between these ramps. The proposed EB weaving segment is expected to operate at a better LOS than the existing EB ramp merge/diverge areas.

5.2 Rejected Alternatives

The following alternatives were determined to be non-viable after being evaluated in the PSR (PDS), Value Analysis (VA) study (May 13, 2003), and the post-VA study conducted by Caltrans in 2004-2005.

5.2.1 PSR (PDS) Alternative 2

This PSR (PDS) alternative proposed realigning the EB off-ramp to a hook ramp which intersected a realigned Redlands Boulevard. With this configuration there would be a signalized intersection at the hook ramps, realigned Redlands Boulevard, and proposed Evans Street. The WB ramps would be realigned to have the on- and off-ramps intersect at Tippecanoe Avenue and Laurelwood Drive on the north side of the freeway.

With this alternative, the EB weaving distance between the Waterman Avenue on-ramp and the Tippecanoe Avenue off-ramp is reduced from over 1,970 feet in the existing condition to 1,630 feet. Even with the addition of an auxiliary lane, the weaving analysis shows a LOS of borderline E/F for the AM peak hour in 2035 and LOS E in the PM peak hour in 2035. Although the mainline is already operating at LOS F, this hook ramp option would increase the congestion due to the reduced weaving length and cause the mainline to operate at LOS F for a longer period of time.

There are other design issues associated with this alternative that would likely require design exceptions. These include the reduced spacing of the EB interchanges to less than 3,280 feet, the nonstandard weave length, and interchange spacing being 1,640 feet away from Tippecanoe Avenue. In addition, there would be only a 164-foot tangent section on the EB hook off-ramp. Because of the negative impacts to the freeway operations and design exceptions, this alternative was considered non-viable.

5.2.2 PSR (PDS) Alternative 4

This PSR (PDS) alternative proposed an offset urban interchange. With this configuration there would be a four-way intersection where the EB and WB on- and off-ramps intersect at a common point on Tippecanoe Avenue, north of I-10. The EB on- and off-ramps would cross under the mainline to the north side of the freeway and connect at a single point, which would require

tunneling below grade. The mainline would also require realignment slightly to the north in order to allow for stage construction. The bridge would need to be replaced to accommodate the geometrics of the single point intersection and provide adequate sight distance.

An intersection analysis completed in 2002 using the Comprehensive Analysis Program for a Single Signalized Intersection (CAPSSI) revealed the need for a triple SB left-turn to the EB on-ramp based on year 2025 traffic forecasts. There were 1,001 PCEs with a 0.95 peak hour factor making the SB left-turn require three left-turn lanes to achieve a LOS D for that intersection leg and to provide a LOS D for the intersection. In addition, this SB triple left-turn created a queue of eight vehicles per lane, which exceeded the available storage length. The distance between the SB left-turn stop limit line at the EB on- and off-ramps and the NB left stop line at Laurelwood Drive would be only 334 feet. The SB queue of eight vehicles per lane requires approximately 300 feet of storage length. This would not leave sufficient room geometrically to accommodate the reversing lane pocket delineation and any storage for the NB left-turns at Laurelwood Drive.

On the mainline, the EB on-ramp auxiliary lane to Mountain View Avenue is reduced to 1,811 feet degrading the existing weave conditions on EB I-10 between Tippecanoe Avenue and Mountain View Avenue.

Other issues associated with this alternative included the need to provide pump stations to address drainage issues associated with the EB on- and off-ramps going below the mainline in tunnels. The profile of the traveled way would be as much as 20 feet below original ground. Additional easements would be required to accommodate the drainage system. Because of geometrics, groundwater levels, the fault zone, and the traffic operations issues with the triple left-turn and mainline weaving degradation, this alternative was considered to be non-viable.

5.2.3 Value Analysis Alternative 1

This alternative would construct a conventional urban interchange that would have a single point intersection under a realigned mainline. Each ramp would split traffic with left-turns approaching to a common signal and right-turns in separate split lanes for a merge/diverge with Tippecanoe Avenue. The right-turn lanes would not necessarily be signalized.

Due to the close proximity of the freeway to Redlands Boulevard, less than 656 feet, there is insufficient distance for the EB off-ramp traffic to access the Tippecanoe Avenue SB left-turn pocket to Redlands Boulevard. This would result in traffic backing up on the ramps, and possibly the mainline, due to an inability to access an allowable space to merge into the turn pocket.

Realignment of the mainline would be required to geometrically fit in all the required turn pockets and turning movements at this single point intersection. This realignment of the mainline would present significant staging challenges and impact freeway operations during construction. There would also be potentially severe impacts to commercial right-of-way on the north side of the mainline as the mainline would have to be realigned to the north to accommodate the geometrics required.

This alternative was considered not viable for the following reasons: inadequate geometrics for accessing required turning movements; the staging challenges; impacts to mainline operations; high costs associated with potentially severe right-of-way impacts; and complete bridge reconstruction and realignment of approximately 6,600 feet of mainline, which would still result in inadequate distance to access the required movements along Tippecanoe Avenue.

5.2.4 Value Analysis Alternative 2

This alternative proposed extending Evans Street north from Redlands Boulevard across the I-10 mainline up to Laurelwood Drive/Harriman Place. This alternative was developed to serve as a parallel north-south corridor to Tippecanoe Avenue to relieve some of the traffic on Tippecanoe Avenue. A new bridge over the I-10 mainline would be required and a new bridge over Redlands Boulevard would also be required as the distance between I-10 and Redlands Boulevard is not sufficient to achieve the required clearance. A new connector from Evans Street back to Redlands Boulevard would also be required in addition to either retaining walls or a large embankment for Evans Street south of Redlands Boulevard. Large retaining walls would also be required along Evans Street on the north side of I-10 to minimize the right-of-way impacts for the new Evans Street, since the alignment would go through developed property north of the freeway.

An analysis of the 2025 traffic model, the latest model available at the time of the analysis in 2004, indicated a reduction of traffic on Tippecanoe Avenue between 0 and 13 percent, depending on the location and direction. The reduction in traffic on Tippecanoe Avenue/Anderson Street from an added Evans Street overcrossing by itself was not sufficient to bring the LOS on the existing ramp intersections to an acceptable level without additional mitigation being required on the Tippecanoe Avenue/Anderson Street corridor. The construction of only a new overcrossing at Evans Street would still leave four signalized intersections in close proximity to each other, which creates a queuing problem through the corridor along with unacceptable LOS at these intersections. The tight spacing of the existing intersections would create back-ups onto the ramp and potentially the mainline.

The construction cost for the new Evans Street overcrossing would be significant and there would be significant right-of-way impacts as well, particularly on the north side of the freeway. Because of the relatively small improvement to the traffic operations on Tippecanoe Avenue/Anderson Street, the substandard geometric conditions, an unacceptable level of service and queuing, and the significant cost and impact to construct a new overcrossing, this alternative concept was considered non-viable.

5.2.5 Post VA Alternative 1 - Base Condition

This alternative would keep the EB and WB ramp locations the same as the existing condition. The ramps would be widened at the intersections with Tippecanoe Avenue/Anderson Street and Tippecanoe Avenue/ Anderson Street would be widened in each direction from Redlands Boulevard to north of Laurelwood Drive. To accommodate the widening, the I-10 bridge would need to be replaced to allow the through lanes and left-turn lanes in each direction to geometrically fit.

An analysis of the traffic operations of this alternative showed several issues. Due to leaving the existing condition of three closely spaced intersections, there is still a significant queuing problem with this alternative, as well as operational issues. In the PM peak hour, the Progression Analysis and Signal System Evaluation Routine (PASSER) analysis on the corridor showed that all four intersections, though having a marginally acceptable LOS, have a volume per capacity (v/c) ratio that ranged from 0.96 to 1.01. Typically any v/c over 0.95 indicates the intersection is not able to clear the traffic within the cycle length. The queuing is also unacceptable since there is such a short distance between the intersections. For the PM peak hour, the SB left-turn queue at the EB ramp intersection is almost 14 though the storage length available is only 263 feet, sufficient for about

seven to eight vehicles. At the WB ramp intersection, the NB left-turn queue is over 11 vehicles with the same storage length for seven to eight vehicles.

To mitigate the oversaturation of the intersections and the queuing, an additional through lane in each direction through the corridor would be required. This would require an even larger new bridge at Tippecanoe Avenue to accommodate 10 lanes, three through lanes in each direction and two left-turn lanes in each direction. This would be geometrically problematic as Tippecanoe Avenue/Anderson Street would then need to be further widened beyond the ramp intersections to allow for a transition to these 10 lanes. This would also require even more right-of-way, cost, and other impacts to address. The additional widening would not resolve the queuing issues between the closely spaced intersections. Because of the closely spaced intersections, extensive right-of-way needs, and bridge replacement requirements, this alternative was considered non-viable.

5.2.6 Post VA Alternative 2 - Alternatives 2a, 2b and 2c

These alternatives looked at various permutations of the EB on- and off-ramps. The WB on-and off-ramps would be the same as in viable Alternative 1 which consists of realigning the on- and off-ramps to loop ramps which converged at a single point at Laurelwood Drive. Alternatives 2a, 2b and 2c all have a hook ramp for the EB off-ramp onto Redlands Boulevard about 656 feet west of Tippecanoe Avenue. Alternative 2a has an EB on-ramp immediately adjacent to the EB off-ramp. Alternative 2b replaces the EB hook on-ramp with a loop ramp in the southeast quadrant of the interchange (east of Tippecanoe Avenue between I-10 and Redlands Boulevard). Alternative 2c has all the features of 2b and adds an additional EB loop on-ramp from SB Tippecanoe Avenue in the southwest quadrant of the interchange.

These alternatives create several traffic operations deficiencies. The EB hook off-ramp is located closer to the Waterman Avenue EB on-ramp than either the existing condition or viable Alternative 1. As a result, weaving operations are degraded from the existing condition and even if an auxiliary lane was added, the weaving operations would be inferior to viable Alternative 1. In addition to the degraded weave, which applies to Alternatives 2a, 2b and 2c, there are queuing problems with Alternative 2a. The EB queue for the NB left-turn at Redlands Boulevard was 20 vehicles in the AM peak hour from the PASSER analysis. This would exceed the allowable storage of 295 feet, which can accommodate only about eight vehicles. This would create the potential for traffic backing up onto the mainline from the ramp.

To alleviate the EB queue problem in Alternative 2a, Alternatives 2b and 2c were developed. Alternative 2b added a loop off-ramp for the EB traffic to go north on Tippecanoe Avenue. This movement can only be accommodated geometrically with the WB on- and off-ramps relocated to Laurelwood Drive as in viable Alternative 1 since the loop ramp merge on Tippecanoe Avenue would not allow access to the existing WB on-ramp. The addition of the EB to NB loop ramp would require the existing EB on-ramp from Tippecanoe Avenue to be relocated. A hook ramp on-ramp located adjacent to the new EB hook off-ramp was proposed; however, this creates merging traffic weaving with the diverging traffic for the EB off-ramp loop in the southeast quadrant. Another variant alternative, 2c, was developed to also improve the traffic operations. This alternative added an additional loop ramp for SB Tippecanoe Avenue traffic for EB I-10 traffic. This would eliminate the need for the EB hook on-ramp; however, it still creates the weaving conflict between the loop on-ramp traffic conflicting with the EB loop off-ramp. The NB Anderson Street traffic to EB I-10 would need to use an on-ramp moved from the existing location to south of the new loop ramp, which would be immediately north of the Redlands Boulevard/Anderson Street intersection. This would create severe difficulties for NB traffic accessing the ramp just beyond a signalized

intersection with no storage between that ramp and Redlands Boulevard. It would also create difficulties for WB Redlands Boulevard traffic turning north on Anderson Street trying to utilize the EB on-ramp. This traffic would need to effectively make a 180 degree turn to access this ramp.

Alternatives 2b and 2c would both require the relocation of the WB ramps similar to viable Alternative 1 to accommodate the loop ramp in the southeast quadrant of Anderson Street/Redlands Boulevard. As a result, these two alternatives would have more significant additional impacts than viable Alternative 1 and would have traffic operational deficiencies that viable Alternative 1 does not have. Because of the degradation of the EB weaving between Waterman Avenue and Tippecanoe Avenue, the queuing problems with Alternative 2a for the Redlands Boulevard EB left-turn and the problematic location of the EB on-ramp with Alternatives 2b and 2c, Alternatives 2a, 2b and 2c were considered non-viable.

5.2.7 Post VA Alternative 3 - Split Diamond Alternative

This alternative would connect Tippecanoe Avenue with a northerly extension of Evans Street (across I-10) via east-west frontage roads. The WB off-ramp and the EB on-ramp would connect to this frontage road at Tippecanoe Avenue. The EB off-ramp and WB on-ramp would connect to the frontage road at Evans Street. The extension of Evans Street to the north would require a new overcrossing bridge over I-10 and would go through existing businesses north of I-10. The extension over I-10 would also require Evans Street to be raised over Redlands Boulevard as there is inadequate distance between Redlands Boulevard and I-10 to attain the required mainline clearance. This would entail a new bridge for Evans Street over Redlands Boulevard with a new connector between Evans Street and Redlands Boulevard.

One main problem with this alternative is the WB weaving distance. The weave from the WB on-ramp from Evans Street to the Carnegie Lane/Hospitality Lane off-ramp is reduced from over 1,968 feet to 995 feet. This new weave operates at a LOS F in the year 2035 PM peak hour. In the EB direction, the weave length is also reduced from over 1,968 feet to less than 1,640 feet. This would result in a LOS of borderline E/F in the 2035 PM peak hour. The only other option that could be studied for the EB on- and off-ramps would be to grade separate the ramps; however, due to the tight spacing with Redlands Boulevard and the relatively short distance between Waterman Avenue and Evans Street this solution is problematic.

This alternative would also require design exceptions including the reduced spacing of interchanges, to less than 3,280 feet and the 995 foot auxiliary lane for weaving. Because of the inadequate WB weaving distance, the extensive right-of-way impacts to build the frontage road and the Evans Street extension, and the restriction of future expansion of I-10 with the construction of tight frontage roads, this alternative was determined to be non-viable.

5.2.8 Post VA Alternative 4 - Southeast Quadrant

This alternative would reconstruct the EB on- and off-ramps. These ramps would be reconfigured as hook ramps which converge at a location on Redlands Boulevard about 985 feet east of Anderson Street/Tippecanoe Avenue. The west ramps would remain at their existing location. The location of the new hook ramps would run through several large car dealerships on the north side of Redlands Boulevard in the City of Loma Linda.

A Synchro analysis of this alternative was performed which indicated that the queues for the EB off-ramp would likely back up onto the mainline in the AM peak hour. The queue for the Redlands Boulevard WB right-turn to Tippecanoe Avenue NB is over 1,970 feet. The LOS for the Redlands

Boulevard/Anderson Street intersection in the AM peak hour would be F. The long queue and the low LOS would cause traffic on Redlands Boulevard to back up beyond the new hook ramp intersection. EB off-ramp traffic would then back up on the ramps since Redlands Boulevard would be blocked for the exiting traffic.

Since the EB on- and off-ramps would be moved further to the east from the existing condition, the weaving operations between the EB on-ramp for Tippecanoe Avenue and the Mountain View Avenue EB off-ramp would be degraded. The existing EB weaving distance between the two interchanges is 2,238 feet and it would be reduced to 1,827 feet. If the hook ramps were moved further to the east to try to accommodate the large queue between Anderson Street and the EB off-ramp along Redlands Boulevard, the weaving distance would be further degraded from the existing condition.

Because the mainline operations would be degraded due to the potential queuing at the EB off-ramp and the weaving distance would be degraded from the existing and viable Alternative 1 and the severe right-of-way impacts for ramp realignments affecting two large car dealerships, this alternative was considered non-viable.

6 CONSIDERATIONS REQUIRING DISCUSSION

6.1 Hazardous Waste

An aerially-deposited lead (ADL) study was completed by EMI, Inc. in April 2009 for proposed excavation or soil disturbance areas within Caltrans right-of-way. Based on the sampling, testing, and analysis performed by EMI, Inc. the soils within the project were classified as either Soil Type Y2 (California hazardous waste) or Soil Type X (non-hazardous). Recommendations for the reuse of both types of soils during construction were made based on the California Department of Toxic Substance Control (DTSC) Variance. No additional costs for the reuse of lead-contaminated soils during construction are anticipated.

An asbestos study was conducted by Sigma Engineering, Inc. on the I-10/Tippecanoe Avenue Undercrossing (Bridge No. 54-098) and the I-10/San Timoteo Creek structure (Bridge No. 54-099) and results of the study are provided in a separate report. The study, approved by Caltrans in April 2009, indicated that none of the materials sampled contained asbestos concentrations above the method detection limit, resulting in no asbestos-containing construction materials (ACCM) identification during the survey.

An Initial Site Assessment (ISA) was prepared by EMI, Inc. in June 2009. The primary purpose of the ISA is to identify any potentially hazardous substances or petroleum products within the subject site based on the governmental records search, visual site survey and aerial photograph review. It includes a review of known and suspected releases from the site or adjoining properties into the on-site soil, groundwater, or surface water. The study includes releases of hazardous substances or petroleum products even under conditions in compliance with current laws. The ISA was conducted in accordance with Appendix DD of the Caltrans Project Development Procedures Manual, "Preparation Guidelines for Initial Site Assessment (ISA) Checklist for Hazardous Waste."

The ISA recommends the following additional studies during subsequent phases of the project to identify the presence of any additional hazardous wastes:

- A lead study should be conducted adjacent to all residential and commercial structures (all painted structures) to be removed within the subject site. The study should be conducted by

trained and/or licensed professionals in accordance with Caltrans guidelines. It should include the collection and analyses of soil immediately adjacent to the painted structure. The field and analytical data obtained during this study should be used to provide a review of the sampling locations, summary of analytical results, extent of lead-impacted soil (if identified) and recommendations for the handling, stockpiling, reuse, and/or off-site transportation and disposal of lead-impacted soil (as needed).

- Due to the possible presence of elevated lead concentrations within the striping paint along I-10 and associated roadways, it is recommended that the paint be sampled and tested for lead by trained and/or licensed professionals. Representative samples of striping paint should be collected along both sides of the highway and associated roadways. The field and analytical data obtained during this study should be used to provide a review of the sampling locations and descriptions, summary of the analytical results, and recommendations for striping paint removal, containment, and off-site transportation and disposal (as appropriate).
- An asbestos survey should be conducted at all of the building structures to be removed within the construction area that are older than 1979 (asbestos in construction materials was generally phased out in the early to mid-1970s). Asbestos surveys must be overseen by a California Certified Asbestos Consultant. The results of these surveys should provide a description of the asbestos-containing materials, their locations, estimated quantity, and recommendations for removal, containment, and off-site transportation and disposal.
- Building structures older than 1979 within the planned construction areas should be assessed for the possible presence of lead-based paint. Lead use in commercial paint was prohibited in 1978. This study must be conducted by trained and/or licensed professionals. The results of this study should provide a description of the lead-based paint locations, estimated quantity, and recommendations for removal, containment, and off-site transportation and disposal. While assessing building structures within the planned construction area, it is recommended that a trained and licensed environmental professional also assess for the possible presence of Polychlorinated Biphenyls (PCB) and mercury within and adjacent to buildings. Pole-mounted transformers were located along the northern sides of Rosewood Drive, Laurelwood Drive, and Lee Street. Pad-mounted transformers were located adjacent to an abandoned restaurant (Wendy's) and Denny's Restaurant. Other PCB sources (such as light ballasts) are suspected within the commercial and residential structures. Suspected mercury sources within the structures in the planned construction areas include thermostats and florescent bulbs. The results of this study should provide a description of the PCB and mercury source locations, estimated quantity, and recommendations for removal, containment, and off-site transportation and disposal.
- There is a potential that gasoline-impacted soil could be encountered during excavation activities near or at the Thrifty Oil property (1945 S. Tippecanoe Avenue) and the former Union 76 service station (24891 Redlands Boulevard). Due to this potential, it is recommended that a health, safety, and emergency contingency plan be established prior to excavation activities. This plan should establish health and safety guidelines and requirements for personnel involved in the possible removal of impacted soil. This plan, to be developed by an experienced environmental professional, must provide safe handling procedures or any encountered gasoline-impacted soil. The plan should include, but not be limited to, a description of the anticipated contaminant locations and depths, anticipated volumes to be generated during excavation activities, safe handling procedures, and appropriate soil disposal methods. Reports detailing the horizontal and vertical extent of

impacted soil at these locations can be obtained from: <http://geotracker.swrcb.ca.gov>. This plan should be approved by Caltrans prior to use.

- Soil excavations conducted on-site be monitored (by the construction contractor) for visible soil staining, odor, and the possible presence of unknown hazardous-material sources, such as buried 55-gallon drums and underground tanks. If hazardous materials contamination and/or sources are suspected or identified, an environmental professional should evaluate the course of action required.

There are no feasible project alternatives that will avoid potentially hazardous waste sites.

6.2 Value Analysis

A VA study was completed on May 13, 2003 to comply with the Federal Value Engineering (VE) Mandate and to explore alternatives that will enhance the project performance. The VA proposed nine more alternatives or variations, of which two were considered promising for further study. Subsequent to this, Caltrans conducted internal studies and an internal VA on the project in 2004 and 2005. This resulted in a separation of the interchange project and the adjacent Evans Street corridor into separate projects. Four additional alternatives were proposed for further study on the interchange. As part of this alternatives analysis, two of the three build alternatives from the PSR (PDS) were found to be non-viable. The third alternative from the PSR (PDS) was revised to eliminate the connectivity to the Evans Street corridor to make it a stand-alone project. All the proposed alternatives were evaluated in a traffic study that was submitted, in September 2006, and subsequently approved by Caltrans. The conclusion from the study was that two of the three PSR (PDS) build alternatives, the two VA alternatives, and the four Caltrans proposed alternatives all had features which resulted in the alternatives not being viable because of various geometric issues, degraded freeway performance, right-of-way impacts, and costs. Exhibits showing the rejected alternatives are included in Attachment K. The only recommended viable alternative was one of the build alternatives in the PSR (PDS) with the eliminated connectivity to Evans Street, referred to as Alternative 1 in this report.

6.3 Resource Conservation

The existing asphalt concrete and the Portland Cement Concrete pavement to be removed would be crushed to aggregate base material and incorporated into the new pavement structural section of the proposed project. The proposed project intends to maximize the use of the existing hardware items as well. This can be achieved by relocating any usable existing signs, lighting and traffic signal poles. The signs identified for removal would be available for recycling.

6.4 Right-of-Way Issues

A Right-of-Way Data Sheet has been prepared and included in Attachment F for the improvements proposed in the preferred alternative, Alternative 1, which would require new permanent right-of-way in all four quadrants of the interchange. The proposed WB on- and off-ramps would require full and partial acquisitions of residences and businesses in the northeast quadrant. In the southwest and southeast quadrants, the major construction work involves widening of Redlands Boulevard and Anderson Street, requiring partial acquisitions. In the northwest quadrant, partial acquisitions would be required to reconstruct the NW and SW corners of the Harriman Place/Tippecanoe Avenue intersection. In general, the partial acquisitions consist of several feet of frontage area along major arterials.

Temporary construction easements would also be required in all four quadrants to construct and widen local streets, construct ramps, retaining walls and potential sound walls, and widen the I-10 structure over San Timoteo Creek. Improvements to commercial driveways along Anderson Street and Redlands Boulevard would be required as a result of roadway widening.

A Final Relocation Impact Report (FRIR) has been prepared to address potential problems that may be caused by the displacement of existing land uses and their owners/occupants by the proposed project. The FRIR identifies the relocation of residential and commercial uses and occupants associated with the proposed project; the replacement housing for those to be displaced by the proposed project; and any relocation issues. A full discussion of the FRIR is included in the FED. It is anticipated that adequate relocation opportunities within the cities of Loma Linda, San Bernardino, and Redlands could exist for all residents and businesses that would potentially be displaced as a result of the proposed project. The Caltrans Relocation Assistance Program (RAP) will be implemented as part of the property acquisition process for the project. The RAP is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) and Title 49 Code of Federal Regulations (CFR) Part 24. The RAP provides appropriate procedures to ensure adequate and appropriate relocation of all displaced persons regardless of the cost and availability of housing.

6.5 Environmental Issues

Caltrans is the California Environmental Quality Act (CEQA) Lead Agency and the National Environmental Policy Act (NEPA) Lead Agency for this project. As owner-operator of the State Highway System (SHS), Caltrans is the CEQA Lead Agency for all improvement projects on the SHS. Effective July 1, 2007, Caltrans has been assigned environmental review and consultation responsibilities under NEPA pursuant to 23 U.S.C. 327. The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327.

Caltrans has determined for this project that the appropriate environmental documentation for CEQA compliance is an Initial Study (IS), and for NEPA compliance, an Environmental Assessment (EA). Caltrans has adopted a Mitigated Negative Declaration (MND) for the IS and a Finding of No Significant Impact (FONSI) for the EA.

The IS/EA was prepared in accordance with Caltrans' environmental procedures, as well as State and federal environmental regulations. A copy of the cover page and title sheet of the Initial Study with Mitigated Negative Declaration / Environmental Assessment is included in Attachment L.

Various environmental technical studies were completed in support of the IS/EA. These studies include:

- Air Quality Assessment Report
- Archaeological Survey Report (ASR)
- Community Impact Assessment (CIA)
- Historic Property Survey Report (HPSR)
- Historical Resources Evaluation Report (HRER)
- Initial Site Assessment (ISA)
- Natural Environmental Study (Minimal Impacts) (NES MI)
- Noise Study Report (NSR)
- Noise Abatement Decision Report (NADR)

- Paleontological Identification Report and Paleontological Evaluation Report (PIR/PER)
- Final Relocation Impact Report (FRIR)
- Summary of Floodplain Encroachment
- Visual Impact Assessment (VIA)
- Water Quality Assessment Report (WQAR)
- Traffic Analysis

Copies of these reports are on file and available at SANBAG and the cities of Loma Linda and San Bernardino offices.

6.6 Air Quality Conformity

The project is included in the 2008 Regional Transportation Plan (RTP), which was found to be conforming by the FHWA/Federal Transit Administration (FTA) on June 5, 2008. The project is also in the adopted 2011 FTIP, which was approved by FHWA on December 14, 2010. The proposed project will also comply with all South Coast Air Quality Management District (SCAQMD) requirements.

The project-level Particulate Matter (PM) hot-spot analysis was presented to SCAG's Transportation Conformity Working Group (TCWG) for discussion and review on November 28, 2006. This project was approved and concurred on by Interagency Consultation at the TCWG meeting as a project not having adverse impacts on air quality and meeting the requirements of the Clean Air Act (CAA) and 40 CFR 93.116.

The results of the air quality analysis indicate that the proposed project will not cause any violations or exceedances of the State and national ambient air quality standards (CAAQS or NAAQS) due to the following:

- The project is consistent with the design concept and scope of the project as listed in the following documents: (1) SCAG 2008 RTP, (2) SCAG 2011 FTIP, (3) the mobility goals of the Regional Congestion Management Plan, and (4) Caltrans Route Concept Fact Sheet for I-10 (March 2000).
- The proposed project has undergone air quality conformity analysis for the basin.
- Based on CO, PM₁₀, and PM_{2.5} assessments, the project will not cause or contribute to localized violations of any federal air quality standard.
- The future NO_x, CO, PM₁₀, and PM_{2.5} emissions levels within the SCAG region, which includes the proposed project, are projected to be less than the applicable SIP emissions budget.

6.7 Title VI Considerations

Implementation of Alternative 1 would not result in any disproportionately high or adverse impacts on minority of low-income neighborhoods or communities. Caltrans and FHWA policies demonstrate a commitment to Title VI of the Civil Right Act, which provides that no person in the United States shall, on the grounds of race, color, national origin, sex, disability, or age be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving federal financial assistance.

The proposed project improvements include reconstruction of access ramps at all intersections within the project limits and accommodation of bus facilities along Tippecanoe Avenue/Anderson Street.

6.8 Noise Abatement Decision Report

A NADR (LSA Associates, Inc., July 2009) was prepared as a separate document for the project. This section represents the NADR which:

- Is an evaluation of the reasonableness and feasibility of incorporating noise abatement measures into this project;
- Constitutes the preliminary decision on noise abatement measures to be incorporated into the DED; and
- Is required for Caltrans to meet Title 23, Code of Federal Regulation, Part 772 of the Federal Highway Administration standards.

The NADR does not present the final decision regarding noise abatement; rather, it presents key information on abatement to be considered throughout the environmental review process, based on the best available information at the time the DED is published. If a project is subject to federal review, but does not have a circulated ED, the NADR section documents the final noise abatement decision.

The NADR does not address noise barriers or other noise-reducing treatments required as mitigation for significant adverse environmental effects identified under the California Environmental Quality Act (CEQA).

The NSR for this project was prepared by LSA Associates, Inc. in May, 2009 and approved by Caltrans Environmental Oversight on May 11, 2009. Table 11 summarizes the findings of the NSR.

Table 11: Summary of Feasible Sound Barriers from Noise Study Report

Sound Barrier No.	Location	Approx. Length (feet)	Height (feet)	Acoustically Feasible	Number of Benefited Residences ¹	Reasonable Allowance per Residence	Total Reasonable Allowance
1	Edge of Mainline Shoulder	2,413	8	Yes	2	\$50,000	\$100,000
		2,413	10	Yes	9	\$52,000	\$468,000
		2,413	12	Yes	11	\$52,000	\$572,000
		2,413	14	Yes	22	\$52,000	\$1,144,000
2	Property Line	708	8	Yes	4	\$50,000	\$200,000
		708	10	Yes	9	\$52,000	\$468,000
		708	12	Yes	9	\$52,000	\$468,000
		708	14	Yes	9	\$52,000	\$468,000
		708	16	Yes	9	\$52,000	\$468,000
3	Property Line	709	6	Yes	9	\$52,000	\$468,000
		709	8	Yes	12	\$54,000	\$648,000
		709	10	Yes	12	\$54,000	\$648,000
		709	12	Yes	14	\$54,000	\$756,000
		709	14	Yes	14	\$56,000	\$784,000
		709	16	Yes	14	\$56,000	\$784,000

Sound Barrier No.	Location	Approx. Length (feet)	Height (feet)	Acoustically Feasible	Number of Benefited Residences ¹	Reasonable Allowance per Residence	Total Reasonable Allowance
5	Right-of-Way Line	295	12	Yes	1	\$50,000	\$50,000
		295	14	Yes	1	\$50,000	\$50,000
		295	16	Yes	1	\$50,000	\$50,000

Source: LSA Associates, Inc., Noise Study Report, May 2009.

¹ Number of residences that are attenuated by 5 dBA or more by the modeled barrier.

dBA = A-weighted decibels

A summary of key information used in making the preliminary noise abatement decision is shown in Table 12.

Table 12: Summary of Abatement Key Information

Sound Barrier No.	Height (feet)	Acoustically Feasible	Number of Benefited Residences ¹	Total Reasonable Allowance	Estimated Construction Cost ²	Reasonable	Break LOS ³
1	8	Yes	2	\$100,000	\$1,521,000	No	No
	10	Yes	9	\$468,000	\$1,764,431	No	No
	12	Yes	11	\$572,000	\$2,173,300	No	No
	14	Yes	22	\$1,144,000	\$2,250,861	No	No
2	8	Yes	4	\$200,000	\$260,017	No	No
	10	Yes	9	\$468,000	\$309,187	Yes	No
	12	Yes	9	\$468,000	\$363,467	Yes	No
	14	Yes	9	\$468,000	\$417,747	Yes	Yes
3	6	Yes	9	\$468,000	\$213,604	Yes	No
	8	Yes	12	\$648,000	\$260,382	Yes	Yes
	10	Yes	12	\$648,000	\$309,621	Yes	Yes
	12	Yes	14	\$756,000	\$363,978	Yes	Yes
	14	Yes	14	\$784,000	\$418,334	Yes	Yes
5	12	Yes	1	\$50,000	\$152,378	No	Yes
	14	Yes	1	\$50,000	\$174,994	No	Yes
	16	Yes	1	\$50,000	\$201,544	No	Yes

Source: LSA Associates, Inc., Noise Abatement Decision Report, July 2009.

¹ Number of residences that are attenuated by 5 dBA or more by the modeled barrier.

² Sound barrier construction costs were provided by RMC, Inc. (July 2009).

³ This column indicates whether the sound barrier is high enough to break the line of sight (LOS) between the receiver and truck exhaust stacks per Highway Design Manual Chapter 1100.

Based on the above key information, other non-acoustical factors, and the Noise Abatement Focus Meeting held on April 28, 2009, the recommended sound barrier (SB) heights for SB Nos. 2 and 3 are shown in Table 13.

Table 13: Recommended Sound Barriers

Sound Barrier No.	Height (feet)
2	14
3	8

The recommended sound barrier heights were determined based on the minimum sound barrier height that breaks the line of sight between the receiver and a truck exhaust stack and the lowest sound barrier construction cost. The Caltrans *Traffic Noise Analysis Noise Protocol* specifies that sound barriers should be high enough to block the noise from a truck exhaust stack. In addition, the recommended sound barrier height of 14 feet for SB No. 2 would provide the maximum number of benefited residences. A sound barrier height of 8 feet was recommended for SB No. 3 to prevent stagnant air created by higher barriers and to reduce a feeling of confinement in the outdoor active use areas, which are relatively shallow. The preliminary noise abatement decision presented in the NADR was included in the DED, which was circulated for public review. The approximate locations of the recommended sound barriers are shown in Attachment D.

The preliminary noise abatement decision presented in the NADR is based on preliminary project alignments and profiles, which may be subject to change. As such, the physical characteristics of noise abatement described herein also may be subject to change. If pertinent parameters change substantially during the final project design, the preliminary noise abatement decision may be changed or eliminated from the final project design. The final decision of the noise abatement will be made upon completion of the project design and the public involvement processes.

7 OTHER CONSIDERATIONS AS APPROPRIATE

7.1 Public Hearing Process

A Notice of Intent to Adopt a Mitigated Negative Declaration and Availability of Initial Study/Environmental Assessment, Notice of Public Hearing was published on October 21, 2009. The Draft IS/EA was circulated for a 30-day public review period. The public hearing was held at Victoria Elementary School in the City of San Bernardino on November 5, 2009. Public comments received during the review period and at the public hearing have been incorporated into the FED.

7.2 Route Matters

The project proposes to modify access to I-10 by realigning the WB off-ramp and constructing a new WB loop on-ramp with the ramp termini relocated north along Tippecanoe Avenue. These modifications require a Modified Access Report (MAR), which has been prepared as a separate document. In addition, two modified freeway agreements will be required for the city of Loma Linda and city of San Bernardino.

The I-10 Route Concept Fact Sheet, dated March 2000, identifies future widening to include two HOV lanes, one in each direction. The proposed improvements for this project, including the widening of the I-10/Tippecanoe Avenue Undercrossing and the I-10/San Timoteo Creek structure, are designed to accommodate the HOV lanes and are consistent with the Route Concept Fact Sheet.

7.3 Permits

The following permits will be required for this project:

- County of San Bernardino Flood Control District Encroachment Permit
- State Right of Way Encroachment Permit
- Section 401 RWQCB Certification
- Section 404 ACOE Nationwide Permit (NWP)
- CDFG Streambed Alteration Notification (agreement or letter of non-jurisdiction)
- General Construction Activity NPDES Permit (SWRCB)

This project is subject to the Caltrans Statewide NPDES Storm Water Permit and Waste Discharge Requirements (Order No. 99-06-DWQ, NPDES No. CAS000003 and CAS000002).

7.4 Cooperative Agreements

Cooperative Agreement Number 8-1229, which was amended on January 7, 2009, sets forth the terms and conditions for Caltrans and SANBAG, outlining responsibilities for the PA/ED phase of the project. Separate agreements will be required for the right-of-way, PS&E, and construction phases of the project.

7.5 Other Agreements

Maintenance agreements and any other necessary agreements will be developed as required by the project. Maintenance Agreements with the City of San Bernardino and with the City of Loma Linda for traffic signals, street lighting, pavement rehabilitation and landscaping will likely be required. Freeway Agreements with both cities will be modified to document the revised traffic circulation features of the interchange, revisions to local street connections to the freeway, and modifications to local streets required to maintain traffic circulation in relation to the freeway.

7.6 Involvement with a Navigable Waterway

There are no navigable rivers within the proposed project limits.

7.7 Transportation Management Plan

A Transportation Management Plan (TMP) is required for this project. The objective of a TMP is to minimize project-related traffic delay and maximize safety for the motorists during construction without compromising the quality of work being performed.

A TMP Data Sheet (Attachment M) has been developed to provide recommendations to minimize the traffic impacts of construction activities so as to provide the highest level of traffic circulation and access during the construction period. Based on the TMP Data Sheet information, the impacts of the project to the freeway mainline and local roads are estimated to be medium while the impacts to the freeway ramps are estimated to be high. Various elements, as well as the associated cost for each strategy, are outlined in the TMP Data Sheet.

7.8 Stage Construction

Construction of the proposed improvements is scheduled to begin in October 2012 and end in March 2014. The proposed construction sequencing is intended to provide immediate congestion relief to the I-10 EB off-ramp to Anderson Street and the Anderson Street/Redlands Boulevard intersection by increasing the capacity of these facilities. Five major construction stages are anticipated to construct the proposed project improvements. Stage Construction Index Sheets are included in Attachment N.

Stage 1 construction involves widening the Tippecanoe Avenue Undercrossing along WB I-10 and the San Timoteo Creek structure along EB I-10, replacing the existing concrete lined trapezoidal channel with an underground RCB culvert between San Timoteo Creek and Anderson Street, adding an auxiliary lane along the EB I-10 mainline, and realigning the Tippecanoe Avenue EB off-ramp. In this stage, detours may be required for realignment of the I-10 EB off-ramp and construction of the off-ramp concrete termini. Motorists can use Waterman Avenue, Hospitality Lane, and Redlands Boulevard to bypass the construction sites. Traffic impacts are anticipated to be minor as the closure of Tippecanoe Avenue and EB off-ramp at Tippecanoe Avenue would be done overnight and

during the weekend. Construction of the EB off-ramp concrete terminus would require a weekend closure.

Stage 2 construction focuses on widening Anderson Street and Redlands Boulevard. During construction, driveway access to local businesses and residents would be maintained. Pedestrian access can be maintained during construction by constructing the street widening improvements in halves. Bus stops may need to be relocated temporarily outside the construction area. After the streets are widened, existing medians can be removed and paved/reconstructed in their proposed locations.

Stage 3 construction is comprised of the realignment of Laurelwood Drive, constructing the new WB off-ramp at Tippecanoe Avenue, and widening Tippecanoe Avenue north of the intersection. No closure is anticipated as motorists would be able to continue utilizing the existing WB off-ramp while the new ramp is being constructed.

Stage 4 construction activities include construction of the new WB loop on-ramp at Tippecanoe Avenue and widening the remainder of Tippecanoe Avenue. The existing WB off-ramp would be removed in this stage after traffic has been shifted to the newly constructed WB off-ramp. No closures are anticipated for this stage of construction.

Stage 5 construction completes the improvements along Tippecanoe Avenue. After Tippecanoe Avenue is widened, existing medians can be removed and reconstructed in their proposed locations.

7.9 Accommodation of Oversize Loads

There are no existing or proposed vehicle height restrictions along I-10 through the project limits, including during construction.

7.10 Graffiti Control

A graffiti-prone area is defined as an urban area in the San Bernardino County. Since this project lies within a graffiti-prone area, the final design will include details to prevent access to bridges, signs, and walls. In addition, the abutments, retaining walls, and other vertical surfaces, will be constructed using a fractured-rib finish, or other similar finish treatments, for the prevention of graffiti.

7.11 Drainage

The general drainage patterns within the project vicinity are from southeast to northwest. Regional drainage facilities include San Timoteo Creek which crosses the project site near the western project limit. San Timoteo Creek discharges to the Santa Ana River which runs east to west about 0.75 mile north of the project site. Existing drainage systems within the project limits generally drain to the San Timoteo Creek. Onsite runoff is collected by drainage systems in the median and on the shoulders which connect to existing cross culverts that discharge to earthen channels or concrete lined trapezoidal channels which parallel the mainline. South of I-10, the existing concrete lined trapezoidal channel crosses under Anderson Street in a double reinforced concrete box (RCB) culvert.

Drainage system improvements are proposed to collect and convey the design flow from the project site while maintaining existing flow patterns and incorporating existing drainage systems as much as possible. As a result of the EB mainline widening and EB ramp improvements, the existing

concrete lined trapezoidal channel south of I-10 would be replaced with a double 6'x4' RCB culvert between San Timoteo Creek and Anderson Street. Existing drainage facilities that outlet into the concrete lined trapezoidal channel would be extended to tie in directly to the proposed double RCB. A biofiltration swale is also proposed above the downstream end of the proposed double RCB culvert that would treat storm runoff from the EB off-ramp. Portions of the storm runoff from the mainline and WB on and off-ramps would be drained with inlets into closed drainage systems and routed into proposed biofiltration swales located in the WB ramps infield areas. New storm drain connections would also be proposed at the ramp curb returns on Tippecanoe Avenue and Anderson Street to tie into the existing local drainage systems.

7.12 Federal Involvement

Per the current Joint Stewardship and Oversight Agreement (Agreement) between Caltrans and FHWA, dated September 2007, this project is considered to be a High Profile Project. A High Profile Project Responsibilities List has been signed and agreed upon for this project on May 21, 2008. However, should any future situation or circumstance arise that will potentially declassify the project as a High Profile Project, Caltrans shall notify FHWA and reassess this project using the High Profile Project selection outlined in the Agreement.

The MAR was prepared to obtain FHWA approval on the modified access to I-10. FHWA provided the Engineering and Operational Acceptability Determination on October 15, 2009. Final approval of the MAR will be contingent upon completion of the planning and environmental process.

7.13 Life Cycle Cost Analysis for Pavements

A Life Cycle Cost Analysis (LCCA) for pavements was performed for both freeway mainline and ramp improvements. The LCCA evaluates alternative pavement sections and identifies the lowest total cost alternative. The total cost of each pavement alternative accounts for initial construction, future maintenance and rehabilitation, and user costs (travel time and vehicle use) over the design life of a pavement alternative. The alternatives evaluated in the LCCA were developed and recommended in the approved Preliminary Materials Report (November 2010). Based on the results of the LCCA, the following pavement sections were selected: a rigid pavement section of 1.25' Jointed Plain Concrete Pavement (JPCP) over 0.10' Hot Mixed Asphalt (HMA) Bond Breaker over 0.50' Lean Concrete Base (LCB) over 0.70' Aggregate Subbase (AS) for the eastbound I-10 mainline widening and portions of the westbound I-10 mainline along ramp gore areas; a flexible pavement section of 0.10' Open Graded Friction Course (OGFC) over 0.20' Rubberized Hot Mixed Asphalt (RHMA) over 0.80' HMA over 0.50' Aggregate Base (AB) for the I-10 ramps. The LCCA Forms are included as Attachment O.

8 PROGRAMMING

8.1 Programming

This project is programmed in the SCAG adopted 2011 FTIP. An amendment to update the funding amounts was submitted as part of the 2011 FTIP Amendment #1, which was approved by FHWA on December 30, 2010. Funding sources per the 2011 FTIP Amendment #1 are shown in Table 14.

SANBAG is committed to completing the PA/ED (EA Phase Code 0), and the PS&E (EA Phase Code 1).

8.2 Funding

The funding for the PA/ED is from Federal Demonstration funding with Measure I match. The PA/ED is anticipated to be complete in Winter 2010. It is anticipated that SANBAG will manage the PA/ED and PS&E with Caltrans providing oversight for this project. Table 14 shows the project funding amounts per the 2011 FTIP Amendment #1.

Table 14: Project Funding

Year	Fund	Engineering	R/W	Construction
Prior	Federal	515	25,054	
Prior	State		2,500	
Prior	Measure I / Local	6,948	6,146	825
2011/2012	Federal			26,961
2011/2012	Measure I / Local			9,821
	Subtotal	7,463	33,700	37,607
	Total	78,770		

Values are in 1,000's of dollars

8.3 Schedule

Table 15 lists the major project milestones for this project.

Table 15: Project Milestones

Phase	Start	Completion
Project Report and Environmental Document	July 2004	December 2010
Plans, Specifications & Estimates	June 2010	October 2012
Right-of-Way	June 2010	July 2012
Construction	October 2012	March 2014

9 REVIEWS

This PR was reviewed by the following agencies:

Reviewer	Title	Date
Aaron Burton	Senior Environmental Planner Branch Chief, Environmental Studies B Caltrans District 8	10/14/09
Luis Betancourt	Design Coordinator Caltrans Headquarters	10/6/09
Tay Dam	Senior Transportation Engineer FHWA	10/7/09
Syed Raza	Deputy District Director Traffic Operations Caltrans District 8	10/6/09
Jon Bumps	Design Oversight Caltrans District 8	10/6/09
Quyen Sy	Design Oversight Caltrans District 8	10/6/09

10 PROJECT KEY PERSONNEL

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Exhibit C
Project Benefit Form

Project Title: I-10 Tippecanoe Interchange Improvement Project

Project Category: Highway Interchange Improvement

Project Type: Modified Interchange (1)

Outputs: Phase I- Widen eastbound I-10 mainline from Waterman Ave. eastbound on-ramp to Tippecanoe Ave eastbound off-ramps Phase II- Reconfigure the westbound off-ramp to a partial cloverleaf configuration and adding a westbound loop at Tippecanoe on-ramp.

Outcomes:

Safety: Modification to the westbound I-10 ramps including realignment of the existing off-ramp and new loop on ramp from northbound Tippecanoe Avenue, and modification of the existing on ramp from southbound Tippecanoe will improve the merge/diverge operations and reduce weaving conflicts at the I-10 westbound ramps resulting in improved traffic operations and level of service. Phase II of the project will also improve safety by reducing weaving conflicts to the westbound on-ramp.

Velocity: The project is project to reduce Tippecanoe Ave. on ramp AM and PM peak from 1406 to 769 and 1791 to 722 respectively.

Throughput: The project will improve LOS through the design year of 2035

Reliability: The I-10 Tippecanoe Interchange Improvement Project Phase I & II will improve mainline operations by relieving the backup on the existing off-ramp. Relieve traffic congestion and reduce traffic delays during peak operating hours at the adjacent interchange. Relieve traffic congestion and reduce traffic delays during peak operating hours on existing arterial and collector roads adjacent to I-10. Provide vehicular access to existing nearby residential, commercial, and industrial areas.

Congestion reduction: The I-10 Tippecanoe Interchange Improvement Project Phase I & II is projected to reduce Daily Vehicle Hours of Delay by 14,571 hrs and Daily Peak Hour Person-Minutes by 268,060 min.

Emission reduction: Southern California Association of Governments' (SCAG) regional transportation demand model was run to determine performance and emission benefits of the project. SCAG's state-of-the-art transportation model was validated through an interagency modeling task force using up-to-date census and origin and destination survey data. The transportation demand model is used by SCAG and other agencies for transportation and environmental analyses for the Regional Transportation Plan, Regional Transportation Improvement Program, conformity, and other planning activities. The model output yields speeds, hours of delay, volumes and other performance data, and is used as an input to the Air Resources Board EMFAC model to determine emissions for various pollutants. Model runs were performed with and without the project. The results of these model runs show a positive regional air quality benefit from the project.

This list provides information on acronyms commonly used by transportation planning professionals. This information is provided in an effort to assist SANBAG Board Members and partners as they participate in deliberations at SANBAG Board meetings. While a complete list of all acronyms which may arise at any given time is not possible, this list attempts to provide the most commonly-used terms. SANBAG staff makes every effort to minimize use of acronyms to ensure good communication and understanding of complex transportation processes.

AB	Assembly Bill
ACE	Alameda Corridor East
ACT	Association for Commuter Transportation
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
APTA	American Public Transportation Association
AQMP	Air Quality Management Plan
ARRA	American Recovery and Reinvestment Act
ATMIS	Advanced Transportation Management Information Systems
BAT	Barstow Area Transit
CALACT	California Association for Coordination Transportation
CALCOG	California Association of Councils of Governments
CALSAFE	California Committee for Service Authorities for Freeway Emergencies
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CMAQ	Congestion Mitigation and Air Quality
CMIA	Corridor Mobility Improvement Account
CMP	Congestion Management Program
CNG	Compressed Natural Gas
COG	Council of Governments
CPUC	California Public Utilities Commission
CSAC	California State Association of Counties
CTA	California Transit Association
CTC	California Transportation Commission
CTC	County Transportation Commission
CTP	Comprehensive Transportation Plan
DBE	Disadvantaged Business Enterprise
DEMO	Federal Demonstration Funds
DOT	Department of Transportation
EA	Environmental Assessment
E&D	Elderly and Disabled
E&H	Elderly and Handicapped
EIR	Environmental Impact Report (California)
EIS	Environmental Impact Statement (Federal)
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FSP	Freeway Service Patrol
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
GFOA	Government Finance Officers Association
GIS	Geographic Information Systems
HOV	High-Occupancy Vehicle
ICTC	Interstate Clean Transportation Corridor
IIEP	Inland Empire Economic Partnership
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
IIP/ITIP	Interregional Transportation Improvement Program
ITS	Intelligent Transportation Systems
IVDA	Inland Valley Development Agency
JARC	Job Access Reverse Commute
LACMTA	Los Angeles County Metropolitan Transportation Authority
LNG	Liquefied Natural Gas
LTF	Local Transportation Funds

MAGLEV	Magnetic Levitation
MARTA	Mountain Area Regional Transportation Authority
MBTA	Morongo Basin Transit Authority
MDAB	Mojave Desert Air Basin
MDAQMD	Mojave Desert Air Quality Management District
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MSRC	Mobile Source Air Pollution Reduction Review Committee
NAT	Needles Area Transit
NEPA	National Environmental Policy Act
OA	Obligation Authority
OCTA	Orange County Transportation Authority
PA&ED	Project Approval and Environmental Document
PASTACC	Public and Specialized Transportation Advisory and Coordinating Council
PDT	Project Development Team
PNRS	Projects of National and Regional Significance
PPM	Planning, Programming and Monitoring Funds
PSE	Plans, Specifications and Estimates
PSR	Project Study Report
PTA	Public Transportation Account
PTC	Positive Train Control
PTMISEA	Public Transportation Modernization, Improvement and Service Enhancement Account
RCTC	Riverside County Transportation Commission
RDA	Redevelopment Agency
RFP	Request for Proposal
RIP	Regional Improvement Program
RSTIS	Regionally Significant Transportation Investment Study
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agencies
SB	Senate Bill
SAFE	Service Authority for Freeway Emergencies
SAFETEA-LU	Safe Accountable Flexible Efficient Transportation Equity Act – A Legacy for Users
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCRRA	Southern California Regional Rail Authority
SHA	State Highway Account
SHOPP	State Highway Operations and Protection Program
SOV	Single-Occupant Vehicle
S RTP	Short Range Transit Plan
STAF	State Transit Assistance Funds
STIP	State Transportation Improvement Program
STP	Surface Transportation Program
TAC	Technical Advisory Committee
TCIF	Trade Corridor Improvement Fund
TCM	Transportation Control Measure
TCRP	Traffic Congestion Relief Program
TDA	Transportation Development Act
TEA	Transportation Enhancement Activities
TEA-21	Transportation Equity Act for the 21 st Century
TMC	Transportation Management Center
TMEE	Traffic Management and Environmental Enhancement
TSM	Transportation Systems Management
TSSDRA	Transit System Safety, Security and Disaster Response Account
USFWS	United States Fish and Wildlife Service
VCTC	Ventura County Transportation Commission
VVTA	Victor Valley Transit Authority
WRCOG	Western Riverside Council of Governments

San Bernardino Associated Governments



MISSION STATEMENT

To enhance the quality of life for all residents, San Bernardino Associated Governments (SANBAG) will:

- Improve cooperative regional planning

- Develop an accessible, efficient, multi-modal transportation system

- Strengthen economic development efforts

- Exert leadership in creative problem solving

To successfully accomplish this mission, SANBAG will foster enhanced relationships among all of its stakeholders while adding to the value of local governments.

Approved June 2, 1993
Reaffirmed March 6, 1996