Talmage Road/Southbound U.S. 101 On-Off Ramp Realignment Project

Final Environmental Impact Report

State Clearinghouse # 2013072057

June 2015

Prepared for
City of Ukiah

Prepared by
Leonard Charles & Associates

Talmage Road/Southbound U.S. 101 On-Off Ramp Realignment Project

FINAL ENVIRONMENTAL IMPACT REPORT

Response to Comments Document

State Clearinghouse No. 2013072057

June 2015

Prepared for: City of Ukiah
300 Seminary Avenue
Ukiah, California 95482

Prepared by: Leonard Charles and Associates
7 Roble Court
San Anselmo, California 94960
415.454.4575

TABLE OF CONTENTS

CHAPTER 1
INTRODUCTION

A. PROJECT DESCRIPTION

The City of Ukiah (City) proposes to modify and reconstruct the southbound portion of the U.S. 101 interchange at Talmage Road (State Route 222) in Ukiah, California, to provide additional capacity in order to address future impacts associated with regional growth and projected growth in the Airport Industrial Park (AIP). The purpose of the project is to alleviate congestion and improve traffic operations and safety for the southbound Highway 101 on- and off-ramps and along the Talmage Road Corridor. The project includes a partial cloverleaf interchange configuration with a new signalized intersection at the southbound ramp terminus with Talmage Road. There would be three (3) left-turn lanes onto westbound Talmage Road and one (1) eastbound lane. Two dedicated left turns would be provided into the Airport Industrial Park. The existing southbound off-ramp would be removed. The new signalized intersection at Talmage Road and the southbound on/off ramp are proposed to be interconnected and coordinated with the existing signalized intersection at Talmage Road and Airport Park Boulevard.

The EIR also assesses a project alternative recommended by Caltrans (EIR Alternative 2) and concludes that this alternative is the environmentally superior alternative. Under Alternative 2, which Caltrans has recently communicated is its preferred design, the southbound Highway 101 off-ramp to westbound Talmage Road would remain in its approximate current location. It would be widened to include two right-turn lanes as it approaches the Talmage Road intersection. This southbound off-ramp intersection with westbound Talmage Road would be signalized and realigned to the west to increase sight distance. The southbound Highway 101 off-ramp to eastbound Talmage Road would be realigned slightly to the west, and would remain only one lane. This intersection would be signalized with the signal controlling right turns if queues begin accumulating on either southbound off-ramps or along the left-turn lane onto the southbound Highway 101 on-ramp. As is the case for the proposed project, two dedicated left-turn lanes from Talmage Road to Airport Park Boulevard would be provided.

B. CEQA PROCESS

The City of Ukiah (Lead Agency) prepared a Draft Environmental Impact Report (DEIR) for the project and circulated it for public review in September 2014. The 45-day public review period began on September 8, 2014 and ended on October 23, 2014. The City also held a public hearing before the City Council to receive oral comments on the DEIR at the City Hall at 300 Seminary Avenue in Ukiah on October 15, 2014.

The DEIR for the Talmage Road/Southbound U.S. 101 On-Off Ramp Realignment Project, together with this Response to Comments Document, constitute the Final EIR (FEIR) for the proposed project. The FEIR is an informational document prepared by the Lead Agency that must be considered and certified by decision-makers before approving the proposed project (CEQA Guidelines, Section 15090). California Environmental Quality Act (CEQA) Guidelines (Section 15132) specify the following:

"The Final EIR shall consist of:

(a) The Draft EIR or a revision of that draft.
(b) Comments and recommendations received on the Draft EIR either verbatim or In a summary.
(c) A list of persons, organizations, and public agencies commenting on the Draft EIR.
(d) The responses of the Lead Agency to significant environmental points raised in review and consultation process.
(e) Any other information added by the Lead Agency."

This document has been prepared pursuant to CEQA and in conformance with the CEQA Guidelines. This Response to Comments Document incorporates comments from public agencies, organizations, and the general public, and contains appropriate responses by the Lead Agency to those comments.

C. ORGANIZATION OF THIS FEIR

This FEIR for the proposed interchange realignment project contains information in response to comments raised during the public comment period.

Chapter 1 describes the CEQA process and the organization of this Response to Comments Document.

Chapter 2 contains a list of all persons and organizations that submitted written comments and/or made spoken comments on the DEIR during the public review period.

Chapter 3 contains copies of the comment letters and a summary of comments made at the public hearing, and the responses to those comments. Within each letter and public hearing comments, individual comments are labeled with a number in the margin. Immediately following the comment letter are responses to each of the numbered comments.

Chapter 4 contains text changes made to the DEIR.

Chapter 5 contains the Mitigation Monitoring Program for the Project.

Appendices contain CEQA noticing information, supporting traffic and air quality data, and a technical memo from the EIR noise consultant.

CHAPTER 2
AGENCIES, ORGANIZATIONS, AND PERSONS COMMENTING ON THE DEIR

This chapter provides a list of the agencies and individuals that commented on the DEIR and where their letter and the City's response to the comments can be found.

The City received six (6) comment letters on the DEIR during the public review period. Two (2) of these letters were from public agencies, and four (4) were from individuals. In addition, one commenter incorporated by reference comment letters that were submitted to the City in 2013 on a Draft Mitigated Negative Declaration (MND) that had been prepared and circulated by the City for public review. Subsequent to the public review of that Draft MND, the City decided to prepare an EIR on the proposed project. While those earlier comments letters do not address the adequacy of the DEIR, they do contain some

comments that may be potentially relevant to the DEIR analysis. Accordingly, those letters are included on this FEIR along with responses to relevant comments included in those letters.

At the public hearing, comments were submitted by two (2) members of the public. The table below shows the location of the comment letter (as well as the public hearing comments) within the Final EIR and the responses to the letter or comments.

Commentor	Date	Commentor Page	Response Page
Public Agencies			
1. State Office of Planning and Research	10/23/14	4	7
2. California Department of Transportation (Jaime Hostler)	10/17/14	8	10
3. State of California Native American Heritage Commission (Katy Sanchez)	9/25/14	11	14
Interested Persons			
4. William D. Kopper (Law Offices of William D. Kopper)	10/20/14	15	20
5. Daniel T. Smith, Jr. (Smith Engineering & Management)	10/21/14	29	70
6. Greg Gilbert (Autumn Wind Associates, Inc.)	10/23/14	81	87
7. James Houle	10/15/14	94	95
Comments Made on the 2013 Mitigated Negative Declaration			
8. William D. Kopper	8/26/13	97	104
9. Steve Pettyjohn (The Acoustics & Vibration Group, Inc.)	8/26/13	105	108
10. Daniel T. Smith, Jr. (Smith Engineering & Management)	8/14/13	109	119
11. Dale La Forest (Dale La Forest & Associates)	8/27/13	121	147
12. California Department of Transportation	8/27/13	157	164
13. California Department of Transportation	9/04/14	167	169
Comments Made at the Public Hearing			
14. Ukiah City Council Public Hearing	10/15/14	170	170

CHAPTER 3
COMMENTS ON THE DEIR AND RESPONSES TO THOSE COMMENTS

The following chapter contains the letters received and responses to those letters. Each letter is followed by a response page(s). Each comment and its corresponding response are numbered. The end of this chapter contains a summary of comments made at the October 15, 2014 City Council public hearing, and responses to those comments. Where responses have resulted in changes to the DEIR, these changes also appear in Chapter 4, Revisions to the DEIR.

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

October 23, 2014

RECEIVED
OCT 27 2014
CITY OF UKIAH
BUILDING/ PLANNING DEPARTMENT

Charley Stump
City of Ukiah
300 Seminary Avenue
Ukiah, CA 95482

Subject: Talmage Road/Southbound U.S. 101 On-Off Ramps Realignment Project
SCH#: 2013072057

Dear Charley Stump:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on October 22, 2014, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly. 1-1

Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

Document Details Report
State Clearinghouse Data Base

SCH# 2013072057
Project Title Talmage Road/Southbound U.S. 101 On-Off Ramps Realignment Project
Lead Agency Ukiah, City of

Type EIR Draft EIR

Description The City of Ukiah is proposing to modify and reconstruct the southbound portion of the US 101 interchange with Talmage Road (SR 222) to provide additional capacity in order to address future impacts associated with regional growth and protected growth in the Airport Industrial Park. The purpose of the project is to alleviate congestion and improve traffic operations and safety for the southbound Highway 101 on and off ramps and along the Talmage Road corridor. The project includes a partial cloverleaf interchange configuration with a new signalized intersection at the southbound ramp terminus with Talmage Road. There would be three left turn lanes onto westbound Talmage Road and one eastbound lane. Two dedicated left turns would be provided into the Airport Industrial Park. The existing southbound off-ramp would be removed. The new signalized intersection at Talmage Road and the southbound on/off ramp are proposed to be interconnected and coordinated with the existing signalized intersection at Talmage Road and Airport Park Blvd. Other proposed improvements include new sidewalks, signing, striping, medians, and safety lighting.

Lead Agency Contact

Name Charley Stump
Agency City of Ukiah
Phone 707 463 6219 **Fax**
email
Address 300 Seminary Avenue
City Ukiah **State** CA **Zip** 95482

Project Location

County Mendocino
City Ukiah
Region
Lat / Long
Cross Streets Talmage Road, Highway 101
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways Hwy 101
Airports Ukiah Municipal
Railways NWP
Waterways Russian River and local creeks
Schools
Land Use The current land use is "Street/Transportation." US 101 and Talmage Road Interchange

Project Issues Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Economics/Jobs; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Landuse; Aesthetic/Visual

Reviewing Agencies Resources Agency; Department of Fish and Wildlife, Region 1E; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 1; Air Resources Board; Regional Water Quality Control Board, Region 1; Native American Heritage Commission; Public Utilities Commission; State Lands Commission

Document Details Report
State Clearinghouse Data Base

Date Received 09/08/2014 ***Start of Review*** 09/08/2014 ***End of Review*** 10/22/2014

Response to Letter from Scott Morgan, Office of Planning and Research, State Clearinghouse

1-1 This is a cover letter that states that the City has complied with State Clearinghouse review requirements for draft environmental documents that are subject to CEQA. No response is required.

DEPARTMENT OF TRANSPORTATION
DISTRICT 1, P. O. BOX 3700
EUREKA, CA 95502-3700
PHONE (707) 441-4554
FAX (707) 445-2048
TTY 711

Serious drought.
Help save water!

October 17, 2014

1-MEN-101 23.4
SCH # 2013072057

Charley Stump
City of Ukiah
300 Seminary Avenue
Ukiah, CA 95482

Dear Mr. Stump,

Thank you for the opportunity to comment on the Talmage Road/Southbound U.S. 101 On-Off Ramp Realignment Project Draft Environmental Impact Report (DEIR), August 2014. The description of this project is to modify and reconstruct the southbound portion of the U.S.101 interchange with Talmage Road State Route (SR) 222 to provide additional capacity in order to address future impacts associated with regional growth and projected growth in the Airport Industrial Park. The purpose of this project is to alleviate congestion and improve traffic operations and safety for the southbound Highway 101 on and off ramps and along the Talmage Road corridor.

Caltrans is working closely with the City of Ukiah on the Preliminary Engineering and Evaluation Report (PEER) regarding this project. Several Caltrans functional units are participating in the PEER review and will have additional comments available in the upcoming months. Caltrans Encroachment Permits unit anticipates issuance of an encroachment permit by next year. 2-1

Caltrans participated in the development of Alternative # 2 (DEIR, pg. 163): to maintain two separate US 101 southbound off-ramps. In comparison to the other project alternatives, Alternative # 2 (Alt # 2) will require less right of way be purchased, less impacts to resources and less redesign work necessary to accomplish the goals of this project. Alt # 2 includes minor realignments of ramps, a signal at the US 101 southbound (SB) off ramp and westbound Talmage and a signal at the US 101 SB off ramp and eastbound Talmage to control queuing. In addition, there will be two dedicated left turn lanes from Talmage Road to Airport Park Boulevard. 2-2

After review of the DEIR we offer the following comments:

- Please continue to work closely with Caltrans to further define preferred Alt # 2. 2-3

- Note: Alt # 2 permits the ingress and egress of STAA trucks on the US 101 on and off ramps however, Airport Road (at this intersection with Talmage) does not accommodate STAA trucks as currently designed. STAA trucks will not be able to turn left from Talmage onto Airport Road nor will they be able to turn right from Airport Road onto Talmage without the potential for departing from their lane and possible collisions. Signage will be posted on northbound Airport road notifying large trucks that only lefts turns are permitted onto Talmage. Costco stated that they do not intend to use STAA vehicles in the transportation of goods at the Ukiah Costco site. Winco currently does not use STAA trucks at their Ukiah store. 2-4

If you have questions or need further assistance, please contact me at the number above or jaime.hostler@dot.ca.gov.

Sincerely,

Jaime Hostler

Jaime Hostler
Associate Transportation Planner
District 1 Regional Planning

c. Sebastian Cohen
Troy Arseneau
David Morgan
James Van Bonn
Phil Dow

Response to Letter from Jaime Hostler, California Department of Transportation

2-1 The comment provides information regarding the coordination of Caltrans and the City on the proposed Project and issuance of an encroachment permit is noted for the record. As no questions are asked concerning the DEIR, no additional response is warranted.

2-2 The comment provides information regarding the benefits of Alternative 2 and is noted for the record. As described on page 172 of the DEIR, this alternative would have approximately the same impacts as the proposed Project while improving traffic operations. Accordingly, the DEIR identified Alternative 2 as the environmentally superior alternative.

2-3 Caltrans states its preference for Alternative 2, which is noted for the record. This information will be provided to the decision makers for their consideration. This request regarding future coordination between Caltrans and the City is noted for the record. The City fully intends to continue coordinating with Caltrans on the Project. As no questions are asked concerning the DEIR, no additional response is warranted.

2-4 The comment notes that signage will be placed on Airport Park Boulevard regulating STAA trucks is noted for the record. The impact is less than significant, and no mitigation is required for that impact, The signage would be added as required by Caltrans.

STATE OF CALIFORNIA
NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd., ROOM 100
West SACRAMENTO, CA 95691
(916) 373-3710
Fax (916) 373-5471

Edmond G. Brown, Jr., *Governor*

September 25, 2014

Charley Stump
City of Ukiah
300 Seminary Avenue
Ukiah, CA 95482

RE: SCH# 2013072057 U.S. Hwy 101/Talmage Road Interchange Realignment, Mendocino County.

Dear Mr. Stump,

The Native American Heritage Commission (NAHC) has reviewed the Notice of Preparation (NOP) referenced above. The California Environmental Quality Act (CEQA) states that any project that causes a substantial adverse change in the significance of an historical resource, which includes archeological resources, is a significant effect requiring the preparation of an EIR (CEQA Guidelines 15064(b)). To comply with this provision the lead agency is required to assess whether the project will have an adverse impact on historical resources within the area of project effect (APE), and if so to mitigate that effect. To adequately assess and mitigate project-related impacts to archaeological resources, the NAHC recommends the following actions: 3-1

- ✓ Contact the appropriate regional archaeological Information Center for a record search. The record search will determine:
  - If a part or all of the area of project effect (APE) has been previously surveyed for cultural resources.
  - If any known cultural resources have already been recorded on or adjacent to the APE.
  - If the probability is low, moderate, or high that cultural resources are located in the APE.
  - If a survey is required to determine whether previously unrecorded cultural resources are present.
- ✓ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure.
  - The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.
- ✓ Contact the Native American Heritage Commission for:
  - A Sacred Lands File Check. **USGS 7.5-minute quadrangle name, township, range, and section required**
  - A list of appropriate Native American contacts for consultation concerning the project site and to assist in the mitigation measures. **Native American Contacts List attached**
- ✓ Lack of surface evidence of archeological resources does not preclude their subsurface existence.
  - Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) Guidelines §15064.5(f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
  - Lead agencies should include in their mitigation plan provisions for the disposition of recovered cultural items that are not burial associated, which are addressed in Public Resources Code (PRC) §5097.98, in consultation with culturally affiliated Native Americans.
  - Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, PRC §5097.98, and CEQA Guidelines §15064.5(e), address the process to be followed in the event of an accidental discovery of any human remains and associated grave goods in a location other than a dedicated cemetery.

Sincerely,

Katy Sanchez

Katy Sanchez
Associate Government Program Analyst

CC: State Clearinghouse

Native American Contacts
Mendocino County
September 25, 2014

Coyote Valley Band of Pomo Indians
Michael Hunter, Chairperson
P.O. Box 39/ 7901 Hwy 10, Pomo
Redwood , CA 95470
(707) 485-8723
(707) 485-1247 Fax

Pinoleville Pomo Nation
Leona Willams, Chairperson
500 B Pinoleville Drive Pomo
Ukiah , CA 95482
(707) 463-1454
(707) 463-6601 Fax

Potter Valley Tribe
Salvador Rosales, Chairperson
2251 South State Street Pomo
Ukiah , CA 95482
pottervalleytribe@pottervalleytribe.com
(707) 462-1213
(707) 462-1240 - Fax

Redwood Valley Rancheria of Pomo
Elizabeth Hansen, Chairperson
3250 Road I Pomo
Redwood , CA 95470
redwoodres@pacific.net
(707)485-0361
(707) 485-5726 Fax

Round Valley Reservation/Covelo Indian
Kenneth Wright, President
77826 Covelo Road Yuki ; Nomlaki
Covelo , CA 95428 Pit River
(707) 983-6126 Pomo
(707) 983-6128 Fax Concow
Wailaki; Wintun

Stewarts Point Rancheria
Reno Keoni Franklin, Chairperson
1420 Guerneville Road, Ste Pomo
Santa Rosa , CA 95403
reno@stewartspoint.com
(707) 591-0580 Office
(707) 591-0583 Fax

Stewarts Point Rancheria THPO
Otis Parish, Tribal Historic Preservation Officer
1420 Guerneville Road, Ste Pomo
Santa Rosa , CA 95403
Otis@stewartspoint.org
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(707) 591-0583 Fax

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(707) 591-0583 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH # 2013072057, U.S. Hwy 101/Talmage Road Interchange Realignment, Mendocino County.

Native American Contacts
Mendocino County
September 25, 2014

Potter Valley Tribe
Greg Young, Environmental Coordinator
2251 South State Street Pomo
Ukiah , CA 95482
(707) 462-1213
(707) 462-1240 Fax

Pinoleville Pomo Nation
Erica Carson, THPO
500 B Pinoleville Drive Pomo
Ukiah , CA 95482
(707) 463-1454
(707) 463-6601 Fax

Pinoleville Pomo Nation
Alan Cooper-Rider, Environmental Director
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Ukiah , CA 95482
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(707) 463-6601 FAX

Redwood Valley Rancheria of Pomo
Lois Lockart, Tribal Administrator
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redwoodres@pacific.net
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(707) 485-5726 Fax

Redwood Valley Rancheria of Pomo
Zhao Qui, Cultural Resources Coordinator
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redwoodres@pacific.net
(707) 485-0361
(707) 485-5726 Fax

Redwood Valley Rancheria of Pomo
Steve Nevarez Jr., Environmental Coordinator
3250 Road I Pomo
Redwood , CA 95470
redwoodres@pacific.net
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(707) 485-5726 Fax

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This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH # 2013072057, U.S. Hwy 101/Talmage Road Interchange Realignment, Mendocino County.

Response to Letter from Katy Sanchez, State of California Native American Heritage Commission

3-1 The letter from the Native American Heritage Commission (NAHC) is a response to the Notice of Preparation that explains what studies need to be done for an EIR; it does not contain comments on the DEIR. The cultural resource studies conducted for the DEIR comply with all NAHC recommendations set forth in this letter. As described in Appendix C of the DEIR, the EIR consulting archaeologist did contact the Northwest Information Center of the California Historical Resources Information System and conducted a record search. A site survey was conducted, and Appendix C contains the professional report describing the survey process and results. The archaeologists did contact the NAHC, and the letter from NAHC is contained in Appendix C of the DEIR. The archaeologists did contact the list of people provided by the NAHC. As reported on page 10 of the report in Appendix C, no archeological sites were identified on the project site. The archaeological assessment complied with all NAHC requirements for EIR preparation.

Law Office of William D. Kopper

417 E Street
Davis, CA 95616
(530) 758-0757
Fax (530) 758-2844

William D. Kopper*
Preston L. Morgan

RECEIVED
OCT 23 2014
CITY OF UKIAH
BUILDING/ PLANNING DEPARTMENT

October 20, 2014

City of Ukiah
Planning and Community Development Department
300 Seminary Avenue
Ukiah, CA 95482

RE: *Comments on the Talmage Road/Southbound U.S. Hwy 101 On-Off Ramp Realignment Project*
Environmental Impact Report State Clearinghouse No. 2013072057

Dear Members of the City of Ukiah Planning Staff and Planning Commission:

I represent Ukiah Citizens for Safety First, a California Association, Rachel Land, and Patty Hernandez. These are their comments on the Environmental Impact Report (EIR) for the Talmage Road/ Southbound U.S. Hwy 101 On-Off Ramp Realignment Project ("Project"). We incorporate into these comments those of all other individuals and entities commenting on the Mitigated Negative Declaration for the Intersection Improvement Project. Ukiah Citizens for Safety First, Rachel Land, and Patty Hernandez, oppose the Project as it is currently planned and designed. We incorporate into these comments the attached comments of Mr. Daniel T. Smith, Traffic Engineer, and Mr. Greg Gilbert, Air Pollution Control Specialist. 4-1

With respect to the Environmental Impact Report for the Talmage Road/Southbound U.S. Highway 101 On-Off Ramp Realignment Project, we have the following comments.

1. **The City of Ukiah did Not Consult with the County of Mendocino about the Interchange Improvement Project.**

For a Project of "statewide, regional, or area wide significance", the lead agency must provide notice to "transportation planning agencies" and "public agencies which have transportation facilities within their jurisdiction which could be affected by the project." (Public Resources Code Section2l092.4(a); CEQA Guidelines Section l5072(e).) Such "transportation facilities" include "major local arterials and public transit within 5 miles of the project site and freeways, highways, and rail transit service within 10 miles of the project site". (Public Resources Code Section 21092.4(b); CEQA Guidelines Section l5072(e).) Lead agencies must provide these agencies with all "environmental documents pertaining to the project". (Public Resources Code Section 21 094(a).) "Consultation shall be conducted in the same manner as for responsible agencies" and "shall be for the purpose of the lead agency obtaining information concerning the project's effects on major arterials, public transit, freeways, highways, and rail transit service" within a consultant agency's 4-2

*Certified Family Law Specialist; and Estate Planning, Trust and Probate Law Specialist
The State Bar of California Board of Legal Specialization

jurisdiction. (Public Resources Code Section 21092.4(a).)

The EIR prepared by the City does not include evidence that the City of Ukiah complied with these provisions of the California Environmental Quality Act and consulted with the County of Mendocino. The County has facilities that are likely to be affected by the Project, including Talmage Road, which is also known in the County as Road No. 222. The addition of trips related to the expansion of the interchange are likely to have an impact on County roads. The City should have consulted with the County about the interchange design and possible affects on County roads. There is no evidence in the EIR that any consultation took place.

2. **The Environmental Impact Report has Improperly Segmented the Interchange Project from the Costco Project.**

The Interchange Improvement Project is tied to the Ukiah Costco Project. As a condition of approval, the Ukiah Costco Project cannot go forward without the construction of the improvements at the U.S. 101/Talmage Road Interchange as set forth in the FEIR for the Costco Project. 4-3

There is no dispute that CEQA forbids "'piecemeal' review of the significant environmental impacts of a project." *(Berkeley Keep Jets Over the Bay Committee v. Board of Port Commissioners* ("*Berkeley Keep Jets Over the Bay Committee*") (2001) 91 Cal.App.4th 1344, 1358.) Rather, CEQA mandates "that environmental considerations do not become submerged by chopping a large project into many little ones—each with a minimal potential impact on the environment—which cumulatively may have disastrous consequences." (*Bozung v. Local Agency Formation Com.* (1975) 13 Cal.3d 263, 283–284.) Thus, the Guidelines define "project" broadly as "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment...." (Guidelines, § 15378, subd. (a).) If the description is inadequate because it fails to discuss the complete project, the environmental analysis will probably reflect the same mistake. (See, *Laurel Heights Improvement Association v. Regents of the University of California* (1988) 47 Cal.3d 376, 396.)

The entire project being proposed for approval must be described in the EIR. A complete project description is necessary to ensure that all the Project's environmental impacts are considered. (*City of Santee v. County of San Diego* (1989) 214 Cal.App.3d 1438, 1454.) A lead agency may not split a single large Project into small pieces so as to avoid environmental review of the entire project. (*Orinda Association v. Board of Supervisors* (1986) 182 Cal.App.3d 1145, 1171.) In the case of *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 729-732, the court discussed an EIR for a housing project that did not include construction of sewer lines and expansion of the Wastewater Treatment Plant designed to serve the project. The court found that even though the Wastewater Treatment Plant would serve other proposed housing, it was necessary for the housing project and therefore part of the project. (*Id.* at 731-732.) Because the construction of additional sewer capacity was a "required" or "crucial element [ ]" without which the proposed development project could not go forward, the EIR for the project had to consider the environmental impacts of such construction. (*Id.*)

In *Tuolumne County Citizens for Responsible Growth, Inc. v. City of Sonora (2007)* 155 Cal.App.4th 1214, the court held that a proposed Lowe's Home Improvement Center and a planned realignment of the adjacent Old Wards Ferry Road were improperly segmented as two separate projects in light of the dispositive fact that the road realignment was included by the City of Sonora

as a condition of approval for the Lowe's project. (*Id.* at p. 1220.) The court held that this was really one project, not two, because "[t]heir independence was brought to an end when the road realignment was added as a condition to the approval of the home improvement center project. [Citation.]" (*Id.* at 1231.)

Because the Ukiah Costco Project cannot go forward without the construction of the improvements at the U.S. 101/Talmage Road Interchange as added as a condition in the FEIR (AR 707, 85), the Interchange Improvements must be considered in conjunction with the Costco Project for CEQA purposes. The independence of the two projects was brought to an end when the City required completion of the Interchange improvements before the Costco Project could obtain a certificate of occupancy. In accord with the Costco FEIR, the Mitigation Monitoring Reporting Program requires that the Interchange improvements must be completed prior to the issuance of a building permit. The Mitigation Monitoring Reporting Program for the Costco states as follows: "Interchange improvements shall be substantially completed prior to the issuance of the certificate of occupancy for the project." The Costco Project cannot be built without the Interchange project. The Interchange project is a necessary mitigation measure for the Costco Project, without which the Costco Project would create unacceptably dangerous conditions on US-101 southbound at the Talmage Road Interchange. Because the Costco Project is conditioned upon completion of the Interchange improvements, the Interchange improvements are part of the Project and must be analyzed in the same EIR as the Costco Project. The General Plan text on page 32 of the Circulation Section states: "Improvements to the Interchange of U.S. 101 and Talmage are to be constructed as part of the Airport Industrial Park off Talmage Road, which is a short distance west of the existing interchange." (See, p. 74 of the Draft EIR.) This statement in the General Plan is further evidence that the huge development in the Airport Industrial Park (the Costco Project) is part of the same project as the improvements to the Interchange at U.S. 101 and Talmage Road.

3. **Improper Analysis of Alternatives**.

On page 74 of the EIR, the EIR states that one of the factors that is to be considered in the Traffic Impact Analysis for the Interchange Improvements is: "substantially increases hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses." The Traffic Section of the EIR admits that the proposed Project would require design exceptions and that the proposed design does not comply with the California Department of Transportation Highway Design Manual (HDM). 4-4

In the analysis of Project Alternatives, each alternative is analyzed with respect to the following factors: 1) geology and soils, 2) hydrology and water quality, 3) biological resources, 4) cultural resources, 5) traffic and circulation, 6) air quality, 7) noise, 8) visual resources, 9) utilities and public services, 10) hazards and hazardous materials, 11) land use, 12) global climate change, and 13) energy use.

One important issue that was raised in the Costco Project EIR and with respect to the Mitigated Negative Declaration for the Talmage Road/U.S. Highway 101 On-Off Ramp Realignment Project was the unusual geometric features of the proposed design of the Project that would create substantial deviations from the requirements from the HDM. These deviations could cause safety issues. Because safety of the design is paramount, the design parameters of each of the alternatives and the safety of these design parameters should be a key factor in choosing alternatives. The EIR needs to identify the design exceptions with each alternative and address the safety concerns related 4-5 4-6

to these design exceptions. Only with this information can the decision makers and the public understand which alternative should be selected by the City. The design problems related to the Project are identified in the attached letter from Daniel Smith, Traffic Engineer, dated August 14, 2013. 4-7

The alternatives section states that the two alternatives considered by the Route 101 Corridor Interchange Study in Mendocino County (MCOG, 2005) were not feasible for two reasons: 1) they would have significantly more impact to the exiting U.S. 101 mainline facility, and 2) would have significantly more impact to the existing City and State transportation facilities. The EIR fails to explain what either of these two significant impacts to the existing City and State transportation facilities would be. The EIR fails to explain why either of these two significant impacts of the MCOG recommended alternatives would occur. Please provide additional information as to how the two alternatives recommended by MCOG would have significantly more impacts to the existing U.S. 101 mainline facility and also significantly more impact to the existing city and state transportation facilities. 4-8

4. **Cumulative Impacts**.

The Project EIR does not include among the Cumulative Projects the Walmart Expansion Project. One of the reasons that the Walmart Expansion Project could not proceed is that the interchange at Talmage Road and U.S. 101 would not permit additional traffic. Once the interchange is approved, the Walmart Expansion will likely be once again brought before the City for approval. Therefore, a realistic cumulative impacts analysis should include the Walmart Expansion Project. 4-9

5. **Assumptions regarding Future Traffic Volumes**.

The EIR states that it relies on growth figures from Caltrans, which are included in the Traffic Appendix, to conclude that the U.S. 101 traffic will be only 1.3 times greater in the year 2032. The Costco EIR stated that during peak hours, the traffic volumes would be approximately 1.45 times greater. Please explain how and why the assumptions in the Costco EIR regarding peak hour traffic in the year 2032 differ from the assumption in the traffic study included in the Appendix to the DEIR for the Project. 4-10

6. **Bicycle and Pedestrian Issues**.

The sole discussion of pedestrian and bicycle issues is included on page 75 of the DEIR. The DEIR states Talmage Road is identified in the Ukiah Bicycle and Pedestrian Master Plan as a Class III Bicycle Route in this area, where bicycles share the roadway with other vehicles. The Project maintains this designation and also provides striped shoulders that may be used by bicyclists. The Project improves pedestrian access by constructing new wider sidewalks along the north side of Talmage Road connecting to existing sidewalks.

The discussion regarding bicycle circulation is inadequate. The EIR should explain how bicycle safety will be assured for bicycles traveling in the westbound direction over the Talmage Road overcrossing of U.S. 101. If the Caltrans alternative is selected, how will bicycles be protected from the added traffic entering on to Talmage Road from the southbound off ramps of U.S. 101. In the event the Project alternative is selected, the EIR needs to address how bicycles traveling in the westbound direction from the Talmage Road overpass will be able to negotiate the vastly expanded 4-11

Talmage Road Airport Boulevard intersection and access Airport Boulevard. The EIR also needs to address how pedestrian safety will be assured once the pedestrians cross Talmage Road and enter onto Airport Park Boulevard. What will be the safest route for pedestrians? 4-12

The EIR fails to explain how the Project is consistent with General Plan Policy CT-6.2(a) The EIR does not show how it implements a plan to extend the system of bicycle lanes and pathways into the Airport Industrial Park Business Area. The EIR does not explain how implementation measure CT-6.3(a) and CT-6.3(b) will be implemented. As previously stated, there is no information about how bicycles are going to get through the Airport/Talmage Road intersection. 4-13

Sincerely,

William D. Kopper
Attorney at Law

WDK/wrn

Response to Letter from William D. Kopper (Law Office of William D. Kopper)

4-1 The commenter requests that the comment letters submitted on the previous Draft Mitigated Negative Declaration be included in this FEIR along with responses to comments in those letters that are relevant to the DEIR analyses. See Comment Letters 8 to 13, which includes the requested comment letters.

4-2 The comment asks whether the Notice of Availability (NOA) was sent to the County Department of Transportation. The City sent the NOA and the DEIR to the County Department of Transportation. The City followed up with an email to ensure they received it. The City was informed that the County Department of Transportation did receive the NOA and the DEIR. The County did not submit comments on the DEIR.

4-3 The commenter claims that the DEIR has improperly segmented the Talmage Road Interchange Improvements Project from the Costco Project. This legal claim is incorrect. The Costco Wholesale Project was previously analyzed in an EIR certified by the City in 2013. One of the mitigation measures in the Costco EIR requires that the certificate of occupancy for the Costco project may not be issued until the Talmage Road Interchange Improvements Project is substantially completed. On this basis, the Talmage Road Interchange Improvements Project bears some relation to the Costco project. The two projects, however, are separate projects that do not satisfy the legal test for what is considered illegal "piecemealing" of environmental review under CEQA. Therefore, the two projects were appropriately analyzed in separate environmental review documents. This EIR nonetheless appropriately considers the approval and future operation of the Costco project in its impact assessment. The piecemealing test set forth by the Supreme Court in *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal. 3d 376 states:

"We hold that an EIR must include an analysis of the environmental effects of future expansion of other action if: (1) it is a reasonably foreseeable consequence of the initial project; and (2) the future expansion or action will be significant in that it will likely change the scope or nature of the initial project or its environmental effects." (*Id.* at 396.)

The Talmage Interchange Project is "reasonably foreseeable" and will change the scope or nature of the environmental effects of the Costco Project – once completed, the Talmage Improvements will mitigate certain of the Costco traffic impacts. But there is no improper piecemealing of these projects because the Talmage Interchange Project is not a "consequence" of the Costco Project. As noted in *Banning Ranch Conservancy v. City of Newport Beach* (2012) 211 Cal.App.4th 1209, 1223 "two projects may properly undergo separate environmental review (i.e., no piecemealing) when the projects have different proponents, serve different purposes, or can be implemented independently." The two projects satisfy the *Banning Ranch* test for separate environmental review (i.e. no piecemealing).

First, the Costco Project and the Talmage Interchange Project have different proponents. Costco is the project proponent/applicant for its project; the City is the project proponent for the Talmage Interchange Project.

Second, the Talmage Interchange Project serves a different purpose than the Costco Project. The Costco Project develops a new commercial development – a Costco Warehouse. The Talmage Interchange Project improvements are required to alleviate existing and future congestion, which any significant new development in the Redwood Business Park /Airport Industrial Park could otherwise exacerbate. The Talmage Interchange Project is also required to improve traffic operations and safety for the southbound on- and off-ramps and along the Talmage Road corridor.

Third, Talmage Interchange Project will be implemented independently from the Costco Project. The City's need for the Talmage Road interchange improvements predates the application for the Costco project. The need for the interchange improvements has been discussed in the Circulation and Transportation Element of the General Plan since 1995. Thus, improving this interchange has been an adopted City policy goal since that time, and the improvements are needed regardless of whether the Costco project is constructed. The Costco EIR acknowledges that the Talmage Road Interchange improvements are needed, with or without the Costco project. (See, e.g., *Anderson First Coalition v. City of Anderson* (2005) 130 Cal.App.4th 1173, 1189-1190 [in which the lead agency did not need to analyze in a single EIR the impacts of a shopping center and an adjacent interchange upon which the center would rely for access].)

The commenter's reliance on *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713 and *Tuolumne County Citizens for Responsible Growth, Inc. v. City of Sonora* (2007) 155 Cal.App.4th 1214 is misplaced. In *San Joaquin Raptor,* the EIR for the housing project recognized the sewer expansion was necessary to the project, yet the EIR lacked any discussion of the sewer expansion's scope or environmental consequences. (*San Joaquin Raptor*, *supra*, 27 Cal.App.4th at p. 731.) Here, the Talmage EIR fully acknowledges the existence of the Costco project, and evaluates the cumulative environmental effects in the event both are constructed. As noted in section 5.2 of the Talmage DEIR, the Costco project was considered in both the "list approach" and the "projections approach" to the cumulative impacts analysis. (See CEQA Guidelines, § 15030.) With respect to the list approach, the Costco project is considered, along with the Talmage Project and other past, present, and reasonably probable future projects, for purposes of cumulative analysis where the Costco project could produce related cumulative impacts. (See DEIR, pp. 36 (Geology and Soils), 46 (Hydrology and Water Quality), 58 (Biological Resources), 64 (Cultural Resources), 115 (Noise), 120 (Visual Resources), 126 (Utilities and Public Services), 131 (Hazards and Hazardous Materials), and 139 (Land Use).) In certain impact areas, the Costco project would not produce foreseeable related impacts. For example, with respect to construction, though there is the possibility that construction of the Costco project and the Talmage Project could occur concurrently, the City will implement a construction management plan to ensure there will not be problems resulting from construction vehicles from both projects through the same areas. As such, and because construction-related impacts are inherently short-term, there would not be any air quality-, noise-, or traffic-related cumulative construction impacts associated with the Talmage Project and other past, present, and reasonably probable future projects, including the Costco project.

With respect to the projections approach, Cumulative traffic impacts were assessed, as required by Caltrans for projects on State highways, for a 20-year horizon, which at the time the analysis was initiated was the year 2032. Future (2032) traffic volumes were projected from the base year (2012) existing traffic count data and multiplying existing volumes by the 1.3 Caltrans District 1 20-year growth factor. (Caltrans, 2006). The distribution of future traffic volumes at study intersections was then adjusted to align the volume projections with trip distribution estimates developed by the City of Ukiah (2013) for the Costco Wholesale Project DEIR. Correspondingly, cumulative impacts for traffic-related noise, air quality, and greenhouse gas emissions are also assessed for the horizon year of 2032 based on the growth factor traffic volumes and modified traffic distribution to address Costco-related traffic. (See DEIR, pp. 79 (Traffic and Circulation), 96 (Air Quality), 116 (Noise), 146-148 (Global Climate Change).) Thus, the relevant cumulative effects of both projects have been considered and disclosed in the Talmage DEIR.

In *Tuolumne*, the court determined the projects were improperly piecemealed because the road improvement and the home improvement center project were undertaken by the same entity and the roadway project was located right next to the home improvement center. (*Tuolumne County, supra,* 155 Cal.App.4th at p. 1227.) Neither of those key factors are present here – the Talmage Improvement Project and the Costco Project have different applicants and proponents, and the Talmage Improvement Project takes place at a location away from the Costco. Moreover, the Talmage interchange improvements would serve many businesses and local traffic and are not proposed because of the Costco project.

Because the Costco cannot receive a Certificate of Occupancy until the Talmage Improvements are completed, the commenter claims that project independence ends when a project is conditioned upon completion of another project. There is, however, no such one-factor piecemealing test under CEQA. The commenter does not cite any authority in support of such a rule. Such a condition is not the sole determinant of inclusion; it is a merely one factor to be considered when determining the scope of a project. Such a condition here does not convert the multi-purpose and long-standing set of proposed Talmage Interchange Improvements into a project undertaken solely for the benefit of the Costco Project. Nor does it undermine the other factors set forth above which show no illegal piecemealing has occurred by analyzing the Talmage Road Intersection Improvements Project and the Costco Project in separate EIRs. The trial court in the litigation over the Costco EIR recently agreed, finding that the City did not commit a CEQA error of improper piecemeal review by failing to include this Talmage Interchange Improvements Project as part of the Costco Project and analyzing the two projects in one EIR. (See Decision After Court Trial on Petition for Writ of Mandate, *Ukiah Citizens for Safety First, et al. v. City of Ukiah, et al.* (Mendocino Superior Court Case No. SCUK CVPT 14-63579).)

4-4 This is the first of a number of comments that express concern regarding the design exceptions that the Project would require and the potential for the design exceptions to create safety hazards.

As noted on page 77 of the DEIR, the project would not increase hazards to drivers and in fact would result in a beneficial impact to safety. This is true for both the proposed Project and Alternative 2, Caltrans' preferred project. The resulting lane geometry would be safe and an improvement over existing conditions given the proposed corridor operations, travel speeds, vehicle types, anticipated signing, and traffic volumes. The primary safety improvements include providing additional lanes, new signal control for westbound and southbound traffic, improved pedestrian crossings, and overall congestion relief.

To attain the proposed preferred designs for the proposed Project and Alternative 2, certain design exceptions would potentially be required. Appendix E (Traffic Impact Study) of the DEIR identified five design exceptions that would potentially be required for the proposed Project, one of which would no longer be needed. The four remaining exceptions would be to the following standards: Stopping Sight Distance Standards (201.1); Distance between Ramp Intersection and Local Road Intersection (504.3); Lane Drop Transitions (206.3); and Side Slopes 4:1 or Flatter (304.1). At the time of preparation of the Traffic Impact Study, the preliminary plans for the proposed Project were discussed with Caltrans, at which time Caltrans indicated no issues with the design exceptions and that they would likely be approved (DEIR, Appendix E).

At this time, Alternative 2, the environmentally superior alternative is anticipated to have six design exceptions (the design exceptions would be finalized and approved by Caltrans during its review process). These design exceptions would be the same four potentially required for the proposed Project, with the addition of two more: Angle of Intersection (403.3) and Site Distance and Clear Recovery Zone (902.2).

The fact that design exceptions may be required to attain the preferred designs for the proposed Project and Alternative 2, however, does not trigger a significant impact related to design hazards or safety. All proposed projects located within the State highway right-of-way are designed, and/or reviewed by Caltrans, in the context of the Highway Design Manual (HDM) (Caltrans 2012). The HDM establishes uniform policies and procedures to carry out the State highway design functions of Caltrans. The HDM does not provide a legal standard, but is considered a credible and widely-used guidance document. In some instances, a proposed project may not be able to be designed to be fully consistent with the HDM. The HDM recognizes this potential in HDM Chapter 80, Application of Design Standards, where it discusses how there is not a "one-size-fits-all" design philosophy and that highway design criteria and policies in the HDM provide a guide for the engineer to exercise sound judgment in applying the standards in the context of local conditions. In HDM Chapter 81.6, it further states that "The design guidance and standards in this manual have been developed with the intent of ensuring that designers have the flexibility to tailor a project to the unique circumstances that relate to it and its location, while meeting driver expectation." "This guidance allows for flexibility in applying design standards and approving design exceptions that take the context of the project location into consideration; which enables the designer to tailor the design, as appropriate, for the specific circumstances while maintaining safety" (Caltrans 2012). The concept of the HDM being a guidance document is further iterated in a memo from Caltrans to all

"Highway Design Manual Holders," dated April 10, 2014. This memo is included in Appendix B of this FEIR.

As such, if local or site-specific conditions do require deviation from the HDM, Caltrans has established a process by which exceptions to the design standards are documented and approved (Chapter 21, Exceptions to Design Standards, in the Project Development Procedures Manual). This could include such things as a change in slope of a curve or length of a queuing lane. The need for design exceptions arises most often because design standards change over time and existing conditions may not meet current design standards, and new designs must conform to existing conditions. The need for a design exception does not mean that a proposed design is unsafe. If a requested design exception results in an unsafe condition, Caltrans would not approve it. It is not uncommon for a highway project to include, and for Caltrans to approve, several design exceptions, especially a project that modifies an existing highway facility that was designed to an older standard.[1] In a recent letter to the City, Caltrans has confirmed this is the purpose of the design exception process and acknowledges that given that the Project is being constructed adjacent to and tying into existing infrastructure, the use of design exceptions is a process that is not unexpected. (FEIR, Appendix E, Caltrans letter to Charley Stump, City of Ukiah Director of Community Planning & Development, May 4, 2015.) According to Caltrans "Proper analysis and adherence to the exception process will ensure that a safe project will be constructed for all traveling modes of the public." (Caltrans, May 4, 2015.)

The fact that design exceptions would likely be required for the proposed Project design does not mean the Project would result in a significant impact related to design hazards or safety. The Project as designed, including the design exceptions, would not increase hazards to drivers and in fact would result in a beneficial impact to safety. Furthermore, Caltrans approval of the design exceptions signifies it has exercised its judgment that the design is appropriate for the site conditions and that the design would not create a safety or traffic hazard. As noted in the letter dated November 19, 2014 from Caltrans District 1, "[Caltrans] primary responsibility is the safety of the traveling public…and Caltrans staff constantly works to provide a safe, multimodal and sustainable transportation network." This letter is included in Appendix E of this FEIR. The City may properly exercise its discretion to rely on Caltrans' judgment and expertise to determine in this EIR that a final design will not cause a significant safety hazard.

4-5 The commenter states that the Costco EIR and the earlier Draft Initial Study/Mitigated Negative Declaration for this Project identified "unusual geometric features of the proposed project" which caused the need for design exceptions that could cause safety hazards. Notably, the impact analysis contained in this EIR is based on a more detailed project design than was available at the time the Costco EIR was prepared. Furthermore, the fact that design exceptions would likely be required for the Proposed Project design does not mean the Project includes unusual geometric features which would result in a significant impact

[1] Other projects that have included design exceptions that the EIR Authors have worked on or are aware of include: Metal Beam Guard Rail – State Route 299; Smith River Rancheria – US101; Samoa Gateway, Bicycle, & Pedestrian Improvements – State Route 255; Sonoma Country Inn Roadway Improvements – State Route 12.

related to design hazards or safety. As noted in the previous response, the Project as designed, including the design exceptions, would not increase hazards to drivers. In fact, the proposed improvements would improve the safety for drivers passing through the Project.

4-6 The comment states that the EIR should identify the design exceptions for each project alternative and address safety concerns associated with these design exceptions. With regard to design exceptions that may be required for the proposed Project and Alternative 2 and potential safety hazard impacts associated with said exceptions, please refer to Response 4-4. Although the review by Caltrans is currently underway, the design exceptions have not yet been finalized. Though the specific design exceptions have not yet been finalized, the EIR does, however, comply with CEQA in that the Project Description in the Draft EIR provides sufficient information regarding the Project design to evaluate the physical environmental impacts of implementing the project. (*Cal. Oak Foundation v. Regents of University of Cal.* (2010) 188 Cal.App.4th 227, 269-270; CEQA Guidelines, § 15124.) Notably, an EIR need not provide final design information, including a description of each design exception that may be required, in order to comply with CEQA. (See *Dry Creek Citizens Coalition v. County of Tulare* (1999) 70 Cal.App.4th 20, 28.) That information would be developed during subsequent design phases in coordination with review by Caltrans. At this time, no safety concerns have been identified for the design of the proposed Project or Alternative 2. As noted in Response 4-4, the purpose of the design exception process is to tailor the design for the specific circumstances surrounding the project while maintaining safety. Accordingly, if a requested design exception results in an unsafe condition, Caltrans would not approve it. Refer to Response 4-4 for additional information regarding design exceptions and safety hazards.

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4-7 The comment states that design problems related to the Project are addressed in an attached letter from Daniel Smith. The cited letter from Daniel Smith is presented as Comment Letter 10 later in this report.

4-8 The commenter requests additional information regarding two alternatives identified in a 2005 MCOG study that included possible improvements for the project interchange and which were rejected from further consideration as alternatives in the DEIR. As noted on page 159 of the DEIR, significant impacts associated with the two referenced MCOG alternatives include significant and unavoidable temporary and permanent impacts to U.S. 101 mainline traffic and City streets including pedestrian access across U.S. 101 associated with the complete closure of the US-101 / Talmage Road interchange required to construct the “tight diamond” and “cloverleaf,” interchange configurations. The closure of the US-101 / Talmage Road interchange necessitates detouring traffic to other interchanges in the Ukiah area, and has the potential to significantly impact their safe operation and the safe operation of City roadways and intersections. The interchange configurations would also have significantly higher air quality impacts associated with the larger scope and area of construction, potentially greater water quality impacts associated with a larger area of disturbance, and new impacts to housing as a result of demolition of private residences, and would have additional private property acquisition requirements.

4-9 The commenter states that the DEIR did not include the Walmart Expansion project in the list of projects assessed for cumulative impacts. CEQA defines cumulative impacts as two or more individual impacts which, when considered together, are substantial or which compound or increase other environmental impacts. The cumulative analysis is intended to describe the "incremental impact of the project when added to other, closely related past, present, or *reasonably foreseeable future projects*" that can result from "individually minor but collectively significant projects taking place over a period of time." (CEQA Guidelines, § 15355 (italics added).) The Walmart Expansion Project is not considered to be a reasonably foreseeable future project for purposes of the cumulative analysis. The Walmart Expansion Project was denied by the Planning Commission in 2012 and not appealed to the City Council. There is no pending application regarding Walmart nor any communications to the City that would imply a future Walmart expansion is foreseeable. As such, the City is not required to assume that a Walmart expansion project would be part of the cumulative condition. In fact, in light of the lack of *any* evidence that another Walmart expansion proposal has been or will be made, the City may *not* assume such a project in a cumulative scenario for this EIR at this time, because such a scenario would be entirely hypothetical or speculative, and therefore not accurate, useful information for the City's decision-makers and the public. Moreover, the 1.3 Caltrans growth rate applied to calculate the future traffic in the Talmage Interchange EIR Traffic Impact Study inherently includes traffic associated with the development of the former Walmart Expansion Project site because it is based on projected area growth, including within the Redwood Business Park/Airport Industrial Park.

4-10 The commenter requests an explanation of why the traffic analysis done for the Costco project identified more traffic in 2032 than the Project DEIR did. The methodology used in the Talmage Interchange Traffic Impact Study is the most recent modeling approach recommended by Caltrans. This included using the Caltrans growth factor of 1.3 to project future traffic conditions, which is specific to the US 101 corridor through Ukiah. In addition, more recent traffic counts were collected (Caltrans does not allow the use of traffic counts that are more than 2 years old) than were used in the Costco EIR. Use of the Caltrans-recommended methodology is appropriate for this Project because it is a State highway facility and is consequently required to meet Caltrans standards. As such, future growth was not determined looking at individual land use projects. Recommended growth factors were used that implicitly include future development in the region, including retail establishments such as Costco. The growth factor of 1.3 (calculated as a 20-year straight-line determinant: 15% growth over 10 years, 30% growth over 20 years) that was used is considered by Caltrans and the City to be conservatively representative of the anticipated regional traffic growth, and is also conservatively representative of regional growth during the previous 20 years. Historically, the Ukiah area has experienced growth rates of less than 1% per year. Using a growth rate of 1%, over a 20-year period the growth factor would be 1.22%, or 8% less than the Caltrans-recommended growth factor.

The methodologies used to project future traffic conditions in the Talmage Interchange Traffic Impact Study, therefore, differ from those used in the Costco Traffic Impact Study. The Costco Traffic Impact Study utilized the Ukiah Valley Area Plan (UVAP) travel demand forecasting model as the basis for the future traffic conditions. Moreover, differences in flow volumes for individual movements

under the future conditions for these analyses are attributed to peak hour factors used, assumptions made relative to trip distribution, and the existing traffic volumes used for the future projections. See also Responses 5-18 to 5-25.

4-11 The commenter requests additional information on how bicycle safety would be assured for westbound bicyclists both for the proposed Project conditions and under EIR Alternative 2. The Ukiah Bicycle and Pedestrian Master Plan classifies Talmage Road as a regional bicycle facility and bicycle activity corridor, and identifies it as a Class III connector bike route. A Class III facility is an area of the street that is shared with motorists and is designated by signs. As noted on page 75 of the DEIR, the Project would not conflict with this designation; Talmage Road would remain a Class III facility.

The Project includes signs, standard lane widths and striped 8-foot wide contiguous shoulders along Talmage Road which would accommodate shared use with bicyclists, consistent with the Class III designation. At the southbound interchange off-ramp there would be a signalized stop and crosswalk that could be used by pedestrians and bicyclists traveling, east to west, to safely traverse the intersection. For bicyclists traveling west to east, they would follow the rules-of-the-road and merge with traffic. The project improvements would be constructed in a manner that would meet the Class III facility standards, and therefore would result in safe conditions for bicyclists. Bicyclists are required to follow the same rules of the road as motor vehicles. Bicyclists could use the new and existing traffic signals to safely traverse the intersections, and could also have the option of using the pedestrian crosswalks.

For Alternative 2, westbound cyclists, just like drivers of other vehicles, would use the traffic signals to safely traverse the intersection of the southbound offramp and Talmage Road, and they would also have the option of using the pedestrian crosswalk.

4-12 The commenter asks for additional information on how pedestrian safety will be provided for the Project. The Project includes construction of a new sidewalk along the north side of Talmage Road that would connect to existing sidewalks in the pedestrian network in the area, including existing sidewalks on Airport Park Boulevard via the crosswalk at Talmage Road/Airport Park Boulevard Intersection. Pedestrians could safely cross Talmage Road/Airport Park Boulevard Intersection using the existing pedestrian crosswalk and pedestrian signal. Pedestrian sidewalks currently exist intermittently on both sides of Airport Park Boulevard south of Talmage Road.

4-13 The commenter asks how the Project is consistent with three General Plan implementation measures that address bicycle access and safety. Please see Response 4-11 regarding bicycle access. The commenter asks how the Project is consistent with General Plan Implementation Measure CT-6.2(a), which requires streets linking residential areas with schools and shopping areas be designed to include bicycle lanes. That implementation measure states the City will develop a bicycle plan to extend bicycle lanes to “important locations” in the City’s planning area. The City has developed a bicycle plan that lists Talmage Road as a Class III facility where bicyclists share the roadway with other vehicles. The Project, as designed, will maintain the Class III designation by including signs, standard lane

widths and striped 8-foot wide contiguous shoulders along Talmage Road, which would accommodate shared use with bicyclists.

Implementation Measure CT-6.3(a) requires that streets linking residential areas with schools and shopping areas be designed to include bicycle lanes. The Project is consistent with the City's Bicycle and Pedestrian Master Plan that designates Talmage Road through the Project area as a Class III facility. As described above in Response 4-11, the proposed Project contains Class III bicycle facilities. The City's Bicycle and Pedestrian Master Plan, which was prepared subsequent to the City's General Plan does not recommend constructing Class II bicycle lanes on this road. The proposed Project is consistent with this plan that was developed to be consistent with City General Plan policies calling for development of such a plan.

Implementation Measure CT-6.3(b) calls for considering bicycle operations in designing roads and traffic control systems. The Project was designed to consider bicycle operations and, as stated above, is consistent with the recommendations for Talmage Road set forth in the City's Bicycle and Pedestrian Master Plan.

To summarize, the Project is designed to be consistent with the City's Bicycle and Pedestrian Master Plan and with three General Plan implementation measures that address bicycle access and safety. However, a final determination of plan consistency is the responsibility of the City decision-makers.

SMITH ENGINEERING & MANAGEMENT

October 21, 2014

Planning and Community Development Department
City of Ukiah
300 Seminary Avenue
Ukiah, CA 95482
Attn: Mr. Charlie Stump, Director

Subject: Talmage Road / U.S. 101 Interchange Modification Draft Environmental Impact Report (SCH #2013072057)

Dear Mr. Stump:

At the request of Attorney William Kopper, I have reviewed the traffic aspects of the Draft Environmental Impact Report (the "DEIR") for the Talmage Road / U.S. 101 Interchange Modification Project (the "Project") and supporting documentation. My qualifications to perform this review include registration as a Civil and Traffic Engineer in California and over 46 years professional consulting engineering practice in the traffic and transportation industry. I have both prepared and reviewed traffic and circulation analyses of environmental review documents, including studies of freeway interchange modifications, shopping centers, freestanding discount stores and superstores and discount club stores and superstores. I am familiar with the surroundings of the proposed Project, having previously commented on environmental documents for the nearby proposed Walmart expansion project and the COSTCO development, both of which are potentially affected by the subject interchange. I also commented on the Draft Initial Study/Mitigated Negative Declaration that preceded the subject DEIR. My professional resume is attached.

Findings of my review are summarized below.

The DEIR Is Deficient As an Information Document Due To Defective Scales On Figures Detailing The Design of the Project and Alternatives To It 5-1

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Key figures detailing the design features of the Project and an Alternative to it, namely Figure 3.1-3 (the Project) and Figure 5.4-1 (Project Alternative 2) have incorrect and misleading dimensional scales on them. Both figures display an alpha-numeric scale indicating the figures are at a scale of 1 inch equals 160 feet. A graphical scale immediately above the alpha-numeric one on both of the subject figures measures out to indicate that the figures are at a scale of 0.63 inches to 160 feet (or in other words, a scale of 1 inch equals approximately 254 feet). This commenter compared measured distances between readily identifiable points on the figures as published with distances between the same points on true-to-scale aerial photos. This comparison reveals that neither the alpha-numeric nor graphical scales published on the DEIR figures are accurate. This inaccuracy is also internally obvious on the figures. For example, on Figure 3.1-3 (the Project) the width of the four southbound exit lanes plus shoulder as they approach Talmage Road should be about 56 feet. They scale about 74 feet according to the alphanumeric scale (about a 32 percent differential) and about 116 feet according to the graphical scale (about a 107 percent differential).

Members of the public generally don't have the experience of this commenter to realize when scales are inaccurate. Hence, the errant scales on these key figures interferes with the ability of the public understand the degree and implications of nonconformities with design standards inherent in the Project or the potentially hazardous difficulties in driver tasking imposed by the complexities of unconventional features compounded by close spacing. Both considerations are critical issue in whether the public should approve going forward with this Project. Thus, the DEIR is deficient as an information document.

The DEIR Fails To Disclose and Mitigate Potentially Significant Impacts of the Project Design's Non-conformity to Standards on Traffic Safety 5-2

The DEIR's summary of impacts and mitigations finds in Item 4.5-B that the Project would realign ramps and change lane configurations, but these changes would not increase hazards to drivers, that the consequence is less than significant and that no mitigation is required. However, the DEIR is inappropriately dismissive of the safety issues inherent in exceptions to design standards that the proposed design requires. The problem with this is multi-fold.

The DEIR only informs the public in an obscure generalization that the Project involves non-conformities to relevant design standards. Appendix E to the DEIR provides slightly more information about design exceptions, but this series of paragraphs, buried in a long narrative section describing all the alternatives considered, does not describe the non-conformities in clear terms of severity such as how far the proposed Project varies from the actual standard. Hence, the DEIR does not inform the public explicitly as to what the nature of the non-

conformities to design standards are, the severity of deviation from standards and what operational and safety consequences these exceptions to design standards might entail. This deliberate deficiency in the DEIR as an information document is particularly egregious because the City and its consultants clearly know what the specific nature of the design exceptions are and what the operational and safety consequences of them are, not in the least because we pointed those things out in either our last comments on the Costco EIR, the now withdrawn IS/MND on this Interchange Modification Project or both. The City cleverly evades responding to those comments by noting that there were comments on the IS/MND and stating that these are on file with the City. But the specific details in them are never directly responded-to. Only in an obscure section of Appendix E does the DEIR identify the general nature of the design nonconformities to standards, but it never explicitly reveals the extent of noncompliance with standards. It merely opines whether Caltrans will require a design exception or not and if required, whether Caltrans will grant a design exception.

The DEIR attempts to evade discussion of the consequences of exceptions to design standards by 1) stating without substantiation that in the opinion of the City and its consultants, the proposed configuration would be safer than the existing one, and 2) implying the obviously nonsensical deduction that by the simple fact that Caltrans has a design exceptions protocol, the explicit though undescribed exceptions that the proposed design requires are inherently OK. This interpretation ignores the fact that the City, its consultants, and Caltrans have a duty to assure that the proposed design conforms to design standards as much as is reasonably feasible. In fact, the Caltrans preferred alternative (Figure 5.4-1 in the DEIR) is superior to the City's preferred alternative in limiting design compromises and unconventional design complexities although the evaluation of alternatives to the Project never considers this fact (a subject discussed in a subsequent section of these comments). 5-3 5-4

The DEIR's approach to the issue of design exceptions, treating it as a matter of opinion of its experts, is an attempt to render our prior comments on this subject and those we are making herein to a matter of disagreement among experts. Under CEQA, disagreements among experts need only be noted, but not fully responded to. But this is clearly a matter of fact that potentially affects public safety, facts that the DEIR seeks to avoid revealing and addressing in depth. 5-5

Fact 1: Caltrans *Highway Design* Manual topic 206.3(1) *Through Lane Drops* provides as follows: "when a lane is to be dropped, it should be done by tapering over a distance equal to WV, where W = width of lane to be dropped and V = design speed."[1] Therefore, for example, if the design speed on Talmage is 35 miles per hour and the lane being dropped is 12 feet wide, the taper distance should be 420 feet (12 x 35). 5-6

[1] W = length in feet; V = design speed in miles per hour.

Fact 2: In the existing condition, the merge of the southbound to eastbound off ramp lane into the eastbound through lane occurs over a distance of about half of the above standard. 5-7

Fact 3: In the proposed Project, the merge is of two eastbound through lanes (the turn from the southbound off-ramp to the eastbound lanes is signal-controlled). The merge between the two eastbound lanes takes place over a distance of about 60 percent of the above standard. However, because the left lane of the two eastbound lanes merging is itself shifting to the left about one lane width in this design, the entire lateral width of the merge is doubled. Hence, the standard length for the merge would be doubled to about 840 feet.). Consequently, the proposed Project design involves a merge that is only about 30 percent of standard. Hence, the existing configuration is about 66 percent closer to conforming to standard than the proposed Project. 5-8

Fact 4: The volume of traffic that must merge into the single eastbound lane on the Talmage overcrossing of the freeway is far greater with the proposed Project than in the existing configuration. In the existing condition, only the extremely light southbound off to eastbound volume must merge. With the Project, about half the entire eastbound volume must merge. 5-9

Fact 5: Total traffic exposed in the deficient merge would be greater with the Project than in the existing condition. This is because the nearby Costco development project is conditioned to be ineligible for occupancy permit until mitigation of the Talmage Interchange traffic impacts is complete. Hence, as long as the existing interchange configuration remains in place, the Costco traffic will not be there. 5-10

Fact 6: There are potentially hazardous consequences of deficient merge length. When vehicles fail to merge successfully because of a too short merge length, vehicles may collide with one another and/or the bridge rail or go over the steep embankment to the south of the roadway. 5-11

When all of these facts are considered, it is obvious that the opinion of the City and its consultants as expressed in the DEIR is not only unsupported by fact, it is contradicted by fact.

The DEIR Must Disclose In Detail All Exceptions To Design Standards Being Requested and All Communications With Caltrans Regarding Same

The DEIR claims that Caltrans will approve the design and design exceptions inherent in the City's preferred design and specifically claims on DEIR page 77 in the discussing of Impact 4.5-B that "*Caltrans has reviewed and commented on the proposed design, and Caltrans District 3 Design indicates that the proposed* 5-12

basic design will be approved"[2]. However, no documentation of any such design approval is provided within the DEIR or its Appendices. The only documented evidence of any Caltrans support for the proposed Project is an April 15, 2013 letter from Caltrans District 1 Office or Regional and Community Planning, commenting on the *Costco DEIR*, which is reproduced in Appendix E to the current subject DEIR. The first part of the letter states that, based on additional traffic operational analysis, the mitigation proposed by the City for the Talmage interchange could mitigate the impacts of the Costco project and recommends that the mitigation proposal be included as a condition of approval of the Costco project. That is to say, according to hypothetical traffic operations calculations, the design could solve traffic congestion problems. However, in a subsequent section entitled **Caltrans Permit/Approval** that the City would apparently prefer to ignore, the referenced letter goes on to state as follows: *"Any work within State right of way will require an approved encroachment permit. Encroachment permit applications are reviewed for consistency with State standards and are subject to Department approval."* This institutional language requires some amplification.

Caltrans Encroachment Permit Manual (referenced in the same paragraph of the April 15, 2013 letter) in its introductory preface states as follows: "*The manual's purpose is to maintain uniform methods and procedures in the issuance of encroachment permits. Special situations and circumstances that require deviation from departmental design standards and policy are subject to approval by Headquarters Division of Design.*" Further, Chapter 3 of said Manual states as follows: "*The Division of Design, Chief, shall review and approve exceptions to Statewide policies and mandatory design standards that govern encroachments and access to encroachments within the State highway right of way. The Division of Design, Chief, has delegated the approval of advisory design standards to the District Directors.*" Quite clearly, the April 15, 2013 Caltrans letter is not representative of approval of design exceptions by either the District Director or the Division of Design, Chief. Moreover, Project Alternative 2 (referred to in Appendix E as the "Caltrans Preferred Alternative) depicted in DEIR Figure 5.4-1 is dated February, 2014. This is almost a year *after* the April 15, 2013 Caltrans letter the DEIR cites as proof Caltrans will approve the design of the Project and is a clear indication that Caltrans has had subsequent concerns about the design of the Project. 5-13

The DEIR must reveal in Section 4.5 of its main volume, not just in an obscure and generalized section of Appendix E, the exact design nonconformities with Caltrans standards that are inherent in the Project design, the specific extent of the nonconformity, the details of the design exceptions that will have to be requested and the justification for them, the potential public safety consequences of each nonconformity as well as whatever correspondence the City and its 5-14

[2] According to the Caltrans District 1 *District System Management Plan*, the Caltrans Design group supporting District 1 design functions is housed within Caltrans District 3 offices.

consultants have had with Caltrans with regard to design nonconformities and exceptions.

We also note here that DEIR Section 4.5 B Regulatory Framework,, in its discussion of Caltrans role, fails to identify the requirements of conformity to design standards and Caltrans design exceptions process. This failure also renders the DEIR deficient as an information document under CEQA. 5-15

The Proposed Project Design Includes Another Unconventional Feature That Compromises Traffic Safety

A second unusual geometric feature of the proposed design is the transition from a single lane off-ramp on southbound US 101 at Talmage Road, to a four lane cross-section approaching the intersection of the southbound off ramp with Talmage within a distance of about 780 feet. This tapering up from one lane to four lanes occurs on a 180 degree curve of very sharp radius (about 200 feet, less on the lanes on the inside of the curve). Within this 780- foot curved section, motorists must select the path to the correct lane or lanes appropriate for their next intended movement. One lane is intended for those going eastbound on Talmage. Two lanes lead to westbound Talmage lanes that in a short distance turn left to Airport Park Boulevard. One lane leads to a westbound Talmage through lane or a right turn at Airport Park Boulevard. Motorists' approach view of this demerge area is obscured by the Talmage overcrossing and the subsequent sharp curvature, so they must make their decision and lane transition movements in a very brief period of time. 5-16

This configuration creates a difficult navigation task for any new or infrequent user of the southbound off ramp or for distracted drivers. Because a proposed COSTCO near this interchange is projected to attract drivers from a vast market area, with the consequence that many will be infrequent visitors unfamiliar with the lane configuration, the design is likely to result in many drivers getting in the wrong lane for their destination or making late, abrupt and hazardous lane transitions to get into the appropriate lane.

For those who get in the wrong lane, the close proximity of the Airport Park Boulevard intersection with Talmage to the Ramp intersection with Talmage adds further complexity to driver decisionmaking and recovery maneuvering with adverse safety consequences. The intersections between Talmage and the southbound off ramp and Talmage and Airport Park Boulevard are separated by only about 250 feet. A driver who ends up in the wrong off-ramp lane of the three exit lanes that lead to Talmage westbound, who intends either to go straight west on Talmage or turn right at Airport Park but instead gets into either of the left-most left turn lanes on the off-ramp, or who intends to turn left at Airport Park but instead gets into the rightmost of the three left turn lanes on the off-ramp, will be

forced to make potentially hazardous abrupt maneuvers on the short[3] section of Talmage to get into the appropriate lane. The Project designers apparently hope that driver confusion and consequent unsafe maneuvers caused by this unusual design and the overly complex driver navigation tasks it demands can be alleviated by signage, but this is implausible. The DEIR is deficient in failing to identify this clearly potentially hazardous configuration which cannot be mitigated in the present design.

Caltrans clearly has reservations about the proposed design, having proposed as a preference what is considered Project Alternative 2, that avoids the subject overly complex and unconventional feature of the City's proposed Project described above. 5-17

The DEIR Fails To Rationalize Its Traffic Analysis With That In The City's Recent EIR For The Nearby COSTCO Project

The traffic volumes relied upon in the subject DEIR's traffic analysis of the Talmage Interchange improvements are vastly discrepant from those in the Costco DEIR. The Talmage Interchange traffic volumes are purported to represent year 2032 traffic including Costco traffic and other regional traffic growth to that date. However, the following is true: 5-18

- The 2032 weekday pm peak hour volume of traffic movements through the intersection of Talmage with the US 101 southbound ramps in the subject DEIR *is 8.4 percent lower than the year 2030 + Costco traffic projection in the Costco EIR even though the projection in the current DEIR is purported to account for two more years of growth.*[4] 5-19
- The Costco traffic as projected in the Costco DEIR alone accounts for over 60 percent of the 20-year weekday pm peak total traffic growth at the subject intersection as projected in the current DEIR. 5-20
- Although the 2032 weekday pm peak total traffic movements at the subject intersection constitutes a 30 percent growth over the baseline traffic volume count the current DEIR relied upon, under the growth factor procedures relied upon, the current DEIR analysis would have projected the same traffic growth to year 2032 at the subject location (as it would for any other interchange in the area) even if there were no massively traffic generating Costco project on the interchange's doorstep already approved pending completion of the interchange. Clearly, the DEIR 5-21

[3] Caltrans *Highway Design Manual* standards require a mandatory minimum of 400 feet separation between the ramp intersection and the nearest street intersection. Although the substandard separation distance between intersections is an existing condition, the complexities of the driver demands imposed by the proposed Project design and their safety consequences are compounded by the preexisting substandard intersection spacing.

[4] This is compiled by comparison of weekday pm peak hour traffic volume data found at Costco DEIR Appendix E, Figures 5 and 7 (copies attached) to corresponding data on the previously referenced Figure 3 of the current DEIR Appendix E.

analysis of this interchange Project does not reflect the traffic growth from the Costco project it enables. The concern that this DEIR may nor reasonably reflect likely 2032 traffic is further corroborated by the following considerations.

- The year 2032 total volume of traffic movements in the weekday pm peak hour through the intersection of Talmage with the US 101 southbound ramps in the subject DEIR is *less than 19 percent higher than the existing traffic count used in the Costco EIR.*[5] 5-22
- The year 2032 weekday pm peak hour volume of traffic movements through the intersection of Talmage with the US 101 southbound ramps in the subject DEIR is *only 2 percent greater than the Existing + Costco traffic projection in the Costco DEIR.*[6] 5-23
- It is also noteworthy that in our prior comments on the Costco project we have conclusively demonstrated that the Costco volumes should be even higher than indicated because the Costco analysis used an improper traffic distribution. Use of a correct traffic distribution for Costco would put considerably more traffic on the Talmage Interchange. 5-24

Although the DEIR observes that the traffic projections it relies on were developed using different methodology and different baseline traffic counts than those in the Costco EIR, the discrepancies that exist are so significant and the evidence that Costco traffic is not adequately reflected in the analysis that it is insufficient to simply observe that different forecast methodologies and base data were used. Less than 18 months ago, the City certified the Costco EIR, including its traffic analysis. Because of the significant differences between the traffic forecasts therein and the ones in the Talmage Interchange DEIR, it is insufficient for the City to in essence say 'Caltrans made us do it this way' or 'that was right then, this is right now'. To comply with the good faith effort to disclose impact demanded by CEQA, the City should, at a minimum, demonstrate that the proposed interchange improvement Project is functionally adequate under Caltrans evaluation procedures but with the traffic volumes projected in the Costco EIR including with the Costco volumes as corrected for an appropriate trip distribution based on Costco's market area instead of on the irrelevant Wal-Mart market area. 5-25

The Evaluation of Alternatives To The Project Is Inadequate

The DEIR's Section 5.5 evaluation of alternatives to the Project is inadequate because 1) it fails to consider the relative nonconformity to design standards and 5-26

[5] This is compiled by comparison of data for the subject intersection contained in DEIR Appendix E, Figure 3 with data in Costco DEIR Figure 3.10-2 at page 3.10-10. The figure from the Costco DEIR is attached hereto.

[6] This is compiled by comparison of data for the subject intersection contained in DEIR Appendix E, Figure 3 with data for the same intersection in the combination of Costco DEIR Figures 3.10-2 at page 3.10-10 (Existing Traffic- already attached) and 3.10-3 at page 3.10-22 (Project Traffic - same as Costco DEIR Appendix E, Figure 7, already attached).

need for and severity of exceptions to design standards among the alternatives as well as the presence or absence of unconventional design features that impose complex and potentially excessive driver decision and maneuvering demands, 2) it errantly compiles level of service and related queuing evaluations of Project Alternative 2 in a manner that undervalues its operational efficiency as compared to the Project, and 3) it mischaracterizes the results of comparison of the intersection delay calculations between Project Alternative 2 and the proposed Project.

In regard to Item 1 above, it appears visually obvious through comparison of Figures 5.4-1 with 3.1-3 that Project Alternative 2 is considerably more conformant to Caltrans standards for tapering at lane drops than is the proposed Project (although we cannot precisely identify how much due to the DEIR's deficiencies with regard to map scale discussed previously). It is also obvious that Project Alternative 2 eliminates the Project design's unconventional and confusing demerge of the southbound off ramp to 4 lanes on an obscured 180-degree curve with complex matching of 3 of the lanes to specific movements at a downstream intersection a substandard distance away, an undesirable feature of the Project design that results in unusually high demand on driver decisionmaking and maneuvering. The evaluation of alternatives to the Project fails to give any mention of the clear advantage of Project Alternative 2 over the Project due to these considerations. 5-27

In regard to Item 2, an essential feature of Project Alternative 2 is that it signalizes the intersection of the southbound-to-westbound off-ramp movement with the westbound Talmage traffic through movement without involving the eastbound Talmage through movement or the minor westbound Talmage to southbound on-ramp movement in the operations of this signal. However, the actual calculations of intersection delay and level-of-service treat the signalized intersection as if the eastbound Talmage through movement were under control of the signal. This is evidenced in the calculation sheet which appears in Appendix E at .pdf page 426 of the DEIR Appendices (copy attached) and is entitled HCM Intersection Capacity Analysis, 4: Talmage Road & SB Off-Ramp, Future PM Peak Hour, Caltrans Alternative Geometry. If the calculation had been performed correctly excluding consideration of the eastbound Talmage movement from control of the signal, the efficiency advantage in terms of lower delay of Project Alternative 2 over the proposed Project would be greater than reported. 5-28

In regard to Item 3, the narrative comparison of the alternatives states on DEIR page 166, "When compared to the proposed project, the alternative would reduce the amount of delay at intersections Nos.1 and 2 while slightly increasing the delay at Intersection No. 3." In actuality, if the relevant DEIR Tables 5.4-6 (the Project) and 5.5-3 (Project Alternative 2) are compared, the comparison shows that Project Alternative 2 is superior at *all* locations. At Intersection No. 3, the 5-29

delay at is *higher, not lower* with the Project (24 seconds per vehicle) than with Project Alternative 2 (22.8 seconds per vehicle).

Of these considerations, those discussed under Item 1 above is of compelling importance. Rather than characterizing Project Alternative 2 as the Environmentally Superior Alternative by default, the narrative overall evaluation should be characterizing it as a fundamentally more sound design choice than the Project. 5-30

The Project Is Growth Inducing

The DEIR's discussion of whether the Project is growth inducing exempts from consideration development projects already planned by the City. However, this ignores salient facts in this case. 5-31

- Under the Caltrans growth factor procedure used to estimate year 2032 traffic at the project location, the same amount of 2032 traffic at the interchange would have been estimated whether or not there was a Costco project in the immediate vicinity. Hence, Costco traffic must be considered additive to the 2032 traffic forecast used in the analysis.

- The Costco project's use or occupancy permit is conditioned on completion of a Talmage Interchange mitigation. In other words, Costco traffic can't happen unless the interchange Project happens.

- The Costco project is, trafficwise, an intensification over land uses previously planned for the Airport Industrial Park.

Ergo, the Project must be considered growth inducing.

The DEIR Fails To Consider Which of the Project or Project Alternative 2 Designs Best Conforms to Ultimate Widening of the Talmage Overcrossing of US 101

Appendix E to the now withdrawn IS/MND for the Project identified a threshold that when future traffic reaches 125 to 130 percent of existing traffic, the City and Caltrans should begin actions to widen the Talmage overcrossing of U.S. 101. The 2032 traffic forecasts in the current DEIR are at the 130 percent level; the 125 percent threshold presumably would be reached somewhat sooner. And as we have demonstrated herein, Costco project traffic is not really considered in the 2032 forecast. Since Costco will contribute at least an additional 60 percent to the forecast traffic growth, those thresholds for overcrossing widening will be reached much earlier. Hence, it is incumbent in the analysis of the alternative designs to consider which design is most consistent with a widening of the 5-32

overcrossing, both in ultimate configuration and during the construction period. The DEIR has not performed such an analysis.

Creating a Environmental Document for the Interchange Improvement Separate from the Costco Environmental Review Is an Improper Segmentation of What Should Be Considered a Single Project

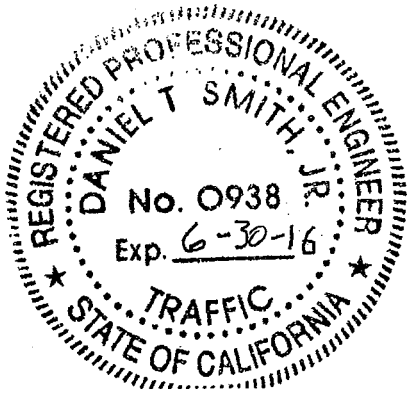
From the time of the Walmart Expansion environmental review, before the NOP on the Costco project was ever initiated, it has been abundantly clear that the Costco project could not go forward without an improvement to the Talmage - U.S. 101 interchange. Yet the City has processed the environmental review of Costco and the Talmage interchange as independent projects and has made the segmentation impacts more damaging to meaningful environmental review by using separate data bases and analysis methods for the respective traffic studies.. This is improper segmentation of the COSTCO project and the interchange improvement project violates CEQA 5-33

Conclusion

This concludes my current comments on the Talmage Road / U.S. 101 Interchange Modification Project. In summary, the IS/MND is deficient in multiple ways that require significant new information be added to the document. Consequently, the revised document must be recirculated in draft status for a full 45 day comment period

Sincerely,

Smith Engineering & Management
A California Corporation



Daniel T. Smith Jr., P.E.
President

Attachment 1
Resume of Daniel T. Smith Jr., P.E.

SMITH ENGINEERING & MANAGEMENT

DANIEL T. SMITH, Jr.
President

EDUCATION

Bachelor of Science, Engineering and Applied Science, Yale University, 1967
Master of Science, Transportation Planning, University of California, Berkeley, 1968

PROFESSIONAL REGISTRATION

California No. 21913 (Civil)
California No. 938 (Traffic)
Nevada No. 7969 (Civil)
Arizona No. 22131 (Civil)
Washington No. 29337 (Civil)

PROFESSIONAL EXPERIENCE

Smith Engineering & Management, 1993 to present. President.
DKS Associates, 1979 to 1993. Founder, Vice President, Principal Transportation Engineer.
De Leuw, Cather & Company, 1968 to 1979. Senior Transportation Planner.
Personal specialties and project experience include:

Litigation Consulting. Provides consultation, investigations and expert witness testimony in highway design, transit design and traffic engineering matters including condemnations involving transportation access issues; traffic accidents involving highway design or traffic engineering factors; land use and development matters involving access and transportation impacts; parking and other traffic and transportation matters.

Urban Corridor Studies/Alternatives Analysis. Principal-in-charge for State Route (SR) 102 Feasibility Study, a 35-mile freeway alignment study north of Sacramento. Consultant on I-280 Interstate Transfer Concept Program, San Francisco, an AA/EIS for completion of I-280, demolition of Embarcadero freeway, substitute light rail and commuter rail projects. Principal-in-charge, SR 238 corridor freeway/expressway design/environmental study, Hayward (Calif.) Project manager, Sacramento Northeast Area multi-modal transportation corridor study. Transportation planner for I-80N West Terminal Study, and Harbor Drive Traffic Study, Portland, Oregon. Project manager for design of surface segment of Woodward Corridor LRT, Detroit, Michigan. Directed staff on I-80 National Strategic Corridor Study (Sacramento-San Francisco), US 101-Sonoma freeway operations study, SR 92 freeway operations study, I-880 freeway operations study, SR 152 alignment studies, Sacramento RTD light rail systems study, Tasman Corridor LRT AA/EIS, Fremont-Warm Springs BART extension plan/EIR, SRs 70/99 freeway alternatives study, and Richmond Parkway (SR 93) design study.

Area Transportation Plans. Principal-in charge for transportation element of City of Los Angeles General Plan Framework, shaping nations largest city two decades into 21'st century. Project manager for the transportation element of 300-acre Mission Bay development in downtown San Francisco. Mission Bay involves 7 million gsf office/commercial space, 8,500 dwelling units, and community facilities. Transportation features include relocation of commuter rail station; extension of MUNI-Metro LRT; a multi-modal terminal for LRT, commuter rail and local bus; removal of a quarter mile elevated freeway; replacement by new ramps and a boulevard; an internal roadway network overcoming constraints imposed by an internal tidal basin; freeway structures and rail facilities; and concept plans for 20,000 structured parking spaces. Principal-in-charge for circulation plan to accommodate 9 million gsf of office/commercial growth in downtown Bellevue (Wash.). Principal-in-charge for 64 acre, 3 million gsf multi-use complex for FMC adjacent to San Jose International Airport. Project manager for transportation element of Sacramento Capitol Area Plan for the state governmental complex, and for Downtown Sacramento Redevelopment Plan. Project manager for Napa (Calif.) General Plan Circulation Element and Downtown Riverfront Redevelopment Plan, on parking program for downtown Walnut Creek, on downtown transportation plan for San Mateo and redevelopment plan for downtown Mountain View (Calif.), for traffic circulation and safety plans for California cities of Davis, Pleasant Hill and Hayward, and for Salem, Oregon.

Transportation Centers. Project manager for Daly City Intermodal Study which developed a $7 million surface bus terminal, traffic access, parking and pedestrian circulation improvements at the Daly City BART station plus development of functional plans for a new BART station at Colma. Project manager for design of multi-modal terminal (commuter rail, light rail, bus) at Mission Bay, San Francisco. In Santa Clarita Long Range Transit Development Program, responsible for plan to relocate system's existing timed-transfer hub and development of three satellite transfer hubs. Performed airport ground transportation system evaluations for San Francisco International, Oakland International, Sea-Tac International, Oakland International, Los Angeles International, and San Diego Lindberg.

Campus Transportation. Campus transportation planning assignments for UC Davis, UC Berkeley, UC Santa Cruz and UC San Francisco Medical Center campuses; San Francisco State University; University of San Francisco; and the University of Alaska and others. Also developed master plans for institutional campuses including medical centers, headquarters complexes and research & development facilities.

Special Event Facilities. Evaluations and design studies for football/baseball stadiums, indoor sports arenas, horse and motor racing facilities, theme parks, fairgrounds and convention centers, ski complexes and destination resorts throughout western United States.

Parking. Parking programs and facilities for large area plans and individual sites including downtowns, special event facilities, university and institutional campuses and other large site developments; numerous parking feasibility and operations studies for parking structures and surface facilities; also, resident preferential parking .

Transportation System Management & Traffic Restraint. Project manager on FHWA program to develop techniques and guidelines for neighborhood street traffic limitation. Project manager for Berkeley, (Calif.), Neighborhood Traffic Study, pioneered application of traffic restraint techniques in the U.S. Developed residential traffic plans for Menlo Park, Santa Monica, Santa Cruz, Mill Valley, Oakland, Palo Alto, Piedmont, San Mateo County, Pasadena, Santa Ana and others. Participated in development of photo/radar speed enforcement device and experimented with speed humps. Co-author of Institute of Transportation Engineers reference publication on neighborhood traffic control.

Bicycle Facilities. Project manager to develop an FHWA manual for bicycle facility design and planning, on bikeway plans for Del Mar, (Calif.), the UC Davis and the City of Davis. Consultant to bikeway plans for Eugene, Oregon, Washington, D.C., Buffalo, New York, and Skokie, Illinois. Consultant to U.S. Bureau of Reclamation for development of hydraulically efficient, bicycle safe drainage inlets. Consultant on FHWA research on effective retrofits of undercrossing and overcrossing structures for bicyclists, pedestrians, and handicapped.

MEMBERSHIPS

Institute of Transportation Engineers Transportation Research Board

PUBLICATIONS AND AWARDS

Residential Street Design and Traffic Control, with W. Homburger *et al.* Prentice Hall, 1989.

Co-recipient, Progressive Architecture Citation, *Mission Bay Master Plan*, with I.M. Pei WRT Associated, 1984.

Residential Traffic Management, State of the Art Report, U.S. Department of Transportation, 1979.

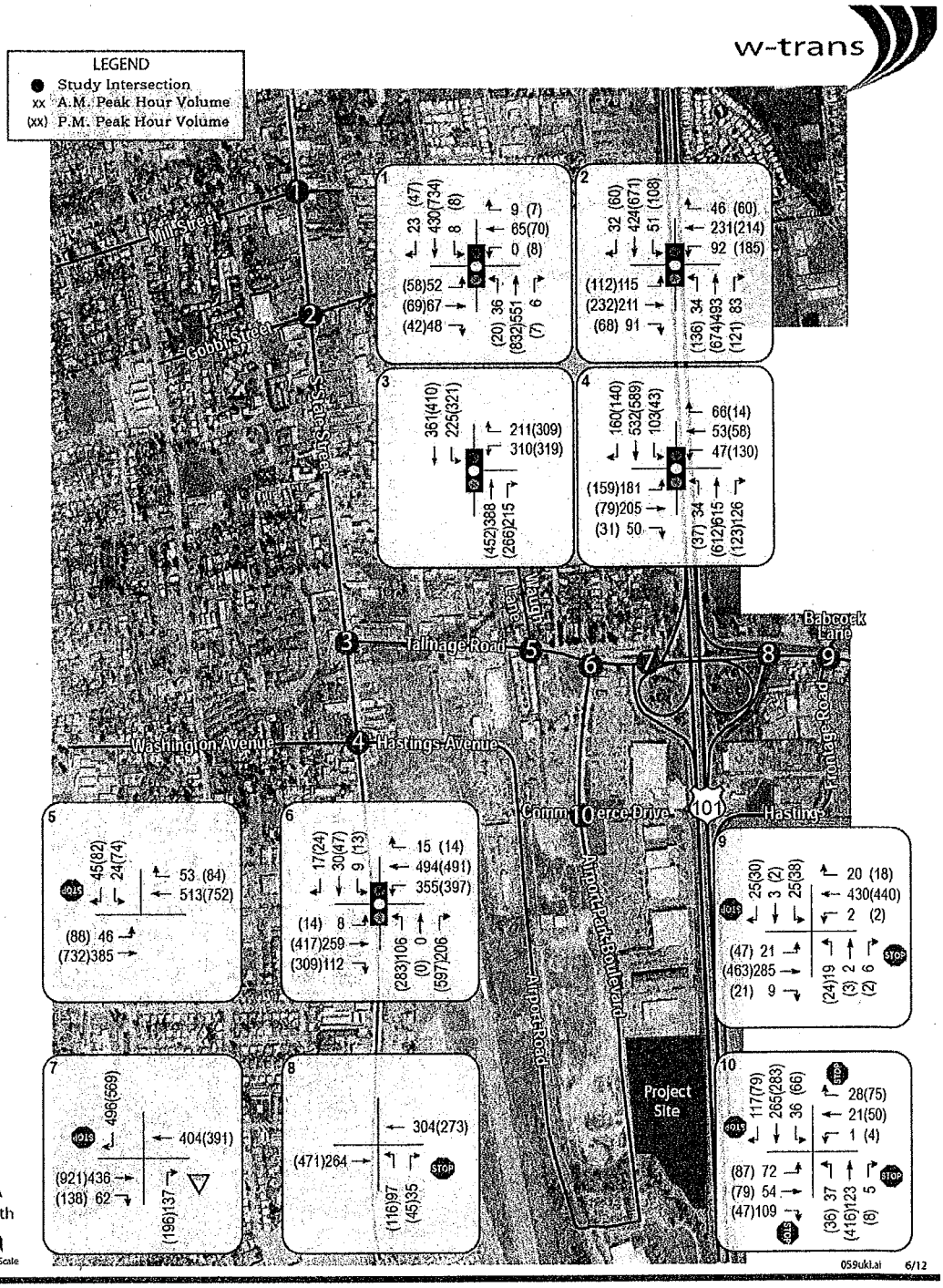
Improving The Residential Street Environment, with Donald Appleyard et al., U.S. Department of Transportation, 1979.

Strategic Concepts in Residential Neighborhood Traffic Control, International Symposium on Traffic Control Systems, Berkeley, California, 1979.

Planning and Design of Bicycle Facilities: Pitfalls and New Directions, Transportation Research Board, Research Record 570, 1976.

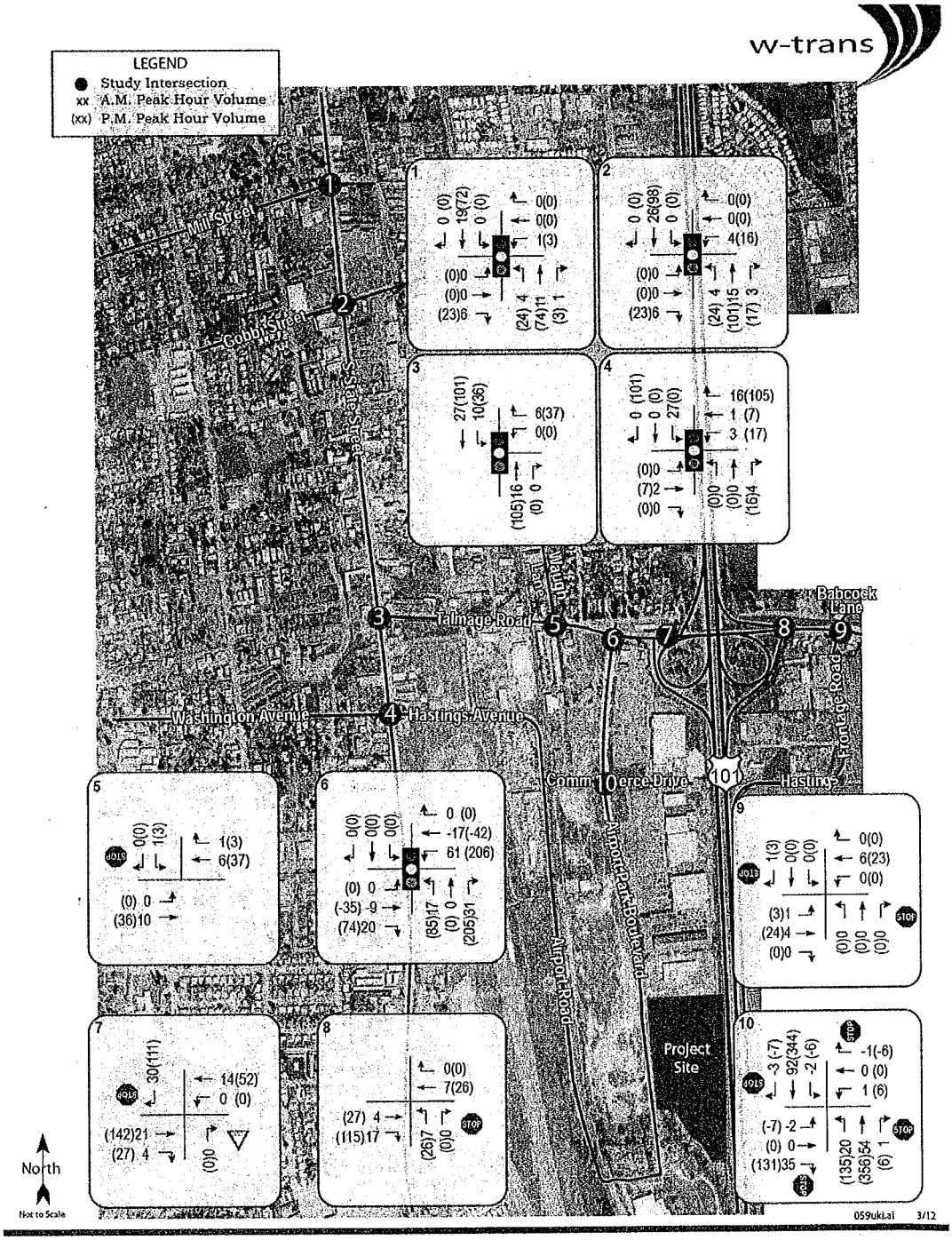
Co-recipient, Progressive Architecture Award, *Livable Urban Streets, San Francisco Bay Area and London*, with Donald Appleyard, 1979.

ATTACHMENT 2
COSTCO DEIR APPENDIX E FIGURES 5 AND 7



Costco DEIR Traffic & Circulation Report
City of Ukiah

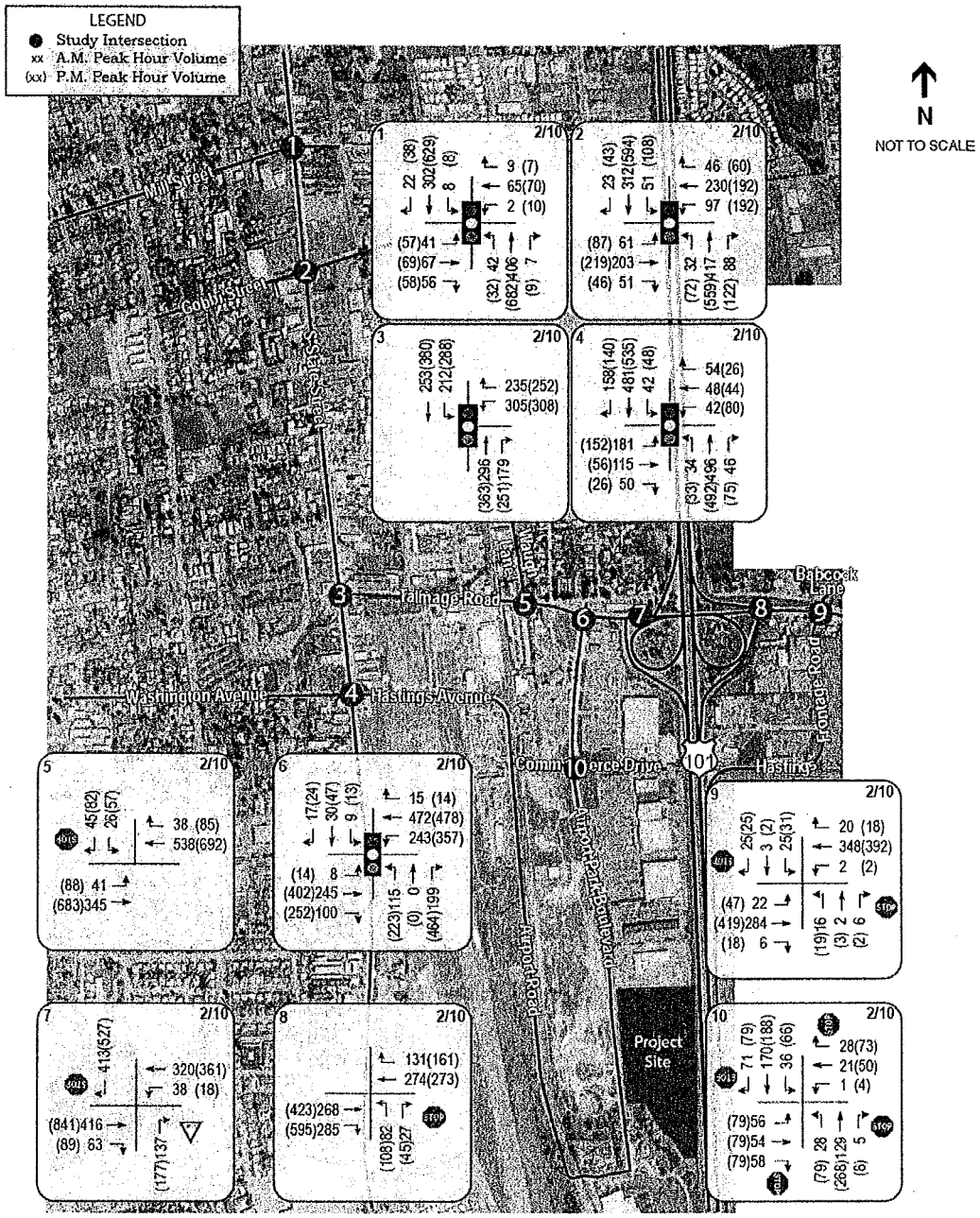
Figure 5
Future Traffic Volumes



Costco DEIR Traffic & Circulation Report
City of Ukiah

Figure 7
Project Traffic Volumes

ATTACHMENT 3
COSTCO DEIR FIGURE 3.10-2



SOURCE: w-trans, 2012; and ESA, 2012

Ukiah Costco Project . 211169

Figure 3.10-2
Existing Traffic Volumes

ATTACHMENT 4
DEIR APPENDIX E COMPUTATION SHEET AT PAGE 426 OF APPENDICES .PDF
COMPUTATION SHOWS EASTBOUND TALMAGE TRAFFIC ERRANTLY INCLUDED IN ANALYSIS OF SIGNALIZED INTERSECTION OF TALMAGE WESTBOUND THROUGH AND SOUTHBOUND-TO-WESTBOUND RAMP TRAFFIC IN CALTRANS PREFERED ALTERNATIVE (PROJECT ALTERNATIVE 2) 5-34

HCM Signalized Intersection Capacity Analysis
4: Talmage Road & SB Off-Ramp

Future PM Peak Hour
Caltrans Alternative Geometry

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↱↱
Volume (vph)	0	977	360	0	0	457
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		2.0	5.6			5.6
Lane Util. Factor		0.95	*0.88			0.88
Frt		1.00	1.00			0.85
Flt Protected		1.00	1.00			1.00
Satd. Flow (prot)		3539	3278			2787
Flt Permitted		1.00	1.00			1.00
Satd. Flow (perm)		3539	3278			2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	130%	130%	130%	130%	130%	130%
Adj. Flow (vph)	0	1337	493	0	0	625
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1337	493	0	0	625
Turn Type		NA	NA			custom
Protected Phases		2 4	6			7
Permitted Phases						
Actuated Green, G (s)		44.1	12.4			20.5
Effective Green, g (s)		44.1	12.4			20.5
Actuated g/C Ratio		1.00	0.28			0.46
Clearance Time (s)			5.6			5.6
Vehicle Extension (s)			3.0			3.0
Lane Grp Cap (vph)		3539	921			1295
v/s Ratio Prot		c0.38	0.15			c0.22
v/s Ratio Perm						
v/c Ratio		0.38	0.54			0.48
Uniform Delay, d1		0.0	13.4			8.1
Progression Factor		1.00	1.00			1.00
Incremental Delay, d2		0.1	0.6			1.3
Delay (s)		0.1	14.0			9.4
Level of Service		A	B			A
Approach Delay (s)		0.1	14.0		9.4	
Approach LOS		A	B		A	

Intersection Summary			
HCM 2000 Control Delay	5.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	44.1	Sum of lost time (s)	11.2
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

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Implementation of the recommended improvements at Talmage Road/Airport Park Boulevard and Talmage Road/US 101 Southbound Off-Ramp would result in acceptable operating conditions during both the a.m. and p.m. peak hours, and would result in acceptable queuing conditions in both the a.m. and p.m. peak hours. See **Figure 3.10-4** for a conceptual drawing of the proposed mitigation measure. The City has begun preliminary engineering on the improvements. As a state facility, modification of the interchange will require approval from Caltrans. The City has consulted with Caltrans and there is agreement on the need for improvements at that location. Funding sources have been identified, but full funding is not guaranteed at this time. Due to the uncertainty of timing, the impact is considered **significant and unavoidable.**

Future Year 2030 plus Project Freeway Segment Levels of Service

As shown in **Table 3.10-15**, the freeway segments of U.S. 101 north and south of Talmage Road would continue to operate at LOS B or better during both peak hours. The Future Year 2030 plus Project levels of service calculation sheets are provided in the transportation impact analysis report (**Appendix E**).

TABLE 3.10-15
FUTURE YEAR 2030 PLUS PROJECT
FREEWAY SEGMENT PM PEAK-HOUR LEVELS OF SERVICE (LOS)

	Northbound		Southbound	
Freeway Segment	**Vp[a]**	**LOS**	**Vp[a]**	**LOS**
1. North of Talmage Road	763	B	1,014	B
2. South of Talmage Road	555	A	632	A

a Vp = Service flow rate, measured in passenger cars per hour per lane (pc/h/ln).
SOURCE: W-Trans, 2012.

Mitigation: None required.

Future Year 2030 plus Project Queuing Analysis

Impact 3.10.5: Under Future plus Project conditions, traffic associated with the Project would contribute to inadequate queuing storage at Talmage Road/Airport Park Blvd. and Talmage Road/US 101 Southbound Off-Ramp. This impact is potentially significant.

Under Future plus Project p.m. peak hour conditions, the projected maximum queues between intersections and in turn pockets near the Talmage Road interchange can be accommodated within the available storage except at three locations. The northbound Airport Park Boulevard right-turn lane as well as the westbound Talmage Road left-turn lanes at the intersection of Talmage Road/Airport Park Boulevard are expected to have maximum queues that extend beyond the available storage. Also, the US 101 Southbound Off-Ramp at Talmage Road is anticipated to have maximum queues that extend well beyond the available storage. A summary of the Future

TABLE 3.10-4
EXISTING PM PEAK HOUR QUEUES NEAR TALMAGE ROAD-SR 222 INTERCHANGE [a]

	Northbound			Southbound			Eastbound			Westbound		
Intersection	L	T	R	L	T	R	L	T	R	L	T	R
6. Talmage Road / Airport Park Boulevard												
Available Storage	250	-	250	50	-	165	50	400	400	175	500	500
Maximum Queue	108	-	138	33	-	84	31	212	167	171	94	54
7. Talmage Road / U.S. 101 SB Off-Ramps												
Available Storage	-	-	1840	-	-	600	-	-	270	50	-	-
Maximum Queue	-	-	109	-	-	**728**	-	-	0	16	-	-
8. Talmage Road / U.S. 101 NB Off-Ramps												
Available Storage	930	-	-	-	-	-	-	-	-	-	-	-
Maximum Queue	113	-	-	-	-	-	-	-	-	-	-	-

a. Maximum Queue represents the maximum queues that develop within SIMTRAFFIC (values represent the average of six SIMTRAFFIC runs). All distances measured in feet. **Bold** indicate where queues exceed available storage.

SOURCE: W-Trans, 2012.

Existing Freeway Segment Levels of Service

The segments of US 101 to the north and south of Talmage Road are currently operating at LOS A in both the northbound and southbound directions during the p.m. peak hour. The existing levels of service for the freeway segments are summarized in **Table 3.10-5**. Level of service calculation sheets for freeway segments are included in the traffic & circulation report (Appendix E).

TABLE 3.10-5
EXISTING FREEWAY SEGMENT PM PEAK-HOUR LEVELS OF SERVICE (LOS)

	Northbound		Southbound	
Freeway Segment	Vp[a]	LOS	Vp[a]	LOS
North of Talmage Road	704	A	697	A
South of Talmage Road	372	A	368	A

a. Vp = Service flow rate, measured in passenger cars per hour per lane (pc/hr/ln).

SOURCE: W-Trans, 2012.

Collision History

The collision history for the study area was reviewed to determine any trends or patterns that may indicate a safety issue. Collision rates were calculated based on the most recent available records from January 1, 2006, through December 31, 2010, obtained from the California Highway Patrol and published in their Statewide Integrated Traffic Records System (SWITRS) reports. As presented in traffic & circulation report (Table 5 of Appendix E), the calculated collision rates for the study intersections were compared to average collision rates for similar facilities statewide, as indicated in *2007 Accident Data on California State Highways*, California Department of Transportation.

SMITH ENGINEERING & MANAGEMENT

March 8, 2013

Ms. Kim Jordan
Planning and Community Development Department
City of Ukiah
300 Seminary Avenue
Ukiah, CA 95482

Subject: Costco Wholesale Project Draft Environmental Impact Report ("DEIR") SCH # 2011112025

Dear Ms. Jordan:

At the request of Attorney William Kopper, I have reviewed the traffic aspects of the Draft Environmental Impact Report (the "DEIR") and supporting documentation, particularly the Appendix - Transportation Impact Analysis report, for the Costco Wholesale Project in the City of Ukiah(the "Project"). My qualifications to perform this review include registration as a Civil and Traffic Engineer in California and over 44 years professional consulting engineering practice in the traffic and transportation industry. I have both prepared and reviewed traffic and circulation analyses of environmental review documents, including studies of shopping centers, freestanding discount stores and superstores and discount club stores and superstores. I am familiar with the surroundings of the proposed Project, having previously commented on the nearby proposed Walmart expansion project. My professional resume is attached. 5-35

Findings of my review are summarized below.

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The DEIR Relies on Unrepresentative and Outdated Traffic Counts As the Fundamental Base for Most of Its Traffic Analyses

5-36

The so-called existing traffic counts that the DEIR relies upon for evaluation of all traffic scenarios except long range cumulative ones are comprised of peak period intersection turning counts taken in February of 2010 and California Department of Transportation (Caltrans) traffic data collected in 2008. The intersection counts and traffic data were originally assembled for the traffic impact analysis of the Walmart Expansion Project DEIR that was circulated in the summer of 2011.

The Caltrans representative commenting on that Walmart DEIR noted that the peak hour turn counts taken in the month of February were grossly under-representative of the typical average peak hour throughout the year[1]. We ourselves, commenting on the Walmart FEIR, noted that the response to Caltrans comments on this issue were evasive, contrary to fact and that there was substantial evidence that the low February traffic counts lead to critical errors in traffic study conclusions as to whether, absent mitigation, project traffic would produce extended queues on the US 101 southbound off ramp to Talmage Avenue, resulting in critical compromises to public safety[2]. The substantial evidence documented at that time was:

1. The authoritative trip generation source document *Trip Generation, 8th Edition*, at Table 4 on page 1499[3] indicates that February shopping center traffic totals only 78.1 percent of annual monthly average shopping traffic, and is the absolutely lowest month of the year.
2. Caltrans maintains permanent traffic count stations at locations throughout northern California. The data from a nearby Caltrans permanent count station on US 101 shows that general traffic on the freeway in February is 7 percent lower

[1] Letter of comment on Walmart Expansion DEIR dated August 18, 2011 from Jesse Robertson, Caltrans District 1 to Kim Jordan, City of Ukiah.
[2] Letter dated January 17, 2012 from Daniel T. Smith Jr., P.E. to William D. Kopper, submitted as part of the formal record at the City Council hearing on the Walmart matter, January 18, 2012.
[3] The table is reproduced as Attachment A to this letter.

than the average annual month, 12.4 percent lower than the average of the busiest 6 months of the year and 18 percent lower than the busiest month of the year. Now, in the Costco DEIR, the Lead Agency and its consultants, rather than conducting new counts in a representative month, are again relying on the February 2010 traffic data it knows, or should know, to be critically flawed without performing any seasonal adjustment on it to make it representative of an average peak hour.

The DEIR makes the finding that there is a traffic impact condition at the intersection of Talmage Avenue and the U.S. 101 southbound ramps that is significant and unavoidable. A critical issue in that circumstance affecting whether it would be appropriate to approve the Project under findings of overriding considerations is whether the traffic queuing on the southbound off ramp with the Project without the mitigation improvement to the interchange would constitute an extreme hazard to public safety. The difference in baseline traffic as counted in an extremely low traffic month like February as compared to an average traffic month is, as we document in a subsequent section, of sufficient dimension to make a difference in whether or not it would be acceptable to approve the Project under overriding considerations.

The reuse of stale existing traffic condition data also raises CEQA compliance issues. CEQA guidelines section 15125(a) indicates that the normal baseline for measuring a Project's impacts is the environmental conditions that exist at the time of filing the Notice of Preparation (NOP) for the EIR. The date of the NOP in Costco's case is November 4, 2011. By that date, the unrepresentatively low February, 2010 counts were nearly 2 years old, were more than 2 years old before the DEIR traffic study was completed and were a month short of 3 years old when the Costco DEIR was actually circulated. By that time the economy had improved over 2010. In our above-referenced 1-17-12 letter, we pointed out that the 2010 counts at the Walmart driveways indicated that at that time Walmart was only generating trips at 71 percent of typical average rates for that type of store, so there is every reason to believe that by late 2011 or early 2012, even without any other significant development in the area, counts at the Talmage / U.S. 101 southbound

ramps intersection would be significantly higher than in the unrepresentative counts of February, 2010. Given this, and given that the representativeness of the February 2010 counts had been already a matter of contention, the DEIR's failure to perform new traffic counts in a month as reasonably representative of average as practical after the time of the NOP is not only a procedural violation of CEQA Guidelines section 15125(a), it is also indicative of a lack of the good faith effort to disclose impact that CEQA demands.[4]

The Trip Generation Analysis Appears Excessively Favorable To the Project

The trip generation estimate for the Project is based on data furnished by the applicant for three of its small-city establishments serving fairly large surrounding rural market areas that it considers most comparable to the proposed Project's circumstances. However, the three Costco sites from which trip generation data has been drawn are really quite different in terms of their market areas. In the case of Carson City, there are 2 Costco stores in Reno, only about 30 miles distant. In the case of the Turlock Costco, there are other Costcos about 14 miles away in Modesto, 26 miles away in Merced and 30 miles away in Mantica. The Eureka store has a very large market area, with the nearest Costcos being 148 miles away in Redding, 199 miles away in Medford Oregon, 210 miles away in Chico and 225 miles away in Santa Rosa. And in contrast to the Carson City and Turlock locations, these long mileages to the nearest Costco stores that define the Eureka Costco market area are mileages on difficult roads. If the Ukiah store is completed, the nearest Costco stores to it will be 60 miles away in Santa Rosa, 148 miles away in Chico and 152 miles away in Eureka. So the most similar store to Ukiah is the one in Eureka. Not surprisingly, the Eureka store with its vast market area, per Table 3.10-6, has a trip generation rate that is 13.5 percent higher than the Carson City store, 8.9 percent higher than the Turlock store and 7.1 percent greater than the overall average of the three that was relied on in the study. In keeping with the good faith effort to disclose impact that

[4] We also note that, insofar as the DEIR relied on the same 2008 Caltrans traffic counts as in the Walmart Expansion DEIR, by the time of the Costco NOP, Caltrans counts for 2009 and 2010 were already available and 2011 counts were available before the time of completion of the DEIR's draft traffic study in June of 2012.

CEQA demands, it makes sense that the Eureka store should be the basis for the trip generation estimate rather than the average of the three locations.

Assumed Attraction of Passer-by Traffic Unsustainable By Existing Traffic

Before addressing the principal point in the above heading, we observe that the Project Trip Generation Summary, DEIR Table 3.10-7, makes it appear that the traffic analysis eliminated from further consideration those trips presumed attracted from passer-by traffic at the trip generation stage rather than tracing the paths of those trips from the point they divert from their existing route to the Project site and back to the point of resumption of their original trip. We note that the Project Traffic Volumes evidenced in Figure 3.10-3, particularly those for Intersection 10, seem to make evident that attracted passer-by trips were properly traced in from their point of diversion and back to their point of trip resumption. However, for the record, please confirm that this latter interpretation is in fact the case.

The aforementioned DEIR Table 3.10-7 and the narrative text associated with it indicates that 37 percent of the Project's pm peak hour trips, 411 trips in specific, would be attracted from drivers already passing nearby to the site, mostly from Talmage Avenue and the northern part of Airport Park Boulevard. This statistic is reportedly derived from data on Costco facilities nationwide. It is important to recognize that such a data base would reflect the characteristics of numbers of Costco facilities located near the crossroads of high-traffic urban arterials as well as some near the less-busy arterials of smaller communities like the proposed site in Ukiah. Logically, that overall national statistic of passer-by attraction may not be representative of what can be sustained at the proposed Ukiah site. Here we consider the specifics of the proposed site.
Figure 3.10-2 indicates that in the February, 2010 counts, a total of 2288 vehicles passed through the intersection of Talmage Avenue with Airport Park Boulevard in the weekday pm peak hour. If, as projected in the DEIR, 411 pm peak hour trips to Costco are to be attracted from existing passers-by, then everyone normally passing through the

intersection of Talmage with Airport Park Boulevard would have to divert to visit Costco once every 5 or 6 weekdays (average once every 5.57 weekdays). This frequency of visitation is unrealistic. The amount of traffic passing close by the site simply cannot sustain the share of Costco trip generation assumed to come from passer-by capture. The analysis should be redone assuming a more sustainable rate of passer-by capture, given the level of existing traffic near the site.

Analysis of Traffic Queues Critically Flawed 5-37

Several traffic queuing issues are critical to the environmental analysis of the Project. They include:

- With the Project and proposed traffic mitigations, would traffic queues on Talmage between its intersections with Airport Park Boulevard and the U.S. 101 southbound ramps extend from the downstream intersection into the upstream intersection in either direction, or would excessive queues from turning lanes obstruct through lanes?
- With the Project and proposed traffic mitigations, would traffic queues on the U.S. 101 southbound off-ramp to Talmage be safely accommodated?
- With the Project and proposed traffic mitigations, would traffic queues on the other approaches to either the intersection of Talmage with Airport Park Boulevard or to the southbound ramp intersection create problems?
- If the Lead Agency were to consider approving the Project without the proposed mitigation to the intersection to Talmage and the U.S. 101 southbound ramps under findings of overriding considerations, would conditions so detrimental to public safety be likely that it would be unreasonable to approve findings of such overriding considerations?

The DEIR's information in response to these issues is inadequate on several counts. First, the DEIR's analysis of queues is entirely based on hypothetical simulations of

queue lengths, even for the "existing condition"[5]. Although observations of existing queue lengths could easily have been made, this was never done. Hence, there is no way of knowing how well or poorly the simulation results presented in the DEIR reflect actual conditions. Because the queuing issue is so critical to the evaluation of this Project, the DEIR's analysts should measure existing queues, compare the result of the actual measurements to the output of the simulations of existing conditions and use that metric to adjust the results of the simulations for other scenarios.

Another problem with the DEIR's analysis of queues is the way it analyzes the queues on the southbound off ramp from U.S. 101 to Talmage. The DEIR makes the proper interpretation that queues on the southbound right (the southbound-to-westbound movement in the interchange) become impactful when the queue length exceeds 600 feet. When queues on the southbound-to-westbound movement exceed 600 feet, they extend past the point where the southbound-to-eastbound exit movements split from the southbound-to-westbound movements and the southbound-to-westbound queue begins to block those southbound-to-eastbound movements. Once that happens, a new dynamic kicks in and the queue on the southbound ramp begins to build at a rate as if the entire flow on the southbound off ramp were being processed through the southbound-to-westbound movement. The DEIR fails to assess this dynamic and, as a consequence, underestimates the actual length of queues that would build on the subject southbound off-ramp in situations where the interchange mitigation identified in the DEIR may not be built.[6] Consider the implications in each of the following scenarios:

- Existing Condition: DEIR Table 3.10-4 indicates the queue on the southbound-to-westbound movement on the subject off ramp is 728 feet. But, because the southbound-to-eastbound traffic becomes mired in the southbound-to-westbound queue, the actual queue will be in excess of 972 feet[7]. This places the back of the

[5] The DEIR relies on the average of six separate simulation runs of the analysis software SIMTRAFFIC to estimate queues for each analysis scenario (see DEIR page 3.10-8).
[6] Since this issue was raised in our letters of comment on the Walmart DEIR, the failure of the Lead Agency and its consultants to properly assess queue length in this DEIR is inexplicable and improper.
[7] In this and the immediately following queue estimates, we estimate that the added queue length would be proportional to the added approach volume participating in the queue as the result of the southbound-to-eastbound traffic flow being caught in the queue upstream of the ramp split and being processed past the

queue in the high speed deceleration area of the off-ramp, a significant safety problem.[8]

- Existing + Project Condition: DEIR Table 3.10-10 indicates that, without mitigation, the queue on the southbound-to-westbound movement on the subject off-ramp would be 1037 feet. However, because traffic on the southbound-to-eastbound movement becomes additive to that queue, the actual queue would be in excess of 1325 feet. This places the back of the queue onto the freeway mainline, a very hazardous situation.
- Near Term + Project: DEIR Table 3.10-13 indicates that, without mitigation, the queue on the southbound-to-westbound movement on the subject off-ramp would be 1192 feet. However, because traffic on the southbound-to-eastbound movement becomes additive to that queue, the actual queue would be in excess of 1525 feet. The back of this queue would extend several hundred feet onto the freeway mainline, an extremely hazardous situation.

Based on the above information, there can be no doubt that unless the interchange configuration is mitigated, the impacts on the southbound off-ramp and southbound freeway mainline would be severe public safety hazard as well as significant delay. Given this, it would be utterly irresponsible and negligent for the Lead Agency to approve the Project under findings of overriding considerations without implementing mitigation improvements to the interchange or is to allow Project occupancy before committed mitigations to the interchange can be implemented.

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split point at the rate of queue building and dispersal of the southbound-to-westbound movement. In an actual probabilistic computation of queue length, the 95th percentile queue would be longer than the values approximated through proportional techniques herein.

[8] The queue analysis of the existing traffic condition begs this question: Why, if the existing traffic volume inputs and road geometry are identical to those in the Walmart Expansion DEIR, and the same analysis program was employed by the same traffic consultants as produced the Walmart Expansion DEIR, why are the queue lengths for the existing condition predicted in the current study different from those predicted in the Walmart DEIR? The facile answer is that the queue lengths are predicted by a traffic simulation program; each simulation run produces somewhat different results, and that is why the predicted queues are the average of that predicted in six simulation runs. While all of that is factual, the differing results between the current and prior study suggest that six runs of SIMTRAFFIC is insufficient to reach a stable average value of maximum queue length that would be at least close to the average of a separate set of the same number of runs of the simulation on the same input data. In this commenter's experience, the normal standard of practice is to assume that it takes 10 runs of the simulation to reach a stable average prediction of maximum queue length.

We also note that all of the foregoing is based on the underlying data presented in the DEIR. If corrections were made for the understatements of traffic described in prior sections herein - low February traffic counts, for the low Walmart existing traffic generation (only 71 percent of norms at the time counted), understatement of this Project's trip generation, and for the excessive portion of the Project's trip generation assumed attracted from existing passers-by - then the queues on the southbound U.S. 101 off-ramp to Talmage would be significantly greater than we estimate above.

A final queuing issue concerns the queue projected in the right turn lane of the northbound approach on Airport Park Boulevard to its intersection with Talmage. Even with proposed mitigation, this queue is projected to be 261 feet in the Existing + Project scenario and 271 feet in the Near Term + Project scenario. The DEIR dismisses the significance of these queues because they do not extend into a "controlled" intersection. However, at these queue lengths, the queues will extend well past the driveway to the Quick Stop convenience store and gas station, probably blocking it almost full time, and into the northernmost driveway of the Walmart property. We suggest that the managements of these establishments be contacted and the DEIR should note whether or not they concur that the projected queues are not significant.

Lead Agency Fails To Fully Disclose Its Knowledge of Design Details and Feasibility of Proposed Mitigation Improvements to U.S. 101/Talmage Interchange 5-38

In early 2012, perhaps in reaction to our written and oral comments that the mitigation improvements To U.S. 101/Talmage Interchange proposed in the Walmart DEIR appeared infeasible, the City had GHD Inc., a civil engineering firm it was relying on for other work connected with Redwood Business Park, perform a civil engineering design feasibility review of the mitigation alternatives proposed for the interchange in that DEIR. At the City Council's March 7 meeting, staff reported that the roundabout designs favored as mitigation by the Walmart DEIR and its traffic consultant were far less feasible than the signalization mitigation scheme that relocated all southbound off-ramps

to the southwest quadrant of the interchange. The staff report, which included a preliminary design plan for this latter mitigation dated January, 1012 at a scale of 1 inch to 80 feet, also indicated that this scheme would require Caltrans approval of certain undisclosed "design exceptions" (that is, waivers to nonconformance to Caltrans design standards). Subsequently, at its June 6, 2012 meeting, the City Council approved a contract with GHD to prepare full construction design documents for this mitigation scheme and negotiate Caltrans approval of the scheme. However, in the Costco DEIR released in late January, 2013, this mitigation scheme for the interchange is only presented in the same crude conceptual detail that was presented in the Walmart DEIR in mid-summer 2011, an unscaled level of detail so conceptual that the traffic engineer for both DEIRs' described the sketches as 'cartoons' in City Council testimony.

The DEIR acknowledges the City is preparing design studies for the subject mitigation. It acknowledges that full funding for the mitigation is not guaranteed at this time. And it acknowledges that Caltrans approval of the design (and encroachment permit to construct it is required. On the basis of these considerations, it classifies the Project's traffic impact in the interchange area significant and unavoidable. But the language of the DEIR conveys the impression that this is all just a matter of procedure and timing – that approvals and funding are close to being lined up and the mitigation is really going to get built soon, leading the public and policymakers to the belief that it would be acceptable to approve Costco now with the expectation that the mitigation implementation will soon follow.[9] But such a view overlooks the complexities of the situation. Although the City has known since sometime in advance of March 7, 2012 that Caltrans approval will be contingent on Caltrans acceptance of violations of Caltrans design standards, the DEIR fails to disclose what the specifics of the needed "design exceptions" are. This must be disclosed so the public can form its own impression of whether or not the proposed mitigation will be built any time soon. The following vague statement contained on DEIR page 3.10-26 is insufficient and potentially misleading, "*The City has consulted with Caltrans and there is agreement on the need for improvements at that location.*

[9] See DEIR page3.10-26.

Preliminary designs of the intersection improvements have been shared and discussed with Caltrans staff." The public should be informed based on the City's best state of knowledge at the time of circulation of this DEIR whether Caltrans officials reviewing the design proposal have been favorable to the proposed design (not just in agreement that some improvement should be made), whether they have at least informally indicated openness to the design exceptions involved or been skeptical about the likelihood of granting them, been non-committal or even voiced preference for a different mitigation design.

The DEIR's entire presentation of the proposed mitigation fails to convey the inherent operational complexity and driver-challenging nature of the design. A key aspect of this is that the design presumes that all four westbound approach lanes on westbound Talmage to Airport Park Boulevard (two lefts, a through and a combined through-right) will extend all the way to the intersection with the 101 southbound ramps – that is, without the normal raised island bay taper protecting and channelizing access to the left turn lanes. Unless the lanes extend fully, there will be insufficient queue storage between the two intersections and the mitigation will be dysfunctional from the start. The DEIR Appendix D traffic study expresses the hope that drivers will be directed to the correct lane for their destination by signs and markings on the off ramp and intersection markings to avoid creating a trap lane for drivers in the left-most off ramp lane.[10] However, this facile view that guidance will allow drivers to sort themselves out appropriately ignores the geometry of the proposed off-ramp. The geometry is such that drivers will have to demerge from a single lane to the appropriate one of three lanes (leftmost for Airport Park Boulevard, center for Talmage westbound, right for Talmage eastbound) while simultaneously executing a 180-degree fishhook turn on an extremely short radius (approximately 200 foot outside radius on the outside lane) curve. And this must happen with the driver's view on the approach to the demerge and fishhook curve screened by the overcrossing structure. Since Costco as well as the existing Walmart and Friedmans in Redwood Business Park all draw customers from large, remote market

5-39

[10] DEIR Appendix D, pages 17 and 18.

areas, many of the drivers on the ramp will be first time or infrequent users who, despite best efforts at signing and marking, will end up in the wrong lane on the ramp and still attempt to weave to lanes serving their intended destination. Ultimately, traffic operations on the proposed mitigation are likely to resemble those at the bumper-car arena at an amusement park. Hence, it is questionable that the design as proposed is approvable. DEIR Appendix E admits on the above-referenced page that the intent of the proposed mitigation design is to avoid the need for the more costly (and more conventional) solution of widening the freeway overcrossing to 4 lanes.

On the interchange mitigation funding issue, the DEIR should make clear to the public that that the City's intent had been to fund the majority of the cost that would not be funded by Costco and other fair share payers by using funds through the Successor Agency to the Ukiah Redevelopment Agency and that the State of California Department of Finance disputes the legality of the City using those funds for that purpose. The DEIR should reference the staff report to the June 6, 2012 City Council meeting or any subsequent report adding more clarification to the issue. 5-40

Since the Project Cannot Be Implemented Without the Interchange Modification, the Interchange Modification Should Be Evaluated in the DEIR as Part of the Project

The Costco Project cannot go forward without modification to the Talmage – U.S. 101 interchange area. The City's staff report for the June 6, 2012 City Council agenda item approving the design contract for the interchange modification stated in its first paragraph, 4th sentence: *"It is clear that the build out of the Park will require a significant improvement to the traffic facilities for the south bound freeway traffic."* Analyzed properly, the data in the current DEIR makes clear that the Costco Project cannot be reasonably approved unless an effective modification to the interchange is constructed simultaneously. Due to these considerations, the interchange modification should be treated as an element of the Costco Project. The DEIR's Project Description 5-41

section fails to identify the interchange modification as an element of the Costco Project or to identify the full impacts of the interchange modification. The DEIR solely purports to evaluate the interchange modification's effectiveness in mitigating the traffic effects of the rest of the Costco Project. CEQA requires environmental analysis of 'the whole' of a project. In failing to identify the interchange modification as part of the Project Description and in failing to attempt to identify all of the interchange modification's environmental impacts, the DEIR improperly segments the real Project. The DEIR should be revised to evaluate the full environmental impacts of the Project including in specific those of the proposed interchange modification.

In any case, the interchange modification would be a major project that would require its own EIR, even if it were to be considered as an independent action. To date, there is no evidence of any effort to perform a complete environmental review of the interchange modification project. The fact that the City has acted to include this specific design of interchange modification in its Capital Improvement Program and funded in excess $250,000 in development of construction plans for the modification without conducting any environmental analysis of the proposed modification may also be improper under CEQA.

The DEIR Fails To Consider the Proposed Walmart Expansion in the Traffic Analysis 5-42

The Walmart Expansion Project has an EIR (SCH 2010032042) certified December 14, 2011. Approval of the Walmart Project was withheld due to failure of the City Planning Commission to reach findings that the benefits of the project override the significant impacts of the Walmart expansion project that the EIR found. Those impacts included certain parking and landscape nonconformities, the traffic situation involving the U.S. 101 – Talmage interchange and other consideration. If the City implements the currently proposed interchange modifications which were identified as a potential mitigation measure in the Walmart EIR, Walmart could remedy its parking /landscape deficiencies

and have nothing standing between its project and approval. Or even without changing anything else, with the traffic impacts purportedly mitigated per the already certified EIR, Walmart could refile and potentially convince the Planning Commission that the benefits of the project now outweigh the remaining significant impacts and gain approval under overriding considerations. In fact, much Planning Commission discussion about overriding considerations at its March 14 and April 11, 2012 meetings where the Commission finally determined that it did not support findings of overriding considerations concerned how easily Walmart could resurrect the project if the City developed a solution to the interchange traffic problem and Walmart made small changes to their plan.

However, despite the ease with which the Walmart Expansion project could be resurrected, the current Costco Project DEIR has not evaluated the consequences of Walmart Expansion traffic being added to the scene in any of the near term scenarios. This is a critical omission. The DEIR should be revised to include analysis of a near term traffic scenario that assumes the Walmart Expansion does get approved and constructed.

The DEIR Fails To Address the Zoning Changes Needed by the Project Properly

5-43

Part of the Project site is zoned Industrial/Auto Commercial, a zoning category that does not allow retail. In order to approve the Project, this zoning must be changed. Zoning must be consistent with the General Plan. The City needs a General Plan Amendment to change the zoning. As part of the General Plan Amendment, the City must complete a traffic study assessing the consequences and impacts of changes in traffic the specific Amendment would cause. The DEIR has not performed any analysis of whether changing the zoning on the Industrial/Auto Commercial portion of the site to Retail would be more detrimental from a traffic standpoint than development under the current zoning.

The DEIR discussion of conformance with General Plan Circulation policies, specifically CT 1.1 and CT 1.3 on DEIR pages 3.7-8 and -9 admits that the Project would have

significant near term and long term cumulative traffic impacts, but claims the Project remains in conformity with those General Plan policies because it offers to pay fair share fee contributions toward identified mitigations for those impacts. However, fee based mitigation must be effective mitigation, which means it is capable of being completed. In this case the fee-based mitigation is not feasible mitigation because there is no enforceable plan to complete the mitigation. In specific, the DEIR's own traffic study finds those traffic impact conditions to be significant and unavoidable because there is no assurance of securing full funding or getting Caltrans approval for the interchange modification mitigation measure. Therefore, the Project is inconsistent with the General Plan. The findings of consistency cannot be made. The EIR needs to discuss the Project's inconsistency with the General Plan and the impacts of this inconsistency.

On page 3.7-3, the DEIR asserts that the Project doesn't have to conform to every single policy of the General Plan; that it just needs to overall be judged by the community to be more in furtherance of General Plan policies than it is in obstruction of them. That standard doesn't apply when a Project is directly inconsistent with a fundamental policy of the General Plan. If the Project is inconsistent with a fundamental policy, then the City cannot proceed.

DEIR Collision Analysis Ignores Critical Location

5-44

The DEIR and its Appendix E reviews collision data for study intersections for the 5 years starting January, 2006 through December, 2010. Data for calendar year 2011 was available shortly after the NOP for the Project was circulated and certainly well before the Appendix E Draft Traffic Impact Study was completed in June, 2012. The 2011 collision data should have been considered in the analysis. More important, by confining the collision analysis to intersections, the traffic impact analysis avoids addressing the most critical traffic safety consideration of relevance to this DEIR. That consideration is whether the queuing on the southbound U.S. 101 off-ramp to Talmage in the interchanges current geometry constitutes such a significant hazard to public safety that it would be inappropriate to approve the Project under findings of overriding considerations without first implementing mitigation improvements to the interchange. The DEIR must examine the collision data for the subject off-ramp and the immediate freeway mainline approach to this off-ramp.

> *ECON. The potential route to and from each market area was determined based on current travel patterns to and from the project area, and a percentage of assigned Project-generated vehicle trips were derived from the share of each market area. These distribution percentages were then applied to the trip generation estimates to determine the number of vehicle trips on each route to and from the market destinations."*

DEIR Table 3.10-8 presents the percentages of Project traffic approaching/departing via major routes as the end result of this process. However, neither the DEIR nor its Appendix E Transportation Impact Study the actual data and computation steps involved in deriving the results presented in Table 3.10-8. A vast portion of the market area lays to the north that would access and depart the Project via U.S. 101 to/from north of Talmage and an additional large portion of the market area lays generally to the east and would approach/depart along SR 20, ultimately also approaching and departing the immediate Project area via U.S. 101 north of Talmage. It seems odd that, given the size of the portion of the market area that would ultimately approach/depart via U.S. 101 to the north of Talmage, Table3.10-8 would only show 34 percent of Project trips approaching and departing via this route. Obviously, this distribution percentage is critical because of the queuing problems on the southbound off-ramp to Talmage and the queuing problems on Talmage between that off-ramp intersection and the intersection with Airport Park Boulevard. Please present the initial data and computational steps that translate the market analysis into the end results shown on Table 3.10-8.

Changed Threshold of Significant Traffic Impact at 2-Way Stop Intersections

5-45

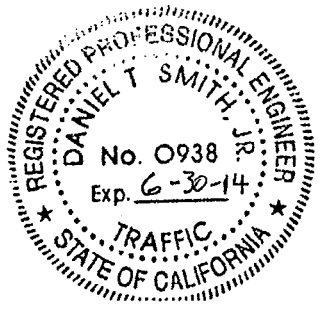
It appears that the City has changed the criteria for significant traffic impacts since certifying the Walmart Expansion EIR to eliminate direct consideration of side street delays per 2-way stops, now only considering whether the overall average delay on the combination of all approaches remains within an acceptable level. The implication of this policy is that drivers on the stopped minor approaches could vainly wait forever to find a safe opportunity to proceed without the condition being found to be a significant traffic impact. Is this change in the significance threshold where side street delay is now not even reported in the DEIR a change that was formally adopted by the City Council or is this a convention that was concocted by City staff and consultants in an effort to eliminate the inconvenient need to explain-away nuisance findings of significant impacts?

Conclusion

This concludes my current comments on the Draft Environmental Impact Report for Costco Project. Because of the many critical defects in the Transportation and Traffic section of the DEIR discussed above, that section should be completely revised and the document should be re-circulated for a full 45 day comment period in draft status. In closing, I emphasize my prior comment that, due to the considerable public safety consequences of traffic queues on the U.S. 101 southbound off ramp to Talmage that would occur if the Project were approved and in operation before an effective mitigation scheme for the interchange area were implemented, the Project cannot reasonably be approved under findings of overriding considerations.

Sincerely,

Smith Engineering & Management
A California Corporation



Daniel T. Smith Jr., P.E.
President

Source numbers 58, 124

Table 4 Monthly Variation in Shopping Center Traffic Percentage of Average Month			
Month	**Percentage**	**Month**	**Percentage**
January	85.3	July	100.8
February	78.1	August	102.1
March	92.0	September	94.8
April	93.2	October	98.9
May	105.4	November	101.5
June	106.0	December	141.8

Sample size: 2
Average gross leasable area: 938,000 square feet

The sites were surveyed between the 1960s and the 2000s throughout the United States and Canada.

Source Numbers

1, 2, 3, 4, 5, 6, 13, 14, 18, 19, 22, 26, 40, 42, 48, 49, 54, 59, 60, 61, 64, 65, 72, 73, 75, 76, 77, 78, 79, 87, 89, 90, 98, 99, 100, 105, 110, 124, 156, 159, 172, 186, 193, 194, 195, 196, 197, 198, 199, 202, 204, 211, 213, 260, 263, 269, 295, 299, 300, 301, 304, 305, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 358, 365, 376, 385, 390, 400, 404, 414, 420, 423, 428, 437, 440, 442, 444, 446, 507, 562, 563, 580, 598, 629, 658

Response to Letter from Daniel T. Smith, Jr. (Smith Engineering & Management)

5-1 The commentor correctly notes that the scales on the DEIR Figures 3.1-3 and 5.4-1 are inaccurate. These maps/figures were derived from larger maps and figures, including full-scale engineering drawings, and were reduced to fit the size of the EIR document. The process of reduction distorted the scale. The actual scale is approximately one inch equals approximately 135 feet for Figure 3.3-1 and approximately 75 feet for Figure 5.4-1. These reduced maps/figures were not used for any of the DEIR analyses, including the analysis of traffic safety issues. All analyses were based on the original maps/figures (on file with the City and the EIR traffic engineers) that had accurate scales. As presented in the DEIR, these maps/figurers are intended to be illustrative – they show the basic layout and proposed new realignments of the Project and Alternative 2. While the map scaling as shown in the DEIR does not affect any EIR analysis or conclusions, the scales on the maps will be changed to more accurately describe the scale for each reduced figure. See the change to the scales of Figures 3.1-3 and 5.4-1 in Chapter 4 of this FEIR.

5-2 The commenter states that the DEIR fails to disclose significant safety impacts associated with design exceptions. Though the proposed Project would require approval of a limited number of design exceptions by Caltrans, there is nothing inherently unsafe about the design exceptions, as claimed by the commenter. As discussed in Response 4-4, the need for design exceptions arises most often because design standards change over time and existing conditions may not meet current design standards, and new designs must conform to existing conditions. The proposed Project is designed and would be reviewed by Caltrans in the context of the Highway Design Manual (HDM), including the design exceptions, which will ensure a safe design. The HDM "allows for flexibility in applying design standards and approving design exceptions that take the context of the project location into consideration; which enables the designer to tailor the design, as appropriate, for the specific circumstances while maintaining safety" (Caltrans 2012). As noted in the recent letter from Caltrans to the City, which describes the purpose of the design exception process, given that the Project is being constructed adjacent to and tying into existing infrastructure, the use of design exceptions is a process that is not unexpected. (FEIR Appendix E, Caltrans letter to Charley Stump, City of Ukiah Director of Community Planning & Development, May 4, 2015.) According to Caltrans "[p]roper analysis and adherence to the exception process will ensure that a safe project will be constructed for all traveling modes of the public." (Caltrans, May 4, 2015.)Please also see Responses 4-4 and 4-6.

5-3 The commenter claims the City, its consultants, and Caltrans have a duty to ensure that the proposed project design conforms to design standards as much as reasonably feasible. This assertion is incorrect. As discussed in Response 4-4, under certain circumstances, such as here, design standards change over time and existing conditions may not meet current design standards. Because new designs must conform to existing conditions, the need for design exceptions to the design standards arises. Thus, it is common for a highway project to include, and for Caltrans to approve, several design exceptions, especially for a project that modifies an existing highway facility that was designed to an older standard. In this case, although the review by Caltrans is currently underway, the design

exceptions have not yet been finalized. The preliminary design exceptions for the proposed Project are discussed in Response 4-4 and Response 5-2. As noted in Response 4-4, the purpose of the design exception process is to tailor the design for the specific circumstances surrounding the project while maintaining safety. Thus, if a requested design exception results in an unsafe condition, Caltrans would not approve it. Please refer to Response 4-4 for additional information regarding design exceptions and safety hazards.

5-4 The commenter expresses support for the Caltrans preferred alternative (Alternative 2 in the DEIR). Both the proposed Project and Alternative 2 are identified by Caltrans and the designers as appropriate alternatives that adequately address the needs to improve traffic operations and safety at the Talmage Road / US-101 southbound interchange. Alternative 2 is identified in the DEIR as the Environmentally Superior Alternative (refer to page 3 of the DEIR) because it has reduced energy impacts and greater traffic operational benefits.

5-5 The commenter again states that the design exceptions would result in safety impacts. Specific design exceptions are being jointly evaluated for the Project by the design engineers, the City, and Caltrans. The need for a design exception does not cause a proposed design to be unsafe, as the commenter implies. It is not uncommon for a highway project to include several design exceptions, especially a project that modifies an existing highway facility that was designed to an older standard. As noted in Response 4-4, the purpose of the design exception process is to tailor the design for the specific circumstances surrounding the project, while maintaining safety. Thus, if a requested design exception results in an unsafe condition, Caltrans would not approve it. Refer to Response 4-6.

5-6 to 5-11 These comments present a series of alleged “facts” by the commenter, with the general theme that the eastbound merge, from the southbound off-ramp, is deficient and would be worsened by the proposed Project. As shown in the responses to each “fact” presented by the commenter, below, this is not the case.

Under “Fact 1,” the commenter has accurately quoted the HDM, and the equation to determine taper distance has been calculated correctly for the existing conditions. The EIR traffic consultants would add that 206.3(1) is an Advisory Standard, not a Mandatory Standard. Advisory design standards allow greater flexibility in application to accommodate design constraints or be compatible with local conditions on rehabilitation projects.

Under “Fact 2,” the commenter suggests that the existing tapering distance for the merge of the southbound to eastbound off ramp lane into the eastbound through lane is about “half” of what it should be for “Through Lane Drops” Under the HDM. The commenter is correct in that the tapering distance of the existing eastbound merge measures about half of the distance than would be advisory under the current HDM.

There is no indication, however, that this existing condition is a safety hazard. For context as to how the existing eastbound merge functions in the context of collision rates, and therefore its safety, the following analysis of the existing off-ramp and merge is provided. A collision analysis performed by Caltrans for the 3-year time period between April 1, 2009 and March 31, 2012 shows that actual

total collision rate is less than the statewide average for similar highway facilities, and that the actual "fatal+injury collision" rate is less than the statewide average for similar highway facilities. There were no reported merge collisions associated with the existing non-standard southbound off-ramp to eastbound Talmage Road blind merge condition. This report is included as Appendix B of this FEIR.

Under "Fact 3," the commenter shifts to measuring the merge as conceived under the proposed Project. The commenter's description of the eastbound merge being two lanes is not correct, however; there is only one lane. Therefore, the doubling of the required taper distance is not accurate. Rather, the taper distance would be roughly the same as under existing conditions. Furthermore, it should be noted that the figure depicting the proposed project that is included in the DEIR is conceptual. While it is likely that the merge taper length does not meet the advisory design standard associated with HDM Topic 206.3 Through Lane Drops, it is irrelevant how much "closer" the existing configuration might be to conforming to the standard compared to the proposed Project because a design exception is proposed to address this feature in the proposed Project. Design exceptions are discussed in further detail under Response 4-4.

Under "Fact 4," the commenter makes statements regarding the volume of traffic that must merge into the eastbound lane. Detailed traffic models of the proposed Project and Alternative 2 were independently developed and corridor traffic analyses and traffic simulations were independently performed by Caltrans District 1 Traffic Operations and by the Project traffic consultants using Synchro 8 with SimTraffic. For the proposed Project, a detailed traffic model was developed by the Project traffic consultants using Synchro 8 with SimTraffic and reviewed by Caltrans District 1 Traffic Operations. While an advisory design exception would be required for the eastbound merge, both analyses independently demonstrated the proposed Project and Alternative 2 safely accommodate all future traffic in all directions, and that the distance provided for the eastbound merge is adequate. The Caltrans District 1 analysis of Alternative 2 is included in FEIR Appendix B, and the Synchro 8 analysis is presented in Section 4.5 and Appendix E of the DEIR.

Under "Fact 5," the commenter indicates that traffic exposed to the "deficient" eastbound merge would be greater with implementation of the proposed Project than under existing conditions, because Costco would be allowed to be built. It is true that Costco cannot begin operating until the proposed Talmage Interchange improvements are constructed. However, the proposed Project would occur regardless of the Costco project because it is proposed to accommodate a variety of planned future growth, not just the fraction of growth associated with the Costco project. The existing non-standard southbound off-ramp to eastbound Talmage Road blind merge condition would be improved with the proposed Project. The design improves traffic safety and reduces hazards by eliminating the non-standard southbound off-ramp to eastbound Talmage Road blind merge condition and constructing a safer perpendicular approach thereby improving visibility. The design also improves traffic safety and reduces hazards by providing standard shoulders that provide separation between approaching traffic and the overcrossing structure, improving pavement delineation that specifically alerts drivers of their requirement to yield right-of-way to eastbound traffic on Talmage Road, and replacing the non-standard metal beam guard railing protecting the

overcrossing structure with a new standard facility. As discussed above, Synchro 8 with SimTraffic analyses independently demonstrated that both the proposed Project and Alternative 2 safely accommodate all future traffic in all directions, and that the distance provided for the eastbound merge is adequate.

Under "Fact 6," the commenter summarizes the "hazardous consequences of a deficient merge length." As discussed throughout this response, there are no safety issues or hazards associated with the design of the proposed merge taper length and Caltrans review and approval of a design exception will ensure safe conditions (See Response 4-4). Moreover, the Project includes additional safety design features as noted above.

5-12 As noted by the commenter, Caltrans, pursuant to its April 15, 2013 letter, has indicated that the proposed basic design for the Project will be approved. The City is currently coordinating with Caltrans regarding the final design of the Project, including the design exceptions. As noted in the HDM, the purpose of the design exceptions is to tailor the design of the Project to the specific circumstances surrounding the Project, while maintaining safety. Review and approval of the final Project design by Caltrans, consistent with the HDM, will assure a safe design. (See Response 4-4.). The commenter is also correct that a Caltrans Encroachment Permit is required for any work within the State Right-of-Way regardless of type. In the case of this project, approval of an Encroachment Permit constitutes approval of the project design, and approval to begin construction activities within the State Right-of-Way. Also, see Response 5-13 below.

5-13 As noted on page 73 of the DEIR, the commenter is correct that the Project would require an Encroachment Permit from Caltrans. To provide further clarification, the following change is made to page 17 of the DEIR under the heading Responsible and Trustee Agencies:

> "The primary Responsible Agency for this project is the California Department of Transportation (Caltrans). Caltrans will use the information and analysis in the EIR to support its permitting process for changes to the highway interchange, including issuance of an Encroachment Permit."

The commenter is correct that any necessary design exceptions must be approved by Caltrans prior to issuance of an Encroachment Permit. Issuance of an Encroachment Permit is the last step in the Caltrans project approval process. Contrary to the commenter's claims, however, neither the City nor the DEIR indicated that the April 15, 2013 letter from Caltrans represents an approval of design exceptions or of the final design. The City is currently coordinating with Caltrans on determining the final design of the project, with needed design exceptions. As discussed in Response 4-4 and Response 5-12, this process assures a safe design.

5-14 The commenter asks that the specific design exceptions be identified. Please see Responses 4-4 and 4-6.

5-15 The commenter states that the DEIR does not identify the Caltrans permitting process in the regulatory Section Framework. A description of the design

exception process is hereby added to the Regulatory Framework discussion in Section 4.5 Traffic and Circulation, on page 73 of the DEIR, prior to the heading "Ukiah General Plan":

"All proposed State highway projects are designed, and/or reviewed by Caltrans, in the context of the Highway Design Manual (HDM) (Caltrans 2012). If local or site-specific conditions require deviation from the HDM, Caltrans has established a process by which exceptions to the design standards are documented and approved in Chapter 21, Exceptions to Design Standards, in the Project Development Procedures Manual. For each design exception a "fact sheet" is completed. The purpose of the fact sheet is to document engineering decisions leading to the approval of each exception to a design standard. Caltrans has responsibility for review and approval of each design exception."

5-16 The comment identifies a unique geometric feature of the Project design regarding the transition from a single lane off-ramp to a four lane cross-section. While the proposed configuration differs from most off-ramp intersection configurations, it has not been identified by the Project designers, the City, or Caltrans as overly complex or unsafe. The use of appropriate advanced signing, pavement markings, pavement delineation and increased turn lane lengths to accommodate anticipated queuing is expected to provide a safe and non-hazardous driving condition and minimize the need to perform unsafe maneuvers or last minute merges. Advanced signing and pavement markings would be very specific regarding the destinations associated with each lane, and would inform drivers well in advance of decision-making points of the appropriate lanes to queue into. The details of the specific signing, striping and markings would be developed in coordination with Caltrans and would not be approved by them if they were deemed unsafe or confusing to motorists.

5-17 The comment claims Caltrans must have "reservations" about "overly complex and unconventional feature" of the proposed Project design because Caltrans has expressed a preference for Alternative 2. No such implication can be read from Caltrans expressed preference. First, the traffic operational advantages and environmental advantages are part of the argument supporting Alternative 2 as the Environmentally Superior Alternative in the Draft EIR. Second, the City is currently coordinating with Caltrans regarding the final design of the Project, including the design exceptions. As noted in the HDM, the purpose of the design exceptions is to tailor the design of the Project to the specific circumstances surrounding the Project, while maintaining safety. Review and approval of the final Project design by Caltrans, consistent with the HDM, will ensure a safe design. (See Response 4-4.)

5-18 to 5-25 Comments 5-18 to 5-25 are a series of statements made regarding the differences in the traffic volumes used in the Talmage Interchange DEIR and the Costco EIR which the commenter presents to support a claim that the Talmage Interchange DEIR did not adequately account for Costco-related traffic in its 2032 analysis.

First, the commenter identifies what he perceives to be inconsistencies between the year 2030 + project weekday PM peak hour traffic volumes presented in the Costco EIR with the year 2032 weekday PM peak hour traffic volumes for the

Project used in the Talmage Interchange EIR at the intersection of Talmage Road and U.S. 101 southbound on/off ramps. The commenter claims the Talmage Interchange EIR year 2032 + project traffic at this intersection is lower than the year 2030 + project traffic at the same intersection in the Costco EIR even though the Talmage EIR purports to account for two more years of traffic. The commenter then identifies what it perceives to be inconsistencies between the year 2032 weekday PM peak hour traffic volumes for the Project used in the Talmage Interchange EIR at the intersection of Talmage Road and U.S. 101 southbound on/off ramps and the existing traffic counts and the existing + project traffic projections in the Costco EIR. These claims are incorrect.

First, the Talmage Interchange DEIR Traffic Impact Study does not purport to account for two more years of growth in its year 2032 analysis. The time period of growth considered in both the Talmage and Costco traffic studies is 20 years; the Talmage Interchange DEIR's existing conditions baseline from which the 20 year period was calculated is simply two years later (2012) than the baseline assumed for the Costco EIR (2010).

Second, the commenter's claim assumes a direct comparison can be made between the future traffic volumes in the Talmage EIR and the Costco EIR simply because they both model future conditions. The commenter ignores, however, that the traffic volumes presented in the Costco EIR (Appendix A of the Traffic Impact Study) and traffic volumes for the Project used in the Talmage Interchange EIR (Appendix E of the Traffic Impact Study) were each determined with different methodologies using different assumptions. The Costco Traffic Impact Study utilized the Ukiah Valley Area Plan (UVAP) travel demand forecasting model as the basis for the future traffic conditions while Talmage Interchange EIR used the Caltrans growth factor of 1.3 to project future traffic conditions, which is specific to the US 101 corridor through Ukiah. Use of the Caltrans-recommended methodology is appropriate for this Project because it is a State highway facility and is consequently required to meet Caltrans standards. (See also, Response to Comment 4-10.) Furthermore, differences in flow volumes for individual movements under the future conditions analyses are attributed to peak hour factors used, assumptions made relative to trip distribution, and the existing traffic volumes used for the future projections.

Third, with regard to the comparisons between the year 2032 Talmage Traffic Impact Study volumes and the baseline and baseline + project traffic volumes in the Costco DEIR (those comments labeled 5-22 and 5-23), the two traffic impact studies had different baseline years, and consequently different baseline traffic volumes, that established the existing conditions. The Costco EIR Traffic Study used traffic counts from 2010, while the Talmage Interchange DEIR Traffic Study, used more recent counts from the year 2012. It is not appropriate to compare the future traffic volume from one traffic study to the existing conditions or the existing plus project conditions of another traffic study, when the baseline assumptions and modeling methodologies for each are different. The Talmage Traffic Impact Study appropriately collected current traffic counts at the time the study commenced, and at issuance of the Notice of Preparation, to establish the baseline conditions.

Thus, contrary to the commenter's claims, due to differences in baseline traffic counts, methodology, and other factors discussed above, a direct comparison analysis between the Talmage Interchange DEIR and the Costco DEIR traffic volumes cannot reasonably be performed. Therefore, the commenter has failed to present any meaningful analysis which undermines the traffic analysis in the Talmage EIR and/or demonstrates that the Talmage EIR failed to account for Costco-related traffic in its year 2032 traffic volumes.

While the growth rate applied to the calculate the future traffic in the Talmage Interchange EIR Traffic Impact Study inherently includes projected area growth, including Costco-related and other Redwood Business Park/Airport Industrial Park-related traffic, a sensitivity analysis was performed which demonstrated that even if the Costco-generated traffic was added on top of the growth rate traffic already assumed for the year 2032 analysis (essentially double-counting the Costco traffic), the study intersections would still perform acceptably. The traffic model sensitivity analysis evaluated the sensitivity of the traffic model to changes in model parameters and to higher traffic volumes than were reported in the Talmage Interchange EIR Traffic Impact Study. The sensitivity analysis was performed on the Synchro 8 with SimTraffic models for both the Project alternative geometry and Alternative 2 geometry. To evaluate each model's sensitivity to traffic volumes, the Future condition analysis was used and the growth rate was increased to levels consistent with the addition of Costco-related traffic to determine whether the study intersections would perform acceptably based on the study thresholds of significance and available lane storage for queuing vehicles.

For the proposed Project geometry, the results of the sensitivity analysis showed that the geometry and traffic operations acceptably accommodate traffic and anticipated queuing for traffic volumes that are 22% higher than those analyzed for the future condition and therefore, would accommodate a double counting of Costco-related traffic. This condition is equivalent to a growth rate of 1.52, or a 52% increase over existing traffic. At the intersection of Airport Park Boulevard and Talmage Road, the additional 22% of traffic equals 529 vehicles, which is 36 vehicles greater than the traffic generated by the planned Costco project at this intersection (Costco Project traffic volumes from Costco EIR Traffic Study Figure 7). At the intersection of Talmage Road and U.S. 101 southbound on/off ramps, the additional 22% of traffic equals 441 vehicles, which is 109 vehicles greater than the traffic generated by the planned Costco project at this intersection (Costco Project traffic volumes from Costco EIR Traffic Study Figure 7).

For the Alternative 2 geometry, the same sensitivity analysis showed that the geometry and traffic operations acceptably accommodate traffic and anticipated queuing for traffic volumes that are 28% higher than those used to analyze the future condition, and therefore, would accommodate a double counting of Costco-related traffic. This condition is equivalent to a growth rate of 1.58, or a 58% increase over existing traffic). At the intersection of Airport Park Boulevard and Talmage Road, the additional 28% of traffic equals 674 vehicles, which is 181 vehicles greater than the traffic generated by the planned Costco project at this intersection (Costco Project traffic volumes from Costco EIR Traffic Study Figure 7). At the intersection of Talmage Road and U.S. 101 southbound on/off ramps, the additional 28% of traffic equals 561 vehicles, which is 229 vehicles greater than the traffic generated by the planned Costco project at this intersection

(Costco Project traffic volumes from Costco EIR Traffic Study Figure 7). The results of sensitivity analyses are included in the Appendix B of this FEIR.

Finally, the commenter questions (Comment 5-24) the adequacy of the Costco EIR traffic volumes and distribution. As indicated in Response 4-10, the Costco EIR was found to be adequate by the City of Ukiah when the City Council certified the EIR in 2013, and on May 1, 2015, the Mendocino County Superior Court upheld the Costco EIR finding that traffic impacts in the Costco EIR were analyzed and mitigated appropriately.

In summary, the Talmage Interchange DEIR appropriately and conservatively looked at future growth and both the proposed Project and Alternative 2 would perform acceptably with the inclusion of Costco project volumes.

5-26 This comment summarizes the comments subsequently made in more detail in Comments 5-27, 5-28, and 5-29. Refer to the response to those comments below.

5-27 The commenter states that there are operational benefits to Alternative 2. As indicated in Responses 4-4, 5-4 through 5-11, 5-16 and 5-17, there are some traffic operational advantages of Alternative 2. The traffic operational advantages are discussed in support of Alternative 2 as the Environmentally Superior Alternative in the Draft EIR.

5-28 The commenter states that one of the LOS analysis was inaccurately prepared. The commenter has misinterpreted the calculation sheet. While the volume is shown in the analysis calculation, no control delay is assigned to the eastbound Talmage through movement in the calculation. There is no uniform control delay for the eastbound movement. The analysis essentially assumes the eastbound movement has a continuous green light without interruptions. This assumption is reflected in the calculation sheet which shows and uniform control delay of 0.0 seconds and an approach delay of 0.1 seconds for the eastbound through movement.

5-29 The commenter states that Alternative 2 is superior as regards amount of delay at all intersections. The commenter is correct regarding the traffic operational advantages of Alternative 2 and the second sentence of the last paragraph on page 166 of the DEIR, is revised to read:

"When compared to the proposed project, the alternative would reduce the amount of delay at Intersections Nos. 1, ~~and~~ 2 and ~~while slightly increasing the delay at Intersection No.~~ 3."

5-30 The commenter states that Alternative 2 is a more sound design choice. The City agrees that the "sound design choice" is an important consideration in the decision-making process for this project. The detailed design aspects of the project, however, will be addressed during the project approval process, not as part of determining adequacy of the EIR. The City is currently coordinating with Caltrans regarding the final design of the project, including the design exceptions. As noted in the HDM, the purpose of the design exceptions is to tailor the design of the project to the specific circumstances surrounding the project, while

maintaining safety. Review and approval of the final project design by Caltrans, consistent with the HDM, will ensure a safe design. (See Response to Comment 4-4.)The Environmentally Superior Alternative discussion in the Draft EIR did note the operational advantages of Alternative 2.

5-31 The commenter states that Costco-generated traffic should have been added to the 1.3 growth rate used to calculate 2032 traffic volumes. Regarding the use of the Caltrans-recommended growth factor in the Talmage Intersection DEIR Traffic Impact Study to predict future traffic growth, refer to Responses 4-10 and 5-18 to 5-25. The Costco project was approved by the City for development in the Redwood Business Park, and the City considered the Costco project consistent with allowed Redwood Business Park/Airport Industrial Park land uses. Traffic in 2032 from the Costco project and any future development of the industrial park are included in the traffic projections done for the Talmage DEIR. As discussed in Response to Comments 5-18 to 5-24, while the growth rate applied to the calculate the future traffic in the Talmage Interchange EIR Traffic Impact Study inherently includes projected area growth, including Costco-related and other Redwood Business Park/Airport Industrial Park-related traffic, a sensitivity analysis was performed which demonstrated that even if the Costco-generated traffic was added on top of the growth rate traffic already assumed for the year 2032 analysis (essentially double-counting the Costco traffic), the study intersections would still perform acceptably.

5-32 The commenter asks about the future need to widen the interchange. The potential widening of the overcrossing was part of the project evaluated in the Draft IS/MND. Subsequent analysis by the Project designers and Caltrans found that the widening is not necessary to accommodate future traffic growth and operations, and was therefore not included in the project and alternatives evaluated in this EIR. As shown in Appendix E (Traffic Impact Study) of the DEIR, the project and alternatives operate acceptably under future conditions. Because the widening is no longer needed, it is not necessary to evaluate which alternative would best accommodate widening of the overcrossing. Regarding the use of the Caltrans-recommended growth factor and Costco related trips, refer to Response to Comment 4-10 and Response to Comments 5-18 to 5-24.

5-33 The commenter states that the Project and the Costco project should have been assessed in the same EIR. Please see Response to Comment 4-3 regarding this same issue.

5-34 The commenter states that one of the LOS analysis was inaccurately prepared. See Response 5-28 regarding this same comment.

5-35 The comment is an introduction to a letter submitted in March 2013 on the Costco project. The letter does not raise any questions regarding the Talmage Road Interchange Project. Comments related to the Costco Project EIR were responded to in the certified Costco Wholesale Project Final EIR (SCH #2011112025) and are hereby incorporated by reference.(CEQA Guidelines, § 15150.) Comments pertinent to the proposed Talmage Road Interchange Project and DEIR are responded to below. Most of the pertinent comments were already submitted as part of the commenter's 2014 letter. Nevertheless, specific responses are

provided below that point the reader to where these older comments are responded to in this report.

5-36 The commenter states that the Costco traffic counts are unrepresentative and outdated. See previous Responses to Comments 5-18 through 5-25 regarding these same concerns about traffic counts and analyses of the Costco Project and their relation to the more current traffic analysis conducted for the DEIR. Questions about the trip generation rate used for the Costco EIR analysis are not relevant for this EIR as the DEIR traffic analysis is based on Caltrans-provided traffic growth projections for 2032. It is noted, however, that the Costco EIR was found to be adequate by the City of Ukiah when the City Council certified the EIR in 2013. Moreover, any certified EIR is presumed adequate unless a court determines otherwise and on May 1, 2015, the Mendocino County Superior Court upheld the Costco EIR, finding that traffic impacts in the Costco EIR were analyzed and mitigated appropriately. The traffic analysis done for the Talmage DEIR is considered up-to-date, consistent with current Caltrans traffic projections and methodology, and accurate.

5-37 The commenter states that the Costco EIR presented a flawed analysis of traffic queues. A new queuing analysis was done for the Talmage Road Interchange Project DEIR. As described in the Talmage DEIR (page 78 and Appendix E), based on current traffic projections and the modeling done for the DEIR, queues would not occur on Highway 101 by 2032. Therefore, there would not be any significant impacts associated with queuing. Modeling was used in the Talmage DEIR as it more accurately reflects conditions over time and in the future than periodic visual observations. Traffic planning and analysis is typically based on such modeling.

5-38 The comment states that the Costco EIR did not include an analysis of an interchange design that was being undertaken at that time. Subsequent to submittal of this comment letter, a project design for the improvements to the US 101/Talmage Interchange was developed. The Talmage Road Interchange Project DEIR assessed the impacts of this proposed design as well as alternatives to that design. As stated in Comment Letter 2, Caltrans and the City have been working closely together on the Project and Caltrans anticipates issuance of an encroachment permit in 2015. In addition, see Responses 5-12 and 5-30 regarding the coordination of the project with Caltrans.

5-39 The commenter states that the Project design would result in inadequate queue storage. As noted above in Response 5-37 there will be adequate space for future queuing. See previous Responses 5-2 through 5-17 regarding these same concerns about project design and its safety.

5-40 The commenter states that the City will fund most of the interchange project and not Costco. How the City finances a project, if it approves the Project and decides to fund some portion of it, is not an environmental issue. Environmental impacts are defined as changes to the physical environment. How the City spends its revenues is a City policy decision. Accordingly, this issue is not required to be addressed in the EIR. However, the commenter's concerns are herein part of the record and may be considered in the City decision-maker's deliberations about the Project. Also, see subsequent Response 7-1 regarding this same issue.

5-41 The commenter states that the Costco EIR should have revaluated the improvements to the interchange required as mitigation for the Costco project. See Response 4-3 regarding this same issue of the relation of the Costco Project and the Talmage Road Interchange Project.

5-42 The commenter states that the Walmart Expansion project should have been assessed in the Costco EIR. See Response 4-9 regarding the issue of the relation of the not-approved Walmart Project and the Talmage Road Interchange Project.

5-43 The commenter states that the Costco EIR did not address the zoning change needed for that project. Comments about zoning for the Costco project are not related to the Talmage Road Interchange Project. No response is warranted to questions about zoning and general plan consistency of the approved Costco Project.

5-44 The commenter states that the Costco EIR should have included 2011 collision data when assessing traffic safety impacts because it was available before the Costco DEIR was circulated for public review. The Talmage Road Interchange Project DEIR did include this newer data. As shown in Appendix A of the Traffic Impact Study (included in DEIR Appendix E), there were zero collisions reported for calendar year 2011 at Project intersections. Based on current traffic projections and the traffic impact analysis done for the Talmage Road Interchange Project DEIR, traffic safety impacts of vehicles moving through the Project at its completion and in 2032 would be less than significant (see pages 76 through 79 of the DEIR). The traffic analysis assessed traffic collision data through the end of 2011 in assessing these impacts (see pages 12 through 13 of DEIR Appendix E).

5-45 The commenter states that the City changed its traffic LOS significance threshold for side street approaches to the intersection between the time the Walmart Expansion EIR was prepared and when the Costco EIR was prepared. How the City assessed traffic impacts of past projects does not affect the interchange improvement DEIR. The Talmage Road Interchange Project does not include "minor approaches" so how they are assessed elsewhere is not relevant to this EIR.

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October 23, 2014

Mr. Mr. William Kopper, Esq.
417 E Street
Davis, CA 95616

RE: Talmage Road/Southbound U.S. 101 On-Off Ramp Realignment Project DEIR; City of Ukiah– Air Quality Review and Comments

Dear Mr. Kopper:

Autumn Wind Associates, Inc. has reviewed the above-referenced DEIR at your request, and provides these comments for your consideration regarding Talmage's air quality analysis and findings.

I. Talmage DEIR Ignores Mitigation Discussion and Options

At DEIR pg. 96, operational emissions are determined to be significant and unavoidable, with no consideration of mitigation. Because Talmage will potentiate increased traffic beyond conditions that currently have led to exceedances of the local air district's threshold for NOx emissions, the project must employ available, reasonable, feasible measures to mitigate those emissions. Similarly, the air basin is designated non-attainment for PM10, and the project will increase operational PM10 emissions and particularly from heavy-duty diesel vehicles that emit toxic air contaminants that will use the improved interchange in greater numbers. 6-1

Feasible mitigations are available to reduce Talmage's NOx and PM10 emission impacts; such reductions are necessary to mitigate Talmage's NOx emissions formative of ozone (with ozone levels having exceeded ambient air standards in the Ukiah area), and prevent further violations of PM10 standards under CA Ambient Air Quality Standards (CAAQS).

Offsite mitigation measures to reduce Talmage's NOx and PM10 emission impacts are readily available, and precedent exists for assessing fees to commercial land uses in the area that must rely on the interchange. The City already mitigates the cost of infrastructure improvements (such as Talmage interchange) that supports new or existing commercial development (e.g. Costco), via collection of what are generically known as "fair share" road improvement fees. If the City can assess fees to build roads that will increase traffic and emission impacts, why has the City failed to assess a fair-share fee for

mitigating operational emissions from Costco and those other commercial entities that will rely on the expanded interchange? The City must consider implementation of an air quality mitigation fee for the Talmage project, no differently than it already utilizes special assessments for roadway improvements, supplemental fire protection for new development, etc. Air quality standards that are threatened or are already exceed health-based standards should be treated with no less importance than threatened or exceeded fire safety or traffic standards.

Mitigations to reduce Talmage's significant emissions are available and could, for example, include low- or zero-emission school buses, refuse vehicles, or other heavy-duty vehicles that will use or service the expanded Talmage interchange in ever-greater numbers across its planning lifetime. Guidance to mitigate operational emissions of new land use development is provided by the CA Air Pollution Control Officers Association and the CALEEMOD land use emissions model, and should have been evaluated for Talmage.[1] Diesel refuse trucks that emit NOx and PM10 containing toxic air contaminants will, for example, routinely serve the Costco whose development has been conditioned to the expansion of the Talmage interchange, and, similarly, diesel school buses will serve existing and new populations that will be served by the Costco and other retail and commercial operations adjacent to or in the area of to the interchange. Zero- or low-emission refuse trucks and school buses are available and would help reduce Talmage's "significant and unavoidable" air emission impacts, while protecting against ozone standards "nonattainment" and improvement of the air basin's "nonattainment" designation for PM10. 6-2

Similarly, "fair share" ("air share"…) fees to mitigate the project's emissions should have been considered for use by the local air district to manage cost-effective emission reductions that will be provided to offset Talmage area emissions (consistent with CEQA's interest in co-located mitigation benefit). Other air districts have routinely collected and managed project-specific CEQA mitigation fees to produce related emission reductions for years.[2] As noted at pg. 48 of "Quantifying Greenhouse Gas Mitigation Measures" guidance document produced by the CA Air Pollution Control Officers Association, "At the discretion of the reviewing agency, emission reductions may be created with offsite mitigation projects"[3]----as noted again here, precedent clearly exists for use of effective, offsite air emission mitigation methods to reduce Talmage's operational emissions impacts. 6-3

II. Talmage Interchange Ignores SB 743 and Is Likely To Increase, Not Decrease, Operational Emissions

[1] See SMAQMD's coverage of CAPCOA and CALEEMOD mitigations contained in Table of Measures, "Recommended Guidance for Land Use Emission Reductions Version 3.1 (for Operational Emissions); http://www.airquality.org/ceqa/RecommendedGuidanceLandUseEmissionReductions.pdf

[2] See SMAQMD Mitigation Fee; http://www.airquality.org/ceqa/mitigation.shtml. See "Table of Measures", pg. 5, SMAQMD's "Recommended Guidance for Land Use Emission Reductions Version 3.1 (for Operational Emissions); http://www.airquality.org/ceqa/RecommendedGuidanceLandUseEmissionReductions.pdf. See PCAPCD's CEQA Air Quality Handbook; Appendix C, and particularly measure 8-B; http://www.placer.ca.gov/departments/air/landuseceqa

[3] CAPCOA; "Quantifying Greenhouse Gas Mitigation Measures; A Resource for Local Government to Assess Emission Reduction Measures From Greenhouse Gas Mitigation Measures"; August, 2010.

The 1.3 multiplier in the DEIR's traffic analysis used to estimate the project's increased operational emissions reflects a historical, business-as-usual[4] approach focused solely on traffic flows; this perspective has been contradicted by SB 743 (Steinberg) enacted into law prior to issuance of the Talmage DEIR. As noted in recent CEQA guidance provided by the Governor's Office of Planning and Research, "By focusing solely on delay, environmental studies typically required projects to build bigger roads and intersections as "mitigation" for traffic impacts."[5] The 1.3 traffic multiplier ignores SB 743's recognition that building more highway capacity can be expected to lead not to fewer emissions, but, rather, to greater growth in trips and related emissions than has been historically analyzed with focus exclusively on traffic density, flow, and intersection levels of service. SB 743 recognizes that Talmage's increased highway capacity is growth- and trip-inducing. Talmage is, then, simply another business-as-usual highway capacity expansion project that declares an operational emission impact significant and unavoidable, disclaim any duty to mitigate those impacts, and then can be expected, *pro forma*, to override the impact in the final stage of the Lead Agency's CEQA findings process. 6-4 6-5

III. Talmage Vehicle Trip Estimates Are Inconsistent With Costco Trip Estimates and Are Likely Underestimated

At Talmage DEIR pg. 94, contradictory discussion ensues regarding operational vehicle emission estimates for the proposed interchange. The section concludes that with project development there will be a net reduction in emissions over the 2012 no-build condition, to levels below the local air district's criteria pollutant thresholds of significance (see Table 4.6-5). It then references the City's approved Costco EIR, stating that new Costco trip emissions apportioned to the Talmage interchange are expected to cause significant impacts that will exceed applicable thresholds: 6-6

> "…the emissions generated by vehicles using the proposed project would still exceed the significance thresholds for those three criteria pollutants. Accordingly, the complete trips accommodated by the proposed project would emit amounts of NOx, PM10, and PM2.5 that would exceed adopted MCAQMD significance thresholds."

Based on Costco emissions analysis already approved by the City, and consistent with SB 743's determination that increased highway capacity projects routinely increase, not decrease, growth in traffic and related emissions, the City's implicit assumption that Talmage's expansion will lead to reduced traffic queuing and idling emissions to reduce its vehicle emissions over time is disingenuous. What will reduce those emissions noted in Table 4.6-5 are regulated, required improvements in new vehicle emission standards over time, and the reality is that increased vehicle use from Talmage's growth-inducing effects, coupled with increases in traffic from Costco and other anticipated land use growth in the area, are likely to overrun cited 2032 emission benefits.

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4 CARB defines business-as-usual to mean, "the normal course of business or activities for an entity or a project before the imposition of greenhouse gas emission reduction requirements or incentives." CARB: "Preliminary Draft Regulation for a California Cap-and-Trade Program," Section 95802 (a)(18), Dec., 2009; page 7.

[5]) Governor's Office of Planning and Research, "Updating Transportation Impacts Analysis in the CEQA Guidelines – Preliminary Discussion Draft of Updates to the CEQA Guidelines Implementing Senate Bill 743 (Steinberg, 2013)
[5]"DRAFT Policy Brief on Highway Capacity and Induced Travel," (April 2014)., p. 5-6.

Additionally, at Talmage DEIR pg. 94, operational vehicle trip emissions and modeling assumptions made by the Lead Agency appear to have been selectively parsed and are underestimated as a result, based on use of Caltrans modeling methodology. At pg. 94 under discussion for Impact 4.6-B (regarding the project's potentially significant operational emissions impact) the DEIR states 6-7

> "However, for 2032 this modeling does not show the total emissions from the new trips that would travel through the project, since the Caltrans-approved model for transportation improvements only looks at the emissions of vehicles passing through the project area and compares the emissions from a "build" alternative and a "no build" alternative. The modeling shows the emissions of projected new traffic (i.e. 1.3 times times the number of trips as currently occurs…) as it travels through the project site."

The first sentence in the paragraph above is confusing and appears inconsistent with CEQA objectives. CEQA requires use of the most up-to-date assumptions and modeling that will most accurately reflect actual, anticipated conditions, and yet no explanation is given regarding why the "modeling does not show the total emissions from the (project's) new trips". The City must provide substantive explanation and justification for use of what is likely an under-representative methodology underpinning its emissions estimates.

It is likely that the DEIR has underestimated the interchange's maximum, future (2032) project-related operational trips by use of the 1.3 multiplier while ignoring contradictory evidence from the Costco EIR. With reliance on the 1.3 multiplier the City has assumed that improvements to the interchange, handling both normal population-increase traffic growth with the addition of new traffic resulting from the growth-inducing effects of the upgraded interchange, will never go beyond more than a one-third increase over existing traffic counts. However, the DEIR disagrees with Costco EIR traffic findings, and it contradicts legislative and air quality agency-related transportation analyses[6] linking increasing highway capacity (e.g. Talmage) to people shifting from other modes to driving, drivers making longer trips, or drivers making more frequent trips.[7] The DEIR has failed to reasonably evaluate the proposed interchange's capacity expansion that can be expected to lead to growth-inducing impacts (with increased vehicle trips and vehicle miles traveled), and transportation mode choices favoring vehicle use that will result from near- to mid-term decreased congestion at the Talmage interchange. 6-8 6-9

To be consistent for the purposes of estimating project-related vehicle emissions, trip data found in the City's Talmage DEIR must be consistent with that used in the City's approved Costco EIR since a large portion of Costo-related emissions will result from vehicles using the Talmage interchange. More than slight discrepancies in vehicle trip data will lead to unreliable emission impact estimates, contrary to 6-10

[6] The Talmage project will increase highway capacity by reconfiguring and adding new lanes to the Hwy 101-Talmage interchange; such capacity increases are now understood to lead to greater increases in VMT and vehicle use than has been traditionally assumed in CEQA environmental reviews. According to CEQA guidance prepared for implementation of SB743, "research indicates that adding new traffic lanes in areas subject to congestion tends to lead to more people driving further distances" (pg 9); Governor's Office of Planning and Research, "Updating Transportation Impacts Analysis in the CEQA Guidelines – Preliminary Discussion Draft of Updates to the CEQA Guidelines Implementing Senate Bill 743 (Steinberg, 2013) 6-11

[7] "DRAFT Policy Brief on Highway Capacity and Induced Travel," (April 2014)., p. 2.

CEQA's interest in conservative, accurate environmental assessment. In this case, the Talmage DEIR traffic counts vary appreciably from those used for emissions estimates in the Costco EIR, with Talmage DEIR counts as much as 30% lower (year 2030 at Talmage, with Costco traffic). Are the estimates in Talmage DEIR comparatively too low or are the Costco counts too high? In all likelihood, both are respectively too low since Costco used average trip distances generated by MCOG that failed to account for the substantially larger 3-county rural Costco market area. Nevertheless, artificially low trip rates used to estimate emissions for the Talmage interchange in the Talmage DEIR are not consistent with those estimated for the interchange in the Costco environmental review process.

At Talmage DEIR, pg. 94, the Lead Agency concludes with an inappropriate arithmetic rationale that seems to draw into question its confidence in its own trip-related emissions estimates (gained by use of the outdated Caltrans 1.3 multiplier discussed above). Setting aside the estimates derived with the Caltrans trip rate methodology, it states 6-12

> "According to the traffic analysis done as part of that Costco EIR, 42 percent of the new trips generated by that project would access Costco to and from Highway 101, and, therefore, would travel through the project. If the emissions reported in Costco were similarly adjusted and reduced by 58 percent (to exclude trips that accessed the Costco from streets other than those traversing the proposed project site) the emissions generated by vehicles using the proposed project would still exceed the significance thresholds for those three criteria pollutants."

The City seems to be saying that even if its emission estimates are inaccurate with use of the Caltrans methodology, the DEIR's conclusion of significant emissions impact is reasonable based on a quick parsing of Costco estimates. Unfortunately, this back-of-the-envelope approach with another EIR's emissions estimates is of little or no value since it fails to satisfy CEQA's requirement for comprehensive and accurate estimates of Talmage emissions. Talmage DEIR emissions should be consistent with Talmage-related emissions within the Costco EIR, or the Lead Agency should substantively explain its inconsistent traffic counts. Further, its analysis and review process should employ up-to-date, modern-day impact review information, methods, and models that recognize recent advances in critical, underlying traffic management assumptions (e.g. SB 743 and related OPR CEQA guidance). Both environmental review projects (Talmage Interchange, Costco) belong to the City, and the inappropriate reliance on under-representative Caltrans traffic count methodology ignores current legislative and air agency guidance indicating that an upgraded Talmage interchange will likely lead to more traffic, more vehicle trips, and greater VMT---while generating emission quantities beyond those estimated in the Talmage DEIR.

IV. **Talmage Interchange Construction Emissions Appear To Be Underestimated**

The version of the Road Construction Emissions Model used to estimate emissions for the Talmage project was out of date prior to issuance of the DEIR. According to the DEIR (pg. 92) version 6.3.2 was used. However, this version was updated to 7.1.0 a year prior to the August 2014 Talmage DEIR issuance date. Numerous changes affecting emissions estimates were made in that year period, including revisions to construction equipment, horsepowers, and duty factors; incorporation of EMFAC 2011 and OFFROAD 2011 emission factors; worker commute emissions calculations, etc. Without use of the most recent version of the Road Construction Emissions Model reasonably available prior to issuance of the Talmage DEIR, road construction emissions estimates are virtually certain to be over- or under-estimated. 6-13

Additionally, no information is found in the Air Quality element of the Talmage DEIR indicating that off-ramp demolition emissions were included in estimates for new road construction. The Road Construction Emissions Model does not estimate demolition emissions; demolition emissions will occur with changes to existing ramps and particularly with removal of asphalt at the southbound off-ramp of roughly 700' in length. Neither does the DEIR include emissions estimates for demolition of concrete at the overpass. Demolition emissions are estimated separately from new construction in the analysis of total project construction emissions. 6-14

DEIR pg. 92 reflects use of one acre of project size for estimating road-building emissions; in the absence of discussion of road work that will occur at the southbound offramp lane, it is very likely that the total area of disturbance will exceed a total of 43,560 square feet since the existing ramp appears to run more than several hundred feet northerly. If the total project work area is underestimated, road-building emissions estimates will be inaccurately low. 6-15

Sincerely,

Greg Gilbert
Autumn Wind Associates.

Response to Letter from Greg Gilbert (Autumn Wind Associates, Inc.)

6-1 The commenter states that the DEIR should have assessed possible mitigations for the significant air quality impact, including requiring "fair share" fees to fund programs that would reduce vehicle emissions. The significant air quality impact associated with the proposed Project is the result of pollutant emissions from future increased traffic generated by area growth. The proposed Project has no authority to limit that growth and pollutant emissions. As noted in the DEIR, project-related emissions during operation are from mobile sources that would use the Project as part of their trip. Any future reduction in mobile emissions would result from improved engine efficiency or less polluting fuel sources. Such changes would be the result of State or federal policies and regulations, and the City does not have the authority to require such changes. The commenter suggests that the City assess a fair-share mitigation air quality mitigation fee to mitigate the air quality impacts of the Project. Under this Project, however, the City only has authority to impose mitigation on the applicant, and the applicant of this Project is the City itself. As such, requiring air quality mitigation fees for this Project would essentially require the City to pay a fee to itself for its own Project. To the extent the commenter suggests the City impose an air quality mitigation fee on development projects that might use the Project, those development projects are separate projects analyzed in their own environmental review documents and subject to air quality mitigation measures of their own where they would result in significant air quality impacts or make cumulatively considerable contributions to significant cumulative air quality impacts. The City can and does assess the potential air quality impacts of individual projects requiring CEQA review. However, the City has no authority to impose fair share air quality mitigation fees on those projects now, as part of this Project. As such, there are no feasible measures to mitigate the proposed Project's air quality impacts to a less-than-significant level and the impact remains significant and unavoidable.

6-2 The commenter suggests certain mitigation measures to reduce significant air quality impacts, including requiring low- or zero-emission school buses, refuse vehicles, or other heavy-duty vehicles that will use Talmage Road interchange. School buses are owned and maintained by the school district and refuse vehicles also owned and maintained by a third party, Ukiah Waste Solutions. While the City can encourage them to do so, the City has no control over and cannot legally force these third party operators who might use Talmage Interchange to purchase low- or zero-emission vehicles. The mitigation suggestion is therefore infeasible. (See CEQA Guidelines, § 15364.)

Notably, state-wide programs to reduce emissions from school buses and heavy-duty vehicles already exist and are being implemented in Mendocino County. The California Air Resources Board approved the Truck and Bus regulation in 2008 to significantly reduce particulate matter and oxides of nitrogen emissions from existing diesel vehicles operating in California. The AB 923 Motor Vehicle Program provides funding for replacement of older school buses with new lower emissions school buses. As of 2014, the Mendocino County Air Quality Management District has provided funding for seven school buses for various school districts within the county totaling $796,820. In addition, the State Lower Emissions School Bus Program (LESBP) has provided funding for the replacement of fifteen additional school buses. With respect to heavy-duty

vehicles, the Carl Moyer Program provides incentive funding for the replacement or retrofit of older diesel engines with newer cleaner engines. As of 2014, the Mendocino County Air Quality Management District has distributed in excess of $2,500,000 under this Program for the replacement or retrofit of 82 diesel engines for both private sector and government fleets.

The City is intent on reducing vehicle emissions within its jurisdiction. Currently, the City's fleet of 129 licensed vehicles includes 5 hybrid vehicles, 2 GEM (all electric) vehicles, and 1 CNG (natural gas) street sweeper. A major means of realizing this intention is the recent preparation of a Draft Climate Action Plan (CAP) for the City. The CAP has been approved by the City Planning Commission but not yet adopted by the City Council. The City's CAP contains a number of strategies and actions for the City to reduce GHG and other air pollutant emissions. Many recommended actions are listed, including the City upgrading its fleet to include more electric, hybrid, and alternative fuel vehicles and promoting telecommuting and alternative work strategies for City employees. Other recommended actions include ones to promote Transportation Demand Management (TDM) plans for local large employers.

6-3 The commenter suggests the City pay fair share fees to the Mendocino County Air Quality Management District as mitigation for air quality emissions impacts of the Project. Assessment of fair-share fees to the MCAQMD to mitigate air quality impacts is not an appropriate form of mitigation, unless it is linked to a specific mitigation program. (See *Anderson First Coalition v. City of Anderson* (2005) 130 Cal.App.4th 1173, 1188 [mitigation fees must be part of a reasonable plan of actual mitigation that the relevant agency commits itself to implementing]; *Save Our Peninsula Comm. v. Monterey County Bd. Of Supervisors* (2001) 87 Cal.App.4th 99, 141 [same].) Unlike the examples of the SMAQMD and the PCAPCD, the MCAQMD does not have an adopted air quality fee mitigation program into which the City could pay fair-share mitigation fees. Mitigation requiring payment of fair-share fees would, therefore, be infeasible. (See CEQA Guidelines, § 15126.4, subd. (a)(1); see also, *Gray v. County of Madera* (2008) 167 Cal.App.4th 1099, 1122 [a fee requirement is not adequate mitigation when a program setting fee requirements and committing to specific mitigation measures has not been adopted].)

6-4 The commenter claims the DEIR's traffic analysis is inconsistent with guidance addressing Senate Bill 743. In August 2014, the California Office of Planning and Research circulated a "Preliminary Discussion Draft of Updates to the CEQA Guidelines Implementing Senate Bill 743" (Steinberg, 2013) to obtain public comments. The comment period ended on November 21, 2014. OPR is reviewing the comments it received, and, if warranted, will consider revisions to the draft guidelines. Once finalized and adopted, the new guidelines will be phased in. Initially, they would apply within "transit served areas," and by January 1, 2016 they would apply statewide. The act states that the guidelines only apply to new projects that have not commenced environmental review when the guidelines are adopted. Subdivision (d) of CEQA Guidelines section 15007 further provides that "[p]ublic agencies shall comply with new requirements in amendments to the Guidelines beginning with the earlier of the following two dates: (1) The effective date of the agency's procedures amended to conform to the new Guideline amendments; or (2) The 120th day after the effective date of

the Guideline amendments." Thus, the City would not be subject to any new Guidelines until 120 days after they're effective (which will not occur until after the Natural Resources Agency has completed a formal rulemaking process and the Office of Administrative Law has completed its review). Because no formal rulemaking process has begun, the effective date of any new regulations has not yet occurred. Moreover, the DEIR is not required to address any new requirements under the new Guidelines implementing SB 743 pursuant to subdivisions (b) and (c) of section 15007. The former provides that "[a]mendments to the Guidelines apply prospectively only. New requirements in amendments will apply to steps in the CEQA process not yet undertaken by the date when agencies must comply with the amendments." Subdivision (c), in turn, provides that "[i]f a document meets the content requirements in effect when the document is sent out for public review, the document shall not need to be revised to conform to any new content requirements in Guideline amendments taking effect before the document is finally approved."

Nevertheless, it is valuable to understand how use of these possible future guidelines could affect the DEIR conclusions. The proposed guidelines, if adopted, would make several major changes to how transportation impacts may be assessed under CEQA. Under the new proposed Section 15064.3 of the State CEQA Guidelines, transportation impacts of projects would no longer be measured on the basis of how vehicle delay caused by a project would affect the level of service (LOS) at an intersection or on a roadway, but would instead be measured on the basis of the vehicle miles traveled that the project generates and on the project's effects on transit, non-motorized travel, and traveler safety. Nevertheless, delay and level of service may still be assessed in the CEQA document by the lead agency with respect to consistency with that agency's adopted plans (e.g., minimum LOS standards as set forth in the agency's general plan).

Instead of identifying impacts based on the effects on LOS, impacts for transportation projects such as this interchange improvement Project would be based on whether the Project increases roadway capacity for automobiles in a congested area or adds a new roadway to the network thereby inducing additional automobile travel compared to existing conditions. The preliminary guidelines go on to state that a transportation project whose primary purpose is improving safety or operations generally would not have a significant transportation impact. The proposed Project does add roadway capacity, but the added capacity is needed to address existing operational and safety constraints as well as to address additional projected traffic generated by predicted area growth to the year 2032.

The commenter states that the DEIR's cumulative traffic analysis ignores SB 743's recognition that building more highway capacity leads to greater growth and greater pollutant emissions. The commenter, however, ignores that the additional highway capacity associated with this Project is needed to address traffic as a result of future growth, which Caltrans predicts will increase by a factor of 1.3 through the Project area by 2032. This area-wide growth is not a consequence of the Project. As stated in the DEIR, if that increase occurs as projected and the Project is not constructed, then there will be increased congestion through the Project area. This increased congestion would result in increased emission of air pollutants and GHG that would increase the severity of the significant impacts on

air quality and GHG emissions described in the DEIR. In addition, by facilitating access to major Ukiah area retailers (and facilitating such access is one of the goals of the act), the Project may reduce overall indirect vehicle miles traveled (VMT).

As described under the No Project Alternative (DEIR, page 162), emission of air pollutants and GHG would have a greater impact if the Project were not built.

Finally, even if indirect VMT did increase due to the Project, emissions from that increase could, at worst, be a significant air quality and GHG impact. The DEIR, however, already concludes that these indirect Project impacts are significant and unavoidable.

6-5 The commenter suggests that the project will expand highway capacity thereby increasing pollutant emissions and that the City will disclaim any duty to mitigate those impacts and approve the project with a statement of overriding considerations. The commenter's opinion is noted for the record. As described in the DEIR, the proposed Project improvements were called for in the City's General Plan as necessary for the general plan-designated development of the Redwood Business Park/Airport Industrial Park. The growth is projected to come from development allowed under the City's General Plan, the Ukiah Valley Area Plan, and the County's General Plan, as accounted for in Caltrans-projected regional traffic increase along the Highway 101 corridor. This growth is not caused by the proposed Project. However, for CEQA purposes, the DEIR assessed the indirect impacts of this projected traffic increase as it travels through the Project. If the Project is not constructed, much, if not all, of this traffic would still travel through the Project area while other vehicles might travel to more distant shopping areas. As described under the No Project Alternative (DEIR, page 162), emission of air pollutants and GHG would have a greater impact if the Project were not built.

6-6 The commenter suggests that, based on the Costco EIR traffic analysis, the Project DEIR underestimates future traffic to a level that 2032 emissions would exceed the benefits of new regulations that are projected to reduce emissions by that date. The Talmage DEIR accurately reports that emissions in 2032 from traffic travelling through the Project site would be less than existing condition emissions. However, because the destinations of these future trips remains unknown, the modeling done for interchange improvements identifies emissions only from those existing and future vehicles passing through the Project site. The Costco EIR analysis was referenced in the Talmage DEIR to show that the complete trips generated by the Costco project (some of which would travel through the Project site) would generate emissions exceeding the adopted significance threshold. The commenter is correct that the DEIR concludes that the overall emissions would exceed significance criteria. On this basis, though the Project would not directly cause the emissions, the DEIR conservatively concluded the impact to be significant and unavoidable.

The commenter is correct that the main cause of future emission reductions would result from changes in engine efficiency and the composition of fuels. However, the improvement in intersection operations within the Project site would reduce

congestion and vehicle delay, and this improved operation would also result in some reduction in emissions.

6-7 The commenter states that indirect vehicle emissions of all vehicles using the Project in 2032 should have been modeled. The air quality analysis was based on the traffic study prepared for the Talmage DEIR. Emissions from all vehicles passing through the Project site were modeled, which is consistent with the Caltrans-approved model. The CTEMFAC-5 is used to calculate mobile source air toxics and CO_2 emissions. To calculate emissions from a project the model relies on the traffic volumes, speeds, and delays through the project site. As the Project would not cause these trips and it is unknown to and from where these trips would go, it is speculative to model the total length of the new trips added by 2032. (See State CEQA Guidelines, § 15145.) The traffic assessment was based on the Caltrans 1.3 growth factor assumption regarding increases in traffic that would use the Project by 2032. That said, as stated in the previous response, the Costco EIR analysis was referenced in the Talmage DEIR analysis to conservatively account for the possible total trip length of some of the new traffic that could use the Project after its completion and in 2032. Again, the impact was deemed significant and unavoidable.

6-8 The commenter states that the Talmage DEIR's 2032 traffic projection is underestimated and inconsistent with traffic projections done for the Costco EIR. This interchange improvement DEIR does not contradict the analysis in the Costco EIR. Rather, it updates traffic counts and relies on the more up-to-date future traffic projections that Caltrans has made for the area. See Response 4-10 and Response 5-18 to 5-25 regarding the appropriateness of the traffic projections in the Talmage DEIR compared to those made in the Costco EIR. See also Responses 6-4 and 6-5 above regarding the issue of potential emissions from increasing interchange capacity.

6-9 The commenter states that the Project DEIR does not adequately assess near- to mid-term congestion (with concurrent emission of pollutants) induced by improving the interchange's capacity. As described on page 94 of the Talmage DEIR, short-term emissions from additional traffic once the Project becomes operational would be less than significant. As described in previous Responses 6-4 and 6-5, future emissions are based in part on Caltrans-projected traffic volume increases in the area. As stated on page 154 of the DEIR, the Project would accommodate already planned and approved development on the Redwood Business Park/Airport Industrial Park and would not induce additional development in the area. The Project would accommodate the projected trips from planned area development. Accordingly, it would not increase VMT. In fact, as previously stated in Response 6-4, it could decrease future VMT.

6-10 The commenter states that the DEIR's 2032 traffic projection is underestimated and inconsistent with traffic projections done for the Costco EIR. Again, see Response 4-10 Response 5-18 to 5-25 on why the Talmage DEIR Project trips are different from and more appropriate than the Costco trip projections. The DEIR used the most current growth projections that Caltrans provided.

6-11 The commenter again states that the project will increase roadway capacity leading to an increase in VMT. Please see previous Responses 6-4 and 6-5 regarding this same comment.

6-12 The commenter states that modeling of all 2032 trips is needed to quantitatively know the amount of pollutants that may be emitted in 2032 and that the traffic projections are inaccurate. Further, the commenter opines that the project should be reviewed per SB 743 regarding traffic impacts from increased roadway capacity. As explained in Response 6-7, because the Project will not cause new traffic trips, the emissions from the complete trips that could use the Project by 2032 are not Project-related and remain speculative. To ensure that the DEIR provided the most conservative analysis, the emissions reported in the certified Costco EIR were discussed and incorporated into the analysis. Thus, contrary to the commenter's claim, the DEIR does not underreport the emissions for the Project by excluding emissions associated with the traffic projections from the Costco EIR. On that basis, the indirect air quality impact in the DEIR was found to be significant and unavoidable. See previous Response 4-10 and Response 5-18 to 5-25 regarding the relationship of Costco traffic and the Project. See previous Response 6-4 regarding the issue of the Project increasing VMT and the Project's relationship to SB 743.

6-13 The commenter states that the DEIR should have used a more current version of the Road Construction Emissions Model. When the original Project assessment was conducted, the version of the Road Construction Emissions Model, current at that time was Version 6.3.2. Since that analysis was completed, the new model, Version 7.1.5.1 was released. This newest version was run, and it showed no exceedances of the Mendocino County Air Quality Management District's CEQA thresholds of significance. The average daily emissions are higher than the original estimates reported in the DEIR, mostly because the newer model assigns more equipment usage. The emissions are shown in the following table. More data on the modeling is included in Appendix C of the FEIR.

Maximum Road Construction Emission Model Results

Emission Estimates for – Talmage Rd Interchange Project Phases		ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM_{10} (lbs/day)	Total $PM_{2.5}$ (lbs/day)	CO_2 (lbs/day)
Grubbing/Land Clearing	**Daily Maximum**	1.2	6.8	11.1	10.5	2.5	1,180
	Daily Average	0.1	0.7	1.1	1.1	0.3	118
Grading/Excavation	**Daily Maximum**	6.2	29.0	59.8	13.3	5.1	5,891
	Daily Average	2.5	11.6	23.9	5.3	2.0	2,356
Drainage/Utilities/Sub-Grade	**Daily Maximum**	5.7	28.6	55.0	13.0	4.8	5,829
	Daily Average	0.4	10.0	19.3	4.6	1.7	2,040
Paving	**Daily Maximum**	2.9	15.0	24.3	1.6	1.5	2,692
	Daily Average	5.0	2.3	3.6	0.2	0.2	404
Maximum (pounds/day)		6.2	29.0	59.8	13.3	5.1	5,891
Average (pounds/day)		***5.0***	***24.5***	***47.9***	***11.2***	***4.2***	***4,918***
MCAQMD Threshold Of Significance Average (pounds/day)		54	None	54	82	54	None
Total (tons/construction project)		0.4	1.7	3.5	0.4	0.2	355.4

6-14 The commenter states that the DEIR does not indicate whether ramp and bridge demolition activities were included in the construction emissions modeling. The model was adjusted to be conservative and to address demolition activities. The acreage input was increased to 2.1 acres, and extra equipment was added to address the partial demolition of the bridge and ramp. The amount of equipment and the time of use in each phase of the construction includes the demolition and construction of the new ramp alignment. See Appendix C of this FEIR for the modeling.

6-15 The commenter states that the construction emissions modeling did not include work at the southbound offramp lane. As shown in Appendix C, the disturbance area was increased to 2.1 acres to be conservative and ensure that all roadwork was included.

Clerk's Copy 11b

October 15, 2014
The City Council of Ukiah
DEIR for Talmage Road Interchange Modification

Dear Council-members:

During the five-year history of the Costco Project, no local government entity has seriously considered and reported upon the economic impact of the project nor upon its financial viability. The City's purchase of 15.3 acres of land for $2.34 million under the Redevelopment Program assumed further build-out of the Redwood Industrial Park made good sense although no examination of the expected new tax revenues, nor of the prospect of significant taxes lost as a result from shuttered enterprises was ever reported to the citizens. As originally planned, the $2.34 million land acquisition would be paid back to the City by Costco and used for the Talmage Interchange project. Any addition funds for traffic improvements and the like could be obtained under the same Redevelopment Account. 7-1

The majority of taxpayers are unaware that this Redevelopment Program was merely a slush fund – a tricky way to spend 20 years of future tax revenues right now and pay them back 30 years from now at hefty interest rates. This assumed that the Town would just grow and grow at over 2% per year for the unlimited futures. Well, now things have changed: The State Legislature totally shut down this slush fund in the middle of 2013, and the City was forbidden from using the $2.34 million from the land sale to Costco for traffic improvements to funnel customers to Costco. No new sources of money have been found to finance the approximately $6.4 million needed to handle traffic problems. As if this is not enough, the City is looking at having to pay back the bonds it took out way back in 2011 for the Redevelopment Program with interest rates building towards 6%. Economic hard times are upon us and a big spurt in tax revenues is unlikely any time soon.

Will Costco bring in sufficient taxes to the City to make all of this OK? We have never, never, never seen any projections of tax revenues from Costco nor from Walmart either that would justify the City Council's extravagance. What will be the impact of stores closing due to competition from Costco? Walmart has said they expect a 20% reduction in sales. Where are all these new customers expected to flock to the new Costco to come – Lake County?

No one in City Government has been forth-coming with us. Many of us have asked for a little straight-forward accounting over the years but we have gotten no response. The City Council passes these annoying questions on to staff and staff has seldom responded in a manner that us common people can decipher. People have grown tired of this old issue but it will not go away. We will have 3 out of 5 new Council Members at year end. How about a fresh look?

Respectfully,

James Houle

Response to Letter from James Houle

7-1 The commenter asks questions about the costs of the proposed interchange Project, how it will be paid for, and whether the Costco project will generate sufficient tax revenues to pay for the improvements. See Response 5-40. City decision-makers will determine whether or not to spend money to finance the Project. How the City spends its revenues is a City policy decision. These fiscal issues do not affect the physical environment and would not cause environmental impacts. Accordingly, these questions are not addressed in the DEIR. However, the commenter's questions and concerns expressed are herein part of the record and may be considered in the City decision-maker's deliberations about the Project.

2013 Comment Letters Submitted on the 2013 Draft Mitigated Negative Declaration

Mr. William Kopper (see previous Comment 4-1) incorporated all comments submitted on the 2013 Draft Mitigated Negative Declaration (MND) as comments on the DEIR. The Draft MND was withdrawn by the City in August 2013, and subsequently the City prepared the DEIR to more fully assess Project impacts and possible project alternatives. Six comment letters on the Draft MND were submitted during the public review period for that document. They are presented as Comment Letters 8 though 13 below. Responses are provided to comments that questioned the analysis in the Draft MND and its attached Initial Study when those comments are pertinent to the new analyses presented in the DEIR.

William D. Kopper

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August 26, 2013

City of Ukiah
Planning and Community Development Department
300 Seminary Avenue
Ukiah, CA 95482

RE: *Mitigated Negative Declaration for the Talmage Road – U.S. Hwy 101 On-Off Ramps Realignment Project*

Dear Members of the City of Ukiah Planning Staff and City Council:

I represent Ukiah Citizens for Safety First, a California Association, Rachel Landy, Patty Hernandez, Sandy McKee, and Teri Stout. These are their comments on the Mitigated Negative Declaration (MND) for the Talmage Road/U.S. Hwy 101 Intersection Improvement Project. We incorporate into these comments those of all other individuals and entities commenting on the Mitigated Negative Declaration for the Intersection Improvement Project. Ukiah Citizens for Safety First, Rachel Landy, Patty Hernandez, Sandy McKee, and Teri Stout oppose the Project as it is currently planned and designed. We incorporate into these comments the attached comments of Mr. Daniel T. Smith, Traffic Engineer, and Mr. Steve Pettyjohn, Noise Engineer.

With respect to the Mitigated Negative Declaration for the Talmage Road/U.S. Hwy 101 On-Off Ramps Realignment Project, we have the following comments:

1. **The City of Ukiah did not provide the Mitigated Negative Declaration and the Traffic Study to the County of Mendocino and did not consult with the County about the Intersection Improvement Project.** 8-1

For a Project of "statewide, regional, or area wide significance", the lead agency must provide notice to "transportation planning agencies" and "public agencies which have transportation facilities within their jurisdiction which could be affected by the project." (Public Resources Code Section 21092.4(a); CEQA Guidelines Section 15072(e).) Such "transportation facilities" include "major local arterials and public transit within 5 miles of the project site and freeways, highways, and rail transit service within 10 miles of the project site". (Public Resources Code Section 21092.4(b); CEQA Guidelines Section 15072(e).) Lead agencies must provide these agencies with all "environmental documents pertaining to the project". (Public Resources Code Section 21094(a).) "Consultation shall be conducted in the same manner as for responsible agencies" and "shall be for the purpose of the lead agency obtaining information concerning the project's effects on major arterials, public transit, freeways, highways, and rail transit service" within a consultant agency's jurisdiction. (Public Resources Code Section 21092.4(a).)

The MND prepared by the City does not include evidence that the City of Ukiah complied with these provisions of the California Environmental Quality Act. There is no evidence in the record that the Traffic Study for the Project and the Mitigated Negative Declaration were provided to the County of Mendocino. This Agency has facilities that are likely to be affected by the Project, including Talmage Road, which is also known in the County as Road No. 222. The addition of trips related to the expansion of the interchange is likely to have an impact on county roads. Therefore, both the Traffic Study and the Mitigated Negative Declaration were required to be provided to Mendocino County. Moreover, the City should have consulted with the County about the interchange design and possible affects on county roads.

2. **The Mitigated Negative Declaration is Not an Appropriate Environmental Document to Evaluate the Effects of the Talmage Road/U.S. 101 Hwy Interchange Improvement Project. The City of Ukiah is required to prepare an Environmental Impact Report.**

THESE OBJECTIONS TO THE USE OF A NEGATIVE DECLARATION RELY ON THE FOLLOWING UNDERSTANDING OF THE LAWS

A. Standards for an Environmental Impact Report.

A Negative Declaration may be prepared for a project when, after completing an initial study, the lead agency determines that the project "would not have a significant effect on the environment." (Public Resources Code Section 21080(c).) A determination of "no significant effect on the environment" can be made only if "there is no substantial evidence in light of the whole record before the lead agency" that such an impact may occur. (Public Resources Code Section 21080(c)(1); CEQA Guidelines Section 15070(a).) In contrast, whenever substantial evidence in the record supports a "fair argument" that significant impact may occur, an EIR is required. Even when there is other substantial evidence in the record that supports an opposite conclusion, the agency must nevertheless prepare an EIR. (*No Oil, Inc. v. City of Los Angeles (No Oil, I)* (1975) 13 Cal.3d 68, 75; *Friends of "B" Street v. City of Hayward* (1980) 106 Cal.App.3d 988, 1000-1003; *Laurel Heights Improvement Association of San Francisco, Inc. v. Regents of the University of California ("Laurel Heights II")* (1993) 6 Cal.4th 1112, 1123.)

It is clear that the "fair argument" standard creates a "low threshold" for requiring preparation of an EIR. (*Citizens Action to Serve All Students v. Thornley* (1990) 222 Cal.App.3d 748, 754; *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 310.) The "fair argument" standard is founded upon the principle that because issuing a Negative Declaration has a "terminal effect on the environmental review process" an EIR is necessary to resolve "uncertainty created by conflicting assertions" and to substitute some degree of factual certainty for tentative opinion and speculation." (*Citizens of Lake Murray Area Association v. City Council* (1982) 129 Cal.App.3d 436, 440; *No Oil I, supra*, 13 Cal.3d at 85.)

B. The "Fair Argument" Test.

If the Administrative Record includes some substantial evidence supporting a "fair argument" that significant effects may occur, it does not matter whether the agency finds such evidence persuasive. The agency's job is not to weigh competing evidence and to determine whether, in fact, a significant impact on the environment will occur. Instead, the agency's task is to determine wether substantial evidence exists that there is a fair argument that a significant impact may occur. The agency does not have to find compelling evidence, but simply find that a "fair argument" has been presented and is supported by substantial evidence. As stated in *Friends of "B" Street* (1980) 106, Cal.App.3d 988, 1002:

> Stated another way, if the trial court perceives substantial evidence that the project might have such an impact [on the environment], but the agency failed to secure preparation of the required EIR, the agency's action is to be set aside because the agency abuses discretion by failing to proceed in a manner required law.

The case of *Sierra Club v. County of Sonoma* (1992) 6 Cal.App.4th 1307 involved a dispute over gravel mining operations. In *Sierra Club v. County of Sonoma*, the Court of Appeal further clarified its view of the "fair argument" standard. The court stated:

> A court reviewing an agency's decision not to prepare an EIR in the first instance must set aside the decision if the administrative record contains substantial evidence that a proposed project might have a significant environmental impact; in such a case, the agency has not proceeded as required by law. Stated another way, the question is one of law, i.e., 'the sufficiency of the evidence to support a fair argument.' [Citation.] Under this standard, deference to the agency's determination is not appropriate and its decision not to require an EIR can be upheld only when there is no credible evidence to the contrary. (*Sierra Club v. County of Sonoma* (1992) 6 Cal.App.4th 1307, at 1317 to 1318.)

In the case of *Sierra Club v. County of Sonoma*, the court held that expert testimony that expanded gravel operations might have a significant impact on the environment constituted substantial evidence supporting a "fair argument" not withstanding the contrary opinion of other experts. (6 Cal.App.4th at 1322-1323.) **According to the holding of *Sierra Club v. County of Sonoma*, the expert testimony attached to these objections is sufficient to require the preparation of an environmental impact report, not withstanding the opinion of staff that the proposed does not have a significant impact on the environment. The fact that credible expert testimony has been provided to the City of Ukiah requires the preparation of an Environmental Impact Report.**

C. The Burden Is On The Government To Gather Adequate Information and Investigate Environmental Impacts.

In the case of *Sundstrom v. County of Mendocino* (1988), the court stated that in situations where agencies have failed to gather the data necessary to make an informed decision on environmental impacts an environmental impact report may be required as a matter of course. The court implied that EIRs may sometimes be required even in the absence of "substantial evidence" of potential significant impacts. The court stated that "CEQA" places the burden of environmental investigation on government rather than on the public." Additionally, the court noted an agency "should not be allowed to hide behind its own failure to gather relevant data." The court then added:

> If the local agency has failed to study an area of possible environmental impact, a fair argument may be based on the limited facts of the record. Deficiencies in the record may actually enlarge the scope of fair argument by lending a logical plausibility to a wider range of inference. (*Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d at 311.)

As noted in *No Oil, Inc. v. City of Los Angeles* (*No Oil I*) (1975) 13 Cal.3d 68, 84, the California Supreme Court stated that EIRs should be prepared in "doubtful cases," so that agencies do not make decisions "without the relevant data or a detailed study of it."

Courts are not to reflexively defer to a lead agency's determinations regarding the "substantiality of evidence" simply because the agency couches its determination in terms of credibility. Rather, the court only defers to agency determinations regarding credibility where there is at least some specific evidence in the record supporting such determinations. The cases hold that lead agencies cannot ignore uncontroverted testimony based on objective data. (*Citizens Association for Sensible Development of Bishop Area v. County of Inyo* (1985) 172 Cal.App.3d 151, 173.)

D. The Evidence Needed to Support a Fair Argument.

Public Resources Code Section 21080(e) defines the term "substantial evidence" as that term is used in the context of a decision whether to prepare a Negative Declaration or an EIR as follows:

> Argument, speculation, unsubstantiated opinion or narrative, evidence which is clearly inaccurate or erroneous, or evidence of social or economic impacts which do not contribute to or are not caused by, physical impacts on the environment, is not substantial evidence. Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts.

Public Resources Code Section 21080(e) codifies prior case law defining what constitutes "substantial evidence" supporting a fair argument that a project requires an EIR. One of the sources of this definition is *Perley v. County of Calaveras* (1982) 137 Cal.App.3d 424, 436-437. Substantial

evidence does not always have to be expert testimony. A number of cases have treated lay testimony as substantial evidence. For example, in *Oro Fino Gold Mining Corporation v. County of El Dorado* (1990) 225 Cal.App.3d 872, the court treated as substantial evidence citizens' personal observations about how the proposed project could affect their neighborhoods, since the observations were based on the declarant's past experience with a similar project in the same area. In *Citizens Association for Sensible Development of Bishop Area v. County of Inyo* (1985) 172 Cal.App.3d 151, 173, the court accepted as substantial evidence the personal observations of project opponents. The court stated that adjacent property owners may testify to traffic conditions based upon their own personal knowledge.

E. Credible Expert Testimony That A Project May Have A Significant Impact Compels Preparation of an EIR.

In *City of Livermore v. Local Agency Formation Commission* (1986) 184 Cal.App.3d 531, 541-542, the court held that if there is credible expert testimony that a project may have a significant impact, even if contradicted, it is generally dispositive and under such circumstances an EIR must be prepared. An EIR is required to be prepared to resolve disputes among experts. In the case of *City of Carmel by the Sea v. Board of Supervisors* (1986) 183 Cal.App.3d 229, the existence of disagreement among experts was a factor in the court's decision to require an EIR. In that case, the experts could not agree on the amount of wetlands that existed on a subject site. The court reasoned that "the very uncertainty created by the conflicting assertions made by the parties ... underscores the necessity of the EIR to substitute some degree of factual certainty for tentative opinion and speculation." (*City of Carmel by the Sea v. Board of Supervisors, Id.*, at 247-249.)

F. The Commenters Have Presented Expert Testimony That the Project May Have a Significant Impact on the Environment, and Therefore an Environmental Impact Report Should Be Prepared.

The attached Traffic Study by Mr. Dan Smith, Traffic Engineer, indicates that the Project may have a significant affect on traffic safety and traffic congestion. The attached report prepared by Mr. Steve Pettyjohn, Noise Engineer, suggests that the Project may have a Significant Impact on noise. These expert reports based upon fact and analysis require the City of Ukiah to undertake an Environmental Impact Report before approving the Project.

G. Traffic Impacts.

Appendix G, Section XVI(d) requires that an Environmental Impact Report be prepared if a Project may substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). As shown in the attached report by Mr. Daniel Smith, the Project is not in compliance with Caltrans Highway Design Manual topic 2.06.3(1) that addresses "through lane drops". As pointed out by Mr. Smith, the design speed on Talmage is at least 35 mph, and therefore, the taper distance for the termination of a 12-foot wide lane should be a length of 420 feet under Caltrans regulations. The design for the interchange shows that the taper distance will be only approximately 135 feet, or 32% of the design standard. Mr. Smith points

out that the through lane on Talmage also tapers to the left to line up with the overcrossing of the freeway – another transition of about 12 feet in width. According to the Caltrans Design Standards, another 420 feet taper distance should be provided for this change. Mr. Smith provides the expert opinion that the lack of adequate taper distance will likely increase safety hazards and, therefore, the Project may have a Significant Safety Impact. Mr. Smith's opinion is based upon fact.

Mr. Smith also points out that the Mitigated Negative Declaration states that in preparation of the environmental study "staff examined and used information from the FEIR for the Walmart Expansion Project, prepared by the consulting firm ESA and certified by the City Council on January 18, 2012. Additionally, the Draft Environmental Impact Report for the Costco Project, dated January 2013, was examined and used to gather additional data and information. All of the studies listed above are incorporated into this document by reference." (Initial Study, Mitigated Negative Declaration, p. 3.) The traffic counts for the Costco DEIR showed 207 more traffic movements at the Talmage Road/U.S. Hwy 101 interchange during the weekday pm peak hour than does the GHD study that was prepared for the MND. The Costco traffic counts were greater than the GHD traffic counts by 14.7% on the four most heavily utilized movements at the interchange. The GHD study estimated traffic growth to the analysis year (2032) by applying a growth factor to the existing counts. The use of low existing counts resulting in a substantially lower forecast for future congestion. In the event that the Costco counts had been used, the interchange would be shown not to alleviate traffic congestion. If the Costco counts had been used, the Project would have a Significant Impact in the 2032 analysis year. Because the Mitigated Negative Declaration relied on the lower traffic counts instead of the higher traffic counts, it fails to meet CEQA's requirement for good faith full disclosure of impacts. The Mitigated Negative Declaration violates CEQA by failing to use proper baseline figures that accurately reflect the existing conditions. Mr. Smith pointed out the fact that the traffic at the interchange is likely to be substantially higher than in the GHD analysis, the intersection design is likely to have a Significant Impact on traffic safety and cause a significant increase in safety hazards.

H. Greenhouse Gas Emissions.

CEQA Guidelines Appendix G section 7(a) states that a project may have a Significant Impact on the environment if it generates greenhouse gas emissions, either directly or indirectly, that may have a Significant Impact on the environment. The Mitigated Negative Declaration reports that the Project will have no impact on GHG emissions because the traffic will be the same with and without the Project.

The analysis in the Mitigated Negative Declaration is incorrect. In Appendix G, the CEQA Guidelines discuss how an agency is to evaluate Environmental Impacts. In answering the questionnaire, Appendix G states: "all answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts."

In this case, the Interchange Project will facilitate construction of a Costco Warehouse store, which is an indirect impact. Without the development of the interchange improvements, the Costco

store cannot be built because access to the Costco will be virtually impossible. The only significant obstacle to the construction of the Costco store is the lack of access to the store from the U.S. 101 freeway. The interchange improvements are intended to resolve this problem. The Interchange Project, therefore, will indirectly cause the generation of additional GHG emissions. These emissions will be "off-site" emissions. The Costco store is projected to produce 8,493 metric tons of CO_2e per year. This far exceeds the significant standard of 1,100 metric tons per year CO_2e that was adopted by the BAAQMD CEQA Air Quality Guidelines. The Mitigated Negative Declaration is in error. The Project may have a Significant Impact on GHG emissions and, therefore an Environmental Impact Report should be prepared.

I. The Mitigated Negative Declaration is Improper because the Interchange Project Should be Included as part of the Costco Project EIR. 8-2

An Agency cannot segment a Project into components and, in this way, minimize the Project's impact and undercut public review. As the court stated in *County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 199:

> Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposals benefit against its environmental cost, consider mitigation measures, assess the advantage of terminating the proposal (i.e., the 'no project' alternative) and weigh other alternatives in the balance. An accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR.

An EIR must include all components of a Project. In the case of *San Joaquin Raptors/Wildlife Rescue Center v. County of Sanislaus* (1994) 27 Cal.App.4th 713, the court held that an EIR for a housing project that did not include construction of sewer lines and expansion of a waste water treatment plant designed to serve the project was inadequate. This case is relatively close to the circumstances surrounding the Costco Project and the Talmage Road/U.S. 101 interchange. The expansion of the interchange is an absolute necessity to the Costco Project, and the Costco Project cannot go forward without the expansion of the interchange. Without the expansion of the interchange, the access to the Costco Project would be grid locked after the construction of the Costco Project. Therefore, the interchange improvements have to be considered as part of the Costco Project, and evaluated in an Environmental Impact Report in conjunction with the Costco Project

Sincerely,

William D. Kopper
Attorney at Law

WDK/wrn
enclosures

Response to Letter on the Previous Draft MND from William D. Kopper

8-1 The commenter stated that the City should have prepared an EIR for the proposed Project. The comments on the previous Draft Mitigated Negative Declaration describe the need for the City to prepare an EIR. These comments are not relevant since the City decided subsequent to the submittal of this letter to prepare an EIR rather than pursuing the original proposal to adopt an MND.

8-2 The commenter stated that the Project should be included and assessed as part of the Costco EIR. See Response 4-3 regarding the issue of the relationship of this DEIR to the approved Costco Project.

The Acoustics & Vibration Group, Inc.

5700 Broadway Sacramento, CA 95820-1852
916-457-1444 FAX: 916-457-1475
Consultants In Acoustics, Vibration, Noise Control & Audio Visual Design

August 26, 2013

William Kopper
William D. Kopper Attorney at Law
417 E Street
Davis, CA 95616

SUBJECT: Results of Review of Sound & Vibration Impact Section of Initial Study and Mitigated Noise Impact Study for Modifications to the Talmage Road/US 101 Interchange in Ukiah

Dear Mr. Kopper,

Documented in the letter report are the results of a review of the sound and vibration sections of the initial study and mitigated negative declaration (IS/MND) for the proposed modifications to the Talmage Road/US101 interchange [1]*. The proposed changes will modify the southbound US101 off-ramp to Talmage Road and Talmage Road. Residential land exists north of Talmage Road plus hotels are found along Airport Park Boulevard. The project is said to be required because of development in the airport business including a Wal-Mart and Costco large box stores. The IS/MND contains a project description and CEQA requirements, the environmental checklist form, a noise assessment [2], a traffic study [3] and other studies. The IS/MND states that no noise or vibration impacts will result from the project.

The purpose of this review of the IS/MND is to ensure that sound sources were properly addressed, evaluated and mitigated where necessary to be sure that noise sensitive receptors do not suffer as a result of the project. Based on this review and evaluation, noise impacts may occur. The noise sections of the Initial Study/Mitigated Negative Declaration are inadequate and incomplete. The influence of traffic due to at least two of the projects that would benefit from this project is not included in this analysis. Finding the cumulative affects of all known projects is required by California Environmental Quality Act, CEQA. Information required for an independent evaluation of the noise impacts is not available. This includes traffic counts and mixes used to calibrate the model, traffic counts and mixes used to do predictions of existing conditions, existing plus project(s), and existing plus project conditions. Construction noise and vibration are addressed incompletely. 9-1

Based on this review and evaluation, the noise sections of the Draft EIR are inadequate and incomplete. This is because:

1. The Traffic Study in the IS/MND uses the impacts from the proposed Wal-Mart Expansion and the construction of a new Costco for part of the justifications for the modifications to the Talmage/US101 interchange. However, the study does not provide any traffic counts or mixes for existing plus project conditions. The change in traffic volumes from existing to existing plus project(s) for noise-sensitive receptors near Talmage Road and Airport Park Boulevard is expected to be significant. The noise assessment does not address this condition. 9-2

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* - *Number in brackets refers to references listed at the end of this letter report.*

2. The location of the sound measurement positions is not described well enough to be able to duplicate the tests or evaluate the measured results. The symbol locations on Figure 1 do not agree with Google Earth® address placement and the distance from the road is not given. This information is necessary to confirm results. 9-3
3. The interpretation of "short term" construction noise impacts as having to last one year is without foundation. A daily change can be considered a "short term" change. The construction noise impact evaluation is without merit. The impacts for the closest homes to Talmage are expected to be significant. 9-4

The reasons given above are sufficient to justify not approving the IS/MND for the Talmage/US101 interchange modifications. Additional reasons could be provided.

Please call if you have any questions or comments about the results and the comments given. Let me know if additional information is needed.

Sincerely,

Steve Pettyjohn, Principal
Certified: Institute of Noise Control Engineers-1981

REFERENCES

1. Anon., ***Talmage Road/Southbound U.S. 101 On-Off Ramp Realignment Project: Initial Environmental Study and Mitigated Negative Declaration***. by Department of Planning and Community Development, City of Ukiah, July 2013.

2. M.S. Thill, "Talmage Interchange Improvement Project Draft Environmental Noise Assessment, Ukiah, California", for GHD Inc., Santa Rosa, CA, by Illingworth & Rodkin, Inc., Petaluma, CA, Job N0.: 12-171, January 24, 2013.

3. F Penry, Matt Wargula & M. Kennedy, "Talmage Southbound Interchange Project Traffic Impact Study Technical Memorandum", Director of Public Works and Director of Planning & Community Development, Ukiah, CA by GHD Inc., Santa Rosa, CA, Job No.: 02502-8410035, June 31, 2013.

The Acoustics & Vibration Group

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Consultants in Acoustics, Vibration, Noise Control & Audio Visual Design

STEVE PETTYJOHN

Principal

Steve is an engineering professional responsible for overseeing services provided by The Acoustics & Vibration Group (TAVG). He is especially proficient at setting realistic goals, explaining what the purpose is of these goals and how sound and vibration influences a project. He has extensive experience in designing facilities for optimum sound quality, measuring sound, analyzing data and completing noise impact statements. Steve analyzes heating, ventilating, air-conditioning systems for sound characteristics and vibration isolation; does sound level surveys to document employee noise exposures; and designs sound reinforcement systems and sound paging systems. He executes vibration measurements for industrial, commercial and public utility projects and specifies mechanical equipment systems to meet acoustic and vibration criteria. In addition he serves as an expert witness in cases involving acoustic and vibration issues.

TAVG was formed in Sacramento by Steve in 1986 after completing seven years of acoustic and vibration research for Cummins Engine Company, a major international manufacturer headquartered in Indiana, and five years with acoustic and vibration consulting firms in Atlanta, Georgia. During these years he has completed hundreds of projects encompassing a wide scope of work. Clients have included manufacturing and industrial firms, retail businesses and commercial firms, architects, engineering and mechanical companies, governments and governmental agencies, developers, contractors, churches, hospitals and schools.

Steve is a registered Professional Engineer in Acoustics (#19639PE) in Oregon, the only state with a test for this discipline. He attained certification (#81010) in 1981 by the Institute of Noise Control Engineers in an exam patterned on the professional engineer examinations given by the states. The Vibration Institute certified him in 1994 as Vibration Specialist III (#9403-004B). Steve received a Master of Science degree in an acoustics multi-disciplinary program in 1979 from the School of Mechanical Engineering from the Georgia Institute of Technology. This program exposed him to acoustics and vibration courses from the Departments of Architecture, City Planning, Psychology, Physics, Electrical Engineering, Geophysical Science, Aerospace Engineering and Solid Mechanics as well as Mechanical Engineering. In 1976 Steve was certified as an Engineer-In-Training, from the state of Georgia. His experience in acoustics and vibration began at Oregon State University, OSU, where he completed special projects on engine vibration and chain saw sound. In 1972 he earned a Bachelor of Science degree in Mechanical Engineering from OSU.

He is a member of relevant professional organizations. They include The Vibration Institute, Acoustical Society of America (ASA), Institute of Noise Control Engineers (INCE), American Society of Mechanical Engineers (ASME) and American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE).

Response to Letter on the Previous Draft MND from Steve Pettyjohn (The Acoustics & Vibration Group, Inc.)

9-1 The commenter suggested that the noise study done for the previous Draft MND did not provide the noise information needed for an independent evaluation. The commenter is directed to the new, expanded noise analysis contained in the DEIR (pages 98 through 116). This DEIR analysis addresses noise from future vehicle use of the Project as described by the traffic analysis prepared for the DEIR and also includes a cumulative noise impact analysis. Appendix G of the DEIR contains details on noise measurements and methodology to allow independent evaluation of noise impacts. The DEIR noise analysis also contains a full discussion of Project construction noise. Accordingly, the prior comments on the original Initial Study were addressed in the new noise analysis prepared for the DEIR. This analysis accurately identifies Project noise impacts and needed mitigation measures. It is further noted that no comments regarding the DEIR noise analysis were submitted by any of the individuals or agencies commenting directly on the DEIR.

9-2 The commenter stated that the Draft MND noise study did not provide information for the existing and the existing plus project conditions at sensitive receptors near the Project site. The new noise analysis done for the DEIR does include noise measurements that describe the existing noise environment. It also includes the results on noise modeling to show projected future (2032) noise levels and the effects on noise-sensitive receptors (see Table 4.7-8 on page 115 of the DEIR for a summary of existing and future noise levels at sensitive receptors). As the comment refers to an earlier report, it does not concern the current DEIR noise analysis.

9-3 The commenter stated that the Draft MND noise study did not describe or map well the noise measurement locations. As described on pages 103 through 106 of the DEIR, measurements made at Sites LT-2, LT-4, ST-3/ST-4, and ST-6 documented noise levels at locations representative of residential land uses near U.S. 101 and the southbound off-ramps to Talmage Road. The noise analysis done for the DEIR accurately shows the location of noise measurement locations as well as all other information needed to independently assess the results of the noise modeling (see additional information about selection of noise measurement locations and the noise analysis contained in the full noise report contained in DEIR Appendix G). As the comment refers to an earlier report, it does not concern the current DEIR noise analysis.

9-4 The commenter questioned the use of up to one year being an adequate description of “short term impacts” when assessing noise impacts. The City’s maximum exterior noise standards do not regulate noise levels from temporary construction activities at non-residential receivers. As described on page 107 of the DEIR, the City Municipal Code does not establish maximum construction noise limits, and the qualitative noise limits apply only to construction within a residential zone. A footnote on page 108 of the DEIR explains why the one-year duration is considered by the expert noise consultant to be a reasonable threshold for Project construction noise and the City agrees with this determination. Also, please see the subsequent Response 11-27 regarding this same concern.

SMITH ENGINEERING & MANAGEMENT

August 14, 2013

Mr. Charlie Stump, Director
Planning and Community Development Department
City of Ukiah
300 Seminary Avenue
Ukiah, CA 95482

Subject: **Talmage Road / U.S. 101 On-Off Ramp Realignment Project Initial Environmental Study and Mitigated Negative Declaration**

Dear Mr. Stump:

At the request of Attorney William Kopper, I have reviewed the traffic aspects of the Talmage Road / U.S. 101 On-Off Ramp Realignment Project Initial Environmental Study and Mitigated Negative Declaration (the "IS/MND") for the Talmage Road / U.S. 101 On-Off Ramp Realignment Project (the "Project") and supporting documentation, particularly the Appended Traffic Impact Study by GHD Inc.. My qualifications to perform this review include registration as a Civil and Traffic Engineer in California and over 44 years professional consulting engineering practice in the traffic and transportation industry. I have both prepared and reviewed traffic and circulation analyses of environmental review documents, including studies of freeway interchange modifications, shopping centers, freestanding discount stores and superstores and discount club stores and superstores. I am familiar with the surroundings of the proposed Project, having previously commented on environmental documents for the nearby proposed Walmart expansion project and the COSTCO development, both of which are potentially affected by the subject interchange. My professional resume is attached.

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Findings of my review are summarized below.

The IS/MND Fails To Disclose and Mitigate Potentially Significant Impacts of the Project Design on Traffic Safety

The IS/MND categorizes the Project as having no impact on Transportation/Traffic. Criterion 14 (d) of the Guidelines Appendix G Checklist states: "would the Project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment". The City has marked the box "No Impact" on the checklist. It appears that the basis for this conclusion is the GHD Study that the Intersection Improvement Project would improve traffic conditions at the Interchange, and a Caltrans letter dated April 15, 2012 stating general concurrence with the results of the study and Preferred Alternative. Nevertheless, there are design features of the proposed interchange that that are substandard or unusual and that "substantially increase hazards." The City should have checked the box "Potententially significant" for Criterion 14(d). 10-1

One dangerous design feature is the merge-down on eastbound Talmage from two lanes to one between its intersection with the U.S. 101 southbound ramps and the structure overcrossing the freeway. Caltrans *Highway Design* Manual topic 206.3(1) *Through Lane Drops* provides as follows: "when a lane is to be dropped, it should be done by tapering over a distance equal to WV, where W = width of lane to be dropped and V = design speed."[1] Since the design speed on Talmage is at least 35 miles per hour, the taper for termination of a 12-foot wide lane should have a length of 420 feet. In fact, the actual taper in the design plan for the preferred alternative is only approximately 135 feet, only 32 percent of the design standard. This violation of safety standards is even more significant. Because the remaining through lane on Talmage also tapers to the left to line up with the overcrossing of the freeway – a transition also of about 12 foot width. So the lane being eliminated will have to transition an actual lateral distance of about 24 feet

[1] W = length in feet; V = design speed in miles per hour.

concurrent with merging into a single lane. Hence, the taper for this lane termination should, by design standards, have a distance of 840 feet. The 135 feet provided in the prposed intersection design is only 16 percent of Caltrans' standards. Since the concrete bridge railing begins just beyond the conform point, the consequences of this all-too-abrupt transition will be at-speed crashes into an immovable object, a clear hazard that is unaddressed in the IS/MND and which can only be mitigated by widening the overcrossing. In my opinion the interchange design may have a significant impact on the environment becaue it will increase safety hazards due to inadequate and below Caltrans' standards lane merger distances in the eastbound direction on Talmage.

A second unusual geometric feature of the proposed design is the transition from a single lane off-ramp on southbound US 101 at Talmage Road, to a four lane cross-section approaching the intersection of the southbound off ramp with Talmage within a distance of about 780 feet. This tapering up from one land to four lanes occurs on a 180 degree curve of very sharp radius (about 200 feet, less on the lanes on the inside of the curve). Within this 780- foot curved section, motorists must select the path to the correct lane or lanes appropriate for their next intended movement. One lane is intended for those going eastbound on Talmage. Two lanes lead to westbound Talmage lanes that in a short distance turn left to Airport Park Boulevard. One lane leads to a westbound Talmage through lane or a right turn at Airport Park Boulevard. This configuration creates a difficult navigation task for any new or infrequent user of the southbound off ramp or for distracted drivers. Because a proposed COSTCO near this interchange is projected to attract drivers from a vast market area, with the consequence that many will be infrequent visitors unfamiliar with the lane configuration, the design is likely to result in many drivers getting in the wrong lane for their destination or making late, abrupt and hazardous lane transitions to get into the appropriate lane. For those who get in the wrong lane, the close proximity of the Airport Park Boulevard intersection with Talmage to the Ramp intersection with Talmage adds further adverse safety consequences. The intersections between Talmage and the southbound offramp and Talmage and Airport Park Boulevard are separated by only about 270 feet. A driver who ends up in the wrong

off-ramp lane of the three exit lanes that lead to Talmage westbound, who intends either to go straight west on Talmage or turn right at Airport Park but instead gets into either of the left-most left turn lanes on the off-ramp, or who intends to turn left at Airport Park but instead gets into the rightmost of the three left turn lanes on the off-ramp, will be forced to make potentially hazardous abrupt maneuvers on the short[2] section of Talmage to get into the appropriate lane. The IS/MND is deficient in failing to identify this clearly potentially hazardous configuration which cannot be mitigated in the present design. The design features of the intersection described here may have a significant impact on traffic safety and will likely substantially increase hazards. This opinion is based up the facts and analysis in this letter report.

Although the IS/MND and the appended GHD June 21, 2013 Traffic Impact Study memo highlight the April 15, 2013 letter from Caltrans District 1 Office of Community Development and Planning, which agrees that based on theoretical traffic capacity analysis the Project would mitigate traffic as projected in the GHD study;the subject Caltrans letter points out that for the Project to be implemented, an additional approval through the Caltrans Encroachment Permit process will be required. The subject Caltrans letter notes that the Encroachment Permit process involves review for consistency with Caltrans design standards. So the Project is not fully approved by Caltrans and, based on the foregoing, may not be approvable by Caltrans.

We also note that the endorsement by Caltrans District 1 Office of Community Development and Planning is based on theoretical calculations of capacity flows and queuing prepared by GHD. These theoretical calculations of intersection capacity and queuing do not fully reflect the deleterious effects on traffic flows of the navigational difficulties posed for unfamiliar or distracted drivers by the complex geometry and driver decisionmaking requirements related thereto on the southbound off ramp and segment of Talmage between said ramp and the intersection with Airport Park Boulevard. Hence, the conclusion that the design mitigates design-year traffic may be incorrect.. 10-2

[2] Caltrans *Highway Design Manual* standards ordinarily require a mandatory minimum of 400 feet separation between the ramp intersection and the nearest street intersection.

Existing Traffic Counts Are Inconsistent With Prior Environmental Documentation and Pose Questions as to the Reasonableness of the Claim of Functional Traffic Mitigation 10-3

The existing conditions traffic counts relied on in the GHD traffic impact study are generally lower than those relied on in the Costco DEIR traffic study. Table 1 below compares the "existing" Costco counts versus the "existing" GHD counts at the intersection of the 101 southbound ramps with Talmage for the weekday pm peak hour.[3]

Table 1. Comparison of COSTCO vs GHD Existing Traffic Counts: Weekday PM Peak

	SB off - WB	SB off-EB	WB thru	WB left	EB thru	EB right
COSTCO	527	177	361	18	841	89
GHD	430	144	321	35	767	109
Difference	-97	-33	-40	+17	-74	+20

As can be seen from the table, the Costco data indicates 207 more traffic movements at the subject intersection during the weekday PM peak than does GHD, a net of 11.5 percent more traffic overall. The traffic volume is greater on all of the major movements; the GHD observations are greater on only the two most minor movements that are of far less significance. In fact, the Costco observations are greater than GHD's by 14.7 percent on the four most heavily utilized movements. Since the GHD study estimates traffic growth to the analysis year (2032) by applying a growth factor to existing counts, low existing counts results in substantially lower forecast year traffic than had the growth factors been applied to the higher existing counts relied on in the Costco DEIR. In addition, because Costco traffic will be such a major component of traffic growth at this particular interchange, and because the distribution of Costco traffic has such a dominant polarity due to the shape and distribution of population in its market area, the movements from the southbound off-ramp to Talmage westbound and from Talmage eastbound to the

[3] This reflects data found on Figure 3.10-2 of the Costco DEIR and on Figure 3 of the GHD report.

northbound on ramp will grow at a disproportionately larger rate than other movements through the intersection of Talmage and the southbound ramps.[4] If the GHD analysis had relied on the Costco existing condition counts and adjusted the anticipated growth rates on individual movements to account for the projected polarity of Costco traffic, the GHD traffic analysis would likely have found a significantly worse and deficient LOS and delay at the Talmage – Southbound Ramps intersection in the "with Project" condition. Since the GHD report claims to have relied on the Costco DEIR, its analysts should have realized that the existing traffic turning counts GHD had collected were significantly lower than those in the Costco DEIR and that, due to the disproportionate polarity of Costco's traffic distribution, application of single fixed growth rates on all movements would have resulted in a less severe pattern of traffic demand.

In recognition of the good faith effort to disclose impacts required by CEQA, the analysts should have chosen to rely on the higher set of counts and to account for the disproportionate pattern inherent in the Costco component of traffic growth. Failure to do this renders the IS/MND inadequate. In my opinion the intersection design may have a significant impact on traffic safety and cause a significant increase in hazards. This opinion is based in part of the fact that the GHD analysis is based upon traffic counts that are too low in comparison to other recent traffic counts, and therefore understate the impacts of the Project on traffic safety.

Traffic Thresholds To Widen the Talmage Overcrossing of U.S. 101 Identified By GHD May Be Exceeded As Soon As COSTCO Opens

The GHD report identifies a threshold that when future traffic reaches 125 to 130 percent of existing traffic, the City and Caltrans should begin actions to widen the Talmage overcrossing of U.S. 101. While this is posited as a condition that will happen at some

10-4

[4] Table 3.10-8 of the Costco DEIR indicates that 34 percent of Costco traffic will approach southbound on U.S. 101 and depart northbound on 101. Only 8 percent of the traffic will approach northbound on 101 and depart southbound; only 7 percent of Costco traffic will come westbound from further east on Talmage and depart eastbound. Hence, traffic will increase disproportionately on the most problematic heavy movements at the subject Talmage-Southbound Ramps intersection that is not accounted-for in the analysis.

uncertain future date, the Costco DEIR provides evidence that this threshold will be crossed immediately when Costco opens. The Costco DEIR includes an immediate future scenario comprised of its existing observed traffic, the estimated traffic from a limited number of specific approved projects in the area and the Costco traffic, a scenario termed the Near Term + Project scenario. We have compared the Near Term + Project scenario traffic movements at the Talmage – Southbound Ramps intersection to the threshold level of 125 percent of the existing movement counts defined and collected by GHD. This comparison reveals that the Near Term + Costco scenario traffic will exceed the 125 percent threshold for the widening of the Talmage overcrossing of 101 in the weekday evening peak hour on 3 of the 4 major movements at the intersection.[5]

Hence, rather than the interchange improvement meetinga relatively long term future need; the interchange improvement, which will enable the Costco,will cause the almost immediate need for the City to widen the U.S. 101 overpass. The IS/MND is deficient as an information document for failing to clearly disclose to the public and decision makers this environmental impact and to evaluate it. The case of *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099, requires a lead agency to consider a potentially significant environmental impact, even if the impact is not included on the Appendix G checklist. The Project in conjunction with the related with the Costco expansion will cause a bottleneck on the Talamage Road U.S. 101 overpass, which will have traffic hazard impacts, and will require a widening of the overpass. This impact needs to be addressed in the MND or an Environmentla Impact Report.

Creating a Environmental Document for the Interchange Improvement Separate from the Costco Environmental Review Is an Improper Segmentation of What Should Be Considered a Single Project 10-5

From the time of the Walmart Expansion environmental review, before the NOP on the Costco project was ever initiated, it has been abundantly clear that the Costco project

[5] The eastbound thru, southbound to westbound off and the southbound to eastbound off all exceed the thresholds; the westbound thru is only 10 vehicles short of the threshold.

could not go forward without an improvement to the Talmage - U.S. 101 interchange. Yet the City has processed the environmental review of Costco and the Talmage interchange as independent projects and has made the segmentation impacts more damaging to meaningful environmental review by using separate data bases and analysis methods for the respective traffic studies.. This is improper improper segmentation of the COSTCO project and the interchange improvement project violates CEQA

Conclusion

This concludes my current comments on the Initial Study/Mitigated Negative Declaration for the Talmage Road / U.S. 101 On-Off Ramp Realignment Project. In summary, the IS/MND is deficient in these ways: 10-6

- As discussed in detail above, the IS/MND fails to disclose that the interchange improvement design involves substandard and unusual geometric features that are potentially hazardous and may not be approved by Caltrans in the design compliance review and Encroachment Permit Review Process. As stated in this Report, the Project may have a significant effect on the environment by causing a substantial increase in hazards and creating safety impacts.
- The IS/MND understates the amount and more demanding pattern of traffic movements at the critical intersection in the interchange. As a result, it estimates in a higher level of service and lower level of delay than is likely to take place. It also fails address the traffic volumes the City previously disclosed in the Costco DEIR[6] traffic study, and that if these volumes are used in the Interchange traffic study, the future volumes will be sufficiently high to cause a significant impact even with all of the favorable assumptions about the effectiveness of the interchange design. The IS/MND's traffic impact study, together with the Costco traffic forecasts, show that it will be necessary to widen the Talmage overcrossing of U.S. 101. . This is a potentially signigicant environmental impact that was not

[6] The "Near-Term + Project" scenario.

SMITH ENGINEERING & MANAGEMENT

DANIEL T. SMITH, Jr.
President

EDUCATION

Bachelor of Science, Engineering and Applied Science, Yale University, 1967
Master of Science, Transportation Planning, University of California, Berkeley, 1968

PROFESSIONAL REGISTRATION

California No. 21913 (Civil)
California No. 938 (Traffic)
Nevada No. 7969 (Civil)
Washington No. 29337 (Civil)
Arizona No. 22131 (Civil)

PROFESSIONAL EXPERIENCE

Smith Engineering & Management, 1993 to present. President.
DKS Associates, 1979 to 1993. Founder, Vice President, Principal Transportation Engineer.
De Leuw, Cather & Company, 1968 to 1979. Senior Transportation Planner.
Personal specialties and project experience include:

Litigation Consulting. Provides consultation, investigations and expert witness testimony in highway design, transit design and traffic engineering matters including condemnations involving transportation access issues; traffic accidents involving highway design or traffic engineering factors; land use and development matters involving access and transportation impacts; parking and other traffic and transportation matters.

Urban Corridor Studies/Alternatives Analysis. Principal-in-charge for State Route (SR) 102 Feasibility Study, a 35-mile freeway alignment study north of Sacramento. Consultant on I-280 Interstate Transfer Concept Program, San Francisco, an AA/EIS for completion of I-280, demolition of Embarcadero freeway, substitute light rail and commuter rail projects. Principal-in-charge, SR 238 corridor freeway/expressway design/environmental study, Hayward (Calif.) Project manager, Sacramento Northeast Area multi-modal transportation corridor study. Transportation planner for I-80N West Terminal Study, and Harbor Drive Traffic Study, Portland, Oregon. Project manager for design of surface segment of Woodward Corridor LRT, Detroit, Michigan. Directed staff on I-80 National Strategic Corridor Study (Sacramento-San Francisco), US 101-Sonoma freeway operations study, SR 92 freeway operations study, I-880 freeway operations study, SR 152 alignment studies, Sacramento RTD light rail systems study, Tasman Corridor LRT AA/EIS, Fremont-Warm Springs BART extension plan/EIR, SRs 70/99 freeway alternatives study, and Richmond Parkway (SR 93) design study.

Area Transportation Plans. Principal-in charge for transportation element of City of Los Angeles General Plan Framework, shaping nations largest city two decades into 21'st century. Project manager for the transportation element of 300-acre Mission Bay development in downtown San Francisco. Mission Bay involves 7 million gsf office/commercial space, 8,500 dwelling units, and community facilities. Transportation features include relocation of commuter rail station; extension of MUNI-Metro LRT; a multi-modal terminal for LRT, commuter rail and local bus; removal of a quarter mile elevated freeway; replacement by new ramps and a boulevard; an internal roadway network overcoming constraints imposed by an internal tidal basin; freeway structures and rail facilities; and concept plans for 20,000 structured parking spaces. Principal-in-charge for circulation plan to accommodate 9 million gsf of office/commercial growth in downtown Bellevue (Wash.). Principal-in-charge for 64 acre, 2 million gsf multi-use complex for FMC adjacent to San Jose International Airport. Project manager for transportation element of Sacramento Capitol Area Plan for the state governmental complex, and for Downtown Sacramento Redevelopment Plan. Project manager for Napa (Calif.) General Plan Circulation Element and Downtown Riverfront Redevelopment Plan, on parking program for downtown Walnut Creek, on downtown transportation plan for San Mateo and redevelopment plan for downtown Mountain View (Calif.), for traffic circulation and safety plans for California cities of Davis, Pleasant Hill and Hayward, and for Salem, Oregon.

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Transportation Centers. Project manager for Daly City Intermodal Study which developed a $7 million surface bus terminal, traffic access, parking and pedestrian circulation improvements at the Daly City BART station plus development of functional plans for a new BART station at Colma. Project manager for design of multi-modal terminal (commuter rail, light rail, bus) at Mission Bay, San Francisco. In Santa Clarita Long Range Transit Development Program, responsible for plan to relocate system's existing timed-transfer hub and development of three satellite transfer hubs. Performed airport ground transportation system evaluations for San Francisco International, Oakland International, Sea-Tac International, Oakland International, Los Angeles International, and San Diego Lindberg.

Campus Transportation. Campus transportation planning assignments for UC Davis, UC Berkeley, UC Santa Cruz and UC San Francisco Medical Center campuses; San Francisco State University; University of San Francisco; and the University of Alaska and others. Also developed master plans for institutional campuses including medical centers, headquarters complexes and research & development facilities.

Special Event Facilities. Evaluations and design studies for football/baseball stadiums, indoor sports arenas, horse and motor racing facilities, theme parks, fairgrounds and convention centers, ski complexes and destination resorts throughout western United States.

Parking. Parking programs and facilities for large area plans and individual sites including downtowns, special event facilities, university and institutional campuses and other large site developments; numerous parking feasibility and operations studies for parking structures and surface facilities; also, resident preferential parking .

Transportation System Management & Traffic Restraint. Project manager on FHWA program to develop techniques and guidelines for neighborhood street traffic limitation. Project manager for Berkeley, (Calif.), Neighborhood Traffic Study, pioneered application of traffic restraint techniques in the U.S. Developed residential traffic plans for Menlo Park, Santa Monica, Santa Cruz, Mill Valley, Oakland, Palo Alto, Piedmont, San Mateo County, Pasadena, Santa Ana and others. Participated in development of photo/radar speed enforcement device and experimented with speed humps. Co-author of Institute of Transportation Engineers reference publication on neighborhood traffic control.

Bicycle Facilities. Project manager to develop an FHWA manual for bicycle facility design and planning, on bikeway plans for Del Mar, (Calif.), the UC Davis and the City of Davis. Consultant to bikeway plans for Eugene, Oregon, Washington, D.C., Buffalo, New York, and Skokie, Illinois. Consultant to U.S. Bureau of Reclamation for development of hydraulically efficient, bicycle safe drainage inlets. Consultant on FHWA research on effective retrofits of undercrossing and overcrossing structures for bicyclists, pedestrians, and handicapped.

MEMBERSHIPS

Institute of Transportation Engineers Transportation Research Board

PUBLICATIONS AND AWARDS

Residential Street Design and Traffic Control, with W. Homburger *et al.* Prentice Hall, 1989.

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Response to Letter on the Previous Draft MND from Daniel T. Smith, Jr. (Smith Engineering & Management)

10-1 The commenter suggested that the original Initial Study for the Draft MND should have been changed to reflect potentially significant impacts resulting from then proposed design features. This listing of claimed design deficiencies relates to the prior MND. The commenter has updated this listing in his letter submitted on the DEIR. See the previous Responses 5-3 to 5-11 for responses regarding the potential safety concerns involved with the merge-down on eastbound Talmage Road from two lanes to one. See Response 5-16 regarding potential safety concerns of the single lane southbound offramp to a four-lane cross section approaching the off-ramp's intersection with Talmage Road. Finally, it is true that Caltrans will need to approve the Project. See Comment Letter 2 from Caltrans wherein they describe the ongoing coordination between that agency and the City in designing the Project. As stated in that letter, Caltrans anticipates issuance of an encroachment permit for the Project in 2015.

10-2 The commenter stated that Caltrans' endorsement does not account for safety concerns resulting from the Project design. Caltrans has reviewed the DEIR and participated in the design and design exception process. Caltrans is fully aware of the development of the projected traffic volumes and the existing interchange design that requires certain design exceptions to increase its capacity while minimizing traffic hazards. The DEIR traffic analysis concluded that the Project would have capacity to serve 2032 traffic capacity in a safe manner. The commenter disagrees. See the responses to his specific comments on the DEIR inadequacies in Comment Letter 5 above as well as his more specific comments regarding safety concerns on the Draft MND below. As stated in responses to comments on Comment Letter 5, the traffic analysis accurately assesses traffic capacity and safety issues.

10-3 The commenter stated that there is a discrepancy between the traffic counts used for the Draft MND and the Costco EIR. See Responses 5-18 to 5-25 to comments from this same commenter regarding similar comments about the variation in counts and analysis done for this DEIR and ones done for the Costco EIR. As explained in those previous responses, the Talmage DEIR analysis is based on more current counts and traffic projections, and the analysis was done consistent with Caltrans' recommendations for the traffic analysis. Again, the Talmage DEIR analysis assesses long-term impacts of future traffic based on traffic growth projections, and those projections incorporate traffic that would be generated by the Costco project.

10-4 The commenter stated that the interchange would need to be widened to accommodate future traffic volumes. See Response 5-30 to a comment from this same commenter about the possible future need to widen the overcrossing. Widening of the overcrossing will not be required by 2032 given projected traffic volumes using the Project.

10-5 The commenter stated that the proposed Project and the Costco project should have been assessed in the same EIR. The DEIR explains how the proposed interchange improvements Project is a separate project from the approved Costco project. See pages 22 to 24 of the DEIR for the full explanation of why the

interchange Project is a separate project with independent utility from the Costco project. Also, see previous Response 4-3 regarding this same issue. Additionally, this DEIR assesses the indirect traffic impacts from projected traffic growth using the Project by 2032. It also assesses the indirect effects of the additional noise, energy, GHG emissions and air pollutant emissions from this future traffic. Finally, the DEIR assesses the cumulative impacts of the Project plus the Costco project and other proposed or approved, but not developed, projects in the Project area.

10-6 This comment summarized the commenter's previous comments on the Draft MND. See the previous five responses that address his comments. The conclusion that the previous IS/MND is inadequate is not pertinent to this DEIR. More pertinent traffic-related comments are included in the commenter's submittal on the DEIR (the previous Comment Letter 5) and responses are provided to the comments in that letter addressing DEIR adequacy.

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NOISE IMPACTS
COMMENTS ON INITIAL STUDY/MITIGATED NEGATIVE DECLARATION:
CITY OF UKIAH - TALMAGE INTERCHANGE IMPROVEMENT PROJECT

Dear Mr. Stump and Planning Commissioners, August 27, 2013

INTRODUCTION

The City of Ukiah has improperly segmented this roadway improvement project from other phases of the "Redwood Business Park and Airport Business Park" development. The Walmart Expansion EIR and the Costco DEIR should have included environmental review of all roadway improvements needed to serve those projects. As such, the City is evading proper CEQA review by circulating a Initial Study/Mitigated Negative Declaration ("IS/MND") for this Talmage roadway project with lesser standards than are required for environmental impact reports. 11-1

The consequence of such project piecemeal review is that the full extent of the noise impacts from these combined major developments is not being considered in this Project's "Draft Environmental Noise Assessment" (hereafter: "Noise Study.")

For example, the City approved the 2011 Walmart Expansion project EIR and required noise mitigations to protect existing residences located just north of Talmage Road from noisy construction activities. Yet the current Talmage Project's Noise Study will generate noise levels considerably louder because heavy equipment will be operating much closer to these homes. Inexplicably this Noise Study offers no mitigation for its construction noise impacts to those homes. This leaves the impression that the City is holding private shopping center developers to higher standards and more costly mitigation than it imposes on itself. The Noise Study suffers from a lack of informed disclosure about the foreseeable noise impacts and from the lack of proposed noise mitigations for significant impacts on nearby homes. That Walmart Expansion project EIR also included noise level measurements that were considerably louder than those in this Talmage Project Noise Study, demonstrating this Noise Study's conclusions to be inaccurate.

As discussed below, this Project would conflict with the City's Municipal Code standards because nothing clearly prohibits construction activities before 7:00 a.m. During typical 11-2

summertime pavement projects, noisy paving construction activities are commonly underway before 7:00 a.m. as a way to avoid the heat of the afternoon. This Project may also create significant vibration and noise impacts to at least one adjacent commercial business during construction activities, an impact to that nearby restaurant that the Noise Study never considered. The Project would likely result in a substantial permanent traffic noise level increase that the Noise Study did not reveal. That is because in part it used the wrong threshold of significance for such long-term traffic noise impacts to homes already exposed to excessive noise levels. The Noise Study underestimates existing noise levels, and as a result, reaches the wrong conclusions about the Project impacts' significance. The Noise Study also failed to adequately evaluate the construction noise impacts and provide reasonable noise mitigation that is required by CEQA.

The IS/MND itself and the Noise Study do not state how much additional traffic this Talmage Road Improvement Project is being constructed to accommodate along Talmage Road. Without that information, the public cannot readily assess how much additional noise will result at nearby homes from that increased traffic. That information is not even contained in the Initial Study's attached Technical Memorandum. While that document states that the existing weekday peak traffic along Talmage Road to the east of Airport Park Boulevard is 19,734 ADT[1], it fails to indicate what the future peak weekday peak traffic will be. The public needs access to both the existing and future traffic volumes to calculate the increase in traffic noise this Project will facilitate or cause. The public should not have to rummage through arcane data or separate EIRs for other nearby projects to find other hints that might conceivably be used to approximate such future peak weekday traffic information. The consequence of piecemealing these various environmental studies is that the public is being denied its ability to review the full impact of such development. Any conclusion the Noise Study arrives at where such critical information is not available to the public is essentially unsupported by substantial evidence.

1. NOISE STUDY IS FLAWED DUE TO INADEQUATE NOISE LEVEL MEASUREMENTS

The Noise Study fails to disclose critical and typically required details about the ambient noise level measurement technique used to support that Study.

The Noise Study does not identify the make and model of the sound level meters that were used, whether they were calibrated and were accurate, how and where they were positioned while being used, what the meteorological conditions were during those noise measurements, and what the neighborhood noise circumstances and audible traffic counts were like during that time. For example, on January 3, 2013 when measurements were taken, the temperature records for Ukiah show a low temperature of 26 degrees F, cold enough that some outdoor noise level meters and batteries can be unreliable. CalTrans noise standards require that such information be disclosed or documented in a noise study. But this Project's Noise Study contains no sketch of the sound level meters' location in relation to existing landmarks and distances to identifiable features. It doesn't describe whether the sound level meters were calibrated immediately before and after these measurements, their last calibration date with a current NIST-traceable certification, how high they were positioned above the ground, and any traffic counts during the

11-3

[1] Source: Technical Memorandum - Traffic Impact Study, 2013, p. 11.

measurements.[2] Without such disclosure, any data obtained during those measurements loses its credibility as being substantial evidence to support the Project's Initial Study.

Noise measurements at three of the Noise Study's four locations were too short in duration and too inconsistent to reliably reveal what the ambient noise level conditions were. 11-4

The Noise Study's short-term noise level measurements of only 10 minutes each were too short in duration to accurately measure that traffic noise. CalTrans recommends a longer measurement duration of at least 15-20 minutes for "medium traffic volume" of 500-1000 vehicles per hour per lane, and 20-30 minutes for "low traffic volume" of less than 500 vehicles per lane.[3] The problem with too-brief measurements is that they can be wildly inconsistent from one 10-minute period to the next 10-minute period because traffic flow is not uniform, having peaks and lulls with varying loudness due to different vehicles.

The Noise Study's short-term noise level measurements at selected sites ST-1 and ST-2 are demonstratably unreliable because there was insufficient repeatability between the two noise level measurements at each site. The noise levels shown in Table 4 varied by 3 and 4 decibels respectively. (i.e. for *short term* location ST-1: 71 and 74 dBA = 3 dB difference. For ST-2: 72 and 68 dBA = 4 dB difference.) Caltrans recommends a maximum of 1 to 2 dBA between such repeated measurements or recommends additional measurements need to be taken. If they vary so much, that is an indication that the noise level measurements were too short in duration to represent the noise levels at that time and location.[4] Accordingly, the Noise Study data is insufficient to characterize the actual traffic noise levels at those locations. 11-5

Noise levels at those same three measurement locations underestimate ambient noise levels because they were obtained at the wrong time of day when traffic noise was not at its peak. 11-6

The Noise Study's few short-term noise level measurements were taken from about 11:20 a.m. to 12:50 p.m., and are thus likely inadequate in describing how loud traffic noise is at the loudest (i.e. just before or after the "peak hour") traffic times, or at the quietest times that construction might occur.[5] Peak hours typically occur in the late afternoon as workers return to their homes at a workday's end, not at noon. Thus those measurements at sites ST-1, ST-2, and ST-3 do not reveal the even louder ambient noise levels that existing homes are exposed to. That is vital but missing information which is critically needed to determine which threshold of significance must be used in evaluating this Project's noise impacts.

The Noise Study's Figure 2 shows that the peak noise level measurements at site LT-1 occurred during the hour from 9 a.m. to 10 a.m. (68 dBA L_{eq}) or from 1 p.m. – 2 p.m. 11-7

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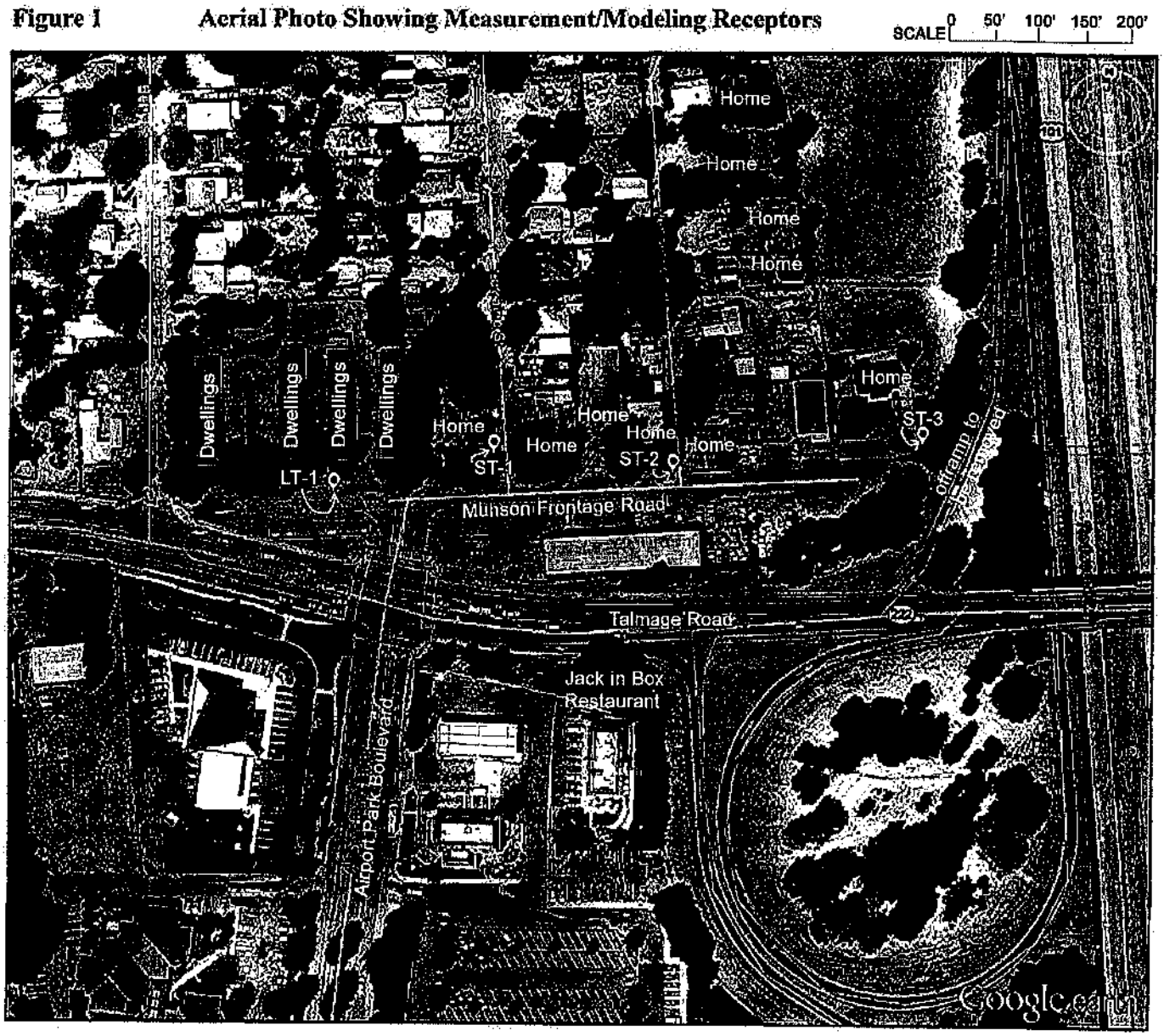
[2] Source: CalTrans' "Technical Noise Supplement," July 2011, pp. 3-39 to 3-40.
[3] Source: CalTrans' "Technical Noise Supplement," July 2011, Table 30-1, p. 3-12.
[4] Source: CalTrans' "Technical Noise Supplement," July 2011, p. 3-14.
[5] The peak traffic hour is generally not the noisiest hour. During rush hour traffic, vehicle speeds and heavy truck volumes are often low. Free-flowing traffic conditions just before or after rush hour often yield higher noise levels. (*ibid*, p. 3-10.)

(also 68 dBA L_{eq}). By comparison, Figure 2 shows the measured noise levels at site LT-1 during the hours when sites ST-1, ST-2, and ST-3 were measured (starting with 11 a.m. and 12 noon) were 65 and 66 dBA L_{eq}. That is **2 to 3 dBA less** than the noise levels at the daily peak noise hour. That is clear evidence that the Noise Study underestimates the short-term noise levels at those Munson Frontage Road sites.

The acoustical study for the 2011 Walmart Expansion project's EIR also measured the peak noise levels at that same site LT-1 in June, 2010 occurring at 4 p.m., not at 11 a.m. or noon. (See Figure 4.8-3 from the Ukiah Walmart Expansion Project EIR below.)

AERIAL PHOTO FROM NOISE STUDY *MODIFIED* WITH IMPACTED HOMES SHOWN:

Figure 1 **Aerial Photo Showing Measurement/Modeling Receptors**



The Noise Study's noise level measurements are not credible for a summer road construction project because they were obtained at the wrong time of the year during winter when traffic noise and background noise were both significantly lower.

The Noise Study relied upon a 24-hour noise level calculation of **67 dBA L_{dn}** at measurement site LT-1 along Munson Frontage Road. It was taken in January 2013, a month when in the middle of the winter outdoor noise levels are the quietest. People do not use noise lawnmowers or leaf-blowers in the winter. Residents do not spend much time outdoors on their patios with music playing. Less traffic and traffic noise occurs when people are not vacationing then too. As a result, the Noise Study underestimates how loud the traffic noise levels will be at the noisiest time of the year (summer) when such roadway construction will occur. The Noise Study fails to comply with CalTrans standards for noise measurement times because the measurements were not obtained to yield the worse hourly traffic noise characteristics.[7] 11-8

As such, those noise level measurements are not suitable for predicting the ambient noise levels during this Project's hot summer construction activities and for determining whether the noise impacts will be significant.

For example, CalTrans lists the monthly average daily trips along Highway 101 for one segment in January, 2012 at 18,309 ADT[8] and in August, 2012 at 23,452 ADT.[9] That difference represents a 28% increase in traffic in summer from January. More of that traffic is heavy trucking too which is louder yet because more construction activity occurs in summer in communities like Ukiah which have cold winters.

The most convincing evidence that the Noise Study calculation for site LT-1 is substantially incorrect is found elsewhere in previous City documents. The 2011 EIR for the Walmart Expansion project includes an acoustical report that also measured noise levels at the very same location, also labeled "LT-1" along Munson Frontage Road at the intersection of Airport Park Boulevard as that location which was measured in 2013 for the Talmage Road Noise Study. That 24-hour day-night average noise level 11-9

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[7] 23 Code of Federal Regulations (CFR) 772 requires that traffic characteristics that yield the worst hourly traffic noise impact on a regular basis be used for predicting noise levels and assessing noise impacts. Therefore, if the purpose of the noise measurements is to determine a future noise impact by comparing predicted noise with measured noise, the measurements must reflect the highest existing hourly noise level that occurs regularly. In some cases, weekly or seasonal variations need to be considered. In recreational areas, weekend traffic may be higher than on weekdays and may be heavily influenced by season, depending on the type of recreation. (Source: CalTrans' "Technical Noise Supplement," July 2011, p. 3-9.)

[8] http://traffic-counts.dot.ca.gov/monthly/2012/01/vmtweb.pdf

[9] http://traffic-counts.dot.ca.gov/monthly/2012/08/vmtweb.pdf

measurement for Walmart on June 8, 2010 was reported to be **70 dBA L_{CNEL}**.[10] That is at least 3 dBA louder than what the Talmage Road Noise Study now reports. That 70 dBA L_{CNEL} measurement is more appropriate for consideration with this Talmage Project's construction during the summer and for year-round transportation noise level increase predictions.

Noise level measurements were not taken at all the appropriate locations.

The Noise Study is inadequate because it failed to include any 24-hour day-night average ("L_{dn}") noise level measurements near the Highway 101 where homes closest to the freeway off-ramp are located. Those homes along SR 101 or the east end of Munson Frontage Road near SR 101 are exposed to the loudest existing noise levels and will also be exposed to the greatest noise levels during the Project's off-ramp deconstruction. The Noise Study thus underestimates this Project's existing noise levels and as a result, it under-calculates the Project's construction noise and its long-term noise impacts. 11-10

The Noise Study does not contain any accurate measurements of the long-term ambient noise levels at the most significantly noise-impacted homes north of Talmage Road.

Instead of taking 24-hour noise level measurements at those homes (ST-1, ST-2, ST-3, and at other homes to the north), the Noise Study's consultant use an undefined short-cut to crudely estimate those ambient noise levels. The Noise Study never describes how it converted one or two brief 10-minute noise level measurements into a calculated 24-hour average noise level. If it relied upon its incorrect long-term measurement/calculation at site LT-1 as described below in this comment letter, then any calculation that followed is incorrect because the input data was wrong. 11-11

The data in the Noise Study's Table 4 also does not support the calculated L_{dn} levels at sites ST-1 and ST-3. For example, at ST-1, the mean noise level $L_{(50)}$ was 55 dBA, while at ST-2, that level $L_{(50)}$ was 64 dBA, a significant difference of 9 dBA, yet the Noise Study then somehow inexplicably calculates the day-night weighted noise level average at both sites as 63 dBA L_{dn}. 11-12

Moreover, there is an obvious error in the data in Table 4 for measurement site ST-3. The Noise Study there reports a measurement of 57 dBA $L_{(1)}$ which represents the noise level during that 10-minute measurement period that was only exceeded 1% of the time. Yet the Noise Study reports a measurement of 69 dBA $L_{(10)}$ during that same time interval, indicating that measurements then exceeded 69 dBA for 10% of the time. It is literally impossible for noise levels to only exceed 57 dBA for 1% of the time and also during the same 10-minute period exceed 69 dBA for 10% of the time. By analogy, that's somewhat like incorrectly claiming that the second tallest person in a crowd of 100 people is shorter than 10 of those same people. Every other measurement (($L_{(Max)}$, $L_{(10)}$, $L_{(50)}$, and $L_{(90)}$) at site ST-3 is much louder than corresponding measurements at site ST-1, yet the Table 4 inconsistently calculates that the average noise level L_{eq} at ST-3 is lower than at ST-1. 11-13

[10] See Walmart Expansion project DEIR, p. 4.8-5, Table 4.8-1, "Existing Noise Environment at Project Site". That 24-hour CNEL measurement was nearly the same value as a L_{dn} day-night average measurement.

That error indicates that the noise level at site ST-3 (nearest to Highway 101) is considerably louder than the Noise Study indicates. This error may have been an unintentional mistake. But the consequence is that it leads to the Noise Study's conclusion that the severity of ambient noise levels at the home close to ST-3 and nearest to Highway 101 are significantly underreported. This is just one example of the public's need for full disclosure of the data collected for such noise studies so that other errors can be discovered and fixed.

As to the previous matter of an undisclosed method for converting a 10-minute measurement into a 24-hour average, the Noise Study provides nothing that the public can use to check the accuracy of its unknown if not unprofessional estimation methodology. To illustrate this point, one cannot measure the outdoor temperature for only 10 minutes and predict the average daily temperature from that brief measurement. The Noise Study also cannot arrive at correct calculations and conclusions if it makes serious errors with the data it collected. In so doing, the Noise Study fatally relies upon unreliable data from the wrong location and time of day and year for predicting the ambient noise levels at homes near sites ST-1, ST-2, and ST-3. 11-14

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2. SIGNIFICANT PROBLEMS AND ERRORS IN NOISE STUDY'S ANALYSIS:

The Noise Study contains tables and an aerial map of measurement locations that are illegible.

The Noise Study fails to fully or meaningfully disclose the Illingworth & Rodkin's Noise Study's written contents because it was scanned poorly. As a result the headings for tables are totally blackened, unreadable and obscure what the column labels likely stated. The includes Figure 1 "Aerial Photo" apparently showing the locations of noise measurements is also illegible for the same reason. Those locations are critical for someone attempting to verify or dispute the Noise Study's accuracy. The public can't use that information as presented. It should be rescanned and be recirculated. 11-15

The Noise Study's computerized Traffic Noise Model assumptions and input data are not disclosed so that the public can review that analysis and test its conclusions.

The Noise Study relies upon the Traffic Noise Model for its conclusions about noise level increases. But the Noise Study does not disclose the data used for its calculations. There is no evidence to support the conclusions there will be a less-than-significant traffic noise level increase. The Noise Study does not even reference where else such information might be found, if for example it was submitted to the Planning Department but not scanned for the IS/MND. Without that information being made available, the IS/MND's noise impact conclusions are not consistent with CEQA because they are unsupported. 11-16

The Noise Study fails to accurately disclose how much of an increase in traffic noise levels will occur along Talmage Road and at nearby homes as the result of this Project.

The Noise Study claims that the FHWA Traffic Noise Model was used to calculate the existing and future plus traffic noise levels. But nowhere in the Noise Study is the future noise levels along this road correctly predicted. It should be obvious that the existing noise level calculated for measurement site "LT-1" of **67 dBA L_{dn}** is not accurate during the louder, summer time conditions when the Project's excavation, grading and paving will occur. Apprehensive neighbors might also wonder if their homes will be exposed to even louder traffic noise levels due to higher traffic counts that this Project will enable for Walmart expansion and Costco's businesses? 11-17

For example, the Noise Study does not indicate whether its future noise level predictions in Table 6 include noise increases from the increased traffic which both the proposed Walmart expansion and the new Costco will someday attract. The Noise Study includes little more than one half a page to discuss this important long-term noise impact for residents living near Talmage Road.

As mentioned above, and worth repeating, the DEIR for the Walmart Expansion project included a noise report that measured noise levels at the same location "LT-1". That 24-hour day-night average noise level measurement on June 8, 2010 was **70 dBA** L_{CNEL}. That's 3 dBA louder than what the Noise Study now reports in 2013 for a cold January day.

Previous traffic studies for Costco's proposed project nearby have considerably underestimated the amount of traffic that Costco would attract. As the March 8, 2013 public comment letter from traffic engineer Daniel Smith's to the City of Ukiah about the Costco Project's EIR stated, a CalTrans representative commenting on the previous Walmart DEIR had noted that the peak hour turn counts taken in the month of February were grossly under-representative of the typical average peak hour throughout the year. Other studies show that February shopping center traffic totals only 78% of annual monthly average shopping traffic. 11-18

But without the Noise Study including any indication of the future traffic increase data used for its modeling this Project's future noise levels, the public cannot now check or verify the Noise Study's prediction of "existing plus project" noise levels.

What should be glaringly obvious though is that the "existing plus project" noise level at LT-1 shown in Table 6 is incorrect. It cannot also be 67 dBA L_{dn} in the future if significant additional future traffic noise level increases are added to the existing claim of 67 dBA L_{dn}. The City accepted a noise study for Walmart in 2011 for that same location LT-1 that reported a 24-hour noise level of about 70 dBA L_{dn}. Location LT-1 is only about 100 feet from the intersection of Talmage Road and Airport Park Boulevard where nearly all the traffic to the Walmart Expansion site and the Costco store will pass. The Noise Study's conclusion there will be no foreseeable future noise level increase at site LT-1 is not credible nor is supported by any known data or analysis. 11-19

The Noise Study's analysis of noise impacts at other homes closer to SR-101 is also flawed.

The same flaw with measurements at site LT-1 can be identified for the predicted noise levels at measurement sites ST-1, ST-2, and ST-3. Because the Noise Study's "Traffic Noise Model (TNM version 2.5)" calculations were calibrated using noise level measurements in the wrong month of January from site LT-1, and without considering future traffic level increases to all foreseeable shopping on Airport Park Boulevard, the results of the Table 6 conclusions about the significance of the Project's traffic noise impacts at these other sites are inaccurate. 11-20

As mentioned above, the Noise Study claims to approximate the noise levels at locations ST-1, ST-2, and ST-3 along Munson Frontage Road in terms of day-night averages (L_{dn}) without revealing how it arrived at those noise levels. There is no indication that any long-term noise level measurements were conducted at those locations. The Noise Study, p. 8, instead inexplicably claims in Table 4, Footnote 1, that *"L_{dn} approximated by correlating to corresponding time period at long-term measurement site."* That explanation is meaningless without additional information. The Noise Study offers no explanation, and there is no industry-wide methodology that would allow just one or two very brief, 10-minute long noise level measurements at those three locations to be converted, even approximately, into 24-hour day-night average noise levels. Moreover, the long-term site LT-1 location is not similar enough to ST-1, ST-2 or ST-3 locations to make direct comparisons because it is nearer to Talmage Road, is not partially shielded by the existing lengthy Triple "S" Tire building from traffic, and is significantly farther from the I-5 freeway. 11-21

In addition to the previously identified error, the Noise Study's prediction at site ST-3 of an existing noise level of 63 dBA L_{dn} is not consistent with other available City of Ukiah information. That noise level measurement site ST-3 is only about 200 feet east of the U.S. 101 centerline. The Ukiah General Plan Noise Element, Section IV.2, page 6, (see below on next page for a copy of Table IV.2-6) estimates that U.S. 101 traffic noise levels for 2010 to be about 60 dBA L_{dn} at a distance of 635 feet from the centerline of that roadway. Highway noise levels increase by approximately 3.0 to 4.5 dBA for each halving of distance to the roadway, depending upon intervening hard or soft vegetated ground surfaces. Using standard acoustical methodologies, the noise level predictable at site ST-3 using that General Plan data would be approximately 65 to 67.5 dBA at 200 feet from the centerline of U.S. 101. [11] 11-22

[11] To calculate a dB level at different distances from a source given a known dB level for a known distance:
dB2 = dB1 – 10 x A x LOG(R2/R1) where:

- LOG = logarithm, base 10,
- A = dB drop-off rate coefficient (in this Project's case, a = 1.0 for a 3.0 dB drop off rate (linear source, no atmospheric absorption).) (or A = 1.5 for a 4.5 dB drop off rate.)
- dB1 = dB level at know distance from source, R1
- dB2 = dB level at another distance from source, R2
- R1 = known distance from source for known decibel level dB1
- R2 = second distance from source for which known decibel level estimate (dB2) is desired

In this case, at a location 200' (R2) from the highway centerline, where dB1 = 60 dB(A)L_{dn} at 635' (R1) from the highway, dB2 = dB1– 10 x A x LOG(R2/R1) = 60.0 – 10 x 1.0 x LOG(200'/635') = **65** dB(A)L_{dn}.

The Noise Study's prediction of 63 dBA L_{dn} is significantly lower than either 65 or 67.5 dBA L_{dn} derived using other relevant information. This may be because the Noise Study uses measurements taken in the dead of winter rather than during the typical summertime increased highway conditions. It may be due to the data discrepancy identified above. The Noise Study's error is further highlighted by the Walmart Expansion project EIR's late Spring noise level measurement of 70 dBA L_{dn} at that location. The consequence however is that the Noise Study significantly underestimates by perhaps 2 to 4.5 decibels the existing noise level exposure at location LT-3 where the nearest home would be to this Project's noisy construction activities. 11-23

Table IV.2–6: Traffic Noise Contour Data distance (feet) from center of roadway to L_{dn} contours

Segment	Description	60 dB L_{dn}	
		1990	2010
	U.S. 101		
1	River Road to East Perkins Street	451	635
2	East Perkins St. to North State Street	496	635
3	North State St. to Lake Mendocino Dr.	462	635
	North State Street		
4	Central Ave. to Parducci Road	57	N/A
5	Parducci Road to Hensley Creek Road	98	N/A
6	Hensley Creek Rd. to KUKI Lane	121	N/A
7	KUKI Lane to Garrett Dr.	178	N/A
8	Garrett Dr. to Clara Ave.	168	N/A
9	Clara Ave. to Seminary Ave.	113	N/A
	South State Street		
10	Seminary Ave. to Freitas Ave	102	N/A
11	Freitas Ave. to Washington Ave.	113	N/A
12	Washington Ave. to Meadow Brook Dr.	145	N/A
13	Meadow Brook Dr. to S.R. 253	80	N/A

The Noise Study is flawed for failing to consider increased heavy truck and heavy equipment traffic noise during construction.

The Noise Study's construction traffic noise analysis does not include the greater noise levels along Talmage Road caused by heavy-duty construction vehicles hauling aggregate and paving materials. Such heavy trucking produces much louder noise than typical vehicles from loud diesel engines straining under load. As a result, it can be expected that the ratio of heavy trucking to automobiles during construction will be atypically higher, along with the noise levels they will generate. 11-24

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3. THE NOISE STUDY'S CONCLUSIONS ARE INCORRECT BECAUSE THIS STUDY RELIES UPON INCORRECT ASSUMPTIONS.

The Noise Study incorrectly assumes that Project construction noise will only occur during "daytime" hours (i.e. 7:00 a.m – 10:00 p.m.)

11-25

The Project Description imposes no such time restriction. This Project Description, in the absence of any time-of-day mitigations, theoretically controls when the Project can operate. It describes construction as occurring "primarily during normal business hours," whatever that vague phrase means. Walmart, an adjacent business, has business hours into the night. The term "Primarily" fails to limit construction noise during other non-prime times. Road building construction activities typically begin during hot summer days well in advance of 7:00 a.m. Besides, the IS/MND recommends no time limits or mitigations on Project construction activities.

The Noise Study also erroneously states that the *"City of Ukiah Municipal Code established limits on the hours during the day that construction activity is permitted to occur, and that proposed construction activities would occur during daytime hours only. This ensures that construction noise impacts would not occur during the sensitive nighttime period when it would result in potential sleep disturbance."* 11-26

That reassurance is simply not accurate. The City's Municipal Code Section 6054 does not prohibit nighttime construction before 7:00 a.m. It only vaguely limits how loud it might be, based not on standard decibel limits, but rather on the uncertain discomfort of reasonable people. Moreover, that Code even allows the City to give a permit for such construction even if it is so loud that it disturbs people:

> §6054 CONSTRUCTION OF BUILDINGS AND PROJECTS
>
> It shall be unlawful for any person within a residential zone, or within a radius of five hundred feet (500') therefrom, to operate equipment or perform any outside construction or repair work on buildings, structures or projects or to operate any pile driver, power shovel, pneumatic hammer, derrick, power hoist or any other construction type device (between the hours of 7:00 P.M. of one day

and 7:00 A.M. of the next day) in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance unless beforehand a permit therefor has been duly obtained form the Director of Public works. No permit shall be required to perform emergency work as defined in §6046 of this Article. (Ord. 748, Article 1, adopted 1980)

This Project as described poses significant sleep disturbance impacts to those residents living with hundreds of feet of its construction sites. The IS/MND is flawed for failing to analyze such significant impacts and for failing to provide mitigations to limit the time of day such activities can occur.

The City of Ukiah needs to be consistent with its interpretation of its noise standards. For example, in recognizing that because the City's codes do not limit construction hours, City officials approved the Walmart expansion project's EIR and additionally imposed time-of-day limits on its construction: *"Construction activities shall be limited to the daytime hours Monday to Friday from 7 a.m. to 5 p.m., Saturday 8 a.m. – 5 p.m., and prohibited on Sundays and holidays observed by the City of Ukiah."* Walmart's site is much farther from these homes to the north of Talmage Road than this Talmage interchange project is, so such time limits are even more critical for homes near Talmage Road to prevent excessive sleep-disturbance impacts.

The Noise Study incorrectly assumes that this Project will have no short-term construction noise impacts because it misconstrues what a short-term noise impact is.

The Noise Study fails to evaluate the short term construction noise impacts adequately because it defines short-term noise impacts as that that continue for "a period of more than one year." As such, it totally fails to consider shorter construction-related noise impacts that last for moments, days, weeks or months. 11-27

The Noise Study fails to identify any maximum allowed construction noise level limits.

Instead, the Noise Study states that Ukiah has no municipal code noise standards for noise. That incorrectly implies there are no CEQA limits on construction noise whatsoever other than perhaps limiting noisy activities to daytime hours. The Noise Study thus fails to consider Federal, State, County or similarly appropriate noise limits for construction noise found elsewhere in California cities and used in recent EIRs for the Walmart Expansion and Costco projects. 11-28

The Noise Study fails to disclose the Project's greatest noise impact on the nearest homes.

Residents living near this construction Project should be able to read this Noise Study to find out how much noise they will be exposed to during construction and in the years afterward. Only if they are adequately informed can they provide City officials their reasonable comments or objections. Nowhere though does the Noise Study inform any specific resident about the maximum noise exposure that this Project's construction and later traffic increases will cause. The discussion for "Impact 4" (Temporary Construction 11-29

Noise does not identify the maximum noise level that any one home will be exposed to.) Table 6 (Summary of Traffic Noise Modeling Results) does not provide accurate conclusions about traffic noise at all affected homes, including homes to the north along SR-101 where the northern portion of the off-ramp will be deconstructed.

The Noise Study incorrectly assumes that it can base its analysis on an average distance of 200 feet from the construction activities to nearby homes. Then it states that the actual nearest distance from off-ramp construction activities to the closest home will be about 70 feet. There are also other existing homes and outdoor yards that will be closer than 200 feet to the construction zones. Homes or yards closer than 200 feet will be likely exposed to greater noise levels than those at a 200-foot distance. CEQA requires that such a Noise Study evaluate a project's greatest noise impact on sensitive receptors, not merely its average impact for some arbitrary distance such as 200 feet. Thus the Noise Study's assumptions and conclusions are unsupported and substantially understate how severe construction noise would be at these nearby homes.

The Noise Study fails to evaluate the even louder noise impact of multiple heavy construction vehicles and equipment operating at the same time.

The Noise Study is flawed because it assumes that only one noise source will be operating at any one time during construction. CEQA requires the evaluation of a project's loudest total short-term noise impact on nearby sensitive receptors, and not merely a prediction of the noise level from a single piece of equipment as if it is being operated alone. The Noise Study, p. 13, states that for construction noise, the "maximum instantaneous noise levels are calculated to range from about 68 dBA to 78 dBA L_{max}" at an average distance of 200 feet. That would be true if a single noise source emitted 80 dBA to 90 dBA L_{max} at 50 feet. But if three pieces of heavy equipment, each emitting 90 dBA L_{max} at a distance of 50 feet, were simultaneously operating, then at 200 feet from a home, their combined noise emissions could cumulatively be about 94.7 dBA L_{max} at 50 feet, and 82.7 dBA L_{max} at 200 feet. That realistic noise level correction for multiple equipment operations is considerably louder than the Noise Study calculates as being up to 78 dBA L_{max}. There are perhaps about a half dozen existing residences within 200 feet to the west and northwest of the off-ramp construction that is part of this Project that will be excessively impacted by construction noise. The Noise Study must be revised to disclose the actual maximum construction-related noise exposure these residences will experience. 11-30

The Noise Study relies upon estimations of construction equipment noise that understate how loud this equipment may be.

The Noise Study underestimates this Project's construction noise impact by referencing equipment noise levels that are less than are shown in other relevant studies. Its Table 7 shows that a tractor emits 84 dBA L_{max} at 50 feet, while the Federal EPA lists tractors as emitting between 77 to 98 dBA L_{eq} at that same 50-foot distance. (See tables below.) Similarly, the Noise Study shows that a dozer emits 85 dBA L_{max} at 50 feet, while the National Cooperative Highway Program lists dozers as emitting between 88 dBA L_{eq} at 11-31

that same 50-foot distance. Unless the IS/MND limits the noise levels to just those shown in the Noise Study, then it should evaluate the Project's noise impacts based upon commonly available noise level studies that such equipment realistically emits.

For example, to show how the Noise Study underestimates equipment noise, compare its information in Table 7 to that in the included tables below:

EQUIPMENT TYPE	NOISE STUDY'S DATA In Table 7; 50-Foot; L_{max}	OTHER STUDIES' DATA 50-Foot; L_{eq}
Tractor	84	77 to **98**
Dozer	85	**88**
Scraper	85	89 or 80-**93**
Front-end loader	80	**87**
Backhoe	80	84 or 73-**95**

EXAMPLE OF OTHER EQUIPMENT NOISE LEVELS:

Table 4.12-12

Typical Construction Equipment Noise Levels

Equipment	Noise Levels at 50 Feet (dBA)
Dozer	88
Excavator	85
Elevating Scraper	89
Backhoe	84
Front End Loader	87
Water Truck	87
Tractor Trailer-20 CY	80
Crane	86
Compactor	82
Paver	85
Welding Machine	74
Generator	84
Drill Rig	88

Source: National Cooperative Highway Research Program, Mitigation of Nighttime Construction Noise, Vibrations, and Other Nuisances, 1999. U.S. Army Construction Engineering Research Laboratory, Construction Site Noise Control Cost-Benefit Estimating Procedures, 1978. U.S. Environmental Protection Agency, Noise from Construction Equipment and Operation, Building Equipment, and Home Appliances, 1971.

Table 3.14-9
Noise Ranges of Typical Construction Equipment

Construction Equipment	Noise Levels in dBA L_{eq} at 50 feet[1]
Front Loader	73–86
Trucks	82–95
Cranes (moveable)	75–88
Vibrator	68–82
Saws	72–82
Pneumatic Impact Equipment	83–88
Jackhammers	81–98
Pumps	68–72
Generators	71–83
Compressors	75–87
Concrete Mixers	75–88
Concrete Pumps	81–85
Back Hoe	73–95
Tractor	77–98
Scraper/Grader	80–93
Paver	85–88

Source: U.S. EPA, 1971 as presented in City of Los Angeles, 1998.

Notes:

1 Machinery equipped with noise-control devices or other noise-reducing design features do not generate the same level of noise emissions as that shown in this table.

The Noise Study fails to disclose that some construction noise levels will be significant and would exceed even CalTrans' noise standards.

Nearby residences will be exposed to excessive short-term construction noise during this Project's activities. This Project will generate heavy-duty equipment noise during the removal and regrading of the roadbed for the existing southbound Interstate-5 off ramp near homes along Munson Frontage Road. One home near the noise level measurement site ST-3 pictured above is only about 70 feet away from that off-ramp deconstruction area.[12] The Noise Study's Table 7 claims that dozers, scapers and graders each produce **85 dBA L_{max}** continuously at a distance of 50 feet. To break up existing asphalt concrete, even noisier equipment will be used, including jackhammers and hoe rams.[13] CalTrans' "Technical Noise Supplement," July 2011, Table 8-1, estimates that "mounted impact hammers" can produce **90 dB L_{max}** at a distance of 50 feet. For that home near site ST-3 on Munson Frontage Road that is as close as about 70 feet away from such roadway 11-32

[12] Source: Noise Study, p. 10.

[13] See Noise Study, pp. 9 and 10 for reference to jackhammers and hoe rams.

construction activities, such short-term noise levels from just one "hoe ram" (a hydraulic rock hammer) would be about **82 to 87 dB L_{max}**. It will be even louder when several pieces of heavy equipment are operated nearby. Noise levels of that magnitude would be excessively loud in this nearby residential area without some form of noise mitigation. Many California communities limit short-term construction noise so that it does not exceed 75 dBA L_{max} at nearby homes.[14] But this Project's noise levels could exceed those typical noise level limits by 12 to 17 dBA. The fact that the City of Ukiah does not have such a noise limit in its local regulations does not mean that there is no limit to how much noise such construction activities can generate and expose existing residents to. Applicable standards from other agencies can be used in the absence of appropriate local standards. The fact that this Project would exceed CalTrans' construction noise standards indicates it will create a significant impact. The Project's Initial Study/Mitigated Negative Declaration is flawed for failing to analyze and disclose this significant construction noise impact.

> "Caltrans construction noise criteria are typically expressed using the Lmax descriptor at a reference distance. As stated above, an Lmax of 86 dBA at 50 feet is commonly used by Caltrans as a maximum construction noise limit. Equipment and operations are usually at or less than that level, except for blasting, pile drivers (impact or vibratory), hoe rams, pavement breakers for crack-and-seat operations, and other impact equipment." [CalTrans' "Technical Noise Supplement," July 2011, page 8-37.]

It is even more severe than this. That construction noise may have a strong impulsive character. The maximum noise limits from noise with impulsive quality are often considered to be 5 dB less than the otherwise stated maximum standards because they tend to be more distressing to nearby residents. The Noise Study never even discusses that such impulsive construction noise should be evaluated by stricter standards.

For homes near a Santa Rosa Walmart project, 77 to 81 dBA triggered construction noise <u>mitigation</u>, but for homes near this Talmage Project, the very same noise consultant firm inconsistently suggests no noise mitigation is needed even though construction noise levels would be much greater. 11-33

The public may wonder why the City of Ukiah is proposing this Talmage Road Project with <u>no</u> noise mitigation for construction noise levels which could reach **91.7 dBA** L_{max} or more at a nearby home, when by comparison, the City of Santa Rosa required construction noise mitigation for far quieter noise levels of **77 to 81 dBA** L_{eq} at nearby residences? That inconsistency is rather surprising when the noise consultant for both projects is the same firm.

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[14] For example, the City of Santa Rosa has a construction noise standard that limits construction noise to 60 dBA L_{eq} in the daytime, 55 dBA L_{eq} at night, and 75 dBA L_{max} for impact noise levels. http://ci.santa-rosa.ca.us/doclib/Documents/ut_irwp_PEIR_Chapter_4_12_Noise.pdf page 4.12-34.

The preparer of the Talmage Road Noise Study, Illingworth & Rodkin, Inc, previously prepared the acoustical study for a Walmart project's EIR in Santa Rosa, California.[15] That acoustical study concluded that short-term noise impacts during construction were considered to be significant. That study predicted construction activities would theoretically generate a significant noise impact at nearby homes of 82 dBA L_{eq} during ground clearing, and 86 dBA L_{eq} during demolition, excavation, and grading. Then it reduced that theoretical noise level prediction to take into account an existing 8-foot high noise wall between the homes and that Walmart's construction area. No similar noise wall exists with this current Ukiah Talmage Project. For that Walmart EIR, Illingworth & Rodkin then reduced their firm's short-term construction noise prediction because of that noise wall's effectiveness to between 77 – 81 dBA L_{eq} at those homes. They nonetheless considered even that reduced noise level to be significant because it would still be above the City's maximum allowed daytime and nighttime noise standards, and they recommended that noise mitigations be adopted.

Yet for Ukiah's Talmage Road project, their Noise Study[16] now states that "typical hourly average construction generated noise levels are about 79 to 88 dBA L_{eq} measured at a distance of 50 feet from the center of the site during busy construction periods." For that home near site ST-3 only 70 feet from the off-ramp construction area, those noise levels would diminish slightly to about **76 to 85** dBA L_{eq}. That noise level exceeds that predicted in the Santa Rosa Walmart project EIR, and it is only predicted from a single unit of equipment, not from multiple units operated simultaneously. If homes in Santa Rosa needed protective mitigations, then homes in Ukiah exposed to even greater construction noise levels also need noise mitigation. The IS/MND and its Noise Study must be revised.

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4. THE NOISE STUDY USES INCORRECT THRESHOLDS OF SIGNFICANCE

The Noise Study is inadequate because it misrepresents the proper short-term <u>construction noise</u> threshold of significance, and in so doing, would not prevent serious noise impacts. 11-34

In order to determine if this Project's noise impacts will be excessive, and require mitigation, the City must identify relevant and protective thresholds of significance. The Noise Study, p. 9, inexplicably assumes that the proper threshold of significance for construction noise is 60 dBA L_{eq} and also exceeds the ambient noise environment by at least 5 dBA L_{eq} **for a period of more than one year**. That means such noise would have to meet *both* criteria. By that ill-conceived threshold, if the Project's construction noise level at a home repeatedly reached an ear-splitting 90 dBA L_{eq} for only a week or a month, even though it exceeded the first limit of 60 dBA L_{eq}, it wouldn't exceed the

[15] See: *Walmart Project DEIR*, online here: http://ci.santa-rosa.ca.us/doclib/Documents/Walmart_EIR_Noise.pdf (See page 3.14-16 of that DEIR for mitigations also.) This document will be made available if requested. That Walmart Noise assessment was also prepared by: Illingworth & Rodkin, Inc; Environmental Noise Assessment Wal-Mart, Santa Rosa CA, dated November 11, 2004.

[16] See Noise Study, p. 12.

second limit for over a year, and therefore that dangerous noise level would not be considered significant. The Noise Study does not indicate where it found support for that "period of more than one year" criteria. It is not in the City of Ukiah's codes or its General Plan. Nor does the Noise Study explain away how ineffective such a threshold would be in protecting any neighbor from permanent hearing damage.

The City of Ukiah must remove that "more than one year" requirement from this Talmage Road Project's threshold of significance for noise impacts. It wasn't used for the Walmart Expansion Project's EIR. For that Walmart Expansion EIR, the City imposed Mitigation Measure 4.8-1a that limited construction noise to the daytime hours Monday to Friday from 7 a.m. to 5 p.m., Saturday 8 a.m. – 5 p.m., and prohibited construction on Sundays and holidays observed by the City of Ukiah. Additional construction noise limits were imposed as well by other mitigations. Such mitigations should be considered now too.

That "more than one year" requirement for construction noise is not commonly imposed elsewhere either. The City of Santa Rosa has used more protective construction noise thresholds of significance for even **brief** construction work of up to 60 dBA L_{eq} in the daytime, 55 dBA L_{eq} at night and 75 dBA L_{max} for *impact* noise levels without any "more than one year" criteria.[17] Santa Rosa also includes a threshold of significance for construction noise that is a "greater than 5 dBA L_{eq} increase in noise above existing ambient noise during daytime or nighttime."

The Noise Study fails to identify an applicable threshold of significance for existing homes farther away that may also be exposed to excessive Project construction noise levels. 11-35

Some homes exist approximately 700 feet away from this Project's construction zone. Those homes may have daytime ambient noise levels during some hours of less than 50 dBA L_{eq}. Construction noise that may continue for hours from this Project may be as loud as about 68 dBA L_{eq} at those homes.[18] Even with mathematical acoustical corrections to account for possible intervening structures that could block some of that noise, the unblocked construction noise levels at homes 700 feet away could still exceed the City's 50 or 60 dBA L_{eq} limits. The City of Ukiah Municipal Code, section 6048, establishes a Maximum Exterior Noise Level Standard for a R1 zone during the day of 50 dBA L_{eq} when that noise such as construction noise has a cumulative duration in any 15-minute period. (*See table on next page for Ukiah's standards.*) The Noise Study fails to consider this impact upon more distant homes as an additional threshold of significance. The Noise Study fails to obtain noise level measurements at some homes not immediately adjacent to Munson Frontage Road where construction noise levels could exceed this threshold of significance.

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[17] See this EIR document online at: http://ci.santa-rosa.ca.us/doclib/Documents/ut_irwp_PEIR_Chapter_4_12_Noise.pdf (That threshold of significance is referenced at page 4.12-34. This document will be made available upon request.

[18] Noise is assumed to be attenuated by distance of between 6.0 to 7.5 dB for each doubling of distance from a stationary noise source. If multiple equipment operation is audible at the same time, with combined noise level at 50 feet that can be as high as over 91 dBA L_{eq} , then at 700 feet it could be about 62 to 68 dBA L_{eq}.

City of Ukiah City Code

The City of Ukiah Municipal Code contains a Noise Ordinance (Division 7, Chapter 1, Article 6) that establishes maximum exterior noise level standards that apply to noise levels in the proposed Project area for affected land uses. Applicable standards to the Project are as follows:

> *6048 Ambient Base Noise Level:* Where the ambient noise level is less than designated in this Section the respective noise level in this Section shall govern.

TABLE 4.8-3
NOISE LEVEL PERFORMANCE STANDARDS

Maximum Exterior Noise Level Standards, dBA

Zone	Cumulative Duration of Noise Event in Any 15 minute Period	Leq
R1 and R2	10:00 p.m. – 7:00 a.m.	40
	7:00 p.m. – 10:00 p.m.	45
	7:00 a.m. – 7:00 p.m.	50
R3	10:00 p.m. – 7:00 a.m.	45
	7:00 a.m. – 10:00 p.m.	50
Commercial	10:00 p.m. – 7:00 a.m.	60
	7:00 a.m. – 10:00 p.m.	65
Industrial (Manufacturing)	Anytime	70

SOURCE: City of Ukiah, 1983.

The Noise Study fails to disclose the thresholds of significance and evaluate this Project's noise impacts compared to Ukiah's maximum transportation noise exposure standards for residential interior and exterior spaces. 11-36

The City of Ukiah's maximum noise standard for residential noise at outdoor activity areas or property lines is 60 dBA L_{dn} and is 45 dBA L_{dn} for interior spaces.[19] These are the standards the City of Ukiah also cites in its current Costco Draft EIR. Both the Noise Study and the previous Walmart Expansion EIR reveal that exterior noise levels will exceed this 60 dBA L_{dn} maximum noise limit at homes near site LT-1.

Also, the Noise Study never even mentions or analyses this Project's potential exceedance of the City's 45 dBA L_{dn} limit for interior spaces in nearby homes. If noise levels in 2010 at site "LT-1" were measured at 70 dBA L_{dn} and traffic noise will increase as the result of this Project and the increased traffic to Walmart and Costco, then the nearby homes will likely have their interior rooms be exposed to noise levels in excess of 45 dBA L_{dn}. Typical light-weight exterior walls and roofs on wood-framed residential structures at most attenuate traffic noise by 25 dBA when windows are closed. As soon as exterior noise levels exceed 70 dBA L_{dn}, then the interior rooms will likely be exposed to this Project's increased and excessive traffic noise. For those residents without air conditioners who leave their windows open for cooling in the summer, their interior room

[19] Source: City of Ukiah General Plan 1995, Section IV.2, page 9, Table IV.2-8 "Maximum Allowable Noise Exposure Transportation Noise Sources."

noise levels will exceed allowable maximum standards even more. The IS/MND is inadequate for failing to evaluate and mitigate this significant traffic noise impact.

The Noise Study also uses the wrong threshold of significance for permanent noise increases to residential areas that are already impacted by excessive traffic and other noise. 11-37

The Noise Study, p. 7, identifies the threshold of significance for permanent noise level increases (i.e. from traffic increase due to the Project) of 3 dBA L_{dn} at homes when predicted future noise levels would exceed acceptable residential standards. If the Project-related future noise level increase still complies with the City's satisfactory residential standards, then the Noise Study sets a threshold of significance for a 5 dBA L_{dn} increase in noise levels. But the Noise Study provides no guidance for what threshold of significance should be used for existing homes that are already exposed to noise levels in excess of the City's standards. In that regard, the Noise Study fails to comply with CEQA. This flawed approach presented by the Noise Study would allow each consecutive project over time to add another 3 dBA to existing neighborhoods with no increasing restriction and no absolute upper limit.

The Noise Study fails to recognize that existing homes are already exposed to excessive traffic noise levels. 11-38

Some homes north of Talmage Road are already exposed to excessive noise. The California Department of Public Health Services, Office of Noise Control, has established guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. Noise levels above 70 dBA L_{dn} are deemed "clearly unacceptable" for residential land uses.[20] The noise level at measurement site LT-1 was already measured in 2010 at **70 dBA L_{dn}** by Walmart's consultants for the EIR that the City approved. This Talmage Road's Project-related changes with higher traffic flows, rearranged exit patterns, and the increased traffic from Walmart and Costco projects will increase noise levels above that clearly unacceptable 70 dBA L_{dn} level. The Noise Study is inadequate for failing to identify this significant impact and for failing to provide appropriate noise mitigations for those adversely impacted homes along Munson Frontage Road. If noise mitigations are needed to protect existing homes from the City's approval of new major commercial development, then either the City or the developers should fund those mitigations.

Under these circumstances, a permanent increase in the day-night average noise level of 3 dBA L_{dn} or greater is not acceptable. In that regard the Noise Study's assumptions and conclusions are inconsistent with California case law. The court in *Grey v. County of Madera* (2008) 167 Cal.App.4th 1099 overturned an approval of an environmental study when it decided that, where a home was already exposed to excessive road noise, a further noise level increase of 2.1 dBA L_{dn} would be excessive.

[20] See the "Land Use Compatibility For Community Noise Environments", "Model Community Noise Ordinance," Office of Noise Control, California Department of Health, Berkeley, California, January, 2002.

The Noise Study fails to correctly identify which homes near this Project's construction site are already impacted by ambient noise levels in excess of the maximum allowed City's standards. For example, the existing residential dwellings adjacent to measurement site LT-1 are calculated to have been exposed in January, 2013 to **67 dBA L_{dn}** of noise. In the summer, that noise level will be greater yet. It will be at least 3 dBA louder (i.e. **70 dBA L_{dn}**) if the Walmart Expansion EIR's acoustical report in June, 2010 is to be believed. That existing noise level substantially exceeds the City's maximum allowed standard for traffic noise exposure of **60 dBA L_{dn}**.

The City, to be consistent with its other approved EIRs and noise studies, should use a threshold of significance for traffic noise increases of as low as **1.5 dBA**, not 3.0 dBA as the Noise Study presumes. For example, the current Costco Draft EIR, page 3.8-14, states that a traffic noise level increase of 1.5 dB would be significant when the existing L_{dn} sound level is 65 dBA L_{dn} or greater.[21] By comparison, this Talmage Road Project's Noise Study doesn't even mention what threshold of significance would be appropriate when traffic-related ambient noise levels exceed 65 dBA L_{dn} which already occurs.

Thus the Noise Study's recommended maximum 3 dBA traffic noise increase threshold of significance is inconsistent with the City's standards used for Costco and with the Federal FICON recommended maximum of 1.5 dBA for such noise level increases. The Noise Study's conclusions that flow from that error are incorrect and must be corrected.

Closest Home to Highway 101 Off-ramp at east end of Munson Frontage Road Measurement Site ST-3 may have been approximately in the center of this photograph

[21] That recommended threshold of significance figure of 1.5 dBA is based on Federal Interagency Commission on Noise (FICON) standards. Federal noise standards apply to projects throughout the U.S., including in Ukiah, even though the Noise Study does not mention these standards.

The Noise Study, p. 11, Table 6, predicts that noise levels at measurement location ST-3 closer to the Highway 101 freeway will increase by 2 dBA L_{dn}. But since the ambient noise level at that location in January, 2013 was incorrectly calculated to be 63 dBA L_{dn} because the calculation was based on flawed data and an inappropriate measurement at site LT-1. That ambient noise level should at least be adjusted upward when summer's increased traffic and non-transportation-related noise levels are considered. Then, that ST-3 site's ambient noise levels will exceed 65 dBA L_{dn}. Or as discussed above, the noise level predictable at measurement site ST-3 using City of Ukiah General Plan data would be approximately 65 to 67.5 dBA at 200 feet from the centerline of Highway 101. In either case, the Noise Study's prediction of a 2 dBA traffic noise level increase exceeds the 1.5 dBA threshold of significance, and accordingly must be considered to be significant and must be mitigated. 11-39

The existing noise levels at measurement locations LT-1 (near apartments or small multiple family dwellings) of at least 70 dBA L_{dn} exceeds the permissible maximum noise level identified in the Ukiah General Plan of 60 dBA CNEL.[22] 11-40

The Noise Study provides no threshold of significance for low-frequency noise that typically results from operation of heavy equipment during construction operations. 11-41

This Project's construction will result in even greater noise impacts to nearby homes by its low-frequency noise emissions from the use of heavy equipment. All the Noise Study's analysis of audible noise is based upon what is called the "A-weighted" scale for frequencies about 500 Hertz. Yet heavy-equipment emits loud, lower frequency noise below 500 Hertz, much of which is still readily audible and will cause neighboring residents considerable distress. Low frequency noise readily penetrates the exterior walls and roofs of light-framed homes without much attenuation. Interior noise levels will be much louder than would be predicted by the A-weighted scale. Such noise will rattle windows. It can cause human health problems and lack of sleep. Nearly all sound level meters also are able to measure sound in a broader frequency range called the "C-weighted" scale specifically to account for circumstances like what this Project poses for its short-term construction noise. The Noise Study should evaluate low-frequency construction noise impacts to these nearby homes.

5 THE NOISE STUDY'S CONCLUSIONS THAT THIS ROAD PROJECT WILL HAVE INSIGNIFICANT NOISE IMPACTS ARE INCORRECT

The Noise Study fails to reveal that construction noise levels at the nearest homes to the freeway off-ramp will be significant because they will exceed the maximum allowed CalTrans noise standards. 11-42

The Project's construction noise levels should not be allowed to exceed even CalTrans's relaxed standards of 86 dBA L_{max} at 50 feet.[23] This Project involves the operation of

[22] 1995 City of Ukiah General Plan, TABLE 3.8-2 "Maximum Allowable Noise Exposure Transportation Noise Sources" for transient lodging is 60 dBA Ldn or CNEL.

[23] CalTrans' "Technical Noise Supplement," July 2011, page 8-37.

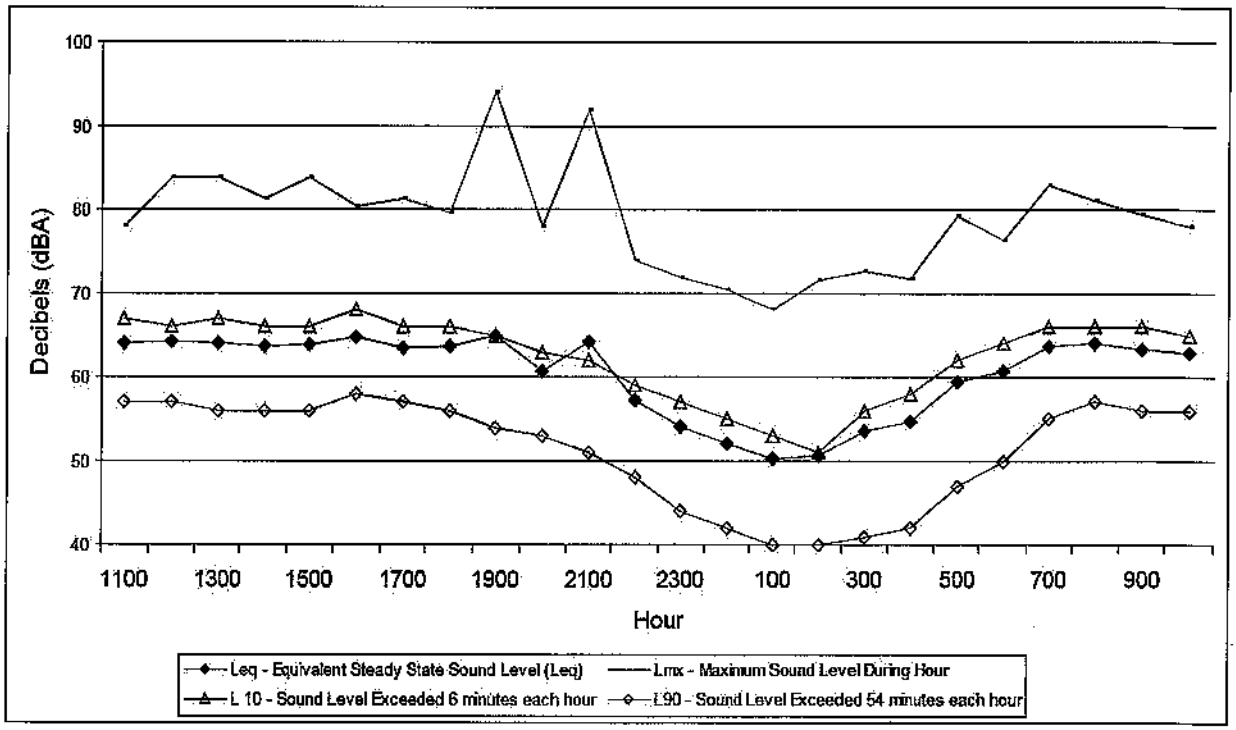
jackhammers, hoe rams and possibly concrete saws in removing the existing southbound offramp. Each of these equipment types is identified in Noise Study's Table 7 as producing 90 dBA L_{max}. Any one of them at that distance, considering the standard distance-attenuation factor of a 6 dBA reduction for each doubling of distance, would still produce about **87 dBA L_{max}**. If all three of these equipment types operate 70 feet from the nearest home, they would produce a cumulative noise level of about **91.7 dBA L_{max}**. At a distance of 130 feet, their cumulative noise level emission would be over 86 dBA L_{max}. The narrow row of trees with visible gaps between that home and this Project's off-ramp construction zone will not reduce such short-term noise below the CalTrans maximum standards. This short-term construction noise impact must be considered to be significant at least for that nearest home near site ST-3.

Even worse is the fact that such construction noise has a strong impulsive character rather than being of a uniform loudness. Many noise ordinances recognize that the maximum allowed noise level from operations with an impulsive noise quality should be reduced by 5 dB to account for increased human annoyance and disturbance from this kind of noise. When that factor is included, other homes nearby will be exposed to excessive noise as well. When three operations occur simultaneously emitting 90 dBA L_{max} each at a distance of 50 feet, their cumulative noise level at a distance of 240 feet would be about 86 dBA L_{max}. There are perhaps a half dozen homes within 240 feet of this off-ramp construction zone that could therefore be exposed to excessively loud impulsive noise levels.

The Noise Study fails to reveal that this Project's construction noise will create significant impacts to many residents and will exceed the reasonable threshold of significance for such short-term construction noise. 11-43

If the City removes the inappropriate and never-before-used "more than one year" criteria from this IS/MND's proposed threshold of significance for noise, then this Project's construction noise will exceed the 60 dBA L_{eq} limit and also will exceed the ambient noise environment at nearby homes by at least 5 dBA L_{eq}. Existing homes long Munson Frontage Road are already exposed to ambient traffic noise levels that are greater than 60 dBA L_{eq}. Evidence from the Walmart Expansion EIR's noise report in 2010 shows that hourly average ambient noise levels at site LT-1 have been measured up to about 64 dBA L_{eq} for many daytime hours in June. (See Figure 4.8-3 from that EIR below on next page.) Adding 5 dBA L_{eq} to that ambient level, the City should consider this Project's construction noise that exceeds about 69 dBA L_{eq} at those nearby homes to create a significant impact.

CHART OF NOISE LEVEL MEASUREMENTS AT SITE "LT-1" - from Walmart EIR



Ukiah Walmart Expansion Project. 209418

Figure 4.8-3

Utility Pole at Airport Park Blvd and Munson Frontage Road
Tuesday June 8 – Wednesday June 9, 2010

The Noise Study on page 13 predicts that this Project's construction noise levels at a distance of 200 feet will be between about **67 to 76 dBA L_{eq}**. That range of noise levels exceeds either the 60 dBA L_{eq} limit or the 69 dBA L_{eq} limit when 5 dBA is added to the ambient noise levels. The upper end of that range of predicted construction noise levels also exceeds by more than 5 dBA the Noise Study's own hourly L_{eq} measurements in Figure 2 that are up to about 68 dBA $L_{eq\ (hr)}$. Had the Noise Study evaluated the noise levels from multiple pieces of heavy construction equipment being used simultaneously, that exceedance of applicable noise standards would be even greater.

For those homes, construction noise impacts will be significant. For the home near site ST-3 located 70 feet from the off-ramp area, such noise will be even louder and more significant. For the numerous homes located even 500 feet from Project construction areas where they would be expected to be exposed to ambient noise level that are less than 60 dBA L_{eq}, they could be exposed to significant short-term construction noise increases to 68 dBA L_{eq}. [24]

[24] Noise is assumed to be attenuated by distance of between 6.0 to 7.5 dB for each doubling of distance from a stationary noise source depending upon hard or soft ground surface characteristics along the path of noise travel. If as the Noise Study predicts construction noise at 200 feet could be 76 dBA L_{eq}, then at 500 feet it could be about 66 to 68 dBA L_{eq}.

The Noise Study fails to identify other construction noise standards that it should use to determine the significance of the Project's noise impacts. 11-44

This Project's construction noise levels may exceed the maximum limits imposed by other municipalities. For example, the City of Santa Rosa imposes a 75 dBA L_{max} limit for impact noise levels of construction noise. It also limits such noise to 60 dBA L_{eq} in the daytime, 55 dBA L_{eq} at night.[25] The Noise Study while claiming that the City of Ukiah has not established quantitative noise level limits for construction activities, failed to look elsewhere to see what other reasonable standards for a threshold of significance could be found and applied to its analysis. This Talmage Road project from a single heavy equipment operation may generate 87 dBA L_{max} which is much louder than Santa Rosa's maximum limit of 75 dBA L_{max}. Or by its own prediction that construction noise could be as high as 76 dBA L_{max} at homes 200 feet away, the Noise Study would exceed standards from Santa Rosa for those homes and ones closer to the offramp. On that basis alone, the IS/MND should determine that for some homes this Project's construction noise impacts will be significant. The IS/MND is inadequate because its Noise Study fails to accurately disclose the true magnitude of construction noise impacts this Project will cause to some nearby land uses.

The Noise Study's conclusion that future noise levels will not increase at site LT-1 as the result of this Project is incorrect because it fails to include future Walmart expansion and Costco traffic. 11-45

The Noise Study's Table 6 states that the existing noise level at LT-1 is 67 dBA L_{dn}. It also states the future noise level at LT-1 will also be 67 dBA L_{dn}. Ignoring for the moment the 3 dBA louder measurement at LT-1 for the Walmart project, that calculation in the current Noise Study is incorrect. That conclusion is patently impossible and these noise levels cannot be the same because substantial future traffic increases from Walmart's expansion and Costco's creation will dramatically increase the noise levels at LT-1. The only way those noise levels would be the same is if the authors of the Noise Study forgot to include in their computerized prediction model the large traffic increase these two major shopping facilities will generate.

The Noise Study fails to evaluate this Project's noise impact on an adjacent business. 11-46

The City's "maximum exterior noise level standard" for a "cumulative duration of noise event in any 15-minute period" for commercially zoned use is 65 dBA L_{eq}. At a close distance of about 70 feet to the west of the proposed, widened freeway interchange is an existing Jack in the Box restaurant. This Project poses continuous construction noise levels from the operation of heavy equipment of over 85 dBA L_{eq} at a distance of 50 feet. Construction noise levels of grading, road paving, and jack-hammering as heard at that restaurant would be considered significant. That is because the cumulative noise emissions from these operations would greatly exceed 65 dBA L_{eq} during some 15-minute period, if not for hours, at that close distance.

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[25] Source: http://ci.santa-rosa.ca.us/doclib/Documents/ut_irwp_PEIR_Chapter_4_12_Noise.pdf page 4.12-34. This document is available online and will be made available if requested.

Conclusion:

For the forgoing reasons, the Talmage Interchange Improvement Project Initial Study/Mitigated Negative Declaration is inadequate in describing, analyzing and mitigating this Project's significant noise impacts. CEQA requires the revision and recirculation of this IS/MND regarding such noise impact analysis and possible mitigation before this Project's application can again be considered. 11-47

Thank you for reviewing these comments. Please also provide me with public notice and an opportunity to review any further revisions of the environmental documents for this Project or public meetings concerning this Project. If you have any questions about this comment letter, please feel free to contact my office.

Sincerely,

Dale La Forest

Dale La Forest
Professional Planner and Architectural Designer

Dale La Forest & Associates

Response to Letter on the Previous Draft MND from Dale La Forest (Dale La Forest & Associates)

11-1 The initial comment was an introduction to the commenter's following 46 specific comments on the adequacy of the noise analysis prepared for the original Draft MND. It is noted as a general response that this letter contains comments on the previous Draft MND. No comments specific to the DEIR noise analysis were submitted by this commenter or any of the other individuals or agencies commenting directly on the DEIR.

The noise analysis done for the Draft MND was revised and expanded for the DEIR. Based on that new analysis, construction noise impacts were found to be less than significant unless night work was required. In that case the DEIR recommends mitigation requiring a City permit, and that permit will include conditions to limit the nighttime noise. The Walmart DEIR also required compliance with the City's Noise Ordinance and the need for City approval for work that occurred after the hours specified in the Noise Ordinance. The Walmart EIR also required posting of information for contractors informing them of construction time limits. As this interchange Project would be done per Caltrans approvals, it is expected that all contractors would be required to ensure that workers abide by the Noise Ordinance and any permit conditions required for nighttime work. The Walmart EIR also recommended that 1) construction equipment use the best available noise control techniques wherever feasible; 2) impact tools be hydraulically or electrically powered, or, if not feasible, fitted with a muffler and jackets; 3) stationary noise sources be located as far from sensitive receptors as possible; and 4) amplified music (boom boxes) not be allowed at the job site. As this construction Project would be done under contract to the City with Caltrans approval, it is expected that best noise control technology would be used for construction equipment, including impact tools. Any stationary generators would need to be moved as construction along the ramps and roadway progresses. Given the noisy Project environment, and the type of construction involved, it is not expected that boom boxes would be used, or, if they were that they would be audible at sensitive receptors. The DEIR found that construction noise would be less than significant given the one recommended mitigation addressing nighttime construction. Additional mitigations are not warranted. However, to ensure that construction noise limitations are clear, an additional mitigation will be added requiring 1) construction equipment use the best available noise control techniques wherever feasible; 2) impact tools be hydraulically or electrically powered, or, if not feasible, fitted with a muffler and jackets; 3) stationary noise sources be located as far from sensitive receptors as possible; and 4) amplified music (boom boxes) not be allowed at the job site. See Chapter 4 of this Final EIR for this EIR addition.

With regard to the noise measurements done for the Walmart EIR, they were done at a different time of season and year. The noise measurements done for this DEIR are considered the most current data on existing noise levels, and they are accurate. Ambient noise measurements were made during two noise surveys; the first noise survey occurred in January 2013, and the second occurred in November 2013. The two noise monitoring surveys were conducted to quantify ambient noise levels at representative noise-sensitive land uses located in the project vicinity. Noise levels measured during the November 2013 noise

monitoring survey were consistent and reliable. Further, the November 2013 noise monitoring survey confirmed that the January 2013 noise data taken as part of the analysis prepared for the IS/MND were credible, repeatable, and applicable to the DEIR assessment. Also see Response 11-5 below.

11-2 The commenter stated that the project would conflict with the City's Municipal Code and that the MND noise study underestimated future noise and that it failed to adequately describe the future traffic that would use the Project. As noted on page 112 of the DEIR, the Ukiah City Code establishes limits on the hours during the day that construction activity is permitted to occur. However, it is possible that nighttime work could occur resulting in a potentially significant nighttime noise impact. Mitigation Measure 4.7-A.1 requires that the applicant shall obtain a permit from the Ukiah Director of Public Works if nighttime work is necessary, as required by the City Code. The permit shall include the following: 1) allow construction noise between 7 P.M. and 7 A.M. only for construction activities that Caltrans states needs to be done at night; 2) construction equipment idling shall be limited to five (5) minutes; 3) if nighttime work is to exceed one week, then temporary noise baffles would be installed between the noise source and sensitive receptors; 4) if nighttime work is to exceed one week, then provide hotel vouchers to occupants of the nearest sensitive receptors; and 5) any other noise-reducing measures the City considers warranted. With the implementation of this measure, the impact would be less than significant.

The DEIR and supporting noise and vibration technical analysis, included as Appendix G of the DEIR, conclude that construction activities would not result in significant noise or vibration impacts on commercial businesses in the Project vicinity.

Substantial permanent noise increases would not occur as a result of the Project. Impact 4.7-C of the DEIR (pages 114 through 116) summarizes the significance criteria used in the evaluation of substantial permanent noise increases. Traffic noise modeling results indicate that noise increases would range from 0 to 2.2 dBA at receptors in the Project vicinity. The noise increases attributable to the proposed improvements and additional traffic volumes expected along the roadways would not exceed the 3 dBA threshold of significance.

As noted in Response 11-1, additional noise measurements were completed for this DEIR, were accurate and compared well with the data collected for the IS/MND, and are considered the most current data on existing noise levels in the Project vicinity.

The traffic noise modeling discussion contained on page 114 of the DEIR summarizes the methods and data used in the traffic noise modeling done to describe future traffic noise. Peak hour traffic volume data was used for existing conditions (2012) and future conditions in 2032. Travel speeds and vehicle mix were input into the model based on observations made during the noise monitoring surveys. The full report contains the TNM adjustment factors and input and output files.

11-3 The comment stated that the Draft MND noise study failed to disclose important details about the ambient noise level measurement technique used in that study.

The DEIR noise analysis report includes the requested data about the sound level meters, how and where noise measurements were made, what the meteorological conditions were, and the neighborhood noise circumstances. See Appendix G of the DEIR.

11-4 The comment stated that noise measurements at three of the Draft MND noise study's four locations were too short in duration to reliably reveal what the ambient noise level conditions were. See pages 103 through 106 of the DEIR and Appendix G of the DEIR regarding this same issue. The November 2013 Noise Monitoring Survey included three additional short-term noise measurements conducted over a period of 40 minutes (four 10-minute intervals) at each site.

11-5 The comment stated that the Draft MND short-term noise measurements were inconsistent and unreliable. Noise levels measured during the November 2013 noise monitoring survey were consistent and reliable as a review of the data shows that the data were similar during each of the two surveys. Further, the November 2013 noise monitoring survey confirmed that the January 2013 noise data taken as part of the analysis prepared for the IS/MND were credible, repeatable, and applicable to the DEIR assessment. Measurements made during the surveys followed the general noise measurement guidance recommended by Caltrans in the Technical Noise Supplement (TeNS). Further, Caltrans review of the noise measurements and analysis did not reveal any significant issues or deviations from the TeNS guidance.

11-6 The comment stated that Draft MND noise levels at the short-term measurement locations were obtained at the wrong time of day. See pages 103 through 106 of the DEIR and Appendix G of the DEIR regarding this same issue. Both the January 2013 and November 2013 noise monitoring surveys included long-term and short-term noise measurements. Per standard acoustical methodology, the short-term noise measurements were made in concurrent time intervals with the data collected at the long-term reference measurement sites. This method facilitates a direct comparison between both the short-term and long-term noise measurements and allows for the identification of the worst-hour noise levels, as well as noise levels during the quietest hours at land uses in the Project vicinity where long-term noise measurements were not made. According to the City's expert acoustical consultants, this is a credible method for estimating noise levels throughout large project areas where the noise sources are similar. The commenter claims that the noise analysis should have focused on peak hour traffic, as that would be the worst-hour noise levels. The analysis calculated traffic noise levels assuming AM and PM peak traffic conditions.

11-7 The comment stated that the noise measurements done for the Draft MND were different than reported for the area in the Walmart EIR. See Response 11-1 regarding this same issue. The noise measurements done for the DEIR are considered the most current data on existing noise levels, and the results of the measurements are accurate. Noise levels at elevated positions such as reference measurement LT-1 (microphone 12 feet above the ground) are typically higher than measurements made at short-term sites (microphone 5 feet above the ground to represent human ear height) because of the absorption of the sound energy by the ground. See the description of the methodology used to calculate

noise levels at the measurement locations in the noise study contained in Appendix G of the DEIR.

11-8 The comment stated that the Draft MND noise measurements were taken at the wrong time of the year. See Response 11-5 regarding this same issue.

11-9 The comment stated that the noise measurements done for the Draft MND were inaccurate when compared to measurements done for the Walmart EIR. See Responses 11-1 and 11-5 regarding this same issue. Furthermore, the analysis performed for the Project confirms there is no merit to the claim of seasonal noise differences made by the commenter as there was no variation in noise measurements noted between the January 2013 and November 2013 surveys done in different seasons for the DEIR.

11-10 The comment stated that the Draft MND noise study was inadequate because it did not include 24-hour noise level measurements at homes closest to the freeway offramp. See pages 103 through 106 of the DEIR and Appendix G of the DEIR regarding this same issue. Measurements made at Sites LT-2, LT-4, ST-3/ST-4, and ST-6 documented noise levels at locations representative of residential land uses near U.S. 101 and the southbound off-ramps to Talmage Road. The day-night average noise levels (Ldn) were calculated based on the measured data at long-term sites or estimated (as described previously) at each of the short-term measurement sites.

11-11 The comment stated that the Draft MND noise study was inadequate because it did not explain how short-term noise measurements were converted to describe long-term noise levels. See Response 11-6 and notes on DEIR Tables 4.7-4 and 4.7-5 that describe how the method of using data from the short-term and long-term noise measurements allows for the identification of the worst-hour noise levels, as well as, noise levels during the quietest hours at land uses in the Project vicinity where long-term noise measurements were not made. Noise measurements at the long-term measurement locations were 24-hour measurements. The calculation of noise levels described in the DEIR and DEIR Appendix G uses standard acoustical engineering approaches that combine short-term and long-term measurements.

11-12 The comment questioned how the noise levels in the Draft MND were calculated. See Responses 11-6 and 11-11 regarding this same issue. The Ldn noise levels at Sites ST-1 and ST-3 were estimated by comparing average noise levels (Leq) during corresponding time periods. In each instance, the Ldn was calculated to be 63 dBA.

11-13 The comment stated that there was an error in Table 4 of the Draft MND noise study. Table 4 of the IS/MND noise study contained a typographical error. This error was corrected on page 104 of the DEIR and within Appendix G of the DEIR .

11-14 See Response 11-6 regarding this same comment.

11-15 This comment referred to the older noise study done for the Draft IS/MND. The tables and graphics in the DEIR have been revised to fix these earlier problems.

The measurement locations are accurately mapped in the DEIR (see Figure 4.7-1).

11-16 The comment stated that the Draft MND noise study did not disclose assumptions and input data that was used. The DEIR noise analysis report includes the requested data about the traffic noise model inputs. (See Appendix G of the DEIR). As described in Appendix G (page 13) of the EIR, traffic data was provided by the EIR traffic consultants. The traffic data was the same as reported in the traffic section of the DEIR.

11-17 The comment stated that the Draft MND noise study did not correctly predict noise levels nor did it include noise generated by the Costco project. See Responses 11-1, 11-2, and 11-5 regarding this same issue. The DEIR noise study is based on the Caltrans-projected 1.3 growth rate in traffic by 2032, which includes projected traffic associated with development of the Costco site. The Walmart project is no longer proposed, and, therefore, not assessed (see Response 4-9 regarding the Walmart project).

11-18 The comment stated that the noise study done for the Walmart EIR underestimated traffic and traffic noise and that the Costco EIR also underestimated traffic that would be generated by that project. See Responses 11-1, 11-2, 11-5, and 11-16 regarding this same issue. As previously described in Response 4-9, the Walmart project is no longer proposed, and, therefore, not assessed in this EIR. Any questions about that project are not pertinent to this EIR since the project is not proposed. The counts that were done for this DEIR were done at the times of year and the days recommended by Caltrans and are considered reliable counts of existing conditions. See Responses 5-18 through 5-25 regarding the issue of traffic projections done for this EIR as compared to traffic projections done for the Costco EIR. The traffic projections done for the Project EIR are consistent with Caltrans direction and accurate.

11-19 The comment stated that the Draft MND inaccurately predicted future noise and that noise studies done for the Walmart EIR showed greater noise at one noise measurement location on the Project site than predicted in the Draft MND noise study. See Responses 11-1, 11-2, and 11-5 regarding this same issue. As previously described in Responses 4-9 and 11-18, the Walmart project is no longer proposed, and, therefore, not assessed in this EIR. Any questions about that project are not pertinent to this EIR since the project is not proposed.

11-20 The comment stated that the Draft MND inaccurately predicted future noise at several locations on the Project site than predicted in the Draft MND noise study. See Response 11-6 regarding this same issue. Using the methodology described in detail in Appendix G of the DEIR, the DEIR noise analysis calculated future traffic a.m. and p.m. hour noise levels given the increase in traffic predicted by Caltrans for the year 2032.

11-21 The comment stated that the Draft MND noise study did not explain how long-term noise levels at and near the Project site were predicted. See Responses 11-6 and 11-11 regarding this same issue.

11-22 The comment stated that the noise levels predicted for the Project were less than shown in the City General Plan Noise Element. See Response 11-1 regarding this same issue. The noise measurements done for this DEIR are considered the most current data on existing noise levels and the results of the measurements are much more accurate than generalized predictions of noise contours contained in the General Plan, as those contours do not account for shielding provided by terrain or structures. A sensitive receptor that is behind a hill, another structure, or dense foliage will experience less noise exposure than a receptor that has a straight-line, unobstructed exposure to the noise source. The noise contour data contained in the General Plan is intentionally conservative to identify and appraise potential noise and land use compatibility issues within the community. The future noise level calculations were made for General Plan build-out scenarios based on estimates of traffic volumes 15 to 20 years in the future. Such information is only used to screen proposed projects to determine which project would require additional project specific studies.

11-23 The comment stated that based on other studies, the Draft MND noise study underestimated future noise levels. See Responses 11-1, 11-2, 11-5 and 11-22 regarding this same issue.

11-24 The comment stated that the Draft MND noise analysis did not include noise from construction trucks. As noted in Table 4.7-6 of the DEIR, trucks generate noise levels similar to other heavy equipment necessary to construct the interchange improvements. The construction noise levels predicted in the analysis assumed heavy-duty trucks would be necessary to deliver materials and supply to the Project site.

11-25 The comment stated that the Draft MND noise analysis assumed work would be done only during daytime hours. See Responses 11-1 and 11-2 regarding this same issue.

11-26 The comment stated that the City's Municipal Code does not prohibit nighttime construction noise and that such noise could occur; the impact of this nighttime noise was not addressed in the Draft MND noise analysis. See Responses 11-1 and 11-2 regarding this same issue. Generally, proposed construction would not occur at night. In the case that some nighttime operations would be needed when ramps would need to be closed to allow construction, the project will require a City-issued permit per Mitigation Measure 4.7-A.1. That mitigation measure requires temporary noise baffles to protect sensitive receptors if the nighttime construction would exceed one week and for the City to provide hotel vouchers to the nearest sensitive receptors. As the DEIR states (page 113), these sensitive receptors live next to a freeway where residents are used to high ambient noise levels, and not in a quiet residential neighborhood. This fact plus the expected infrequency of the need for nighttime work plus the noise reduction mitigations would reduce the construction noise to a less-than-significant level.

11-27 The comment stated that construction noise was incorrectly assessed in the Draft MND given the significance threshold on one year for construction noise. Impact 4.7-A (DEIR pages 109 through 113) provides a discussion of maximum instantaneous noise levels and hourly average noise levels expected from Project construction activities. Such noise levels could be expected to last for moments,

days, weeks, or months. The City's maximum exterior noise standards do not regulate noise levels from temporary construction activities at non-residential receivers, however. As described on page 107 of the DEIR, the City Municipal Code does not establish maximum construction noise limits, and the qualitative noise limits apply only to construction within a residential zone. The impact is less than significant because the Project would not result in a substantial temporary noise increase defined as construction noise levels that exceed 60 dBA Leq and the ambient noise environment by at least 5 dBA Leq for a period of more than one year. The rationale of the City's standard is as follows. First, a one-year duration defines what would be considered "temporary". One year is representative of the amount of time typically required to construct most projects and consistent with most people's expectations for a Project's duration. In the noise consultants' professional opinion, one year is a reasonable amount of time for persons of normal sensitivity to be subject to daytime construction noise. Second, the 60 dBA Leq noise level threshold is derived from speech interference studies. Noise levels above 60 dBA Leq begin to result in speech interference and persons must raise their voices to be clearly heard. Exterior noise levels exceeding 60 dBA Leq can also result in activity interference indoors. Third, the construction noise must also be 5 dBA Leq above the ambient to be clearly noticeable. The noise level limits and construction duration, combined, are used to assess the potential for a substantial temporary noise increase. In this case, Project construction is only anticipated to take approximately five months. (See DEIR, pp. 20, 109.)

11-28 The comment stated that construction noise limits used by other jurisdictions should have been applied for the Draft MND analysis. See the discussion in Impact 4.7-A (page 109 through 110 in the DEIR) regarding this same issue. Appropriate noise thresholds, as summarized in Response 11-27, are used in the analysis of temporary construction noise.

11-29 The comment stated that residents near the project site would not be able to know what noise they would be exposed to given the data in the Draft MND noise study. See the discussion in Impact 4.7-A regarding this same issue. Maximum instantaneous noise levels and hourly average noise levels expected from project construction activities are presented at distances of 50 feet from the noise source in Tables 4.7-6 and 4.7-7 to provide information for those residents immediately adjoining the construction site. The noise data is also presented at a distance of 200 feet from the noise source assuming that the distance between the construction activities and receptors would vary throughout the approximate 5-month construction period.

11-30 The comment stated that the Draft MND noise study was flawed because it did not assess multiple pieces of construction equipment operating at the same time. As noted in Table 4.7-7 of the DEIR (page 112), average noise levels by construction phase assume multiple pieces of construction equipment operating simultaneously. The maximum instantaneous noise levels generated by multiple pieces of construction equipment are not likely to occur at the same time, (i.e., it is unlikely that the maximum instantaneous noise level from one piece of construction equipment would occur during the exact same instance as the maximum instantaneous noise level from another piece of construction equipment). Therefore, the maximum instantaneous noise level resulting from a

single piece of construction equipment (as shown in Table 4.7-6 – page 111) is representative of the maximum instantaneous noise levels expected at a receptor located 50 from the noise source.

11-31 The comment stated that the Draft MND noise analysis relied upon incorrect estimates of construction equipment noise. The construction noise data utilized in the noise assessment was taken from studies published by the National Cooperative Highway Research Program and United States Environmental Protection Agency. These sources of data are credible, are commonly used by others, and provide a reasonable estimate of noise levels that would be expected with the construction of the Project. The commenter selected noisy equipment types to show possible inconsistencies, and then compared different acoustical descriptors (maximum instantaneous (Lmax) noise levels against average (Leq) noise levels). The examples used by the commenter inaccurately describe projected noise levels for the Project, and the DEIR provides an accepted EIR analytical approach.

11-32 The comment stated that the Draft MND noise analysis did not accurately assess construction noise from simultaneous use of several pieces of equipment and equipment that generates impulsive noise. See Responses 11-28, 11-30, and 11-31 regarding this comment. All heavy construction includes sounds that may be considered impulsive. The technical report in Appendix G and the DEIR noise section include an adequate discussion of construction noise on an average and maximum instantaneous level. Neither Caltrans nor the City of Ukiah have regulations that require “impulsive” noise to be penalized by 5 dB.

11-33 The comment stated that construction noise mitigation was required for the Santa Rosa Walmart project and should have been in the Draft MND. Impacts and mitigation measures differ by project depending on numerous variables. The predicted construction noise levels, the ambient noise levels at receptors, and the duration of construction activities are carefully considered to identify significant temporary noise increases due to construction. The commenter compares different acoustical descriptors (maximum instantaneous (Lmax) noise levels against average (Leq) noise levels). As described on page 110 of the DEIR, typical hourly construction noise averages for the Project would be 67 dBA to 76 dBA at the nearest sensitive receptors, which is less than the average levels the commenter notes for the Santa Rosa Walmart project. Short-term construction noise impacts due to this Project were determined to be less than significant with the implementation of mitigation. Though less than significant, additional mitigations have been added as part of this FEIR to further reduce the impact as discussed in Response 11-1.

11-34 The comment again stated that the use of one year as a threshold level for construction noise was unsupported in the Draft MND. See Response 11-27 regarding this comment.

11-35 The comment stated that an applicable threshold of significance for construction noise was not provided in the Draft MND for homes more distant from the Project site. See Response 11-27. It follows that construction noise impacts would also be less than significant with mitigation at receptors located further from the construction site.

11-36 The comment stated that the Draft MND noise study did not assess noise impacts to interior and exterior residential spaces per the City's maximum transportation noise exposure standards. The City of Ukiah's maximum transportation noise exposure standards are normally used to assess the compatibility of new noise-sensitive land uses with the existing and future noise environment at the site. The commenter suggests that the study is inadequate even though existing noise levels at residential land uses near the project site currently exceed the 60 dBA Ldn exterior noise threshold and 45 dBA Ldn interior noise level threshold. Again, these thresholds are used in the siting of new noise-sensitive land uses, not for assessing temporary or permanent noise increases due to the proposed Project. On the contrary, the noise analysis contained in the DEIR is accurate.

11-37 The comment stated that the Draft MND noise study used the wrong threshold of significance for permanent noise increases to residential areas that are already impacted by excessive traffic and other noise. See page 108 of the DEIR. Based on studies of test subject's reactions to changes in environmental noise levels for similar noise sources, the Federal Interagency Committee on Noise (FICON) developed the following recommendations for thresholds to be used in assessing the significance of project-related noise level increases for transportation noise sources. Where background noise levels without the project would be less than 60 dB Ldn, a 5 dB or greater noise level increase due to the project would be considered significant. Where background noise levels without the project would be in the range of 60-65 dB Ldn, a 3 dB or greater noise level increase due to the project would be considered significant. Finally, where background noise levels without the project would exceed 65 dB Ldn, a 1.5 dB or greater noise level increase due to the project would be considered significant. This graduated scale is based on findings that people in quieter noise environments would tolerate larger increases in noise levels without adverse effects, whereas people already exposed to elevated noise levels exhibited adverse reactions to noise for smaller increases.

11-38 The comment stated that given existing noise levels near the freeway, the use of a 3 dB noise increase as a Draft MND threshold of significance was inappropriate. See Response 11-37 regarding this same issue. A 3 dB increase in noise levels is perceived by humans as a "just-perceptible" increase in noise and is an appropriate threshold to judge the significance of permanent noise increase attributable to the project. As described in the "Existing Noise Environment" section of the noise technical report in Appendix G of the DEIR, these sensitive receptors live next to a freeway where residents are used to high ambient noise levels, and not in a quiet residential neighborhood. See also Response 11-45.

11-39 The comment stated that the noise levels should have been expanded to reflect the time of year noise measurements were made and/or to reflect levels predicted in the City's General Plan. See Responses 11-5 and 11-37 regarding this same issue.

11-40 The comment stated that the existing noise level at one measurement location exceeds the permissible maximum established in the City's General Plan. See Response 11-36 regarding this same issue.

11-41 The comment stated that the Draft MND noise study did not assess low-frequency noise. See Response 11-27 regarding this same issue. The significance threshold used in the analysis of construction noise is appropriate for the proposed Project. Low-frequency noise is measured based on a C-weighted scale. Neither Caltrans nor the City has adopted any maximum C-weighted scale against which to measure whether such noise is significant or not. Even if such thresholds were available, measurements based on a C-weighted scale would not provide any meaningful analysis for this Project. Human hearing is represented by the A-weighted noise levels, which were measured and modeled in this analysis. CEQA analyses are based on A-weighted noise level analysis. No additional analysis is necessary or required.

11-42 The comment stated that Project construction noise would exceed Caltrans noise standards. See Responses 11-27 and 11-32 regarding these same issues.

11-43 The comment again stated that Project construction noise would significant impact residents exceeding a "reasonable" threshold of significance. See Response 11-27 regarding this same issue.

11-44 The comment again stated that the Draft MND noise study should have used an alternative threshold of significance for construction noise impacts. See Response 11-27 regarding this same issue.

11-45 The comment stated that the Draft MND noise study did not accurately predict future noise given the Walmart Expansion project and the Costco project. See Table 4.7-8 regarding this same issue. Traffic noise levels are calculated to increase by 1.3 dBA Ldn, a less-than-significant increase where noise levels background noise levels without the Project would exceed 65 dB Ldn. See also Response 11-17.

11-46 The comment stated that the Draft MND noise study did not assess noise impacts on an adjacent business. See Response 11-2, 11-17, and 11-18 regarding this same issue. In addition, the City's maximum exterior noise standards do not regulate noise levels from temporary construction activities at non-residential receivers. As described on page 107 of the DEIR, the City Municipal Code does not establish maximum construction noise limits, and the qualitative noise limits apply only to construction within a residential zone.

11-47 The comment stated that the Draft MND was inadequate and should have been revised. The noise analysis contained in the IS/MND was revised for the DEIR. This new analysis is deemed to be an accurate accounting of noise impacts from the proposed Project.

Charley Stump

From: Wood, Veronica R@DOT <Veronica.Wood@dot.ca.gov>
Sent: Tuesday, August 27, 2013 11:18 AM
To: Charley Stump
Cc: Murphy, Rodney L@DOT; Matt.Kennedy@ghd.com
Subject: RE: Talmage Road/US101 On-Off Ramps Realignment Project
Attachments: 01-0A760_Comments.pdf

Hi Charley,

Attached are the comments on the technical documents and Draft Initial Study and Mitigated Negative Declaration for the Talmage Road Interchange Project.

Feel free to call me if you would like to discuss this further.

Thank you,

Veronica Wood
Environmental Coordinator
California Department of Transportation
District 3
Marysville, CA 95901
(530) 741-4158

Caltrans Review of the Talmage Road Interchange Improvements Project Initial Study with Proposed Mitigated Negative Declaration		
Subject	Comment	Comment Author and Contact Info
Air 12-1 12-2 12-3 12-4 12-5 12-6	Due to nonattainment for State PM10, this project is subject to Regional Conformity. The project has to follow the Guidelines and meet all requirements for CEQA. The following report has been reviewed and my comments are as follows: · Include a table of Contents · Include a list of Tables · Include a List of Figures · Include Vicinity or Project location Map · Include Project Description Map · Include Project Description. Discuss the Build Alternative and No Build Alternative · Correct typo "pass-though" on page 1 · Indicate which version of Road Construction Emission Model was used to yield results · Indicate the version of CTEMFAC was used to yield results. · Please include the existing and future (2020 & 2030) ADT numbers to support data in Table 6 (page 11) · Suggests adding Boiler Plate Language (Standard language) for Global Climate Change and GHG section of the report.	Shalanda Christian, Shalanda_Christian@dot.ca.gov, (530) 741-4030
Biology 12-7 12-8	Here are my comments for MEN 101 at Talmage Road project: **1.** A walk-through of the study area was conducted by consultant biologists in the fall (September 7, 2012) to categorize the habitats within the study area. Protocol and seasonal surveys for special status plants were not conducted within the study area during their blooming period. It is recommended that special status plant surveys be conducted during the blooming period to verify their presence/absence. **2.** The Initiation of Environmental Technical Studies document (ESR) states that trees will be removed for the proposed project; however, the NES states that no trees will be removed. Will the removal of trees be required?	Kelli Angell, Kelli_Angell@dot.ca.gov, (530) 741-4486
Cultural 12-9	Here are my comments on the documents for Cultural Resources. Overall the documents are well written and my comments are for the most part minor. 1. Since this was a CEQA only project with no federal nexus (assuming this is correct), the appropriate document would be a Historic Resource Compliance Report rather than a Historic Property Survey Report.	Erick Wulf, Erick_Wulf@dot.ca.gov, (530) 741-4084

12-10 12-11 12-12 12-13 12-14 12-15	2. It would have been good for the consultant to contact the Caltrans District 1 archaeologists early in the process in order to determine what Caltrans may have done in the area and to begin the consultation process early. As well as to determine if there were any sensitive issues with the area (assuming this was not been done, it may have been done, but there was no mention of that in the reports.) 3. Check to make sure the maximum depth for all project work will not exceed 3 feet in depth, including the signals. 4. Additional effort needs to be conducted and documented in regards to Native American Consultation. I recommend sending the draft report to everyone on the NAHC list and following up with phone call(s) to make sure they received the reports and have no comments. This is especially important considering recent events with Native American groups in that area. 5. The survey coverage map should include the area up to the intersection. 6. The APE map needs to be signed by all. 7. For the ASR, elaborate on the potential for buried resources and possible project effects, especially considering what Caltrans has been finding in Little Lake Valley as part of the Willets Bypass Project. 8. Other than these comments the documentation looks good. The only real major concern is the Native American consultation. In the IS/MND it should be an Historic Resource Compliance Report instead of a Historic Property Survey Report since the document is CEQA only, and the survey coverage map should include up to the intersection since that is part of the project.	
Hazardous Waste 12-16	Hazardous waste has reviewed the above referenced documents and has the following comments: -The completed sampling is adequate for the project, as proposed, for hazardous waste issues. - The conclusions of the report could do a significantly better job in explaining material handling, off-site disposal/reuse options and potential worker safety requirements. As the report was prepared and signed by a professional, I would recommend the City have the conclusions tailored to more reasonably reflect site conditions. Based on the data I would anticipate very few restrictions, other than compliance with CCR Title 8, Section 1532.1 lead in construction" to be required.	Mark Melani, Mark_Melani@dot.ca.gov, 530-741-4556
12-17 Landscape Architect	Attached are my comments and a sheet showing that there is an existing irrigation system at this off/on-ramp. When the existing southbound off-ramp gets obliterated, care will need to take place to preserve the conduit pipe that goes under the off-ramp so that the irrigation system is still useable. This information would be good to forward to whomever is doing the design.	Laura Lazzarotto, laura.lazarotto@dot.ca.gov, (707)445-7878

	which occurs between approximately February 15 and August 15, depending on species.
Biological – Plant and Animal Communities	5. To delineate the buffer zone around a nesting tree (to protect the nest(s) and tree), orange construction fencing placed at the specified radius (as determined by a qualified biologist) from the base of the tree within which no machinery or workers shall intrude.
Geology and Soils	6. All recommendations contained in the Limited Materials and Preliminary Geotechnical Report prepared by Rau and Associates, dated May, 2013 shall be followed and/or incorporated into the project.
Traffic	7. an evaluation of the widening and improvement of the existing Talmage Road overcrossing structure and evaluation of Intersection No. 3 for signalization should occur once traffic volumes reach existing (2012) with an applied growth factor of 1.25 to 1.30.

12-18

Checklist and Environmental Analysis

I. AESTHETICS **Would the project:**	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☒

12-19

Setting: The City is situated within the Ukiah Valley and includes background views to wooded or chaparral covered mountains. The project site is the Talmage Road/Highway 101 interchange and is a General Plan "gateway" located in the southeastern portion of the City. According to the City's General Plan, "gateway" is a term used to describe the "first impression" that a resident or visitor has of the Ukiah Valley. Per the City's General Plan, Talmage Road is one of six main gateways identified as a "second gateway level", which is an entrance into the city itself. 12-20

The project site is developed with roadways and street infrastructure. The surrounding area is densely developed with residential, heavy commercial, retail commercial and agricultural land uses. The site contains a number of trees within the interchange loop, as well as various grasses and shrubs.

Potential Impacts (Items a, b, c and d): The proposed interchange improvement project would modernize the southbound Highway 101 on and off-ramps, add substantial vehicle storage capacity to the facility, and improve both pedestrian and bicycle facilities. No trees to ~~would~~ are expected be removed and no structures would be built except for the erection of a traffic signal and new roadway signage. Elimination of the existing southbound off-ramp and the widening of the existing loop off-ramp and the erection of the traffic signal and signage would not adversely impact any scenic vista, damage scenic resources, degrade visual character or create new light and glare for the following reasons:

- While the site is classified as a "gateway" into the City, it is not designated as an official scenic vista or important natural/scenic resource.
- The site is already significantly developed with roadway infrastructure.
- No structures would be built that would alter any views of the western hills or agricultural/open space lands.

Mitigation Measures: None Required.

Impact Significance After Mitigation: N/A

suggested revision:

Elimination of the existing southbound off-ramp and the widening of the existing loop off-ramp and the erection of the traffic signal and signage would not adversely impact any scenic vista or damage any scenic resources. There is a less than significant impact resulting from widening the southbound off-ramp lanes from two to five lanes. The paving will be widened over 36 feet and some green areas will be decreased, creating a more urbanized setting. With all southbound traffic converging to a T-intersection facing northbound, there may be an increase in headlight glare .

The Ukiah Valley is a subarea of the Russian River Valley. The Ukiah Valley is approximately 22 miles long, averages approximately three miles wide, and occupies an area approximately 65 square miles in size. The altitude of the valley floor ranges from approximately 500 feet at the southern end to approximately 700 feet in the northern end. The valley floor at Ukiah is approximately 600 feet above sea level. 12-21

Three primary creeks flow from west to east through the City: Orrs Creek, Gibson Creek and Doolin Creek.

Project Setting

The site is an urbanized highway interchange, but has an open area and a number of trees "inside" and on the southern border of the interchange loop area. Accordingly, the site does have some plant/animal habitat value.

Natural Environment (Biological) Study

A Natural Environment (Biological) Study was prepared for the project to determine if special-status plant/animal communities/species occur within the propose project area. The Study, which is incorporated herein by reference was prepared by Wildlife Research Associates, dated January 18, 2013 and concluded the following:

1. No special-status communities or plant species were observed within the project area.

2. Eleven wildlife species have been reported in the area; however, no suitable habitat for any of these reported species was found to occur within the project area.

3. The trees within the proposed project area are potential nesting habitat for a variety of bird species. No special-status bird species were observed during the 2012 fall field surveys. Although no trees will be removed as part of the project, other nesting habitat, such as blackberry bushes, will be removed for the project.

Potential Impacts (Items a, b, c, d, e and f)

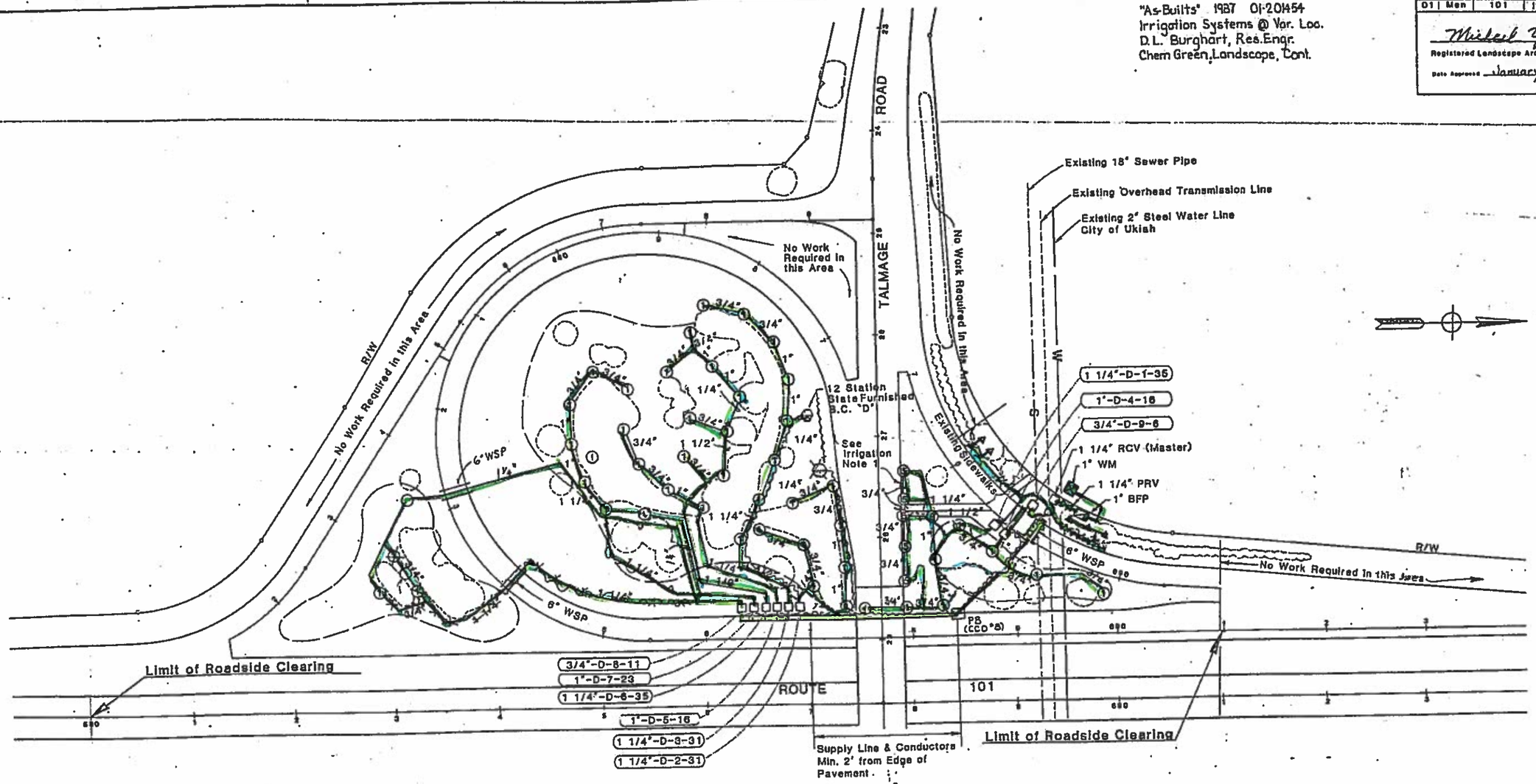
No riparian areas or wetlands exist on or near the project site, therefore none would be affected by the project. No special-status communities or plant species were observed within the project area during field investigations, therefore none would be affected by the proposed project. The site is a freeway interchange and field review reveals no fish or wildlife migratory corridors on or near the site, therefore none would be affected by the project. The City does not have an adopted habitat conservation plan for the project site or surrounding area, therefore none apply to the project site.

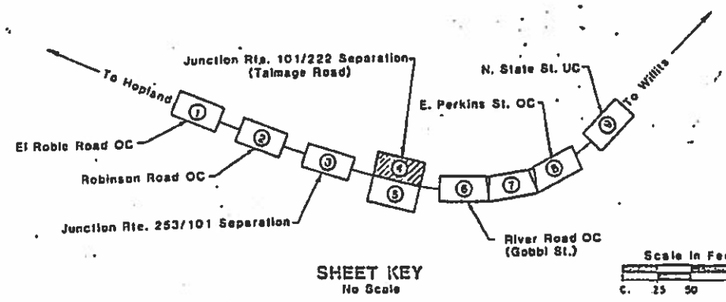
While no trees would be removed as a result of the project, grading operations will alter soil structure and remove bushes that contribute to plant and animal habitats. Additionally, grading operations could potentially harm existing trees if conducted too close to the root and drip zones of the trees. Accordingly, Mitigation Measures are appropriate to protect plant and animal ~~specials.~~ species.

DIST	COUNTY	ROUTE	POST MILE/KILOMETER PREFIX	SHEET NO.	TOTAL SHEETS
01	Men	101	19.6/R26.3	5	20

Michael Yanchiff
Registered Landscape Architect No. 1932
Date Approved January 5, 1987

"As-Builts" 1987 01-201454
Irrigation Systems @ Var. Loc.
D.L. Burghart, Res. Engr.
Chem Green, Landscape, Cont.





SHEET KEY
No Scale

Scale in Feet
0 25 50 100

JUNCTION RTE. 101/222 SEPARATION (TALMAGE ROAD)
LOCATION 4

Caltrans LANDSCAPE ARCHITECTURE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	Designed By:	Date Revised	Contract Number 01-201454	IRRIGATION PLAN	I-4
		Drawn By:	Revised By:			
				01-201453		REV. 8-20-84 LASC

Project Landscape Architect M. Yanchiff | Design Landscape Architect | Date | Approved Recommended By | Date | Reviewed By | Date

Response to Letter on the Previous Draft MND from Caltrans

12-1 The comment stated that the Draft MND's air quality study should have been formatted to meet CEQA requirements. As requested, the air quality analysis done for the DEIR meets all CEQA requirements.

12-2 The commenter requested that the Draft MND air quality report contain maps and tables of contents. The requested data is provided either in the body of the DEIR or Appendix F of the DEIR.

12-3 The comment asked for a typo to be corrected. The report has been rewritten – see DEIR Appendix F.

12-4 The comment asked what version of the Road Construction Emission Model was used in the Draft MND air study. Version 6.3.2 was used. Since that analysis was completed, the new model, Version 7.1.5.1 was released and the analysis has been updated in response to this comment. See Response 6-13.

12-5 The comment asked what version of CTEMFAC was used in the Draft MND air study. CTEMFAC Version 5.0 was used as described on page 94 of the DEIR.

12-6 The comment stated that the Draft MND air quality report should have addressed greenhouse gas emissions and climate change. See Section 4.12 of the DEIR (pages 142 to 148) for a full discussion of GHG emissions and climate change that was not included in the IS/MND.

12-7 The comment recommended special status plant surveys during their bloom periods be done for the Draft MND. As described on page 55 of the DEIR, there is no habitat on the Project site that would support special status species. However, a mitigation was recommended to ensure that prior to construction, surveys will be done to identify nests of any special status species of birds that may have moved to the site since the DEIR surveys were conducted. Though such nests are not expected, the recommended mitigation provides protections for those nests if they are present.

12-8 The comment requested clarification of whether trees would be removed for the Project. No trees would need to be removed for the proposed Project. As described on page 164 of the DEIR, 35 trees would need to be removed for Alternative 2, which is the environmentally superior alternative.

12-9 The comment requested that the title of the Historic Resource Compliance Report be retitled. The report has been retitled as requested – see DEIR Appendix D.

12-10 The comment recommended contact with Caltrans archaeologists. The cultural resource studies were conducted per all pertinent State requirements and protocols. See the revised cultural resource reports contained in DEIR Appendix D.

12-11 The comment asked the Draft MND preparers to ensure that grading did not exceed three feet in depth. It is possible that some excavation (e.g., digging holes for light standard poles) may exceed three feet. While there is no evidence

of cultural resources on the site, Mitigation Measures 4.4-A.1 and 4.4-A.2 provide for proper handling of any cultural resources or human remains that might be uncovered during these excavations as well as site grading.

12-12 The comment recommended additional contacts with Native American representatives. As requested, additional contacts were made for individuals on the NAHC list – see DEIR Appendix D for a full list of the contacts.

12-13 The comment requested that the Draft MND survey coverage map be extended. As shown in Map 3 in Appendix D of the DEIR, coverage was extended to the intersection on the south side of Talmage Road and to the extent of unpaved soils on the north side.

12-14 The comment stated that the Draft MND APE map needed to be signed by all individuals listed on the map. The other two individuals listed on the map were unavailable to sign the map at the time the DEIR was prepared. The most important reviewer for map accuracy is the Caltrans reviewing archaeologist, and he did sign the map. The City Public Works Director and the reviewing Caltrans engineer will need to sign it prior to final Caltrans approval of the encroachment permit, but those signatures are not needed to ensure accuracy of the map nor to meet CEQA requirements. It is noted that Caltrans did not make a comment on this map when reviewing the DEIR.

12-15 The comment stated that the Draft MND analysis of cultural resources should have been expanded to address resources that might be uncovered during construction. The DEIR contains Mitigation Measures 4.4-A.1 and 4.4-A.2 to address potential impacts to any buried cultural resources.

12-16 The comment stated that the commenter expected that few restrictions would be required for handling and transporting hazardous waste other than compliance with applicable laws. The discussion of hazardous materials was expanded for the DEIR; see Section 4.10 on pages 127 through 132 of the DEIR. As stated on page 130 of the DEIR, compliance with all federal, State, and local laws and regulations governing use, storage, and transport of hazardous materials would reduce the impact associated with such materials to a less-than-significant level. This is the same conclusion that this commenter reaches in Comment 12-16.

12-17 The comment requested more information about an irrigation system at the Project site and how it might be affected by the Project. According to the City's engineers (GHD), there is no existing irrigation system, and trees growing within the area between the southbound onramp and the freeway are not irrigated. If Alternative 2 (the environmentally superior alternative) is constructed, then additional irrigation is required for new trees planted as part of the recommended mitigation presented on page 165 of the DEIR.

12-18 This comment was a summary of previous mitigation measures contained in the Draft MND. They have been replaced by different or modified mitigations in the DEIR.

12-19 The comment noted that the Project would have less-than-significant visual impacts rather than no impact as originally reported in the Draft MND. The DEIR

concurred and found these impacts to be less than significant (see pages 119 through 121 of the DEIR).

12-20 This comment includes suggested language changes for the Draft MND. The commenter notes that the Project would have a less-than-significant visual impact rather than no impact as the Draft MND stated. Again, the DEIR is consistent with this recommended finding.

12-21 This comment is a portion of the Initial Study included in the Draft MND. It suggests one word change, which is consistent with the biological analysis contained in the DEIR (see pages 55 though 57 of the DEIR).

From: Wood, Veronica R@DOT [mailto:Veronica.Wood@dot.ca.gov] **Sent:** Wednesday, September 04, 2013 8:12 AM **To:** Charley Stump **Cc:** Matt.Kennedy@ghd.com; Murphy, Rodney L@DOT **Subject:** FW: Talmage Road/US101 On-Off Ramps Realignment Project

Hi Charley,

Here are a few comments on the noise section.

Please let me know if you have any questions.

Thank you,
Veronica Wood
Environmental Coordinator
California Department of Transportation
District 3
Marysville, CA 95901
(530) 741-4158

Comments for the Talmage Interchange Improvement Project

- Remove the statement about the Caltrans North Region noise specialist has determined that this project would not meet the definition of a Type 1 project 13-1
- Please explain why this project is not a type 1 project. 13-2
- If project is determined to be a type 1 project, please follow the CEQA protocol and include the appropriate modeling forecast for future noise levels predictions. 13-3
- Follow the CEQA guidelines on noise levels exceeding the threshold of 67 db. 13-4

Response to Letter on the Previous Draft MND from Caltrans

13-1 The comment requests a statement about a noise specialist be removed from the Draft MND. The statement was removed when preparing the new DEIR per this comment.

13-2 The comment requests that the Draft MND explain why the Project is not a Type 1 project. The Project is not considered to be a Type 1 project because improvements do not result in a new highway facility in a new location, a substantial horizontal or vertical alteration in the existing roadway alignments, or otherwise meet the definition of the Type 1 project. Therefore, the Project does not require a Noise Study Report as defined by regulation 23 CFR 772.

13-3 The comment requested that the proper CEQA protocol be followed if the Project is a Type 1 project. See Response 13-2 regarding this comment.

13-4 The comment requested that the proper CEQA protocol be followed if the Project is a Type 1 project. See Response 13-2 regarding this comment.

Public Hearing Comments and Responses to Those Comments

A public hearing on the DEIR was held before the Ukiah City Council on October 15, 2014. Two members of the public submitted oral comments.

14-1 **James Houle** questioned how the Project would feasibly be financed. These comments were similar to those he made in his comment letter (Comment Letter 7). He did not offer any comments about the adequacy of the DEIR or ask any questions concerning that document. Therefore, no response is required. How the City finances the Project is a matter of City policy and not an environmental issue subject to CEQA.

14-2 **Greg Hoyt** asked where the new trees would be planted to replace those removed if Alternative 2 is selected to be the final project. As stated in a verbal response at the public hearing, the DEIR recommends that the 64 new trees be planted in the four gaps between current tree stands located to the west of the southbound offramp (see Mitigation Measure PA 2-1 on page 165 of the DEIR).

CHAPTER 4
REVISIONS TO THE DEIR

The following chapter presents changes to the text of the DEIR that are warranted given errors found by the City and the comments presented in Chapter 3. Changes are shown in the following manner:

- Additions to the text are shown as underlined text like this added text.
- Deletions from the text are shown as strike-out text, like this ~~strike-out~~.

Based on City review and comments received, the following DEIR text revisions are warranted. These revisions are intended to clarify the DEIR analyses. However, none of these revisions would result in a new potentially significant impact nor substantially increase the significance of any impact.

1. Chapter 2.0 – Introduction

   The following is added to page 17:

   "The primary Responsible Agency for this project is the California Department of Transportation (Caltrans). Caltrans will use the information and analysis in the EIR to support its permitting process for changes to the highway interchange, including issuance of an Encroachment Permit. "

2. Chapter 3.0 – Project Description, Figure 3.1-3

   Figure 3.1-3 is revised to describe the scale to be approximately one inch equals approximately 135 feet.

3. Chapter 4.0, Section 4.5 – Traffic and Circulation

   a. A description of the design exception process is added to the Regulatory Framework discussion on page 73 of the DEIR, prior to the heading "Ukiah General Plan":

      "All proposed State highway projects are designed, and/or reviewed by Caltrans, in the context of the Highway Design Manual (HDM) (Caltrans 2012). If local or site-specific conditions require deviation from the HDM, Caltrans has established a process by which exceptions to the design standards are documented and approved in Chapter 21, Exceptions to Design Standards, in the Project Development Procedures Manual. For each design exception a "fact sheet" is completed. The purpose of the fact sheet is to document engineering decisions leading to the approval of each exception to a design standard. Caltrans has responsibility for review and approval of each design exception."

4. Chapter 4.0, Section 4.7 – Noise

The following mitigation measure is added under Impact 4.7-A on page 113 of the DEIR:

Mitigation Measure 4.7-A.2: During construction, the Project contractor shall 1) fit construction equipment with the best available noise control techniques wherever feasible; 2) require that impact tools be hydraulically or electrically powered, or, if not feasible, fitted with a muffler and jackets; 3) locate stationary noise sources as far from sensitive receptors as possible; and 4) forbid amplified music (boom boxes) at the job site.

5. Chapter 5.0, Section 5.4 – Alternatives

a. Figure 5.4-1 is revised to describe the scale to be approximately one inch equals 75 feet.

b. The second sentence of the last paragraph on page 166 of the DEIR, is revised to read:

"When compared to the proposed project, the alternative would reduce the amount of delay at Intersections Nos. 1, ~~and~~ 2 and ~~while slightly increasing the delay at Intersection No.~~ 3."

CHAPTER 5
MITIGATION MONITORING PROGRAM

INTRODUCTION

The California Environmental Quality Act (CEQA) requires a public agency to adopt a monitoring program when approving a project or changes to a project, in order to mitigate or avoid significant effects on the environment (Public Resources Code section 21081.6). The program is based on the findings and the required mitigation measures presented in an Environmental Impact Report (EIR) that has been prepared on the project and certified by the lead agency. The reporting program must be designed to ensure compliance during project implementation.

Pursuant to the CEQA Guidelines, a Mitigation Monitoring Program (MMP) must cover the following:

- The MMP must identify the entity that is responsible for each monitoring and reporting task, be it the City of Ukiah (as lead agency), other agency (responsible or trustee agency), or a private entity (i.e., the project sponsor).

- The MMP must be based on the project description and the required mitigation measures presented in the environmental document prepared for the project and certified by the lead agency.

- The MMP must be approved by the lead agency at the same time of project entitlement action or approvals.

MMPs are typically designed in chart and checklist format for ease of monitoring.

PURPOSE AND USE OF THE MONITORING PROGRAM

The purpose of the monitoring program is to provide the City of Ukiah with a simple guideline of procedures to ensure that the mitigation measures required under the Final EIR are implemented properly.

Since each required mitigation measure must be implemented, a monitoring chart was created, which is attached to this report. This chart provides the following information and direction for use.

1. The required mitigation measures are listed in the first column, corresponding to the list of measures provided in the Draft and Final EIR.

2. The second column lists the agency or entity responsible for implementing the mitigation measure.

3. The third column describes when the mitigation will be implemented and the monitoring period.

4. The fourth column provides a location for the monitor to sign-off that the mitigation has been successfully implemented.

Mitigation Monitoring and Reporting Program Table

Mitigation Measure	Monitoring Responsibility	Timing	Sign Off
Geology and Soils			
4.1-A.1 The final improvement plans shall incorporate all design and construction recommendations contained on pages 8-12 in the *Limited Materials and Preliminary Geotechnical Report* prepared by Rau and Associates dated May 2013 consistent with the standards identified in the California Building Code, Caltrans standard structural requirements, and Caltrans Standard Specifications (latest Edition) and pertaining to the following: 1. Reprocessing of Certain Subgrade Soils and Fill Soils, including unconsolidated subgrade soils for pavement support and Strip Foundation Support for Low Retaining Walls. 2. Grading and Site Preparation 3. Pavement Structural Sections 4. Retaining Wall Foundations 5. Pier Foundations for Signals or Street Lights 6. Surface and Subsurface Drainage The Rau and Associates or other geotechnical engineer retained by the City shall review and sign the final plans and specifications for the project and approve them as conforming to their recommendations prior to grading. The project geotechnical engineer shall provide geotechnical observation during the grading and construction, which will allow the geotechnical engineer to compare the actual with the anticipated soil conditions and to check that the contractors' work conforms to the geotechnical aspects of the plans	City of Ukiah Planning and Community Development Department, City Building Services Division	Plans and specifications approved prior to issuance of encroachment permit.	

	and specifications. The geotechnical engineer of record will prepare letters and as-built documents, to be submitted to the City, to document their observances during constructions and to document that the work performed is in accordance with the project plans and specifications.			
4.1-B.1	The City shall prepare an Erosion and Sediment Control Plan consistent with all the general site and good housekeeping requirements, the listed erosion control requirements, and the sediment control requirements of Division 9, Chapter 7 of the City Code. The plan shall be prepared by a registered civil engineer, or other professional who is licensed and qualified. As required by the code, the plan shall include the following information and contain the following mandatory measures: • A description and delineation of the vegetative measures to be taken to minimize erosion and sedimentation; • A description and delineation of the proposed temporary and permanent measures to appropriately and effectively minimize soil erosion and sedimentation and to protect manufactured or disturbed slopes from erosion by mechanical means, such as with mulches, diversion dikes, etc.; • Delineation of the proposed drainage control measures and temporary and permanent measures to be taken to retain sediment on the site; • The extent and manner of the cutting of trees and the clearing of vegetation, and their disposal, and the measures proposed for the protection of undisturbed trees and vegetation;	City of Ukiah Planning and Community Development Department	Plan approved prior to issuance of encroachment permit. Monitoring ongoing during construction.	

• The proposed methods for the disposal of excess materials and for dust control; • A description of the measures to maintain the devices shown on the plan during grading operations and construction on the site; • The extent of disturbed ground that would exist, the streets that would be paved, and drainage devices that would be installed prior to the start of each rainy season; • Seeding mixtures and rates, types of sod, method of seedbed preparation, expected seeding dates, type and rate of lime and fertilizer application, and kind and quantity of mulching for both temporary and permanent vegetative control measures; • Use of the most recent version of the CASQA BMP handbook, section 3 as a guide as to what measures should be taken for any particular set of circumstances. • Erosion Control Measures (Section 9703) o Complete soil stabilization within five days of clearing or inactivity in construction; o Design the Project as such to avoid disturbing land in sensitive areas and to preserve existing vegetation wherever possible; o Schedule major grading operations during dry months when practical, and allow adequate time before rainfall begins to stabilize the soil with erosion control materials; o Conduct seeding and mulching as soon as grading is complete;			

○ If seeding or another vegetative erosion control method is used, establish the vegetative cover within a time frame approved by the city engineer, or the city engineer may require the site to be reseeded or a nonvegetative option employed; ○ Use special techniques that meet the design criteria outlined in the CASQA BMP handbook on steep slopes or in drainageways to ensure stabilization; ○ Stabilize soil stockpiles and/or securely cover at the end of each workday; ○ In areas where permanent reseeding and planting is not established at the close of the construction season, use additional control measures, such as a heavy mulch layer or another method that does not require germination, to ensure soil stabilization at the site; ○ Where runoff needs to be diverted from one area and conveyed to another, construct earth dikes, drainage swales, slope drains or other suitable practice in accordance with the design criteria set forth in the most recent version of the CASQA BMP handbook; ○ Employ techniques to prevent the blowing of dust or sediment from the site and that deliver upland runoff past disturbed slopes shall be employed when determined necessary by the City engineer. • Sediment Control Measures (Section 9703):			

○ Place linear sediment barriers below the toe of exposed and erodible slopes, down slope of exposed soil areas, around soil stockpiles, and at other appropriate locations along the site perimeter; ○ Conduct street sweeping as needed to remove sediment from streets and roadways and to prevent the sediment from entering storm drains or receiving waters. Washing the street or use of cleaning fluids would not be allowed; ○ Protect every storm drain inlet with the potential to receive sediment laden runoff in accordance with the design criteria set forth in the most recent version of the CASQA BMP handbook. Inspect and maintain inlet protection frequently; ○ Install sediment basins or sediment traps where sediment-laden water may enter the drainage system or watercourses and in association with dikes, temporary channels, and pipes used to convey runoff from disturbed areas; ○ Protect adjacent properties by the use of a vegetated buffer strip in combination with other perimeter controls or other appropriate method, as described in the most recent version of the CASQA BMP handbook			
Biological Resources			
4.3-A.1 Construction shall not cause nest abandonment of	City of Ukiah Planning	Surveys conducted for work	

	special-status species of birds or destruction of active nests of species protected by the Migratory Bird Treaty Act or Section 3503 of the Fish and Game Code (protection of nesting passerines). The following measures shall be implemented to avoid disturbing any special status species nesting above ground. Vegetation removal conducted during the nesting period shall require a pre-construction survey for active bird nests, conducted by a qualified biologist. No known active nests shall be disturbed without a permit or other authorization from USFWS and/or CDFW. 1. For earth-disturbing activities occurring during the breeding season (March 1 through September 1), a qualified biologist shall conduct pre-construction surveys of all potential nesting habitat for all birds within 500 feet of earthmoving activities. 2. If active special status bird nests are found during pre-construction surveys 1) a 500-foot no-disturbance buffer will be created around active raptor nests during the breeding season or until it is determined that all young have fledged, and 2) a 250-foot buffer zone will be created around the nests of other special status birds and all other birds that are protected by California Fish and Game Code 3503. These buffer zones are consistent with CDFW avoidance guidelines; however, they may be modified in coordination with CDFW based on existing conditions at the project site. 3. If pre-construction surveys indicate that nests are inactive or potential habitat is unoccupied	and Community Development Department	during breeding season March 1 through September 1) within 2 weeks of any vegetation removal or earth-disturbing activities. If active nest found, monitoring ongoing during construction in the breeding season.	

	during the construction period, no further mitigation is required. Shrubs and trees that have been determined to be unoccupied by special status birds or that are located 500 feet from active nests may be removed. 4. If vegetation removal activities are delayed or suspended for more than two weeks after the pre-construction survey, the areas shall be resurveyed.			
Cultural Resources				
4.4-A.1	If buried archeological resources, such as chipped or ground stone, historic debris, building foundations, or human bone, are inadvertently discovered during ground-disturbing activities, work would stop in that area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the City and other appropriate agencies.	City of Ukiah Planning and Community Development Department	If mitigation is needed, the measures will be implemented as described.	
4.4-A.2	If human remains of Native American origin are discovered during project construction, it is necessary to comply with state laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (NAHC) (PRC 5097). If any human remains are discovered or recognized in any location other than a dedicated cemetery, there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until: • The county coroner has been informed and has determined that no investigation of the cause of			

	death is required; and • If the remains are of Native American origin, the descendants of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC 5097.98 Or • The NAHC was unable to identify a descendant, or the descendant failed to make a recommendation within 24 hours after being notified by the commission.			
4.4-A.3	If human remains are discovered during any demolition/construction activities, all ground-disturbing activity within a 100-meter radius of the remains shall be halted immediately, and the Mendocino County coroner shall be notified immediately, according to Section 5097.98 of the state Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined by the County coroner to be Native American, the Native American Heritage Commission (NAHC) shall be notified within 24 hours, and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. The City shall consult with the Most Likely Descendant, if any, identified by the NAHC regarding the treatment and disposition of the			

	remains. 4.4-A.4 Should paleontological resources be identified at any project construction site, the construction manager shall cease operation within a 100-meter radius of the discovery and immediately notify the City. The project proponent shall retain a qualified paleontologist to provide an evaluation of the find and to prescribe mitigation measures to reduce impacts to a less-than-significant level. In considering any suggested mitigation proposed by the consulting paleontologist, the City shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, land use assumptions, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while mitigation for paleontological resources is carried out.			
Traffic				
4.5-B.1	Signage will be posted on northbound Airport Road notifying large trucks that only left turns are permitted onto Talmage Road."	City of Ukiah Planning and Community Development Department	Signage will be installed prior to completion of the Project	
Air Quality				
4.6-A.1	The project shall be constructed to include all requirements set forth in the MCAQMD Rules 1-410 and 4-130. All Best Management Practices shall be included in the construction contracts.	City of Ukiah Planning and Community Development Department	Best Management Practices will be finalized prior to issuance of encroachment permit. Monitoring ongoing during construction.	

Mitigation Monitoring and Reporting Program Table

Noise				
4.7-A.1	If nighttime work is necessary, as required by the City Code, the applicant shall obtain a permit from the Director of Public Works. The permit shall include the following: 1) allow construction noise between 7 P.M. and 7: A.M. for construction activities that Caltrans states needs to be done at night; 2) construction equipment idling shall be limited to five (5) minutes; 3) if nighttime work is to exceed one week, then temporary noise baffles would be installed between the noise source and sensitive receptors; 4) if nighttime work is to exceed one week, then provide hotel vouchers to occupants of the nearest sensitive receptors; and 5) any other noise-reducing measures the City considers warranted.	City of Ukiah Planning and Community Development Department, Building Services Division	Permit approved prior to issuance of encroachment permit. Ongoing monitoring for compliance during the construction period.	
4.7-A.2	The Project contractor will 1) fit construction equipment with the best available noise control techniques wherever feasible; 2) require that impact tools be hydraulically or electrically powered, or, if not feasible, fitted with a muffler and jackets; 3) locate stationary noise sources as far from sensitive receptors as possible; and 4) forbid amplified music (boom boxes) at the job site.	City of Ukiah Planning and Community Development Department, Building Services Division	The mitigation will be included as required conditions in the Project contract. Ongoing monitoring for compliance during the construction period.	
Energy				
4.13-A	During project construction, the City shall require the following: 1) engines shall be maintained to meet manufacturers' recommended operating standards; and 2) construction equipment shall not be allowed to idle for longer than five (5) minutes. Caltrans shall encourage that the contractors' fleets include diesel engines meeting the most current State standards for new diesel engine performance and/or	City of Ukiah Planning and Community Development Department, Building Services Division	The mitigations will be included as required conditions in the Project contract. Ongoing monitoring for compliance during the construction period.	

	low-emission, energy-secure, alternatively-fueled vehicles. Caltrans shall require project contractors to maximize carpooling of their employees.			
4.13-B	Project design shall include: 1) LED lights for illumination and stoplights; and 2) to the degree possible, solar panels to power lighting.			

Appendix A

CEQA Noticing Data

NOTICE OF DEIR COMPLETION AND AVAILABILITY
NOTICE OF PUBLIC MEETING

You are invited to attend a City Council Public Hearing.

Talmage Road / U.S. 101 Interchange Modification
Draft Environmental Impact Report (DEIR)

Talmage Road and U.S. 101
(State Clearinghouse #2013072057)

The City of Ukiah Planning and Community Development Department has completed and released a Draft Environmental Impact Report (Draft EIR) for the Talmage Road / U.S. 101 Interchange Modification (Project). The Draft EIR is available for review and comment as noted below.

Project Description: The City of Ukiah is proposing to modify and reconstruct the southbound portion of the U.S. 101 interchange with Talmage Road (State Route 222) to provide additional capacity in order to address future impacts associated with regional growth and projected growth in the Airport Industrial Park. The purpose of the project is to alleviate congestion and improve traffic operations and safety for the southbound Highway 101 on and off ramps and along the Talmage Road corridor. The project includes a partial cloverleaf interchange configuration with a new signalized intersection at the southbound ramp terminus with Talmage Road. There would be three (3) left turn lanes onto westbound Talmage Road and one (1) eastbound lane. Two dedicated left turns would be provided into the Airport Industrial Park. The existing soundbound off-ramp would be removed. The new signalized intersection at Talmage Road and the southbound on/off ramp are proposed to be interconnected and coordinated with the existing signalized intersection at Talmage Road and Airport Park Boulevard. Other proposed improvements include new sidewalks, signing, striping, medians, and safety lighting.

Project Location: The Project site is located at the intersection of Talmage Road and U.S. Highway 101 in the southeastern portion of the City of Ukiah.

Significant Environmental Effects: Potentially significant environmental effects that are addressed in the DEIR include geology/soils, hydrology and water quality, biological resources, cultural resources, traffic and circulation, noise, global climate change, and energy.

Less-than-Significant Effects: Less-than-significant effects discussed in the DEIR include visual resources, utilities and public services, and hazards/hazardous materials.

Significant and Unavoidable Indirect Impacts: Significant and unavoidable indirect impacts identified in the DEIR include emission of criteria air pollutants from projected future traffic that would be accommodated by the project would exceed local air quality significance thresholds; the emission of these criteria pollutants would also contribute to cumulative air quality impacts, and emission of greenhouse gases from projected future traffic that would be accommodated by the project.

Public Meeting Date: **Wednesday October 15, 2014 at 6:15p.m. (or soon thereafter)**

Public Meeting Location: **Civic Center City Council Chambers**
300 Seminary Avenue,
Ukiah, CA 95482

Review Period: The 45-day review period for the DEIR will run from **September 8, 2014 through October 23, 2014.** Please submit comments regarding the DEIR in writing to the City of Ukiah Planning and Community Development Department no later than **5:00 PM on October 23, 2014**. Comments received after that date will not be incorporated into the Final EIR. Please mail or email your written comments regarding the DEIR to:

City of Ukiah
Planning & Community Development Department (Attention: Charley Stump, Director)
300 Seminary Avenue
Ukiah, CA 95482
ATTN: Charley Stump, Director of Planning and Community Development
Email: cstump@cityofukiah.com

If you have any questions regarding this matter, please contact Charley Stump, Director of Planning and Community Development at (707) 463-6219 or cstump@cityofukiah.com.

The DEIR and related documents are available for review at:

City of Ukiah
Planning & Community Development Dept.
300 Seminary Ave.
Ukiah, CA 95482

Main Branch Library
105 North Main Street
Ukiah, CA 95482

City of Ukiah website: www.cityofukiah.com

Notice: The Project site is not on any of the lists of potentially hazardous sites enumerated under Section 65962.5 of the Government Code (this information required per CEQA Guidelines Section 15087(c)(6)).

City of Ukiah

Department of Planning and Community Development
300 Seminary Avenue, Ukiah, CA 95482
707-463-6203 / www.planning@cityofukiah.com

Talmage Road/U.S. 101 Southbound On-Off Ramps Realignment Project DEIR

AFFADAVIT OF NOTICE MAILING AND POSTING

I, Charley Stump, Director of Planning and Community Development do hereby certify that I am a duly qualified and acting representative of the City of Ukiah Planning and Community Development Department; that on the following days, Planning and Community Development Department Staff caused the attached Public Notice to be published (Ukiah Daily Journal), posted (at Civic Center), mailed to nearby and AIP property owners, mailed to the State Clearinghouse, various agencies, and interested parties, emailed to interested parties, and submitted to the Mendocino County Clerk for posting on the dates as listed below. A copy of the DEIR on CD was also mailed to the State Clearinghouse (15 copies), various agencies and interested parties as noted on the attached mailing list.

Mailed to the State Clearinghouse, Various Agencies and Interested Parties by Charley Stump on September 4, 2014.

Emailed to specific interested parties (Tony Shaw and William Kopper) by Charley Stump on September 4 and September 8, 2014

Posted on Civic Center Site by Charley Stump on September 4, 2014

Sent to the Ukiah Daily Journal for publication by Charley Stump, Director of Planning and Community Development on September 4, 2014.

Submitted to the Mendocino County Clerk for Posting by Cathy Elawadly, Planning and Building Technician on September 4, 2014

Send to Nearby Property Owners and Property Owners in the AIP by Charley Stump on September 5, 2014

I certify under penalty of perjury that the foregoing is true and correct.

Executed this **8th day of September, 2014**

9-8-14

Charley Stump, Director
Planning and Community Development

TALMAGE ROAD / U.S. 101 SOUTH-BOUND INTERCHANGE REALIGNMENT PROJECT

Draft EIR NOC / NOA
Mailing List

September 4, 2014:

State Clearinghouse
1400 10th Street
P.O. Box 3044
Sacramento, CA 95812-3044
15 copies on CD with NOC

City Council
City Manager
City Attorney
DPW Director
Assistant City Manager
City Website
Notice/Link

CalTrans District 3
703 B Street
Marysville, CA 95901
ATTN: Veronica Wood
1 copy on CD with Notice

CalTrans District 1 (via Clearinghouse)
P. O. Box 3700
Eureka, CA 95502-3700
1 copy on CD with Notice

County of Mendocino Planning
501 Low Gap Road, Room 1440
Ukiah, CA 95482
1 copy on CD with Notice

County of Mendocino Department of Transportation
340 Lake Mendocino Drive
Ukiah, CA 95482
1 copy on CD with Notice

Mendocino County AQMD
306 East Gobbi Street
Ukiah, CA 95482
Notice/Link

Mendocino Council of Governments
367 N State St Ste 206,
Ukiah, CA 95482
1 copy on CD with Notice

Mendocino County Clerk (post)
501 Low Gap Road
Ukiah, CA 95482
NOC/Availability

Employers Council of Mendocino County
ATTN: Tony Shaw: 2sanshaw@sbcglobal.net
Notice/Link

Ukiah Chamber of Commerce
309 East Perkins Street
Ukiah, CA 95482
Notice/Link

Pinky Kushner
504 North Oak Street
Ukiah, CA 95482
Notice/Link - Pinky Kushner
pinkykushner@mac.com

Gary Ackerstrom
North Counties Engineering
425 Talmage Road
Ukiah, CA 95482
Notice/Link

William Kopper
417 E Street
Davis, CA 95616
Notice mail and email/Link
kopperjd@omsoft.com **(9/8/14)**

Jim Houle
7130 Black Bart Trail
Redwood Valley
NOC/Availability

Dale LaForrest & Associates **(9/5/14)**
101 E Alma St, Mount Shasta, CA, 96067
NOC/Availability

UDJ legal ad (publish 9/7/14)
NOC/Availability

Ukiah Civic Center notice posting
NOC/Availability

On-site notice posting
NOC/Availability

Property owners in AIP **(9/5/14)**
NOC/Availability

CSTwalp

Appendix B

Traffic Data

Memorandum

June 16, 2015

To	Leonard Charles		
Copy to	City of Ukiah		
From	Matt Kennedy, PE, TE	Tel	707.523.1010
Subject	Talmage Interchange DEIR Responses to Traffic Comments	Job no.	84/10930/20

This memorandum summarizes the responses to traffic related comments prepared by GHD as reviewed and edited by EIR team for inclusion in the City of Ukiah Talmage Interchange FEIR.

Response to Comment 4-4

This is the first of a number of comments that express concern regarding the design exceptions that the Project would require and the potential for the design exceptions to create safety hazards.

As noted on page 77 of the DEIR, the project would not increase hazards to drivers and in fact would result in a beneficial impact to safety. This is true for both the proposed Project and Alternative 2, Caltrans' preferred project. The resulting lane geometry would be safe and an improvement over existing conditions given the proposed corridor operations, travel speeds, vehicle types, anticipated signing, and traffic volumes. The primary safety improvements include providing additional lanes, new signal control for westbound and southbound traffic, improved pedestrian crossings, and overall congestion relief.

To attain the proposed preferred designs for the Proposed Project and Alternative 2, certain design exceptions would potentially be required. Appendix E (Traffic Impact Study) of the DEIR identified five design exceptions that would potentially be required for the proposed Project, one of which would no longer be needed. The four remaining exceptions would be to the following standards: Stopping Sight Distance Standards (201.1); Distance between Ramp Intersection and Local Road Intersection (504.3); Lane Drop Transitions (206.3); and Side Slopes 4:1 or Flatter (304.1). At the time of preparation of the Traffic Impact Study, the preliminary plans for the proposed Project were discussed with Caltrans, at which time Caltrans indicated no issues with the design exceptions and that they would likely be approved (DEIR, Appendix E).

At this time, Alternative 2, the environmentally superior alternative is anticipated to have six design exceptions (the design exceptions would be finalized and approved by Caltrans during its review process). These design exceptions would be the same four potentially required for the proposed Project, with the addition of two more: Angle of Intersection (403.3) and Site Distance and Clear Recovery Zone (902.2).

The fact that design exceptions may be required to attain the preferred designs for the Proposed Project and Alternative 2, however, does not trigger a significant impact related to design hazards or safety. All proposed projects located within the State highway right-of-way are designed, and/or reviewed by Caltrans, in the context of the Highway Design Manual (HDM) (Caltrans 2012). The HDM establishes uniform policies and procedures to carry out the State highway design functions of Caltrans. The HDM does not provide a legal standard, but is considered a credible and widely-used guidance document. In some instances, a

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proposed project may not be able to be designed to be fully consistent with the HDM. The HDM recognizes this potential in HDM Chapter 80, Application of Design Standards, where it discusses how there is not a "one-size-fits-all" design philosophy and that highway design criteria and policies in the HDM provide a guide for the engineer to exercise sound judgment in applying the standards in the context of local conditions. In HDM Chapter 81.6, it further states that "The design guidance and standards in this manual have been developed with the intent of ensuring that designers have the flexibility to tailor a project to the unique circumstances that relate to it and its location, while meeting driver expectation." "This guidance allows for flexibility in applying design standards and approving design exceptions that take the context of the project location into consideration; which enables the designer to tailor the design, as appropriate, for the specific circumstances while maintaining safety" (Caltrans 2012). The concept of the HDM being a guidance document is further iterated in a memo from Caltrans to all "Highway Design Manual Holders," dated April 10, 2014. This memo is included in Appendix B of this FEIR.

As such, if local or site-specific conditions do require deviation from the HDM, Caltrans has established a process by which exceptions to the design standards are documented and approved (Chapter 21, Exceptions to Design Standards, in the Project Development Procedures Manual). This could include such things as a change in slope of a curve or length of a queuing lane. The need for design exceptions arises most often because design standards change over time and existing conditions may not meet current design standards, and new designs must conform to existing conditions. The need for a design exception does not mean that a proposed design is unsafe. If a requested design exception results in an unsafe condition, Caltrans would not approve it. It is not uncommon for a highway project to include, and for Caltrans to approve, several design exceptions, especially a project that modifies an existing highway facility that was designed to an older standard[1]. In a recent letter to the City, Caltrans has confirmed this is the purpose of the design exception process and acknowledges that given that the Project is being constructed adjacent to and tying into existing infrastructure, the use of design exceptions is a process that is not unexpected. (FEIR, Appendix E, Caltrans letter to Charley Stump, City of Ukiah Director of Community Planning & Development, May 4, 2015.) According to Caltrans "Proper analysis and adherence to the exception process will ensure that a safe project will be constructed for all traveling modes of the public." (Caltrans, May 4, 2015.)

The fact that design exceptions would likely be required for the Proposed Project design does not mean the Project would result in a significant impact related to design hazards or safety. The Project as designed, including the design exceptions, would not increase hazards to drivers and in fact would result in a beneficial impact to safety. Furthermore, Caltrans approval of the design exceptions signifies it has exercised its judgment that the design is appropriate for the site conditions and that the design would not create a safety or traffic hazard. As noted in the letter dated November 19, 2014 from Caltrans District 1, "[Caltrans] primary responsibility is the safety of the traveling public…and Caltrans staff constantly works to provide a safe, multimodal and sustainable transportation network." This letter is included in Appendix E of this FEIR. The City may properly exercise its discretion to rely on Caltrans' judgment and expertise to determine in this EIR that a final design will not cause a significant safety hazard.

[1] Other projects that have included design exceptions that the EIR Authors have worked on or are aware of include: Metal Beam Guard Rail – State Route 299; Smith River Rancheria – US101; Samoa Gateway, Bicycle, & Pedestrian Improvements – State Route 255; Sonoma Country Inn Roadway Improvements – State Route 12.

Response to Comment 4-5

The commenter states that the Costco EIR and the earlier Draft Initial Study/Mitigated Negative Declaration for this Project identified the need for design exceptions that could cause safety hazards. The impact analysis contained in this EIR is based on a more detailed project design than was available at the time the Costco EIR was prepared. As noted in the previous response the Project would not result in additional safety hazards. In fact, the proposed improvements would improve the safety for drivers passing through the Project.

Response to Comment 4-6

The comment states that the EIR should identify the design exceptions for each project alternative and address safety concerns associated with these design exceptions. With regard to design exceptions that may be required for the proposed Project and Alternative 2 and potential safety hazard impacts associated with said exceptions, please refer to Response 4-4. Although the review by Caltrans is currently underway, the design exceptions have not yet been finalized. Though the specific design exceptions have not yet been finalized, the EIR does, however, comply with CEQA in that the Project Description in the Draft EIR provides sufficient information regarding the Project design to evaluate the physical environmental impacts of implementing the project. (Cal. Oak Foundation v. Regents of University of Cal. (2010) 188 Cal.App.4th 227, 269-270; CEQA Guidelines, § 15124.) Notably, an EIR need not provide final design information, including a description of each design exception that may be required, in order to comply with CEQA. (See Dry Creek Citizens Coalition v. County of Tulare (1999) 70 Cal.App.4th 20, 28.) That information would be developed during subsequent design phases in coordination with review by Caltrans. At this time, no safety concerns have been identified for the design of the proposed Project or Alternative 2. As noted in Response 4-4, the purpose of the design exception process is to tailor the design for the specific circumstances surrounding the project while maintaining safety. Accordingly, if a requested design exception results in an unsafe condition, Caltrans would not approve it. Refer to Response 4-4 for additional information regarding design exceptions and safety hazards.

Response to Comment 4-7

The comment states that design problems related to the Project are addressed in an attached letter from Daniel Smith. The cited letter from Daniel Smith is presented as Comment Letter 10 later in this report.

Response to Comment 4-8

The commenter requests additional information regarding two alternatives identified in a 2005 MCOG study that included possible improvements for the project interchange and which were rejected from further consideration as alternatives in the DEIR. As noted on page 159 of the DEIR, significant impacts associated with the two referenced MCOG alternatives include significant and unavoidable temporary and permanent impacts to U.S. 101 mainline traffic and City streets including pedestrian access across U.S. 101 associated with the complete closure of the US-101 / Talmage Road interchange required to construct the “tight diamond” and “cloverleaf,” interchange configurations. The closure of the US-101 / Talmage Road interchange necessitates detouring traffic to other interchanges in the Ukiah area, and has the potential to significantly impact their safe operation and the safe operation of City roadways and intersections. The

interchange configurations would also have significantly higher air quality impacts associated with the larger scope and area of construction, potentially greater water quality impacts associated with a larger area of disturbance, and new impacts to housing as a result of demolition of private residences, and would have additional private property acquisition requirements.

Response to Comment 4-10

The commenter requests an explanation of why the traffic analysis done for the Costco project identified more traffic in 2032 than the Project DEIR did. The methodology used in the Talmage Interchange Traffic Impact Study is the most recent modeling approach recommended by Caltrans. This included using the Caltrans growth factor of 1.3 to project future traffic conditions, which is specific to the US 101 corridor through Ukiah. In addition, more recent traffic counts were collected (Caltrans does not allow the use of traffic counts that are more than 2 years old) than were used in the Costco EIR. Use of the Caltrans-recommended methodology is appropriate for this Project because it is a State highway facility and is consequently required to meet Caltrans standards. As such, future growth was not determined looking at individual land use projects. Recommended growth factors were used that implicitly include future development in the region, including retail establishments such as Costco. The growth factor of 1.3 (calculated as a 20-year straight-line determinant: 15% growth over 10 years, 30% growth over 20 years) that was used is considered by Caltrans and the City to be conservatively representative of the anticipated regional traffic growth, and is also conservatively representative of regional growth during the previous 20 years. Historically, the Ukiah area has experienced growth rates of less than 1% per year. Using a growth rate of 1%, over a 20-year period the growth factor would be 1.22%, or 8% less than the Caltrans-recommended growth factor.

The methodologies used to project future traffic conditions in the Talmage Interchange Traffic Impact Study, therefore, differ from those used in the Costco Traffic Impact Study. The Costco Traffic Impact Study utilized the Ukiah Valley Area Plan (UVAP) travel demand forecasting model as the basis for the future traffic conditions. Moreover, differences in flow volumes for individual movements under the future conditions for these analyses are attributed to peak hour factors used, assumptions made relative to trip distribution, and the existing traffic volumes used for the future projections. See also Response 5-18 to 5-25.

Response to Comment 4-11

The commenter requests additional information on how bicycle safety would be assured for westbound bicyclists both for the proposed Project conditions and under EIR Alternative 2. The Ukiah Bicycle and Pedestrian Master Plan classifies Talmage Road as a regional bicycle facility and bicycle activity corridor, and identifies it as a Class III connector bike route. A Class III facility is an area of the street that is shared with motorists and is designated by signs. As noted on page 75 of the DEIR, the Project would not conflict with this designation; Talmage Road would remain a Class III facility.

The Project includes signs, standard lane widths and striped 8-foot wide contiguous shoulders along Talmage Road which would accommodate shared use with bicyclists, consistent with the Class III designation. At the southbound interchange off-ramp there would be a signalized stop and crosswalk that could be used by pedestrians and bicyclists traveling, east to west, to safely traverse the intersection. For bicyclists traveling west to east, they would follow the rules-of-the-road and merge with traffic. The project

improvements would be constructed in a manner that would meet the Class III facility standards, and therefore would result in safe conditions for bicyclists. Bicyclists are required to follow the same rules of the road as motor vehicles. Bicyclists could use the new and existing traffic signals to safely traverse the intersections, and could also have the option of using the pedestrian crosswalks.

For Alternative 2. westbound cyclists, just like drivers of other vehicles, would use the traffic signals to safely traverse the intersection of the southbound off-ramp and Talmage Road, and they would also have the option of using the pedestrian crosswalk.

Response to Comment 4-12

The commenter asks for additional information on how pedestrian safety will be provided for the Project. The Project includes construction of a new sidewalk along the north side of Talmage Road that would connect to existing sidewalks in the pedestrian network in the area, including existing sidewalks on Airport Park Boulevard via the crosswalk at Talmage Road/Airport Park Boulevard Intersection. Pedestrians could safely cross Talmage Road/Airport Park Boulevard Intersection using the existing pedestrian crosswalk and pedestrian signal. Pedestrian sidewalks currently exist intermittently on both sides of Airport Park Boulevard south of Talmage Road.

Response to Comment 4-13

The commenter asks how the Project is consistent with three General Plan implementation measures that address bicycle access and safety. Please see Response 4-11 regarding bicycle access. The commenter asks how the Project is consistent with General Plan Implementation Measure CT-6.2(a), which requires streets linking residential areas with schools and shopping areas be designed to include bicycle lanes. That implementation measure states the City will develop a bicycle plan to extend bicycle lanes to “important locations” in the City’s planning area. The City has developed a bicycle plan which lists Talmage Road as a Class III facility where bicyclists share the roadway with other vehicles. The Project, as designed, will maintain the Class III designation by including signs, standard lane widths and striped 8-foot wide contiguous shoulders along Talmage Road which would accommodate shared use with bicyclists.

Implementation Measure CT-6.3(a) requires that streets linking residential areas with schools and shopping areas be designed to include bicycle lanes. The Project is consistent with the City’s Bicycle and Pedestrian Master Plan that designates Talmage Road through the Project area as a Class III facility. As described above in Response 4-11, the proposed Project contains Class III bicycle facilities. The City’s Bicycle and Pedestrian Master Plan, which was prepared subsequent to the City’s General Plan does not recommend constructing Class II bicycle lanes on this road. The proposed Project is consistent with this plan that was developed to be consistent with City General Plan policies calling for development of such a plan.

Implementation Measure CT-6.3(b) calls for considering bicycle operations in designing roads and traffic control systems. The Project was designed to consider bicycle operations and, as stated above, is consistent with the recommendations for Talmage Road set forth in the City’s Bicycle and Pedestrian Master Plan.

To summarize, the Project is designed to be consistent with the City's Bicycle and Pedestrian Master Plan and with three General Plan implementation measures that address bicycle access and safety. However, a final determination of plan consistency is the responsibility of the City decision-makers.

Response to Comment 5-2

The commenter states that the DEIR fails to disclose significant safety impacts associated with design exceptions. Though the proposed Project would require approval of a limited number of design exceptions by Caltrans, there is nothing inherently unsafe about the design exceptions, as claimed by the commenter. As discussed in Response 4-4, the need for design exceptions arises most often because design standards change over time and existing conditions may not meet current design standards, and new designs must conform to existing conditions. The proposed Project is designed and would be reviewed by Caltrans in the context of the Highway Design Manual (HDM), including the design exceptions, which will ensure a safe design. The HDM "allows for flexibility in applying design standards and approving design exceptions that take the context of the project location into consideration; which enables the designer to tailor the design, as appropriate, for the specific circumstances while maintaining safety" (Caltrans 2012). As noted in the recent letter from Caltrans to the City, which describes the purpose of the design exception process, given that the Project is being constructed adjacent to and tying into existing infrastructure, the use of design exceptions is a process that is not unexpected. (FEIR Appendix E, Caltrans letter to Charley Stump, City of Ukiah Director of Community Planning & Development, May 4, 2015.) According to Caltrans "[p]roper analysis and adherence to the exception process will ensure that a safe project will be constructed for all traveling modes of the public." (Caltrans, May 4, 2015.)Please also see Responses 4-4 and 4-6.

Response to Comment 5-3

The commenter claims the City, its consultants, and Caltrans have a duty to ensure that the proposed project design conforms to design standards as much as reasonably feasible. This assertion is incorrect. As discussed in Response 4-4, under certain circumstances, such as here, design standards change over time and existing conditions may not meet current design standards. Because new designs must conform to existing conditions, the need for design exceptions to the design standards arises. Thus, it is common for a highway project to include, and for Caltrans to approve, several design exceptions, especially for a project that modifies an existing highway facility that was designed to an older standard. In this case, although the review by Caltrans is currently underway, the design exceptions have not yet been finalized. The preliminary design exceptions for the proposed Project are discussed in Response 4-4 and Response 5-2. As noted in Response 4-4, the purpose of the design exception process is to tailor the design for the specific circumstances surrounding the project while maintaining safety. Thus, if a requested design exception results in an unsafe condition, Caltrans would not approve it. Please refer to Response 4-4 for additional information regarding design exceptions and safety hazards.

Response to Comment 5-4

The commenter expresses support for the Caltrans preferred alternative (Alternative 2 in the DEIR). Both the proposed Project and Alternative 2 are identified by Caltrans and the designers as appropriate alternatives that adequately address the needs to improve traffic operations and safety at the Talmage Road

/ US-101 southbound interchange. Alternative 2 is identified in the DEIR as the Environmentally Superior Alternative (refer to page 3 of the DEIR) because it has reduced energy impacts and greater traffic operational benefits.

Response to Comment 5-5

The commenter again states that the design exceptions would result in safety impacts. Specific design exceptions are being jointly evaluated for the Project by the design engineers, the City, and Caltrans. The need for a design exception does not cause a proposed design to be unsafe, as the commenter implies. It is not uncommon for a highway project to include several design exceptions, especially a project that modifies an existing highway facility that was designed to an older standard. As noted in Response 4-4, the purpose of the design exception process is to tailor the design for the specific circumstances surrounding the project, while maintaining safety. Thus, if a requested design exception results in an unsafe condition, Caltrans would not approve it. Refer to Response 4-6.

Response to Comments 5-6 to 5-11

These comments present a series of alleged "facts" by the commenter, with the general theme that the eastbound merge, from the southbound off-ramp, is deficient and would be worsened by the proposed Project. As shown in the responses to each "fact" presented by the commenter, below, this is not the case.

Under "Fact 1," the commenter has accurately quoted the HDM, and the equation to determine taper distance has been calculated correctly for the existing conditions. The EIR traffic consultants would add that 206.3(1) is an Advisory Standard, not a Mandatory Standard. Advisory design standards allow greater flexibility in application to accommodate design constraints or be compatible with local conditions on rehabilitation projects.

Under "Fact 2," the commenter suggests that the existing tapering distance for the merge of the southbound to eastbound off ramp lane into the eastbound through lane is about "half" of what it should be for "Through Lane Drops" Under the HDM. The commenter is correct in that the tapering distance of the existing eastbound merge measures about half of the distance than would be advisory under the current HDM.

There is no indication, however, that this existing condition is a safety hazard. For context as to how the existing eastbound merge functions in the context of collision rates, and therefore its safety, the following analysis of the existing off-ramp and merge is provided. A collision analysis performed by Caltrans for the 3-year time period between April 1, 2009 and March 31, 2012 shows that actual total collision rate is less than the statewide average for similar highway facilities, and that the actual "fatal+injury collision" rate is less than the statewide average for similar highway facilities. There were no reported merge collisions associated with the existing non-standard southbound off-ramp to eastbound Talmage Road blind merge condition. This report is included as Appendix B of this FEIR.

Under "Fact 3," the commenter shifts to measuring the merge as conceived under the proposed Project. The commenter's description of the eastbound merge being two lanes is not correct, however; there is only one lane. Therefore, the doubling of the required taper distance is not accurate. Rather, the taper distance would be roughly the same as under existing conditions. Furthermore, it should be noted that the figure depicting the proposed project that is included in the DEIR is conceptual. While it is likely that the merge taper length

does not meet the advisory design standard associated with HDM Topic 206.3 Through Lane Drops, it is irrelevant how much "closer" the existing configuration might be to conforming to the standard compared to the proposed Project because a design exception is proposed to address this feature in the proposed Project. Design exceptions are discussed in further detail under Response 4-4.

Under "Fact 4," the commenter makes statements regarding the volume of traffic that must merge into the eastbound lane. Detailed traffic models of the proposed Project and Alternative 2 were independently developed and corridor traffic analyses and traffic simulations were independently performed by Caltrans District 1 Traffic Operations and by the Project traffic consultants using Synchro 8 with SimTraffic. For the proposed Project, a detailed traffic model was developed by the Project traffic consultants using Synchro 8 with SimTraffic and reviewed by Caltrans District 1 Traffic Operations. While an advisory design exception would be required for the eastbound merge, both analyses independently demonstrated the proposed Project and Alternative 2 safely accommodate all future traffic in all directions, and that the distance provided for the eastbound merge is adequate. The Caltrans District 1 analysis of Alternative 2 is included in FEIR Appendix B, and the Synchro 8 analysis is presented in Section 4.5 and Appendix E of the DEIR.

Under "Fact 5," the commenter indicates that traffic exposed to the "deficient" eastbound merge would be greater with implementation of the proposed Project than under existing conditions, because Costco would be allowed to be built. It is true that Costco cannot begin operating until the proposed Talmage Interchange improvements are constructed. However, the proposed Project would occur regardless of the Costco project because it is proposed to accommodate a variety of planned future growth, not just the fraction of growth associated with the Costco project. The existing non-standard southbound off-ramp to eastbound Talmage Road blind merge condition would be improved with the proposed Project. The design improves traffic safety and reduces hazards by eliminating the non-standard southbound off-ramp to eastbound Talmage Road blind merge condition and constructing a safer perpendicular approach thereby improving visibility. The design also improves traffic safety and reduces hazards by providing standard shoulders that provide separation between approaching traffic and the overcrossing structure, improving pavement delineation that specifically alerts drivers of their requirement to yield right-of-way to eastbound traffic on Talmage Road, and replacing the non-standard metal beam guard railing protecting the overcrossing structure with a new standard facility. As discussed above, Synchro 8 with SimTraffic analyses independently demonstrated that both the proposed Project and Alternative 2 safely accommodate all future traffic in all directions, and that the distance provided for the eastbound merge is adequate.

Under "Fact 6," the commenter summarizes the "hazardous consequences of a deficient merge length." As discussed throughout this response, there are no safety issues or hazards associated with the design of the proposed merge taper length and Caltrans review and approval of a design exception will ensure safe conditions (See Response 4-4). Moreover, the Project includes additional safety design features as noted above.

Response to Comment 5-12

As noted by the commenter, Caltrans, pursuant to its April 15, 2013 letter, has indicated that the proposed basic design for the Project will be approved. The City is currently coordinating with Caltrans regarding the final design of the Project, including the design exceptions. As noted in the HDM, the purpose of the design exceptions is to tailor the design of the Project to the specific circumstances surrounding the Project, while

maintaining safety. Review and approval of the final Project design by Caltrans, consistent with the HDM, will assure a safe design. (See Response 4-4.). The commenter is also correct that a Caltrans Encroachment Permit is required for any work within the State Right-of-Way regardless of type. In the case of this project, approval of an Encroachment Permit constitutes approval of the project design, and approval to begin construction activities within the State Right-of-Way. Also, see Response 5-13 below.

Response to Comment 5-13

As noted on page 73 of the DEIR, the commenter is correct that the Project would require an Encroachment Permit from Caltrans. To provide further clarification, the following change is made to page 17 of the DEIR under the heading Responsible and Trustee Agencies:

> "The primary Responsible Agency for this project is the California Department of Transportation (Caltrans). Caltrans will use the information and analysis in the EIR to support its permitting process for changes to the highway interchange, including issuance of an Encroachment Permit."

The commenter is correct that any necessary design exceptions must be approved by Caltrans prior to issuance of an Encroachment Permit. Issuance of an Encroachment Permit is the last step in the Caltrans project approval process. Contrary to the commenter's claims, however, neither the City nor the DEIR indicated that the April 15, 2013 letter from Caltrans represents an approval of design exceptions or of the final design. The City is currently coordinating with Caltrans on determining the final design of the project, with needed design exceptions. As discussed in Response 4-4 and Response 5-12, this process assures a safe design.

Response to Comment 5-14

The commenter asks that the specific design exceptions be identified. Please see Responses 4-4 and 4-6.

Response to Comment 5-15

The commenter states that the DEIR does not identify the Caltrans permitting process in the regulatory Section Framework. A description of the design exception process is hereby added to the Regulatory Framework discussion in Section 4.5 Traffic and Circulation, on page 73 of the DEIR, prior to the heading "Ukiah General Plan":

> <u>"All proposed State highway projects are designed, and/or reviewed by Caltrans, in the context of the Highway Design Manual (HDM) (Caltrans 2012). If local or site-specific conditions require deviation from the HDM, Caltrans has established a process by which exceptions to the design standards are documented and approved in Chapter 21, Exceptions to Design Standards, in the Project Development Procedures Manual. For each design exception a "fact sheet" is completed. The purpose of the fact sheet is to document engineering decisions leading to the approval of each exception to a design standard. Caltrans has responsibility for review and approval of each design exception."</u>

Response to Comment 5-16

The comment identifies a unique geometric feature of the Project design regarding the transition from a single lane off-ramp to a four lane cross-section. While the proposed configuration differs from most off-ramp intersection configurations, it has not been identified by the Project designers, the City, or Caltrans as overly complex or unsafe. The use of appropriate advanced signing, pavement markings, pavement delineation and increased turn lane lengths to accommodate anticipated queuing is expected to provide a safe and non-hazardous driving condition and minimize the need to perform unsafe maneuvers or last minute merges. Advanced signing and pavement markings would be very specific regarding the destinations associated with each lane, and would inform drivers well in advance of decision-making points of the appropriate lanes to queue into. The details of the specific signing, striping and markings would be developed in coordination with Caltrans and would not be approved by them if they were deemed unsafe or confusing to motorists.

Response to Comment 5-17

The comment claims Caltrans must have "reservations" about "overly complex and unconventional feature" of the proposed Project design because Caltrans has expressed a preference for Alternative 2. No such implication can be read from Caltrans expressed preference. First, the traffic operational advantages and environmental advantages are part of the argument supporting Alternative 2 as the Environmentally Superior Alternative in the Draft EIR. Second, the City is currently coordinating with Caltrans regarding the final design of the Project, including the design exceptions. As noted in the HDM, the purpose of the design exceptions is to tailor the design of the Project to the specific circumstances surrounding the Project, while maintaining safety. Review and approval of the final Project design by Caltrans, consistent with the HDM, will ensure a safe design. (See Response 4-4.)

Response to Comments 5-18 to 5-25

Comments 5-18 to 5-25 are a series of statements made regarding the differences in the traffic volumes used in the Talmage Interchange DEIR and the Costco EIR which the commenter presents to support a claim that the Talmage Interchange DEIR did not adequately account for Costco-related traffic in its 2032 analysis.

First, the commenter identifies what it perceives to be inconsistencies between the year 2030 + project weekday PM peak hour traffic volumes presented in the Costco EIR with the year 2032 weekday PM peak hour traffic volumes for the Project used in the Talmage Interchange EIR at the intersection of Talmage Road and U.S. 101 southbound on/off ramps. The commenter claims the Talmage Interchange EIR year 2032 + project traffic at this intersection is lower than the year 2030 + project traffic at the same intersection in the Costco EIR even though the Talmage EIR purports to account for two more years of traffic. The commenter then identifies what it perceives to be inconsistencies between the year 2032 weekday PM peak hour traffic volumes for the Project used in the Talmage Interchange EIR at the intersection of Talmage Road and U.S. 101 southbound on/off ramps and the existing traffic counts and the existing + project traffic projections in the Costco EIR. These claims are incorrect.

First, the Talmage Interchange DEIR Traffic Impact Study does not purport to account for two more years of growth in its year 2032 analysis. The time period of growth considered in both the Talmage and Costco

traffic studies is 20 years; the Talmage Interchange DEIR's existing conditions baseline from which the 20 year period was calculated is simply two years later (2012) than the baseline assumed for the Costco EIR (2010).

Second, the commenter's claim assumes a direct comparison can be made between the future traffic volumes in the Talmage EIR and the Costco EIR simply because they both model future conditions. The commenter ignores, however, that the traffic volumes presented in the Costco EIR (Appendix A of the Traffic Impact Study) and traffic volumes for the Project used in the Talmage Interchange EIR (Appendix E of the Traffic Impact Study) were each determined with different methodologies using different assumptions. The Costco Traffic Impact Study utilized the Ukiah Valley Area Plan (UVAP) travel demand forecasting model as the basis for the future traffic conditions while Talmage Interchange EIR used the Caltrans growth factor of 1.3 to project future traffic conditions, which is specific to the US 101 corridor through Ukiah. Use of the Caltrans-recommended methodology is appropriate for this Project because it is a State highway facility and is consequently required to meet Caltrans standards. (See also, Response to Comment 4-10.) Furthermore, differences in flow volumes for individual movements under the future conditions analyses are attributed to peak hour factors used, assumptions made relative to trip distribution, and the existing traffic volumes used for the future projections.

Third, with regard to the comparisons between the year 2032 Talmage Traffic Impact Study volumes and the baseline and baseline + project traffic volumes in the Costco DEIR (those comments labeled 5-22 and 5-23), the two traffic impact studies had different baseline years, and consequently different baseline traffic volumes, that established the existing conditions. The Costco EIR Traffic Study used traffic counts from 2010, while the Talmage Interchange DEIR Traffic Study, used more recent counts from the year 2012. It is not appropriate to compare the future traffic volume from one traffic study to the existing conditions or the existing plus project conditions of another traffic study, when the baseline assumptions and modeling methodologies for each are different. The Talmage Traffic Impact Study appropriately collected current traffic counts at the time the study commenced, and at issuance of the Notice of Preparation, to establish the baseline conditions.

Thus, contrary to the commenter's claims, due to differences in baseline traffic counts, methodology, and other factors discussed above, a direct comparison analysis between the Talmage Interchange DEIR and the Costco DEIR traffic volumes cannot reasonably be performed. Therefore, the commenter has failed to present any meaningful analysis which undermines the traffic analysis in the Talmage EIR and/or demonstrates that the Talmage EIR failed to account for Costco-related traffic in its year 2032 traffic volumes.

While the growth rate applied to the calculate the future traffic in the Talmage Interchange EIR Traffic Impact Study inherently includes projected area growth, including Costco-related and other Redwood Business Park/Airport Industrial Park-related traffic, a sensitivity analysis was performed which demonstrated that even if the Costco-generated traffic was added on top of the growth rate traffic already assumed for the year 2032 analysis (essentially double-counting the Costco traffic), the study intersections would still perform acceptably. The traffic model sensitivity analysis evaluated the sensitivity of the traffic model to changes in model parameters and to higher traffic volumes than were reported in the Talmage Interchange EIR Traffic Impact Study. The sensitivity analysis was performed on the Synchro 8 with SimTraffic models for both the Project alternative geometry and Alternative 2 geometry. To evaluate each model's sensitivity to traffic

volumes, the Future condition analysis was used and the growth rate was increased to levels consistent with the addition of Costco-related traffic to determine whether the study intersections would perform acceptably based on the study thresholds of significance and available lane storage for queuing vehicles.

For the proposed Project geometry, the results of the sensitivity analysis showed that the geometry and traffic operations acceptably accommodate traffic and anticipated queuing for traffic volumes that are 22% higher than those analyzed for the future condition and therefore, would accommodate a double counting of Costco-related traffic. This condition is equivalent to a growth rate of 1.52, or a 52% increase over existing traffic. At the intersection of Airport Park Boulevard and Talmage Road, the additional 22% of traffic equals 529 vehicles, which is 36 vehicles greater than the traffic generated by the planned Costco project at this intersection (Costco Project traffic volumes from Costco EIR Traffic Study Figure 7). At the intersection of Talmage Road and U.S. 101 southbound on/off ramps, the additional 22% of traffic equals 441 vehicles, which is 109 vehicles greater than the traffic generated by the planned Costco project at this intersection (Costco Project traffic volumes from Costco EIR Traffic Study Figure 7).

For the Alternative 2 geometry, the same sensitivity analysis showed that the geometry and traffic operations acceptably accommodate traffic and anticipated queuing for traffic volumes that are 28% higher than those used to analyze the future condition, and therefore, would accommodate a double counting of Costco-related traffic. This condition is equivalent to a growth rate of 1.58, or a 58% increase over existing traffic). At the intersection of Airport Park Boulevard and Talmage Road, the additional 28% of traffic equals 674 vehicles, which is 181 vehicles greater than the traffic generated by the planned Costco project at this intersection (Costco Project traffic volumes from Costco EIR Traffic Study Figure 7). At the intersection of Talmage Road and U.S. 101 southbound on/off ramps, the additional 28% of traffic equals 561 vehicles, which is 229 vehicles greater than the traffic generated by the planned Costco project at this intersection (Costco Project traffic volumes from Costco EIR Traffic Study Figure 7). The results of sensitivity analyses are included in the Appendix B of this FEIR.

Finally, the commenter questions (Comment 5-24) the adequacy of the Costco EIR traffic volumes and distribution. As indicated in Response 4-10, the Costco EIR was found to be adequate by the City of Ukiah when the City Council certified the EIR in 2013, and on May 1, 2015, the Mendocino County Superior Court upheld the Costco EIR finding that traffic impacts in the Costco EIR were analyzed and mitigated appropriately.

In summary, the Talmage Interchange DEIR appropriately and conservatively looked at future growth and both the proposed Project and Alternative 2 would perform acceptably with the inclusion of Costco project volumes.

Response to Comment 5-26

This comment summarizes the comments subsequently made in more detail in Comments 5-27, 5-28, and 5-29. Refer to the response to those comments below.

Response to Comment 5-27

The commenter states that there are operational benefits to Alternative 2. As indicated in Responses 4-4, 5-4 through 5-11, 5-16 and 5-17, there are some traffic operational advantages of Alternative 2. The traffic

operational advantages are discussed in support of Alternative 2 as the Environmentally Superior Alternative in the Draft EIR.

Response to Comment 5-28

The commenter states that one of the LOS analyses was inaccurately prepared. The commenter has misinterpreted the calculation sheet. While the volume is shown in the analysis calculation, no control delay is assigned to the eastbound Talmage through movement in the calculation. There is no uniform control delay for the eastbound movement. The analysis essentially assumes the eastbound movement has a continuous green light without interruptions. This assumption is reflected in the calculation sheet which shows and uniform control delay of 0.0 seconds and an approach delay of 0.1 seconds for the eastbound through movement.

Response to Comment 5-29

The commenter states that Alternative 2 is superior as regards amount of delay at all intersections. The commenter is correct regarding the traffic operational advantages of Alternative 2 and the second sentence of the last paragraph on page 166 of the DEIR, is revised to read:

> "When compared to the proposed project, the alternative would reduce the amount of delay at Intersections Nos. 1, ~~and~~ 2 and ~~while slightly increasing the delay at Intersection No.~~ 3.

Response to Comment 5-30

The commenter states that Alternative 2 is a more sound design choice. The City agrees that the "sound design choice" is an important consideration in the decision-making process for this project. The detailed design aspects of the project, however, will be addressed during the project approval process, not as part of determining adequacy of the EIR. The City is currently coordinating with Caltrans regarding the final design of the project, including the design exceptions. As noted in the HDM, the purpose of the design exceptions is to tailor the design of the project to the specific circumstances surrounding the project, while maintaining safety. Review and approval of the final project design by Caltrans, consistent with the HDM, will ensure a safe design. (See Response to Comment 4-4.)The Environmentally Superior Alternative discussion in the Draft EIR did note the operational advantages of Alternative 2.

Response to Comment 5-31

The commenter states that Costco-generated traffic should have been added to the 1.3 growth rate used to calculate 2032 traffic volumes. Regarding the use of the Caltrans-recommended growth factor in the Talmage Intersection DEIR Traffic Impact Study to predict future traffic growth, refer to Responses 4-10 and 5-18 to 5-25. The Costco project was approved by the City for development in the Redwood Business Park, and the City considered the Costco project consistent with allowed Redwood Business Park/Airport Industrial Park land uses. Traffic in 2032 from the Costco project and any future development of the industrial park are included in the traffic projections done for the Talmage DEIR. As discussed in Response to Comments 5-18 to 5-24, while the growth rate applied to the calculate the future traffic in the Talmage Interchange EIR Traffic Impact Study inherently includes projected area growth, including Costco-related and other Redwood Business Park/Airport Industrial Park-related traffic, a sensitivity analysis was performed which demonstrated

that even if the Costco-generated traffic was added on top of the growth rate traffic already assumed for the year 2032 analysis (essentially double-counting the Costco traffic), the study intersections would still perform acceptably.

Response to Comment 5-32

The commenter asks about the future need to widen the interchange. The potential widening of the overcrossing was part of the project evaluated in the Draft IS/MND. Subsequent analysis by the Project designers and Caltrans found that the widening is not necessary to accommodate future traffic growth and operations, and was therefore not included in the project and alternatives evaluated in this EIR. As shown in Appendix E (Traffic Impact Study) of the DEIR, the project and alternatives operate acceptably under future conditions. Because the widening is no longer needed, it is not necessary to evaluate which alternative would best accommodate widening of the overcrossing. Regarding the use of the Caltrans-recommended growth factor and Costco related trips, refer to Response to Comment 4-10 and Response to Comments 5-18 to 5-24.

Response to Comment 10-3

The commenter stated that there is a discrepancy between the traffic counts used for the Draft MND and the Costco EIR. See Responses 5-18 to 5-25 to comments from this same commenter regarding similar comments about the variation in counts and analysis done for this DEIR and ones done for the Costco EIR. As explained in those previous responses, the Talmage DEIR analysis is based on more current counts and traffic projections, and the analysis was done consistent with Caltrans' recommendations for the traffic analysis. Again, the Talmage DEIR analysis assesses long-term impacts of future traffic based on traffic growth projections, and those projections incorporate traffic that would be generated by the Costco project.

Regards

Matt Kennedy, PE, TE
Project Manager

DEPARTMENT OF TRANSPORTATION
DISTRICT 1, P. O. BOX 3700
EUREKA, CA 95502-3700
PHONE (707) 445-6413
FAX (707) 445-6314
TTY 711

Serious drought.
Help save water!

Rec'd JT 11/21/14

November 19, 2014

1-MEN-101/222

William D. Kopper, Attorney at Law
417 E Street
Davis, CA 95616

Dear Mr. Kopper:

Charlie Fielder asked me to respond to your letter of October 28, 2014 expressing concerns regarding the design of the US 101/SR 222 (Talmage) Interchange Reconfiguration Project. It is clear that you have put substantial thought and effort into your analysis of the project, and that your concerns are genuine.

It appears that all of your concerns regarding the design features of the interchange are based on an earlier concept that was developed by the City's engineering firm. When that early concept was being developed, we shared many of the concerns that you have with it. Since the initial publication of the Mitigated Negative Declaration (MND) in August 2014, we have continued to work with the City on interchange reconfiguration concepts for the Preliminary Engineering Evaluation Report (PEER) that will be completed and approved as part of the encroachment permit for the project.

We are in the process of a rigorous, robust and collaborative PEER process with the project team, which has resulted in an elegant and effective conceptual design solution. Last summer, we reached consensus on a new conceptual design that is now moving forward. This concept is significantly different than the one shown in Figure 3.1-3 (p.35) of the "Project Characteristics" section of the DEIR. The revised alternative is currently in the design phase, addressing geometric details. It is described and shown on pages 163-169 of the DEIR. This design should address most, if not all of the concerns you have described. Our analysis indicates that this design will have fewer environmental impacts, and will operate well for the entirety of its design-life.

As always, our primary responsibility is the safety of the traveling public. I can assure you that, with this project as with all of our projects, Caltrans staff constantly works to provide a safe, multimodal, and sustainable transportation network. I appreciate and share your concern and interest in public safety.

Sincerely,

Brad Mettam
Deputy District Director, Planning and Local Assistance

c. Tim Eriksen, Ukiah City Engineer
Charley Stump, Ukiah Director of Planning & Community Development
Charles Fielder, Caltrans District 1 Director

Memorandum

Serious drought.
Help Save Water!

To: HIGHWAY DESIGN MANUAL HOLDERS

Date: April 10, 2014

File:

From: TIMOTHY CRAGGS
Chief
Division of Design

Subject: **DESIGN FLEXIBILITY IN MULTIMODAL DESIGN**

The Caltrans Program Review, and more recently the SSTI report, identified a need to provide more flexibility in Caltrans' highway design standards and procedures, especially in the context of urban environments and multimodal design.

Caltrans is continually improving its standards and processes to provide flexibility while maintaining the safety and integrity of the state's transportation system. This commitment is evident in the recent update to the Highway Design Manual (HDM) to facilitate the design of Complete Streets, recognizing that the State highway system needs to be multimodal, not just for cars and trucks.

Caltrans' philosophy and flexible approach toward designing multimodal transportation projects on the State highway system is reflected in the HDM, Chapter 80, which states in part:

> *"The Project Development process seeks to provide a degree of mobility to users of the transportation system that is in balance with other values."*
>
> "*A 'one-size-fits-all' design philosophy is not Departmental policy."*
>
> *"The highway design criteria and policies in this manual provide a guide for the engineer to exercise sound judgment in applying standards, consistent with the above Project Development philosophy, in the design of projects. This guidance allows for flexibility in applying design standards and approving design exceptions that take the context of the project location into consideration; which enables the designer to tailor the design, as appropriate, for the specific circumstances while maintaining safety."*

For improvements on local systems, the responsible local entities have long been delegated authority to exercise their engineering judgment when utilizing applicable standards, including those for bicycle facilities established by Caltrans pursuant to Streets and Highways Code sections 890.6 and 890.8. This delegation and delegation process is outlined in the Caltrans Local Assistance Procedures Manual, Chapter 11, page 11-26. See http://www.dot.ca.gov/hq/LocalPrograms/lam/prog_p/ch11-2012-10-05.pdf.

To support the philosophy of flexibility in design, Caltrans recently published "Main Street, California, a Guide for Improving Community and Transportation Vitality." This guide emphasizes investments on California highways that function as a local main street and can improve multimodal travel and contribute to livable and sustainable communities. The guide is available at http://www.dot.ca.gov/hq/LandArch/mainstreet/main_street_3rd_edition.pdf.

In addition, the American Association of State Highway and Transportation Officials (AASHTO) provides a wealth of knowledge in the guides that it develops at the national level. For example, AASHTO's "Guide for the Development of Bicycle Facilities" a.k.a. AASHTO Bike Guide, provides information on how to accommodate bicycle travel and operations in most riding environments. The publication presents sound guidelines that result in facilities that meet the needs of bicyclists and other highway users. The guide provides flexibility to encourage designs that are sensitive to local context and incorporate the needs of bicyclists, pedestrians, and motorists.

Other references relative to urban street and bicycle facility design can also be valuable resources. Publications such as the National Association of City Transportation Officials (NACTO) "Urban Street Design Guide" and "Urban Bikeway Design Guide," and the Institute of Transportation Engineers (ITE) "Designing Urban Walkable Thoroughfares," are resources that Caltrans and local entities can reference when making planning and design decisions on the State highway system and local streets and roads. Caltrans believes that such guidance, coupled with thorough documentation of engineering judgments made in the process, can be of assistance to communities, particularly in urban areas, to support the planning and design of safe and convenient facilities that they own and operate. Caltrans is currently analyzing these guides to identify areas of improvement in our own standards and guidance. This will be a focus of the Department over the next year.

Given the flexibility provided to owners by existing standards and guidance, it remains of the utmost importance, as noted above, for the responsible entity (Caltrans or local authority) to document appropriately their engineering decisions for design-immunity purposes. Adequate documentation will ensure the full protection of design immunity provided under law to the responsible entity.

Caltrans and local entities are encouraged to work proactively with their communities to provide convenient, safe, and context-sensitive facilities that promote increased use by bicyclists and pedestrians of all ages and abilities, and utilize universal design characteristics as appropriate. This approach has resulted in successful flexible design solutions in the past and the Department endorses its use as a fundamental principle of planning and design.

For further information, please contact me at (916) 654-3858 or tim.craggs@dot.ca.gov, or Ray Zhang, Chief, Division of Local Assistance at (916) 653-1776 or rihui.zhang@dot.ca.gov.

c: Director
Chief Deputy Director
Deputy Directors
District Directors
Division Chiefs
Division of Design Management
Deputy District Directors Design

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

M e m o r a n d u m

Flex your power!
Be energy efficient!

To: STEVE HUGHES
Design Office Chief

Date: November 12, 2014

File: Dist. EA 01-0A760
Talmage Interchange

From: DARRON HILL
Assistant Traffic Safety Engineer
District 1 Traffic Safety Office

Subject: **REQUEST FOR A 3-YEAR COLLISION ANALYSIS**

Per your request, a revised collision analysis has been conducted for the 3-year time period between 04/01/2009 and 03/31/2012. The segment reviewed was State Route 101 in Mendocino County, from PM R23.318/R23.818 and State Route 222 from PM L0.418/R0.09.

01-MEN-222 PM L0.418/R0.09

There was 1 reported collision within this segment (1 WB, 1 "Property Damage Only" (PDO), 1 multi-vehicle, 1 "wet road surface", 0 "dark-no street light"). From TASAS Table B, this highway segment has an actual total collision rate that is less than the statewide average for similar highway facilities. The actual fatal+injury (F+I) collision rate is less than the statewide average for similar highway facilities. The actual fatal collision rate is less than the statewide average for similar highway facilities.

The WB rear-end collision occurred at 1522 in the afternoon, in cloudy, wet conditions. Primary Collision Factor (PCF) was listed as "Speeding" due to the driver's inability to brake for stopped traffic on the bridge. The collision occurred in November 2011.

Actual			Average		
Fatal	F + I	Total	Fatal	F + I	Total
0.000	0.00	0.11	0.009	0.42	1.11

01-MEN-101 PM R23.318/R23.818

There were 9 reported SB collision within this 0.5-mile segment (2 Injury, 7 PDO), 5 multi-vehicle, 2 "wet road surface", 3 "dark-no street light"). From TASAS Table B, this highway segment has an actual total collision rate that is 3.33 times greater than the statewide average for similar highway facilities. The actual fatal+injury (F+I) collision rate is 2.5 times greater than the statewide average for similar highway facilities. The actual fatal collision rate is less than the statewide average for similar highway facilities.

The pre-dominant PCF listed in 3 of 9 collisions was "Speeding", followed by 2 of 9 collisions listed for "Influence of Alcohol". The pre-dominant collision type was equally divided (3 of 9) listed as "Hit Object" and "Rear-End". 6 of 9 collisions were associated with the ramp including one solo vehicle collision at the northern entrance to the ramp, two on the EB offramp, and three at the offramp intersection with State Route 222. 1 of 3 collisions at the offramp intersection involved a vehicle turning left in violation of the

posted signage. 1 of 3 collisions involved a vehicle striking a pedestrian in the crosswalk which resulted in injuries, and the final collision was a rear-end, injury collision into traffic waiting to turn right at the stop sign.

Regarding the two EB offramp collisions, the PCF in one was "Influence of Alcohol" and the vehicle left the roadway and struck trees in the gore area. The second collision involved a rear-end collision due to congestion in the curve of the offramp.

With regard to the remaining 3 highway collisions, 2 of 3 collisions involved vehicles attempting to exit State Route 101 onto the Talmage offramp. One collision was associated with "Congestion", one collision occurred when a driver attempted to exit the highway from the #1 lane causing a "Sideswipe", and the final collision occurred on the State Route 101 and was associated with "Influence of Alcohol".

Actual			Average		
Fatal	F + I	Total	Fatal	F + I	Total
0.000	0.35	1.40	0.003	0.14	0.42

Below are the "Ramp" collision rates for each individual ramp rather than the total southbound "Highway" collision rate provided above. The collision rates were recalculated to compensate for one mis-coded collision on the SB to WB ramp.

	Actual			***Average***		
Segment	***Fatal***	***F+I***	***Total***	***Fatal***	***F+I***	***Total***
SB Off-Ramp Before Split	*0.000*	*0.00*	*0.00*	*0.002*	*0.08*	*0.25*
SB Slip Off-Ramp to WB Talmage	*0.000*	*0.35*	*0.53*	*0.005*	*0.13*	*0.38*
SB Loop Off-Ramp to EB Talmage	*0.000*	*0.00*	*1.12*	*0.004*	*0.20*	*0.68*
SB On-Ramp	*0.000*	*0.00*	*0.00*	*0.001*	*0.18*	*0.54*

If you have any questions please contact me at (707) 964-0974.

c: 1 – MK BRADY
2 – DA MORGAN
3 – DL HILL
4 – FILE


MEN 101 PM R23.318/R23.818
MEN 222 PM L0.418/R0.09
TABLE B: 04/01/2009-3/31/2012
COLLISION DIAGRAM
DRAWN BY: CELESTE REDNER
DRAWN ON: 11/07/2014
LEGEND
PROPERTY DAMAGE ONLY (PDO)
INJURY
N
NO SCALE
10/18/2010 PM R23.75 S
0855
Clear/Daylight/Dry
Hit Object
Proceeding Straight
Following Too Close
9/19/2010 PM R23.73 S
2140
Clear/Dark-No Street Light/Dry
Hit Object
Ran Off Road
Influence of Alcohol
12/08/2010 PM R23.72 S
1355
Cloudy/Daylight/Wet
Sideswipe
Change Lanes
Other Violation
3/26/2012 PM R23.52 S
1515
Cloudy/Daylight/Dry
Rear End
Proceeding Straight
Speeding
11/17/2011 PM L0.42 W
1522
Cloudy/Daylight/Wet
Rear End
Proceeding Straight
Speeding
5/18/2011 PM R23.296 N
1655
Cloudy/Daylight/Dry
Rear End
Proceeding Straight
Speeding
5/08/2010 PM R23.517 S
1755
Clear/Daylight/Dry
Rear End
Proceeding Straight
Speeding
2/19/2012 PM R23.517 S
1627
Clear/Daylight/Dry
Auto-Pedestrian
Making Right Turn
Failure To Yield
2/19/2011 PM R23.518 S
0155
Cloudy/Dark-no street light/Wet
Hit Object
Ran Off Road
Influence of Alcohol
1/4/2012 PM R23.518 W
1417
Clear/Daylight/Dry
Broadside
Making Left Turn
Failure To Yield
10/04/2011 PM R23.518 S
0635
Cloudy/Dark-street light/Dry
Rear End
Proceeding Straight
Speeding
3/03/2012 PM R23.296 N
1535
Clear/Daylight/Dry
Hit Object
Ran Off Road
Influence of Alcohol

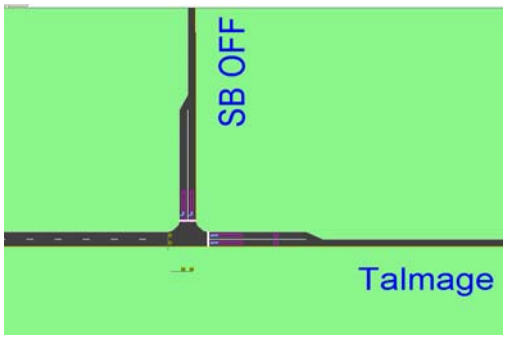
SB 101 Off-ramp to WB on Talmage

General Comments

- A half signal with two lane approaches for the SB and WB approaches was chosen to minimize the WB through queue and relieve large queues on the SB off ramp.
- The intersection was moved as far West as possible to move the WB limit line as far from the bridge vertical curve as possible. The limit line to peak of bridge is estimated to be 280ft.
- By moving the intersection West the SB approach becomes angled due to R/W constraints which restricts sight distance and causes possible shadowing. To fix this it was decided to disallow SB right turns on red.
- The SB Off-ramp is expected to have a short cycle length (< 60 seconds) and will act somewhat like a ramp meter for the rest of the intersections.

Performance:

As can be seen in the chart below, delay for both intersections is minimal. The most important column is the 95th queue length for Westbound (WB) vehicles. Census ramp counts from April 2012 show SBR volumes as high as 500 vehicles per hour, so I included calculations for a scenario where 500 vehicles was used for the base year volume.



	2 WB and 2 SB (w/ no RTOR for SBR and .88 lane util.				
	Control Delay (seconds)			95th Queue (ft)	
Growth Factor	WB	SB	Overall	WB	SB
1.15	10.9	13.7	12.5	70	107
1.3	11.9	15.1	13.7	80	#125
1.3*	13.4	14.4	14	97	135
1.5	14.5	15.6	15.1	112	144
	Sim Traffic (10 Runs)				
1.3	14.3	14.9	14.6	180/118	229/195
1.3*	15.5	15.8	15.6	188/124	254/219

**SBR: 500 veh used instead of 457 for the base year.*

SB 101 Off-ramp to EB on Talmage/222 and SB 101 On-ramp

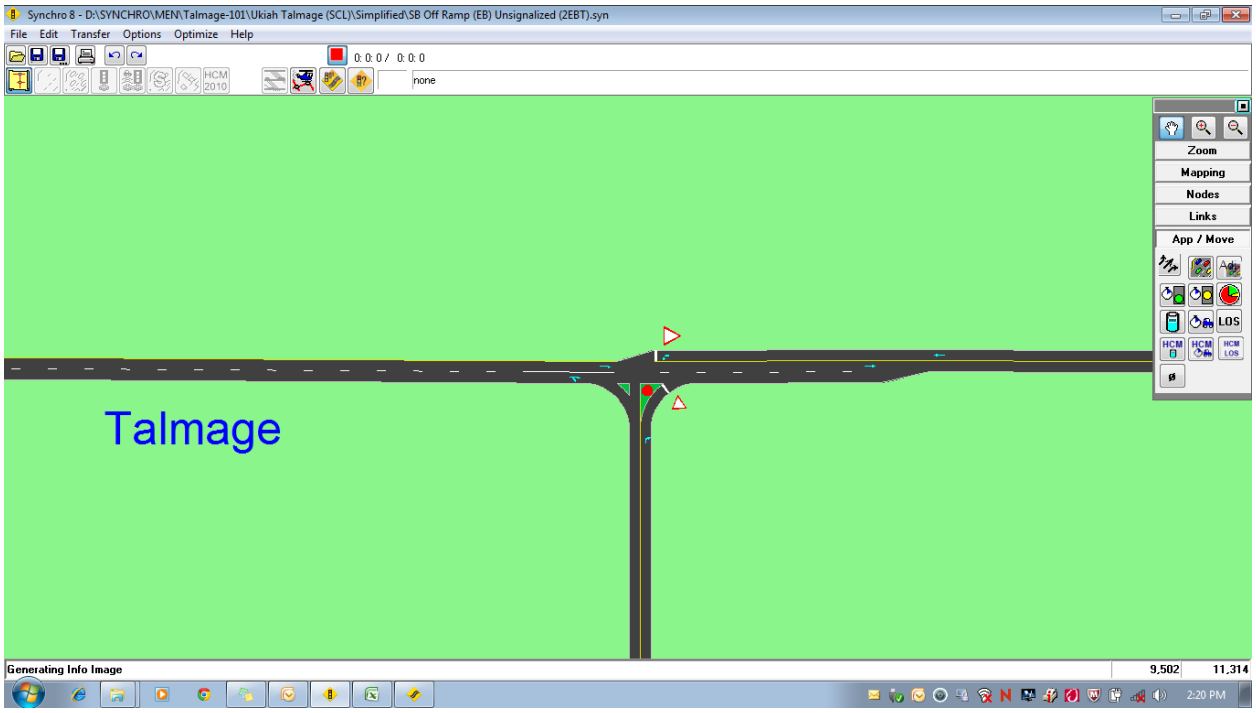
General Comments

- Both signalized and non-signalized options were looked at. The non-signalized option had less control-delay overall and was chosen.
- Choosing between having a single Eastbound through (EBT) lane and having 2 EBT lanes came down to our expected lane utilization and capacity at Airport. By going with 1 EBT lane drivers have roughly 300 feet to merge left if they want to continue over the bridge. By going with 2 EBT lanes, drivers from Airport now have roughly 530 feet to merge left.

Performance

In the table below a 1.4 GF was looked at to see if catastrophic failure followed the design year for the WBL to SB 101 movement. With the designed pocket capable of holding roughly 150 feet worth of vehicles, the design should hold up well.

	Stop Controlled (2EBT) (SIM TRAFFIC RESULTS - 10 Runs)					
	Control Delay (seconds)				95th Queue (ft)	
G. Factor	EBT	WBL	NBR	Overall	WBL	NBR
1.15	3.2	21.1	1.8	3.5	64	8
1.3	4.7	48.3	2	5.6	98	12
1.4	5.8	79.2	2.1	7.4	124	19

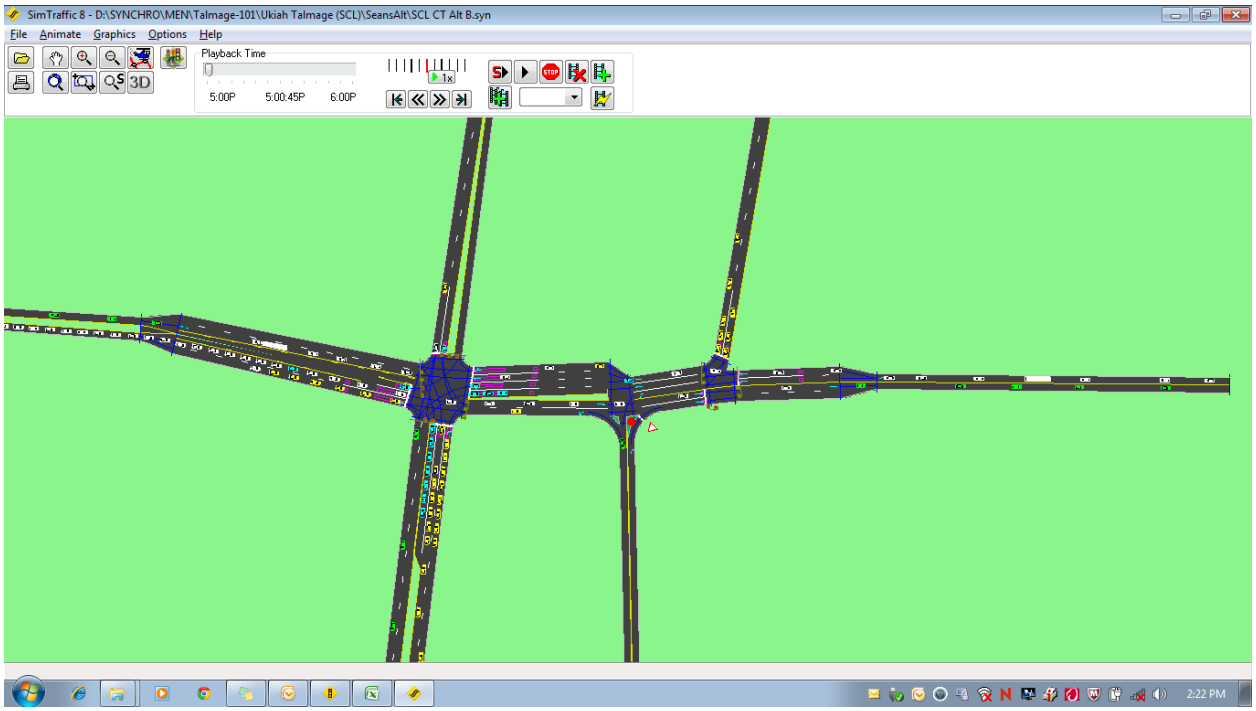


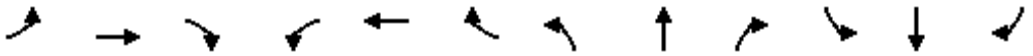
Airport & Talmage

General Comments

- With this new alternative the signal at Airport no longer has a need to be coordinated. This means the cycle length is no longer fixed, which should improve performance.
- Sim-Traffic results typically show dismal results for EB and NB traffic when compared to Synchro delay results (see the graphic below). This is caused by lane choice/stacking and the values used for lane utilization in the HCM calculations. The default lane utilization factor in Synchro for EBT is 95%. For the Airport intersection, changing the lane utilization factors for EBT in Synchro produced the following result:

			Delay (seconds)			
			No Timing Changes		Optimize used	
Lane 1 %	Lane 2 %	Factor	EBT	ALL	EBT	ALL
50	50	100%	36	32.7	36	32.7
60	40	83%	54	38.3	46	38
70	30	71%	108	51.4	64	47.5
80	20	63%	169	66.5	80	53.5





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	346	219	439	318	19	265	0	574	22	41	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6		5.6	5.6		5.2		5.6	5.2	5.2	
Lane Util. Factor	1.00	0.95		0.97	0.95		0.97		1.00	1.00	1.00	
Frt	1.00	0.94		1.00	0.99		1.00		0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)	1770	3331		3433	3506		3433		1583	1770	1778	
Flt Permitted	0.95	1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (perm)	1750	3331		3433	3500		3433		1583	1750	1750	
Peak-hour factor, PHF	0.90	0.96	0.94	0.95	0.93	0.84	0.93	0.71	0.98	0.81	0.87	0.85
Growth Factor (vph)	158%	158%	158%	158%	158%	158%	158%	158%	158%	158%	158%	158%
Adj. Flow (vph)	33	569	368	730	540	36	450	0	925	43	74	32
RTOR Reduction (vph)	0	88	0	0	3	0	0	0	253	0	15	0
Lane Group Flow (vph)	33	849	0	730	573	0	450	0	672	43	91	0
Turn Type	Prot	NA		Prot	NA		Prot		pm+ov	Split	NA	
Protected Phases	5	2		1	6		8		1	7	7	
Permitted Phases									8			
Actuated Green, G (s)	4.6	26.2		23.0	44.6		18.2		41.2	11.7	11.7	
Effective Green, g (s)	4.6	26.2		23.0	44.6		18.2		41.2	11.7	11.7	
Actuated g/C Ratio	0.05	0.26		0.23	0.44		0.18		0.41	0.12	0.12	
Clearance Time (s)	5.6	5.6		5.6	5.6		5.2		5.6	5.2	5.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	80	866		784	1552		620		647	205	206	
v/s Ratio Prot	0.02	c0.25		0.21	0.16		0.13		c0.24	0.02	c0.05	
v/s Ratio Perm									0.19			
v/c Ratio	0.41	0.98		0.93	0.37		0.73		1.04	0.21	0.44	
Uniform Delay, d1	46.7	37.0		38.1	18.7		38.9		29.8	40.3	41.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2	3.4	25.7		17.6	0.1		4.2		45.8	0.5	1.5	
Delay (s)	50.2	62.7		55.7	18.8		43.1		75.6	40.8	43.0	
Level of Service	D	E		E	B		D		E	D	D	
Approach Delay (s)		62.3			39.4			65.0			42.3	
Approach LOS		E			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	54.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	100.7	Sum of lost time (s)	21.6
Intersection Capacity Utilization	102.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	834	109	35	781	0	144
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.93	0.90	0.93	0.96	0.92
Hourly flow rate (vph)	1396	186	62	1335	0	249
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	334			245		
pX, platoon unblocked			0.79		0.86	0.79
vC, conflicting volume			1396		2280	791
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			970		1453	205
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			89		100	61
cM capacity (veh/h)			558		92	633

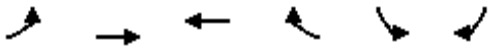
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	931	652	62	668	668	249
Volume Left	0	0	62	0	0	0
Volume Right	0	186	0	0	0	249
cSH	1700	1700	558	1700	1700	633
Volume to Capacity	0.55	0.38	0.11	0.39	0.39	0.39
Queue Length 95th (ft)	0	0	9	0	0	47
Control Delay (s)	0.0	0.0	12.3	0.0	0.0	14.3
Lane LOS			B			B
Approach Delay (s)	0.0		0.5			14.3
Approach LOS						B

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	63.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	423	0	0	270	90	52
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.93	0.93	0.97	0.91
Hourly flow rate (vph)	731	0	0	462	148	91
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						1
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	781					
pX, platoon unblocked						
vC, conflicting volume			731		1193	731
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			731		1193	731
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		29	78
cM capacity (veh/h)			873		207	422

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	731	462	238
Volume Left	0	0	148
Volume Right	0	0	91
cSH	1700	1700	282
Volume to Capacity	0.43	0.27	0.84
Queue Length 95th (ft)	0	0	178
Control Delay (s)	0.0	0.0	60.7
Lane LOS			F
Approach Delay (s)	0.0	0.0	60.7
Approach LOS			F

Intersection Summary			
Average Delay	10.1		
Intersection Capacity Utilization	92.7%	ICU Level of Service	F
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	977	360	0	0	457
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		2.0	5.6			5.6
Lane Util. Factor		0.95	*0.88			0.88
Frt		1.00	1.00			0.85
Flt Protected		1.00	1.00			1.00
Satd. Flow (prot)		3539	3278			2787
Flt Permitted		1.00	1.00			1.00
Satd. Flow (perm)		3539	3278			2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	159%	159%	159%	159%	159%	159%
Adj. Flow (vph)	0	1635	603	0	0	765
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1635	603	0	0	765
Turn Type		NA	NA			Prot
Protected Phases		2 4	6			7
Permitted Phases						
Actuated Green, G (s)		46.4	14.7			20.5
Effective Green, g (s)		46.4	14.7			20.5
Actuated g/C Ratio		1.00	0.32			0.44
Clearance Time (s)			5.6			5.6
Vehicle Extension (s)			3.0			3.0
Lane Grp Cap (vph)		3539	1038			1231
v/s Ratio Prot		c0.46	0.18			c0.27
v/s Ratio Perm						
v/c Ratio		0.46	0.58			0.62
Uniform Delay, d1		0.0	13.3			10.0
Progression Factor		1.00	1.00			1.00
Incremental Delay, d2		0.1	0.8			2.4
Delay (s)		0.1	14.1			12.3
Level of Service		A	B			B
Approach Delay (s)		0.1	14.1		12.3	
Approach LOS		A	B		B	

Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	46.4	Sum of lost time (s)	11.2
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection: 1: Airport Park Boulevard & Talmage Road

Movement	EB	EB	EB	B5	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	TR	T	L	L	T	TR	L	L	R	L
Maximum Queue (ft)	74	455	437	255	267	287	267	266	110	555	566	79
Average Queue (ft)	28	419	407	201	240	254	146	64	108	529	523	32
95th Queue (ft)	68	465	463	290	307	325	229	159	113	550	545	68
Link Distance (ft)		367	367	202		267	267			502	502	66
Upstream Blk Time (%)		41	41	54	1	23	0	0		99	99	1
Queuing Penalty (veh)		0	0	0	0	149	2	0		0	0	0
Storage Bay Dist (ft)	50				250			275	85			
Storage Blk Time (%)	8	63			4	28	0	0	42	35		
Queuing Penalty (veh)	23	20			15	99	1	0	91	75		

Intersection: 1: Airport Park Boulevard & Talmage Road

Movement	SB
Directions Served	TR
Maximum Queue (ft)	105
Average Queue (ft)	54
95th Queue (ft)	95
Link Distance (ft)	66
Upstream Blk Time (%)	10
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: SB On-Ramp & Talmage Road

Movement	EB	EB	WB	WB	WB	NB	B8	B23
Directions Served	T	TR	L	T	T	R	T	T
Maximum Queue (ft)	268	301	193	212	167	297	409	97
Average Queue (ft)	161	145	51	128	7	179	82	6
95th Queue (ft)	260	274	140	267	59	345	315	45
Link Distance (ft)	267	267		194	194	229	340	151
Upstream Blk Time (%)	0	0	0	11		32	6	
Queuing Penalty (veh)	1	1	0	77		0	0	
Storage Bay Dist (ft)			175					
Storage Blk Time (%)			0	15				
Queuing Penalty (veh)			0	9				

Intersection: 3: NB Off-Ramp & Talmage Road

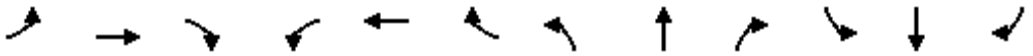
Movement	EB	NB	NB	B9
Directions Served	T	L	R	T
Maximum Queue (ft)	22	308	74	50
Average Queue (ft)	1	97	45	2
95th Queue (ft)	8	226	64	18
Link Distance (ft)	280	236		401
Upstream Blk Time (%)		6		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)			25	
Storage Blk Time (%)		43	17	
Queuing Penalty (veh)		37	25	

Intersection: 4: Talmage Road & SB Off-Ramp

Movement	EB	EB	WB	WB	SB	SB
Directions Served	T	T	T	T	R	R
Maximum Queue (ft)	244	289	402	125	716	300
Average Queue (ft)	211	254	162	101	285	152
95th Queue (ft)	227	270	346	158	675	324
Link Distance (ft)	194	194	393		701	
Upstream Blk Time (%)	32	83	2		1	
Queuing Penalty (veh)	253	660	11		0	
Storage Bay Dist (ft)				100		275
Storage Blk Time (%)			20	6	18	1
Queuing Penalty (veh)			60	17	69	4

Zone Summary

Zone wide Queuing Penalty: 1698



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	346	219	439	318	19	265	0	574	22	41	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6		5.6	5.6		5.2		5.6	5.2	5.2	
Lane Util. Factor	1.00	0.95		0.97	0.95		0.97		1.00	1.00	1.00	
Frt	1.00	0.94		1.00	0.99		1.00		0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)	1770	3331		3433	3507		3433		1583	1770	1781	
Flt Permitted	0.95	1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (perm)	1750	3331		3433	3500		3433		1583	1750	1750	
Peak-hour factor, PHF	0.90	0.96	0.94	0.95	0.93	0.84	0.93	0.71	0.98	0.81	0.87	0.85
Growth Factor (vph)	152%	152%	152%	152%	152%	152%	152%	152%	152%	152%	152%	152%
Adj. Flow (vph)	32	548	354	702	520	34	433	0	890	41	72	30
RTOR Reduction (vph)	0	92	0	0	3	0	0	0	279	0	16	0
Lane Group Flow (vph)	32	810	0	702	551	0	433	0	611	41	86	0
Turn Type	Prot	NA		Prot	NA		Prot		pm+ov	Split	NA	
Protected Phases	5	2		1	6		8		1	7	7	
Permitted Phases									8			
Actuated Green, G (s)	4.9	31.9		21.4	48.4		19.1		40.5	12.0	12.0	
Effective Green, g (s)	4.9	31.9		21.4	48.4		19.1		40.5	12.0	12.0	
Actuated g/C Ratio	0.05	0.30		0.20	0.46		0.18		0.38	0.11	0.11	
Clearance Time (s)	5.6	5.6		5.6	5.6		5.2		5.6	5.2	5.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	81	1002		693	1601		618		604	200	201	
v/s Ratio Prot	0.02	c0.24		c0.20	0.16		0.13		c0.20	0.02	c0.05	
v/s Ratio Perm									0.18			
v/c Ratio	0.40	0.81		1.01	0.34		0.70		1.01	0.20	0.43	
Uniform Delay, d1	49.1	34.2		42.3	18.6		40.8		32.8	42.7	43.8	
Progression Factor	1.00	1.00		0.91	1.21		1.00		1.00	1.00	1.00	
Incremental Delay, d2	3.2	4.9		36.2	0.6		3.6		39.4	0.5	1.5	
Delay (s)	52.3	39.1		74.7	23.1		44.4		72.2	43.2	45.3	
Level of Service	D	D		E	C		D		E	D	D	
Approach Delay (s)		39.5			51.9			63.1			44.7	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	52.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	21.6
Intersection Capacity Utilization	99.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	834	109	35	321	457	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6	5.6	5.6	5.6	5.6
Lane Util. Factor	0.95	1.00	1.00	0.95	0.94	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	4990	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3500	1583	1750	3500	4990	1583
Peak-hour factor, PHF	0.95	0.93	0.90	0.93	0.96	0.92
Growth Factor (vph)	156%	156%	156%	156%	156%	156%
Adj. Flow (vph)	1370	183	61	538	743	244
RTOR Reduction (vph)	0	41	0	0	0	151
Lane Group Flow (vph)	1370	142	61	538	743	93
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Actuated Green, G (s)	50.0	81.4	7.8	63.4	31.4	31.4
Effective Green, g (s)	50.0	81.4	7.8	63.4	31.4	31.4
Actuated g/C Ratio	0.47	0.77	0.07	0.60	0.30	0.30
Clearance Time (s)	5.6	5.6	5.6	5.6	5.6	5.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1669	1299	130	2116	1478	468
v/s Ratio Prot	c0.39	0.03	c0.03	0.15	c0.15	
v/s Ratio Perm		0.06				0.06
v/c Ratio	0.82	0.11	0.47	0.25	0.50	0.20
Uniform Delay, d1	24.1	3.1	47.1	10.1	30.8	27.9
Progression Factor	0.77	0.12	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.6	0.0	2.7	0.1	1.2	1.0
Delay (s)	20.1	0.4	49.8	10.2	32.1	28.9
Level of Service	C	A	D	B	C	C
Approach Delay (s)	17.7			14.2	31.3	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	21.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	16.8
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	423	0	0	270	90	52
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.93	0.93	0.97	0.91
Hourly flow rate (vph)	717	0	0	453	145	89
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						1
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1026					
pX, platoon unblocked			0.68		0.68	0.68
vC, conflicting volume			717		1170	717
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			341		1011	341
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		19	81
cM capacity (veh/h)			823		179	474

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	717	453	234
Volume Left	0	0	145
Volume Right	0	0	89
cSH	1700	1700	248
Volume to Capacity	0.42	0.27	0.94
Queue Length 95th (ft)	0	0	213
Control Delay (s)	0.0	0.0	85.8
Lane LOS			F
Approach Delay (s)	0.0	0.0	85.8
Approach LOS			F

Intersection Summary			
Average Delay	14.3		
Intersection Capacity Utilization	91.0%	ICU Level of Service	F
Analysis Period (min)	15		

Intersection: 1: Airport Park Boulevard & Talmage Road

Movement	EB	EB	EB	B5	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	TR	T	L	L	T	TR	L	L	R	L
Maximum Queue (ft)	74	436	474	255	275	272	265	249	110	555	566	73
Average Queue (ft)	41	291	322	78	255	254	142	77	108	524	525	26
95th Queue (ft)	72	459	474	254	265	267	268	228	118	545	547	62
Link Distance (ft)		367	367	202	249	249	249			503	503	66
Upstream Blk Time (%)		10	14	13	74	64	2	1		97	98	3
Queuing Penalty (veh)		0	0	0	308	264	9	0		0	0	0
Storage Bay Dist (ft)	50							250	85			
Storage Blk Time (%)	22	54					2	1	37	27		
Queuing Penalty (veh)	59	16					6	2	76	57		

Intersection: 1: Airport Park Boulevard & Talmage Road

Movement	SB
Directions Served	TR
Maximum Queue (ft)	99
Average Queue (ft)	55
95th Queue (ft)	99
Link Distance (ft)	66
Upstream Blk Time (%)	15
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: SB On-Ramp & Talmage Road

Movement	EB	EB	EB	WB	WB	WB	B17	NB	NB	NB	NB	B8
Directions Served	T	T	R	L	T	T	T	L	L	L	R	T
Maximum Queue (ft)	265	290	249	167	239	260	398	340	316	329	215	426
Average Queue (ft)	170	182	19	21	226	49	390	293	286	236	175	340
95th Queue (ft)	244	277	96	105	244	204	396	331	327	361	271	560
Link Distance (ft)	249	249			168	168	388	215	215	215		324
Upstream Blk Time (%)	2	3	0	0	94	3	86	89	87	27	7	71
Queuing Penalty (veh)	13	24	0	0	271	8	497	0	0	0	0	0
Storage Bay Dist (ft)			220	150							200	
Storage Blk Time (%)		5		0	94					25	15	
Queuing Penalty (veh)		9		0	54					59	35	

Intersection: 2: SB On-Ramp & Talmage Road

Movement	B8	B8	B23	B23	B22
Directions Served	T	T	T	T	T
Maximum Queue (ft)	419	430	216	221	161
Average Queue (ft)	311	301	112	138	69
95th Queue (ft)	541	548	248	291	173
Link Distance (ft)	324	324	145	145	109
Upstream Blk Time (%)	53	30	18	40	33
Queuing Penalty (veh)	0	0	0	0	0
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: NB Off-Ramp & Talmage Road

Movement	WB	NB	NB	B9
Directions Served	T	L	R	T
Maximum Queue (ft)	168	308	50	416
Average Queue (ft)	153	299	8	391
95th Queue (ft)	165	306	36	458
Link Distance (ft)	147	236		401
Upstream Blk Time (%)	84	100		93
Queuing Penalty (veh)	365	0		0
Storage Bay Dist (ft)			25	
Storage Blk Time (%)		100	1	
Queuing Penalty (veh)		84	2	

Zone Summary

Zone wide Queuing Penalty: 2220

Appendix C

Air Quality Data

ILLINGWORTH & RODKIN, INC.
Acoustics • Air Quality
1 Willowbrook Court, Suite 120
Petaluma, CA 94954

Memo

Date: June 17, 2015

To: Leonard Charles
Leonard Charles & Associates

From: Keith Pommerenck, Senior Consultant
Illingworth & Rodkin, Inc.

Subject: **Talmage Road/Southbound U.S. 101 On-Off Ramp Realignment Project, Ukiah, CA FEIR Responses to Comments (IR Job # 13-210)**

This memo contains responses from Leonard Charles & Associates and Illingworth & Rodkin, Inc. to comments received on the **Talmage Road/Southbound U.S. 101 On-Off Ramp Realignment Project's Draft EIR**. The responses to comments are organized by commenter.

Response to Letter on the Previous Draft MND from Greg Gilbert (Autumn Wind Associates, Inc.). Responses 6-1 through 6-12 were provided by Leonard Charles & Associates.

6-1 The commenter states that the DEIR should have assessed possible mitigations for the significant air quality impact, including requiring "fair share" fees to fund programs that would reduce vehicle emissions. The significant air quality impact associated with the proposed Project is the result of pollutant emissions from future increased traffic generated by area growth. The proposed Project has no authority to limit that growth and pollutant emissions. As noted in the DEIR, project-related emissions during operation are from mobile sources that would use the Project as part of their trip. Any future reduction in mobile emissions would result from improved engine efficiency or less polluting fuel sources. Such changes would be the result of State or federal policies and regulations, and the City does not have the authority to require such changes. The commenter suggests that the City assess a fair-share mitigation air quality mitigation fee to mitigate the air quality impacts of the Project. Under this Project, however, the City only has authority to impose mitigation on the applicant, and the applicant of this Project is the City itself. As such, requiring air quality mitigation fees for this Project would essentially require the City to pay a fee to itself for its own Project. To the extent the commenter suggests the City impose an air quality mitigation fee on development projects that might use the Project, those development projects are separate projects analyzed in their own environmental review documents and subject to air quality mitigation measures of their own where they would result in significant air quality impacts or make cumulatively considerable contributions to significant cumulative air quality impacts. The City can and does assess the potential air quality impacts of individual projects requiring CEQA review. However, the City has no authority to impose fair share air quality mitigation fees

on those projects now, as part of this Project. As such, there are no feasible measures to mitigate the proposed Project's air quality impacts to a less-than-significant level and the impact remains significant and unavoidable.

6-2 The commenter suggests certain mitigation measures to reduce significant air quality impacts, including requiring low- or zero-emission school buses, refuse vehicles, or other heavy-duty vehicles that will use Talmage Road interchange. School buses are owned and maintained by the school district and refuse vehicles also owned and maintained by a third party, Ukiah Waste Solutions. While the City can encourage them to do so, the City has no control over and cannot legally force these third party operators who might use Talmage Interchange to purchase low- or zero-emission vehicles. The mitigation suggestion is therefore infeasible. (See CEQA Guidelines, § 15364.)

Notably, state-wide programs to reduce emissions from school buses and heavy-duty vehicles already exist and are being implemented in Mendocino County. The California Air Resources Board approved the Truck and Bus regulation in 2008 to significantly reduce particulate matter and oxides of nitrogen emissions from existing diesel vehicles operating in California. The AB 923 Motor Vehicle Program provides funding for replacement of older school buses with new lower emissions school buses. As of 2014, the Mendocino County Air Quality Management District has provided funding for seven school buses for various school districts within the county totaling $796,820. In addition, the State Lower Emissions School Bus Program (LESBP) has provided funding for the replacement of fifteen additional school buses. With respect to heavy-duty vehicles, the Carl Moyer Program provides incentive funding for the replacement or retrofit of older diesel engines with newer cleaner engines. As of 2014, the Mendocino County Air Quality Management District has distributed in excess of $2,500,000 under this Program for the replacement or retrofit of 82 diesel engines for both private sector and government fleets.

The City is intent on reducing vehicle emissions within its jurisdiction. Currently, the City's fleet of 129 licensed vehicles includes 5 hybrid vehicles, 2 GEM (all electric) vehicles, and 1 CNG (natural gas) street sweeper. A major means of realizing this intention is the recent preparation of a Draft Climate Action Plan (CAP) for the City. The CAP has been approved by the City Planning Commission but not yet adopted by the City Council. The City's CAP contains a number of strategies and actions for the City to reduce GHG and other air pollutant emissions. Many recommended actions are listed, including the City upgrading its fleet to include more electric, hybrid, and alternative fuel vehicles and promoting telecommuting and alternative work strategies for City employees. Other recommended actions include ones to promote Transportation Demand Management (TDM) plans for local large employers.

6-3 The commenter suggests the City pay fair share fees to the Mendocino County Air Quality Management District as mitigation for air quality emissions impacts of the Project. Assessment of fair-share fees to the MCAQMD to mitigate air quality impacts is not an appropriate form of mitigation, unless it is linked to a

specific mitigation program. (See *Anderson First Coalition v. City of Anderson* (2005) 130 Cal.App.4th 1173, 1188 [mitigation fees must be part of a reasonable plan of actual mitigation that the relevant agency commits itself to implementing]; *Save Our Peninsula Comm. v. Monterey County Bd. Of Supervisors* (2001) 87 Cal.App.4th 99, 141 [same].) Unlike the examples of the SMAQMD and the PCAPCD, the MCAQMD does not have an adopted air quality fee mitigation program into which the City could pay fair-share mitigation fees. Mitigation requiring payment of fair-share fees would, therefore, be infeasible. (See CEQA Guidelines, § 15126.4, subd. (a)(1); see also, *Gray v. County of Madera* (2008) 167 Cal.App.4th 1099, 1122 [a fee requirement is not adequate mitigation when a program setting fee requirements and committing to specific mitigation measures has not been adopted].)

6-4 The commenter claims the DEIR's traffic analysis is inconsistent with guidance addressing Senate Bill 743. In August 2014, the California Office of Planning and Research circulated a "Preliminary Discussion Draft of Updates to the CEQA Guidelines Implementing Senate Bill 743" (Steinberg, 2013) to obtain public comments. The comment period ended on November 21, 2014. OPR is reviewing the comments it received, and, if warranted, will consider revisions to the draft guidelines. Once finalized and adopted, the new guidelines will be phased in. Initially, they would apply within "transit served areas," and by January 1, 2016 they would apply statewide. The act states that the guidelines only apply to new projects that have not commenced environmental review when the guidelines are adopted. Subdivision (d) of CEQA Guidelines section 15007 further provides that "[p]ublic agencies shall comply with new requirements in amendments to the Guidelines beginning with the earlier of the following two dates: (1) The effective date of the agency's procedures amended to conform to the new Guideline amendments; or (2) The 120th day after the effective date of the Guideline amendments." Thus, the City would not be subject to any new Guidelines until 120 days after they're effective (which will not occur until after the Natural Resources Agency has completed a formal rulemaking process and the Office of Administrative Law has completed its review). Because no formal rulemaking process has begun, the effective date of any new regulations has not yet occurred. Moreover, the DEIR is not required to address any new requirements under the new Guidelines implementing SB 743 pursuant to subdivisions (b) and (c) of section 15007. The former provides that "[a]mendments to the Guidelines apply prospectively only. New requirements in amendments will apply to steps in the CEQA process not yet undertaken by the date when agencies must comply with the amendments." Subdivision (c), in turn, provides that "[i]f a document meets the content requirements in effect when the document is sent out for public review, the document shall not need to be revised to conform to any new content requirements in Guideline amendments taking effect before the document is finally approved."

Nevertheless, it is valuable to understand how use of these possible future guidelines could affect the DEIR conclusions. The proposed guidelines, if adopted, would make several major changes to how transportation impacts may be assessed under CEQA. Under the new proposed Section 15064.3 of the State

CEQA Guidelines, transportation impacts of projects would no longer be measured on the basis of how vehicle delay caused by a project would affect the level of service (LOS) at an intersection or on a roadway, but would instead be measured on the basis of the vehicle miles traveled that the project generates and on the project's effects on transit, non-motorized travel, and traveler safety. Nevertheless, delay and level of service may still be assessed in the CEQA document by the lead agency with respect to consistency with that agency's adopted plans (e.g., minimum LOS standards as set forth in the agency's general plan).

Instead of identifying impacts based on the effects on LOS, impacts for transportation projects such as this interchange improvement Project would be based on whether the Project increases roadway capacity for automobiles in a congested area or adds a new roadway to the network thereby inducing additional automobile travel compared to existing conditions. The preliminary guidelines go on to state that a transportation project whose primary purpose is improving safety or operations generally would not have a significant transportation impact. The proposed Project does add roadway capacity, but the added capacity is needed to address existing operational and safety constraints as well as to address additional projected traffic generated by predicted area growth to the year 2032.

The commenter states that the DEIR's cumulative traffic analysis ignores SB 743's recognition that building more highway capacity leads to greater growth and greater pollutant emissions. The commenter, however, ignores that the additional highway capacity associated with this Project is needed to address traffic as a result of future growth, which Caltrans predicts will increase by a factor of 1.3 through the Project area by 2032. This area-wide growth is not a consequence of the Project. As stated in the DEIR, if that increase occurs as projected and the Project is not constructed, then there will be increased congestion through the Project area. This increased congestion would result in increased emission of air pollutants and GHG that would increase the severity of the significant impacts on air quality and GHG emissions described in the DEIR. In addition, by facilitating access to major Ukiah area retailers (and facilitating such access is one of the goals of the act), the Project may reduce overall indirect vehicle miles traveled (VMT).

As described under the No Project Alternative (DEIR, page 162), emission of air pollutants and GHG would have a greater impact if the Project were not built.

Finally, even if indirect VMT did increase due to the Project, emissions from that increase could, at worst, be a significant air quality and GHG impact. The DEIR, however, already concludes that these indirect Project impacts are significant and unavoidable.

6-5 The commenter suggests that the project will expand highway capacity thereby increasing pollutant emissions and that the City will disclaim any duty to mitigate those impacts and approve the project with a statement of overriding considerations. The commenter's opinion is noted for the record. As described in

the DEIR, the proposed Project improvements were called for in the City's General Plan as necessary for the general plan-designated development of the Redwood Business Park/Airport Industrial Park. The growth is projected to come from development allowed under the City's General Plan, the Ukiah Valley Area Plan, and the County's General Plan, as accounted for in Caltrans-projected regional traffic increase along the Highway 101 corridor. This growth is not caused by the proposed Project. However, for CEQA purposes, the DEIR assessed the indirect impacts of this projected traffic increase as it travels through the Project. If the Project is not constructed, much, if not all, of this traffic would still travel through the Project area while other vehicles might travel to more distant shopping areas. As described under the No Project Alternative (DEIR, page 162), emission of air pollutants and GHG would have a greater impact if the Project were not built.

6-6 The commenter suggests that, based on the Costco EIR traffic analysis, the Project DEIR underestimates future traffic to a level that 2032 emissions would exceed the benefits of new regulations that are projected to reduce emissions by that date. The Talmage DEIR accurately reports that emissions in 2032 from traffic travelling through the Project site would be less than existing condition emissions. However, because the destinations of these future trips remains unknown, the modeling done for interchange improvements identifies emissions only from those existing and future vehicles passing through the Project site. The Costco EIR analysis was referenced in the Talmage DEIR to show that the complete trips generated by the Costco project (some of which would travel through the Project site) would generate emissions exceeding the adopted significance threshold. The commenter is correct that the DEIR concludes that the overall emissions would exceed significance criteria. On this basis, though the Project would not directly cause the emissions, the DEIR conservatively concluded the impact to be significant and unavoidable.

The commenter is correct that the main cause of future emission reductions would result from changes in engine efficiency and the composition of fuels. However, the improvement in intersection operations within the Project site would reduce congestion and vehicle delay, and this improved operation would also result in some reduction in emissions.

6-7 The commenter states that indirect vehicle emissions of all vehicles using the Project in 2032 should have been modeled. The air quality analysis was based on the traffic study prepared for the Talmage DEIR. Emissions from all vehicles passing through the Project site were modeled, which is consistent with the Caltrans-approved model. The CTEMFAC-5 is used to calculate mobile source air toxics and CO_2 emissions. To calculate emissions from a project the model relies on the traffic volumes, speeds, and delays through the project site. As the Project would not cause these trips and it is unknown to and from where these trips would go, it is speculative to model the total length of the new trips added by 2032. (See State CEQA Guidelines, § 15145.) The traffic assessment was based on the Caltrans 1.3 growth factor assumption regarding increases in traffic that would use the Project by 2032. That said, as stated in the previous response, the

Costco EIR analysis was referenced in the Talmage DEIR analysis to conservatively account for the possible total trip length of some of the new traffic that could use the Project after its completion and in 2032. Again, the impact was deemed significant and unavoidable.

6-8 The commenter states that the Talmage DEIR's 2032 traffic projection is underestimated and inconsistent with traffic projections done for the Costco EIR. This interchange improvement DEIR does not contradict the analysis in the Costco EIR. Rather, it updates traffic counts and relies on the more up-to-date future traffic projections that Caltrans has made for the area. See Response 4-10 and Response 5-18 to 5-25 regarding the appropriateness of the traffic projections in the Talmage DEIR compared to those made in the Costco EIR. See also Responses 6-4 and 6-5 above regarding the issue of potential emissions from increasing interchange capacity.

6-9 The commenter states that the Project DEIR does not adequately assess near- to mid-term congestion (with concurrent emission of pollutants) induced by improving the interchange's capacity. As described on page 94 of the Talmage DEIR, short-term emissions from additional traffic once the Project becomes operational would be less than significant. As described in previous Responses 6-4 and 6-5, future emissions are based in part on Caltrans-projected traffic volume increases in the area. As stated on page 154 of the DEIR, the Project would accommodate already planned and approved development on the Redwood Business Park/Airport Industrial Park and would not induce additional development in the area. The Project would accommodate the projected trips from planned area development. Accordingly, it would not increase VMT. In fact, as previously stated in Response 6-4, it could decrease future VMT.

6-10 The commenter states that the DEIR's 2032 traffic projection is underestimated and inconsistent with traffic projections done for the Costco EIR. Again, see Response 4-10 Response 5-18 to 5-25 on why the Talmage DEIR Project trips are different from and more appropriate than the Costco trip projections. The DEIR used the most current growth projections that Caltrans provided.

6-11 The commenter again states that the project will increase roadway capacity leading to an increase in VMT. Please see previous Responses 6-4 and 6-5 regarding this same comment.

6-12 The commenter states that modeling of all 2032 trips is needed to quantitatively know the amount of pollutants that may be emitted in 2032 and that the traffic projections are inaccurate. Further, the commenter opines that the project should be reviewed per SB 743 regarding traffic impacts from increased roadway capacity. As explained in Response 6-7, because the Project will not cause new traffic trips, the emissions from the complete trips that could use the Project by 2032 are not Project-related and remain speculative. To ensure that the DEIR provided the most conservative analysis, the emissions reported in the certified Costco EIR were discussed and incorporated into the analysis. Thus, contrary to the commenter's claim, the DEIR does not underreport the emissions for the

Project by excluding emissions associated with the traffic projections from the Costco EIR. On that basis, the indirect air quality impact in the DEIR was found to be significant and unavoidable. See previous Response 4-10 and Response 5-18 to 5-25 regarding the relationship of Costco traffic and the Project. See previous Response 6-4 regarding the issue of the Project increasing VMT and the Project's relationship to SB 743.

Response to Letter on the Previous Draft MND from Greg Gilbert (Autumn Wind Associates, Inc.). Responses 6-13 through 6-15 were prepared by Illingworth & Rodkin, Inc.

6-13 - The commenter states that the DEIR should have used a more current version of the Road Construction Emissions Model. When the original Project assessment was conducted, the version of the Road Construction Emissions Model, current at that time was Version 6.3.2. Since that analysis was completed, the new model, Version 7.1.5.1 was released. This newest version was run, and it showed no exceedances of the Mendocino County Air Quality Management District's CEQA thresholds of significance. The average daily emissions are higher than the original estimates reported in the DEIR, mostly because the newer model assigns more equipment usage. The emissions are shown in the following table. More data on the modeling is included in Appendix C of the FEIR.

Revised Table 5 – Maximum Road Construction Emission Model Results

Emission Estimates for – Talmage Rd Interchange		**ROG (lbs/day)**	**CO (lbs/day)**	**NOx (lbs/day)**	**Total PM_{10} (lbs/day)**	**Total $PM_{2.5}$ (lbs/day)**	**CO_2 (lbs/day)**
Project Phases							
Grubbing/Land Clearing	**Daily Maximum**	2.1	12.4	21.0	11.0	3.0	2,325.9
	Daily Average	0.2	1.2	2.1	1.1	0.3	232.6
Grading/Excavation	**Daily Maximum**	7.8	37.6	76.3	14.3	6.0	7,595.8
	Daily Average	3.1	15.0	30.5	5.7	2.4	3,038.3
Drainage/Utilities/Sub-Grade	**Daily Maximum**	5.3	24.8	49.0	12.8	4.6	4,884.9
	Daily Average	0.4	2.3	3.6	0.2	0.2	1,709.7
Paving	**Daily Maximum**	2.9	15.0	24.3	1.6	1.5	2,692.0
	Daily Average	5.6	57.2	53.4	11.5	4.5	403.8
Maximum (pounds/day)		7.8	37.6	76.3	14.3	6.0	7,595.8
Average (pounds/day)		***5.6***	***27.2***	***53.4***	***11.5***	***4.5***	***5,384.4***
MCAQMD Threshold Of Significance Average (pounds/day)		54	None	54	82	54	None
Total (tons/construction project)		0.4	1.8	3.5	0.8	0.3	355

6-14 - The commenter states that the DEIR does not indicate whether ramp and bridge demolition activities were included in the construction emissions modeling. The model was adjusted to be conservative and to address demolition activities. The acreage input was increased to 2.1 acres, and extra equipment was added to address the partial demolition of the bridge and ramp. The amount of equipment

and the time of use in each phase of the construction include the demolition and construction of the new ramp alignment. See Appendix C of this FEIR for the modeling.

6-15 - The commenter states that the construction emissions modeling did not include work at the southbound off-ramp lane. As shown in Appendix C, the disturbance area was increased to 2.1 acres to be conservative and ensure that all roadwork was included.

Comment AB 279 - *Provide more explanation as to how the air quality analysis relies on the traffic analysis, i.e., explain the methodology in more detail*

Response CT-EMFAC 5 is an interpretation of the California Air Resource Board's **EMFAC** model that simplifies the process of developing composite emission factors for highway project air quality analysis. The data from the traffic study, including speed, peak hour volume, and delay, are entered into the model and

Comment AB 29 - *The comment refers to emissions from demolition activities and it doesn't appear that emissions from such activities are addressed in the new analysis. Need to model fugitive dust, etc. from demo activities.*

Response – As stated in comment 6-14, extra equipment was added to the equipment list to accommodate the portion of the bridge that will be demolished.

Appendix C

Road Construction Emissions Model Results

Modeling of emissions from project construction was done using the Road Construction Emissions Model Version 7.1.5.1. The model includes input defaults for, among other factors, the amount of equipment that would be used during construction. The model allows changes to the defaults to account for smaller or larger projects or other known and/or unusual conditions. The Talmage Interchange project is relatively small for a highway project. Accordingly, the amount of equipment used was reduced from the default assumption in 8 cases (e.g., excavators would not be used for this project) and increased in 2 cases. The number of vehicles anticipated for use in constructing the project were reviewed by GHD (the project engineers) and found to be reasonable estimates for the project. The model results are shown on the following pages.

Road Construction Emissions Model, Version 7.1.5.1

Emission Estimates for ->	Talmage Road (Revised)			Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	
Project Phases (English Units)	**ROG (lbs/day)**	**CO (lbs/day)**	**NOx (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**CO2 (lbs/day)**
Grubbing/Land Clearing	2.1	12.4	21.0	11.0	1.0	10.0	3.0	0.9	2.1	2,325.9
Grading/Excavation	7.8	37.6	76.3	14.3	4.3	10.0	6.0	3.9	2.1	7,595.8
Drainage/Utilities/Sub-Grade	5.3	24.8	49.0	12.8	2.8	10.0	4.6	2.6	2.1	4,884.9
Paving	2.9	15.0	24.3	1.6	1.6	0.0	1.5	1.5	0.0	2,692.0
Maximum (pounds/day)	7.8	37.6	76.3	14.3	4.3	10.0	6.0	3.9	2.1	7,595.8
AVERAGE (pounds per day)	***5.6***	***27.2***	***53.4***	***11.5***	***3.0***	***8.5***	***4.5***	***2.8***	***1.8***	***5384.4***
Total (tons/construction project)	0.4	1.8	3.5	0.8	0.2	0.6	0.3	0.2	0.1	355.4

Notes: Project Start Year -> 2015
Project Length (months) -> 6
Total Project Area (acres) -> 2.1
Maximum Area Disturbed/Day (acres) -> 0.5
Total Soil Imported/Exported (yd^3/day)-> 0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column E are the sum of exhaust and fugitive dust emissions shown in columns F and G. Total PM2.5 emissions shown in Column H are the sum of exhaust and fugitive dust emissions shown in columns I and J.

Emission Estimates for ->	Talmage Road (Revised)			Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	
Project Phases (Metric Units)	**ROG (kgs/day)**	**CO (kgs/day)**	**NOx (kgs/day)**	**PM10 (kgs/day)**	**PM10 (kgs/day)**	**PM10 (kgs/day)**	**PM2.5 (kgs/day)**	**PM2.5 (kgs/day)**	**PM2.5 (kgs/day)**	**CO2 (kgs/day)**
Grubbing/Land Clearing	0.8	4.4	7.3	4.9	0.3	4.5	1.3	0.3	0.9	796.8
Grading/Excavation	3.7	17.3	36.5	6.5	2.0	4.5	2.7	1.8	0.9	3,478.1
Drainage/Utilities/Sub-Grade	2.2	10.5	20.7	5.7	1.2	4.5	2.0	1.1	0.9	2,067.5
Paving	1.3	6.8	11.0	0.7	0.7	-	0.7	0.7	-	1,223.6
Maximum (kilograms/day)	3.7	17.3	36.5	6.5	2.0	4.5	2.7	1.8	0.9	3,478.1
Total (megagrams/construction project)	0.3	1.6	3.2	0.7	0.2	0.5	0.3	0.2	0.1	313.2

Notes: Project Start Year -> 2015
Project Length (months) -> 6
Total Project Area (hectares) -> 1
Maximum Area Disturbed/Day (hectares) -> 0
Total Soil Imported/Exported ($meters^3$/day)-> 0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column E are the sum of exhaust and fugitive dust emissions shown in columns F and G. Total PM2.5 emissions shown in Column H are the sum of exhaust and fugitive dust emissions shown in columns I and J.

Road Construction Emissions Model
Data Entry Worksheet

Version 7.1.5.1

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a
yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells C10 through C25.

Input Type		
Project Name	Talmage Road (Revised)	
Construction Start Year	2015	Enter a Year between 2009 and 2025 (inclusive)
Project Type	2	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	6.00	months
Predominant Soil/Site Type: Enter 1, 2, or 3	1	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	0.30	miles
Total Project Area	2.10	acres
Maximum Area Disturbed/Day	0.50	acres
Water Trucks Used?	2	1. Yes 2. No
Soil Imported	0.00	yd^3/day
Soil Exported		yd^3/day
Average Truck Capacity	20	yd^3 (assume 20 if unknown)

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.

Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.

Construction Periods	User Override of Construction Months	Program Calculated Months	2005	%	2006	%	2007	%
Grubbing/Land Clearing		0.60	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation		2.40	0.00	0.00	0.00	0.00	0.00	0.00
Drainage/Utilities/Sub-Grade		2.10	0.00	0.00	0.00	0.00	0.00	0.00
Paving		0.90	0.00	0.00	0.00	0.00	0.00	0.00
Totals	0.00	6.00						

NOTE: soil hauling emissions are included in the Grading/Excavation Construction Period Phase, therefore the Construction Period for Grading/Excavation cannot be zero if hauling is part of the project.

Hauling emission default values can be overridden in cells C45 through C46.

Soil Hauling Emissions

User Input	User Override of Soil Hauling Defaults	Default Values
Miles/round trip		30
Round trips/day		0
Vehicle miles traveled/day (calculated)		0

Hauling Emissions	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate (grams/mile)	0.25	9.41	1.09	0.22	0.15	1694.67
Emission rate (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day	0.00	0.00	0.00	0.00	0.00	0.00
Tons per contruction period	0.00	0.00	0.00	0.00	0.00	0.00

Worker commute default values can be overridden in cells C60 through C65.

Worker Commute Emissions

	User Override of Worker Commute Default Values	Default Values
Miles/ one-way trip		20
One-way trips/day		2
No. of employees: Grubbing/Land Clearing		5
No. of employees: Grading/Excavation		20
No. of employees: Drainage/Utilities/Sub-Grade		14
No. of employees: Paving		10

	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)	0.164	0.219	1.956	0.047	0.020	443.518
Emission rate - Grading/Excavation (grams/mile)	0.164	0.219	1.956	0.047	0.020	443.518
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.164	0.219	1.956	0.047	0.020	443.518
Emission rate - Paving (grams/mile)	0.164	0.219	1.956	0.047	0.020	443.518
Emission rate - Grubbing/Land Clearing (grams/trip)	0.558	0.363	4.666	0.004	0.003	95.528
Emission rate - Grading/Excavation (grams/trip)	0.558	0.363	4.666	0.004	0.003	95.528
Emission rate - Draining/Utilities/Sub-Grade (gr/trip)	0.558	0.363	4.666	0.004	0.003	95.528
Emission rate - Paving (grams/trip)	0.558	0.363	4.666	0.004	0.003	95.528
Pounds per day - Grubbing/Land Clearing	0.084	0.105	0.965	0.021	0.009	197.486
Tons per const. Period - Grub/Land Clear	0.001	0.001	0.006	0.000	0.000	1.303
Pounds per day - Grading/Excavation	0.337	0.418	3.858	0.083	0.035	789.946
Tons per const. Period - Grading/Excavation	0.009	0.011	0.102	0.002	0.001	20.855
Pounds per day - Drainage/Utilities/Sub-Grade	0.232	0.288	2.652	0.057	0.024	543.088
Tons per const. Period - Drain/Util/Sub-Grade	0.005	0.007	0.061	0.001	0.001	12.545
Pounds per day - Paving	0.169	0.209	1.929	0.042	0.018	394.973
Tons per const. Period - Paving	0.002	0.002	0.019	0.000	0.000	3.910
tons per construction period	0.016	0.020	0.189	0.004	0.002	38.614

Water truck default values can be overriden in cells C91 through C93 and E91 through E93.

Water Truck Emissions	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Miles Traveled/Day	Default Values Miles Traveled/Day		
Grubbing/Land Clearing - Exhaust		0		0		
Grading/Excavation - Exhaust		0		0		
Drainage/Utilities/Subgrade		0		0		
	ROG	**NOx**	**CO**	**PM10**	**PM2.5**	**CO2**
Emission rate - Grubbing/Land Clearing (grams/mile)	0.25	9.41	1.09	0.22	0.15	1694.67
Emission rate - Grading/Excavation (grams/mile)	0.25	9.41	1.09	0.22	0.15	1694.67
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.25	9.41	1.09	0.22	0.15	1694.67
Pounds per day - Grubbing/Land Clearing	0	0	0	0	0	0
Tons per const. Period - Grub/Land Clear	0	0	0	0	0	0
Pound per day - Grading/Excavation	0	0	0	0	0	0
Tons per const. Period - Grading/Excavation	0	0	0	0	0	0
Pound per day - Drainage/Utilities/Subgrade	0	0	0	0	0	0
Tons per const. Period - Drainage/Utilities/Subgrade	0	0	0	0	0	0

Fugitive dust default values can be overridden in cells C110 through C112.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing	0.00	0.5	0.0	0.0	0.0	0.0
Fugitive Dust - Grading/Excavation	0.00	0.5	0.0	0.0	0.0	0.0
Fugitive Dust - Drainage/Utilities/Subgrade	0.00	0.5	0.0	0.0	0.0	0.0

Off-Road Equipment Emissions

Grubbing/Land Clearing	Default Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	*Program-estimate*	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
	1	Crawler Tractors	0.74	4.47	9.67	0.37	0.34	825.35
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Signal Boards	0.41	1.41	1.37	0.11	0.10	157.43
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grubbing/Land Clearing	pounds per day	1.1	5.9	11.0	0.5	0.4	982.8
	Grubbing/Land Clearing	tons per phase	0.0	0.0	0.1	0.0	0.0	6.5

Grading/Excavation	Default Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	*Program-estimate*	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
1.00	2	Graders	1.11	3.49	10.87	0.61	0.56	671.98
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Other Construction Equipment	0.73	3.60	7.83	0.41	0.38	654.35
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
1.00	1	Rubber Tired Loaders	0.54	3.12	6.84	0.23	0.21	662.67
1.00	2	Scrapers	1.52	7.26	18.70	0.76	0.70	1609.12
	1	Signal Boards	0.41	1.41	1.37	0.11	0.10	157.43
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
	4	Tractors/Loaders/Backhoes	1.52	6.30	13.79	1.08	0.99	1345.57
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	5.8	25.2	59.4	3.2	2.9	5101.1
	Grading	tons per phase	0.2	0.7	1.6	0.1	0.1	134.7

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Bore/Drill Rigs	0.41	3.79	6.06	0.18	0.17	944.07
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
	1	Generator Sets	0.56	3.00	4.08	0.30	0.27	487.07
	1	Graders	1.11	3.49	10.87	0.61	0.56	671.98
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	1	Plate Compactors	0.04	0.21	0.25	0.01	0.01	34.45
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Rough Terrain Forklifts	0.25	2.03	3.05	0.18	0.16	372.57
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
	1	Scrapers	1.52	7.26	18.70	0.76	0.70	1609.12
	1	Signal Boards	0.41	1.41	1.37	0.11	0.10	157.43
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
	3	Tractors/Loaders/Backhoes	1.14	4.73	10.34	0.81	0.74	1009.18
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Drainage	pounds per day	5.4	25.9	54.7	2.9	2.7	5285.9
	Drainage	tons per phase	0.1	0.6	1.3	0.1	0.1	122.1

Paving	Default Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	*Program-estimate*	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	1	Pavers	0.47	2.84	5.10	0.26	0.23	481.54
	1	Paving Equipment	0.35	2.69	4.06	0.20	0.18	426.17
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
	2	Rollers	0.76	3.02	6.68	0.50	0.46	559.11
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Signal Boards	0.41	1.41	1.37	0.11	0.10	157.43
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
2.00	3	Tractors/Loaders/Backhoes	0.76	3.15	6.89	0.54	0.50	672.79
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	2.7	13.1	24.1	1.6	1.5	2297.0
	Paving	tons per phase	0.0	0.1	0.2	0.0	0.0	22.7
Total Emissions all Phases (tons per construction period) =>			0.3	1.4	3.1	0.2	0.2	286.0

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.

Equipment		Default Values Horsepower		Default Values Hours/day
Aerial Lifts		20		8
Air Compressors		96390		8
Bore/Drill Rigs		214		8
Cement and Mortar Mixers		4599		8
Concrete/Industrial Saws		4941		8
Cranes		1372		8
Crawler Tractors		1720		8
Crushing/Proc. Equipment		3010		8
Excavators		585		8
Forklifts		514		8
Generator Sets		184590		8
Graders		69		8
Off-Highway Tractors		86		8
Off-Highway Trucks		9281		8
Other Construction Equipment		911		8
Other General Industrial Equipment		90		8
Other Material Handling Equipment		36		8
Pavers		1165		8
Paving Equipment		665		8
Plate Compactors		142		8
Pressure Washers		456		8
Pumps		615		8
Rollers		1866		8
Rough Terrain Forklifts		338		8
Rubber Tired Dozers		9597		8
Rubber Tired Loaders		2314		8
Scrapers		1055		8
Signal Boards		22436		8
Skid Steer Loaders		47		8
Surfacing Equipment		456		8
Sweepers/Scrubbers		103		8
Tractors/Loaders/Backhoes		378		8
Trenchers		689		8
Welders		844		8

0

END OF DATA ENTRY SHEET

Appendix D

Memo Containing Responses from the EIR Noise Consultant

ILLINGWORTH & RODKIN, INC.
Acoustics • Air Quality
1 Willowbrook Court, Suite 120
Petaluma, CA 94954

Memo

Date: April 17, 2015

To: Leonard Charles
Leonard Charles & Associates

From: Michael Thill, Principal Consultant
Illingworth & Rodkin, Inc.

Subject: **Talmage Road/Southbound U.S. 101 On-Off Ramp Realignment Project, Ukiah, CA FEIR Responses to Comments (IR Job # 13-210)**

This memo contains Illingworth & Rodkin, Inc.'s responses to comments received on the Talmage Road/Southbound U.S. 101 On-Off Ramp Realignment Project's Draft EIR. The responses to comments are organized by commenter.

Response to Letter on the Previous Draft MND from Steve Pettyjohn (The Acoustics & Vibration Group, Inc.)

9-1 The commenter is directed to the noise analysis contained in the DEIR (pages 98 through 116). This DEIR analysis addresses noise from future vehicle use of the project and also includes a cumulative noise impact analysis. Appendix G of the DEIR contains details on noise measurements and methodology to allow independent evaluation of noise impacts. The DEIR noise analysis also contains a full discussion of project construction noise. Accordingly, the prior comments on the original Initial Study were addressed in the new noise analysis prepared for the DEIR. This analysis accurately identifies project noise impacts and needed mitigation measures. It is further noted that no comments regarding the DEIR noise analysis were submitted by any of the individuals or agencies commenting directly on the DEIR.

9-2 The new noise analysis done for the DEIR does include noise measurements that describe the existing noise environment. It also includes the results on noise modeling to show projected future (2032) noise levels and the effects on noise-sensitive receptors (see Table 4.7-8 on page 115 of the DEIR for a summary of existing and future noise levels at sensitive receptors). As the comment refers to an earlier report, it does not concern the current DEIR noise analysis.

9-3 The noise analysis done for the DEIR accurately shows the location of noise measurement locations, selected at locations that were representative of the noise environment at the nearest noise-sensitive receptors to the project, as well as all other information needed to independently assess the results of the noise modeling (see DEIR Appendix G). As the comment refers to an earlier report, it does not concern the current DEIR noise analysis.

9-4 A footnote on page 108 of the DEIR explains why the one-year duration is considered a reasonable threshold for project construction noise. Also, please see the subsequent Response 11-27 regarding this same concern.

Response to Letter on the Previous Draft MND from Dale La Forest (Dale La Forest & Associates)

11-1 It is noted as a general response that this letter contains comments on the previous IS/MND. No comments regarding the DEIR noise analysis were submitted by this commenter or any of the other individuals or agencies commenting directly on the DEIR.

The noise analysis done for the Draft MND was revised and expanded for the DEIR. Based on that new analysis, construction noise impacts were found to be less than significant unless night work was required. In that case the DEIR recommends mitigation requiring a City permit, and that permit will include conditions to limit the nighttime noise. The Walmart DEIR also required compliance with the City's Noise Ordinance and the need for City approval for work that occurred after the hours specified in the Noise Ordinance. The Walmart EIR also required posting of information for contractors informing them of construction time limits. As this interchange Project would be done per Caltrans approvals, it is expected that all contractors would be required to ensure that workers abide by the Noise Ordinance and any permit conditions required for nighttime work. The Walmart EIR also recommended that 1) construction equipment use the best available noise control techniques wherever feasible; 2) impact tools be hydraulically or electrically powered, or, if not feasible, fitted with a muffler and jackets; 3) stationary noise sources be located as far from sensitive receptors as possible; and 4) amplified music (boom boxes) not be allowed at the job site. As this construction Project would be done under contract to the City with Caltrans approval, it is expected that best noise control technology would be used for construction equipment, including impact tools. Any stationary generators would need to be moved as construction along the ramps and roadway progresses. Given the noisy Project environment, and the type of construction involved, it is not expected that boom boxes would be used, or, if they were that they would be audible at sensitive receptors. The DEIR found that construction noise would be less than significant given the one recommended mitigation addressing nighttime construction. Additional mitigations are not warranted. However, to ensure that construction noise limitations are clear, an additional mitigation will be added requiring construction equipment use the best available noise control techniques wherever feasible; 2) impact tools be hydraulically or electrically powered, or, if not feasible, fitted with a muffler and jackets; 3) stationary noise sources be located as far from sensitive receptors as possible; and 4) amplified music (boom boxes) not be allowed at the job site. See Chapter 4 of this Final EIR for this EIR addition.

With regard to the noise measurements done for the Walmart EIR, they were done at a different time of season and year. The noise measurements done for this DEIR are considered the most current data on existing noise levels and they are accurate. Ambient noise measurements were made during two noise surveys; the first noise survey occurred in January 2013, and the second occurred in November 2013. The two noise monitoring

surveys were conducted to quantify ambient noise levels at representative noise-sensitive land uses located in the project vicinity. Noise levels measured during the November 2013 noise monitoring survey were consistent and reliable. Further, the November 2013 noise monitoring survey confirmed that the January 2013 noise data taken as part of the analysis prepared for the IS/MND were credible, repeatable, and applicable to the DEIR assessment. Also see Response 11-5 below.

11-2 As noted on page 112 of the DEIR, the Ukiah City Code establishes limits on the hours during the day that construction activity is permitted to occur. However, it is possible that nighttime work could occur resulting in a potentially significant nighttime noise impact. Mitigation Measure 4.7-A.1 requires that the applicant shall obtain a permit from the Ukiah Director of Public Works if nighttime work is necessary, as required by the City Code. The permit shall include the following: 1) allow construction noise between 7 P.M. and 7 A.M. only for construction activities that Caltrans states needs to be done at night; 2) construction equipment idling shall be limited to five (5) minutes; 3) if nighttime work is to exceed one week, then temporary noise baffles would be installed between the noise source and sensitive receptors; 4) if nighttime work is to exceed one week, then provide hotel vouchers to occupants of the nearest sensitive receptors; and 5) any other noise-reducing measures the City considers warranted. With the implementation of this measure, the impact would be less than significant.

The DEIR and supporting noise and vibration technical analysis, included as Appendix G of the DEIR, conclude that construction activities would not result in significant noise or vibration impacts on commercial businesses in the Project vicinity.

Substantial permanent noise increases would not occur as a result of the Project. Impact 4.7-C of the DEIR (pages 114 through 116) summarizes the significance criteria used in the evaluation of substantial permanent noise increases. Traffic noise modeling results indicate that noise increases would range from 0 to 2.2 dBA at receptors in the Project vicinity. The noise increases attributable to the proposed improvements and additional traffic volumes expected along the roadways would not exceed the 3 dBA threshold of significance.

As noted in Response 11-1, additional noise measurements were completed for this DEIR, were accurate and compared well with the data collected for the IS/MND, and are considered the most current data on existing noise levels in the Project vicinity.

The traffic noise modeling discussion contained on page 114 of the DEIR summarizes the methods and data used in the traffic noise modeling done to describe future traffic noise. Peak hour traffic volume data was used for existing conditions (2012) and future conditions in 2032. Travel speeds and vehicle mix were input into the model based on observations made during the noise monitoring surveys. The full report contains the TNM adjustment factors and input and output files.

11-3 The DEIR noise analysis report includes the requested data about the sound level meters, how and where noise measurements were made, what the meteorological conditions were, and the neighborhood noise circumstances. See Appendix G of the DEIR.

11-4 See pages 103 through 106 of the DEIR and Appendix G of the DEIR regarding this same issue. The November 2013 Noise Monitoring Survey included three additional short-term noise measurements conducted over a period of 40 minutes (four 10-minute intervals) at each site.

11-5 Noise levels measured during the November 2013 noise monitoring survey were consistent and reliable as a review of the data shows that the data were similar during each of the two surveys. Further, the November 2013 noise monitoring survey confirmed that the January 2013 noise data taken as part of the analysis prepared for the IS/MND were credible, repeatable, and applicable to the DEIR assessment. Measurements made during the surveys followed the general noise measurement guidance recommended by Caltrans in the Technical Noise Supplement (TeNS). Further, Caltrans review of the noise measurements and analysis did not reveal any significant issues or deviations from the TeNS guidance.

11-6 See pages 103 through 106 of the DEIR and Appendix G of the DEIR regarding this same issue. Both the January 2013 and November 2013 noise monitoring surveys included long-term and short-term noise measurements. The short-term noise measurements were made in concurrent time intervals with the data collected at the long-term reference measurement sites. This method facilitates a direct comparison between both the short-term and long-term noise measurements and allows for the identification of the worst-hour noise levels, as well as noise levels during the quietest hours at land uses in the Project vicinity where long-term noise measurements were not made. The commenter claims that the noise analysis should have focused on peak hour traffic, as that would be the worst-hour noise levels. CEQA does not require worst-case analysis, however. An EIR need not speculate about the worst conceivable impacts that may occur if a project is approved. (*Towards Responsibility in Planning v. City Council* (1988) 200 Cal.App.3d 671, 681; *Napa Citizens for Honest Government v. Napa County Bd. of Supervisors* (2001) 91 Cal.App.4th 342, 373.)

11-7 See Response 11-1 regarding this same issue. The noise measurements done for the DEIR are considered the most current data on existing noise levels, and the results of the measurements are accurate. Noise levels at elevated positions such as reference measurement LT-1 (microphone 12 feet above the ground) are typically higher than measurements made at short-term sites (microphone 5 feet above the ground to represent human ear height) because of the absorption of the sound energy by the ground. See the description of the methodology used to calculate noise levels at the measurement locations in the noise study contained in Appendix G of the DEIR.

11-8 See Response 11-5 regarding this same issue.

11-9 See Responses 11-1 and 11-5 regarding this same issue. There was no seasonal variation noted between the January 2013 and November 2013 surveys done for the DEIR. There is no merit to the claim of seasonal differences.

11-10 See pages 103 through 106 of the DEIR and Appendix G of the DEIR regarding this same issue. Measurements made at Sites LT-2, LT-4, ST-3/ST-4, and ST-6 documented noise levels at locations representative of residential land uses near U.S. 101 and the southbound off-ramps to Talmage Road. The day-night average noise levels (Ldn) were calculated based on the measured data at long-term sites or estimated (as described previously) at each of the short-term measurement sites.

11-11 See Response 11-6 and notes on DEIR Tables 4.7-4 and 4.7-5 that describe how the method of using data from the short-term and long-term noise measurements allows for the identification of the worst-hour noise levels, as well as, noise levels during the quietest hours at land uses in the Project vicinity where long-term noise measurements were not made. Noise measurements at the long-term measurement locations were 24-hour measurements. The calculation of noise levels described in the DEIR and DEIR Appendix G uses standard acoustical engineering approaches that combine short-term and long-term measurements.

11-12 See Responses 11-6 and 11-11 regarding this same issue. The Ldn noise levels at Sites ST-1 and ST-3 were estimated by comparing average noise levels (Leq) during corresponding time periods. In each instance, the Ldn was calculated to be 63 dBA.

11-13 Table 4 of the IS/MND noise study contained a typographical error. This error was corrected on page 104 of the DEIR and within Appendix G of the DEIR.

11-14 See Response 11-6 regarding this same comment.

11-15 This comment refers to the older noise study done for the Draft IS/MND. The tables and graphics in the DEIR have been revised to fix these earlier problems. The measurement locations are accurately mapped in the DEIR (see Figure 4.7-1).

11-16 The DEIR noise analysis report includes the requested data about the traffic noise model inputs. (see Appendix G of the DEIR). As described in Appendix G (page 13) traffic data was provided by the EIR traffic consultants. The traffic data was the same as reported in the traffic section of the DEIR.

11-17 See Responses 11-1, 11-2, and 11-5 regarding this same issue. The noise study is based on the Caltrans-projected 1.3 growth rate in traffic by 2030, which includes development of the Costco site. The Walmart project is no longer proposed, and, therefore, not assessed (see Response 4-9 regarding the WALMART project).

11-18 See Responses 11-1, 11-2, 11-5, and 11-16 regarding this same issue. As previously described in Response 4-9, the Walmart project is no longer proposed, and, therefore, not assessed in this EIR. Any questions about that project are not pertinent to this EIR since

the project is not proposed. The counts that were done for this DEIR were done at the times of year and the days recommended by Caltrans and are considered reliable counts of existing conditions. See Responses 5-18 through 5-25 regarding the issue of traffic projections done for this EIR as compared to traffic projections done for the Costco EIR. The traffic projections done for the Project EIR are consistent with Caltrans direction and accurate.

11-19 See Responses 11-1, 11-2, and 11-5 regarding this same issue.

11-20 See Response 11-6 regarding this same issue. Using the methodology described in detail in Appendix G of the DEIR, the DEIR traffic analysis calculated future traffic a.m. and p.m. hour noise levels given the increase in traffic predicted by Caltrans for the year 2030

11-21 See Responses 11-6 and 11-11 regarding this same issue.

11-22 See Response 11-1 regarding this same issue. The noise measurements done for this DEIR are considered the most current data on existing noise levels and the results of the measurements are much more accurate than generalized predictions of noise contours contained in the General Plan, as those contours do not account for shielding provided by terrain or structures. A sensitive receptor that is behind a hill or structure will experience less noise exposure than a receptor that has a straight-line, unobstructed exposure to the noise source. The noise contour data contained in the General Plan is intentionally conservative to identify and appraise potential noise and land use compatibility issues within the community. The future noise level calculations are made for General Plan build-out scenarios based on estimates of traffic volumes 15 to 20 years in the future. Such information is only used to screen proposed projects to determine which project would require additional project specific studies.

11-23 See Responses 11-1, 11-2, 11-5 and 11-22 regarding this same issue.

11-24 As noted in Table 4.7-6 of the DEIR, trucks generate noise levels similar to other heavy equipment necessary to construct the interchange improvements. The construction noise levels predicted in the analysis assumed heavy-duty trucks would be necessary to deliver materials and supply to the Project site.

11-25 See Responses 11-1 and 11-2 regarding this same issue.

11-26 See Responses 11-1 and 11-2 regarding this same issue. Proposed construction would not occur at night. In the case that some nighttime operations would be needed when ramps would need to be closed to allow construction, the project will require a City-issued permit per Mitigation Measure 4.7-A.1. That mitigation measure requires temporary noise baffles to protect sensitive receptors if the nighttime construction would exceed one week and for the City to provide hotel vouchers to the nearest sensitive receptors. As the DEIR states (page 113), these sensitive receptors live next to a freeway where residents are used to high ambient noise levels, and not in a quiet residential neighborhood. This fact plus the expected infrequency of the need for nighttime work

plus the noise reduction mitigations would reduce the construction noise to a less-than-significant level.

11-27 Impact 4.7-A (DEIR pages 109 through 113) provides a discussion of maximum instantaneous noise levels and hourly average noise levels expected from Project construction activities. Such noise levels could be expected to last for moments, days, weeks, or months. The impact is less than significant because the Project would not result in a substantial temporary noise increase defined as construction noise levels that exceed 60 dBA Leq and the ambient noise environment by at least 5 dBA Leq for a period of more than one year. The rationale of the standard is as follows. First, a one-year duration defines what would be considered "temporary". One year is representative of the amount of time typically required to construct most projects and consistent with most people's expectations for a Project's duration. In the noise consultants' professional opinion, one year is a reasonable amount of time for persons of normal sensitivity to be subject to daytime construction noise. Second, the 60 dBA Leq noise level threshold is derived from speech interference studies. Noise levels above 60 dBA Leq begin to result in speech interference and persons must raise their voices to be clearly heard. Exterior noise levels exceeding 60 dBA Leq can also result in activity interference indoors. Third, the construction noise must also be 5 dBA Leq above the ambient to be clearly noticeable. The noise level limits and construction duration, combined, are used to assess the potential for a substantial temporary noise increase.

11-28 See the discussion in Impact 4.7-A (page 109 through 110 in the DEIR) regarding this same issue. Appropriate noise thresholds, as summarized in Response 11-27, are used in the analysis of temporary construction noise.

11-29 See the discussion in Impact 4.7-A regarding this same issue. Maximum instantaneous noise levels and hourly average noise levels expected from project construction activities are presented at distances of 50 feet from the noise source in Tables 4.7-6 and 4.7-7 to provide information for those residents immediately adjoining the construction site. The noise data is also presented at a distance of 200 feet from the noise source assuming that the distance between the construction activities and receptors would vary throughout the approximate 5-month construction period.

11-30 As noted in Table 4.7-7 of the DEIR (page 112), average noise levels by construction phase assume multiple pieces of construction equipment operating simultaneously. The maximum instantaneous noise levels generated by multiple pieces of construction equipment are not likely to occur at the same time, (i.e., it is unlikely that the maximum instantaneous noise level from one piece of construction equipment would occur during the exact same instance as the maximum instantaneous noise level from another piece of construction equipment), therefore, the maximum instantaneous noise level resulting from a single piece of construction equipment (as shown in Table 4.7-6 – page 111) is representative of the maximum instantaneous noise levels expected at a receptor located 50 from the noise source.

11-31 The construction noise data utilized in the noise assessment was taken from studies published by the National Cooperative Highway Research Program and United States Environmental Protection Agency. These sources of data are credible, are commonly used by others, and provide a reasonable estimate of noise levels that would be expected with the construction of the Project. The commenter selected noisy equipment types to show possible inconsistencies, and then compared different acoustical descriptors (maximum instantaneous (Lmax) noise levels against average (Leq) noise levels). The examples used inaccurately describe projected noise levels, and the DEIR provides an accepted EIR approach.

11-32 See Responses 11-28, 11-30, and 11-31 regarding this comment. All heavy construction includes sounds that may be considered impulsive. The technical report in Appendix G and the DEIR noise section include an adequate discussion of construction noise on an average and maximum instantaneous level. Neither Caltrans nor the City of Ukiah have regulations that require "impulsive" noise to be penalized by 5 dB.

11-33 Impacts and mitigation measures differ by project depending on numerous variables. The predicted construction noise levels, the ambient noise levels at receptors, and the duration of construction activities are carefully considered to identify significant temporary noise increases due to construction. The commenter compares different acoustical descriptors (maximum instantaneous (Lmax) noise levels against average (Leq) noise levels). As described on page 110 of the DEIR, typical hourly averages for the Project would be 67 dBA to 76 dBA at the nearest sensitive receptors, which is less than the average levels the commenter notes for the Santa Rosa Costco project. Short-term construction noise impacts due to this Project were determined to be less than significant with the implementation of mitigation (and additional mitigations have been added as part of this Final EIR.

11-34 See Response 11-27 regarding this comment.

11-35 See Response 11-27. It follows that construction noise impacts would also be less than significant with mitigation at receptors located further from the construction site.

11-36 The City of Ukiah's maximum transportation noise exposure standards are normally used to assess the compatibility of new noise-sensitive land uses with the existing and future noise environment at the site. The commenter suggests that the study is inadequate even though existing noise levels at residential land uses near the project site currently exceed the 60 dBA Ldn exterior noise threshold and 45 dBA Ldn interior noise level threshold. Again, these thresholds are used in the siting of new noise-sensitive land uses, not for assessing temporary or permanent noise increases due to the proposed project. On the contrary, the noise analysis contained in the DEIR is accurate.

11-37 See page 108 of the DEIR. Based on studies of test subject's reactions to changes in environmental noise levels for similar noise sources, the Federal Interagency Committee on Noise (FICON) developed the following recommendations for thresholds to be used in assessing the significance of project-related noise level increases for transportation noise

sources. Where background noise levels without the project would be less than 60 dB Ldn, a 5 dB or greater noise level increase due to the project would be considered significant. Where background noise levels without the project would be in the range of 60-65 dB Ldn, a 3 dB or greater noise level increase due to the project would be considered significant. Finally, where background noise levels without the project would exceed 65 dB Ldn, a 1.5 dB or greater noise level increase due to the project would be considered significant. This graduated scale is based on findings that people in quieter noise environments would tolerate larger increases in noise levels without adverse effects, whereas people already exposed to elevated noise levels exhibited adverse reactions to noise for smaller increases.

11-38 See Response 11-37 regarding this same issue. A 3 dB increase in noise levels is perceived by humans as a "just-perceptible" increase in noise and is an appropriate threshold to judge the significance of permanent noise increase attributable to the project. The sensitive receptors are described in the "Existing Noise Environment" section of the noise technical report in Appendix G of the DEIR.

11-39 See Responses 11-5 and 11-37 regarding this same issue.

11-40 See Response 11-36 regarding this same issue.

11-41 See Response 11-27 regarding this same issue. The significance threshold used in the analysis of construction noise is appropriate for the proposed Project. Human hearing is represented by the A-weighted noise levels, which were measured and modeled in this analysis. CEQA analyses are based on A-weighted noise level analysis Even if a C-weighted scale had been used, neither Caltrans nor the City has adopted any maximum C-weighted scale against which to measure whether such noise is significant or not.

11-42 See Responses 11-27 and 11-32 regarding these same issues.

11-43 See Response 11-27 regarding this same issue.

11-44 See Response 11-27 regarding this same issue.

11-45 See Table 4.7-8 regarding this same issue. Traffic noise levels are calculated to increase by 1.3 dBA Ldn, a less-than-significant increase where noise levels background noise levels without the Project would exceed 65 dB Ldn.

11-46 See Response 11-2, 11-17, and 11-18 regarding this same issue. In addition, the City's maximum exterior noise standards do not regulate noise levels from temporary construction activities at non-residential receivers. As described on page 107 of the DEIR, the City Municipal Code does not establish maximum construction noise limits, and the qualitative noise limits apply only to construction within a residential zone.

11-47 The noise analysis contained in the IS/MND was revised for the DEIR. This new analysis is deemed to be an accurate accounting of noise impacts from the proposed Project.

APPENDIX E

Caltrans letter to Charley Stump, City of Ukiah Director of Community Planning & Development, May 4, 2015

DEPARTMENT OF TRANSPORTATION
District 1- Project Management
P.O. BOX 3700
Eureka, CA 95501
PHONE (707) 441-3979
www.dot.ca.gov

Serious Drought.
Serious drought.
Help save water!

May 4, 2015

Mr. Charley Stump
Director of Community Planning & Development
City of Ukiah
300 Seminary Ave
Ukiah, CA 95482

Dear Mr. Stump

As a result of several discussions and meetings between City of Ukiah staff, GHD Consulting Engineers and Caltrans District 1 Staff, it was determined that a letter further clarifying issues and project development process related to the design and the design exception process for the US 101 / SR 222 Interchange Reconfiguration Project was appropriate.

While meeting all design standards is the primary goal of any highway construction project, site constraints, including physical and geometric conditions of adjacent facilities and infrastructure often create a situation where meeting all design standards is either infeasible or not cost effective. For such instances, Caltrans requires a design exception process be followed. This design exception process is utilized document sound engineering decisions leading to the approval of exceptions of individual standards. This documentation is necessary for Caltrans to ensure safe and consistent designs are implemented. It is imperative to understand that the use and approval of design exceptions does not represent a decrease in safety of a facility. Rather, it ensures that proper safety considerations are made and that appropriate design elements are accounted for and implemented.

For the US 101 / SR 222 Interchange Reconfiguration Project, given that it is being constructed adjacent to and tying into existing infrastructure, the use of design exceptions is a process that is not unexpected. The original highway off-ramp design initially being considered, which has now been altered to a different style off-ramp with a different alignment, would have required design exceptions, but this in itself does not reflect on the level of safety or that any safety issues would have been encountered. Although the design was altered, diligent adherence to the design exception process would have ensured that proper safety considerations, for all aspects of the design, would have been analyzed and proper elements and design features be implemented. Likewise, for the revised design now being implemented, the use of design exceptions does not reflect on the level of safety expected. Proper analysis and adherence to the exception process will ensure that a safe project will be constructed for all traveling modes of the public.

If additional information or assistance is required for proper understanding of the required design exception process, by City of Ukiah staff, any hired consultant engineers, or any concerned members of the public, please feel free to contact me to make such a request.

Sincerely,

SEBASTIAN COHEN
Project Manager

cc:

1. File
2. Lena Ashley
3. Matt Kennedy, GHD