DRAFT
ENVIRONMENTAL IMPACT REPORT
FOR THE
WAL-MART PARCEL MAP AND EXPANSION PROJECT

VOLUME I

(PM 03-17; 2044 FOREST AVENUE)

STATE CLEARINGHOUSE #2004012077

DECEMBER 2006

Prepared by:

CITY OF CHICO
Community Services Department, Planning Division
411 Main Street
Chico, CA 95928

Consultant:

PMC

DRAFT
ENVIRONMENTAL IMPACT REPORT
FOR THE
WAL-MART PARCEL MAP AND EXPANSION PROJECT

(PM 03-17; 2044 FOREST AVENUE)

Prepared by:

CITY OF CHICO
Community Services Department, Planning Division
411 Main Street
Chico, CA 95928

Consultant:

PMC
140 Independence Circle, Suite C
Chico, CA 95973
530-894-3469
Fax: 530-894-6459
www.pacificmunicipal.com

DECEMBER 2006

1.0 INTRODUCTION

1.1 Purpose of the EIR 1.0-1
1.2 Type of EIR 1.0-2
1.3 Intended Uses of the EIR 1.0-2
1.4 Scope and Organization of the EIR 1.0-3
1.5 Effects Found Not to be Significant 1.0-6
1.6 Environmental Review Process 1.0-7
1.7 Terminology of Impacts 1.0-9
1.8 Comments Received on the Notice of Preparation 1.0-10

2.0 EXECUTIVE SUMMARY

2.1 Purpose and Scope of the Subsequent Environmental Impact Report 2.0-1
2.2 Project Characteristics 2.0-1
2.3 Project Alternatives Summary 2.0-2
2.4 Areas of Controversy 2.0-3
2.5 Summary of Environmental Impacts 2.0-4

3.0 PROJECT DESCRIPTION

3.1 Project Location 3.0-1
3.2 Existing Setting 3.0-1
3.3 Project Background 3.0-2
3.4 Requested Project Approvals 3.0-3
3.5 Project Objectives 3.0-4
3.6 Expansion of the Existing Store on Parcel 1 ..... 3.0-5
3.7 Assumptions for Development of Parcel 2 ..... 3.0-11
3.8 Cumulative Projects 3.0-12

4.0 ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

4.0 Introduction to Environmental Impact Analysis 4.0-1
4.1 Land Use 4.1-1
4.2 Traffic and Circulation 4.2-1
4.3 Air Quality 4.3-1
4.4 Biological Resources 4.4-1
4.5 Cultural and Paleontological Resources 4.5-1
4.6 Economic Analysis 4.6-1

5.0 CUMULATIVE IMPACT SUMMARY

5.1 Introduction 5.0-1
5.2 Cumulative Setting 5.0-2
5.3 Cumulative Impact Analysis 5.0-3
5.4 Cumulative Impacts Summary 5.0-4

6.0 ALTERNATIVES TO THE PROPOSED PROJECT

6.1 General CEQA Requirements 6.0-1
6.2 Development of Project Alternatives 6.0-1

6.3 Alternatives Analysis 6.0-5
6.4 Identification of the Environmentally Superior Alternative 6-25

7.0 OTHER CEQA REQUIREMENTS

7.1 Significant Irreversible Environmental Changes/Irretrievable Commitment of Resources 7.0-1
7.2 Significant and Unavoidable Environmental Effects 7.0-1
7.3 Growth-Inducing Impacts 7.0-3

8.0 REPORT PREPARERS AND REFERENCES

8.1 List of Preparers 8.0-1
8.2 References 8.0-2

LIST OF TABLES

Table 1.0-1 Agencies and Persons Commenting on the Notice of Preparation 1.0-10
Table 2.0-1 Summary Table 2.0-5
Table 3.0-1 Existing and Proposed Building Specifications 3.0-6
Table 3.0-2 Operational and Pending Development 3.0-13
Table 4.1-1 Project Consistency with General Plan Land Use Development 4.1-7
Table 4.2-1 Existing Conditions: Intersection Levels-of-Service 4.2-4
Table 4.2-2 Existing Conditions: SR 99 Mainline Levels-of-Service 4.2-6
Table 4.2-3 Existing Conditions: SR 99 Ramp Junction Levels-of-Service 4.2-13
Table 4.2-4 City of Chico General Plan Transportation Related Policy Summary 4.2-15
Table 4.2-5 Level of Service (LOS) Criteria for Roadways 4.2-16
Table 4.2-6 Level of Service (LOS) Criteria for Intersections 4.2-17
Table 4.2-7 Target Level of Service (LOS) for Caltrans Facilities 4.2-21
Table 4.2-8 Project Trip Generation 4.2-23
Table 4.2-9 Short Term No Project Conditions: Intersection Levels-of-Service 4.2-38
Table 4.2-10 Short Term No Project Conditions: SR 99 Mainline 4.2-46
Table 4.2-11 Short Term No Project Conditions: SR 99 Ramp Junction Levels-of-Service 4.2-47
Table 4.2-12 Short Term Plus Project Intersection Levels-of-Service 4.2-48
Table 4.2-13 Short Term Plus Project Conditions: SR 99 Mainline Levels-of-Service 4.2-52
Table 4.2-14 Short Term Plus Project Conditions: SR 99 Mainline Levels-of-Service 4.2-55
Table 4.2-15 Cumulative No Project Conditions Intersection Levels-of-Service 4.2-63
Table 4.2-16 Cumulative No Project Conditions: SR 99 Mainline Levels-of-Service 4.2-69
Table 4.2-17 Cumulative No Project Conditions: SR 99 Ramp Junction Levels-of-Service 4.2-70
Table 4.2-18 Cumulative No Project Conditions: SR 99 Weaving Levels-of-Service 4.2-73
Table 4.2-19 Cumulative Plus Project Conditions Intersection Levels-of-Service 4.2-74
Table 4.2-20 Cumulative Plus Project Conditions: SR 99 Mainline Levels-of-Service 4.2-76
Table 4.2-21 Cumulative Plus Project Conditions: SR 99 Ramp Junction Levels-of-Service 4.2-81
Table 4.2-22 Cumulative Plus Project Conditions: SR 99 Weaving Levels-of-Service 4.2-82
Table 4.2-23 Cumulative (2018) Conditions Queuing Analysis 4.2-86
Table 4.3-1 Federal and State Ambient Air Quality Standards 4.3-2
Table 4.3-2 Ambient Air Quality Monitoring Data from Chico – Manzanita Avenue Monitoring Station 4.3-5
Table 4.3-3 Project Consistency with the General Plan Policies: Air Quality 4.3-9
Table 4.3-4 Emission Action Level Thresholds 4.3-14
Table 4.3-5 Estimated Construction Emissions 4.3-16

Table 4.3-6 Mitigated Construction Emissions 4.3-18
Table 4.3-7 Estimated Operational Emissions (2010 Full Buildout Conditions) 4.3-20
Table 4.3-8 Mitigated Operational emissions (2010 Full Buildout Conditions with Mitigation Measures) 4.3-22
Table 4.3-9 CO Modeling Concentrations (PPM) 4.3-24
Table 4.4-4 Project Consistency with General Plan Biological Resources 4.4-14
Table 4.5-1 Project Consistency with General Plan Cultural Resource Policies 4.5-3
Table 4.6-1 Competitive Grocery Stores 4.6-2
Table 4.6-2 Competitive General Merchandise Stores 4.6-3
Table 4.6-3 Project Consistency with General Plan Goals and Policies 4.6-5
Table 6.0-1 Comparison of Alternatives to the Proposed Project 6.0-25

LIST OF FIGURES

Figure 3.0-1 Regional Location Map 3.0-17
Figure 3.0-2 Surrounding Uses 3.0-19
Figure 3.0-3 Existing Parcel Exhibit 3.0-21
Figure 3.0-4 Proposed Parcel Exhibit 3.0-23
Figure 3.0-5 Tentative Parcel Map 3.0-25
Figure 3.0-6 Site Plan 3.0-27
Figure 3.0-7A Building Elevation 3.0-29
Figure 3.0-7B Building Elevation 3.0-31
Figure 3.0-8 Floorplan 3.0-33
Figure 3.0-9 Vehicle Circulation 3.0-35
Figure 3.0-10 Landscape Plan 3.0-37
Figure 4.1-1 Existing Land Use Map 4.1-3
Figure 4.1-2 Zoning Classifications in Project Area 4.1-5
Figure 4.2-1 Existing Lane Geometrics and Control 4.2-7
Figure 4.2-2 Existing Peak Hour Volumes 4.2-9
Figure 4.2-3 Existing Freeway and Mainline Ramp Volumes 4.2-11
Figure 4.2-4a Trip Distribution 4.2-29
Figure 4.2-2b Fast Food Restaurant/ Gas Station Trip Distribution 4.2-31
Figure 4.2-5 Project Only Traffic Volumes 4.2-33
Figure 4.2-6 Year 2010 No Project Traffic Volumes 4.2-41
Figure 4.2-7 Year 2010 No Project Freeway Mainline and Ramp Volumes 4.2-43
Figure 4.2-8 Year 2010 Plus Project Traffic Volumes 4.2-49
Figure 4.2-9 Year 2010 Plus Project Freeway Mainline and Ramp Volumes 4.2-53
Figure 4.2-10 Year 2018 Geometrics and Control 4.2-65
Figure 4.2-11 Year 2018 No Traffic project Volumes 4.2-67
Figure 4.2-12 Year 2018 No Project Freeway Mainline and Ramp Volumes 4.2-71
Figure 4.2-13 Year 2018 Plus Project Traffic Volumes 4.2-77
Figure 4.2-14 Year 2018 Plus Project Freeway Mainline and Ramp Volumes 4.2-79
Figure 4.4-1 CNDDB 5 and 10 Mile Radius Map 4.4-3
Figure 4.4-2 Potential Wetland Areas 4.4-11
Figure 6.0-1 Grocery Only Expansion Alternative 6.0-7
Figure 6.0-2 Site Alternatives 6.0-9
Figure 6.0-3 Northwest Specific Plan – Nord Highway Site Alternative 6.0-11

1.0 Introduction

This section summarizes the purpose of the Environmental Impact Report (EIR); describes the type of EIR; describes the intended uses of the EIR in compliance with the CEQA Guidelines section 15124(d) including the list of agencies, permits, and consultation for which this EIR is anticipated to be used; describes the scope and organization of the EIR, identifies the environmental effects that were dismissed from further consideration in the Initial Study; describes the environmental review process that has been undertaken and is anticipated to be undertaken, identifies a contact person, describes the terminology of the impact analysis; and provides a summary of the agencies, organizations and individuals that commented on the Notice of Preparation (NOP) of the EIR for this project.

1.1 PURPOSE OF THE EIR

The existing Wal-Mart store located in the southern portion of the City of Chico opened for business in 1994. Presently, Wal-Mart is proposing to expand its existing store into a Wal-Mart Supercenter on a vacant portion of its property. However, Wal-Mart's property consists of two parcels and in their current configuration the store expansion would be located across a property line, which is not allowed by the City of Chico. Thus, Wal-Mart filed an application to the City of Chico for a Tentative Parcel Map that would reconfigure the lot lines of the existing parcels (a 10.36-acre and a 16.75-acre parcel) to create a 24.69-acre parcel and a 2.42-acre parcel. The existing Wal-Mart and the planned expansion would be located entirely on the 24.69-acre parcel. The 2.42-acre parcel will remain undeveloped now but Wal-Mart has indicated that a gas station and restaurant is planned in the future.

This Draft Environmental Impact Report (EIR) evaluates the potential environmental effects of the project known as the Wal-Mart Parcel Map and Expansion Project, PM 03-17; 2044 Forest Avenue (Wal-Mart Expansion), pursuant to the California Environmental Quality Act (CEQA). For purposes of evaluating the full development potential of the entire 27.11-acre project site, this EIR assumes the development of the store expansion on the 24.69-acre parcel, as well as the conceptual future development of a 5,000 square foot fast food restaurant with a drive-through lane and a 12-pump gas station and convenience store on the 2.42-acre parcel. A restaurant and gas station attract a high number of vehicle trips and represent a reasonable worst-case development scenario for this site in terms of environmental impact. The Wal-Mart store expansion is proposed to add 97,556 square feet to the existing 125,889 square foot store, for a total of 223,445 square feet. Of the total expansion, approximately 55,729 square feet would be used for grocery sales and a grocery stockroom area, 36,197 square feet and 19,532 square feet respectively. The remaining square footage would be used for general merchandise sales and storage. The project would also include construction of local access driveways and connection to existing infrastructure.

Several key ideas regarding the purpose of the EIR are provided in the CEQA Guidelines Section 15121(a), which states that an EIR is an informational document for the decision-makers and the general public that discusses the significant environmental effects of a project, identifies possible ways to minimize the significant effects, and describes reasonable alternatives to the project that both meet the basic objectives of the applicant and serve to reduce or eliminate any significant environmental effects of the project. Public agencies with discretionary authority are required to consider the information in the EIR regarding the environmental effects of the project, along with any other relevant information when making decisions on the project. Thus, the focus of the EIR is to provide information regarding the *environmental* consequences of implementation of the project and ways to lessen the environmental effects.

The City of Chico serves as the Lead Agency, (meaning the City has the primary discretionary authority regarding the project) and has prepared this Draft EIR to provide information about the

potential environmental effects of the proposed project. The information in this EIR is required to be considered by the city, along with the other considerations that inform their decision (planning, economic, social), in determining whether to approve the Tentative Parcel Map for the Wal-Mart Expansion project.

1.2 TYPE OF EIR

The CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a Project EIR pursuant to CEQA Guidelines Section 15161. This type of analysis focuses primarily on the changes in the environment that would occur as a result of project implementation, and examines all phases of development of the site (i.e., planning, construction, and operation). The project-level analysis addresses on-site and off-site environmental impacts resulting from the construction and operation of site development. Please refer to Section 3.0 Project Description for a complete description of project characteristics.

1.3 INTENDED USES OF THE EIR

The EIR is intended to evaluate the environmental impacts of the expansion of the Wal-Mart store and potential future development of the remainder of the site to the greatest extent possible. This EIR also includes a summary of the economic analysis (*Wal-Mart Supercenter Economic Impact Analysis,* Sedway, 2006) that has been prepared to analyze the extent to which operation of the expanded project may or may not contribute to physical blight in the community, in accordance with the CEQA Guidelines Sections 15064 and 15131. This EIR should be used as the primary environmental document to evaluate all current and subsequent permitting actions associated with site development and the expansion project (CEQA Guidelines 15124(d). The discretionary actions that may be taken by the City of Chico currently include, but are not limited to, the following:

- Certification of the EIR
- Adoption of the Mitigation Monitoring Program
- Site Design and Architectural Review
- Approval of the Tentative Parcel Map

Additional subsequent ministerial and discretionary approvals and other permits that may be required from the city and other local, regional, state, and federal agencies for which the EIR may be used are identified below:

- Finding of Public Convenience or Necessity (to permit sales of alcohol)
- Approval of the Final Map
- Issue Building Permits
- Approval of a Use Permit (would be required in the future for development of a restaurant if it were to include a drive-through window or for development of a gas station)

- Service Agreements, Abandonment and Relocation Agreements with local utility providers
- Water quality permits (Clean Water Act) that may be required include: Construction Storm Water Activity Permit, Report of Waste Discharge, NPDES Permit
- Section 401 and 404 Permits from the U.S. Army Corps of Engineers and coordination with the EPA, USFWS, and California Department of Fish and Game for fill of wetlands
- Butte County Air Quality Management District permit for operation of a gas station if one is proposed in the future

1.4 SCOPE AND ORGANIZATION OF THE EIR

Sections 15122 through 15132 of the CEQA Guidelines identify the content requirements for Draft and Final EIRs. An EIR must include a description of the environmental setting, an environmental impact analysis, mitigation measures, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. The environmental issues addressed in this Draft EIR were established through review of the previous environmental documentation developed for the site, environmental documentation for nearby projects, preparation of an Initial Study of the project application, responses to the Notice of Preparation (NOP), and agency consultation. The complete text of the Initial Study, NOP, and responses to the NOP is contained in **Appendix A.** The City of Chico determined based on this information that the preparation of an EIR was appropriate due to potentially significant environmental impacts that could be caused by the proposed expansion of the Wal-Mart project. This Draft EIR evaluates the existing environmental resources in the vicinity of the project site, analyzes potential impacts on those resources due to the proposed project, and identifies mitigation measures that could avoid or reduce the magnitude of those impacts.

This Draft EIR is organized in the following manner:

SECTION 1.0 – INTRODUCTION

Section 1.0 summarizes the purpose of the Environmental Impact Report (EIR); describes the type of EIR; describes the intended uses of the EIR in compliance with the CEQA Guidelines Section 15124(d) including the list of agencies, permits, and consultation for which this EIR is anticipated to be used; describes the scope and organization of the EIR, identifies the environmental effects that were dismissed from further consideration in the Initial Study; describes the environmental review process that has been undertaken and is anticipated to be undertaken, identifies a contact person, describes the terminology of the impact analysis; and provides a summary of the agencies, organizations and individuals that commented on the Notice of Preparation (NOP) of the EIR for this project.

SECTION 2.0 - EXECUTIVE SUMMARY

This section briefly summarizes the proposed actions (characteristics of the proposed project) and provides a concise summary matrix table of the project's environmental impacts and associated mitigation measures, and resulting level of significance (in accordance with the CEQA Guidelines Section 15123). Areas of controversy associated with the project are identified. The alternatives considered in this EIR are listed and the environmentally superior alternative is identified.

SECTION 3.0 - PROJECT DESCRIPTION

This section includes a complete description of the project (in accordance with the CEQA Guidelines section 15124). The regional and local existing conditions are described and depicted, the project history is summarized, requested entitlements and permits are listed, the applicant's objectives for the project are described, the technical and operational characteristics of the project are described and depicted, and a list of current development activity in the vicinity is included.

SECTION 4.0 - INTRODUCTION TO THE ENVIRONMENTAL IMPACT ANALYSIS

This section describes the format of the environmental issue sections, the level of significance nomenclature used in this document, and the format of the impact analysis.

SECTIONS 4.1 THROUGH 4.6– ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

These sections contain an analysis of environmental topic areas as identified below. Each subsection contains a description of the existing setting of the project area, identifies project-related and cumulative impacts, and recommends mitigation measures. The following major environmental topics are addressed in this section:

4.1 Land Use: This section addresses potential environmental impacts associated with land use which are generally categorized by physical changes to the environment, compatibility with surrounding uses, and conflicts and/or inconsistencies with relevant planning documents. Land use impacts were evaluated using a combination of field review to assess current land use conditions, review and analysis of existing planning documents, including the City of Chico General Plan and Chico Municipal Code, and other relevant environmental documents for adjacent areas.

4.2 Traffic and Circulation: This section summarizes the results of a traffic impact study performed by Omni-Means. This section describes the existing transportation setting including the current AM, PM, and Saturday peak hour traffic operations at key intersections, freeway ramps, and the affected freeway mainline. Impacts of the project on existing AM, PM, and Saturday peak hour intersection, ramp and mainline operations are identified via quantification of the trip generation and trip distribution associated with the proposed project, assuming identified local and regional approved/pending projects are in place. The section also evaluates the projected cumulative (year 2018) peak hour operations. Potential base improvements and project-related mitigation measures are identified to as needed to alleviate unacceptable level of traffic impacts at the study intersections, ramps and mainline segments under project and cumulative conditions. In addition, the section assesses impacts to transit, bicycle, and pedestrian facilities.

4.3 Air Quality: This chapter presents the results of a technical air quality study performed by Jones & Stokes. The analysis discusses the existing regional air quality conditions in the Northern Sacramento Valley, and evaluates the potential air quality impacts associated with the implementation of the proposed project. This report incorporates the air quality standards contained in the Butte County Air Quality Management District's Indirect Source Review Guidelines.

4.4 Biological Resources: This section evaluates the potential for individual and cumulative impacts to biological resources resulting from the proposed Wal-Mart Expansion project. The analysis of biological resources presented in this section is based on a review of the current

project as well as data collected from the site survey presented in the wetland delineation, botanical survey, and biological resource reports prepared by Hanover Environmental, Inc.

4.5 Cultural and Paleontological Resources: This section considers and evaluates the potential impacts of the proposed Wal-Mart Expansion project on cultural and paleontological resources. Cultural resources include historic buildings and structures, historic districts, historic sites, prehistoric and historic archaeological sites, and other prehistoric and historic objects and artifacts.

4.6 Economics: This section of the EIR considers whether the proposed Wal-Mart Expansion project would result in significant adverse physical deterioration of properties or structures, or urban decay, due to (1) economic impacts on existing businesses (specifically, groceries and under cumulative conditions general merchandise retailers), and (2) the inability of property owners to lease buildings that may be vacated as a consequence of economic impacts resulting from the proposed Wal-Mart Expansion project in conjunction with other projects, including a second Wal-Mart Supercenter north of town. The analysis within this section is based on an economic impact analysis prepared by Sedway Group.

SECTION 5.0 - CUMULATIVE IMPACTS SUMMARY

This section summarizes the cumulative impacts associated with the Wal-Mart Expansion project that are identified in the environmental analysis contained in Sections 4.1 through 4.6 of this Draft EIR. Cumulative impacts are the result of combining the potential effects of the project with other planned developments, as well as foreseeable development projects. The following discussion considers the cumulative impacts of the relevant environmental issue areas.

SECTION 6.0 - ALTERNATIVES TO THE PROJECT

CEQA Guidelines Section 15126.6 require that an EIR describe a range of reasonable alternatives to the project which could feasibly attain the basic objectives of the project and avoid and/or lessen the environmental effects of the project. This alternatives analysis provides the reasoning for the selection of the alternatives that were analyzed, a qualitative comparative analysis between the project and each of the selected alternatives, and a summary table. The environmentally superior alternative is identified. The alternatives to the project analyzed in this document include:

- No Project Alternative
- General Plan Alternative
- Grocery Only Alternative
- Alternative sites
  - North Chico Alternative
  - Nord Highway Alternative
  - Eaton Road Alternative

SECTION 7.0 – OTHER CEQA REQUIREMENTS

This section contains discussions and analysis of various topical issues mandated by CEQA including significant unavoidable environmental effects and significant irreversible environmental changes that cannot be avoided if the project is implemented, and growth inducing impacts.

SECTION 8.0 - REPORT PREPARERS AND REFERENCES

This section lists all authors and agencies that assisted in the preparation of the report by name, title, and company or agency affiliation.

APPENDICES

This section includes all notices and other procedural documents pertinent to the EIR, as well as all technical material prepared to support the analysis.

1.5 EFFECTS FOUND NOT TO BE SIGNIFICANT

In accordance with the CEQA Guidelines Section 15063(c)(3), the Initial Study identified several environmental topics where potentially significant impacts would not be associated with the project. These topics are determined to have no environmental effect or to have effects that are not significant for the project and will not be further analyzed in this EIR. The topics that are dismissed from further analysis and a brief discussion of the reasons why these issues were determined to not to be significant include:

Aesthetics: The proposed Wal-Mart expansion site does not obstruct scenic views of the foothills nor is it located along a state scenic highway. The proposed expansion will be similar in design and massing to the existing building. The plans will be subject to site design and architectural review like any other commercial project in the City.

Geology / Soils: The project site is located in one of the least active seismic regions in California. A geotechnical report was prepared for the project which the city implements through its grading ordinance and building permit review, as well as the requirements of the Regional Water Quality Control Board, which sets forth standards to control erosion and sedimentation.

Hazards / Hazardous Materials: Wal-Mart does not utilize any hazardous materials in significant quantities that pose a threat to the public. The site is not identified on any hazardous waste or substances sites lists or airport safety zone and is not prone to wild land fires.

Hydrology / Water Quality: The proposed expansion of the Wal-Mart store will not result in the discharge of sewage flows above those assumed for site development in the General Plan. The California Water Service has capacity adequate to serve the proposed store expansion. The existing City drainage basin southwest of the project site is sized to accommodate storm water runoff resulting from full development of the subject parcels. The drainage basin is designed to treat all storm water prior to being discharged to Comanche Creek. The project will be required to obtain a Construction Activity Storm Water Permit from the California Regional Water Quality Control Board

prior to any construction. The subject properties are located outside the 500-year flood plain resulting in a less than significant risk of loss, injury or death involving flooding.

Noise: Noise from project construction and operations will be compatible with the existing noise environment, which is dominated by SR 99 and adjacent commercial and retail businesses. No noise-sensitive land uses are located in the immediate vicinity of the site. All loading dock facilities for the propsed project will be located on the west side of the building, facing SR 99.

Open Space / Recreation: The project will not generate new residents that could create demand for new parks or contribute to the overuse of existing parks. The project site is designated in the General Plan for commercial use and site development will not result in the conversion of open space lands to other uses.

Public Services: Due to the infill nature, limited size of the project, and consistency with the land use designation in the General Plan, additional fire fighting, police, local schools, parks or maintenance of public facilities are not anticipated beyond development anticipated in the General Plan. Additional equipment or personnel would not be required.

Utilities: The proposed store expansion on the subject properties will be connected to the public sewer system and no significant changes in demand for any utilities, including domestic water, electricity, gas, and telephone service is excepted to result from the project. Available capacity exists at the City's landfill to accommodate waste generated by the proposed expansion of Wal-Mart. Recycling containers are required for the proposed project to help reduce the amount of material entering the landfill.

1.6 ENVIRONMENTAL REVIEW PROCESS

The review and certification process for the EIR will involve the following procedural steps:

INITIAL STUDY AND NOTICE OF PREPARATION

In accordance with Section 15082 of the CEQA Guidelines, the City of Chico prepared an Initial Study and Notice of Preparation (NOP) of an EIR that was released for public review in June 2004. The City of Chico was identified as the lead agency for the proposed project. This notice was circulated to local, State, and federal agencies, and other interested parties to solicit comments on the proposed scope of the EIR. The NOP is presented in **Appendix A**. Comments received in response to the NOP were considered during preparation of the Draft EIR and are also presented in **Appendix A**.

DRAFT EIR

This document constitutes the Draft EIR. The Draft EIR contains a description of the project, description of the environmental setting, identification of project impacts and mitigation measures for impacts found to be significant, as well as an analysis of alternatives to the project. Upon completion of the Draft EIR, the City of Chico will file the Notice of Completion (NOC) with the State Office of Planning and Research to begin the required 45-day public review period (Section 21161, California Environmental Quality Act).

PUBLIC NOTICE/PUBLIC REVIEW

Concurrent with the NOC, the City of Chico will provide public notice of the availability of the DEIR for public review, and invite comment from the general public, agencies, organizations, and other interested parties. The public review and comment period should be no less than 30 days or longer than 90 days (CEQA Guidelines Section 15105). The review period in this case will be 45 days. Public comment on the DEIR will be accepted in written form. All written comments or questions regarding the DEIR should be addressed to:

Patrick Murphy, Senior Planner
City of Chico
Community Services Department
P.O. Box 3420
411 Main Street
Chico, CA 95927

RESPONSE TO COMMENTS/FINAL EIR

Following the conclusion of the public review period for the Draft EIR, a Final EIR will be prepared. The Final EIR will respond to written comments received during the public review period and to oral comments made at any public hearings.

CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

The City of Chico Planning Commission will review and consider the Final EIR. If the Planning Commission finds that the Final EIR is "adequate and complete", the Commission may certify the Final EIR at a public hearing. The rule of adequacy generally holds that the EIR can be certified if: 1) it shows a good faith effort at full disclosure of environmental information; and 2) provides sufficient analysis to allow decisions to be made regarding the project in contemplation of its environmental consequences.

Upon review and consideration of the Final EIR, the Planning Commission may take action to approve, revise, or deny approval of the Tentative Parcel Map after a public hearing. A decision to approve the map would be accompanied by written findings in accordance with CEQA Guidelines Section 15091 and, if applicable, Section 15093. A Mitigation Monitoring Program, as described below, would also be adopted for mitigation measures that have been imposed upon the map to reduce or avoid significant effects on the environment.

MITIGATION MONITORING

CEQA, at California Public Resources Code Section 21081.6(a), requires lead agencies to adopt a reporting and mitigation monitoring program to describe measures which have been adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment. The specific "reporting or monitoring" program required by CEQA is not required to be included in the Draft EIR, however it will be presented to the Planning Commission for adoption. Throughout the EIR, however, mitigation measures have been clearly identified and presented in language that will facilitate establishment of a monitoring and reporting program. Any mitigation measures adopted by the City of Chico as conditions for approval of the project will be included in a Mitigation Monitoring Program to verify compliance. This Mitigation Monitoring Program will be designed to ensure that these measures are carried out during project implementation.

1.7 TERMINOLOGY OF IMPACTS

Determining the severity of project impacts is fundamental to achieving the objectives of CEQA. CEQA Guidelines Section 15091 requires that decision-makers make findings that significant impacts identified in the Final EIR have been mitigated as completely as feasible. If the EIR identifies any significant unmitigated impacts, CEQA Guidelines Section 15093 requires decision-makers to adopt a statement of overriding considerations that explains why the benefits of the project outweigh the adverse environmental consequences identified by the EIR.

The level of significance for each impact examined in this EIR was determined by considering the predicted magnitude of the impact against "significance criteria." Significance criteria, which are identified in each chapter under that title, are a set of criteria used by the lead agency to determine at what level, or "threshold," an impact would be considered significant. Thresholds were developed using the following:

- CEQA Guidelines, Appendix G.
- Goals, policies and standards contained in the City of Chico General Plan, General Plan EIR, Best Practices Technical Manual, and the Chico Municipal Code.
- Regulatory performance standards of city, regional, State, and federal governmental agencies.
- Policies and standards of special districts.
- Factual or scientific information generally available or produced by studies.
- Consultation with recognized experts on particular environmental issues.
- Generally accepted planning practices.

Four levels of impact significance are recognized by this EIR:

- **Less than significant [LTS]** impacts would not cause a substantial change in the environment or are not disruptive enough to require mitigation, because they fall below the significance threshold.
- **Potentially significant [PS]** impacts may cause a significant effect on the environment; however, additional information is needed regarding the extent of the impact. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact.
- **Significant [S]** impacts would cause a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of the project effects using specified significance criteria. Mitigation measures are identified to reduce project effects to the environment.
- **Significant and unavoidable [SU]** impacts are significant adverse project impacts that cannot be avoided or mitigated to a less-than-significant level if the project is implemented.

1.8 COMMENTS RECEIVED ON THE NOTICE OF PREPARATION

The City of Chico received comment letters on the Notice of Preparation for the Wal-Mart Expansion Project. A copy of each letter is provided in **Appendix A**. The city received letters from the following state and local agencies, and interested parties, as summarized in **Table 1.0-1**.

TABLE 1.0-1
AGENCIES AND PERSONS COMMENTING ON THE NOTICE OF PREPARATION

Letter No.	Author/Affiliation	Issues	Date
1	Roger Cole and Orene Owen.	Lack of parking lot shading provided by the project.	July 9, 2004
2	Heather Schlaff/ Chico Advocates for a Responsible Environment (CARE).	Environmental effects of the addition of parking: lack of shading, use of land, CO concentration, contaminated runoff.	July 9,2004
3	Ray Bruun, P.E. Associate Engineer/ California Regional Water Quality Control Board.	Lists water quality permits (Clean Water Act) that may be required including: Report of Waste Discharge, Construction Storm Water Permit, NPDES Permit.	June 21, 2004
4	Gail Williams Air Quality Planner/ Butte County Air Quality Management District.	Air Quality District has no comment in regard to the proposed project.	June 24, 2004
5	Bruce De Terra, Chief, Office of Regional Transit Planning/ Department of Transportation.	Visual impacts to SR 99, effects to storm water quality, requests the traffic study consider SR 99.	July 7, 2004

2.0 Executive Summary

This section briefly summarizes the proposed actions (characteristics of the proposed project) and provides a concise summary matrix table of the project's environmental impacts and associated mitigation measures, and resulting level of significance (in accordance with the CEQA Guidelines section 15123). Areas of controversy associated with the project are identified. The alternatives considered in this EIR are listed and the environmentally superior alternative is identified.

2.1 PURPOSE AND SCOPE OF THE EIR

This Environmental Impact Report (EIR) has been prepared in conformance with the requirements of the California Environmental Quality Act (CEQA) to evaluate the environmental effects of the Wal-Mart Expansion project. The proposed project is located in the City of Chico in Butte County. The purpose of the EIR is to provide the necessary information to disclose to public agency decision-makers and the general public the significant environmental effects of the proposed project. Additionally, the EIR identifies possible means to minimize the significant effects and describes reasonable alternatives to the project. The City of Chico is required to consider the environmental effects of the project as disclosed in the EIR, along with other relevant information, in making its decision on the project (CEQA Guidelines Section 15121).

The EIR analysis focuses upon the potential physical environmental impacts arising from the city's approval of a tentative map to facilitate creation of a parcel large enough to accommodate the proposed expansion of the Wal-Mart store to a Supercenter, which primarily involves the addition of a grocery store and expansion of the parking lot. The EIR considers the construction and operation of the proposed Supercenter and also assumes that a gas station and restaurant would be constructed on the smaller of the parcels created, although no plans for development of those parcels have been received by the city. The EIR adopts this approach in order to provide a credible worst-case scenario for development of the entire project site disclosing the environmental impacts resulting from project implementation. Where appropriate, some impacts are analyzed under future conditions, which assume buildout of reasonably foreseeable projects in the region; other issues that are site specific in nature are evaluated against baseline conditions.

2.2 PROJECT CHARACTERISTICS

The project site comprises 27.11 acres located at 2044 Forest Avenue. The existing Wal-Mart store on the site opened for business in 1994, is approximately 125,889 square feet in size, and sells general consumer merchandise. The Wal-Mart store is located in a CC Community Commercial zoning district that allows the retail use "by right"; the proposed store expansion on Parcel 1 does not require a use permit. However, the proposed store expansion would take place across a common property line, which is not allowed by the City of Chico. Wal-Mart has submitted an application for a Tentative Parcel Map (PM 03-17) requesting reconfiguration of the two parcel lines to facilitate the expansion of the exiting store into a Wal-Mart Supercenter. The Tentative Parcel Map will alleviate the parcel configuration impediment by reconfiguring the lot lines of the existing parcels (a 16.75-acre parcel and a 10.36-acre parcel) to create one 24.69-acre (Parcel 1) and one 2.42-acre parcel (Parcel 2). The existing Wal-Mart store and all improvements associated with the expansion of the store would be contained entirely within Parcel 1.

The proposed project will add an additional 97,556 square feet to the existing Wal-Mart store, most of which will be added on the southern side of the store with some new construction also taking place on the west and east elevations. The total area of the Wal-Mart store after the expansion would be 223,445 square feet. Approximately 55,729 square feet of the expansion

would be used for grocery sales and a grocery stockroom area, 36,197 square feet and 19,532 square feet respectively. The remaining square footage would be used for general merchandise sales and storage. The existing 630-space parking lot would be expanded with an additional 504 parking spaces for a total of 1,134 spaces. The parking and service areas would be developed with paving and striping, landscaping, lighting, and signage. The existing five driveways on the streets surrounding the project site: Business Lane, three driveways on Baney Lane, and one on Forest Avenue currently provide access. Two additional driveways on Wittmeier Drive would be constructed for the expansion. The primary truck route for deliveries to the store from Business Lane would be extended southward. Trucks would exit the site via Business Lane, right onto Baney Lane or Wittmeier Drive to return to State Route 99 via Forest Avenue to E. 20th Street or Notre Dame Boulevard or other stops in the area. The existing Class I bicycle path and several utilities and other features on the project site would also be relocated southward within the relocated easements.

No development is currently planned for Parcel 2, but a 5,000 square foot fast food restaurant with a drive-through lane, and a gas station including 12 pumps on two islands with a convenience store is analyzed as a reasonable development scenario for this parcel in terms of environmental impact.

2.3 PROJECT ALTERNATIVES SUMMARY

CEQA Guidelines Section 15126(d) requires that an EIR describe a range of reasonable alternatives to the project, which could feasibly attain the basic objectives of the project, while reducing the degree of environmental impact. The alternatives evaluated in this EIR include the following:

- No Project Alternative. The CEQA guidelines require evaluation of the "No Project" alternative in order "to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project" (CEQA Guidelines 15126.6(e)). This alternative assumes that the site remains in it's partially developed state with the existing Wal-Mart store continuing in operation and the remainder of the site remaining vacant.

- General Plan Alternative. This alternative differs from the "No Project" alternative as it assumes development of the proposed project site consistent with the existing zoning and general plan designation. This alternative does not discuss a "no physical change" scenario as found with the "No Project" alternative because given the property's current commercial general plan designation and zoning as well as its location in an intensively developed commercial area, it is unrealistic that the site will remain undeveloped in the foreseeable future. This alternative assumes continued operation of the existing Wal-Mart store and full development of the remainder of the site as a commercial use. An alternative commercial development would potentially generate slightly lower traffic generation rate.

- Grocery Only Alternative. This alternative assumes expansion of the existing Wal-Mart with only the components related to the proposed grocery expansion. No other proposed components of the Wal-Mart expansion proposal would be constructed. The gas station and restaurant would be constructed on the remainder of the property. Figures 6.0-1 display the lay out of the proposed grocery only alternative.

- Alternative Project Sites: Three potential alternative sites were examined for the proposed project. This alternative assumes that the full Wal-Mart Supercenter store, the

gas station, and the restaurant would be developed on the alternate sites. The characteristics of each site are discussed briefly followed by a summary analysis of the environmental issues. It should be noted that the City of Chico has received an application to develop a Wal-Mart Supercenter at the North Chico Alternative site and the entitlements and environmental review for this project (PM 04-09; ANX 04-09) are being processed simultaneously with this subject application and EIR.

- North Chico Alternative **(Figures 6.0-2)**.
- Nord Highway Alternative **(Figure 6.0-2** and **Figure 6.0-3)**.
- Eaton Road Alternative **(Figure 6.0-2)**.

CEQA requires that the environmentally superior alternative be identified. It was determined that the General Plan Alternative is the environmentally superior alternative in that it incrementally reduces potential impacts to traffic, air quality, and biological resources.

2.4 AREAS OF CONTROVERSY

In accordance with CEQA Guidelines Section 15082, the City of Chico prepared and distributed an Initial Study and Notice of Preparation (NOP) of this EIR in 2004. The NOP was circulated to local, state, and federal agencies, other interested parties, and the general public to solicit comments on the proposed project. The NOP and Initial Study and all comments received in response to the NOP are included as **Appendix A** of this document.

Project concerns and issues were considered during the preparation of the Draft EIR. These concerns generally consisted of the following:

- Potential for the project to create blight in the community
- Traffic impacts
- Cumulative effects of this and similar projects
- Parking design

Typically economic, fiscal or social effects of a project are not the subject of an EIR, which focuses on the environmental effects of a project (CEQA Guidelines Section 15064). However, "[a]n EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes in turn caused by the economic or social changes." (CEQA Guidelines Section 15131(a).) Since only physical effects are to be considered under CEQA, economic and social changes resulting from a project may be considered if they, in turn, produce changes in the physical environment. In this case, the physical environmental impact that would be expected to occur as a result of a negative economic effect would be a physical deterioration of the built environment, or urban decay. Chapter 4.6 Economic Analysis of this Draft EIR summarizes the conclusions of an economic study (Sedway, 2006) that identified the expected chain of cause and effect of the Wal-Mart Expansion project to negatively effect competitive businesses and ultimately then to result in urban decay. The analysis considers the effects of the project in and of itself, and in combination with all of the other planned commercial development expected to occur in the area. This analysis concludes that if local conventional grocery stores could not withstand a temporary downturn in sales, it is possible that one or more existing stores may close following

operation of the Wal-Mart Expansion project. However, it would be possible to backfill or even redevelop the space without damaging the Chico retail market and causing urban decay.

The traffic analysis is also based upon a detailed traffic study (Omni-Means, 2006) that concluded that the operation of the project would result in a number of traffic impacts both in and of itself and in combination with other proposed and planned development in the area.

2.5 SUMMARY OF ENVIRONMENTAL IMPACTS

Table 2.0-1 presents a summary of project impacts and proposed mitigation measures that would avoid or minimize potential impacts. The table indicates the level of significance of each environmental impact both before and after the application of the recommended mitigation. For detailed discussions of all project impacts and mitigation measures, please refer to the appropriate chapters in Section 4.0, Environmental Setting, Impacts and Mitigation Measures.

TABLE 2.0-1
SUMMARY OF ENVIRONMENTAL IMPACTS

Impact		Significance Before Mitigation	Mitigation Measure		Significance After Mitigation
4.1 Land Use					
None					
4.2 Traffic and Circulation					
Impact 4.2.1	Development of the proposed project would increase traffic at sufficient volume to cause LOS to decline below City standards.	S	**MM 4.2.1**	The developer shall construct the following improvements or pay their fair-share for traffic improvements based on the "Fair-Share of Improvement Cost Calculations" methodology and Nexus Fee discussed previously, as follows:	SU

Intersection/Roadway	Improvements	Proposed Project Fair Share Cost	
		Wal-Mart Only	Gas Station and Restaurant
City/Caltrans Intersections			
E. 20th Street/SR 99 Southbound Ramps	Provide a westbound to southbound loop-on ramp.	Nexus Fee	Nexux Fee
E. 20th Street/SR 99 Northbound Ramps	Re-stripe the northbound approach to include one shared through-left lane and two exclusive right turn lanes.	Nexus Fee	Nexux Fee
	Provide a channelized free right turn along the westbound approach. Note that this improvement is identified to be in place for year 2018 conditions within the Nexus study.	Nexus Fee	Nexux Fee
E. 20th Street/Chico Mall Access[1]	Development and implementation of a Traffic Management Plan which would potentially include (1) adjusting the shifts of employees to non-peak periods, (2) providing directional signage to shift traffic towards other access points, and (3) providing on-site personnel during peak holiday seasons to physically direct traffic.	100 %	N/a

Intersection/Roadway	Improvements	Proposed Project Fair Share Cost	
		Wal-Mart Only	Gas Station and Restaurant
E. 20th Street/Forest Avenue[2]	Provide an additional left-turn lane along the northbound Forest Avenue approach.	Nexus Fee	Nexux Fee
	Provide an exclusive right-turn lane along the southbound Forest Avenue approach with overlap phasing for the right turn and restrict the eastbound to westbound U-turns along E. 20th Street.	Nexus Fee	Nexux Fee
	Provide a third through lane and an exclusive right-turn lane along the eastbound 20th Street approach. This improvement requires widening the downstream receiving lanes to accommodate the third through lane.	Nexus Fee	Nexux Fee
	Provide a third westbound through lane along the 20th Street. This improvement requires widening the downstream receiving lanes to accommodate the third through lane.	Nexus Fee	Nexux Fee
Skyway/Notre Dame Boulevard[3]	Provision of an additional (2nd) right-turn lane along the southbound Notre Dame Boulevard.	Nexus Fee	Nexux Fee
Private Intersections	Since there is no LOS threshold for private intersections, potential mitigation is described to address any potential vehicle conflict and safety issues.		
Business Lane/Baney Lane	Development and implementation of a Traffic Management Plan	100 %	N/a
Ramp Junctions			
SR 99/E. 20th Street Interchange – Northbound On-Ramp	Provide an eastbound to northbound loop-on ramp.	Nexus Fee	Nexux Fee
SR 99/E. 20th Street Interchange – Southbound Off-Ramp	Provision of a 2-lane southbound off-ramp (two lanes exiting off the freeway).	Nexus Fee	Nexux Fee
SR 99/ SR-32 Northbound Off-Ramp	Provision of an additional through (third) lane on the mainline.	Nexus Fee	Nexux Fee

Notes: 1) The City's Nexus Fee includes $5M for the SR 99/20th Street interchange. The City considers that part of this fee will be to pursue reconfiguration of the mall access and have initiated discussions with the mall. The City does not consider these improvements economically infeasible. The project's contribution of the nexus fees will address the project's impacts to this intersection.

2) The City's Nexus Fee includes $1.14M for this intersection to "Reconfigure and add lanes." The City does not consider the lane improvement economically infeasible. Since these improvements are required under short term conditions, the project should be conditioned to construct these improvements with reimbursements arrangements with the City as appropriate since this project is part of the City's Nexus Fee.

3) The City considers this project part of the Nexus Fee. The project's contribution of the nexus fees will address the project's impacts to this intersection.

Impact		Significance Before Mitigation	Mitigation Measure		Significance After Mitigation
Impact 4.2.2	Inadequate project site circulation and design has the potential to cause vehicle conflicts and public safety issues.	PS	**MM 4.2.2**	The following measures shall be implemented as part of project design and be fully implemented and funded by the project developer:	LTS

Location	Improvements
Project Site Access	The project shall be revised to allow for outbound left turns at the Baney Lane/Wal-Mart West Driveway
	Outbound left turns shall be physically prohibited through construction of channelizations as shown in the site plan for the Baney Lane/Wal-Mart Central Driveway and the Baney Lane/Wal-Mart East Driveway in order to reduce potential traffic related conflicts.
	Restrict vehicular movements along the back alley to/from the Baney Lane/Business Lane intersection to southbound through movements only. To accommodate this restriction, a sign shall be placed near the south end of the alley stating "WAL-MART TRUCK TRAFFIC ONLY – NO THROUGH VEHICLES".
	Development and implementation of a Traffic Management Plan which would potentially include (1) adjusting the shifts of employees to non-peak periods, (2) providing directional signage to shift traffic towards other access points, and (3) providing on-site personnel during peak holiday seasons to physically direct traffic.

Project Roadway Improvements	Push buttons shall be provided to facilitate pedestrian access to/from the site at the intersection of Forest Avenue/Wittmeier Drive. This intersection will be redesigned to accommodate a traffic signal and additional turn lanes.
	Baney Lane shall be improved to City standards for a minor arterial, which will include restriping.

Impact		Significance Before Mitigation	Mitigation Measure		Significance After Mitigation
Impact 4.2.3	Development of the proposed project and all other short-term and cumulative development would increase traffic at sufficient volume to cause LOS to decline below City standards under cumulative conditions.	S	**MM 4.2.3**	The developer shall pay their fair-share for traffic improvements based on the "Fair-Share of Improvement Cost Calculations" methodology and Nexus Fee discussed previously. The fair-share/Nexus Fee costs are as follows:	LTS

Intersection/Roadway	Improvements	Proposed Project Fair Share Cost	
		Wal-Mart Only	Gas Station and Restaurant
City/Caltrans Intersections			
E. 20th Street/Whitman Avenue	Provision of an additional (2nd) northbound right-turn lane.	4%	1%
E. 20th Street / Chico Mall Access[1]	Widen the northbound approach accommodate dual left turn lanes and a shared through right lane.[1]	Nexus Fee	Nexus Fee
	Widen the southbound approach to provide one left turn lane and one through lane exclusive.[1]	Nexus Fee	Nexus Fee
E. 20th Street / Forest Avenue[2]	Provide an additional (second) eastbound left turn along E. 20th Street[1].	Nexus Fee	Nexus Fee
	Provide a third northbound left-turn lane along the northbound Forest Avenue approach.	Nexus Fee	Nexus Fee

Intersection/Roadway	Improvements	Proposed Project Fair Share Cost	
		Wal-Mart Only	Gas Station and Restaurant
Skyway/Notre Dame Boulevard[3]	Convert the existing 2nd left-turn lane (inner left-turn lane) to a shared left-through-right lane in the northbound Notre Dame Boulevard approach.[1]	Nexus Fee	Nexus Fee
	Convert the existing through lane in the southbound direction to a shared through left lane and provide split phasing in the north-south approaches.[1]	Nexus Fee	Nexus Fee
	Re-stripe the westbound right-turn lane to include a shared through-right lane and widen the downstream approach such that the third outside through lane continues on as a right-turn only lane to the northbound SR 99 on-ramp.[1]	Nexus Fee	Nexus Fee
	Widen westbound approach to accommodate one left-turn lane, three through lanes and one exclusive right-turn lane.[1]	Nexus Fee	Nexus Fee
Private Intersections	The following private intersections (all of which are unsignalized) are projected to operate at a unacceptable level of service under *Cumulative Plus Project* conditions. Since there is no LOS threshold for private intersections, potential mitigation is described to address any potential vehicle conflict and safety issues		
Business Lane / Baney Lane	Provide for the signalization of the intersection.	19%	1%
Ramp Junctions			
SR 99/SR-32 Interchange – Northbound Off-Ramp[4]	Provision of an either a two lane ramp (two lanes exiting the freeway) or an additional through lane on the mainline.	Nexus Fee	Nexus Fee
Weave Segments			
NB SR 99 between the Skyway and East 20th Street interchanges[4]	This improvement consisted of provision of an additional northbound through lane (resulting in four lanes including the auxiliary lane).[2]	Nexus Fee	Nexus Fee
95th Percentile Queue Lengths			
Forest Avenue/Baney Lane Intersection	Lengthen the left turn lanes along the northbound and eastbound approaches, as well as the right turn lane along	21%	15%

Intersection/Roadway	Improvements	Proposed Project Fair Share Cost	
		Wal-Mart Only	Gas Station and Restaurant
	the southbound approach to accommodate the 2018 Plus Project queues.		
Forest Avenue/Talbert-Wittmeier Drive Intersection	Lengthen the left turn pockets to accommodate the 2018 Plus Project queue.	100%	N/a

Notes: *1) The City's Nexus Fee includes $5,000,000 for the SR 99/East 20th Street interchange. The City considers that part of this fee will be to pursue reconfiguration of the mall access and have initiated discussions with the mall. The City does not consider these improvements economically infeasible. The project's contribution of the nexus fees will address the project's impacts to this intersection.*

2) The City's Nexus Fee includes $1.140,000 for this intersection to "Reconfigure and add lanes." The City does not consider the lane improvement economically infeasible. Since these improvements are required under short term conditions, the project should be conditioned to construct these improvements with reimbursements arrangements with the City as appropriate since this project is part of the City's Nexus Fee.

3) The City considers this project part of the Nexus Fee. The project's contribution of the nexus fees will address the project's impacts to this intersection.

4) The City's Nexus Fee includes $2,800,000 for auxiliary lanes on SR 99 for the section between Skyway and East 20th Street.

Impact		Significance Before Mitigation	Mitigation Measure		Significance After Mitigation
4.3 Air Quality					
Impact 4.3.1	Construction activities such as clearing, excavation and grading operations, construction vehicle traffic and wind blowing over exposed earth would generate exhaust emissions and fugitive particulate matter emissions that would temporarily affect local air quality for adjacent land uses.	S	**MM 4.3.1**	The developer shall implement measures to reduce ROG, NO_X and PM_{10} emissions during construction activities. During construction, the following measures shall be included in construction specifications, and implemented during construction. • Water all active construction sites at least twice daily. The frequency of watering shall be based on the type of operation, soil, and wind exposure. • Use chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects	SU

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		that are unused for at least 4 consecutive days). • Limit the speed of on-site vehicles to 15 mph on unpaved roads. • Suspend land clearing, grading, earth moving, or excavation activities when winds exceed 20 miles per hour. • Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut-and-fill operations, and hydroseed the area. • Plant vegetative ground cover in disturbed areas as soon as possible. • Cover inactive storage piles. • During initial grading, earth moving, or site preparation, construct a paved (or dust-palliative treated) apron, at least 100 feet long, onto the project site from the adjacent site. • Sweep or wash paved streets adjacent to the development site at the end of each day as necessary to remove excessive accumulations of silt and/or mud that may have accumulated as a result of activities on the development site. • Post a publicly visible sign with the telephone number and person to contact regarding dust complaints. This person will respond and take corrective action within 24 hours. The telephone number of the Butte County AQMD will also be visible to ensure compliance with the Butte County AQMD Rules 200 & 205 (Nuisance and Fugitive Dust Emissions).	

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		• Before final occupancy, demonstrate that all ground surfaces are covered or treated sufficiently to minimize fugitive dust emissions. • Temporary traffic control as appropriate during all phases of construction to improve traffic flow as deemed appropriate by the Department of Public Works and/or Caltrans. • Scheduled construction activities that direct traffic flow to off-peak hours as much as practicable. • All construction equipment shall be maintained according to manufacturers' specifications. • The idling of construction equipment shall be restricted to no longer than 10 minutes. • Only diesel equipment or diesel vehicles with engines built in 1996 or later shall be used. • Off-road machinery shall be restricted to those pieces equipped with lean NO_x engine settings where feasible. • Measures to reduce ROG emissions from architectural coatings shall be implemented. Water-based coatings for both exterior and interior walls on all building structures shall be required. The recommend average solvent content for architectural coatings is approximately 6 grams per liter. That ROG content corresponds to using water-based coatings for everything other than limited specialty uses.	
Impact 4.3.2 During the construction of the proposed project, the use of diesel powered vehicles and equipment will produce	LTS	None Required	LTS

Impact		Significance Before Mitigation	Mitigation Measure		Significance After Mitigation
	potential harmful TAC emmissions.				
Impact 4.3-3	The project would generate temporary, localized odors during the construction phases, similar to any other construction project in the City.	LTS	None Required		LTS
Impact 4.3.4	Operation of the proposed project would increase the ROG and NO_x emissions from mobile and area sources.	S	**MM 4.3.4**	The project developer shall implement the following mitigation measures as part of project design: I. Energy Conservation: • Use of energy-efficient lighting (includes controls) and process systems such as water heaters, furnaces, and boiler units. • Use of energy-efficient and automated controls for air conditioning. • Orientation of building structures to the north for natural cooling and the use of appropriate landscaping that maximizes the potential of passive solar design principles. • Use fleet vehicles that use clean-burning fuels as may be practicable. • Use of solar water heater for at least 25 percent of the building floor area. • Improve the thermal efficiency of commercial and industrial structures as appropriate by: (1) reducing thermal load with automated and timed temperature controls or (2) occupancy load limits. • Incorporate shade trees, adequate in number and proportional to the project size, throughout the project site to reduce building heating and cooling requirements. II. Ancillary Services: • Provide on-site services such as cafeterias, food		SU

Impact		Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
			vending machines, automatic tellers, etc., as appropriate and in compliance with local development regulations. III. Transit: • Provide transit-use incentives, as approved by applicable transportation planning agencies, such as subsidized transit passes and accommodation of unusual work schedules to encourage transit use. • Provide on-site/off-site bus turnouts, passenger benches, or shelters where deemed appropriate by local transportation planning agencies.	
Impact 4.3.5:	Project-generated vehicle trips would increase traffic volumes at roadway intersections in the project site vicinity once the project became operational. During periods of near-calm winds, heavily congested intersections can produce elevated levels of CO that could potentially impact nearby sensitive receptors.	LTS	None Required	LTS
Impact 4.3.6:	Diesel emissions from delivery truck traffic, Transport Refrigeration Units (TRUs) and the gas station at the proposed project may result in elevated diesel PM concentrations in neighborhoods surrounding the site.	PS	None Required	LTS
Impact 4.3.7:	The project would generate potential odors and gaseous fumes by evaporative emissions and tailpipe emissions from passenger vehicles and diesel powered delivery trucks during operations and will include a fast food restaurant, which may emit food odors that may be perceived by surrounding residents.	LTS	None Required	LTS

Impact		Significance Before Mitigation	Mitigation Measure		Significance After Mitigation
Impact 4.3.8	The implementation of the proposed project would have the potential to create uses and/or air quality impacts for the project area beyond those assumed in the BCAQMD Air Quality Attainment Plan.	LTS	None Required		LTS
Impact 4.4.9	The project would contribute to cumulative air quality impacts. These impacts would be **cumulatively considerable** and **significant** impacts**.**	S	**MM 4.4.9**	Implement mitigation measures **MM 4.3.1** and **4.3.4.**	SU
4.4 Biological Resources					
Impact 4.4.1	Implementation of the proposed project would result in the removal of valley grassland habitat with scattered riparian vegetation elements.	LTS	None Required		LTS
Impact 4.4.2	Implementation of the proposed project would result in temporary and direct alteration of site conditions that could support special-status plant species.	PS	None Required		LTS
Impact 4.4.3	Development of the proposed project could result in temporary and direct disturbance to nesting raptors and migratory birds.	PS	**MM 4.4.3**	If proposed grading, site preparation, or construction activities are planned to occur during the nesting seasons for local avian species (typically March 1st through August 31st), a focused survey shall be conducted by a qualified biologist, approved by the City of Chico, for active nests of raptors and migratory birds within and in the vicinity of (no less than 100-feet outside project boundaries, where possible) the construction area no more than 72 hours prior to ground disturbance. If an active nest is located during pre-construction surveys, USFWS and/or DFG (as appropriate) shall be notified regarding the status of the nest. Furthermore, construction activities shall be restricted, as necessary, to avoid disturbance of the nest until it is abandoned and the consulting regulatory agency deems disturbance potential to be minimal. Restrictions may include establishment of exclusion zones (no ingress of personnel or equipment) at a	LTS

Impact		Significance Before Mitigation	Mitigation Measure		Significance After Mitigation
				minimum radius of 100-feet around the nest) or alteration of the construction schedule. If construction will occur during the nonbreeding season (generally September 1st through February 28th), a policy of avoidance and passive relocation (allowing an animal to move out of harms way without any purposeful interference by humans) for any wildlife found onsite shall be implemented for the duration of the project. The appropriate regulatory agency (USFWS or DFG) shall be contacted regarding any species of wildlife refusing to passively relocate from the project area.	
Impact 4.4.4	Implementation of the proposed project would potentially fill jurisdictional waters of the United States.	PS	**MM 4.4.5**	The project applicant shall consult with USACE to verify the original wetland delineation processed under identification number 200300094. If the USACE verifies the delineation and wetlands at the project location are deemed to be jurisdictional, the appropriate permits (e.g., Section 404) under the Clean Water Act and Streambed Alteration Agreement shall be obtained prior to issuance of grading permits. The project applicant shall comply with all permit conditions (established by USACE) to compensate for potential impact to any jurisdictional waters. Additionally, the project applicant shall comply with the City of Chico 'no net loss of wetlands' policy (05-G-9). To the satisfaction of City staff, the applicant shall restore or recreate wetlands and provide for their long-term sustainability and protection through the establishment of a conservation easement and monitoring program.	LTS
Impact 4.4.5	Development of the project in addition to anticipated cumulative development conditions in the project vicinity would result in disturbance to critical riparian habitat and wetlands throughout the region.	PS	**MM 4.4.5**	Implement mitigation measures **MM 4.4.3** and **MM 4.4.4.**	LTS
4.5 Cultural and Paleontological Resources					

Impact		Significance Before Mitigation	Mitigation Measure		Significance After Mitigation
Impact 4.5.1	Implementation of the proposed project could result in the potential disturbance of undiscovered cultural resources.	PS	**MM 4.5.1a**	If any prehistoric or historic artifacts, or other indications of archaeological resources are found once grading and project construction is underway, all work in the immediate vicinity must stop and the City shall be immediately notified. An archaeologist meeting the Secretary of Interior's Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, shall be retained to evaluate the finds and recommend appropriate mitigation measures for the inadvertently discovered cultural resources.	LTS
			MM 4.5.1b	If human remains are discovered, all work must stop in the immediate vicinity of the find, and the County Coroner must be notified, according to Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed.	
			MM 4.5.1c	Mitigation measures MM 4.5.1a and MM 4.5.1b shall be incorporated into construction contracts and documents to ensure contractor knowledge and responsibility for the proper implementation. Should cultural resources be encountered, the supervising contractor shall be responsible for reporting any such findings to the Planning Division, and a qualified archaeologist *will* be contacted to conduct meetings with on-site employees and monitor the *referenced* mitigation measures.	
Impact 4.5.2	Implementation of the proposed project could result in the potential damage or destruction of undiscovered paleontological resources.	PS	**MM 4.5.2**	If any paleontological resources (fossils) are found once grading and project construction is underway, all work in the immediate vicinity must stop and the City shall be immediately notified. A qualified paleontologist shall be retained to evaluate the find and recommend appropriate mitigation measures for the inadvertently discovered paleontological resources.	LTS
Impact 4.5.3	Implementation of the proposed project, along with any foreseeable development in the project vicinity, could result in	LTS	None Required		LTS

Impact		Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
	cumulative impacts to cultural resources.			
Impact 4.5.4	Implementation of the proposed project, along with any foreseeable development in the project vicinity, could result in cumulative impacts to paleontological resources.	LTS	None Required	LTS
4.6 Economic Analysis				
Impact 4.6.1	The proposed Wal-Mart Expansion project would offer products and services that would compete with existing businesses, including general retailers, convenience stores, and groceries, in the City of Chico. Potential closure of competing businesses may result in vacancies that would contribute to physical deterioration and urban decay.	LTS	None Required	LTS
Impact 4.6.2	Expansion of the Wal-Mart store in Chico along with the opening of other retail stores may result in closure of competing businesses. This may increase the inability of property owners to lease vacant buildings that could result in physical deterioration.	LTS	None Required	LTS

3.0 Project Description

This section includes a complete description of the project (in accordance with the CEQA Guidelines section 15124). The regional and local existing conditions are described and depicted, the project history is summarized, requested entitlements and permits are listed, the applicant's objectives for the project are described, the technical and operational characteristics of the project are described and depicted, and a list of current development activity in the vicinity is included.

A more detailed description of the entitlements, permits and decisions necessary for the implementation of this project, as well as the agencies that are expected to use this EIR in their decision-making process, can be found in Section 1.0 Introduction.

3.1 PROJECT LOCATION

The project site is located in the City of Chico in Butte County. The City of Chico is located in the Sacramento Valley, approximately 85 miles north of the City of Sacramento (**Figure 3.0-1**). The Sacramento River runs approximately 10 miles to the west of Chico and forms the western boundary of Butte County. Lake Oroville is located approximately 20 miles to the southeast. State Route 99, one of the main north-south highways in California, passes through the City. State Route 32, an east-west highway, also passes through Chico. Chico is the most populous city in Butte County with an urban area population of approximately 103,625 approximately 30.5 square miles in size.

View from Forest/Wittmeier, looking northwest

The project site comprises 27.11 acres located at 2044 Forest Avenue (**Figure 3.0-2**). The site is bounded on the north by Baney Lane, on the east by Forest Avenue, on the south by Wittmeier Drive, and Business Lane and State Route 99 are west of the site. The State Route 99/East 20th Street interchange is located approximately one-quarter mile to the northwest.

3.2 EXISTING SETTING

The surrounding area is predominantly commercial in character. The Chico Mall, The Village Center, and other commercial establishments are located along East 20th Street. The Wittmeier Auto Center, the recently completed Butte Community College extension, and Lowe's are located on Forest Avenue, south of the project site. State Route 99, a four-lane freeway through Chico, occupies the area west of the project site. The Chico Crossroads Center and Costco are on the west side of State Route 99. East of Forest Avenue, are several office buildings, behind which is a residential area (**Figure 3.0-2**). Immediately

View of existing store, looking west

north of the project site is a Shell gasoline station, vacant commercial land, and the Oxford Suites motel. The Krispy Kreme (now vacant) and the In-and-Out Burger restaurants are located on the western boundary of the project site, at the end of Business Lane.

The Chico General Plan designates the project site as Community Commercial and Commercial Services and the entire site is zoned CC Community Commercial. The project site contains two parcels (**Figure 3.0-3**). One of the parcels comprises 16.75 acres and currently contains a Wal-Mart retail store and associated parking lot. The second parcel is 10.36 acres in size and is located adjacent to and south of the existing Wal-Mart store. This parcel is currently undeveloped and relatively flat. Vegetation on the project site consists of grasses and weeds and contains small, isolated wetlands.

Wal-Mart is a worldwide retail store chain. The existing Wal-Mart store on the project site is approximately 125,889 square feet in size and sells general consumer merchandise including clothing, electronics, hardware, small household appliances, home furnishings, sporting goods, and a limited amount of food and beverages. The existing store also houses a pharmacy, optical and automotive services, and a garden center. The parking lot is located in front of the store and contains 630 parking spaces. Landscaping has been installed in planter areas along the site perimeter on the western property line behind the store, along the frontages of Business Lane, Baney Lane and Forest Avenue, and throughout the parking lot in parking lot island and peninsula planters. A Class I bicycle path is located on the western and southern boundaries of the Wal-Mart store and parking lot. This existing bicycle path is a small segment of a planned Class I bicycle/pedestrian path that will run on the east side of State Route 99 from Big Chico Creek to Skyway/Norte Dame Boulevard. Utility services include city sewer, California Water Service Company provides water, PG&E provides electricity and natural gas, AT&T provides telephone, and Comcast provides cable TV. The store is accessed from Baney Lane via three driveways, from Forest Avenue via one driveway, and from Business Lane via one driveway.

The vacant parcel to the south is not presently connected to any utilities. Wittmeier Drive is located along the southern boundary of the vacant parcel, but there is currently no driveway access serving the parcel.

3.3 PROJECT BACKGROUND

The existing Wal-Mart store on the site opened for business in 1994. In August 2002, Wal-Mart submitted a site plan and building elevations for an expanded store (Wal-Mart Supercenter) to the City's Architectural Review Board, which approved them. That approval has since expired and updated building elevations will be resubmitted as part of the entitlement package. Wal-Mart also applied for approval of a Tentative Parcel Map in 2003 (PM 03-06) involving one of the subject properties. At that time, the applicant proposed to divide the southern parcel (the 10.36-acre parcel) into two parcels (a 7.94-acre parcel and a 2.42-acre parcel). The City of Chico prepared and filed a Mitigated Negative Declaration addressing the parcel map. The Planning Commission approved Parcel Map 03-06 and adopted the Mitigated Negative Declaration

View of loading dock area

in June 2003. The approval was appealed to the City Council by John Shannon, which upheld the Planning Commission's action the following month. In August 2003, a lawsuit was filed in Butte County Superior Court requesting that the decision on the parcel map be set aside. The Court granted Wal-Mart's motion to dismiss the lawsuit in June 2005 after Wal-Mart notified the City that it was abandoning the tentative map and final map, therefore, a final map was never recorded and the tentative map has now expired.

Subsequently, Wal-Mart filed an application for a Boundary Line Modification/Tentative Parcel Map (PM 03-17), as well as a building permit for store expansion. Without the parcel map, the store expansion would have been located across a common property line, which is not allowed by the City of Chico. The boundary line modification/parcel map application, therefore, proposes to reconfigure the lot lines of the existing parcels (a 10.36-acre parcel and the remaining two parcels of 16.75-acres) to create one 24.69-acre parcel and one 2.42-acre parcel. See **Figure 3.0-4**. The existing Wal-Mart and the planned expansion will be located entirely on the 24.69-acre parcel. The 2.42-acre parcel will remain undeveloped but development of a gas station and restaurant may be planned in the future. The City prepared an Initial Study/Mitigated Negative Declaration for the project, which was released for public review in January 2004 (**Appendix A**). After the close of the public review period, the project and the Mitigated Negative Declaration was reviewed by the Planning Commission. At its February 19, 2004 meeting, the Planning Commission voted to require that an Environmental Impact Report be prepared for the project to address traffic impacts and potential economic impacts raised during the public comment period. On February 27, 2004, Wal-Mart filed an appeal of the Planning Commission's action to require preparation of an EIR, but has subsequently withdrawn that appeal. The City is now proceeding with the preparation of the required EIR.

3.4 REQUESTED PROJECT APPROVALS

CITY OF CHICO ENTITLEMENTS

Tentative Parcel Map

Wal-Mart submitted the above referenced application for a Tentative Parcel Map (PM 03-17) requesting reconfiguration of the two parcel lines to facilitate the expansion of the existing store into a Wal-Mart Supercenter. Absent this Tentative Parcel Map, the proposed store expansion would take place across a common property line, which is not allowed by the City of Chico. The Tentative Parcel Map (**Figure 3.0-5**) will alleviate this impediment by reconfiguring the lot lines of the existing parcels (a 16.75-acre parcel and a 10.36-acre parcel) to create on 24.69-acre (Parcel 1) and one 2.42-acre parcel (Parcel 2). The existing Wal-Mart store and all improvements associated with the expansion of the store would be contained entirely within Parcel 1. As described more fully below, no development is currently planned for Parcel 2, but a restaurant and gas station may be developed in the future. In addition, as a part of the Tentative Map, a number of public utility and public access easements (sanitary sewer, storm drainage, water, utilities, and public bicycle path) are proposed for abandonment and relocation on the site, described more fully in the following Section 3.6 Site Design and Architectural Review.

The Wal-Mart store is located in a CC Community Commercial zoning district that allows the retail use "by right"; the proposed store expansion on Parcel 1 does not require a use permit. The project, however, does require site design and architectural review by the Architectural Review Board for the proposed building elevations, site plan, lighting and landscaping plan. Additionally, alcohol sales are permitted in the CC district. However, the State of California may require the City of Chico to issue a

Finding of Public Convenience of Necessity for these sales, which must be approved by the City Council.

Future Entitlements

The 2.42-acre Parcel 2 would remain undeveloped at present. In the future, however, Wal-Mart has indicated that it may be developed with a gas station and restaurant. A restaurant is a permitted use in the CC Community Commercial zone and development could proceed "by right", subject to obtaining approval from the Architectural Review Board. A use permit would be required in the future for development of a gas station or for a restaurant if it were to include a drive-through window. The potential environmental impacts of this future development are addressed in this EIR.

OTHER AGENCY APPROVALS

Because proposed construction activities would disturb more than one acre, the project applicant must obtain a Construction Activity Storm Water Permit or water quality certification from the Regional Water Quality Control Board (RWQCB), Central Valley Region. If the wetlands previously delineated on the project site are determined to be jurisdictional waters of the United States, the project may be required to obtain a Section 404 permit from the U.S. Army Corps of Engineers before filling these wetland areas. The City of Chico will coordinate with Caltrans regarding the design and construction of any improvements to SR 99 associated with the approval of the Wal-Mart Expansion project and projected future traffic in the area. Future development and operation of the gas station may require a permit from the Butte County Air Quality Management District.

3.5 PROJECT OBJECTIVES

Wal-Mart has submitted the following objectives for the project:

- Design a project consistent with the City of Chico Zoning Ordinance and develop the site consistent with general retail development allowed under the Community Commercial zoning district.

- Develop a store that satisfies General Plan goals and policies for commercial and retail development and that is consistent with the site's Commercial Services General Plan land use designation.

- Develop a store that enhances the economic vitality of the City of Chico and contributes to the community.

- Develop a large, state of the art retail store in close proximity to SR 99 that will accommodate the retail demands of the Chico community and surrounding areas and to expand/replace the existing small, outdated retail store.

- Develop an architectural design that softens the scale and mass of the building and provides access that minimizes potential automobile and pedestrian conflicts, and a pedestrian scale in and around the entry to the store.

- Design a site plan to minimize overall access and circulation conflicts, such as facilitation of the circulation between the store, service station and future development on the adjacent parcel.

- Provide landscaping to soften the design and create a pleasant, attractive appearance that unifies the site and complements the surrounding area.
- Design storage areas to blend in with the building itself and confine the areas to a defined space.
- Design seasonal sales areas to complement the building design and minimize pedestrian and automobile conflicts.
- Implement planned improvements and mitigation measures that minimize traffic impacts:
    - Implement traffic mitigation measures in conjunction with the City's planned improvements;
    - Develop and implement planned improvements and mitigations in conjunction with the City, to minimize traffic both in the near term and by Year 2018.
- Phase the demolition of portions of the existing store and construction of the store to minimize economic impacts to employees and the community and potential hazards to the health and safety of employees and customers.[1]
- Provide sufficient off-street parking to meet the City's standards.[2]
- Increase the site's acreage in order to accommodate the larger 223,445 square foot facility.
- Provide adequate infrastructure to support the project and develop a storm drainage system in compliance with standards set forth by the City of Chico.
- Provide a store that will provide significant benefits to the City and community in terms of employment opportunities, sales tax revenues, shopping opportunities and community programs.

3.6 EXPANSION OF THE EXISTING STORE ON PARCEL 1

SITE PLAN

The existing Wal-Mart store is 125,889 square feet. The proposed expansion project will add an additional 97,556 square feet to the existing Wal-Mart store, most of which will be added on the southern side of the store with some new construction also taking place on the west and east elevations. The total area of the Wal-Mart store after the expansion would be 223,445 square feet. See **Figure 3.0-6** for the Site Plan of the proposed project. The proposed addition to the existing building will be similar in design and

Entrance to existing store

[1] Only portions of the existing store will be demolished in order to provide for expansion, not the entire store.
[2] The City standard for a "warehouse retail store" is one parking space for each 200 square feet of gross floor area and one space for each company vehicle.

massing to the existing building (see **Figure 3.0-7** for proposed building elevations). Additions to the west and east side provide articulation to the sides of the building and avoid long, straight walls and seek to minimize the "big box" look. Approximately 55,729 square feet of the expansion would be used for grocery sales and a grocery stockroom area, 36,197 square feet and 19,532 square feet respectively.[3] The remaining square footage would be used for general merchandise sales and storage. The stated intent of the design is to provide a pleasant and distinctive setting that strengthens the site plan, enhances building elevations, softens parking areas by providing additional landscaping, buffers service areas and maintains continuity with the public right-of-way. Further details submitted by the applicant regarding the components of the existing and proposed buildings and sales areas are included in **Table 3.0-1** and Proposed Floor Plan Drawing (**Figure 3.0-8**) and the operations and circulation information that follow.

TABLE 3.0-1
EXISTING AND PROPOSED BUILDING SPECIFICATIONS

Area	Specification
Existing Building	
Existing Building Area	**125,889 sq. ft.**
Existing Sales Floor Area[1]	94,889 sq. ft.
Existing McDonalds Area	1,505 sq. ft.
Existing McDonalds Seat Count	56
Existing Garden Center Fenced Area[2] *Existing Garden Center Metal Canopy* *Existing Garden Center Shade Cloth*	5,512 sq. ft. *1,519 sq. ft.* *3,767 sq. ft.*
Storage Areas: Existing Battery Storage at Auto Center *Existing Trash Compactor (pad only)*	 594 sq. ft. *234 sq. ft.*
Outside sales area	8,000 sq. ft.
Proposed Expanded Building[3]	
Total Expanded Building	**223,445 sq. ft.**
General Merchandise General Merchandise Sales Floor *General Merchandise Office* *General Merchandise Stockroom*	162,541 sq. ft. *138,402 sq. ft.* *7,180 sq. ft.* *16,959 sq. ft.*
Grocery *Grocery Sales* *Grocery Stockroom*	55,729 sq. ft. *36,197 sq. ft.* *19,532 sq. ft.*
Auto Center (existing)	5,175 sq. ft.
Garden Center Fenced Area	20,602 sq. ft.

Source: Pacland, 2005.

1. *This number includes the areas for the McDonalds, Courtesy Desk, Vision Center, Pharmacy, Photo, Auto Center, Cart Storage and Entry Doors.*
2. *Existing Garden Center is enclosed with black ornamental fence 10'-0" high with 2'0" square CMU columns spaced at 12'-0" on center.*
3. *Number of truck loading docks = 7 docks below grade (4 grocery docks (new) and 3 general merchandise docks (existing)) and 2 at grade (1 grocery dock and 1 general merchandise)*

[3] Note: All square footage figures presented in this EIR are based on the best current information. Minor variances will likely occur in the final building design, resolution from deign issues, architectural review conditions, and other considerations.

OPERATIONAL CHARACTERISTICS

Hours of Operation

The existing Wal-Mart store operates 24-hours a day, seven days a week. Wal-Mart anticipates that the expanded store would also be open 24-hours a day, seven days a week.

Site Circulation

The existing five driveways on the streets surrounding the project site include: Business Lane, three driveways on Baney Lane, and one on Forest Avenue. Two additional driveways on Wittmeier Drive would be constructed for the expansion. External and internal vehicle circulation for both customers and delivery trucks is described below and depicted in **Figure 3.0-9**.

Customer Access

Primary access to the site would continue to be provided via the two main driveways on Baney Lane. Wal-Mart envisions that these two main driveways on the northern portion of the site will provide the majority of traffic circulation. Customers exiting the site via Baney Lane would be restricted to right turn movements only and would proceed to Forest Avenue. Concrete traffic islands are proposed to be installed to preclude left turns from the site for the purpose of minimizing the amount of traffic proceeding northbound on Business Lane. The existing traffic signal located at the intersection of Forest Avenue and Baney Lane is proposed to be modified as part of the proposed Wal-Mart expansion and a new traffic signal is proposed at the intersection of Wittmeier Drive and Forest Avenue. One secondary access entrance to the project site exists along the central portion of the site and receives right-in/right-out traffic from Forest Avenue. A new secondary access driveway would be constructed at the north central portion of Wittmeier Drive that would provide ingress/egress for the expanded Wal-Mart store and for future development on Parcel 2.

Internal Circulation

Internal circulation is directed throughout the interior of the project site by directional arrows on the pavement and peninsula and island planters at the terminus of the isles. Stop signs are proposed for critical drive aisle intersection locations.

Customer Drop-off/Merchandise Loading Area

A drop-off area for customers that have difficulty walking to the store from the parking lot is proposed at the front of the store. This area also serves as a package pick-up zone to allow customers who are purchasing large items to load their vehicles.

Delivery Truck Access

The primary truck route for deliveries to the store is from Business Lane. Trucks exiting SR 99 at the East 20th Street off-ramp turn south on Business Lane and proceed to Wal-Mart access at the end of Business Lane behind the Wal-Mart to the truck well bays to unload merchandise. The truck route/fire lane behind the existing store would remain, but it would be extended southward into the area of proposed expansion. A truck turnaround approximately 130 feet in diameter would be designated at the end of the truck route extension, in the southwestern portion of the project site. Trucks would exit the site via Business Lane, right onto Baney Lane or Wittmeier Drive to return to State

Route 99 via Forest Avenue to E. 20th Street or Notre Dame Boulevard or other stops in the area. For delivery of smaller merchandise, an at grade service door has been provided adjacent to the truck bay loading area. Smaller trucks access the site from Business Lane and park adjacent to these loading areas. Products will be carried into the store through the service delivery door.

Bicycle Access

The existing Class I bicycle path (and easement) would be moved further south, and would run along the western and southern boundaries of the newly created Parcel 1 and along the southern boundary of Parcel 2. The existing Class II bicycle path east of the existing store, fronting Forest Avenue, would remain.

Energy Efficiency Measures/Sustainability

The following energy efficiency and sustainability measures will be included in the proposed Wal-Mart Expansion project as part of project design.

Daylighting (skylights/dimming)

The Wal-Mart expansion will include a daylighting system in the grocery area, including energy reduction measures such as dimming of lighting during day light hours and the use of skylights.

Energy efficient HVAC units

Installation of "super" high efficiency packaged HVAC units, with a rating between 10.8 to 13.2. These units range between 4-17 percent more efficient than required by CA Title 24.

Central Energy Management

The store will be equipped with an energy management system that is monitored and controlled from the Home Office in Bentonville, Arkansas. This enables Wal-Mart to monitor energy usage and performance of the store 24 hours a day.

Water Heating

The waste heat from the Refrigeration Equipment will be captured to heat water for the kitchen preparation areas of the store. This represents energy savings of 165 million BTU's per year.

White Roofs

The building will have a "white" membrane roof. The high solar reflectivity of this membrane results in lowering the "cooling" load by about 10 percent.

Non-PVC Roofs

Environmental concerns have been raised with the manufacture and disposal of PVC roofing. PVC roofing will be eliminated the new store.

Interior Lighting Retrofit Program

All T-12 lighting fixtures in the store will be replaced with T-8 fluorescent lamps and electronic ballasts. The energy load is reduced by approximately 15-20 percent as a result of this upgrade. The store will use only "low-mercury" lamps.

LED Signage Illumination

All new internally illuminated building signage, including exit signs, would use LED lighting. This application of LED technology is over 70 percent more energy-efficient than fluorescent illumination. With lamp life ranging to 100,000 hours, using LEDs significantly reduces need to manufacture and dispose of fluorescent lamps.

Integrally Colored Concrete Floors

New concrete floor for grocery area will be integrally colored concrete finish. The use of concrete floors is more environmentally friendly than the use of carpet and vinyl tile finishes. This not only addresses environmental concerns with the manufacture and disposal of PVC, it also reduces the need for most chemical cleaners, wax, and wax strippers.

Recycling

This store will be designed and equipped to recycle the following:

- Oil
- Tires
- Auto Batteries
- Cardboard
- Vegetable Oil
- Single-use Cameras
- Bottles & Cans
- Plastic Waste
- Electronic Waste
- Silver

Steel Recycling

New stores are built of nearly 100 percent recycled structural steel. Wal-Mart's structural steel suppliers use high efficient electric arc furnaces that 50 percent less energy to manufacture recycled steel. It is a material which can be readily recycled again if the building is demolished someday in the distant future.

Recycled Plastic

All of Wal-Mart's plastic baseboards, and many of their plastic shelving, is manufactured from recycled material.

Flyash in Concrete

The concrete in Wal-Mart's Distribution Centers contains 10 percent flyash, an industrial byproduct from coal fired power generation processes. This represents about 4000 tons of flyash per Center.

Storm water protection

The new store will use Oil Filter Crushers to harvest maximum oil for recycling, and to capture oil so that spills will not contaminate runoff. The floor drains in Wal-Mart Auto Centers connect to an oil interceptor to capture oil and Wal-Mart has recently started using new prefabricated oil interceptor to reduce further the potential for contamination. This feature will be added to the existing auto center.

Water-conserving fixtures

All new restroom sinks will use sensor-activated low flow faucets. The faucets reduce usage by 84 percent. The sensors save approximately 20 percent usage over similar manual operated systems.

Ozone-Friendly Refrigerants

Wal-Mart uses R404a for the Refrigeration Equipment. For Air Conditioning, Wal-Mart has converted to R410a refrigerant. All new RTUs and refrigeration equipment will use these refrigerants.

Loading Dock Operations

Truck deliveries would be made to seven below grade loading docks and two at grade docks. Deliveries would include the three existing merchandise trucks and four new grocery merchandise trucks. Wal-Mart estimates that six to seven 18-wheeler trucks would deliver general merchandise each day, seven days a week. The delivery schedule includes deliveries at 3:00 p.m., 6:00 p.m., and 9:00 p.m. Expansion of the store to include a grocery operation would add grocery deliveries, which are typically delivered during the normal delivery hours, plus fresh products typically between 5:00 and 6:00 a.m. Wal-Mart estimates that two to three 18-wheeler trucks would deliver the bulk of the groceries daily, while produce and frozen goods would only be delivered four days a week. Additionally, ten to twelve smaller vendor trucks would make deliveries five days a week between 5:00 a.m. to 12:00 p.m.

Wal-Mart proposes to build a sound wall along the edge of the loading dock to reduce noise from loading operations. The loading docks are all located at the south end of the site and noise from loading operations will be directed toward State Route 99 and Wittmeier Auto Center, neither of which is considered to be sensitive to noise.

Existing Wal-Mart parking area

Parking, Landscaping, and Lighting

The existing 630-space parking lot would be expanded to the south of Parcel 1. The addition of 504 parking spaces would bring the total number of parking spaces on the project site to 1,134. The parking and service areas would be developed with paving and striping, landscaping, lighting, and signage so that the entire development is coherently integrated. These elements are intended to comply with the parking lot landscaping and lighting requirements set forth in the City of Chico Municipal Code which will require approval from the Architectural Review Board. Automatic lighting features would be provided to incorporate energy conservation technology.

The Landscaping Plan (**Figure 3.0-10**) specifies that the existing site landscaping and automatic irrigation systems are intended to be preserved. Any vegetation damaged during construction is to be replaced with similar species. Planting of screening landscaping comprised of conifer trees and large shrubbery per Caltrans specifications would be continued further south, along the western site boundary adjacent to SR 99. A new turf area is depicted at the southern end of the property. Within the parking area, 15 inch box trees, shrubbery and groundcover of a variety of species is proposed in the parking lot island and peninsula planters. Automatic irrigation would be timed to provide optimal water conservation.

Exterior lighting is designed to create a nighttime environment that promotes safe movement of vehicular and pedestrian traffic through the parking area and into the store. Lighting is proposed to be energy efficient, metal halide fixtures. As required by City Ordinance, light fixtures located along property boundaries will include cut off shielding that directs lighting downward in order to prevent both glare impacts to drivers on State Route 99 and light trespass onto neighboring properties.

UTILITY AND ACCESS EASEMENTS

In accordance with Parcel Map 03-17, several utilities and other features on the project site would be installed within the relocated easements. The existing water easement surrounding the existing store would be abandoned. A new 20-foot water easement would be created that would surround the expanded store. The existing sanitary sewer easement located south of the existing store would be abandoned, and a new 20-foot sewer easement would traverse the south-central portion of Parcel 1 to the northern boundary of Parcel 2. The existing storm drain south of the existing store would be abandoned, and a new storm drain would be installed that would be rerouted farther south around the expanded area of the store, then proceed east to Forest Avenue. The PG&E easement would be relocated to the southern boundary of Parcel 1 and then continue along the western and northern boundaries of Parcel 2.

The parcel map provides for the creation of a 25-foot access easement for Parcel 2 from the existing driveway on Forest Avenue, across Parcel 1 along the western boundary of Parcel 2, terminating onto a proposed driveway on Wittmeier Drive. The existing 15-foot easement for the bicycle path would be rerouted further south on Parcel 1 and would traverse the southern boundary of Parcel 2, north of Wittmeier Drive, exiting onto Forest Avenue.

3.7 ASSUMPTIONS FOR DEVELOPMENT OF PARCEL 2

The 2.42-acre Parcel 2 would remain undeveloped at present but, in the future, Wal-Mart has indicated that it may be developed with a gas station and restaurant. For purposes of evaluating the full development potential of the project site and the physical environmental impacts generated by that development, this EIR assumes the development of:

- A 5,000 square foot fast food restaurant with a drive-through lane, and
- A gas station including 12 pumps on two islands with a convenience store as a reasonable development scenario.

A restaurant and gas station attract a high number of vehicle trips and represent a worst-case development scenario for this parcel in terms of environmental impact.

3.8 CUMULATIVE PROJECTS

The environmental analysis of the project includes an analysis of cumulative impacts of the project. CEQA Guidelines Section 15130(a) requires an EIR to discuss the cumulative impacts of a project when the incremental effects of a project are cumulatively considerable.

The following list contains the current development activity in the City of Chico as of June 6, 2004, the filing date for the Notice of Preparation for the project. This list contains projects in the southwest and southeast quadrants for the City of Chico in proximity to the proposed project site, as well as larger projects Citywide. **Table 3.0-2** depicts approximately 1,112,382 square feet of commercial space, including a proposal for a second Wal-Mart Supercenter in the north area of the City of Chico, 3,126 dwelling units, two educational facilities, one hospital expansion, two hotels, and one specific plan for approximately 2,445 new housing units and 442,994 square feet of commercial space (Northwest Chico Specific Plan).

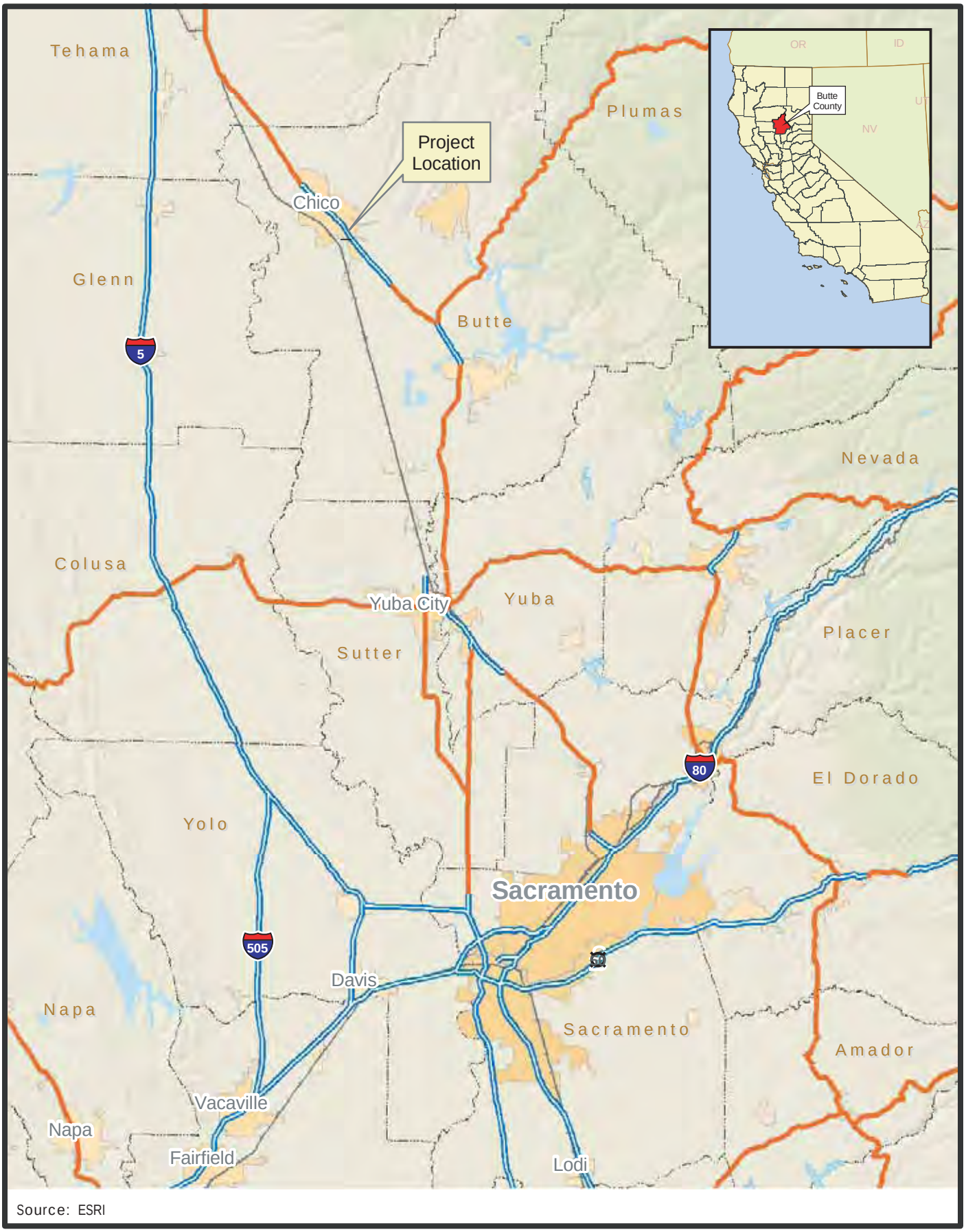
TABLE 3.0-2
OPERATIONAL AND PENDING DEVELOPMENT

(This list includes all projects known at the time the NOP was filed (6/8/2004). The list has been updated to reflect the current status of each project)

#	Project	Address	Description	GP/Zoning Consistency
Approved Projects Under Construction				
1	Retail Buildings ARB 03-02	2481 and 2483 Norte Dame Blvd.	Two commercial buildings, each having 5,280 sq. ft.	Consistent
2	Retail Building	2035 Forest Avenue	10,000 sq. ft. retail shell	Consistent
3	Medical Offices	101 Raley Blvd.	27,000 sq. ft. of medical offices.	Consistent
4	Springfield Retail Center (Kohl's)	Off Springfield Drive	Proposed 96,077 sq. ft. retail building with two additional retail building (15,000 sq. ft. and 11,250 sq. ft.)	Consistent
5	Hillview Terrace Subdivision	East end of E. 20th Street (east of Doe Mill subdivision)	89 residential units on 27.1 acres.	Consistent
6	Yosemite @ 32 Subdivision	Yosemite Drive and Highway 32, NE corner	32-lot residential subdivision with a total of 43 units	Consistent
7	Jan Ct.	Jan Court	Five office buildings totaling 21,500 sq. ft.	Consistent
8	Belvedere Subdivision		191 units on appox. 50 acres	Consistent
9	Mission Hills Vista Hill Subdivision	Humboldt Road, east of El Monte Avenue/Norte Dame Blvd.	33 residential plus 25,400 sq. ft. of commercial retail space	Consistent
10	Bruce Road Tentative Map	East side of Bruce Road north of Little Chico Creek	12-lot residential subdivision	Consistent
Approved Projects but not yet Constructed				
11	Doe Mill Neighborhood Subdivision	East end of E. 20th Street	Approximately 55 units remain to be built in the approved 101-lot subdivision	Consistent
12	SE Chico High School	On Bruce Road north of Skyway	Proposed high school	Consistent
13	Office/Commercial Store	2499 Forest Avenue	6,100 sq. ft. retail building	Consistent
14	Commercial Buildings	2031 Forest Avenue	Two retail commercial buildings totaling 9,975 sq. ft.	Consistent
15	Warehouse addition	2420 Notre Dame Blvd.	4,842 sq. ft. warehouse addition to an existing retail store.	Consistent

#	Project	Address	Description	GP/Zoning Consistency
16	Enloe Hospital Expansion	Esplanade	Hospital Campus Master Plan expansion, increase of 166,108 square feet and 142 new beds	Requires GP amendment/rezone to Public/Quasi Pub
17	E. 20th Street Senior Housing	E. 20th Street at Norte Dame	3.5-acre site proposed for an affordable senior housing project (50 units).	Consistent
18	Oak Valley Subdivision	East of Bruce Road, between Humboldt Road and Highway 32.	1,324 residential units plus 109,000 sq. ft. of commercial. EIR is currently being prepared.	
19	Northwest Chico Specific Plan	Northwest Chico	Approx. 659 acre Specific Plan for the northwest area of Chico. The plan calls for 1,012 new single family dwelling units, 1,043 multifamily units, and 13.9 acres of commercial. The plan is to be acted upon by Council in the Spring 2005.	Consistent
Applications in Process				
20	DES Apartments	Bruce Road and Highway 32	220 apartments	Consistent
21	Pacific Properties	2036 Forest Avenue	73,000 sq. ft. of retail space on 6.5 acres	Consistent
18	North Chico Retail & Annexation (Wal-Mart North)	Esplanade and Garner Lane	210,000 sq. ft. retail anchor store on 20 acres. The project also involves the annexation of an additional area of approximately 120 acres.	Consistent
22	Meriam Park	Bruce Road between Humboldt Road and E. 20th Street	Mixed-use development with more than 1,400 housing units. Total commercial acreage is unknown at this time. Total of 250 acres.	Requires a GP amendment.
Projects Constructed and Operational within the Last Two Years in the Southeast Quadrant				
23	Office complex	2607, 2611, 2615 Forest Avenue	Office complex totaling 22,500 sq. ft.	Consistent
24	Office building	111 & 121 Raley Blvd.	Office building of 25,813 sq. ft. and ambulatory surgery center of 12,097 sq. ft.	Consistent
25	Doe Mill Neighborhood Subdivision	East end of E. 20th Street	Approximately 55 units built in the approved 101-lot subdivision	Consistent
26	Dental office	2533 Forest Avenue	3,000 sq. ft. dental office	Consistent
27	Bakery	2060 Business Lane	4,500 sq. ft. retail bakery	Consistent
28	18-hole Miniature Golf Course	2465 Carmichael Drive	Outdoor entertainment business (miniature golf course)	Consistent

#	Project	Address	Description	GP/Zoning Consistency
29	Townhome units	550 Flying V Street	Eight townhome units	Consistent
30	Office building	2535 & 2539 Forest Avenue	Two office buildings, both are 3,500 sq. ft.	Consistent
31	Office/warehouse building	102 Raley Blvd.	12,000 sq. ft. office/warehouse building	Consistent
32	Office building	2531 Forest Avenue	3,000 sq. ft. office building	Consistent
33	Retail building	1141 Forest Avenue	9,000 sq. ft. retail building (5 suites)	Consistent
34	Day care building	2000 & 2010 Norte Dame Blvd.	3,000 sq. ft. day care building and 6,296 sq. ft. office building	Consistent
35	Pheasant Run Shopping Center	2027 Forest Avenue	5,000 sq. ft. retail, shell building	Consistent
36	Mini-storage	2300 Whitman Avenue	41,865 sq. ft. mini-storage facility	Consistent
37	Jiffy Lube	2454 Norte Dame Blvd.	4,700 sq. ft. auto service building	Consistent
38	Commercial building	2070 & 2072 E. 20th Street	8,000 sq. ft. and 7,255 sq. ft. commercial buildings	Consistent
39	Mini-storage expansion	1909 Whitman Avenue	46,744 sq. ft. expansion of mini-storage facility (189 new units)	Consistent



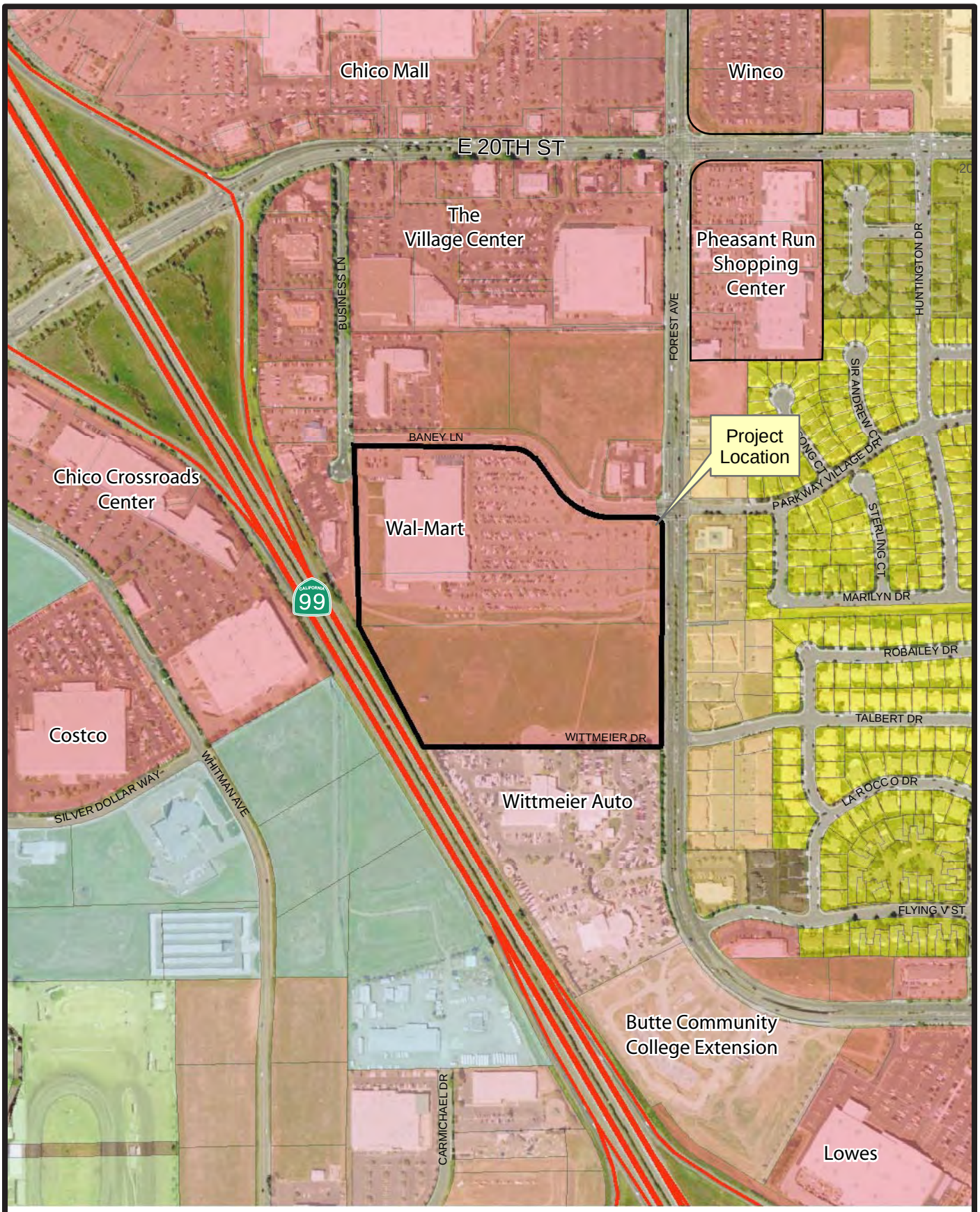
Source: ESRI

T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Figure 3.0-1.ai, April 2006

N

FIGURE 3.0-1
REGIONAL LOCATION MAP

PMC



Source: Butte County; 2004-01-01, "Airphoto USA", 1:3600, 0.6096m, "Color"

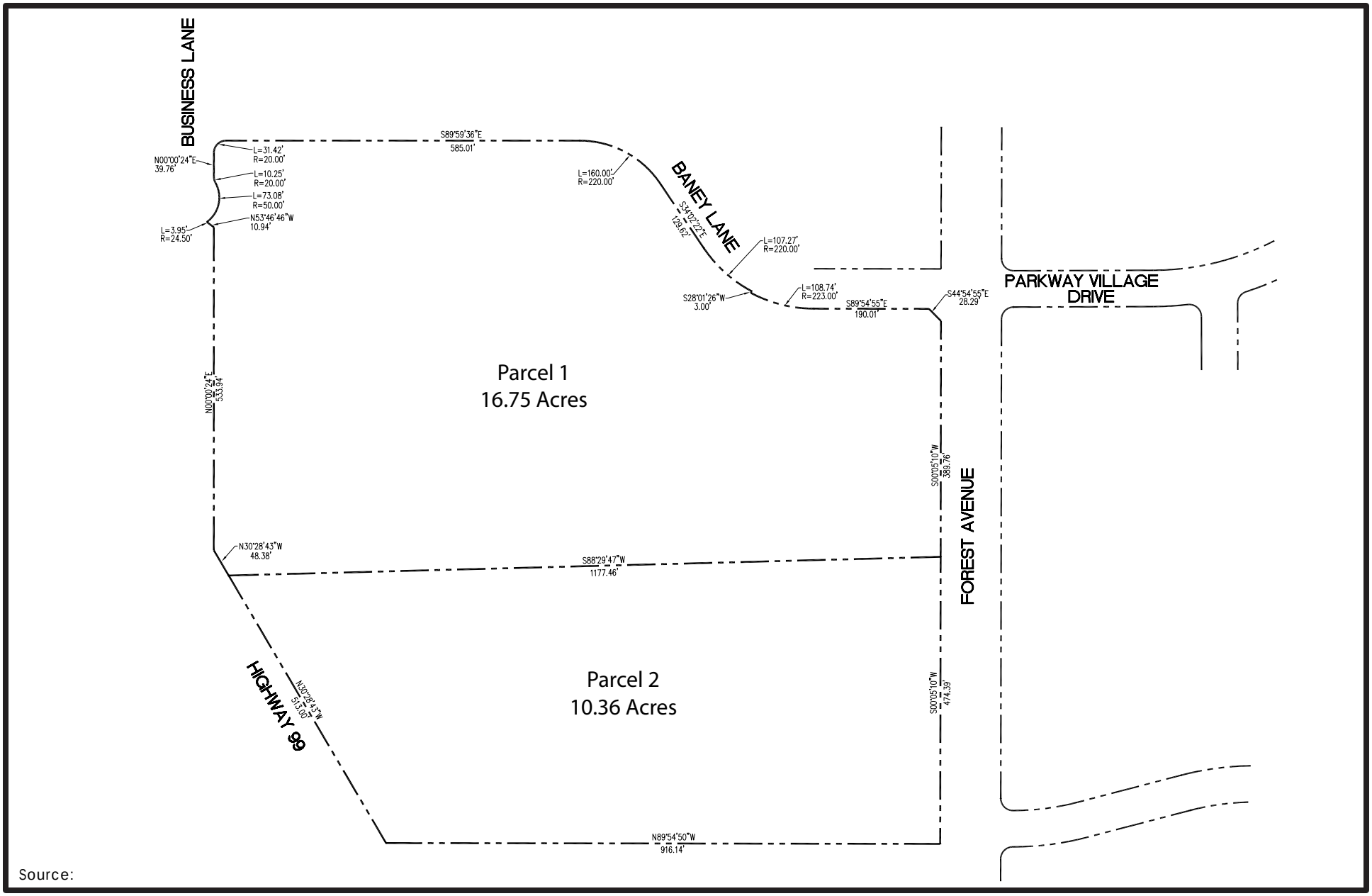
T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Section 3.0\Revised Sept2006\Figure 3.0-2.ai, September 2006

200 X 200
Scale in Feet

N

Figure 3.0-2
Surrounding Uses

PMC



Source:

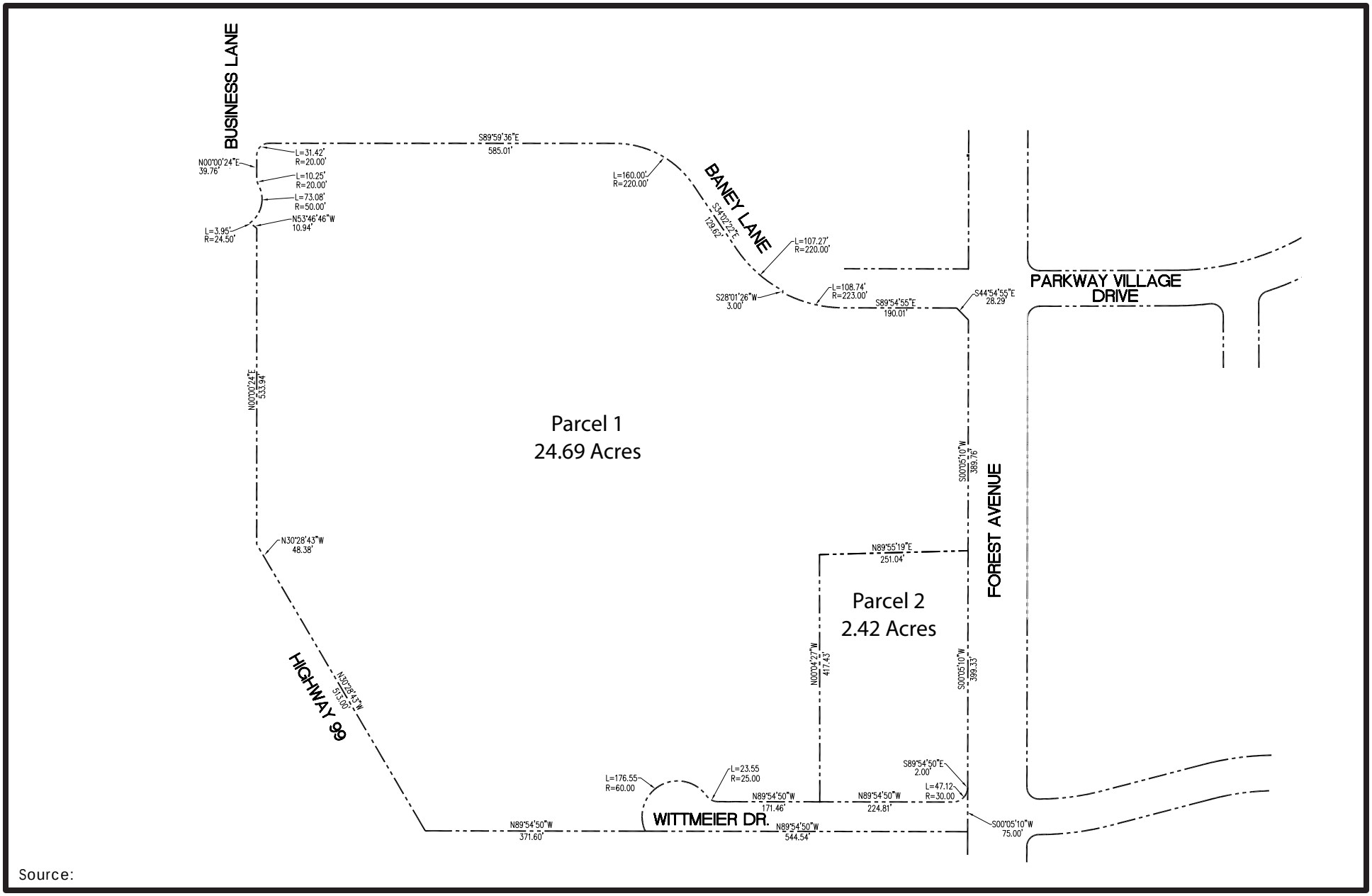
Scale in Feet

N

Figure 3.0-3
Existing Parcel Exhibit

PMC

T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Section 3.0\Revised Sept2006\Figure 3.0-3.ai, September 2006



Source:

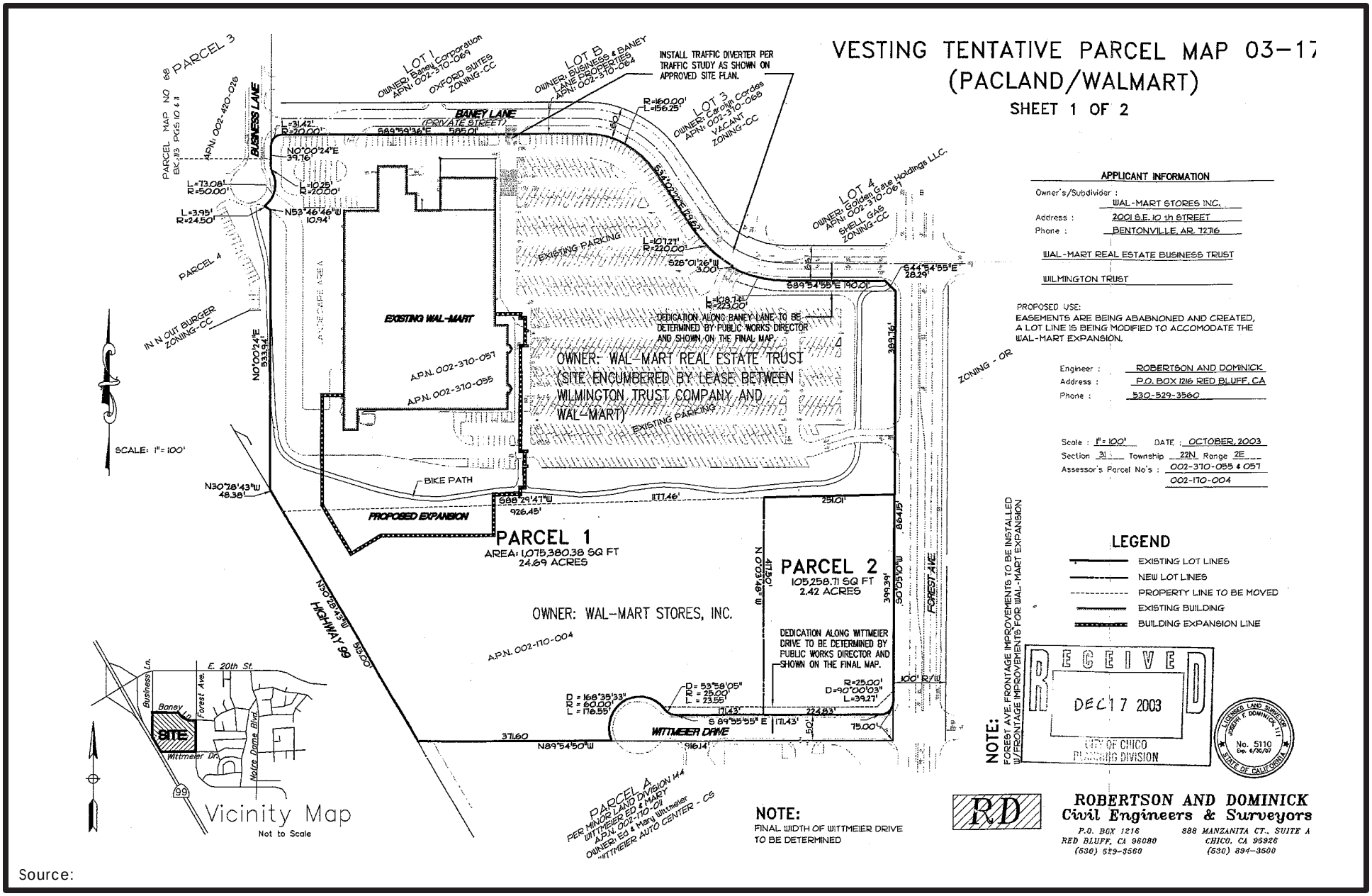
Scale in Feet

N

Figure 3.0-4
Proposed Parcel Exhibit

PMC

T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Section 3.0\Revised Sept2006\Figure 3.0-4.ai, September 2006



Source:

No Scale

N

FIGURE 3.0-5
TENTATIVE PARCEL MAP

PMC

T:\Chico\Chico Wal-Mart\Graphic Development\All Files\Section 3.0\Revised Sept2006\Figure 3.0-5.ai, September 2006

SITE LEGEND

(A) 6" WIDE FIRE LANE STRIPING PAINTED TRAFFIC RED WITH "NO PARKING FIRE LANE" PAINTED WITH 4" HIGH WHITE LETTERING @ 25' O.C. SEE DETAIL SHEET.

(B) PICNIC TABLES AND BENCHES SECURED TO 8'x8' CONCRETE PAD (U3). SIDEWALK DETAIL FOR PAD SECTION

(C) PEDESTRIAN CROSSWALK WITH 4" WIDE PAINTED WHITE STRIPING PARALLEL TO DIRECTION OF TRAFFIC AT 2'-0" O.C. UNLESS NOTED OTHERWISE. SEE SITE PLAN FOR WIDTH.

(D) PEDESTRIAN CROSSING SIGN W11A-2 AND W16A-9P TYPICAL AT PEDESTRIAN CROSSWALKS AS NOTED ON PLANS (3/C-8.1) (1/C-8.2)

(E) "YELLO" PAINTED WHITE ON PAVEMENT TYPICAL SEE DETAIL SHEET. (3/C-8.1)

(F) RAMPED PAVEMENT AT FRONT OF BUILDING TO BE FLUSH WITH TOP OF SIDEWALK AT 5.0% MAXIMUM. REFER TO ARCHITECTURAL PLANS.

(G) EXIT PORCH. SEE ARCHITECTURAL PLANS FOR EXACT SIZE, LOCATION FOR STOOPS, STAIRS AND/OR RAMPS THAT MAY BE REQUIRED. RAMP PAVEMENT FLUSH WITH THE TOP OF STOOP.

(H) 6"ø PIPE BOLLARD TYP. UNLESS NOTED OTHERWISE. SEE DETAIL SHEET. (1/C-9.0)

(I) AT GRADE OVERHEAD DOOR LOCATION. SEE ARCHITECTURAL PLANS FOR EXACT SIZE AND LOCATION FOR COORDINATION WITH CIVIL PLANS.

(J) 4" WIDE x 130' LONG YELLOW PAINTED TRUCK ALIGNMENT STRIPES. SPACED 10'-0" O.C. CENTERED ON DOOR

(K) CONCRETE COMPACTOR PAD. REFER TO ARCHITECTURAL PLAN FOR EXACT LOCATION AND SLOPE.

(L) CONCRETE TRANSFORMER PAD. CONTRACTOR TO COORDINATE WITH LOCAL POWER COMPANY FOR DETAILS. SEE ARCH. PLANS

(M) ACCESSIBLE PARKING SPACE TYPICAL. SEE DETAIL SHEET FOR ACCESSIBLE PARKING SPACE SIZE, SIGN AND SYMBOL ("VAN"-REQUIRED VAN ACCESSIBLE SPACE) (3/C-8.1)

(N) PAINTED ISLAND TYPICAL UNLESS NOTED OTHERWISE. STRIPES SHALL BE PAINTED 5YSL/4" AT 2'-0" O.C. SEE DETAIL SHEET (1/C-8.1)

(O) 8' WIDE PEDESTRIAN CROSSWALK. EDGE LINES PAINTED 5WSL/8" WITH INSIDE STRIPING PAINTED 5WSL/4" @ 2'-0" O.C. PERPENDICULAR TO EDGE LINES.

(P) CART CORRAL TYPICAL-SEE DETAIL SHEET FOR CART CORRAL DETAIL. (10 CART CORRALS TOTAL) RELOCATE EXISTING CART CORRALS AS SHOWN ON PLAN. (1/C-9.0)

(Q) ADA ACCESSIBLE ROUTE FROM BUILDING TO FOREST AVE. RIGHT OF WAY

(R) 2'-0" LOADING ZONE AT ALL SPACES ADJACENT TO CURB AND GUTTER - TYPICAL. 4" PAINTED YELLOW STRIPING @ 2'-0" O.C. PERPENDICULAR TO PARKING SPACE.

(S) 18" CONCRETE CURB AND GUTTER TYPICAL. (2/C-8.0)

(T) PAINTED DIRECTIONAL ARROW TYPICAL -SEE DETAIL SHEET (1/C-8.1)

(U) LIGHT POLE BASE (TYP) (1/C-3.1)

(V) CART CROSSING. (2/C-8.0)

(W) AISLE INDICATOR SIGNS TYPICAL - SEE DETAIL SHEET. (1/C-8.1)

(X) TILE STRIPING SEE DETAIL SHEET. (2/C-8.1)

(Y) "NO TRUCKS" SIGN. SEE DETAIL SHEET. (2/C-8.2) (3/C-8.2)

(AA) "TRUCK EXIT" SIGN. SEE DETAIL SHEET. (2/C-8.2) (3/C-8.2)

(AB) "TRUCK ENTRANCE" SIGN. SEE DETAIL SHEET. (2/C-8.2) (3/C-8.2)

(AC) SAWCUT, MATCH AND JOIN EXISTING PAVEMENT.

(AD) CONCRETE SIDEWALK (4/C-8.0)

(AE) CURB RAMP DETAIL (TYP) (6/C-8.0)

(AF) 8' HIGH ARCHITECTURAL SPLIT FACE CMU SCREEN WALL, SEE ARCH PLANS

(AG) REMOTE GARDEN CENTER TO UTILITIES BOLLARD DETAIL (2/C-8.0)

(AH) CONTRACTOR TO INSTALL 6" TALL CONCRETE WHEEL STOPS PER CITY STANDARDS ADJACENT TO ALL NEW AND EXISTING LANDSCAPE ISLAND AS SHOWN

(AI) "STOP" SIGN 18" STOP BAR (TYP) (2/C-8.1) (3/C-8.1) (5/C-8.1)

(AJ) BICYCLE RACKS TO PROVIDE 50 SLOTS (5% OF PARKING STALLS) SEE ARCH. PLANS.

(AK) REFER TO SITE LIGHTING PLAN SHEET C-3.1 FOR LIGHT POLE LOCATION AND INFORMATION. REFER TO MEP PLANS FOR SITE LIGHTING ELECTRICAL CIRCUITRY.

(AL) EXISTING CURB TO BE REMOVED AND REPLACED WITH A NEW CURB AT ELEVATIONS SHOWN ON GRADING PLAN.

(AM) EXISTING CURBED ISLAND TO BE REMOVED WITHIN PAVEMENT REMOVAL AREAS, TYPICAL.

(AN) PROVIDE 18" WIDE CONCRETE PAD IN VEGETATION FREE ZONE. (1/C-8.0)

(AO) GREASE INTERCEPTOR, REFER TO ARCH/MEP PLANS.

NOTES

1. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY/COUNTY REGULATIONS AND CODES AND O.S.H.A. STANDARDS.
2. THE DESIGN SHOWN IS BASED UPON THE ENGINEER'S UNDERSTANDING OF THE EXISTING CONDITIONS. THIS PLAN DOES NOT REPRESENT A DETAILED FIELD SURVEY. THE EXISTING CONDITIONS SHOWN ON THIS PLAN SHEET ARE BASED UPON SURVEY PREPARED BY CEI ENGINEERING, DATED 11/15/02. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING FIELD CONDITIONS PRIOR TO BIDDING THE PROPOSED SITEWORK IMPROVEMENTS. IF CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITEWORK WHICH WOULD BE AFFECTED. IF CONTRACTOR DOES NOT ACCEPT EXISTING SURVEY, INCLUDING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, HE SHALL HAVE MADE, AT HIS OWN EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR AND SUBMIT IT TO THE OWNER FOR REVIEW.
3. CAUTION - NOTICE TO CONTRACTOR
   THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES AND EXISTING IMPROVEMENTS WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS ON THE PLANS
4. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND DIMENSIONS OF VESTIBULE, SLOPED PAVING, EXIT PORCHES, SIDEWALKS, RAMPS & TRUCK DOORS. PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
5. DIMENSIONS SHOWN REFER TO FACE OF CURB, FACE OF BUILDING OR TO THE CENTERLINE OF PAVEMENT STRIPING, UNLESS OTHERWISE NOTED.
6. ALL PAVED PARKING LOT AREAS WITHIN THE LIMITS OF IMPROVEMENTS SHALL BE STANDARD DUTY PAVEMENT UNLESS OTHERWISE NOTED.
7. CONTRACTOR SHALL PROVIDE A TEMPORARY TRAFFIC CONTROL PLAN FOR THE CITY ENGINEER'S APPROVAL PRIOR TO ANY WORK WITHIN THE CITY RIGHT-OF-WAY.
8. FIRE LANE STRIPING AROUND BUILDING PERIMETER AND ALONG FIRE TRUCK ACCESS WAYS SHALL BE INSTALLED AS PART OF THIS CONTRACT, IN ACCORDANCE WITH THE LOCAL CODE AND FIRE MARSHALL REQUIREMENTS.
9. REFER TO BOUNDARY SURVEY FOR LEGAL DESCRIPTION, DIMENSIONS OF PROPERTY LINES, BASIS OF BEARINGS & BENCHMARK INFORMATION. (SEE SHEET CS-1)
10. SEE SHEET C-1.1 FOR SITE DIMENSIONS.
11. ALL ON-SITE PAINTED STRIPING SHALL BE DOUBLE COATED. SEPARATE COATS SHALL BE APPLIED NO SOONER THAN 4 HOURS APART. (CONTRACTOR TO REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL PAVING MARKING REQUIREMENTS.)
12. PARKING LOT STRIPING SHALL BE YELLOW, 4" WIDTH, & DOUBLE COATED, UNLESS OTHERWISE NOTED. LIGHT POLE BASES TO BE PAINTED TRAFFIC YELLOW (DOUBLE COAT)
13. ALL DISTURBED AREAS ARE TO RECEIVE FOUR INCHES OF TOPSOIL, SEED, MULCH AND WATER UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.
14. ALL ISLANDS WITH CURB AND GUTTER SHALL BE LANDSCAPED. THOSE ISLANDS ARE TO HAVE 18" CURB AND GUTTER. ALL REMAINING ISLANDS ARE TO BE STRIPED AS SHOWN.
15. EXISTING STRUCTURES WITHIN CONSTRUCTION LIMITS ARE TO BE ABANDONED, REMOVED OR RELOCATED AS NECESSARY. ALL COST SHALL BE INCLUDED IN BASE BID.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATION'S, INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITIES SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COST SHALL BE INCLUDED IN BASE BID.
17. EXISTING WAL-MART PYLON SIGN TO REMAIN. TILE PYLON SIGN SHALL BE CONSTRUCTED BY OTHERS. THE CONTRACTOR SHALL INSTALL CONDUIT AND ELECTRICAL CIRCUIT BETWEEN THE PYLON SIGNS AND THE LIGHTING PANEL.
18. CONTRACTOR SHALL TOUCH UP PAINT ALL LIGHT POLE BASES, FIRE HYDRANTS, CART CORRALS, PIPE BOLLARDS, AND CURBS WHICH ARE CURRENTLY PAINTED. COST SHALL BE INCLUDED IN THE BASE BID.
19. CURB RADII ADJACENT TO PARKING STALLS SHALL BE 2'. ALL OTHER CURB RADII SHALL BE 10', UNLESS OTHERWISE NOTED.
20. CONTRACTOR TO REFER TO LANDSCAPING AND IRRIGATION PLAN FOR RELOCATION'S, AND ADDITIONS TO SUCH.
21. EXISTING ACCESSIBLE PARKING SIGNS TO BE REUSED WHEN POSSIBLE. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING SIGNS NEED. ALL ACCESSIBLE SIGNS SHALL BE BUILT INSIDE PIPE BOLLARD PER DETAIL
22. 5 EXISTING CART CORRALS TO REMAIN AND TO BE PAINTED TRAFFIC YELLOW. CONTRACTOR TO INSTALL 5 NEW CART CORRALS PER PLAN.
23. CONTRACTOR IS RESPONSIBLE FOR RELOCATING AND/OR PLACING PEDESTRIAN CROSSING SIGNS IN NEW LOCATIONS AS INDICATED ON PLAN. CONTRACTOR TO VERIFY EXACT NUMBER OF SIGNS REQUIRED.
24. ALL EXISTING PAINT STRIPING TO BE REMOVED PRIOR TO OVERLAY. THE PARKING LOT WILL BE RESTRIPED WITH 2 COATS OF PAINT PER THE PLANS AND SPECIFICATIONS. THIS WORK MUST BE COORDINATED WITH THE CONSTRUCTION MANAGER. THE PARKING LOT MUST BE OPAL IN SECTIONS SO THAT IT DOES NOT INTERRUPT THE STORE OPERATIONS.
25. COORDINATE WALKTHROUGH FOR CURB REPAIR IN PARKING LOT WITH WAL-MART CONSTRUCTION MANAGER.

LEGEND

- STD. DUTY PAVEMENT (1/C-8.0)
- HEAVY DUTY PAVEMENT (2/C-8.0)
- 1.5" (COMPACTED) ASPHALT CONCRETE OVERLAY: CONTRACTOR TO CONSTRUCT A 10' WIDE MILLED JOINT AROUND ALL EXISTING CURB AND GUTTER TO REMAIN. CONTRACTOR TO MILL ADDITIONAL PAVEMENT ADJACENT TO ALL CURB AND GUTTER AS NEEDED TO PROVIDE POSITIVE DRAINAGE AND PRECLUDE THE PONDING OF WATER.
- CONCRETE PAVEMENT (3/C-8.0)
- CONCRETE SIDEWALK PAVEMENT (4/C-8.0)
- PAVEMENT PER ARCH PLANS
- CONCRETE CURB & GUTTER (5/C-8.0)
- CONCRETE BARRIER CURB (5A/C-8.0)
- PIPE BOLLARD (1/C-9.0)
- (#) NUMBER OF PARKING STALLS PER ROW
- [#] NUMBER OF ASSOCIATE PARKING STALLS PER ROW, 224 STALLS TOTAL
- ASSOCIATE PARKING STALLS, WHITE STRIPING
- C DENOTES COMPACT STALL
- CART CORRAL (10 TOTAL) (3/C-9.0)
- AISLE MARKER SIGN (1/C-8.1)
- 5WSL/4" SINGLE WHITE SOLID LINE / 4" WIDE
- 5YSL/4 SINGLE YELLOW SOLID LINE / 4" WIDE EACH
- 5YSL/4" DOUBLE YELLOW SOLID LINE / 4" WIDE EACH
- 5YSL/10" SINGLE YELLOW SOLID LINE / 10" WIDE
- 5WDL/4" SINGLE WHITE DASHED LINE / 4" WIDE
- 5WSL/24" SINGLE WHITE SOLID LINE / 24" WIDE
- LIGHT POLE AND FIXTURE (TYPE RV)
- LIGHT POLE AND FIXTURE (TYPE XV)
- LIGHT POLE AND FIXTURE (TYPE DV)
- LIGHT POLE AND FIXTURE (TYPE JV-MOD)

SITE DATA

USE

EXISTING RETAIL	= 16.66 AC
RETAIL EXPANSION	= 8.20 AC
EXCESS PROPERTY	= 2.42 AC
TOTAL	= 27.08 AC

BUILDING DATA

APPROXIMATE BUILDING AREA	= 155,889 SF
APPROXIMATE EXPANSION AREA	= 67,556 SF
TOTAL	= 223,445 SF

PARKING DATA

EXISTING PARKING

STANDARD STALLS	= 617 STALLS
ACCESSIBLE STALLS	= 13 STALLS
TOTAL STALLS	= 630 STALLS

EXISTING PARKING RATIO = 5.0 / 1000 SF

EXPANSION PARKING

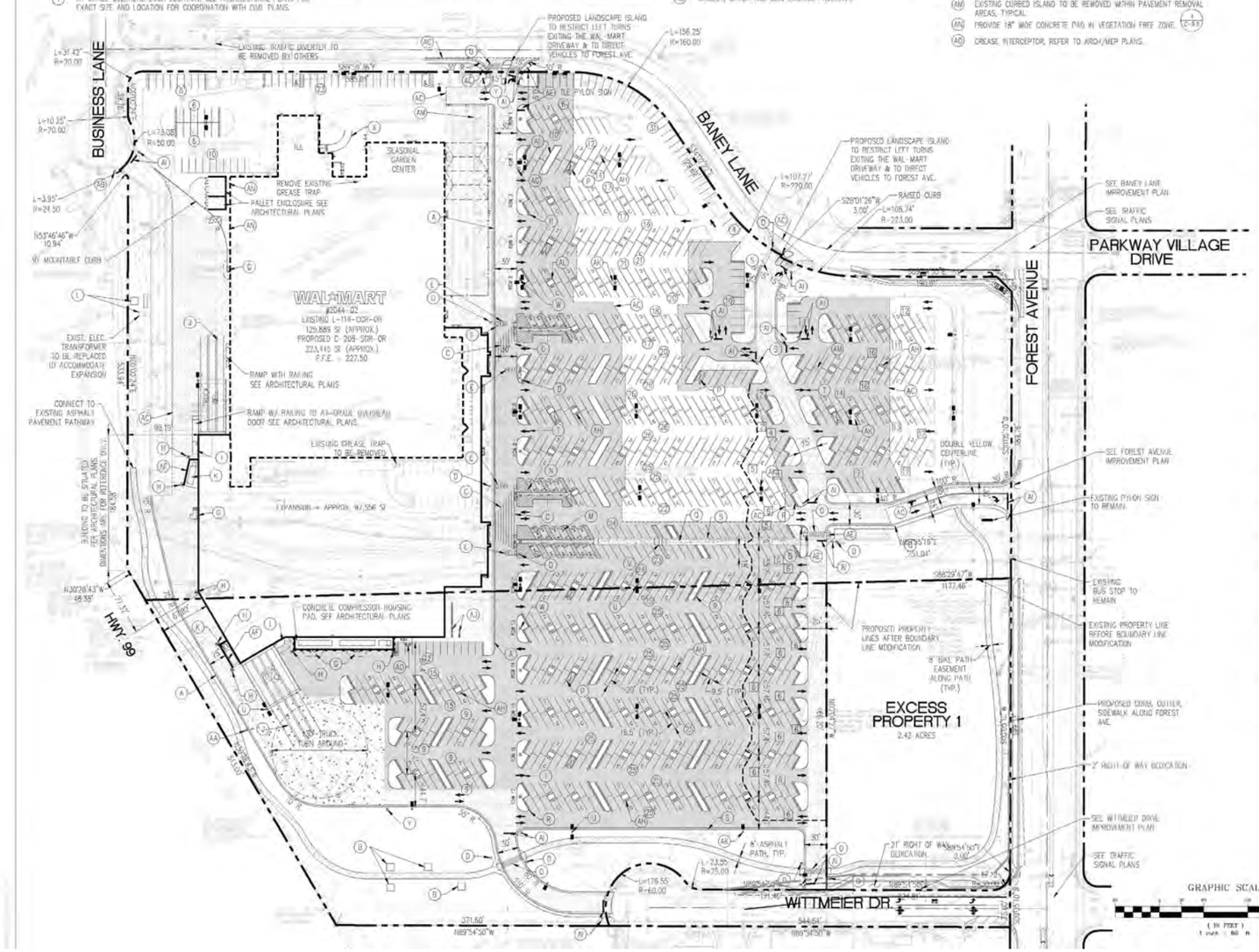
STANDARD STALLS	= 877 STALLS
COMPACT STALLS	= 235 STALLS
ACCESSIBLE STALLS	= 22 STALLS
TOTAL STALLS	= 1,134 STALLS

EXPANSION PARKING RATIO = 5.1 / 1000 SF

SETBACKS

PER CITY OF CHICO ZONING CODE

FRONT	= 0'
REAR	= 10'
SIDE	= 10'



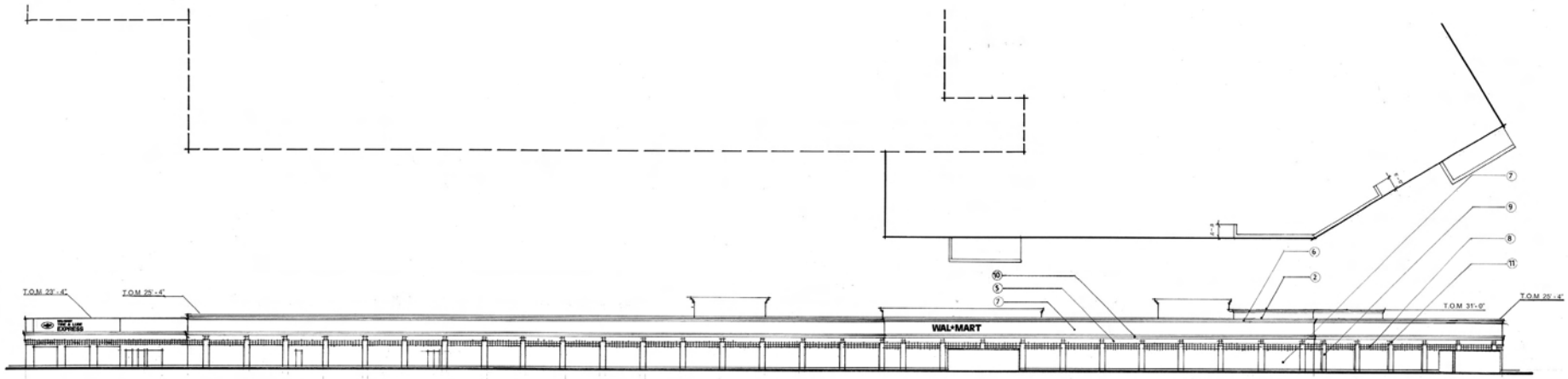
Source: PacLand

N

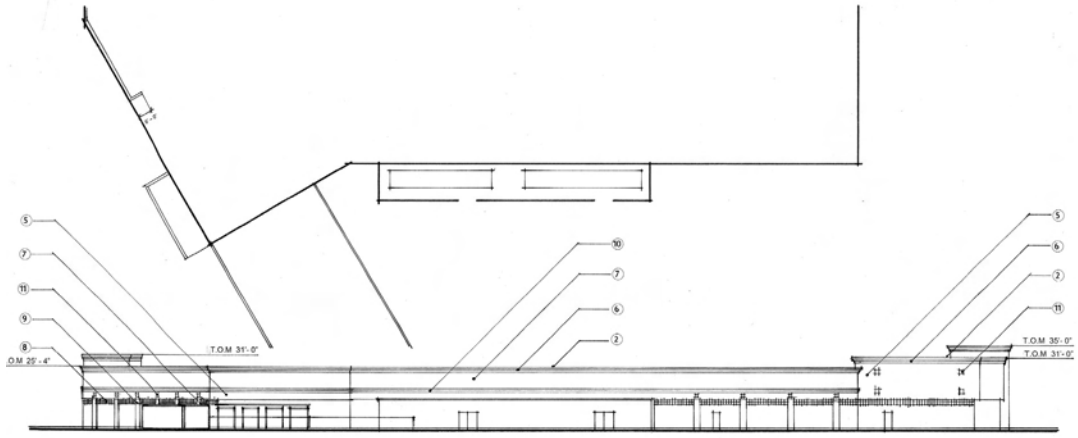
FIGURE 3.0-6
SITE PLAN

PMC

T:\Chico\Chico Wal-Mart\Graphic Development\All Files\Figure 3.0-6.ai, December 2005



WEST ELEVATION
scale: 1" = 20'-0"

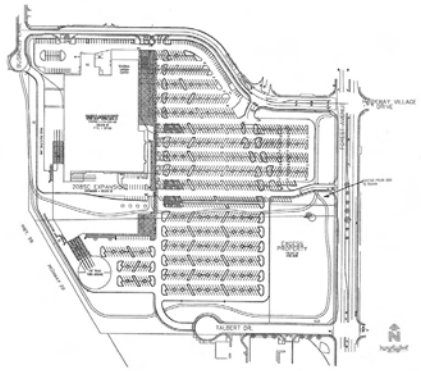


SOUTH ELEVATION
scale: 1" = 20'-0"

MATERIAL & COLOR LEGEND

1. MT'L FLASH'G O/ MEMBRANE FLASH'G O/ BASE FLASH'G
   COLOR TO MATCH: THOROCOAT 30-120 "DEEP LAKE"
2. MT'L FLASH'G O/ MEMBRANE FLASH'G O/ BASE FLASH'G
   COLOR TO MATCH: THOROCOAT 52-7P "BARELY BEIGE"
3. MT'L FLASH'G O/ MEMBRANE FLASH'G O/ BASE FLASH'G
   COLOR TO MATCH: THOROCOAT "MINARET MELON"
4. ALUMINUM STOREFRONT
   COLOR: DARK BRONZE ALUMINUM
5. EIFS ON GYP BOARD OR CMU
   COLOR TO MATCH: THOROCOAT 12-1P "SWEET APRICOT"
6. EIFS ON GYP BOARD OR CMU
   COLOR TO MATCH: THOROCOAT 52-7P "BARELY BEIGE"
7. SPLIT-FACE CMU
   COLOR TO MATCH: THOROCOAT "MINARET MELON"
8. EIFS ON GYP BOARD OR CMU
   COLOR TO MATCH: THOROCOAT 30-120 "DEEP LAKE"
9. SMOOTH-FACE CMU
   COLOR TO MATCH: THOROCOAT 12-1P "SWEET APRICOT"
10. GALV. MET. CAP PAINTED
    COLOR TO MATCH: THOROCOAT 12-1P "SWEET APRICOT"
11. GLAZED CERAMIC TILE
    COLOR: DATILE "TEAL"
12. AMERISTAR FENCING PRODUCTS
    STEEL PICKET FENCING
    COLOR: BLACK W/ GREEN SHADE CLOTH
13. LEXAN GREENHOUSE CANOPY
    COLOR: WHITE

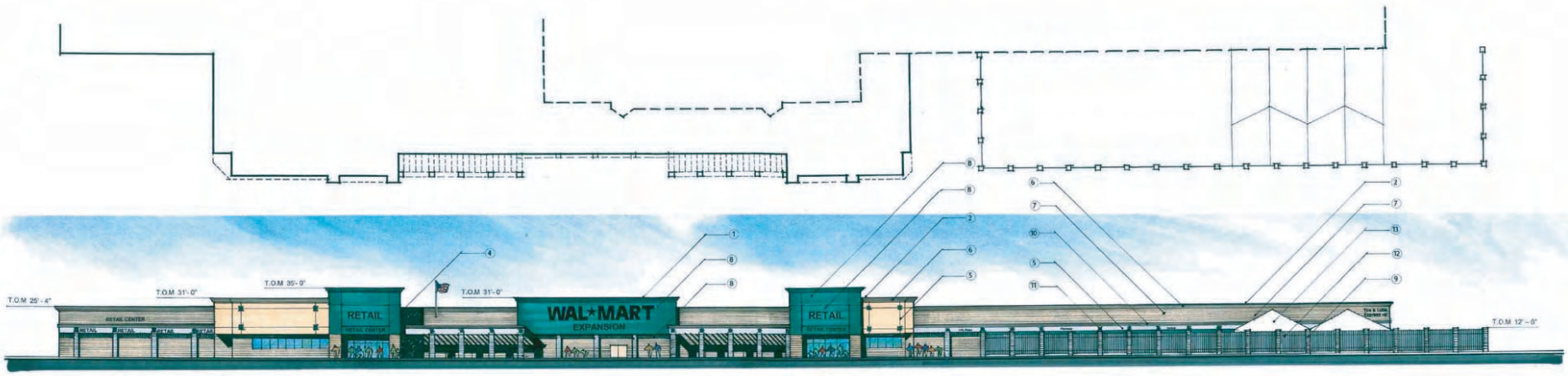
SITE PLAN



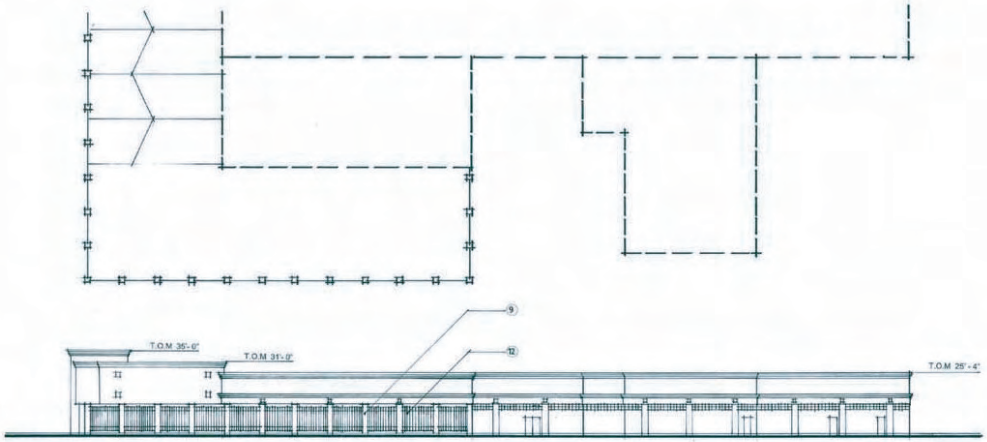
T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Figure 3.0-7a.ai, June 2006

FIGURE 3.0-7A
BUILDING ELEVATION

PMC



EAST ELEVATION
scale: 1" = 20'-0"

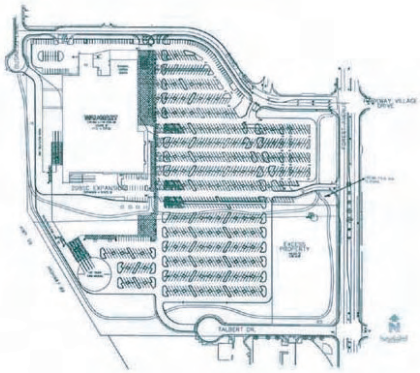


NORTH ELEVATION
scale: 1" = 20'-0"

MATERIAL & COLOR LEGEND

1. MT'L FLASH'G O/ MEMBRANE FLASH'G O/ BASE FLASH'G
   COLOR TO MATCH: THOROCOAT 30-120 "DEEP LAKE"
2. MT'L FLASH'G O/ MEMBRANE FLASH'G O/ BASE FLASH'G
   COLOR TO MATCH: THOROCOAT 52-7P "BARELY BEIGE"
3. MT'L FLASH'G O/ MEMBRANE FLASH'G O/ BASE FLASH'G
   COLOR TO MATCH: THOROCOAT "MINARET MELON"
4. ALUMINUM STOREFRONT
   COLOR: DARK BRONZE ALUMINUM
5. EIFS ON GYP BOARD OR CMU
   COLOR TO MATCH: THOROCOAT 12-1P "SWEET APRICOT"
6. EIFS ON GYP BOARD OR CMU
   COLOR TO MATCH: THOROCOAT 52-7P "BARELY BEIGE"
7. SPLIT-FACE CMU
   COLOR TO MATCH: THOROCOAT "MINARET MELON"
8. EIFS ON GYP BOARD OR CMU
   COLOR TO MATCH: THOROCOAT 30-120 "DEEP LAKE"
9. SMOOTH-FACE CMU
   COLOR TO MATCH: THOROCOAT 12-1P "SWEET APRICOT"
10. GALV. MET. CAP PAINTED
    COLOR TO MATCH: THOROCOAT 12-1P "SWEET APRICOT"
11. GLAZED CERAMIC TILE
    COLOR: DATILE "TEAL"
12. AMERISTAR FENCING PRODUCTS
    STEEL PICKET FENCING
    COLOR: BLACK W/ GREEN SHADE CLOTH
13. LEXAN GREENHOUSE CANOPY
    COLOR: WHITE

SITE PLAN

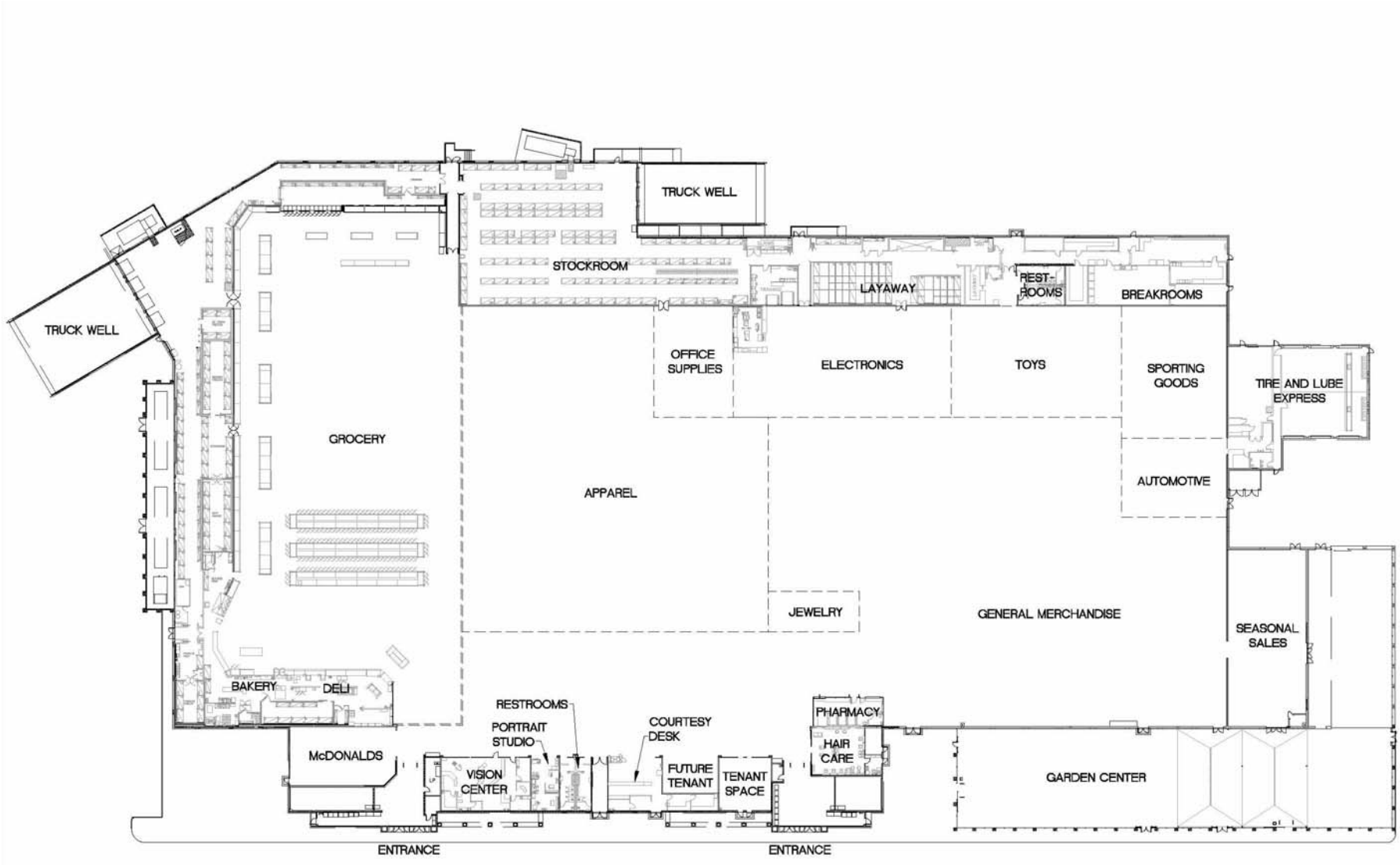


N

FIGURE 3.0-7B
BUILDING ELEVATION

PMC

T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Figure 3.0-7b.ai, June 2006

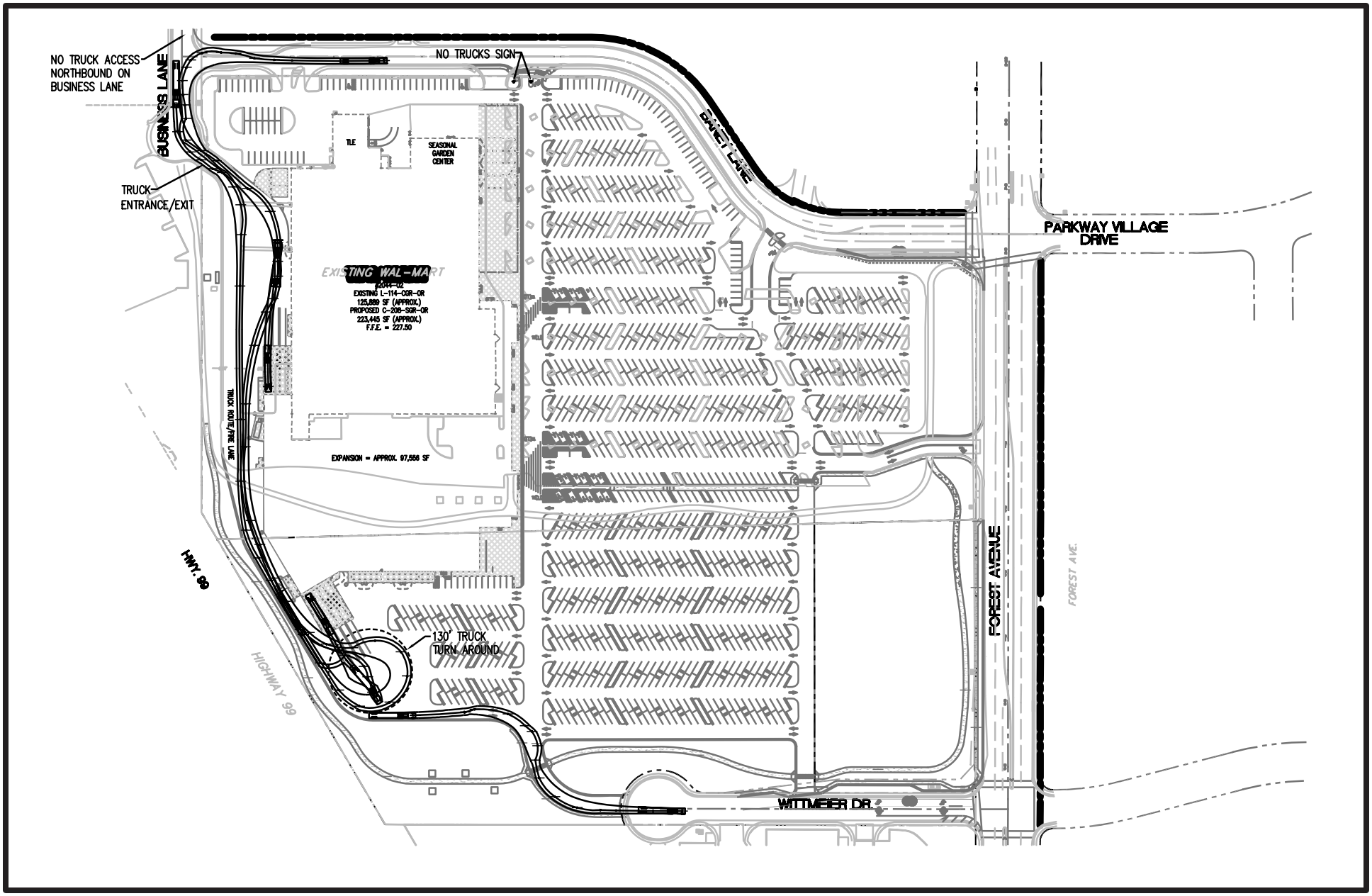


Source: PacLand

T:\Chico\Chico Wal-Mart\Graphic Development\All Files\Section 3.0\Revised Sept2006\Figure 3.0-8.ai; September 2006

FIGURE 3.0-8
FLOOR PLAN

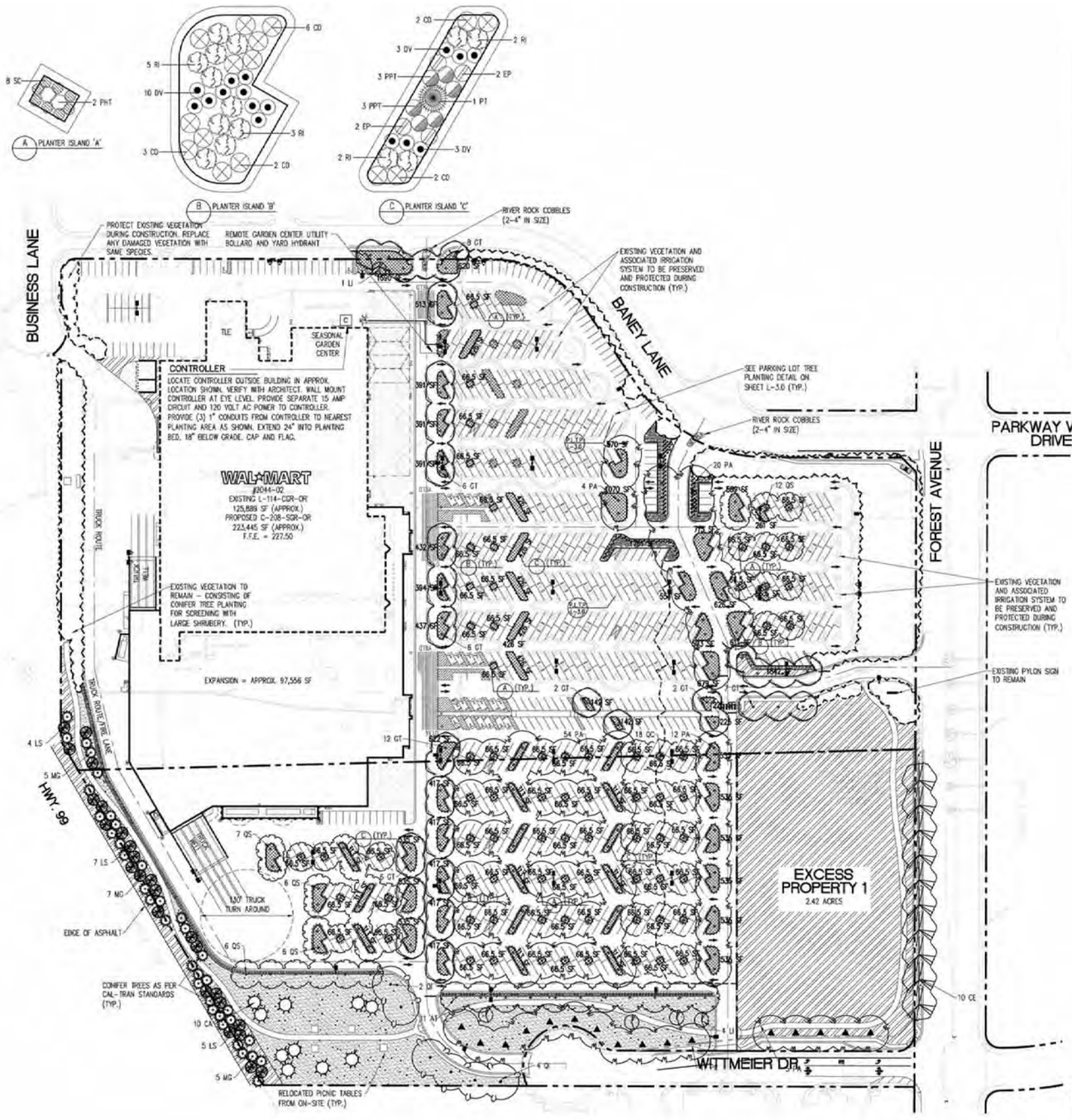
PMC



T:\Chico\Chico Wal-Mart\Graphic Development\All Files\Section 3.0\Revised Sept2006\Figure 3.0-9.ai; September 2006

FIGURE 3.0-9
VEHICLE CIRCULATION

PMC



PLANTING NOTES:

1. ALL PLANTS MUST BE HEALTHY, VIGOROUS MATERIAL, FREE OF PESTS AND DISEASE.
2. ALL PLANTS MUST BE CONTAINER GROWN OR BALLED AND BURLAPPED AS INDICATED IN THE PLANT LIST.
3. ALL TREES MUST BE STRAIGHT TRUNKED AND FULL HEADED AND MEET ALL REQUIREMENTS SPECIFIED.
4. ALL PLANTS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE, DURING, AND AFTER INSTALLATION.
5. ALL TREES MUST BE GUYED OR STAKED AS SHOWN IN THE DETAILS.
6. ALL PLANTING AREAS MUST BE COMPLETELY MULCHED AS SPECIFIED.
7. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCURS AS A RESULT OF THE LANDSCAPE CONSTRUCTION.
8. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS BEFORE PRICING THE WORK.
9. THE CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING ALL PLANTING (INCLUDING BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, FERTILIZING, MOWING, ETC.) OF THE PLANTING AND LAWN AREAS UNTIL THE WORK IS ACCEPTED IN TOTAL BY THE OWNER.
10. THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE (1) YEAR BEGINNING ON THE DATE OF TOTAL ACCEPTANCE. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS BEFORE OR AT THE END OF THE GUARANTEE PERIOD.
11. AFTER BEING DUG AT THE NURSERY SOURCE, ALL TREES IN LEAF SHALL BE ACCLIMATED FOR TWO (2) WEEKS UNDER A MIST SYSTEM PRIOR TO INSTALLATION.
12. ANY PLANT MATERIAL WHICH DIES, TURNS BROWN, OR DEFOLIATES (PRIOR TO TOTAL ACCEPTANCE OF THE WORK) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE AND MEETING ALL PLANT LIST SPECIFICATIONS.
13. STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK" REPRESENT GUIDELINE SPECIFICATIONS ONLY AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.
14. ALL SHRUB, GROUND COVER AND SEASONAL COLOR ANNUAL PLANTING BEDS ARE TO BE COMPLETELY COVERED WITH BARK MULCH TO A MINIMUM DEPTH OF TWO INCHES.
15. LOCATIONS OF EXISTING BURIED UTILITY LINES SHOWN ON THE PLANS ARE BASED UPON BEST AVAILABLE INFORMATION AND ARE TO BE CONSIDERED APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATIONS OF UTILITY LINES AND ADJACENT TO THE WORK AREA. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITY LINES DURING THE CONSTRUCTION PERIOD.
16. SAFE, CLEARLY MARKED PEDESTRIAN AND VEHICULAR ACCESS TO ALL ADJACENT PROPERTIES MUST BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS.
17. DURING THE GROWING SEASON ALL ANNUALS SHALL REMAIN IN A HEALTHY, VITAL CONDITION THROUGHOUT THE CONSTRUCTION PERIOD.
18. ALL PLANT MATERIALS QUANTITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE COVERAGE OF ALL PLANTING BEDS AT SPACING SHOWN GRAPHICALLY.
19. ALL LAWN AREAS ARE TO RECEIVE 4" OF TOPSOIL. ALL LANDSCAPE BED AREAS ARE TO RECEIVE 6" OF TOPSOIL.
20. REFER TO SPECIFICATIONS FOR ALL INFORMATION NEEDED FOR IMPLEMENTATION OF PLANTING PLANS.
21. ALL LANDSCAPED AREAS ARE TO BE WATERED VIA AUTOMATIC IRRIGATION SYSTEM, SEE SHEET L-2.0.
22. ALL EXISTING SUBSTANDARD LANDSCAPING WILL BE REPLANTED IN AREAS THAT ARE IN NEED OF REFURBISHING.
23. CONTRACTOR SHALL ALLOCATE UP TO $5,000 FOR SUPPLEMENTAL PLANT MATERIAL THAT THE CITY MAY REQUIRE TO BRING EXISTING PLANTING AREAS UP TO CODE. CONTRACTOR WILL BE REQUIRED TO SUBMIT COST BREAKDOWN OF MATERIALS, LABOR, AND EQUIPMENT FOR PAYMENT.

PLANT SCHEDULE

QUANTITY	SYMBOL	BOTANICAL/COMMON NAME	SIZE
		TREES	
11	AT	ACER TRUNCATUM/ CHINESE MAPLE	15" BOX
36	MG	MAGNOLIA GRANDIFLORA 'LITTLE GEM'/ 'LITTLE GEM' MAGNOLIA	15" BOX
10	CA	CEDRUS ATLANTICA 'GLAUCA'/ ATLAS CEDAR	15" BOX
10	CE	CELTIS AUSTRALIS/ EUROPEAN HACKBERRY	15" BOX
49	GT	GLEDITSIA TRIACANTHOS 'SKYLINE'/ 'SKYLINE HONEY LOCUST	15" BOX
5	LI	LAGERSTROEMIA INDICA/ 'PINK' CRAPE MYRTLE	15" BOX
89	PA	PLATANUS ACERIFOLIA 'YARWOOD'/ 'YARWOOD' SYCAMORE	15" BOX
16	PC	PYRUS CALLERYANA 'AUTUMN BLAZE'/ AUTUMN BLAZE PEAR	15" BOX
18	QC	QUERCUS COCCINEA/ SCARLET OAK	15' BOX
6	QI	QUERCUS IMBRICARIA/ SHINGLE OAK	15' BOX
37	QS	QUERCUS SUBER/ CORK OAK	15" BOX
25	LS	LAURUS 'SARATOGA'/ 'SARATOGA' LAUREL	15" BOX
		EXISTING TREES TO REMAIN	
		SHRUBS	
513	CD	COTONEASTER DAMMERI 'CORAL BEAUTY'/ BEARBERRY COTONEASTER	2 GAL. CONT., FULL & BUSHY, 4' SPACING O.C.
548	DV	ROSA X NOIATRUM/ PINK GROUNDCOVER ROSE	5 GAL. CONT., FULL & BUSHY, 5' SPACING O.C.
92	EP	EURYOPS PECTINATUS 'MUNCHKIN'/ DWARF EURYOPS	5 GAL. CONT., FULL & BUSHY, 4' SPACING O.C.
151	JOG	JUNIPERUS CHINENSIS 'OLD GOLD'/ 'OLD GOLD' JUNIPER	5 GAL. CONT., FULL & BUSHY, 4' SPACING O.C.
23	PT	PHORMIUM TENAX 'ATROPURPUREUM COMPACTA'/ BRONZE NEW ZEALAND FLAX	5 GAL. CONT., FULL & BUSHY, 4' SPACING O.C.
162	PHT	PHORMIUM TENAX 'JACK SPRATT'/ 'JACK SPRATT' NEW ZEALAND FLAX	1 GAL. CONT., FULL & BUSHY, 2' SPACING O.C.
248	PTT	PITTOSPORUM TOBIRA 'TURNERS'/ TURNERS MOCK ORANGE	5 GAL. CONT., FULL & BUSHY, 4' SPACING O.C.
567	RI	RHAPHIOLEPIS INDICA 'ENCHANTRESS'/ INDIAN HAWTHORN	5 GAL. CONT., FULL & BUSHY, 4' SPACING O.C.
848	SC	SANTOLINA CHAMAECYPARISSUS 'PRETTY CAROL'/ 'PRETTY CAROL' LAVENDER COTTON (GRAY)	1 GAL. CONT., FULL & BUSHY, 2' SPACING O.C.
108	XL	XYLOSMA CONGESTUM/ SHINY XYLOSMA	5 GAL. CONT., FULL & BUSHY, 4' SPACING O.C.
		GROUNDCOVER	
A.N.		HYDROSEED LAWN AREA AGROND TEC (CALIF. NATURAL GRASSLAND)	
		EXISTING VEGETATION PRESERVE AND PROTECT	
A.N.		SOD-LAWN AREA	
A.N.		LANDSCAPE AREA IN PARKING LOT ISLANDS & PENINSULA AREAS - SEE PLANTER DETAILS ON THIS SHEET. IF LANDSCAPE AREAS ARE A DIFFERENT CONFIGURATION THAN REPRESENTED USE A SIMILAR PLANT LAYOUT WITH THE SAME SPACING.	

Source: PacLand

T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Figure 3.0-10.ai, June 2006

N

FIGURE 3.0-10
LANDSCAPE PLAN

PMC

4.0 Environmental Setting, Impacts and Mitigation Measures

4.0 Introduction to Environmental Impact Analysis

This section describes the format of the issue sections, the level of significance nomenclature used in this document, and the format of the impact analysis.

For a complete description of the project characteristics, including assumptions used in the analysis of the created parcel for which no development application is currently before the city, and the cumulative projects list, refer to Section 3.0 Project Description.

4.0.1 FORMAT OF ISSUE SECTIONS

Sections in this chapter describe, for each environmental issue area, 1) the environmental setting as it relates to the specific issue; 2) the regulatory framework for the issue as applicable to the project; 3) significance criteria and the methodology used to assess impacts; 4) an evaluation of project-specific and cumulative impacts and identification of mitigation measures; and 5) a determination of the level of significance after mitigation measures are implemented. Each section is organized into five parts: Introduction, Setting, Regulatory Framework, Impacts and Mitigation Measures, and References.

The **Introduction** provides a brief summary of the purpose of the section and itemizes the main areas of analysis included in the section.

The **Setting** subsection describes the existing conditions pertaining to the environmental issue at the regional, local and project site levels, as appropriate.

The **Regulatory Framework** identifies plans, policies, laws and regulations at the federal, state and local levels that are applicable to the particular issue.

The **Impacts and Mitigation Measures** subsection begins with a description of the standards of significance used to evaluate project impacts, followed by a description of the methodology used to assess impacts. Next are the individual impact statements that relate to the standards of significance. The analysis of the impact as it relates to the project circumstances, including explanatory text and a summary of technical data necessary to formulate a conclusion, forms the analysis. For each impact that is identified as being significant, feasible mitigation is identified followed by a statement of the level of impact that would remain following application of mitigation. This impact/analysis/mitigation format is again applied to the analysis of any cumulative impacts to which the project would contribute.

The **References** subsection lists the documents, personal communications, and other sources of information cited or otherwise used in the preparation of the section.

4.0.2 DETERMINING LEVEL OF SIGNIFICANCE

Determining the severity of project impacts is fundamental to achieving the objectives of CEQA. CEQA Guidelines Section 15091 requires that decision-makers make findings that significant impacts identified in the Final EIR have been mitigated as completely as feasible. The level of significance for each impact examined in this EIR was determined by considering the predicted magnitude of the impact against a significance threshold, the standards of significance. The standards of significance were developed using criteria from the CEQA Guidelines Appendix G; state, federal, and local regulatory schemes; local/regional plans and ordinances; accepted practice; and/or consultation with recognized experts. Thresholds are identified in each chapter under Significance Criteria. Four levels of impact significance are recognized by this EIR:

- **Less than Significant [LTS]** impacts would not cause a substantial change in the environment or are not disruptive enough to require mitigation.

- **Potentially Significant [PS]** impacts may cause a significant effect on the environment, but information is lacking regarding the extent of the impact. This designation may be applied to impacts for which information is incomplete or unavailable, or to impacts that are qualitative in nature and cannot be readily quantified. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact. Mitigation measures are identified to reduce potential impacts to a level that is less than significant.

- **Significant [S]** impacts would cause a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of the project effects using specified significance criteria. Mitigation measures are identified to reduce impacts to a level that is less than significant.

- **Significant and Unavoidable [SU]** impacts are significant adverse project impacts that cannot be avoided or mitigated to a less-than-significant level. This designation can be given to impacts for which there is no feasible mitigation, or to impacts for which mitigation measures can be applied but are not sufficient to reduce impacts to a level that is less than significant.

4.0.3 IMPACT AND MITIGATION FORMAT

The standard format used to present the evaluation of impacts is as follows:

Impact 4.0.1 The impact number identifies the section of the report and the sequential order of the impact within that section. Following the impact number is the impact statement, which identifies the potential impact [LTS, PS, S, SU].

The identified impact is then discussed in more detail. At the end of the discussion, a level of significance is assigned to the impact. If the impact is identified as **less than significant**, there will be no further evaluation of the impact. If the impact is identified as **potentially significant** or **significant**, proposed mitigation measures will follow. **Significant and unavoidable** impacts may or may not have proposed mitigation measures.

Mitigation Measures

In some cases, following the impact discussion, reference is made to state and federal regulations and agency policies that would fully or partially mitigate the impact. Also, policies and programs from applicable local land use plans that partially or fully mitigate the impact may be cited. These policies and regulations shall be considered as part of the package of recommended mitigation measures.

Project-specific and cumulative mitigation measures, beyond those contained in other documents, are described in the format presented below:

MM 4.0.1a Project-specific mitigation is identified that would reduce the impact to the lowest degree possible. The mitigation number links the mitigation to the impact; the letter identifies the sequential order of the mitigation for that impact.

Timing/Implementation:	*Identifies the timing stage when the mitigation measure or permit is to be implemented (e.g., upon submission of final map, prior to issuance of building permit).*
Enforcement/Monitoring:	*Identifies the department or agency with the responsibility for implementing the mitigation measure.*

The discussion concludes by describing how the mitigation measures presented above will reduce the impact. It then identifies the resulting level of significance of the impact following mitigation.

4.1 Land Use

Potential environmental impacts associated with land use are generally categorized by physical changes to the environment, compatibility with surrounding uses, and conflicts and/or inconsistencies with relevant planning documents. Land use impacts were evaluated using a combination of field review to assess current land use conditions, review and analysis of existing planning documents, including the General Plan and Municipal Code, and other recently considered environmental documents for adjacent areas.

The potential physical impact (urban decay) resulting from the potential displacement of businesses is discussed in Section 4.6, Economic Analysis.

4.1.1 ENVIRONMENTAL SETTING

EXISTING LAND USES

The project site comprises 27.11 acres and consists of two parcels (See Section 3.0 Project Description, Figure 3.0-2 Existing Parcels Map). The project site is designated as Community Commercial and Commercial Services under the City of Chico General Plan. The entire project site is currently zoned as CC Community Commercial.

The northern parcel comprises 16.75 acres and is occupied by the existing Wal-Mart store and it's adjacent parking lot. The store is located in a building approximately 125,889 square feet in size. The existing parking lot contains 629 parking spaces. Landscaping and a bicycle path have been installed on the west, east and south side of the store.

The southern parcel is 10.36 acres in size and is located adjacent to and south of the existing Wal-Mart store. The parcel is currently undeveloped and relatively flat. The parcel is overgrown with weeds and grasses.

SURROUNDING LAND USES

The project site is located in an area that is predominantly commercial in character (see Section 3.0, Figure 3.0-2 Surrounding Uses). The Chico Mall, The Village Center, and other commercial establishments are located along East 20th Street. The Pheasant Run Shopping Center is located at the southeast corner of the East 20th Street/Forest Avenue intersection. The Wittmeier Auto Center, an automobile dealership, the recently completed Butte Community College extension, and Lowe's are located on Forest Avenue, south of the project site. State Route 99, a four-lane freeway through Chico, occupies the area west of the project site. The Chico Crossroads Center and Costco are on the west side of State Route 99. East of Forest Avenue, are several office buildings, behind which is a residential area (See Section 3.0, Figure 3.0-2 Surrounding Uses). North of the proposed site is a Shell gasoline station, vacant land which has been proposed as a 73,000 square foot retail center, and the Oxford Suites hotel. The building formerly occupied by the Krispy Kreme Donut store and the In-and-Out Burger restaurant are located west of the project site. **Figure 4.1.1** identifies the current City of Chico General Plan designations and **Figure 4.1.2** identifies the zoning classifications of the Wal-Mart Expansion project site and lands surrounding the proposed project site.

4.1.2 REGULATORY CONTEXT

The proposed project must be consistent with the City's General Plan and the Chico Municipal Code (CMC), specifically Title 19 of the CMC, Land Use and Development Regulations, and Title 18 of the CMC, Subdivision Regulations. As proposed, the project requires a reconfiguration of the parcel lines as requested in the Tentative Parcel Map application. The Land Use section of this EIR

addresses the project's consistency with the General Plan and Titles 18 and 19, as well as the City's CEQA significance criteria.

CITY OF CHICO GENERAL PLAN

The City of Chico General Plan serves as the overall guiding policy document for the City of Chico. As required by State law, a Land Use Diagram depicting general designations of patterns of land uses was adopted by the City. **Figure 4.1.1** shows the General Plan land use designations for the Project Area. As shown in **Figure 4.1.1,** the project site is already designated for commercial uses; therefore the proposed commercial use is consistent with the City of Chico General Plan. The General Plan designated land uses are described below for the project site and adjacent land areas.

Community Commercial

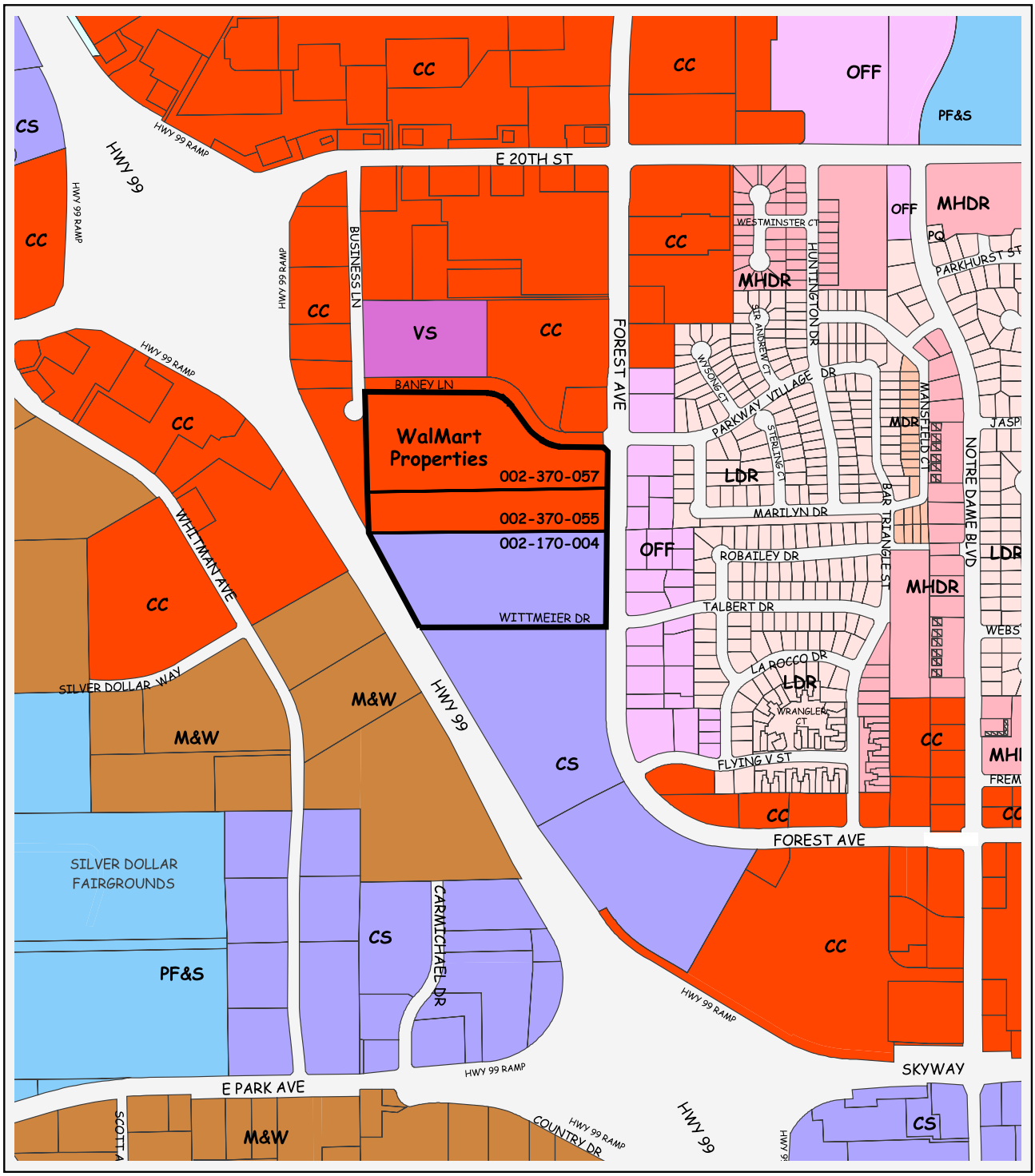
This General Plan land use designation is intended to provide sites for retail shopping areas, primarily in shopping centers, containing a wide variety of businesses, including, but not limited to: retail stores, eating and drinking establishments, commercial recreation, service stations, automobile sales and repair service, financial, business and personal services, motels, educational and social services. Upper-story residential uses are permitted, subject to development standards, up to a maximum of 22 units per gross acre with higher densities permitted in transit-served corridors. Zoning districts can limit certain commercial areas to neighborhood stores or non-automotive establishments.

Commercial Services

This General Plan land use designation is intended to provide sites for commercial business not permitted in other commercial areas because they attract high volumes of vehicle traffic and may have adverse impacts on other uses. Allowable uses include automotive sales and services, building materials, nurseries, agricultural equipment rentals, contractors' yards, wholesaling, warehousing, storage, and similar uses. Offices not accessory to a permitted use and retail uses are excluded, except small restaurants and convenience stores are to be allowed as ancillary uses, subject to appropriate standards.

Guiding and implementing policies of the Chico General Plan relative to land use are identified below. General Plan goals and policies related to other EIR issue areas are discussed in the relevant EIR environmental analysis sections.

The proposed project is consistent with applicable land use policies in the City of Chico's General Plan. The proposed project is allowed under the current General Plan land use designations of Community Commercial and Commercial Services and no General Plan amendments are required. **Table 4.1.1** below identifies and analyzes for consistency the General Plan policies that are applicable to the proposed project.



Parcel Map 03-17

WalMart Expansion
2044 Forest Avenue
APN's: 002-170-004;
002-370-055; 002-370-057

City General Plan Designations

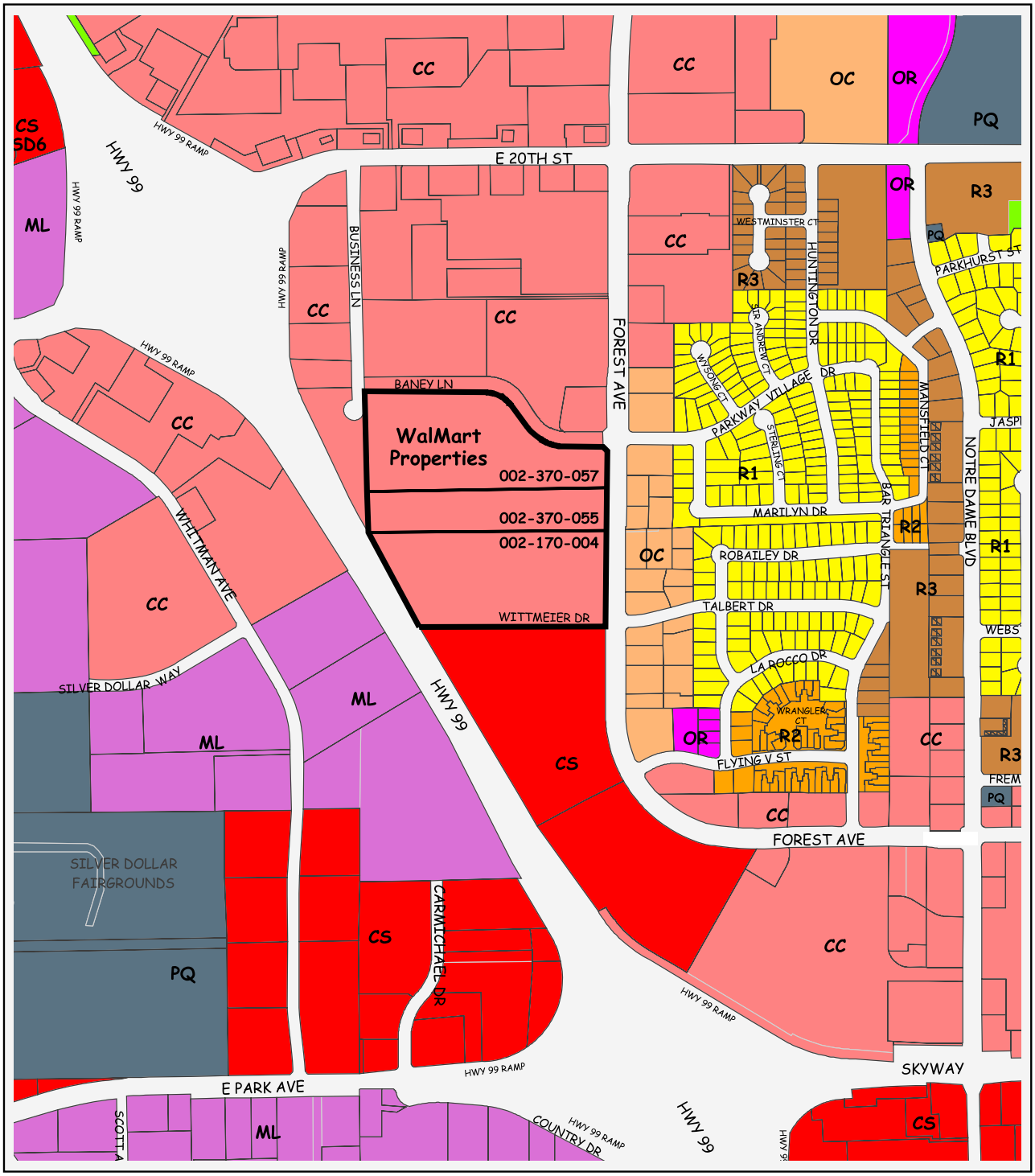
- LDR Low Density Residential
- MDR Medium Density Residential
- MHDR Medium-High Density Residential
- CC Community Commercial
- CS Commercial Services
- VS Visitor Services
- OFF Office
- M&W Manufacturing & Warehousing
- PF&S Public Facility & Services

Source: Community Services Department, May 2006

T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Section 4.1\Figure 4.1-1.ai, November 2006

FIGURE 4.1-1
EXISTING LAND USE MAP

PMC



Parcel Map 03-17

WalMart Expansion
2044 Forest Avenue
APN's: 002-170-004;
002-370-055; 002-370-057

City Zoning/Pre-Zoning Districts

- R1 Low Density Residential
- R2 Medium Density Residential
- R3 Medium-High Density Residential
- OR Office Residential
- OC Office Commercial
- CC Community Commercial
- CS Services Commercial
- ML Light Manufacturing
- PQ Public/Quasi Public Facilities

Source: Community Services Department, May 2006

T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Section 4.1\Figure 4.1-2.ai, November 2006

FIGURE 4.1-2
ZONING CLASSIFICATIONS IN PROJECT AREA

PMC

TABLE 4.1- 1
PROJECT CONSISTENCY WITH GENERAL PLAN LAND USE ELEMENT AND OTHER APPLICABLE ELEMENT POLICIES

General Plan Goals and Policies	Consistency with General Plan	Analysis
Policy LU-G-2: Promote infill development.	Consistent	The project constitutes infill development of an already developed site and is surrounded by existing urban development.
Policy LU-G-3: Ensure that new development is at an intensity to ensure a long-term compact urban form.	Consistent	The project represents an intensification of commercial development in an area currently designated and intended for commercial urban development
Policy LU-G-16: Maintain Chico's prominence as the center of retail activity in the Tri-County area.	Consistent	The project would be compatible with other "big-box" commercial uses in the vicinity of the project and could strengthen retail activity in the project area.
Policy LU-G-17: Promote neighborhood identity and encourage use of alternative modes of transportation by providing local shopping centers that many residents can reach on foot or bicycle.	Consistent	While vehicular use would be the primary means of transportation to the site, the existing bicycle paths would be retained (on Forest Avenue) or extended to the south and east of the expanded store. The store location is within walking distance to other shopping areas. Residential neighborhoods are located across Forest Avenue less than one-quarter mile from the proposed project. An existing B-line transit stop providing bus transit service to the area is located on Forest Avenue on the northern edge of the project site.
Policy LU-G-18: Require pedestrian-oriented design in new shopping areas and provide safe and convenient bicycle and pedestrian access from nearby residential, commercial, and retail areas. Encourage retrofit with such design and access in existing commercial centers where feasible.	Consistent	See LU-G-17. A designated pedestrian sidewalk traversing the existing parking lot exists on the site from the existing bus stop to the front of the project. The proposed parking lot addition includes the incorporation of a concrete sidewalk to surround the site and connect to the existing sidewalk.
Policy LU-I-6: New development adjacent to Highway 99 shall include the installation of landscaping on the freeway right of way consistent with a master plan and a project design recognizing the views from the freeway.	Consistent	The landscape plan prepared for the project identifies an edge landscape treatment along the Highway 99 property line consisting of coniferous trees, shrubs and groundcover consistent with both Cal-trans and City of Chico landscape standards. As proposed, the offset double-row landscape planting would provide both a vertical and horizontal vegetative screen from Highway 99. The project proposes a hard-surface pathway connecting the relocated picnic/rest area with the commercial area formerly occupied by the Krispy Kreme donut franchise.
Policy LU-I-30: For large projects, require special visual studies as a part of design review. Visual simulations that accurately depict the appearance of the proposed project should be required of commercial or industrial buildings with a floor plate in excess of 50,000 square feet. These simulations would be useful in	Consistent	The City of Chico requires that the project undergo review by the Architectural Review Board. As a part of this process, the City has required preparation of visual simulations that are reviewed by the Architectural Review Board for consistency with the Community Design Element policies pertaining to building and site design of large retail shopping centers.

General Plan Goals and Policies	Consistency with General Plan	Analysis
demonstrating the implications of massing, scale, bulk, facade treatment and color in the context of the surrounding community or landscape.		
Policy CD-G-1: Reinforce the compact form of the city.	Consistent	The project constitutes infill development of an already developed site and therefore will not sprawl beyond the outer limits of the Chico urbanized area.
Policy CD-G-2: Create a clear definition of the physical extent of the city.	Consistent	The project represents development within the physical extent of the city defined as portions of Mud Creek, Little Chico Creek division, Butte Creek, and the transmission line corridor, as well as the foothills on the east and agricultural lands on the west. This is contributes to the sharpening of distinctions between natural and urbanized landscapes contributing to a sense of place.
Policy CD-G-5: Minimize the intrusion of Highway 99 and its interchanges on the visual character and form of the city.	Consistent	The landscape plan prepared for the project identifies and edge landscape treatment along the Highway 99 property line consisting of coniferous trees, shrubs, and groundcover consistent with both Cal-trans and the City of Chico landscape standards. As proposed, the offset double-row landscape planting would provide both a vertical and horizontal vegetative screen from Highway 99. The project proposes a hard-surface pathway connecting the relocated picnic/rest area with the commercial area formerly occupied by the Krispy Kreme donut franchise.
Policy CD-G-36: Encourage infill and adaptive reuse of transitioning commercial developments.	Consistent	The project constitutes a commercial development in a transition of expansion. This expansion represents infill development and the reuse of existing development.
Policy CD-G-37: Encourage site and building design to respond to the context and potential linkages to surrounding areas.	Consistent	The project location is within walking distance to other shopping areas. Residential neighborhoods are located across Forest Avenue less than one-quarter mile from the proposed project.
Policy CD-G-38: Encourage consideration of pedestrian and bicycle access in new commercial and industrial projects.	Consistent	While vehicular use would be the primary means of transportation to the site, the existing bicycle paths would be retained (on Forest Avenue) or extended to the south and east of the expanded store. An existing B-line transit stop providing bus transit service to the area is located on Forest Avenue on the northern edge of the project site.
Policy OS-I-14: All new construction shall comply with energy efficiencies mandated by Title 24 construction requirements. New facilities will be substantially more energy efficient than the facilities they replace...	Consistent	Energy conservation is incorporated into the project design, including the use of: daylighting (use of skylights/electrical light dimming, night dimming to about 65 percent illumination during the late night hours, Central Energy Management (store to be equipped with energy management systems which are monitored and controlled from the Home Office in Bentonville), white membrane roofs to increase solar reflectivity and

General Plan Goals and Policies	Consistency with General Plan	Analysis
		reduce cooling loads, efficient T-8 fluorescent lamps and electronic ballasts, low-mercury fluorescent lamps, and light emitting diode (LED) signage illumination.
Policy OS-G-28: Promote energy efficiency in new subdivisions and in building design and encourage the use of alternative building materials.	Consistent	See OS-I-14 above.

City of Chico Municipal Code

City of Chico Land Use and Development Regulations (CMC Title 19)

The City of Chico's adopted Land Use and Development Regulations (Title 19 of the Chico Municipal Code) contains requirements for the development and use of private and public land, buildings, and structures within the City.

As shown in **Figure 4.1.2**, the project site is currently zoned CC Community Commercial. The CC Community Commercial zoning district allows a wide range of potential uses, some permitted as a matter of right and permitted as a conditional use. Title 19 describes the Community Commercial zoning district as an area "*applied to areas appropriate for retail shopping, primarily in shopping centers, including a wide range of retail businesses. The district may also accommodate mixed-use developments for residential development only above the ground floor.*" The proposed Wal-Mart expansion project involves a sizable addition to the existing retail building on Parcel 1. Because Wal-Mart proposes an expansion at the existing, permitted retail use, no use permit is required for the expansion. The proposed project is consistent with the City's Land Use and Development Regulations as the use is allowed within the CC zoning district. For Parcel 2, the applicant has discussed the possibility of locating a gas station and restaurant on the site in the future. Approval of a use permit would be required for the development of a gas station, or the restaurant if it were to include a drive-through window. Pursuant to Section 19.18.010 of Title 19, all commercial projects, including additions, are required to obtain approval from the Architectural Review Board. The project's consistency with the Community Design Element policies pertaining to building and site design of large retail shipping centers is discussed in Section 4.0 (Initial Study, Section A (Aesthetics). Related Economic Development policies are discussed in Chapter 4.6, Economic Development of this document.

City of Chico Subdivision Regulations (CMC Title 18)

The City of Chico's adopted Subdivision Regulations (Title 18 of the Chico Municipal Code) contain requirements that provide policies, standards, requirements and procedures to regulate and control the design and improvement of all subdivisions within the City.

As required in Title 18, a map must be submitted for all subdivisions. A tentative map and final map or parcel map are required for all subdivisions except for those subdivisions for which a minor land division map is permitted, or those subdivisions for which a parcel map waiver has been approved. Title 18 (Section 18.16.035) also requires a boundary line modification where a lot line adjustment is proposed, which is the case with the proposed project.

Wal-Mart has submitted an application for a Tentative Parcel Map (PM 03-17) requesting reconfiguration of the two parcel lines to facilitate the expansion of the existing store into a Wal-Mart Supercenter. Absent this Tentative Parcel Map, the proposed store expansion would take place across a common property line, which is not allowed by the City of Chico. The Tentative Parcel Map (see Figure 3.0-5) will alleviate this impediment by reconfiguring the lot lines of the existing parcels (a 16.75-acre parcel and a 10.36-acre parcel) to create on 24.69-acre (Parcel 1) and one 2.42-acre parcel (Parcel 2).

4.1.3 IMPACTS AND MITIGATION MEASURES

METHODOLOGY

The methodology used for this impact analysis involved a comparison and assessment of the proposed Wal-Mart Expansion project to relevant plans and policies, review of the land uses in relation to surrounding uses and site features, communications with City staff and field reconnaissance.

STANDARDS OF SIGNIFICANCE

The NOP/Initial Study for the proposed project concluded that the project would be consistent with the City's General Plan and zoning regulations, would not divide an established community, and would not conflict with a resource conservation or management plan for the area and therefore would have no impact in these areas. Additionally, the NOP/Initial Study concluded that impacts to the character, aesthetics or functioning of the community and the conversion of agricultural land would be less than significant. As such, these standards of significance are not discussed further in this EIR. The reader is referred to the NOP/Initial Study located in **Appendix A** for a discussion of these areas.

A land use impact is considered significant if implementation of the project would result in any of the following:

1. Will the project or its related activities be inconsistent with the General Plan or Specific Plan policies or zoning regulations?

2. Will the project or its related activities physically divide an established community?

3. Will the project or its related activities conflict with any applicable Resource Management or Resource Conservation Plan?

4. Will the project or its related activities result in substantial conflict with the established character, aesthetics or functioning of the surrounding community?

5. Will the project or its related activities be a part of a larger project involving a series of cumulative actions?

6. Will the project or its related activities result in displacement of people or business activity?

7. Will the project or its related activities result in the conversion of viable prime agricultural land and/or and under agricultural contract to non-agricultural use, or substantial conflicts with existing agricultural operations? (Viable agricultural land is defined as land on Class I or Class II agricultural soils of 5 acres or greater, adjacent on no more than one side to existing urban development.)

PROJECT IMPACT AND MITIGATION MEASURES

As was previously stated, the NOP/Initial Study concluded that implementation of the project would have no impacts under significance standards 1 through 3 (as listed above) based upon the fact that the project as proposed is consistent with the City of Chico General Plan land use designations the site and the adopted City of Chico zoning on the site, was analyzed as part of the City's comprehensive economic development strategy and land use plan as a commercial site with the adoption of the 1994 General Plan (amended in 1999) and is consistent with the commercial goals and policies of the General Plan. In addition, the expansion of the existing use does not divide an established community as no residential community exists, or is contemplated, on the project site or in the immediate project surrounds, in the adopted General Plan. There are no Resource Management or Resource Conservation Plans applicable to the project area.

The NOP/Initial Study concludes that implementation of the project would have a less than significant impact to significance standards 4 and 7 (as listed above) based upon the findings that the project is located in an existing developed commercial area, that changes to the site were contemplated during the general plan adoption and review process and that the project proposes design amenities and features that meet the requirements of the City. The less than significant conclusion relative to the potential conversion of agricultural lands was made based upon the fact that the subject site is not designated or contemplated for an agricultural use and was contemplated for use as a commercial purpose as part of the general plan adoption process in 1994.

The NOP/Initial Study concludes that implementation of the project could have a potentially significant impact upon significance standards 5 and 6 (as listed above) based upon the Planning Commission's conclusion at it's February 19, 2004 meeting that the project could cause a condition of urban decay or blight in the existing downtown area and other retail environments. The determination of the physical environmental impact of urban decay is based upon the analysis of both existing and predicted economic conditions. Thus, a thorough and independent economic analysis was commissioned, the *Wal-Mart Supercenter Economic Impact Analysis: South Store Expansion, Chico, California* (Sedway, 2006).

The Economic Development Element of the General Plan establishes the policies to maintain and enhance economic development opportunities within the City and to define a long-term framework for sustainability. The General Plan emphasizes that the City is the center of retail commercial activity and services for the Tri-County area with substantial employment, and that maintaining this regional status is essential for the economic vitality of the City. Furthermore, the General Plan states that in order to sustain its ability to provide public services for existing and future residents and fund programs for environmental protection, the City will need to enhance its revenue base through new retail, commercial, office, and industrial development. As a result, approximately 520 acres for additional commercial development were set aside in the General Plan (which includes the subject property) that are not within the Downtown area.

The General Plan Land Use Element also contains policies that encourage the provision of neighborhood-oriented shopping facilities. Specifically, policy LU-G-17 promotes neighborhood identity and encourages the use of alternative modes of transportation by providing local shopping centers many residents can reach on foot or bicycle. The project will provide a local shopping center (groceries) for the immediate residential neighborhood east of the site, as well as the larger city population.

It is recognized that there may be conflicting sentiment in the community about whether the establishment of a Wal-Mart Supercenter or any other big-box retailer which includes grocery sales,

may adversely impact the viability of neighborhood grocery stores and, therefore, conflict with General Plan goals of providing such neighborhood services. The economic study prepared for the project concludes that the project will not contribute to urban decay in the City of Chico and, therefore, there will be no Land Use impacts with respect to "environmental issues". The issue of Wal-Mart Supercenter/big-box impacts on Land Use policies pertaining to the continued ability to provide neighborhood shopping centers and the potential of or a conventional grocery store or price-impact warehouse store to close is more of a land use planning/policy issue as opposed to a true "environmental" issue which will be more fully discussed in the City's staff report for the project.

The reader is referred for further and more exhaustive analysis of the potential impacts based upon significance standards 5 and 6 (as listed above) to Chapter 4.6, Economic Analysis of this document, which is based upon the conclusions of the Sedway economic study.

Because the project was determined to have a less than significant impact or would have no impact as determined by the NOP/Initial Study based upon significant standards 1, 2, 3, 4 and 7, no further analysis or evaluation of the impact of the project are provided herein. A complete copy of the NOP/Initial Study is provided in **Appendix A**.

Mitigation Measures

None required.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Land Use Patterns

Impact 4.1.5 Implementation of the project in conjunction with anticipated future development would result in cumulative impacts to land use. This is a **less than significant** impact.

The project would involve the expansion an existing commercial store and parking lot. This project, along with other commercial development in the area, may result in impacts that would be cumulatively considerable. However, uses on the project site conform to the 1994 adopted City of Chico General Plan land use designations and zoning designations. The project site was designated in the General Plan as an area of commercial development and buildout and economic forecasts were calculated in the General Plan using this area developed under a commercial scenario. Therefore, cumulative impacts associated with land use are **less than significant**. Also see economic analysis section for a discussion of potential economic impacts of the project in conjunction with other development projects.

REFERENCES

Chico, City of. 1999. *City of Chico Municipal Code, Title 19, Land Use & Development Regulations.* Ordinance 2185, effective 10/21/99.

Chico, City of. 1994. *City of Chico General Plan, Updated February 1999.*

Chico, City of. 1994. *Master Environmental Assessment for the Chico General Plan, SCH No. 92123062*. January 1994.

4.2 Traffic and Circulation

This section summarizes the results of a traffic impact study performed by Omni-Means for the proposed Wal-Mart Expansion project (including consideration of the impacts associated with development of the 2.42 acre parcel located at the southeastern portion of the project site). The existing transportation setting is described including the current AM, PM, and Saturday peak hour traffic operations at key intersections, freeway ramps, and the affected freeway mainline. Impacts of the project on existing AM, PM, and Saturday peak hour intersection, ramp and mainline operations are identified via quantification of the trip generation and trip distribution associated with the proposed project, assuming identified local and regionally approved/pending projects are in place. The section also evaluates the projected cumulative (year 2018) peak hour operations. Potential base improvements and project-related mitigation measures are identified to alleviate unacceptable level of traffic impacts at the study intersections, ramps and mainline segments under project and cumulative conditions. In addition, the section assesses impacts to transit, bicycle, and pedestrian facilities.

4.2.1 EXISTING SETTING

EXISTING ROADWAY SYSTEM

Roadway Network

The existing Wal-Mart store is currently accessed via three Baney Lane driveways, a Forest Avenue driveway, and a Business Lane driveway that leads into the rear alley. **Figure 3.0-8** identifies the location of the existing driveways. Roadways that provide primary circulation in the vicinity of the project site are described below.

State Highways

State Route 99 (SR 99) is a major state freeway facility that traverses north/south through central and northern California. SR 99 serves as the primary inter-regional auto and truck travel route that connects the northern valley cities of Chico and Yuba City with Sacramento and central valley cities of Stockton, Modesto, Fresno, and Bakersfield. Within the City of Chico, SR 99 also serves as a major commuter route providing vital north/south circulation, providing a four-lane divided cross section with a posted speed limit of 55 mph. Caltrans reported an Annual Average Daily Traffic Volume (AADT) of 58,000 and 69,000 vehicles on SR 99 just south and north of the East 20th Street interchange, respectively. Based upon Caltrans Publication "*2004 Annual Average Daily Truck Traffic on the California State Highway System*", the average truck percentage on SR 99 is approximately 10 percent for the section south and north of the East 20th Street interchange.

City Roadways

The following local roadways are under the jurisdiction of the City of Chico. Given roadway classifications are based on those established within the report *City of Chico General Plan, Transportation Element.*

East 20th Street is a major east-west arterial that begins in the west at Park Avenue, and continues east through an SR 99 interchange to Bruce Road, where the roadway continues as Warfield Lane into residential development. With the exception of the easternmost ½ mile of roadway near Bruce Road, East 20th Street is a divided 4-lane roadway with channelized left turn pockets at major streets, a posted Class II bike lane, and a posted speed limit of 35 mph.

East Park Avenue and ***Skyway*** combine to serve as a major east-west arterial. East Park Avenue (Business SR 99) extends westward from the SR 99 interchange approximately ¾ mile terminating at Midway. ***Skyway*** extends eastward from the SR 99 interchange deep into the foothills. In the vicinity

of the project site, both roadways are divided 4-lane facilities with channelized left turn pockets at major streets, except within the SR 99 interchange where only a single westbound through lane exists between the ramps. The roadways maintain a posted speed limit of 35 mph west of Notre Dame Boulevard, 45 mph between Notre Dame Boulevard and the City's eastern limits, and 50-55 mph east of the City.

Forest Avenue is a major north-south arterial providing connection between the east-west arterial streets of SR-32, 20th Street, and Skyway (via Notre Dame Boulevard as described below). Within the vicinity of the project, Forest Avenue maintains a divided 4-lane configuration arterial with channelized left turn pockets at major streets, a posted Class II bike lane, and a posted speed limit of 35 mph.

Notre Dame Boulevard is north-south arterial connecting Forest Avenue and Skyway, serving basically as the southern continuation for Forest Avenue traffic. Although Notre Dame Boulevard continues north from Forest Avenue and south from Skyway, these facilities are 2-lane collector roadways. Between Forest Avenue and Skyway, the roadway is a divided 4-lane facility with channelized left turn pockets and a posted speed limit of 35 mph.

Wittmeier Drive is a short 2-lane east-west roadway which exists along the southern boundary of the proposed project, terminating to the west as a cul-de-sac, and to the east at Forest Avenue. The roadway continues east through Forest Avenue into a residential subdivision as Talbert Drive. Two future driveways along Wittmeier Drive will provide access to the proposed Wal-Mart Expansion project.

Private Roadways

The following roadways are private roads that provide access in the vicinity of the project site.

Baney Lane is a private street that runs in an east-west direction and has a two-lane undivided cross-section with a left-turn pocket provided at the easternmost Wal-Mart driveway. At the eastern terminus, Baney Lane forms a signalized intersection with Forest Avenue, and continues east through Forest Avenue into a residential subdivision as Parkway Village Drive. At the western terminus, Baney Lane tees into Business Lane. There are three existing Wal-Mart driveways on Baney Lane that will continue to provide access to the project site, although with some modifications to prohibit outbound left turns.

Business Lane is a private street that runs in a north-south direction providing connection between East 20th Street and Baney Lane. Business Lane has a two-lane undivided cross-section. At the northern terminus, Business Lane forms a right-turn-only stop sign controlled intersection with East 20th Street. Within the cul-de-sac located at the roadway's southern terminus south of Baney Lane, the roadway transitions into the alley behind the existing Wal-Mart, which will also exist behind the proposed project as an additional access to the project site.

Study Intersections

Existing traffic volumes were provided by the City of Chico for weekday AM, weekday PM, and Saturday peak hour periods at the critical study intersections listed below. Traffic counts were updated in November 2004 and again in April 2005. The AM peak hour is defined as the one-hour of peak traffic flow (which is the highest total volume count over four consecutive 15-minute count periods) counted between 7:00 AM and 9:00 AM on a typical weekday. The PM peak hour is defined as the one-hour of peak traffic flow counted between 4:00 PM and 6:00 PM on a typical weekday. The Saturday peak hour is defined as the one-hour of peak traffic flow counted between 11:30 AM and 1:30 PM on a Saturday.

E. 20th Street / Whitman Avenue

E. 20th Street / SR 99 SB Ramps

E. 20th Street / SR 99 NB Ramps

E. 20th Street / Business Lane

E. 20th Street / Chico Mall Access

E. 20th Street / Forest Avenue

Business Lane / Chico Mall Access

Baney Lane / Business Lane-Wal-Mart Driveway

Baney Lane / Wal-Mart West Driveway

Baney Lane / Wal-Mart Central Driveway

Baney Lane / Wal-Mart East Driveway

Forest Avenue / Baney Lane-Parkway Village Drive

Forest Avenue / Wal-Mart Driveway

Forest Avenue / Talbert Drive-Wittmeier Drive

Forest Avenue / Notre Dame Boulevard

E. Park Avenue-Skyway / Whitman Road

Skyway / SR 99 SB Off-Ramp

Skyway / SR 99 NB Off-Ramp

Skyway / Notre Dame Boulevard

Intersection turning lane geometrics and traffic control for the above nineteen critical study intersections are illustrated on **Figure 4.2-1.** Existing AM, PM, and Saturday peak hour traffic volumes at the study intersections identified above are shown on **Figure 4.2-2**.

Freeway Mainline

Existing freeway mainline volumes were provided by the City of Chico along the following freeway mainline segments:

1) SR 99 – E. Park Avenue-Skyway Interchange to E. 20th Street Interchange

2) SR 99 – E. 20th Street Interchange to SR-32 Interchange

Freeway Ramps

Existing volumes along the following freeway ramps were derived by Omni-Means based on existing volumes at the ramp intersections:

1) NB SR 99 on-ramp from E. Park Avenue-Skyway

2) NB SR 99 off-ramp to E. 20th Street

3) NB SR 99 on-ramp from E. 20th Street

4) NB SR 99 off-ramp to SR-32

5) SB SR 99 on-ramp from SR-32

6) SB SR 99 off-ramp to E. 20th Street

7) SB SR 99 on-ramp from E. 20th Street

8) SB SR 99 off-ramp to E. Park Avenue-Skyway

Existing AM, PM, and Saturday peak hour traffic volumes at the freeway mainline segments and ramp junctions identified above are shown on **Figure 4.2-3**.

EXISTING TRAFFIC OPERATIONS

Existing conditions were simulated by using existing intersection volumes.

Intersections

Existing peak hour intersection traffic operations were analyzed utilizing existing traffic volumes (shown on **Figure 4.2-2**) and existing intersection lane geometrics and control (shown on **Figure 4.2-1**). **Table 4.2-1** provides a summary of the *Existing* peak hour intersection Levels of Service (LOS). See Section 4.2.4 Methodology for an explanation of Level of Service.

TABLE 4.2-1
EXISTING CONDITIONS: INTERSECTION LEVELS-OF-SERVICE

#	Intersection	Control Type[1]	Target LOS	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
				Delay	LOS	Warrant Met[2]	Delay	LOS	Warrant Met[2]	Delay	LOS	Warrant Met[2]
1	E. 20th St / Whitman Ave	Signal	D	18.1	B	-	26.3	C	-	38.9	D	-
2	E. 20th St / SR 99 SB Ramps	Signal	D	22.4	C	-	35.6	D	-	27.1	C	-
3	E. 20th St / SR 99 NB Ramps	Signal	D	11.1	B	-	41.0	D	-	23.4	C	-
4	E. 20th St / Business Ln	TWSC	D	9.6	A	No	12.1	B	No	11.6	B	No
5	**E. 20th St / Chico Mall Access**	Signal	D	13.6	B	-	49.1	D	-	**61.9**	**E**	**-**
6	**E. 20th St / Forest Ave**	Signal	D	33.2	C	-	48.0	D	-	**78.8**	**E**	**-**
7	Business Ln / Chico Mall Access	TWSC	Pvt[3]	11.9	B	No	23.7	C	No	37.3	E	No
8	Baney Ln / Business Ln	TWSC	Pvt[3]	8.9	A	No	10.3	B	No	18.4	C	No
9	Baney Ln / Wal-Mart West Driveway	TWSC	Pvt[3]	9.4	A	No	10.1	B	No	18.4	C	No
10	Baney Ln / Wal-Mart Central Driveway	TWSC	Pvt[3]	9.7	A	No	12.2	B	No	16.3	C	No
11	Baney Ln / Wal-Mart East Driveway	TWSC	Pvt[3]	9.6	A	No	19.0	C	No	50.0	E	No
12	Forest Ave / Baney Ln-Parkway Village Dr	Signal	D	25.9	C	-	27.4	C	-	28.3	C	-
13	Forest Ave / Wal-Mart Driveway	TWSC	D	10.0	A	No	10.7	B	No	11.0	B	No

#	Intersection	Control Type[1]	Target LOS	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
				Delay	LOS	Warrant Met[2]	Delay	LOS	Warrant Met[2]	Delay	LOS	Warrant Met[2]
14	**Forest Ave / Talbert Dr-Wittmeier Dr**	TWSC	D	15.0	B	-	**36.4**	**E**	**No**	26.5	D	No
15	Forest Ave / Notre Dame Blvd	Signal	D	19.8	B	-	17.8	B	-	13.2	B	-
16	E. Park Ave-Skyway / Whitman Rd	Signal	D	8.5	A	-	23.2	C	-	21.3	C	-
17	E. Park Ave-Skyway / SR 99 SB Ramps	TWSC	D	10.2	B	-	23.6	C	-	12.0	B	-
18	E. Park Ave-Skyway / SR 99 NB Ramps	Signal	D	10.1	B	-	10.8	B	-	9.5	A	-
19	Skyway / Notre Dame Blvd	Signal	D	27.7	C	-	45.7	D	-	37.7	D	-

Source: Omni Means
Notes: Bolded entries indicate private intersections operating as an Unacceptable LOS.
1) TWSC = Two-Way-Stop-Control (LOS and delay are based on LOS and delay for worst approach).
2) Warrant = Caltrans peak hour-volume based signal warrant.
3) Pvt = private roadways, driveways and/or intersections. City LOS criteria not applicable and excess delays analyzed in terms of unacceptable vehicle conflict and safety issues.

As shown in **Table 4.2-1**, the following intersections were found to be currently operating at unacceptable levels under *Existing* conditions during at least one peak hour period.

- East 20th Street/Chico Mall Access – This signalized intersection is found to be operating at unacceptable LOS "E" during the Saturday peak hour period.
- East 20th Street/Forest Avenue – This signalized intersection is found to be operating at unacceptable LOS "E" during the Saturday peak hour period.
- Forest Avenue/Talbert-Wittmeier Drive – This unsignalized intersection is found to be operating at unacceptable LOS "E" during the weekday PM peak hour period.

The following private intersections were found to be operating at poor levels of service.

- Business Lane/Chico Mall Access – This private unsignalized intersection is found to be operating at LOS "E" during the Saturday peak hour period.
- Business Lane/Wal-Mart East Driveway – This private unsignalized intersection is found to be operating at LOS "E" during the Saturday peak hour period.

None of the unsignalized intersections identified above meet Caltrans Peak Hour Volume Warrant-3 [1](Urban Areas) indicating that the peak hour volumes are not large enough to warrant installation of a traffic signal at these locations.

Freeway Mainline Segments

Existing peak hour mainline operations were evaluated utilizing the existing peak hour traffic volumes shown on **Figure 4.2-3**. **Table 4.2-2** summarizes current SR 99 freeway mainline operations.

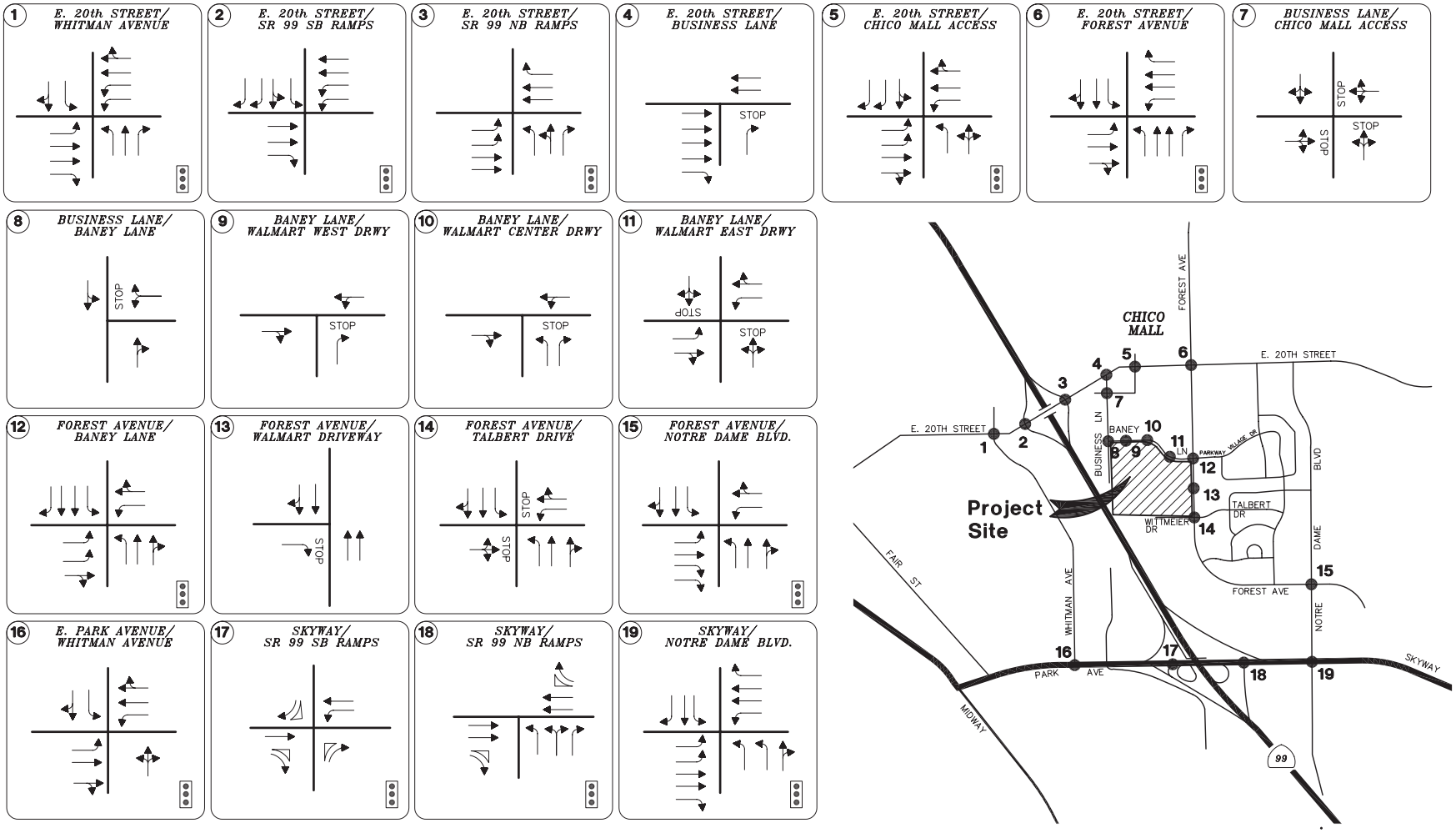
TABLE 4.2-2
EXISTING CONDITIONS: SR 99 MAINLINE LEVELS-OF-SERVICE

Freeway Mainline Segment	No. Lanes	Target LOS	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
			Volume	Density (pc/mi/ln)	LOS	Volume	Density (pc/mi/ln)	LOS	Volume	Density (pc/mi/ln)	LOS
SR 99 NB, north of Skyway I/C	2	E	1,912	17.2	B	2,606	23.4	C	1,886	16.9	B
SR 99 SB, north of Skyway I/C	2	E	2,391	21.5	C	2,057	18.5	C	1,426	12.8	B
SR 99 NB, north of 20th Street I/C	2	E	2,375	21.3	C	3,362	31.6	D	2,393	21.5	C
SR 99 SB, north of 20th Street I/C	2	E	2,551	22.9	C	2.264	20.3	C	1,564	14,0	B

Source: Omni Means
Notes: pc/mi/ln = Passenger Cars per Mile per Lane

As shown in **Table 4.2-2**, all four mainline segments currently operate at acceptable LOS (LOS "E" or better per Caltrans significance criteria for freeways) during AM, PM and Saturday peak hour periods under *Existing* conditions.

[1] ***Warrant 3 - Minimum Pedestrian Volume.*** A traffic signal may be warranted where the pedestrian volume crossing the major street at an intersection or mid-block location during an average day is: 100 or more for each of any four hours; or 190 or more during any one hour. The pedestrian volume crossing the major street may be reduced as much as 50% of the values given above when the predominant pedestrian crossing speed is below 1 m/s. In addition to a minimum pedestrian volume of that stated above, there shall be less than 60 gaps per hour in the traffic stream of adequate length for pedestrians to cross during the same period when the pedestrian volume criterion is satisfied. Where there is a divided street having a median of sufficient width for the pedestrian(s) to wait, the requirement applies separately to each direction of vehicular traffic. Where coordinated traffic signals on each side of the study location provide for platooned traffic which result in fewer than 60 gaps per hour of adequate length for the pedestrians to cross the street, a traffic signal may not be warranted. This warrant applies only to those locations where the nearest traffic signal along the major street is greater than 90 m and where a new traffic signal at the study location would not unduly restrict platooned flow of traffic. Curbside parking at nonintersection locations should be prohibited for 30 m in advance of and 6 m beyond the crosswalk. A signal installed under this warrant should be of the traffic-actuated type with push buttons for pedestrians crossing the main street. If such a signal is installed within a signal system, it shall be coordinated if the signal system is coordinated. Signals installed according to this warrant shall be equipped with pedestrian indications conforming to requirements set forth in other sections of this Manual (Caltrans, November 2002).

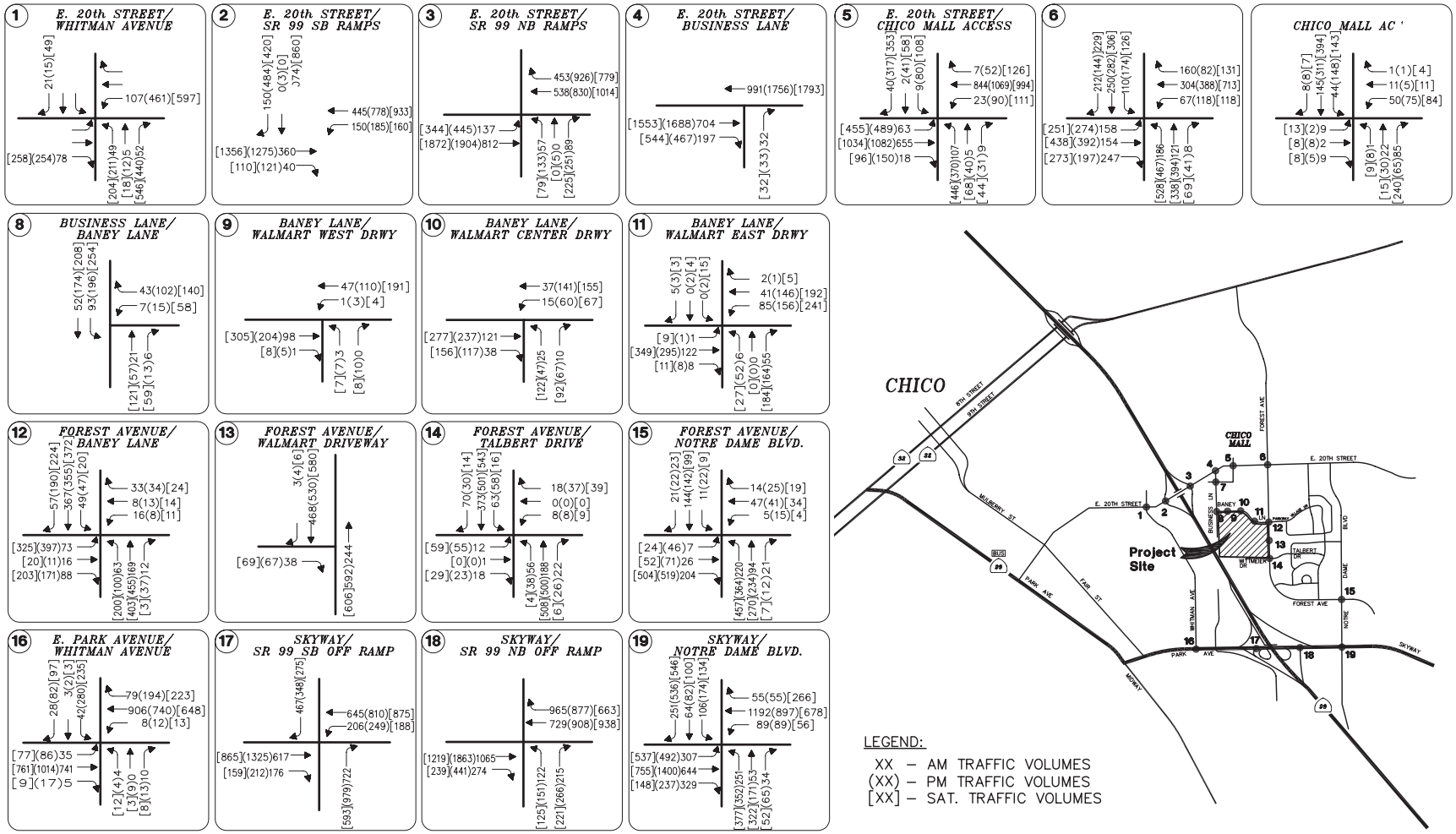


N

FIGURE 4.2-1
EXISTING LANE GEOMETRICS AND CONTROL

PMC

T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Figure 4.2-1.ai, June 2006

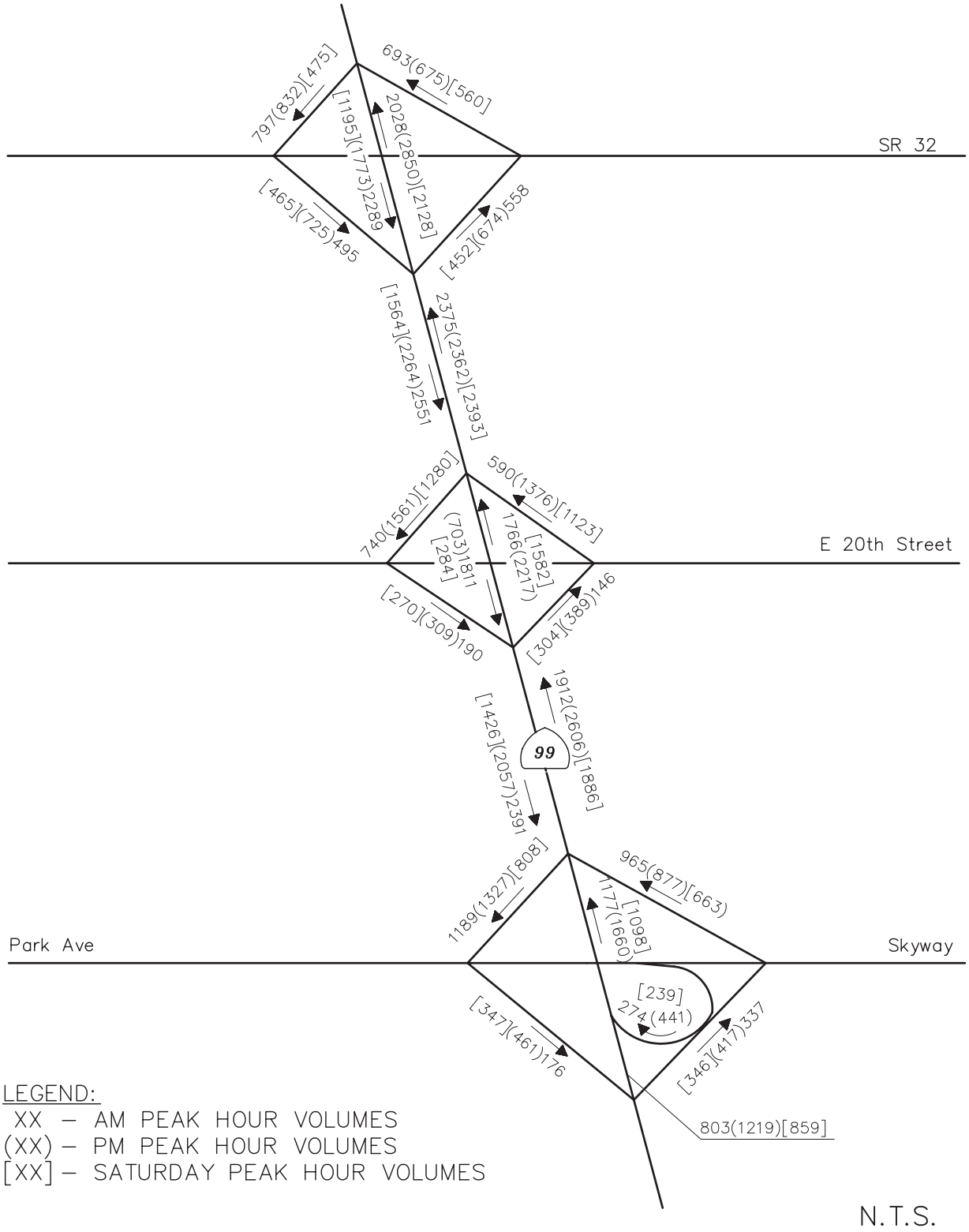


N

FIGURE 4.2-2
EXISTING PEAK HOUR VOLUMES

PMC

T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Figure 4.2-2.ai, June 2006



T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Figure 4.2-3.ai, April 2006

N

FIGURE 4.2-3
EXISTING FREEWAY AND MAINLINE RAMP VOLUMES

PMC

Freeway Ramp Junctions

Existing peak hour ramp operations were evaluated utilizing the existing peak hour traffic volumes shown on **Figure 4.2-4**. **Table 4.2-3** presents the *Existing* conditions' ramp merge/diverge peak hour LOS at the three study interchange locations in the vicinity of the study area.

TABLE 4.2-3

SR 99 & Skyway Interchange	Junction Type	Target LOS	AM Peak Hour		PM Peak Hour		Saturday Peak Hour	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
SR 99 NB Direct On-Ramp	Merge	E	17.6	B	21.2	C	14.3	B
SR 99 NB Loop On-Ramp	Merge	E	8.2	A	13.4	B	8.4	A
SR 99 SB Off-Ramp	Diverge	E	25.8	C	22.5	C	16.1	B
SR 99 & 20th Street Interchange	**Junction Type**	**Target LOS**	**AM Peak Hour**		**PM Peak Hour**		**Saturday Peak Hour**	
			Density (pc/mi/ln)	**LOS**	**Density (pc/mi/ln)**	**LOS**	**Density (pc/mi/ln)**	**LOS**
SR 99 NB Off-Ramp	Diverge	E	21.0	C	28.0	C	20.7	C
SR 99 NB On-Ramp	Merge	E	19.8	B	30.5	D	22.6	D
SR 99 SB Off-Ramp	Diverge	E	27.4	C	24.5	C	17.5	B
SR 99 SB On-Ramp	Merge	E	16.7	B	7.6	A	3.5	A
SR 99 & SR 32 Interchange	**Junction Type**	**Target LOS**	**AM Peak Hour**		**PM Peak Hour**		**Saturday Peak Hour**	
			Density (pc/mi/ln)	**LOS**	**Density (pc/mi/ln)**	**LOS**	**Density (pc/mi/ln)**	**LOS**
SR 99 NB Off-Ramp	Diverge	E	25.7	C	35.6	E	25.8	C
SR 99 SB On-Ramp	Merge	E	23.7	C	20.9	C	13.4	B

Source: Omni Means
Notes: pc/mi/ln = Passenger Cars per Mile per Lane

As shown in **Table 4.2-3**, all study ramp merge/diverge junctions currently operate at acceptable LOS (LOS "E" or better per Caltrans standards for freeways) during AM, PM and Saturday peak hour periods under *Existing* conditions.

4.2.3 REGULATORY FRAMEWORK

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Transportation Concept Reports

A Transportation Concept Report (TCR) is a long-term planning document that the District Transportation Planning Office prepares for each State highway, or portion thereof, in its jurisdiction. The purpose of a TCR is to plan how a highway will be developed and managed so that it operates at the targeted level of service over a twenty-year period. SR 99 in the project study area has a route concept level or goal of LOS E.

Level of Service (LOS) is a qualitative measure of operating conditions within a traffic stream, and their perception by motorists and/or passengers. A LOS definition generally describes these conditions in terms of such factors as speed, travel time, freedom to maneuver, comfort and convenience, and safety.

Caltrans Level of Service for Freeways

- ***LOS A*** on freeways describes primary free-flow operations. Average operating speeds at the freeflow speed generally prevail. Vehicles are almost unimpeded in their ability to maneuver within the traffic stream. On intersections LOS A describes operations with very low delay, up to 5 seconds per vehicle. This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase.

- ***LOS B*** represents a reasonable free-flow, and speeds are generally maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high. For intersections, LOS B describes operations with delay greater than 5 and up to 15 seconds per vehicle. This level generally occurs with good progression, short cycle lengths, or both.

- ***LOS C*** provides for flow with speeds still at or near the freeway flow speed of the freeway. Freedom to maneuver within the traffic stream is noticeably restricted at LOS C, and lane changes require more vigilance on the part of the driver. For intersections, LOS C describes operations with delay greater than 15 and up to 25 seconds per vehicle.

- ***LOS D*** is the level at which speeds begin to decline slightly with increasing flows. In this range, density begins to deteriorate somewhat more quickly with increasing flow. Freedom to maneuver within the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort levels. Even minor incidents can be expected to create queuing, because the traffic stream has little space to absorb disruptions. For intersections, LOS D describes operations with delay greater than 25 and up to 40 seconds per vehicle.

- ***LOS E*** on freeways is the value that corresponds to the maximum flow rate, or capacity, on the facility. Operations in this level are volatile, because there are virtually no usable gaps in the traffic stream. For intersections, LOS E describes operations with delay greater than 40 and up to 60 seconds per vehicle.

- ***LOS F*** on freeways represents a stop and go, low speed conditions with little or poor maneuverability. Speed and traffic flow may drop to zero and considerable delays occur. For intersections, LOS F describes operations with delay in excess of 60 seconds per vehicle. This level, considered by most drivers unacceptable often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection.

CITY OF CHICO GENERAL PLAN

The City of Chico General Plan Transportation Element is the document that provides the framework for achieving the City's transportation system goals. The City of Chico strives to create a balanced transportation system that serves bicyclist and pedestrians as well as motor vehicles. **Table 4.2-4** summarizes the City's General Plan policies related to vehicular transportation that are applicable to this project. Policies relating to other components of transportation (e.g., parking) are addressed in this section.

TABLE 4.2-4
CITY OF CHICO GENERAL PLAN
TRANSPORTATION-RELATED POLICY SUMMARY

Policy	Policy Description	Consistency with General Plan Policy	Analysis
T-G-9	Ensure that major employers, including the City, implement TSM programs to reduce peak-period trip generation.	Consistent, with mitigation	Mitigation Measure **MM 4.2.2** requires the development and implementation of a Traffic Management Plan.
T-G-11	Strive to maintain traffic LOS C on residential streets and LOS D or better on arterial and collector streets, at all intersections, and on principal arterials in the CMP during peak hours.	Consistent, with mitigation	Mitigation Measures **MM 4.2.1** and **4.2.3** would include improvements to improve LOS where it falls below these standards.
T-G-12	Accept LOS E for build-out areas served by transit after finding that: -There is no practical and feasible way to mitigate the lower level of service; and -The uses resulting in the lower level of service are of clear, overall public benefit.	Consistent, with mitigation	See consistency analysis under Policy T-G-11.
T-I-28	Design roadway improvements and evaluate development proposals based on LOS standards.	Consistent	Completed as part of the Wal-Mart Expansion project.

Transportation System Management

The City of Chico General Plan outlines the goals for a city-wide Transportation Systems Management (TSM) program. As defined in the General Plan, the specific objectives of TSM are to:

- Reduce peak-hour traffic congestion by reducing the number of single occupant vehicle trips associated with commute trips;
- Reduce or delay the need for street improvements by making more efficient use of existing facilities;
- Reduce future air pollution concentrations and strive to meet state and federal ambient air pollution standards by reducing the number of single occupant vehicle trips associated with commute trips; and
- Reduce consumption of energy for transportation uses, thereby contributing to the national policy of increasing energy self-sufficiency.

To accomplish these objectives, General Plan Policy T-I-23 states that the City will encourage major employers (100 or more employees), such as the existing Wal-Mart, to prepare and adopt a TSM plan to reduce peak-period vehicle trip generation by 10 percent or more. A TSM plan could include a wide range of trip reduction options. Examples of options are:

1) Transit pass subsidies,
2) Preferential Carpool/Vanpool parking,
3) A ridesharing database,
4) Safe and secure bicycle parking,
5) Shower and locker facilities for employees,
6) On-site information on transit routes, bicycle routes and ridesharing, and
7) Flexible work schedules.

4.2.4 IMPACTS AND MITIGATION MEASURES

METHODOLOGY

Traffic operations have been quantified through the determination of "Level of Service" (LOS). Level of Service is a qualitative measure of traffic operating conditions, whereby a letter grade "A" through "F" is assigned to an intersection or roadway segment representing progressively worsening traffic conditions as discussed in **Table 4.2-6**.

Level of Service Analysis Methodologies

Levels of Service have been calculated for all intersection control types using the methods documented in the Transportation Research Board Publication *Highway Capacity Manual, Fourth Edition, 2000*. For signalized intersections and all-way-stop-controlled (AWSC) intersections, the intersection delays and levels of service are average values for all intersection movements. For two-way-stop-controlled (TWSC) intersections, the intersection delays and levels of service are representative of those for the worst-case approach. The average daily traffic based roadway level of service thresholds are shown in **Table 4.2-5.** Level of service criteria for different types of intersection control are outlined in **Table 4.2-6**.

TABLE 4.2-5
LEVEL OF SERVICE (LOS) CRITERIA FOR ROADWAYS

Roadway Type	Average Daily Traffic (ADT) – Total of Both Directions				
	LOS "A"	LOS "B"	LOS "C"	LOS "D"	LOS "E"
6-Lane Expressway (high access control)	36,000	42,000	48,000	54,000	60,000
6-Lane Divided Arterial (with left-turn lane)	32,000	38,000	43,000	49,000	54,000
4-Lane Expressway (high access control)	24,000	28,000	32,000	36,000	40,000
4-Lane Divided Arterial (with left-turn lane)	22,000	25,000	29,000	32,500	36,000
4-Lane Undivided Arterial (no left-turn lane)	18,000	21,000	24,000	27,000	30,000
2-Lane Arterial (with left-turn lane)	11,000	12,500	14,500	16,000	18,000
2-Lane Arterial (no left-turn lane)	9,000	10,500	12,000	13,500	15,000
4-Lane Collector	12,000	15,000	18,000	21,000	24,000
3-Lane Collector	9,000	11,250	13,500	15,750	18,000
2-Lane Collector	6,000	7,500	9,000	10,500	12,000

Notes: Based on Highway Capacity Manual, Fourth Edition, Transportation Research Board, 2000.

1. All volume thresholds are approximate and assume ideal roadway characteristics. Actual thresholds for each LOS listed above may vary depending on a variety of factors including (but not limited to) roadway curvature and grade, intersection or interchange spacing, driveway spacing, percentage of trucks and other heavy vehicles, lane widths, signal timing, on-street parking, volume of cross traffic and pedestrians, etc.
2. The City of Chico has established that the City's LOS standards should not be applied to private intersections or private driveway approaches to City arterials.

TABLE 4.2-6
LEVEL OF SERVICE (LOS) CRITERIA FOR INTERSECTIONS

Level of Service	Type of Flow	Delay	Maneuverability	Control Delay (seconds/vehicle)		
				Signalized	Unsignalized	All-Way Stop
A	Stable Flow	Very slight delay. Progression is very favorable, with most vehicles arriving during the green phase not stopping at all.	Turning movements are easily made, and nearly all drivers find freedom of operation.	≤ 10.0	≤ 10.0	≤ 10.0
B	Stable Flow	Good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.	Vehicle platoons are formed. Many drivers begin to feel somewhat restricted within groups of vehicles.	>10 and ≤ 20.0	>10 and ≤ 15.0	>10 and ≤ 15.0
C	Stable Flow	Higher delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.	Back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted	>20 and ≤ 35.0	>15 and ≤ 25.0	>15 and ≤ 25.0
D	Approaching Unstable Flow	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	Maneuverability is severely limited during short periods due to temporary back-ups.	>35 and ≤ 55.0	>25 and ≤ 35.0	>25 and ≤ 35.0
E	Unstable Flow	Generally considered to be the limit of acceptable delay. Indicative of poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences.	There are typically long queues of vehicles waiting upstream of the intersection.	>55 and ≤ 80.0	>35 and ≤ 50.0	>35 and ≤ 50.0
F	Forced Flow	Generally considered to be unacceptable to most drivers. Often occurs with over saturation. May also occur at high volume-to-capacity ratios. There are many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors.	Jammed conditions. Back-ups from other locations restrict or prevent movement. Volumes may vary widely, depending principally on the downstream back-up conditions.	> 80.0	> 50.0	> 50.0

References: 1. Highway Capacity Manual, Fourth Edition, Transportation Research Board, 2000.

Technical Analysis Parameters

Intersections

This traffic study focuses on a "planning level" evaluation of traffic operating conditions, which incorporates appropriate heavy vehicle adjustment factors, peak hour factors[2], and signal lost time factors[3] and reports the resulting intersection delays and LOS as estimated using the HCM-2000 based analysis methodologies. Based on consultation with the City of Chico, a peak hour factor (PHF) of 0.90 was established for use in the analysis of all study intersections under all scenarios for this analysis. Per HCM standards, a loss time of 4 seconds per critical movement is applied for the analysis of all signalized intersections. The *Traffix 7.7* (Dowling Associates) software program was used to implement the HCM-2000 analysis methodologies. Assessment of "design level" parameters (including queuing on intersection lane groups, stacking length requirements, coordinated signal operations analyses, etc.) have been included in this study.

Freeway Mainline, Ramp Merge/Diverge and Weaving LOS Methodologies

Freeway mainline, ramp (merge/diverge) junction and mainline weaving operations peak hour traffic operations were analyzed using methodologies presented in the *Highway Capacity Manual (HCM 2000)*. The Transportation Research Board (TRB) published *Highway Capacity Software 2000 (HCS-2000)*, *Version 4.1*, was applied in this analysis. Assumptions used in this analysis include:

- 0.90 peak hour factor (both mainline and ramps)
- 10 percent heavy vehicles during the peak hour periods analyzed - obtained from Average Annual Daily Truck Traffic on the California State Highway System, November 2004 (*http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/truck2003final.pdf*)
- A Passenger Car Equivalency (PCE) factor of 1.5 (level terrain), established based on the terrain (level, rolling, or mountainous), was utilized for evaluating the mainline, ramp merge/diverge and weaving operations.[4]

STANDARDS OF SIGNIFICANCE

The Initial Study for the proposed project evaluated seven transportation related issues, five of which: 1) a change in air traffic patterns, 2) public transit, 3) the continuation of the bike path corridor, 4) emergency access and 5) parking, were considered to be less than significant or have no impact in the Initial Study and are not further discussed in this EIR. For a discussion of these conclusions refer to the NOP/Initial Study in **Appendix A**. Issues relating to traffic volumes exceeding the circulation systems level of service standards and characteristics, which are not consistent with standards

---

[2] Peak-Hour Factor (PHF) is used to address the effect of traffic flow fluctuations on the highway system. Conventionally, PHF is defined as the ratio of one-hour volume and the equivalent one-hour volume based on the highest 15-minute volume count.

[3] Signal lost time factor is a measure for accounting lost time at the beginning and end of a signal light phase. As a light turns green, the time it takes to move will be relatively longer than saturation headway for the first four vehicles, which includes driver reaction time and the time necessary for acceleration.

[4] Passenger Car Equivalency: Traffic volumes containing a mix of vehicle types must be converted into an equivalent flow of passenger cars using passenger car equivalents (PCEs). The procedure in the HCM allows that freeway traffic volumes containing a mix of vehicle types be adjusted by the use of a heavy vehicle factor, *fHV*, into an equivalent flow rate of passenger cars. The heavy vehicle adjustment factor is based on the passenger car equivalence of trucks, buses, and recreation vehicles (RVs).

established in the *Butte County Congestion Management Plan* (CMP), or other General Plan policies related to Transportation Systems Management (TSM).

To measure whether transportation facilities operate acceptably, or are significantly impacted by the addition of project generated traffic, the applicable standards of significance policies were identified for this study. Standards of significance policies establish Level of Service thresholds for acceptable/tolerable operations of transportation facilities, as well as the policies regarding what triggers a significant project impact. The governing policy for a particular study intersection or roadway segment is that which is established by the agency which owns and maintains the facility, although it might be necessary to also consider contradicting policies of other agencies which may have some jurisdictional interest with the facility.

Within this study, the City of Chico and Caltrans both have standards of significance policies which apply to some, or all, of the study facilities. The standards of significance policies for each of these agencies are described in detail below, along with how the policies were interpreted for this study. The following local public agency planning documents were referenced to establish standards of significance for this analysis.

1) *City of Chico General Plan 1999,* City of Chico Planning Department, 1999.

2) *State Route 99 – Chico Corridor Study, Quincy Engineering,* October 2001.

City of Chico Standards of Significance

The *City of Chico General Plan (April 1999) Transportation Element* contains the following policies in the "Standards for Traffic Level of Service" section:

> *T-G-11: Strive to maintain traffic LOS C on residential streets and LOS D or better on arterial and collector streets, at all intersections, and on principal arterials in the CMP during peak hours.*
>
> *T-G-12: Accept LOS E for built-out areas served by transit after finding that:*
>
> - *There is no practical and feasible way to mitigate the lower level of service; and*
> - *The uses resulting in the lower level of service are of clear, overall public benefit.*

Based on the above standards established in the General Plan, LOS "D" is designated as the minimum acceptable LOS standard on City facilities. In this report, a peak-hour LOS of "D" is taken as the threshold for acceptable traffic operations at all study intersections.

The City of Chico also has additional criteria used for CEQA analysis. This criterion includes the following:

Will the project or related activities result in:

1) Traffic volumes which exceed established Level of Service standards on roadways segments or at intersections, or which do not meet applicable safety standards? Based on General Plan policies, significant impacts would generally result if traffic exceeded LOS C on residential streets, LOS D on arterial and collector streets/intersections, and (under specific circumstances) LOS E in built-out areas served by transit.

2) The absence of bikeway facilities in the general locations identified in the General Plan, consistent with guidelines in the Chico Urban area Bicycle Plan, or failure to meet applicable deign requirements and safety standards?

3) Travel characteristics which are not consistent with standards established in the Butte County Congestion Management Plan (CMP), or other General Plan policies related to Transportation Systems Management (TSM)?

4) Substantial impact on existing or proposed public transit systems including rail and air traffic?

5) Effects on existing parking facilities or demand for new parking not provided for by the project?

6) Increased traffic hazards to motor vehicles, bicycles, pedestrian or other traffic?

7) A change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

As discussed previously, five of these standards were considered to be less than significant or have no impact in the Initial Study and are not further discussed in this EIR: 1) a change in air traffic patterns, 2) public transit, 3) the continuation of the bike path corridor, 4) emergency access, and 5) parking.

Caltrans Standards of Significance

The *Guide for the Preparation of Traffic Impact Studies* (dated December 2002) published by Caltrans states the following:

> *"Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities, however, Caltrans acknowledges that this may not be always feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS."*

The "concept level of service" for study freeway mainline segments along the SR 99 corridor as stated within the *State Route 99 – Chico Corridor Study, Quincy Engineering* (October 2001) is provided below. Note that the "concept level of service" within the *Chico Corridor Study* were in turn obtained from the *State Route 99 Route Concept Report (Caltrans District 3, July 1989)*

- State Route 99 – Estates Drive to Skyway: LOS "D"
- State Route 99 – Skyway to Mud Creek Bridge: LOS "E"

Private Streets Standards of Significance

A few of the roadways analyzed within the traffic study are private streets for which there are no designated standards of significance. These include Baney Lane, Business Lane, and all private driveways leading to City streets (i.e. Chico Mall Access, Wal-Mart driveways). The City of Chico has established that the City's LOS standards should not be applied to private intersections or private driveway approaches to City arterials. The resulting delay conditions should, however, be considered in addressing conflict and safety issues.

Standards of Significance Summary

For non-Caltrans facilities owned and maintained by the City, LOS "D" will be taken as the governing threshold.

For private facilities, including Baney Lane, Business Lane, Chico Mall Access, and Wal-Mart driveways, there will be no LOS threshold. Rather, delay conditions should be considered in addressing vehicle conflict and safety issues. The City of Chico is extremely concerned with the Chico Mall Access and Baney Lane and their effect on traffic flows along both E. 20th Street and Forest Avenue.

For Caltrans facilities, the minimum acceptable LOS for SR 99 mainline, ramp junction, and at-grade ramp intersections is based on the concept LOS for the segments identified above. Based on the above discussion, **Table 4.2-7** provides the target level of service that will be utilized for the mainline, ramp junction, and at-grade ramp intersections.

TABLE 4.2-7
TARGET LEVEL OF SERVICE (LOS) FOR CALTRANS FACILITIES

Mainline/ Ramp Junction/ At-Grade Ramp Intersections	Target LOS
SR 99 Mainline Segment– north of Skyway	E
SR 99/Skyway Ramp Junction – NB On-Ramp	E
SR 99/Skyway Ramp Junction – SB Off-Ramp	E
SR 99 NB Ramps/Skyway Intersection	D
SR 99 SB Ramps/Skyway Intersection	D
SR 99 Mainline Segment – north of 20th Street	E
SR 99/20th Street Ramp Junction – NB On and Off-Ramp	E
SR 99/20th Street Ramp Junction – SB On and Off-Ramp	E
SR 99 NB Ramps/20th Street Intersection	D
SR 99 SB Ramps/20th Street Intersection	D
SR 99/SR-32 Ramp Junction – NB Off-Ramp	E
SR 99/ SR-32 Ramp Junction – SB On-Ramp	E

Source: Omni Means

Traffic Signal Warrant Analysis Criteria

To determine whether "significance" should be associated with unsignalized intersection operations, a supplemental traffic signal "warrant" analysis was also completed. The term "signal warrants" refers to the list of established criteria used by Caltrans and other public agencies to quantitatively justify or ascertain the need for installation of a traffic signal at an otherwise unsignalized intersection location. This study will employ the signal warrant criteria presented in the latest edition of the Federal Highway Administration's (FHWA) *Manual on Uniform Traffic Control Devices (MUTCD),* as amended by the *MUTCD 2003 California Supplement,* for all study intersections. The signal warrant criteria are based upon several factors including the volume of vehicular and pedestrian traffic, frequency of accidents, location of school areas, etc. Both the FHWA's MUTCD and the *MUTCD 2003 California Supplement* indicate that the installation of a traffic signal should be considered if one or

more of the signal warrants are met. Specifically, this study utilized the Peak Hour Volume based Warrant 3. Warrant 3 criteria are basically identical for both the FHWA's MUTCD and the *MUTCD 2003 California Supplement*.

ANALYSIS ASSUMPTIONS

Project Trip Generation

This section describes the proposed project and methodologies used to quantify the project trips added to area transportation facilities.

For purposes of this traffic analysis, the term "project" (as described in Section 3.0 Project Description) refers to the development of the site including the proposed Wal-Mart Expansion project, gas station, and fast food restaurant. Although it is recognized that the expansion (and associated improvements) will likely be completed prior to development of the gas station and fast food restaurant, for purposes of this traffic study, it was assumed that the site will be fully developed with all three land uses. The new Supercenter is assumed to be open 24 hours a day/7 days a week. This represents a worst-case operation scenario.

Table 4.2-8 provides a summary of trip generation characteristics for the proposed project.

Typically, project site trip generation is estimated utilizing trip generation rates contained in the Institute of Transportation Engineers (ITE) Publication Trip Generation (Seventh Edition). However, traffic counts conducted at the existing Wal-Mart store indicate that trip generation rates and volumes are significantly higher than those calculated from the ITE Trip Generation Manual using the existing store square footage and ITE rates for a "Free Standing Discount Store" (land use 815). Thus, given this existing characteristic, it is also assumed that trip rates for the proposed Wal-Mart Expansion project would also be higher than ITE trip rates for a comparable "Free Standing Discount Superstore". For this reason, it was necessary to establish an alternative methodology to estimate an appropriate trip generation rate for the proposed Wal-Mart store to reflect the anticipated higher actual rate to the traffic study.

Due to the variances described above, it was determined that the direct use of ITE rates was not appropriate for calculating trip generation for the expanded superstore. Instead an alternative trip generation methodology was required to establish trip generation for the expanded Wal-Mart Supercenter. This alternative methodology basically provides for the factoring up of ITE trip generation characteristics for the proposed site by blending the ITE rates for a "free standing discount superstore" and the actual observed trip rates at Wal-Mart Supercenters. The specific methodology used to calculate the final recommended trip generation for the proposed Wal-Mart Supercenter, including a detailed description of each individual step in the calculations (along with corresponding tables and graphs), are included in **Appendix B**.

As shown in **Table 4.2-8**, within the "'Unadjusted Project Trip Generation" portion of the table, it is estimated that the proposed project site will generate a total of 551 AM peak hour trips, 1,157 PM peak hour trips and 1,396 trips during the Saturday peak hour. However, these total unadjusted project trips do not take into account existing trips which are already generated by the existing Wal-Mart, nor internal trips, diverted trips, or pass-by trips which would be associated with the proposed project.

Existing Wal-Mart trips, as well as internal, diverted, and pass-by trips, will reduce the number of "new" trips which will be distributed to the study intersections and roadways. Each of these trip types are described in further detail below.

Existing Wal-Mart Trips

The existing Wal-Mart store currently generates and distributes trips to study intersections and roadways, which need to be taken into consideration in determining trips that will be generated by the Wal-Mart Expansion project. The proposed, expanded Wal-Mart will result in higher trip generation than the existing facility. Vehicle trips currently generated by the existing store are backed out of the trip generation calculated for the proposed Wal-Mart Expansion since they already exist within local traffic volumes, and failure to back them out would result in the double counting of trips. As **Table 4.2-8** shows within the "Existing Wal-Mart Trip Generation" portion of the table, the existing Wal-Mart store generates a total of 314 AM peak hour trips, 844 PM peak hour trips and 1,116 trips during the Saturday peak hour. These peak hour trips were established from the driveway counts conducted by OMNI-MEANS in April 2005. The inbound vs. outbound splits for AM and PM peak hour traffic for the existing Wal-Mart store are different than those established for the proposed Wal-Mart Expansion project. This difference is to be expected since the two versions of the store experience different trip generation characteristics, due largely to the presence of the grocery store.

As shown in **Table 4.2-8**, after deducting trips which are generated by the existing Wal-Mart facility, the proposed Wal-Mart Expansion project is projected to generate 237 "net new" unadjusted Wal-Mart AM peak hour trips, 313 "net new" unadjusted Wal-Mart PM peak hour trips and 280 "net new" unadjusted Wal-Mart trips during the Saturday peak hour period.

TABLE 4.2-8
PROJECT TRIP GENERATION

Project Trip Generation Rates

Land Use Category	Rate Unit	AM Peak Hour Trip Rate			PM Peak Hour Trip Rate			Saturday Peak Hour Trip Rate		
		Total	In %	Out %	Total	In %	Out %	Total	In %	Out %
Proposed Wal-Mart Superstore										
Free Standing Discount Superstore[1]	Per ksf	2.47	51%	49%	5.19	49%	51%	6.26	51%	49%
Gas Station (944)[2]	Per f.s.	12.07	50%	50%	13.86	50%	50%	19.24	50%	50%
Fast Food Restaurant w/ Drive-Through (934)[2]	Per ksf	53.11	51%	49%	34.64	52%	48%	59.2	51%	49%

Notes: ksf = 1,000 square feet, f.s. = fueling station
1) Trip generation rates equations derived based on the actual field data for Wal-Mart Superstore (see text).
2) Trip generation volumes estimated using the trip rate equations presented in the ITE Trip Generation (7th Edition) for individual use quantities.

Existing Wal-Mart Trip Generation

Land Use Description	Quantity	AM Peak Hour Trip			PM Peak Hour Trip			Saturday Peak Hour Trip		
		Total	In	Out	Total	In	Out	Total	In	Out
Existing Wal-Mart Trips	125.889 ksf	314	185	129	844	425	419	1,116	594	522

3) Existing Wal-Mart Trips based on actual counts conducted at the Wal-Mart driveways

"Unadjusted " Proposed Wal-Mart Trip Generation[4]

Land Use Description	Rate Unit	AM Peak Hour Trip Rate			PM Peak Hour Trip Rate			Saturday Peak Hour Trip Rate		
		Total	In%	Out%	Total	In%	Out%	Total	In %	Out%
Proposed Wal-Mart Superstore Free standing discount superstore	Per ksf	2.47	51%	49%	5.19	49%	51%	6.26	51%	49%
Land Use Description	**Quantity**	**AM Peak Hour Trip**			**PM Peak Hour Trip**			**Saturday Peak Hour Trip**		
		Total	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In %**	**Out**
Proposed Wal-Mart Superstore	223.013 ksf	551	281	270	1,157	567	590	1,396	712	684
"Unadjusted" Wal-Mart Trips		551	281	270	1,157	567	590	1,396	712	684
Total Net New "Unadjusted" Wal-Mart Trips		648	305	343	652	315	337	807	385	422

4) Net New "Unadjusted Trips are derived by subtracting the existing Wal-Mart Trips from the "Unadjusted" Wal-Mart Trips.

Net New "Unadjusted" Project Trip Generation (with Diverted/Pass-By and Internal Trips

Land Use Description	Quantity	AM Peak Hour Trip			PM Peak Hour Trip			Saturday Peak Hour Trip		
		Total	In	Out	Total	In	Out	Total	In	Out
Proposed Wal-Mart Superstore	223.013 ksf	237	96	141	313	142	171	280	118	162
Gas Station	12 f.s.	145	73	72	166	83	83	231	116	115
Fast Food w/ Drive-Through	5 ksf	266	136	130	173	90	83	296	151	145
Total Net New "Unadjusted Proposed Project Trips		648	305	343	652	315	337	807	385	422

Note: Net New "unadjusted" External Trips include both diverted/pass-by trips and internal trips.

Internal Trip Reduction[5]

Land Use Description	Internal Trip Reduction %	AM Peak Hour Trip			PM Peak Hour Trip			Saturday Peak Hour Trip		
	AM, PM, & Sat.	Total	In	Out	Total	In	Out	Total	In	Out
Proposed Wal-Mart Superstore	10%	24	10	14	31	14	17	28	12	16
Gas Station	10%	14	7	7	16	8	8	23	12	11
Fast Food w/ Drive-Through	10%	27	14	13	17	9	8	30	15	15

Total Proposed Project diverted/Pass-by Trips	65	31	34	64	31	33	81	39	42

5) Internal trips calculated based on methodologies outlined within the ITE Generation Handbook (October 1998)

Unadjusted" External Trip Generation (with Diverted Trips)

Land Use Description	AM Peak Hour Trip			PM Peak Hour Trip			Saturday Peak Hour Trip		
	Total	In	Out	Total	In	Out	Total	In	Out
Proposed Wal-Mart Superstore	213	86	127	282	128	154	252	106	146
Gas Station	131	66	65	150	75	75	208	104	104
Fast Food w/ Drive-Through	239	122	117	156	81	75	266	136	130
Total "Unadjusted Proposed Project External Trips	583	274	309	588	284	304	726	346	380

Note: Unadjusted External Trips includes diverted trips.

Diverted/Pass-By

Land Use Description	Diverted/Pass-By Trip %		AM Peak Hour Trip			PM Peak Hour Trip			Saturday Peak Hour Trip		
	AM, PM	Sat.	Total	In	Out	Total	In	Out	Total	In	Out
Proposed Wal-Mart Superstore[6, 7]	46.4%	45.8%	99	40	59	131	59	72	115	49	66
Gas Station[7]	42%	42%	55	28	27	63	32	31	87	44	61
Fast Food w/ Drive-Through[7]	49%	49%	117	67	50	76	44	32	130	74	56
Total Proposed Project Diverted/Pass-By Trips			**271**	**135**	**136**	**270**	**135**	**135**	**332**	**167**	**165**

6) Diverted/Pass-By Trip percentage for the Superstore established based on information provided by the City staff and verified with data available from ITE.
7) Diverted//Pass-By Trip percentages established based on multiple ITE source (see text).

Net New Proposed Project Trip Generation

Land Use Description	AM Peak Hour Trips			PM Peak Hour Trips			Saturday Peak Hour Trips		
	Total	In	Out	Total	In	Out	Total	In	Out
Proposed Wal-Mart Superstore	114	46	68	151	69	82	137	57	80
Gas Station	76	38	38	87	43	44	121	60	61
Fast Food w/ Drive-Through	122	55	67	80	37	43	136	62	74
"Net New" Proposed Project Trips	**312**	**139**	**173**	**318**	**149**	**169**	**394**	**179**	**215**

8) "Net New" Trips exclude Diverted/Pass-By Trips, internal Trips, and existing Wal-Mart trips within the proposed project. Plus project scenarios were analyzed by adding Diverted/Pass-By Trips at all applicable intersections and the project driveways.
Source: Omni Means

Internal Trip Reductions

As noted previously, this traffic analysis considers development of the entire 10.62 acre site including the new Wal-Mart Supercenter expansion, gas station, and fast food restaurant. Because the

proposed project is a mixed use development with complimentary land uses, it is expected that some vehicles visiting one of the three different sections of the project site (Wal-Mart Supercenter, gas station, and fast food restaurant) will also be visiting one (or both) of the other land uses. For example, a vehicle leaving the Wal-Mart store may very well stop at the gas station, and/or the fast food restaurant before leaving the project site. Additionally, some vehicles drawn to the site to stop at the gas station will also decide to stop at the fast food restaurant (or vice versa), or perhaps the Wal-Mart store. When a vehicle visits a project site, it is typically calculated as two trips to account for the inbound and outbound component of the round trip. However, if this same vehicle also visited one (or both) of the other two land uses, it would result in four (or six) trips when taking into account the inbound and outbound component to and from each land use. Given the proximity of the proposed land uses to each other, some of these trips might not even occur using a vehicle but rather could be accomplished on foot after parking. The primary objective of the traffic study is to analyze impacts to the adjacent roadway system, it is reasonable to reduce raw trip generation volumes to account for only the inbound vehicular trip entering the project site, and the outbound vehicular trip exiting the project site, and neglecting these other internal trips between land uses. Internal trip characteristics were established based on information and methodologies outlined within the Institute of Transportation Engineers (ITE) *Trip Generation Handbook* (October 1998) from which internal trip reduction factors for each of the three land uses, and for each analysis period (daily, AM peak hour, PM peak hour), were established. It is indicated that the Wal-Mart Expansion project would capture 21 percent and 10 percent internal trips during the AM and PM peak hour periods, respectively. The gas station would capture 50 percent and 51 percent trips during the AM and PM peak hour periods, respectively. The fast food restaurant would capture 19 percent and 29 percent trips during the AM and PM peak hour periods, respectively. Similar results are also anticipated for the Saturday peak hour period. As shown in **Table 4.2-8**, only a 10 percent reduction in internal trips (based on PM peak hour for Wal-Mart) was applied within the analysis to provide for a conservative analysis, while still providing minimal credit for some internal capture.

Pass-by Trips and Diverted Trips

Not all of the traffic generated by either the existing Wal-Mart or the proposed project are newly generated trips, but rather are trips which will exist with or without the project, and which will be drawn to the project for a variety of reasons. Pass-by and diverted trips are drawn to the existing site, and are accounted for within trip generation calculations for the project site. It is expected that pass-by trips and diverted trips (which are both defined in detail below) are drawn to the existing site, and will be drawn to the proposed project site, from traffic volumes along: (1) Forest Avenue, (2) SR 99, (3) 20th Street, (4) Skyway.

Pass-by trips are defined as trips that would occur on the roadway immediately adjacent to the project with or without the project, which are drawn to the site as a matter of convenience. Within this analysis, pass-by trips are defined as those trips drawn to the project site that would be traveling along Forest Avenue. Since pass-by trips would exist along the adjacent roadway with or without the project, they would not add any trips to any intersections or roadways. However, through movements at the project driveways would change to left and right-turn movements at the project driveway intersections, or other intersections such as Forest Avenue/Baney Lane, which channel traffic to other project driveways.

Diverted trips are similar in nature to pass-by trips. Whereas a pass-by trip is captured from existing traffic traveling along the roadway adjacent to the project, a diverted trip is captured from existing traffic along a nearby roadway. To arrive at the site, it is necessary for a diverted trip to go somewhat "out of its way", and thus will add trips to selected roadways and intersections in the vicinity of the project. After leaving the site, the trip will eventually return to the course of travel it would have been on with or without the project. Since the trip is an existing trip that is already

accounted for, trips are altered or added only to roadway and intersection volumes which correspond to the diverted portion of the travel route.

Within this analysis, it is assumed that trips will be diverted to the project site from the following nearby roadways: (1) SR 99 (2) 20th Street, and (3) Skyway.

Diverted/Pass-By trip percentages for the proposed Wal-Mart store were provided by the City and verified with the following three reference sources:

- *Trip Generation Handbook,* Institute of Transportation Engineers (ITE), October 1998
- *A Study of Pass-by Trips Associated with Retail Development*, ITE Journal, March 1991
- *Trip Generation Characteristics of Shopping Centers,* ITE Journal, June 1996

Diverted trips percentage for the fast food restaurant type of land use was established following a review of the ITE *Trip Generation Handbook*.

It is assumed that the gas station would draw only pass-by trips along Forest Avenue, and not any diverted trips. Thus, a pass-by trip reduction only was applied for this land use.

As **Table 4.2-8** shows within the "Diverted/Pass-By Trips" portion of the table, of the trips generated by the proposed project, it is assumed that 271 AM peak hour trips, 270 PM peak hour trips and 332 Saturday peak hour trips would be either diverted/pass-by trips which already exist along area roadways.

"Net New" Project Trips

As shown in **Table 4.2-8**, after deducting diverted trips, internal trips, and trips which are generated by the existing Wal-Mart facility, the proposed Wal-Mart Expansion project (including the gas station/fast food restaurant) is projected to generate 312 "net new" AM peak hour trips, 318 "net new" PM peak hour trips and 394 "net new" trips during the Saturday peak hour period.

Project Trip Distribution and Assignment

Trip distribution for the Wal-Mart store was analyzed separately from the trip distribution for the gas station and fast food restaurant because of the different nature of the land uses.

The directional trip distribution and assignment for the Wal-Mart Expansion project reflects existing and projected future traffic flows and travel patterns within the vicinity of the project site. Due consideration was also given for the location of other similar facilities, and the location of local and regional housing and employment/commercial centers in relation to the proposed project site when deriving the trip distribution and assignment patterns for the Wal-Mart Expansion project.

Figure 4.2-4a shows the trip distribution for the Wal-Mart superstore and **Figure 4.2-4b** depicts the trip distribution for the gas station/fast food restaurant. **Figure 4.2-5** shows the resulting project trips along the study roadways and along effected turning movements at study intersections, assuming the trip generation, trip distribution, and trip assignment patterns described above.

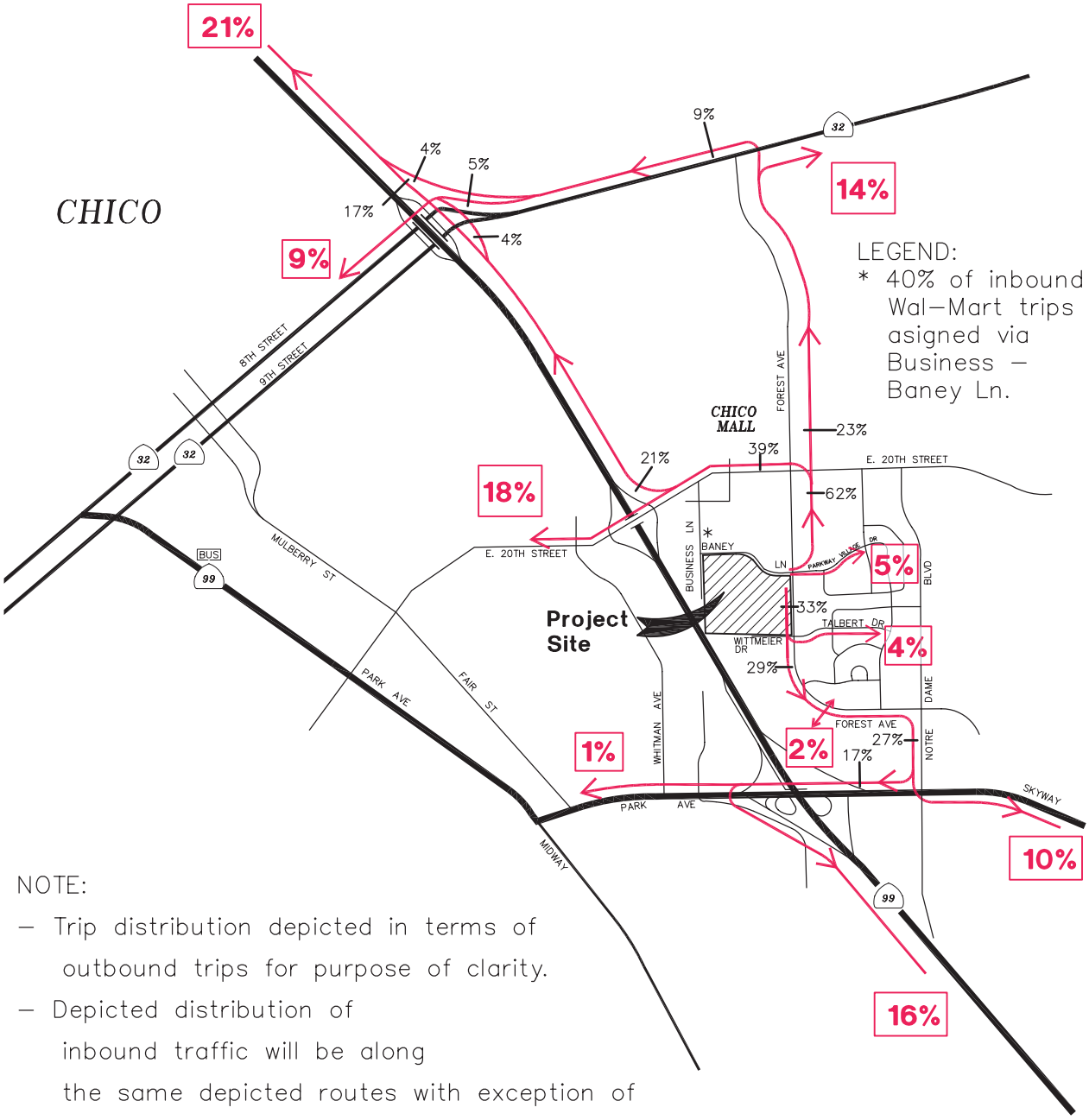
The traffic study assumed that none of the additional traffic generated by the expansion would utilize the Business Lane/Baney Lane route based on the following:

- The parking lot expansion and new access points to the project site would be to the south bordering on Forest Avenue and Whittmeier , so it canbe reasoned that additional trips would be oriented to the southern access rather than to Baney Lane.

- The project includes the prohibition of lefts turns onto Baney Lane at two of the three driveways which may decrease existing traffic destined to Baney Lane-Business Lane.

- The intersection of Forest Avenue/ Baney Lane will be improved to encourage traffic routes to Forest Avenue rather than Baney/Business route.

While it is likely that a small amount of traffic may be added to the Business Lane/Baney Lane route, the focus of the traffic analysis was to take a conservative approach to the project's impact to the Forest Avenue intersections and access points. By taking this approach, the mitigation measures identified on Forest Avenue will ensure that the traffic generated by the expansion will be addressed. If traffic had been assigned to the Business Lane/Baney Lane route, the potential volume would have been minor and the potential impacts would have been added to an already impacted intersection of East 20th Street/Toy-R-Us entrance. Mitigations to this intersection, which have not yet been formalized, are already set to be funded and implemented by the City's Nexus.



NOTE:

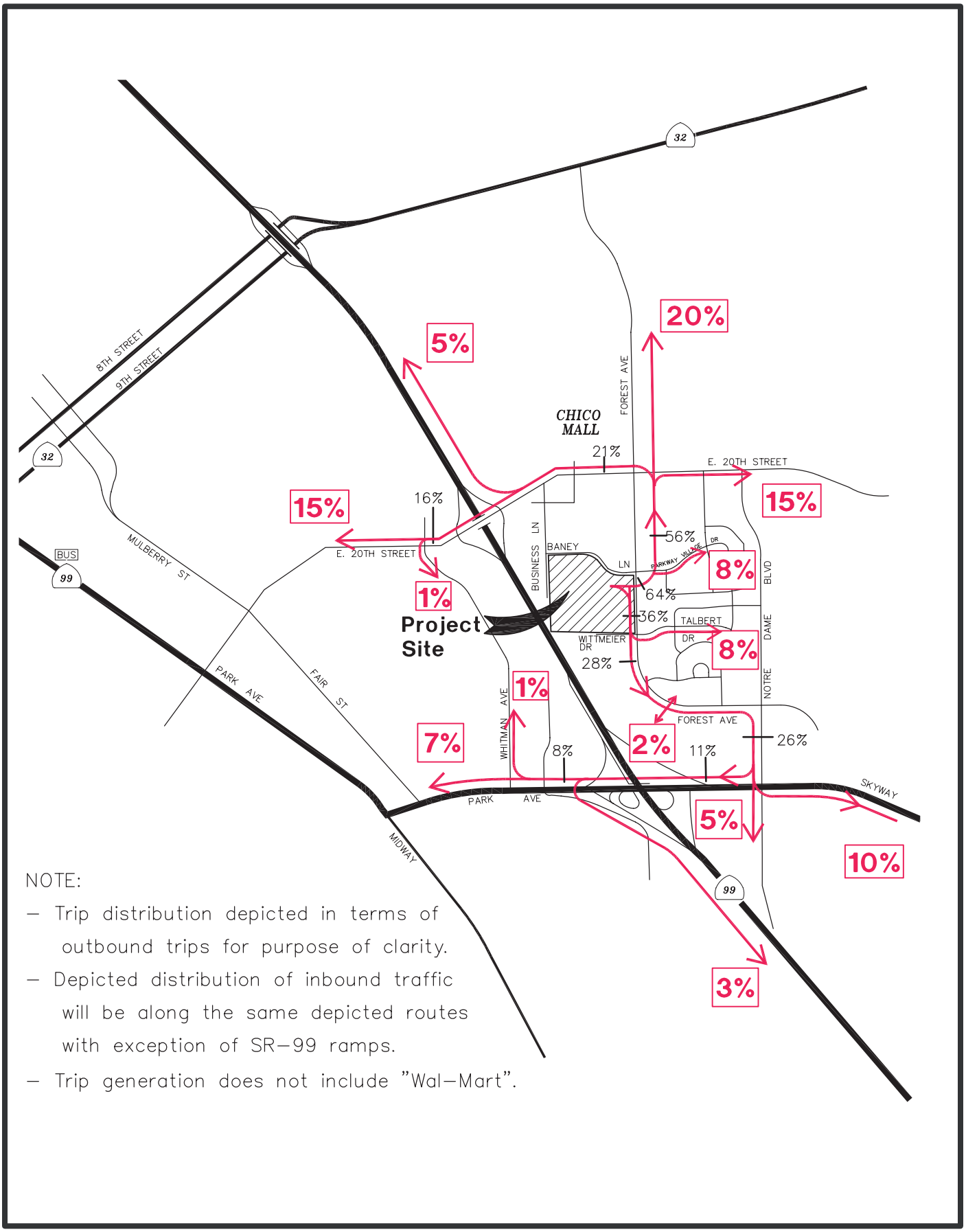
- Trip distribution depicted in terms of outbound trips for purpose of clarity.
- Depicted distribution of inbound traffic will be along the same depicted routes with exception of SR-99 ramps and Business Lane.
- Trip generation does not include "Fast Food/Gas Station".

T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Figure 4.2-4a.ai, April 2006

N

FIGURE 4.2-4A
WAL-MART EXPANSION TRIP DISTRIBUTION

PMC



NOTE:

- Trip distribution depicted in terms of outbound trips for purpose of clarity.
- Depicted distribution of inbound traffic will be along the same depicted routes with exception of SR–99 ramps.
- Trip generation does not include "Wal–Mart".

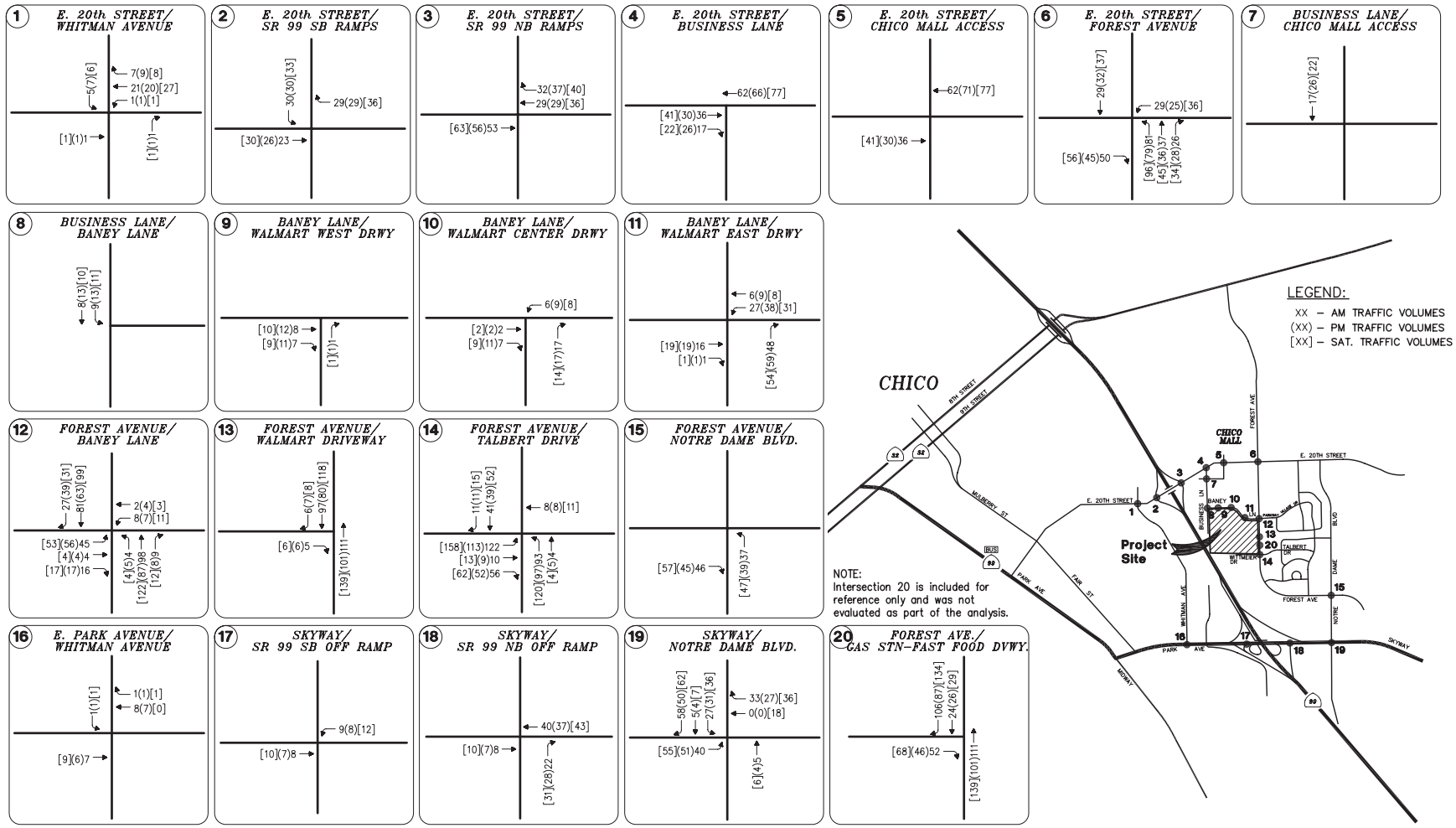
T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Figure 4.2-4b.ai, April 2006

N

FIGURE 4.2-4B

FAST FOOD RESTAURANT/GAS STATION TRIP DISTRIBUTION

PMC



N

FIGURE 4.2-5
PROJECT ONLY TRAFFIC VOLUMES

PMC

T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Figure 4.2-5.ai, June 2006

Project Site Access

The project would utilize all of the existing driveways on Baney Lane, Business Lane, and Forest Avenue, as well as two new additional driveways to the south onto Wittmeier Drive as part of the expansion. At present, all of the access points are full access intersections permitting left-turns in and out of the project site, with the exception of the Forest Avenue driveway, which is a right-in/right-out driveway. The main project access to the existing Wal-Mart store is currently provided via the signalized intersection of Forest Avenue/Baney Lane, with traffic traveling to/from the existing Wal-Mart driveways via Baney Lane. The proposed project site plan calls for all driveways along Baney Lane to be constructed with channelization to prohibit outbound left-turns and force all outbound traffic towards Forest Avenue. This restriction is intended to minimize traffic along Business Lane. Access to the gas station and restaurant is assumed to be via an additional right-in/right-out only driveway along Forest Lane, a driveway along Wittmeier Drive (planned as part of the Wal-Mart expansion), and additional cross access locations to/from the Wal-Mart parking lot. As discussed more fully below, the City will allow left-turn movements from the westernmost driveway.

More detailed descriptions of all of the proposed project driveways, with changes and modifications pertaining to circulation patterns following the expansion, are provided below:

- As will be discussed under the recommendations and mitigation section of the report, it is assumed that vehicular movements along the back alley to/from the Baney Lane/Business Lane intersection will be restricted to southbound through movements. Whereas traffic from the existing Wal-Mart store can currently exit out via the back alley and Business Lane, it is recommended (and assumed within the analysis) that appropriate signage will be provided to prohibit northbound movements along the back alley to minimize project traffic exiting onto Business Lane. The primary truck route for the store is via the Baney Lane/Business Lane intersection with trucks continuing south along the back alley to access the truck bays located near the southwestern portion of the store. When departing from the store, it is assumed the trucks will exit primarily via Wittmeier Drive, although departure would be possible via the alley.

- Traveling east along Baney Lane from Business Lane, the Baney Lane/Wal-Mart West Driveway is located approximately 100 ft. east of Business Lane. Only partial access is proposed providing full access into the driveway but only right-turns out of the driveway. Given this, the only possible route available for the outbound Wal-Mart customers/employees who would like to access development along Business Lane would be a circuitous route via Forest Avenue, E 20th Street and Chico Mall access.

  Note: The provision of channelization at the Baney Lane/Wal-Mart West Driveway to prohibit outbound left turns is assumed within the traffic analysis to correspond with the proposed project site plan. However, following discussions with City of Chico staff, the Recommendations/Mitigations section of this report includes the recommendation that outbound left turns to be permitted at this driveway to provide a limited opportunity for vehicles departing from the Wal-Mart site to access developments along Business Lane. Given that this driveway is located away from the main parking area, and thus experiences minimal traffic volumes, the net effect is that while some opportunity is provided to make an outbound left turn toward Business Lane, the actual number of left turns will be minimal, and negligible for purposes of this traffic study and does not change the conclusions identified in this EIR.

- The Baney Lane/Wal-Mart Central Driveway is located approximately 480 ft. east of Business Lane, and approximately 700 ft. west of Forest Avenue. The proposed project site plan (**Figure 3.0-6**) calls for the construction of a raised channelization island to physically prohibit outbound left turns at this driveway, partly to address sight distance issues at the driveway.

This restriction is recommended, and assumed within the traffic analysis, and existing outbound left-turns from the Wal-Mart at this driveway have been appropriately reassigned onto the network.

- The Baney Lane/Wal-Mart East Driveway is located approximately 315 ft. west of Forest Avenue. The driveway also provides access to the development located at the northwest quadrant of Forest Lane/Baney Lane intersection via a north leg. The proposed project site plan (**Figure 3.0-6**) calls for the construction of a raised channelization island to physically prohibit outbound left turns at this driveway. This restriction is recommended, and assumed within the traffic analysis, and existing outbound left-turns from the Wal-Mart at this driveway have been appropriately reassigned onto the network.

- As with the existing store, the Forest Avenue driveway would provide right-in/right-out access to the project site.

- The Wittmeier Drive/Forest Avenue intersection would provide full access to the project site via two new driveways located along Wittmeier Drive.

- It is assumed that a right-in/right-out access to the southeastern portion of the project will be provided via an additional undefined access driveway along Forest Avenue north of Wittmeier Drive for the gas station/fast food restaurant. Additionally, the Wittmeier Drive/Forest Avenue intersection, and the easternmost new driveway along Wittmeier Drive, will also provide full access to this portion of the project.

Project On-Site Circulation

As the site plan shows, a major component of the on-site circulation system consists of one-way drive aisles located to the east of the proposed store striped for diagonal parking. As noted within the Project Site Access section, Business Lane and Wittmeier Drive will provide access to the truck docking facilities located along the rear of the store. The overall layout of the site provides satisfactory vehicle circulation throughout the project site. The project site plan also provides for a pedestrian system of sidewalks and crosswalks which will channel pedestrians arriving from the new sidewalk/crosswalk system along Forest Avenue to the new store.

Project Truck Traffic

The existing Wal-Mart store currently averages 61 deliveries per week, 31 of which are large 18-wheel semi trucks. It is anticipated that the proposed Wal-Mart Expansion project will have an average of 85 deliveries per week, 24 more than the existing store. Of these, it is anticipated that 39 will be large semi trucks, which is 8 more than the existing store. Review of the project site plan shows that the overall layout of the site provides satisfactory truck access and circulation throughout the site. The existing truck route/fire lane behind the existing store would remain, but it would be extended. A truck turnaround approximately 130 feet in diameter would be designated at the end of the truck route extension, in the southwestern portion of the project site.

Project Roadway Improvements

The project circulation improvements that will be in place following the expansion are as follows:

- The redesigned intersection of Forest Avenue/Wittmeier Drive would be signalized and improved to contain the following lane geometrics:

- The northbound Forest Avenue approach would provide a through lane, combined through-right lane and an exclusive left-turn lane.
- The southbound Forest Avenue approach would provide a through lane, combined through-right lane and an exclusive left-turn lane.
- The eastbound Wittmeier Drive approach would provide a left-turn lane and combined through-right-left lane.
- The westbound Talbert Drive approach would provide a combined through-right-left lane.

- The existing traffic signal at the intersection of Forest Avenue/Baney Lane will be modified to include an additional left-turn lane on the eastbound approach and the lengthening of turn lanes.

SHORT TERM (2010) CONDITIONS

Short Term conditions refer to an analysis scenario projected a few years in the future from Existing conditions where those development projects that are currently under development in the study area are assumed to be completed, with traffic generated by this future development added to existing traffic volumes. At the direction of the City of Chico, Short Term conditions within this analysis are taken as "year 2010" but are expected to represent conditions at the time of operation of the Wal-Mart expansion project. Development of the gas station and restaurant are also assumed, thus representing analysis of "the whole of the project" as required by CEQA.

Raw 2010 traffic volumes for Short Term Conditions were acquired from the City's Nexus Traffic Analysis. These volumes assumed partial development of the identified approval/pending projects (see Table 3.0-2), the range of which was developed in consultation with the City Planning Department. These volumes along with background growth were added to area roadways by 2010, including the proposed Wal-Mart Expansion project. However, it is important to note that trip generation as assumed within the City's "*City of Chico, 2005-06 Update of Development Impact Fees, Analysis and Recommendations (Nexus Study) October 2005, Final Report"* (Nexus Study) and trip generation as assumed within this traffic study, are different. Whereas the Nexus Study assumed more generalized broad level trip generation and distribution assumptions for the Wal-Mart Expansion project, this project-specific traffic study requires a more detailed and refined approach (i.e. specialized trip generation, detailed trip assignments at project driveways and nearby roadways, pass-by and diverted trips adjustments, and diverted trips to/from SR 99).

For purposes of this traffic analysis, it was necessary to extract the specific traffic volumes within the raw volumes associated with the Wal-Mart Expansion project (as established within the Nexus Study) for no project conditions, in order to determine a baseline traffic condition. The specific traffic volumes established in the Traffic Study performed for this EIR analysis were then added to determine the short term plus project conditions. In the course of performing the traffic analysis, when Wal-Mart Expansion volumes as provided by the City for year 2010 conditions were extracted, it was noted that there were some variances between the traffic counts collected for this study and those collected for the City's Nexus Traffic Analysis at several locations. These variances, which are common in traffic analyses, were discussed with the City. Some of the traffic volumes from the City's analysis were adjusted, while others were not. It was determined by the City that the traffic count variances between the two efforts would not impact the findings of either study.

The *Short Term Plus Project* condition is the analysis scenario in which traffic impacts associated with the proposed project (i.e., the Wal-Mart Expansion) are investigated in comparison to the *Short Term No Project* condition scenario. Wal-Mart Expansion volumes as established using trip generation and

distribution methodologies provided for within this analysis were added to *Short Term No Project* volumes to establish *Short Term Plus Project* volumes. Short Term conditions assume that some programmed or planned improvements might be completed, including potentially some project related improvements.

Roadway/Intersection Improvements

It is assumed that roadway and intersection geometrics for *Short Term No Project* conditions will be identical to those which were described for *Existing* conditions.

Short Term No Project Traffic Operations

Short Term (2010) conditions typically refer to analysis scenarios which will exist following the assumed completion of approved and pending study area developments, and thus are typically a few years in the future from *Existing* conditions. As noted previously, for purposes of this study, the Short Term (2010) scenario assumes that 70 percent of the total approved and pending study area developments would be complete by year 2010. **Figure 4.2-6** shows the *Short Term No Project* traffic volumes used in this study established using methodologies described previously.

Intersections

Short Term No Project peak hour intersection traffic operations were analyzed utilizing derived *Short Term No Project* peak hour intersection traffic volumes (shown on **Figure 4.2-7**) and *Existing* lane geometries and control (shown on **Figure 4.2-1**). **Table 4.2-9** provides a summary of the resulting peak hour intersection levels of service.

TABLE 4.2-9
SHORT TERM NO PROJECT CONDITIONS: INTERSECTION LEVELS-OF-SERVICE

#	Intersection	Control Type[1]	Target LOS	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
				Delay	LOS	Warrant Met[2]	Delay	LOS	Warrant Met[2]	Delay	LOS	Warrant Met[2]
1	E. 20th St / Whitman Ave	Signal	D	16.1	B	-	30.8	C	-	44.6	D	-
2	E. 20th St / SR 99 SB Ramps	Signal	D	23.6	C	-	**80.3**	**F**	**-**	42.6	D	-
3	E. 20th St / SR 99 NB Ramps	Signal	D	15.8	B	-	**100.5**	**F**	**-**	**61.9**	**E**	**-**
4	E. 20th St / Business Ln	TWSC	D	10.6	B	No	16.0	C	No	15.0	B	No
5	E. 20th St / Chico Mall Access	Signal	D	15.0	B	-	**133.3**	**F**	-	**140.2**	**F**	**-**
6	E. 20th St / Forest Ave	Signal	D	37.0	D	-	**134.5**	**F**	**-**	**161.2**	**F**	**-**
7	Business Ln / Chico Mall Access	TWSC	Pvt[3]	12.3	B	No	29.4	D	No	64.1	F	No
8	Baney Ln / Business Ln	TWSC	Pvt[3]	9.0	A	No	10.7	B	No	27.2	D	No
9	Baney Ln / Wal-Mart West Driveway	TWSC	Pvt[3]	9.5	A	No	10.6	B	No	12.6	B	No
10	Baney Ln / Wal-Mart Central Driveway	TWSC	Pvt[3]	9.8	A	No	13.5	B	No	18.4	C	No
11	Baney Ln / Wal-Mart East Driveway	TWSC	Pvt[3]	10.7	B	No	85.4	F	No	198.2	F	No
12	Forest Ave / Baney Ln-Parkway Village Dr	Signal	D	24.5	C	-	27.4	C	-	29.8	C	-
13	Forest Ave / Wal-Mart	TWSC	D	10.5	B	No	12.1	B	No	11.5	B	No

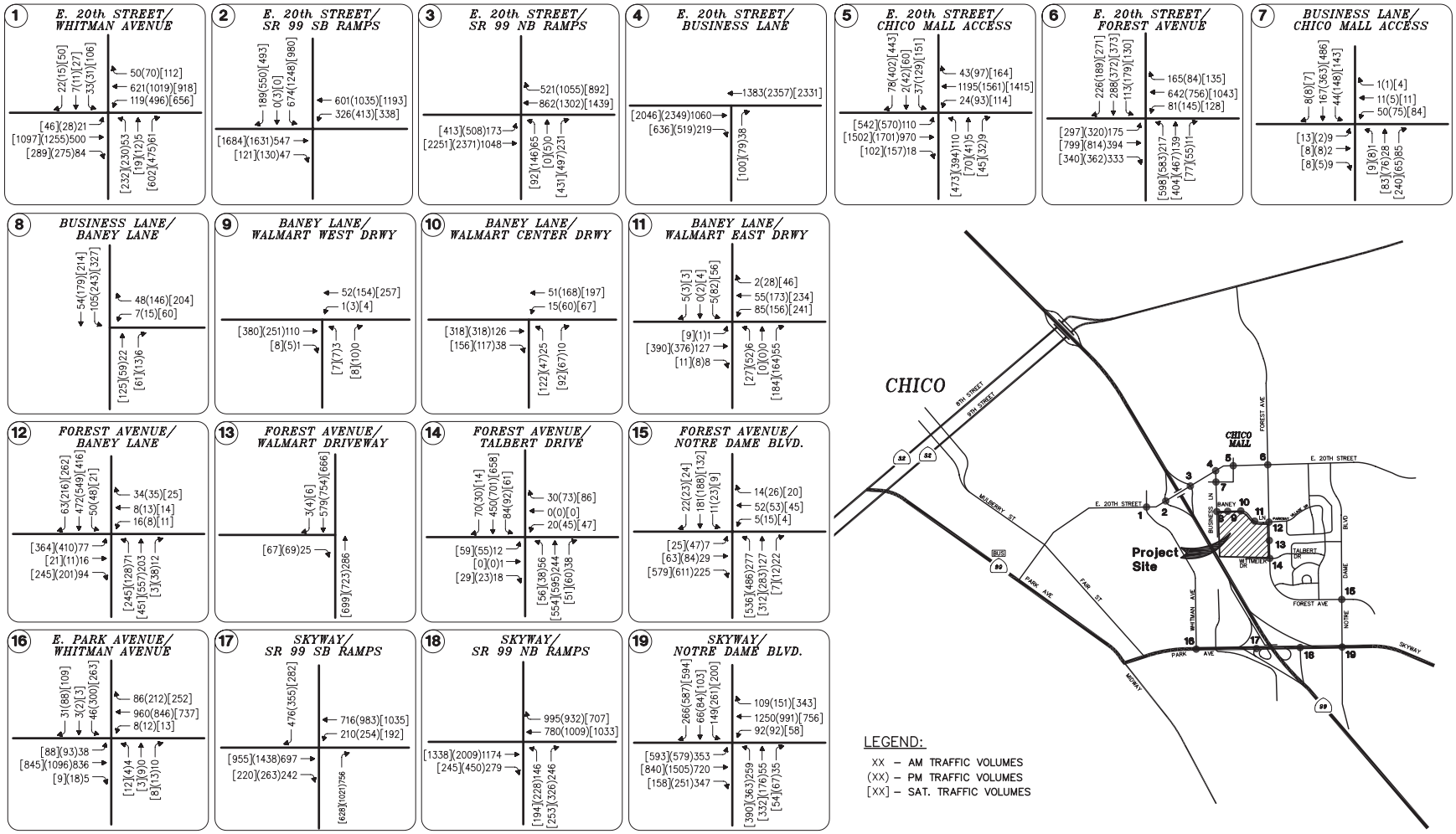
	Driveway											
14	Forest Ave / Talbert Dr-Wittmeier Dr	TWSC	D	18.1	C	-	**133.6**	**F**	**No**	**97.9**	**F**	**No**
15	Forest Ave / Notre Dame Blvd	Signal	D	19.5	B	-	18.1	B	-	14.0	B	-
16	E. Park Ave-Skyway / Whitman Rd	Signal	D	8.7	A	-	24.2	C	-	22.4	C	-
17	E. Park Ave-Skyway / SR 99 SB Ramps	TWSC	D	10.8	B	-	30.1	D	-	13.0	B	-
18	E. Park Ave-Skyway / SR 99 NB Ramps	Signal	D	10.8	B	-	13.7	B	-	10.9	B	-
19	Skyway / Notre Dame Blvd	Signal	D	29.1	C	-	**58.5**	**E**	**-**	44.9	D	-

Source: Omni Means

Notes: Bolded entries indicate intersections operating as an Unacceptable LOS.

1) TWSC = Two-Way-Stop-Control (LOS and delay are based on LOS and delay for worst approach).
2) Warrant = Caltrans peak hour-volume based signal warrant.
3) Pvt = private roadways, driveways and/or intersections. City LOS criteria not applicable and excess delays analyzed in terms of unacceptable vehicle conflict and safety issues.

This page intentionally left blank.



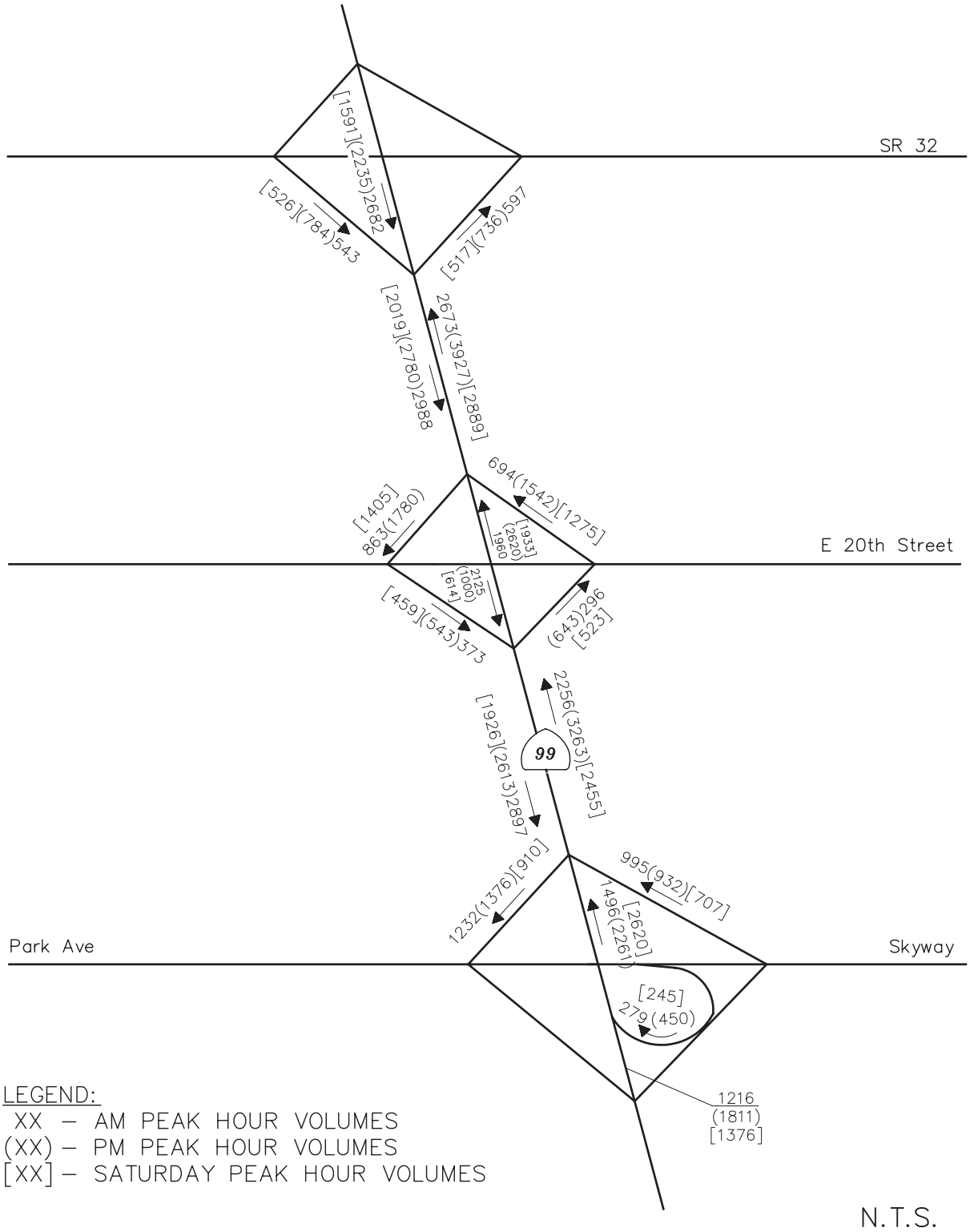
N

FIGURE 4.2-6

YEAR 2010 NO PROJECT TRAFFIC VOLUMES

PMC

T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Figure 4.2-6.ai, June 2006



T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Figure 4.2-7.ai, April 2006

N

FIGURE 4.2-7

YEAR 2010 NO PROJECT FREEWAY MAINLINE AND RAMP VOLUMES

PMC

As shown in **Table 4.2-9**, the following intersections were found to operate at unacceptable LOS under *Short Term No Project* conditions during at least one peak hour period.

- E. 20th Street/SR 99 SB Ramps – This signalized intersection is projected to operate at unacceptable LOS "F" during the PM peak hour period.

- E. 20th Street/SR 99 NB Ramps – This signalized intersection is projected to operate at unacceptable LOS "F" during the PM peak hour period, and LOS "E" during the Saturday peak hour period.

- E. 20th Street/Chico Mall Access – This signalized intersection is projected to operate at unacceptable LOS "F" during the PM and Saturday peak hour periods.

- E. 20th Street/Forest Avenue – This signalized intersection is projected to operate at unacceptable LOS "F" during the PM and Saturday peak hour periods.

- Forest Avenue/Talbert-Wittmeier Drive – This unsignalized intersection is projected to operate at unacceptable LOS "F" during the PM and Saturday peak hour periods.

- Skyway/Notre Dame Boulevard – This signalized intersection is projected to operate at unacceptable LOS "E" during the PM peak hour.

The following private intersections are projected to operate at poor levels of service for *Short Term No Project* conditions. Since there is no LOS threshold for these private intersections, potential mitigation will be described later to address any potential vehicle conflict and safety issues (see **Impact 4.2.2**).

- Business Lane/Chico Mall Access – This private unsignalized intersection is projected to operate at LOS "D" during the PM peak hour period, and LOS "F" during the Saturday peak hour period.

- Business Lane/Wal-Mart East Driveway – This private unsignalized intersection is projected to operate at LOS "F" during the PM and Saturday peak hour periods.

None of the unsignalized intersections identified above meet Caltrans Peak Hour Volume Warrant-3 (Urban Areas) indicating that the peak hour volumes of minor-street vehicles are not large enough to warrant installation of a traffic signal at these locations.

Freeway Mainline Segments

Short Term No Project peak hour mainline operations were evaluated utilizing the existing peak hour traffic volumes shown on **Figure 4.2-2**. **Table 4.2-10** summarizes *Short Term No Project* conditions SR 99 freeway mainline operations.

TABLE 4.2-10
SHORT TERM NO PROJECT CONDITIONS: SR 99 MAINLINE LEVELS-OF-SERVICE

Freeway Mainline Segment	No. Lanes	Target LOS	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
			Volume	Density (pc/mi/ln)	LOS	Volume	Density (pc/mi/ln)	LOS	Volume	Density (pc/mi/ln)	LOS
SR 99 NB, north of Skyway I/C	2	E	2,256	20.2	C	3,263	30.3	D	2,455	22.0	C
SR 99 SB, north of Skyway I/C	2	E	2,897	26.2	D	2,613	23.5	C	1,926	17.3	B
SR 99 NB, north of 20th Street I/C	2	E	2,673	24.0	C	3,927	42.2	E	2,889	26.1	D
SR 99 SB, north of 20th Street I/C	2	E	2,988	27.1	D	2,780	25.0	C	2,019	18.1	C

Source: Omni Means
Notes: pc/mi/ln = Passenger Cars per Mile per Lane

As shown in **Table 4.2-10**, all four mainline segments are projected to operate at acceptable LOS (LOS "E" or better) during AM, PM and Saturday peak hour periods under *Short Term No Project* conditions.

Freeway Ramp Junctions

Short Term No Project peak hour ramp operations were evaluated utilizing the *Short Term No Project* peak hour traffic volumes shown on **Figure 4.2-7**. **Table 4.2-11** presents the *Short Term No Project* conditions' ramp merge/diverge peak hour LOS at the three study interchange locations in the vicinity of the study area.

TABLE 4.2-11
SHORT TERM NO PROJECT CONDITIONS: SR 99 RAMP JUNCTION LEVELS-OF-SERVICE

SR 99 & Skyway Interchange	Junction Type	Target LOS	AM Peak Hour		PM Peak Hour		Saturday Peak Hour	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
SR 99 NB Direct On-Ramp	Merge	E	20.7	C	27.1	C	28.5	D
SR 99 NB Loop On-Ramp	Merge	E	12.0	B	18.9	B	13.2	B
SR 99 SB Off-Ramp	Diverge	E	30.9	D	28.0	D	21.1	C
SR 99 & 20th Street Interchange	**Junction Type**	**Target LOS**	**AM Peak Hour**		**PM Peak Hour**		**Saturday Peak Hour**	
			Density (pc/mi/ln)	**LOS**	**Density (pc/mi/ln)**	**LOS**	**Density (pc/mi/ln)**	**LOS**
SR 99 NB Off-Ramp	Diverge	E	24.5	C	34.6	D	26.5	C
SR 99 NB On-Ramp	Merge	E	22.4	C	**35.6**	**F**	27.1	C
SR 99 SB Off-Ramp	Diverge	E	31.8	D	**29.7**	**F**	22.1	C
SR 99 SB On-Ramp	Merge	E	21.1	C	12.3	B	8.1	A
SR 99 & SR 32 Interchange	**Junction Type**	**Target LOS**	**AM Peak Hour**		**PM Peak Hour**		**Saturday Peak Hour**	
			Density (pc/mi/ln)	**LOS**	**Density (pc/mi/ln)**	**LOS**	**Density (pc/mi/ln)**	**LOS**
SR 99 NB Off-Ramp	Diverge	E	28.6	D	**41.2**	**F**	30.8	D
SR 99 SB On-Ramp	Merge	E	27.6	C	25.6	C	17.6	B

Source: Omni Means
Notes: *Bolded entries indicate intersections operating at Unacceptable LOS.*
pc/mi/ln = Passenger Cars per Mile per Lane

As shown in **Table 4.2-11**, all study ramp merge/diverge junctions are projected to operate at acceptable LOS (LOS "E" or better) during AM, PM and Saturday peak hour periods under *Short Term No Project* conditions, with the exception of the following ramp junctions which are projected to operate at unacceptable LOS F:

- Northbound on-ramp at the SR 99/20th Street interchange
- Southbound off-ramp at the SR 99/20th Street interchange
- Northbound off-ramp at the SR 99/SR-32 interchange

Short Term Plus Project Traffic Operations

The *Short Term Plus Project* condition is the analysis scenario in which traffic impacts associated with the proposed project (i.e., the Chico Wal-Mart Store Expansion) are investigated in comparison to the *Short Term No Project* condition scenario.

Intersections

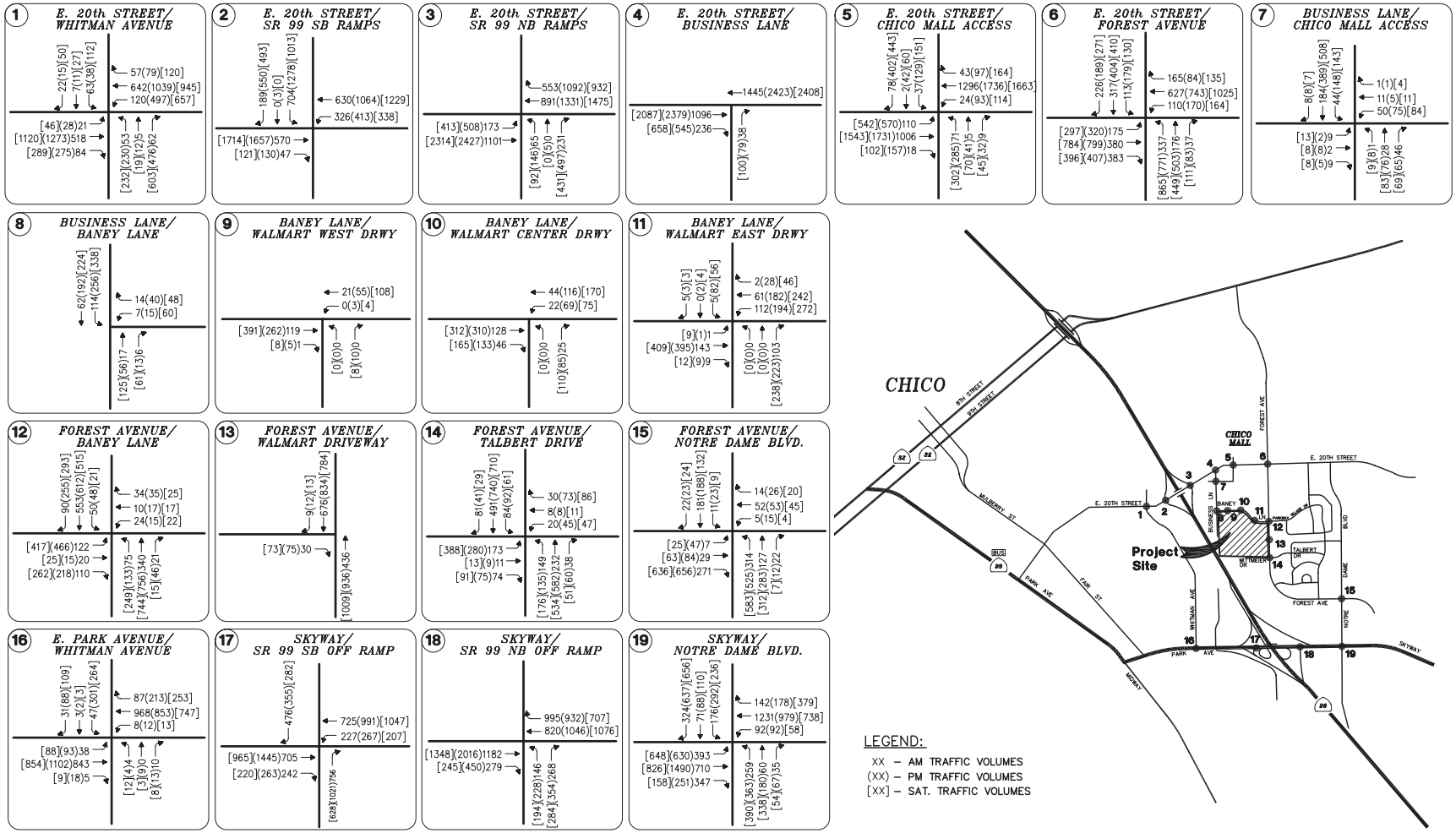
Short Term Plus Project conditions were simulated by superimposing traffic generated by the proposed project onto *Short Term No Project* intersection traffic volumes. The resulting *Short Term Plus Project* traffic volumes are illustrated on **Figure 4.2-8**. *Short Term Plus Project* peak hour intersection traffic operations were quantified utilizing the *Short Term Plus Project* peak hour

intersection traffic volumes. **Table 4.2-12** contains a summary of the resulting *Short Term Plus Project* intersection levels of service.

TABLE 4.2-12
SHORT TERM PLUS PROJECT INTERSECTION LEVELS-OF-SERVICE

#	Intersection	Control Type[1]	Target LOS	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
				Delay	LOS	Warrant Met[2]	Delay	LOS	Warrant Met[2]	Delay	LOS	Warrant Met[2]
1	E. 20th St / Whitman Ave	Signal	D	16.1	B	-	31.6	C	-	46.6	D	-
2	E. 20th St / SR 99 SB Ramps	Signal	D	23.7	C	-	**85.7**	**F**	**-**	46.2	D	-
3	E. 20th St / SR 99 NB Ramps	Signal	D	15.8	B	-	**107.1**	**F**	**-**	**67.9**	**E**	**-**
4	E. 20th St / Business Ln	TWSC	D	10.5	B	No	16.2	C	No	15.2	B	No
5	E. 20th St / Chico Mall Access	Signal	D	15.0	B	-	**133.3**	**F**	-	**140.2**	**F**	**-**
6	E. 20th St / Forest Ave	Signal	D	45.9	D	-	**192.3**	**F**	**-**	**252.3**	**F**	**-**
7	Business Ln / Chico Mall Access	TWSC	Pvt[3]	12.3	B	No	31.2	D	No	64.1	F	No
8	Baney Ln / Business Ln	TWSC	Pvt[3]	9.3	A	No	11.9	B	No	32.6	D	No
9	Baney Ln / Wal-Mart West Driveway	TWSC	Pvt[3]	9.5	A	No	10.3	B	No	11.8	B	No
10	Baney Ln / Wal-Mart Central Driveway	TWSC	Pvt[3]	9.8	A	No	11.7	B	No	12.2	C	No
11	Baney Ln / Wal-Mart East Driveway	TWSC	Pvt[3]	11.7	B	No	231.6	F	No	433.2	F	No
12	Forest Ave / Baney Ln-Parkway Village Dr	Signal	D	24.5	C	-	28.0	C	-	29.9	C	-
13	Forest Ave / Wal-Mart Driveway	TWSC	D	11.1	B	No	12.8	B	No	12.4	B	No
14	Forest Ave / Talbert Dr-Wittmeier Dr	TWSC	D	28.6	C	-	29.4	C	No	32.5	C	No
15	Forest Ave / Notre Dame Blvd	Signal	D	19.5	B	-	17.8	B	-	14.0	B	-
16	E. Park Ave-Skyway / Whitman Rd	Signal	D	8.7	A	-	24.2	C	-	22.4	C	-
17	E. Park Ave-Skyway / SR 99 SB Ramps	TWSC	D	11.1	B	-	33.1	D	-	13.4	B	-
18	E. Park Ave-Skyway / SR 99 NB Ramps	Signal	D	11.2	B	-	14.5	B	-	11.5	B	-
19	Skyway / Notre Dame Blvd	Signal	D	31.5	C	-	**65.8**	**E**	**-**	51.1	D	-

Source: Omni Means
Notes: Bolded entries indicate intersections operating as an Unacceptable LOS.
TWSC = Two-Way-Stop-Control (LOS and delay are based on LOS and delay for worst approach).
Warrant = Caltrans peak hour-volume based signal warrant.
Pvt = private roadways, driveways and/or intersections. City LOS criteria not applicable and excess delays analyzed in terms of unacceptable vehicle conflict and safety issues.



YEAR 2010 PLUS PROJECT TRAFFIC VOLUMES

N

FIGURE 4.2-8

YEAR 2010 PLUS PROJECT TRAFFIC VOLUMES

PMC

T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Figure 4.2-8.ai, June 2006

Whereas the intersection of Forest Avenue/Talbert-Wittmeier Drive was found to be operating unacceptably at LOS F under *Short Term No Project* conditions during the PM and Saturday peak periods, with the plus project roadway improvements in place, the intersection is projected to operate at LOS "C" during all three study peak periods.

Based on a comparison of "no project" vs. "plus project" intersection levels of service as presented in **Table 4.2-9** and **Table 4.2-12**, respectively, the following intersections which were found to operate unacceptably for *Short Term No Project* conditions will experience an increase in delay with the addition of project traffic as described below:

- E. 20th Street/SR 99 SB Ramps – This signalized intersection is projected to continue to operate at unacceptable LOS "F" during the PM peak hour period. The proposed expansion would increase the intersection delay by 5.4 seconds during the PM peak hour.

- E. 20th Street/SR 99 NB Ramps – This signalized intersection is projected to continue to operate at unacceptable LOS "F" during the PM peak hour, and unacceptable LOS "E" during the Saturday peak hour periods. The proposed expansion would increase the intersection delay by 6.6 and 6.0 seconds during the PM and Saturday peak hour periods, respectively.

- E. 20th Street/Chico Mall Access – This signalized intersection is projected to continue to operate at unacceptable LOS "F" during the PM and Saturday peak hour periods, with negligible increases in delay following the proposed expansion.

- E. 20th Street/Forest Avenue – This signalized intersection is projected to continue to operate at unacceptable LOS "F" during the PM and Saturday peak hour periods. The proposed expansion would increase the intersection delay by 57.8 seconds during the PM peak hour period and 91.1 seconds during the Saturday peak hour period.

- Skyway/Notre Dame Boulevard – This signalized intersection is projected to continue to operate at unacceptable LOS "E" during the PM peak hour, with the addition of project traffic increasing the intersection delay by 7.3 seconds.

The following private intersections are projected to operate at poor levels of service for *Short Term Plus Project* conditions. There is no LOS threshold for private intersections, however potential mitigation is included to address any potential vehicle conflict and safety issues.

- Business Lane/Chico Mall Access – This private unsignalized intersection is projected to continue to operate at LOS "D" during the PM peak hour and LOS "E" during the Saturday peak hour. The proposed expansion would increase the intersection delay by less than 2 seconds during the PM and Saturday peak hour periods.

- Business Lane/Baney Lane – This private unsignalized intersection is projected to continue to operate at LOS "D" during the Saturday peak hour period.

- Business Lane/Wal-Mart East Driveway – This private unsignalized intersection is projected to continue operating at LOS "F" during the PM and Saturday peak hour periods, with increases in delays exceeding 100 seconds.

Freeway Mainline Segments

Short Term Plus Project peak hour mainline operations were evaluated utilizing the peak hour traffic volumes shown on **Figure 4.2-9.** **Table 4.2-13** summarizes *Short Term Plus Project* conditions' SR 99 freeway mainline operations at the two interchange locations in the vicinity of the study area.

TABLE 4.2-13
SHORT TERM PLUS PROJECT CONDITIONS: SR 99 MAINLINE LEVELS-OF-SERVICE

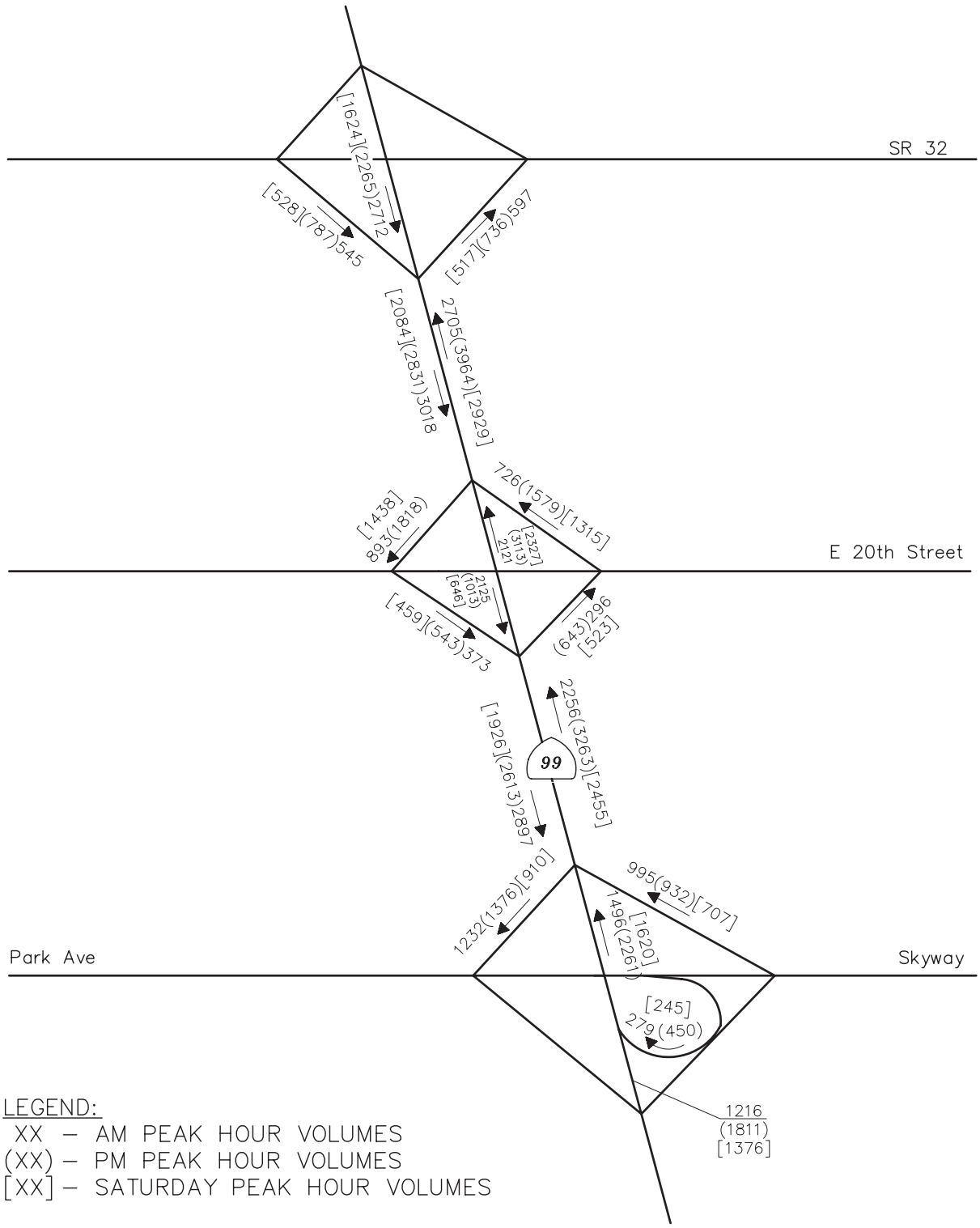
Freeway Mainline Segment	No. Lanes	Target LOS	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
			Volume	Density (pc/mi/ln)	LOS	Volume	Density (pc/mi/ln)	LOS	Volume	Density (pc/mi/ln)	LOS
SR 99 NB, north of Skyway I/C	2	E	2,256	20.2	C	3,263	30.3	D	2,455	22.0	C
SR 99 SB, north of Skyway I/C	2	E	2,897	26.2	C	2,613	23.5	C	1,926	17.3	B
SR 99 NB, north of 20th Street I/C	2	E	2,705	24.3	C	3,964	43.2	E	2,929	26.5	D
SR 99 SB, north of 20th Street I/C	2	E	3,018	27.4	D	2,831	26.5	C	2,084	18.7	C

Source: Omni Means
Notes: pc/mi/ln = Passenger Cars per Mile per Lane

As shown in **Table 4.2-13**, all four mainline segments are projected to operate at acceptable LOS (LOS "E" or better) during AM, PM and Saturday peak hour periods under *Short Term Plus Project* conditions.

Freeway Ramp Junctions

Short Term Plus Project peak hour ramp operations were evaluated utilizing the peak hour traffic volumes shown on **Figure 4.2-9**. **Table 4.2-14** presents the *Short Term Plus Project* conditions' ramp merge/diverge peak hour LOS at the three study interchange locations in the vicinity of the study area.



T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Figure 4.2-9.ai, April 2006

N

FIGURE 4.2-9

YEAR 2010 PLUS PROJECT FREEWAY MAINLINE AND RAMP VOLUMES

PMC

TABLE 4.2-14
SHORT TERM PLUS PROJECT CONDITIONS: SR 99 RAMP JUNCTION LEVELS-OF-SERVICE

SR 99 & Skyway Interchange	Junction Type	Target LOS	AM Peak Hour		PM Peak Hour		Saturday Peak Hour	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
SR 99 NB Direct On-Ramp	Merge	E	20.7	C	27.1	C	19.4	B
SR 99 NB Loop On-Ramp	Merge	E	12.0	B	18.9	B	13.2	B
SR 99 SB Off-Ramp	Diverge	E	30.9	D	28.0	D	21.1	C
SR 99 & E. 20th Street Interchange	**Junction Type**	**Target LOS**	**AM Peak Hour**		**PM Peak Hour**		**Saturday Peak Hour**	
			Density (pc/mi/ln)	**LOS**	**Density (pc/mi/ln)**	**LOS**	**Density (pc/mi/ln)**	**LOS**
SR 99 NB Off-Ramp	Diverge	E	24.5	C	34.6	D	26.5	C
SR 99 NB On-Ramp	Merge	E	22.6	C	**35.9**	**F**	27.4	C
SR 99 SB Off-Ramp	Diverge	E	32.1	D	**30.2**	**F**	22.7	C
SR 99 SB On-Ramp	Merge	E	21.1	C	9.8	A	8.4	A
SR 99 & SR 32 Interchange	**Junction Type**	**Target LOS**	**AM Peak Hour**		**PM Peak Hour**		**Saturday Peak Hour**	
			Density (pc/mi/ln)	**LOS**	**Density (pc/mi/ln)**	**LOS**	**Density (pc/mi/ln)**	**LOS**
SR 99 NB Off-Ramp	Diverge	E	29.0	D	**41.6**	**F**	31.2	D
SR 99 SB On-Ramp	Merge	E	27.9	C	25.9	C	17.9	B

Source: Omni Means
Notes: Bolded entries indicate intersections operating at Unacceptable LOS.
pc/mi/ln = Passenger Cars per Mile per Lane

As shown in **Table 4.2-14**, all study ramp merge/diverge junctions are projected to operate at acceptable LOS (LOS "E" or better) during AM, PM and Saturday peak hour periods under *Short Term Plus Project* conditions, with the following exceptions:

- The northbound on-ramp at the SR 99/E. 20th Street interchange is projected to continue operating at unacceptable LOS "F" during the PM peak hour, with an increase in density of 0.3 passenger cars per mile per lane (pc/mi/ln).

- The southbound off-ramp at the SR 99/E. 20th Street interchange is projected to continue operating at unacceptable LOS "F" during the PM peak hour, with an increase in density of 0.5 pc/mi/ln.

- The northbound off-ramp at the SR 99/SR 32 interchange is projected to continue operating at unacceptable LOS "F" during the PM peak hour, with an increase in density of 0.4 pc/mi/ln.

PROJECT IMPACTS AND MITIGATION MEASURES

Short Term Plus Wal-Mart Project Traffic Impacts

Impact 4.2.1 Development of the proposed project would increase traffic at sufficient volume to cause LOS to decline below City and Caltrans standards. This is considered a **significant** impact.

City/Caltrans Intersections

The following intersections under the jurisdiction of either the City or Caltrans were found to operate at an undesirable level of service under *Short Term Plus Project* conditions.

- E. 20th Street/SR 99 SB Ramps: The signalized intersection would operate at unacceptable LOS "F" during the PM peak hour period under *Short Term No Project* and *Short Term Plus Project* conditions.

- E. 20th Street/SR 99 NB Ramps: The signalized intersection would operate at unacceptable LOS "F" during the PM peak hour and unacceptable LOS "E" during the Saturday peak hour period under *Short Term No Project* and *Short Term Plus Project* conditions.

- E. 20th Street/Chico Mall Access: The signalized intersection would operate at unacceptable LOS "F" during the PM and Saturday peak hour periods under *Short Term No Project* and *Short Term Plus Project* conditions.

- E. 20th Street/Forest Avenue: The signalized intersection would operate at unacceptable LOS "F" during the PM and Saturday peak hour periods under *Short Term No Project* and *Short Term Plus Project* conditions.

- Skyway/Notre Dame Boulevard: The signalized intersection would operate at unacceptable LOS "E" during the PM peak period under *Short Term No Project* and *Short Term Plus Project* conditions.

- Forest Avenue/Talbert-Wittmeier Drive: This unsignalized intersection would operate unacceptably at LOS "F" during the PM and Saturday peak hour periods under *Short Term No Project* conditions. The intersection would operate at unacceptable LOS until the signalization improvements associated with the proposed Wal-Mart expansion development are implemented. The intersection does not meet Caltrans peak hour volume signal warrant criteria for *Short Term No Project* conditions, and as no other improvements to the intersection would improve the levels of service, no further improvements are recommended under *Short Term No Project* or *Short Term Plus Project* conditions at this intersection.

Private Intersections

The following private intersections (all of which are unsignalized) are projected to operate at a poor level of service under *Short Term Plus Project* conditions. Since there is no LOS threshold for private intersections, potential mitigation is described to address any potential vehicle conflict and safety issues.

- Business Lane/Chico Mall Access: This unsignalized intersection is projected to operate at LOS "D" and LOS "F" during the PM and Saturday peak hour periods, respectively, based on the delay along the worst approach (westbound Chico Mall Access). The eastbound gas station driveway is also projected to operate at LOS "D" during the Saturday peak hour period. The high delays along the westbound and eastbound approaches is a circulation issue, and it is

anticipated that drivers familiar with the area would seek alternative ingress and egress routes if undesirable queues are observed.

- Baney Lane/Wal-Mart East Driveway: This unsignalized intersection would operate at LOS "F" during the PM and Saturday peak hour periods based on the delay along the worst approach (southbound driveway) under *Short Term Plus Project* conditions. Poor LOS and long queuing would be experienced only by southbound vehicles within the driveway exiting the gas station in the northwest quadrant of the Forest Avenue/Baney Lane intersection. Restricting the outbound left-turns along the southbound approach would improve levels of service. However, according to the Traffic Impact Study completed for this project, City staff has indicated that this improvement would not be feasible.

  The intersection would meet Caltrans peak hour signal warrant criteria during the Saturday peak hour period. However, it is recognized that this location is undesirable for a signal since it is only ±350 feet from the Forest Avenue/Baney Lane traffic signal. Per information provided by City staff, the vacant property adjacent to the gas station is planned to be developed as a retail development, and access to the adjacent development will almost certainly be provided to both Forest Avenue and Baney Lane.

- Business Lane/Baney Lane: This unsignalized intersection is projected to operate at LOS "D" during the Saturday peak hour period based on the delay along the westbound Baney Lane approach under *Short Term Plus Project* conditions.

Ramp Junctions

The following ramp junctions were found to operate at an unacceptable level of service under *Short Term Plus Project* conditions.

- SR 99/E. 20th Street Interchange - Southbound Off-Ramp: The southbound off-ramp at the SR 99/20th Street interchange would operate at unacceptable LOS "F" during the PM peak hour under *Short Term Plus Project* conditions. The poor level of service is due to the high volume of traffic utilizing the on-ramp.

- SR 99/E. 20th Street Interchange - Northbound On-Ramp: The northbound on-ramp at the SR 99/20th Street interchange would operate at unacceptable LOS "F" during the PM peak hour under *Short Term Plus Project* conditions. The poor level of service is due to the high volume of traffic utilizing the off-ramp to access Chico Mall and other retail land uses along 20th Street.

Mitigation Measures

MM 4.2.1 The developer shall construct the following improvements and be reimbursed or pay the Nexus Fee as follows:

Intersection/Roadway	Improvements	Proposed Project Fair Share Cost	
		Wal-Mart Only	Gas Station and Restaurant
City/Caltrans Intersections			
E. 20th Street/SR 99 Southbound Ramps[2]	Provide a westbound to southbound loop-on ramp.	Nexus Fee	Nexus Fee
E. 20th Street/SR 99 Northbound Ramps[2]	Re-stripe the northbound approach to include one shared through-left lane and two exclusive right turn lanes.	Nexus Fee	Nexus Fee
	Provide a channelized free right turn along the westbound approach. Note that this improvement is identified to be in place for year 2018 conditions within the Nexus study.	Nexus Fee	Nexus Fee
E. 20th Street/Forest Avenue[1]	Provide an additional left-turn lane along the northbound Forest Avenue approach.	Nexus Fee	Nexus Fee
	Provide an exclusive right-turn lane along the southbound Forest Avenue approach with overlap phasing for the right turn and restrict the eastbound to westbound U-turns along E. 20th Street.	Nexus Fee	Nexus Fee
	Provide a third through lane and an exclusive right-turn lane along the eastbound 20th Street approach. This improvement requires widening the downstream receiving lanes to accommodate the third through lane.	Nexus Fee	Nexus Fee
	Provide a third westbound through lane along the 20th Street. This improvement requires widening the downstream receiving lanes to accommodate the third through lane.	Nexus Fee	Nexus Fee
Skyway/Notre Dame Boulevard[2]	Provision of an additional (2nd) right-turn lane along the southbound Notre Dame Boulevard.	Nexus Fee	Nexus Fee
Ramp Junctions			
SR 99/E. 20th Street Interchange – Northbound On-Ramp[2]	Provide an eastbound to northbound loop-on ramp.	Nexus Fee	Nexus Fee
SR 99/E. 20th Street Interchange – Southbound Off-Ramp[2]	Provision of a 2-lane southbound off-ramp (two lanes exiting off the freeway).	Nexus Fee	Nexus Fee
SR 99/ SR-32 Northbound Off-Ramp	Provision of an additional through (third) lane on the mainline.	Nexus Fee	Nexus Fee

Notes: 1) The City's Nexus Fee includes $1.14M for this intersection to "Reconfigure and add lanes." The City does not consider the lane improvement economically infeasible. Since these improvements are required under short term conditions, the project should be conditioned to construct these improvements with reimbursements arrangements with the City as appropriate since this project is part of the City's Nexus Fee.

2) This project is part of the Nexus Fee. The project's contribution of the nexus fees will address the project's impacts to this intersection.

Timing/Implementation: *Prior to Final Map Approval.*

Enforcement/Monitoring: *City of Chico Planning Division and Engineering Division.*

Implementation of mitigation measure **MM 4.2.1** would reduce traffic impacts on the roadway systems listed above to an acceptable LOS and upon completion of the improvements, the proposed project would have a less than significant traffic impact under short-term conditions. There is a gap in timing between the planned opening of the store and the completion of the SR 99 ramp improvements. The improvements to the SR 99 ramps are included within the needed improvements identified in the *State Route 99 – Chico Corridor Study (Nexus Study)*, and the city is collecting fair share contributions for these improvements as part of the Nexus Fee program. However, Caltrans will determine when these ramp improvements will be constructed, as they are state, not City, facilities. Caltrans will rely upon state (and possibly federal) funding for a portion of the construction costs. When and if these funding sources will be programmed and allocated and construction will be scheduled, is not presently known, at least under near-term conditions. Therefore, this impact is considered to be **significant and unavoidable** in the short-term.

Project Site Safety

Impact 4.2.2 Inadequate project site circulation and design has the potential to cause vehicle conflicts and public safety issues. This is a **potentially significant** impact.

Inadequate project circulation and design has the potential to create vehicle conflicts because of limited sight distances for left-turns from existing Wal-Mart driveways on existing roadways and close intersection spacing between existing Wal-Mart driveways and the Forest Avenue/Baney Land intersection. Pedestrian traffic crossing the Forest Avenue/Wittmeier Drive intersection may encounter a potential public safety issue because of inadequate crosswalk lighting.

Project Site Access

The project would utilize all of the existing driveways on Baney Lane, Business Lane and Forest Avenue, as well as two new additional driveways to the south onto Wittmeier Drive as part of the expansion. At present, all of the access points are full access intersections permitting left-turns in and out of the project site, with the exception of the right-in/right-out driveway along Forest Avenue. The main project access to the existing Wal-Mart store is currently provided via the signalized intersection of Forest Avenue/Baney Lane, with traffic traveling to/from the existing Wal-Mart driveways via Baney Lane.

To reduce project traffic along Business Lane, the project site plan proposes that driveways along Baney Lane be reconstructed with right-turn channelization to prohibit outbound left-turns and force outbound traffic towards Forest Avenue. Given this, the only possible route that would be available for the outbound Wal-Mart customers/employees who would like to access development along Business Lane would be a circuitous route via Forest Avenue, E 20th Street and Chico Mall access. As described previously, the provision of channelization at the Baney Lane/Wal-Mart West Driveway to prohibit outbound left turns is assumed within the traffic analysis to correspond with the proposed project site plan. However, following discussions with City of Chico staff, it is recommended that outbound left turns be permitted at this driveway to provide a limited opportunity for vehicles departing from the Wal-Mart site to access developments along Business Lane. A review of the proposed project site plan shows that there is adequate internal circulation to allow vehicles to access the westernmost driveway from the main parking lot. Given that this driveway is located away from the main parking area, and thus experiences minimal traffic volumes, the net effect is that while some opportunity is provided to make an outbound left turn toward Business Lane, the actual number of left turns will be minimal and negligible.

Due to the potential sight distance issues for the outbound left turn vehicles with the westbound Baney Lane traffic at the Baney Lane/Wal-Mart Central Driveway, and the close intersection spacing between the Baney Lane/Wal-Mart East Driveway and Forest Avenue/Baney Lane intersection, it is

recommended that the outbound left turns be physically prohibited through construction of channelizations as shown in the site plan at these two driveways.

It is recommended that vehicular movements along the back alley to/from the Baney Lane/Business Lane intersection be restricted to southbound through movements (which was assumed as part of the traffic analysis) in order to decrease potential vehicle conflicts. This will result in the removal of potential two way travel conflicts between delivery truck and passenger vehicles on a narrow roadway as well as decrease potential pedestrian/vehicle conflicts at the footpath crossing of the roadway. To accommodate this restriction, it is recommended that a sign be placed near the south end of the alley stating "WAL-MART TRUCK TRAFFIC ONLY – NO THROUGH VEHICLES". Whereas traffic from the existing Wal-Mart store can currently exit out via the back alley and Business Lane, implementation of this recommendation would result in the prohibition of northbound movements along the back alley continuing on to Business Lane.

Access to the out parcel along Forest Avenue (site of future gas station/restaurant) is assumed to be via an additional right-in/right-out only driveway along Forest Lane, a driveway along Wittmeier Drive (planned as part of the Wal-Mart expansion), and additional cross access locations to/from the Wal-Mart parking lot.

Project On-Site Circulation

As the site plan shows, a major component of the on-site circulation system consists of one-way drive aisles located to the east of the proposed store striped for diagonal parking.

As noted within the Project Site Access section, Business Lane and Wittmeier Drive will provide access to the truck docking facilities located along the rear of the store. The primary truck route for the store is via the Baney Lane/Business Lane intersection with trucks continuing south along the back alley to access the truck bays located near the southwestern portion of the store. When departing from the store, it is assumed the trucks will exit primarily via Wittmeier Drive, although departure would be possible via the alley.

The overall layout of the site provides satisfactory vehicle circulation throughout the project site. The project site plan also provides for a pedestrian system of sidewalks and crosswalks which will channel pedestrians arriving from the new sidewalk/crosswalk system along Forest Avenue to the new store. No additional recommendations are suggested.

Project Truck Traffic

The existing Wal-Mart store currently averages 61 deliveries per week, 31 of which are via large 18-wheelers. It is anticipated that the proposed Wal-Mart Supercenter will have an average of 85 deliveries per week, 24 more than the existing store. Of these, it is anticipated that 39 will be large 18-wheelers, which is 8 more than the existing store. As described above, a review of the project site plan shows that the overall layout of the site provides satisfactory truck access and circulation throughout the site. The existing truck route/fire lane behind the existing store would remain, but it would be extended. A truck turnaround approximately 130 feet in diameter would be designated at the end of the truck route extension, in the southwestern portion of the project site. No additional changes are necessary for the truck/fire lane.

Project Roadway Improvements

The project circulation improvements that will be constructed before the opening of the expanded Wal-Mart Superstore include the following:

The intersection of Forest Avenue/Wittmeier Drive will be redesigned to accommodate a traffic signal and additional turn lanes. As noted within the 95th Percentile Queue Lengths section, it is also recommended that existing turning lanes on Forest Avenue be lengthened to accommodate longer future queues. It is also recommended that push buttons be provided to facilitate pedestrian access to/from the site at the intersection.

Baney Lane

The existing striping on Baney Lane as it approaches Forest Avenue is faded. Therefore, it is recommended that the striping be enhanced on Baney Lane as part of the expansion. Although Baney Lane is a private street, the road operates as a minor arterial, the City will require that this private roadway be improved to City standards as part of the project (i.e. roadway stripping as well as queuing standards which are discussed under *Cumulative Plus Project Conditions*).

Mitigation Measures

MM 4.2.2 The following measures shall be implemented as part of project design and be fully implemented and funded by the project developer:

Location	Improvements
Project Site Access	Outbound left turns shall be physically prohibited through construction of channelizations as shown in the site plan for the Baney Lane/Wal-Mart Central Driveway and the Baney Lane/Wal-Mart East Driveway in order to reduce potential traffic related conflicts. (Outbound left turns at the Baney Lane/Wal-Mart West Driveway will be allowed).
	Restrict vehicular movements along the back alley to/from the Baney Lane/Business Lane intersection to southbound through movements only. To accommodate this restriction, a sign shall be placed near the south end of the alley stating "WAL-MART TRUCK TRAFFIC ONLY – NO THROUGH VEHICLES".
	Develop and implement of a Traffic Management Plan, in accordance with General Plan Policy T-G-9, which would potentially include (1) adjusting the shifts of employees to non-peak periods, (2) providing directional signage to shift traffic towards other access points, (3) providing on-site personnel during peak holiday seasons to physically direct traffic, (4) provide for transit pass subsidies, (5) provide preferential carpool/vanpool parking, (6) develop an employee ridesharing database, (7) provide for safe and secure bicycle parking, (provide shower and locker facilities for employees, (8) provide on-site information on transit routes, bicycle routes and ridesharing, and (9) flexible work schedules.
Project Roadway Improvements	Push buttons shall be provided to facilitate pedestrian access to/from the site at the intersection of Forest Avenue/Wittmeier Drive.
	Baney Lane shall be improved to City standards for a minor arterial, which will include restriping.

Timing/Implementation: *Prior to issuance of certificate of occupancy.*

Enforcement/Monitoring: *City of Chico Planning Division and Engineering Division.*

Implementation of mitigation measure MM 4.2.2 would reduce all site safety impacts to **less than significant**.

4.2.5 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

CUMULATIVE CONDITIONS

Cumulative conditions refer to analysis scenarios which would exist following assumed build out of the local General Plan, and thus also includes the development of approved/pending projects as identified under Short Term conditions. For purposes of this study, City of Chico staff has directed that Cumulative conditions be taken as year 2018 and be analyzed using 2018 traffic volumes provided by the City (Nexus Study). The *Cumulative No Project* condition investigates traffic operations following completion of all approved and pending projects, see **Section 3.0**, **Table 3.1** for pending projects, (as well as other regional growth and background growth), but excluding development of the proposed project. The *Cumulative Plus Project* condition is the analysis scenario in which traffic impacts associated with the proposed project (i.e., the Wal-Mart Expansion project) are investigated in comparison to the *Cumulative No Project* condition scenario. Wal-Mart Expansion project volumes as established using trip generation and distribution methodologies provided for within this analysis were added to *Cumulative No Project* volumes to establish *Cumulative Plus Project* volumes. Cumulative conditions assume that programmed or planned improvements will be completed, including potentially some project related improvements.

Planned/Programmed Improvements

The "*City of Chico, 2005-06 Update of Development Impact Fees, Analysis and Recommendations (Nexus Study) October 2005, Final Report"* included the following list of improvements for facilities analyzed within this study. The City of Chico has directed that these improvements be assumed to be in place for cumulative conditions.

- Auxiliary Lanes will be provided in both directions on SR 99 between Skyway and East 20th Street interchanges
- Auxiliary Lanes will be provided in both directions on SR 99 between East 20th Street and SR 32 interchanges
- SR 99/20th Street Northbound Ramp intersection – (1) Provide eastbound to northbound on-ramp loop, (2) Provide westbound free right with ramp improvements, (3) Provide an additional westbound through lane
- SR 99/20th Street Southbound Ramp intersection – (1) Provide westbound to southbound on-ramp loop, (2) Provide eastbound free right with ramp improvements, (3) Provide an additional eastbound through lane
- SR 99/Skyway Southbound Ramp intersection – (1) Eliminate the existing southbound off-ramp loop, (2) Provide westbound to southbound on-ramp loop, (3) Provide two lefts and a shared through-right lanes at the southbound approach, (4) Provide four through lanes through the intersection, (5) Provide a signal at the intersection of Skyway/SR 99 SB Ramps

No other improvements are assumed to be in place for cumulative conditions. **Figure 4.2-10** shows the baseline lane geometrics and control assumed for cumulative conditions.

Traffic Volumes

The City of Chico provided volume sets for all three peak hour periods for Cumulative conditions. As with Short Term conditions, volumes associated with the Wal-Mart Expansion were included within the Cumulative 2018 volumes the City provided. As with Short Term conditions, trip generation as

assumed within the Nexus Study, and trip generation as assumed within this traffic study, are different. Whereas the Nexus Study assumed more generalized macro level trip generation and distribution assumptions for the Wal-Mart Expansion project, this traffic study requires a more detailed and refined approach (i.e. specialized trip generation, detailed trip assignments at project driveways and nearby roadways, pass-by and diverted trips adjustments, and diverted trips to/from SR 99). For purposes of this traffic analysis, it is necessary to back out the specific traffic volumes within the raw volumes associated with the Wal-Mart Expansion project (as established within the Nexus Study) for no project conditions, and add them back in (as established for this traffic study) for plus project conditions. In the course of performing the traffic analysis, when Wal-Mart Expansion volumes as provided by the City for year 2018 conditions were backed out, it was noted that the resulting volume sets were not consistent with 2010 volumes established in the previous section of the report at some locations (i.e. resulting 2018 volumes were less than 2010 volumes). Therefore, for purposes of this analysis, at locations where resulting volumes were noted to be inconsistent with 2010 volumes, these volumes were not backed out. These procedures were reviewed and approved by City staff. **Figure 4.2-11** shows the projected Cumulative Base (*Cumulative No Project)* traffic volumes.

Cumulative No Project Traffic Operations

Cumulative No Project conditions establishes a baseline cumulative condition scenario in which the proposed Chico Wal-Mart Store Expansion is assumed not to occur and no further development occurs on the site through year 2018, and year 2018 model land uses are assumed elsewhere.

Intersections

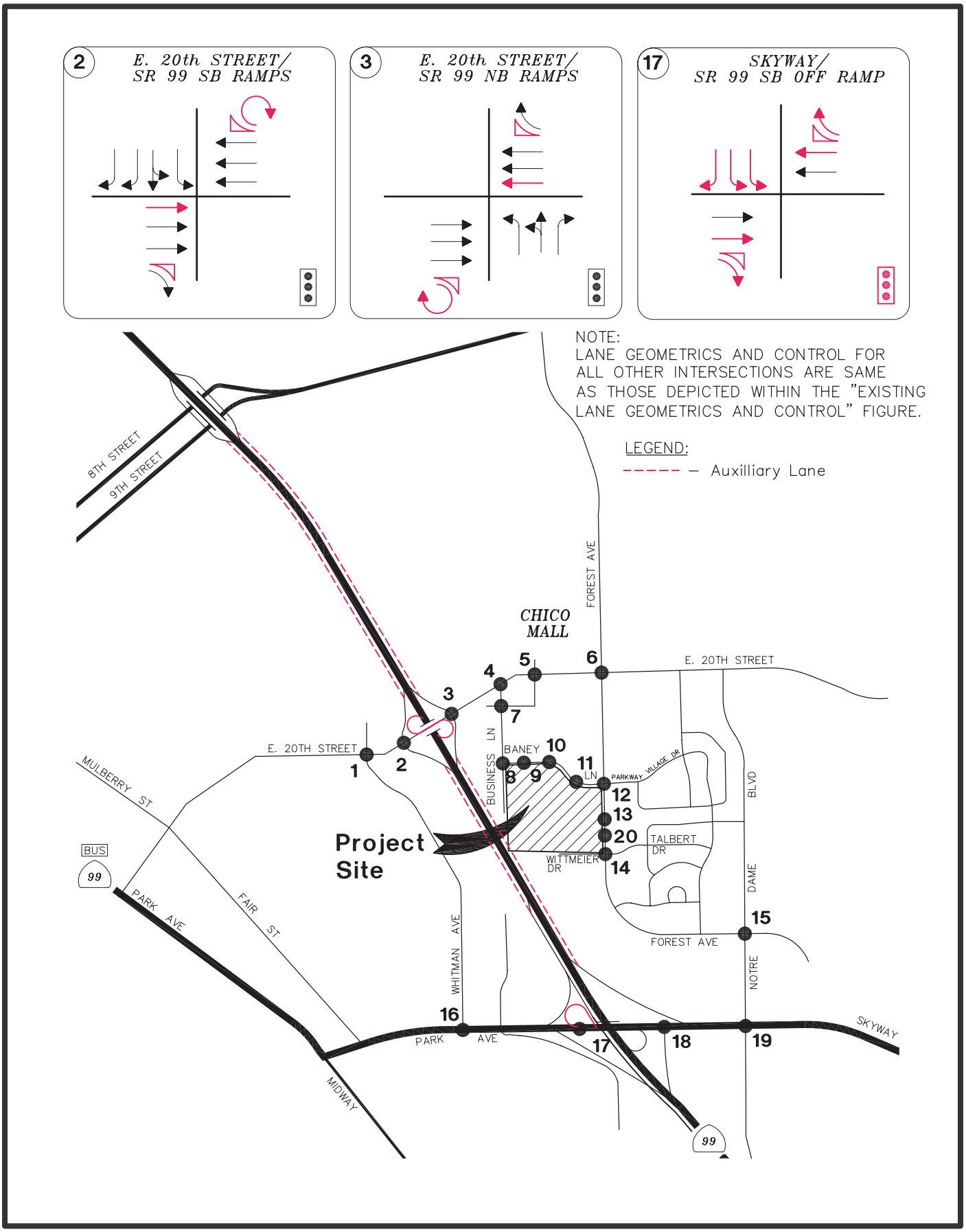
Cumulative No Project AM, PM, and Saturday peak hour intersection traffic operations were quantified utilizing the *Cumulative No Project* peak hour intersection traffic volumes (shown on **Figure 4.2-11**). **Table 4.2-15** contains a summary of the resulting *Cumulative No Project* intersection levels of service.

TABLE 4.2-15
CUMULATIVE NO PROJECT CONDITIONS INTERSECTION LEVELS-OF-SERVICE

#	Intersection	Control Type[1]	Target LOS	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
				Delay	LOS	Warrant Met[2]	Delay	LOS	Warrant Met[2]	Delay	LOS	Warrant Met[2]
1	E. 20th St / Whitman Ave	Signal	D	15.4	B	-	51.3	D	-	**80.2**	**F**	-
2	E. 20th St / SR 99 SB Ramps	Signal	D	19.6	B	-	41.5	D	-	24.2	C	-
3	E. 20th St / SR 99 NB Ramps	Signal	D	20.1	C	-	**106.3**	**F**	**-**	**66.4**	**E**	**-**
4	E. 20th St / Business Ln	TWSC	D	11.7	B	No	25.3	D	No	23.7	C	No
5	E. 20th St / Chico Mall Access	Signal	D	22.7	C	-	**285.2**	**F**	**-**	**274.7**	**F**	**-**
6	E. 20th St / Forest Ave	Signal	D	53.1	D	-	**247.1**	**F**	**-**	**259.4**	**F**	**-**
7	Business Ln / Chico Mall Access	TWSC	Pvt[3]	12.7	B	No	38.2	E	No	113.4	F	No
8	Baney Ln / Business Ln	TWSC	Pvt[3]	9.1	A	No	11.5	B	No	71.8	F	Yes

#	Intersection	Control Type[1]	Target LOS	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
				Delay	LOS	Warrant Met[2]	Delay	LOS	Warrant Met[2]	Delay	LOS	Warrant Met[2]
9	Baney Ln / Wal-Mart West Driveway	TWSC	Pvt[3]	9.7	A	No	11.2	B	No	13.8	B	No
10	Baney Ln / Wal-Mart Central Driveway	TWSC	Pvt[3]	9.9	A	No	14.1	B	No	19.8	C	No
11	Baney Ln / Wal-Mart East Driveway	TWSC	Pvt[3]	11.6	B	No	169.2	F	No	744.9	F	Yes
12	Forest Ave / Baney Ln-Parkway Village Dr	Signal	D	24.2	C	-	28.1	C	-	31.8	C	-
13	Forest Ave / Wal-Mart Driveway	TWSC	D	11.0	B	No	12.8	B	No	11.9	B	No
14	Forest Ave / Talbert Dr-Wittmeier Dr	TWSC	D	33.9	D	-	**268.6**	**F**	**No**	**168.4**	**F**	**Yes**
15	Forest Ave / Notre Dame Blvd	Signal	D	20.4	C	-	20.0	B	-	15.6	B	-
16	E. Park Ave-Skyway / Whitman Rd	Signal	D	9.2	A	-	28.8	C	-	25.3	C	-
17	E. Park Ave-Skyway / SR 99 SB Ramps	TWSC	D	20.5	C	-	30.6	C	-	18.3	B	-
18	E. Park Ave-Skyway / SR 99 NB Ramps	Signal	D	11.6	B	-	19.2	B	-	12.9	A	-
19	Skyway / Notre Dame Blvd	Signal	D	36.0	D	-	**97.5**	**F**	**-**	**63.6**	**E**	**-**

Source: Omni Means
Notes: Bolded entries indicate intersections operating as an Unacceptable LOS.
TWSC = Two-Way-Stop-Control (LOS and delay are based on LOS and delay for worst approach).
Warrant = Caltrans peak hour-volume based signal warrant.
Pvt = private roadways, driveways and/or intersections. City LOS criteria not applicable and excess delays analyzed in terms of unacceptable vehicle conflict and safety issues.

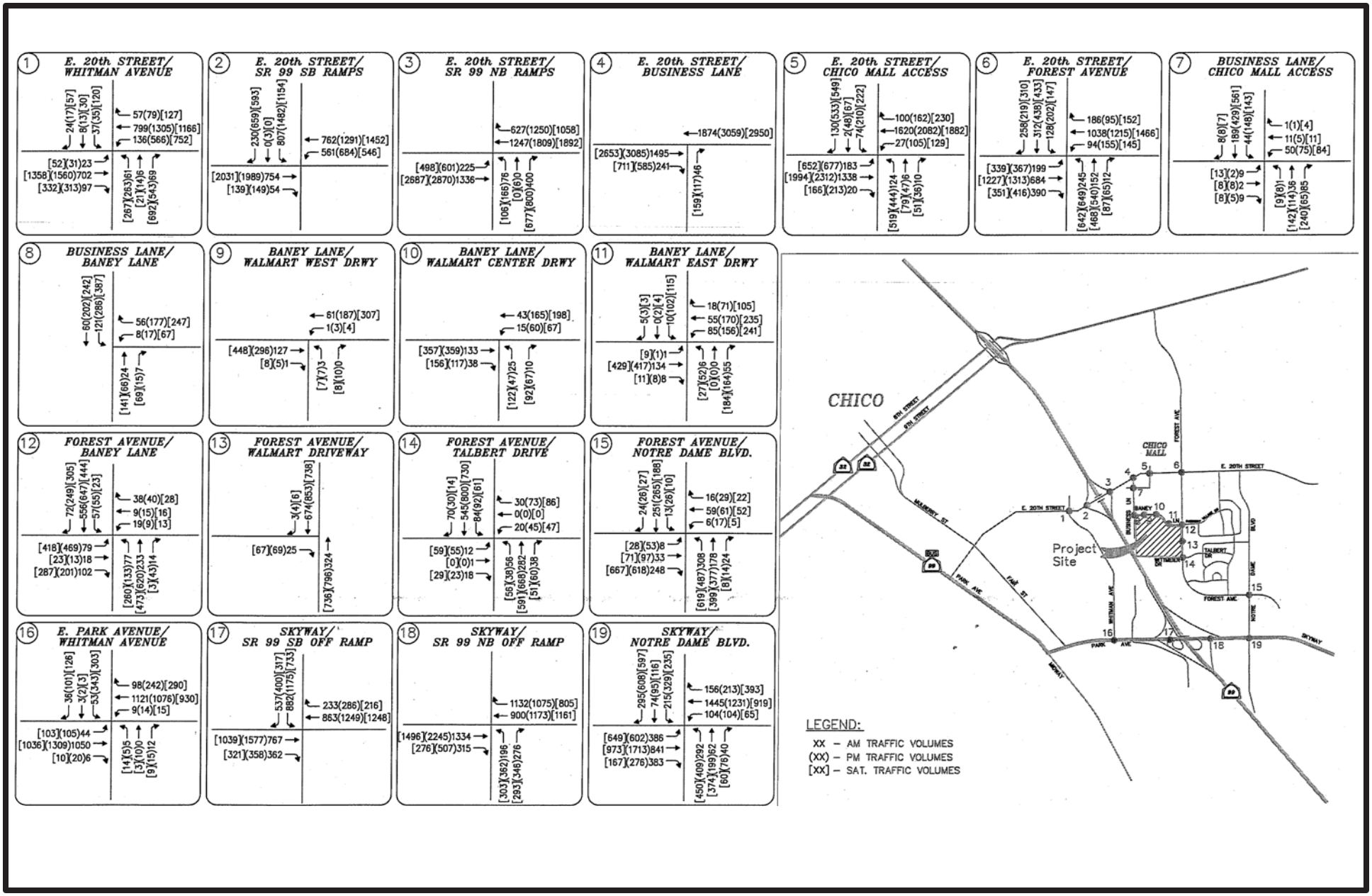


N

FIGURE 4.2-10
YEAR 2018 LANE GEOMETRICS AND CONTROL

PMC

T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Figure 4.2-10.ai, April 2006



T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Figure 4.2-11.ai, June 2006

N

FIGURE 4.2-11

YEAR 2018 NO PROJECT TRAFFIC VOLUMES

PMC

The intersection of E 20th Street/SR 99 SB Ramps is projected to operate at acceptable LOS "D" or better with the cumulative lane geometrics in place. However, the intersection of E 20th Street/SR 99 NB Ramps would operate at unacceptable LOS "F" during the PM peak hour even with the cumulative lane geometrics in place.

As shown in **Table 4.2-15**, the following are projected to operate at unacceptable LOS at least during one peak hour period under *Cumulative No Project* conditions:

- E. 20th Street/Whitman Avenue
- E. 20th Street/NB SR 99 Ramps
- E. 20th Street/Chico Mall Access
- E. 20th Street/Forest Avenue
- Skyway/Notre Dame Boulevard

As shown in **Table 4.2-15**, the following is projected to operate at unacceptable LOS at least during one peak hour period under *Cumulative No Project* conditions:

- Forest Avenue/Wittmeier Drive (projected to meet the warrant criteria during the Saturday peak hour period)

The following are projected to operate at poor levels of service for *Cumulative No Project* conditions. Since there is no LOS threshold for private intersections, potential mitigation will be described later to address any potential vehicle conflict and safety issues.

- Business Lane/Chico Mall Access
- Business Lane/Baney Lane (projected to meet the signal warrant criteria during the Saturday peak hour period)
- Baney Lane/Wal-Mart East Driveway (projected to meet the signal warrant criteria during the Saturday peak hour period)

Freeway Mainline Segments

Cumulative No Project peak hour mainline operations were evaluated utilizing the *Cumulative No Project* peak hour traffic volumes shown on **Figure 4.2-12**. **Table 4.2-16** summarizes *Cumulative No Project* conditions' SR 99 freeway mainline operations at the two interchange locations in the vicinity of the study area.

TABLE 4.2-16
CUMULATIVE NO PROJECT CONDITIONS: SR 99 MAINLINE LEVELS-OF-SERVICE

Freeway Mainline Segment	No. Lanes	Target LOS	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
			Volume	Density (pc/mi/ln)	LOS	Volume	Density (pc/mi/ln)	LOS	Volume	Density (pc/mi/ln)	LOS
SR 99 NB, north of Skyway I/C	2	E	2,860	17.1	B	4,287	25.8	C	3,273	19.6	C
SR 99 SB, north of Skyway I/C	2	E	3,766	22.5	C	3,458	20.7	C	2,606	15.6	B
SR 99 NB, north of 20th Street I/C	2	E	3,254	19.5	C	4,877	30.1	D	3,645	21.8	C
SR 99 SB, north of 20th Street I/C	2	E	3,733	22.3	C	3,535	21.2	C	2,621	15.7	B

Source: Omni Means
Notes: pc/mi/ln = Passenger Cars per Mile per Lane

As shown in **Table 4.2-16**, all four mainline segments are projected to operate at acceptable LOS (LOS "E" or better) during AM, PM and Saturday peak hour periods under *Cumulative No Project* conditions. As noted before, auxiliary lanes along SR 99 between the Skyway and Route 32 interchanges are assumed to be in place for *Cumulative No Project* conditions. As such, the SR 99 mainline operations are evaluated assuming a 6-lane facility.

Freeway Ramp Junctions

Cumulative No Project peak hour ramp operations were evaluated utilizing the *Cumulative No Project* peak hour traffic volumes shown on **Figure 4.2-12**. **Table 4.2-17** presents the *Cumulative No Project* conditions' ramp merge/diverge peak hour LOS at the three study interchange locations in the vicinity of the study area.

TABLE 4.2-17
CUMULATIVE NO PROJECT CONDITIONS: SR 99 RAMP JUNCTION LEVELS-OF-SERVICE

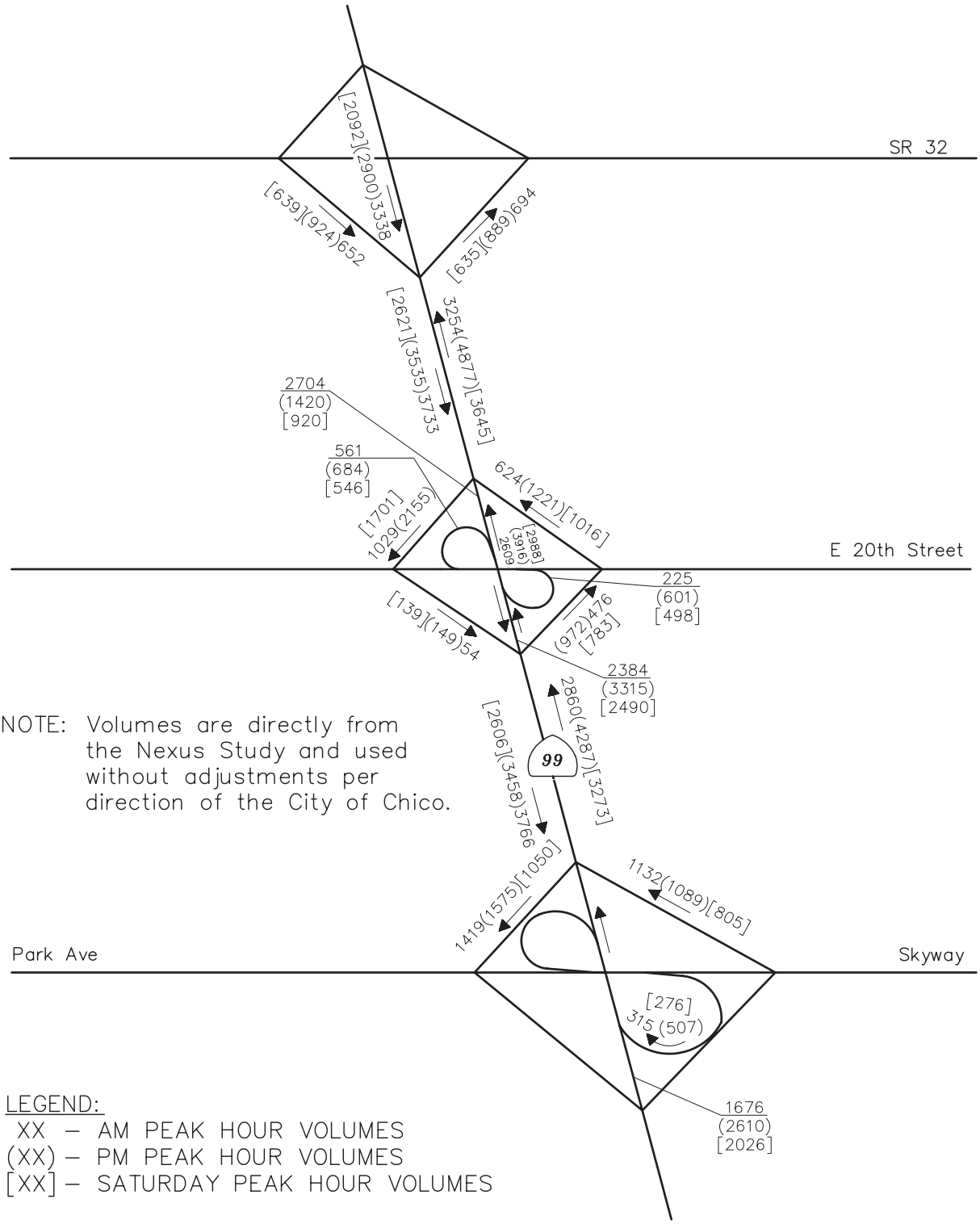
SR 99 & Skyway Interchange	Junction Type	Target LOS	AM Peak Hour		PM Peak Hour		Saturday Peak Hour	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
SR 99 NB Loop On-Ramp	Merge	E	16.5	B	26.7	C	19.4	B
SR 99 & 20th Street Interchange	**Junction Type**	**Target LOS**	**AM Peak Hour**		**PM Peak Hour**		**Saturday Peak Hour**	
			Density (pc/mi/ln)	**LOS**	**Density (pc/mi/ln)**	**LOS**	**Density (pc/mi/ln)**	**LOS**
SR 99 NB Loop On-Ramp	Diverge	E	13.7	B	22.1	C	16.6	B
SR 99 NB Direct On-Ramp	Merge	E	18.9	B	32.3	D	24.2	C
SR 99 SB Off-Ramp	**Diverge**	**E**	31.8	D	**34.6**	**F**	24.4	C
SR 99 SB Loop On-Ramp	Merge	E	18.4	B	12.3	B	8.3	A
SR 99 & SR 32 Interchange	**Junction Type**	**Target LOS**	**AM Peak Hour**		**PM Peak Hour**		**Saturday Peak Hour**	
			Density (pc/mi/ln)	**LOS**	**Density (pc/mi/ln)**	**LOS**	**Density (pc/mi/ln)**	**LOS**
SR 99 NB Off-Ramp	**Diverge**	**E**	27.7	C	**50.8**	**F**	33.2	D
SR 99 SB On-Ramp	Merge	E	24.5	C	32.9	D	18.4	B

Source: Omni Means
Notes: Bolded entries indicate intersections operating at Unacceptable LOS.
pc/mi/ln = Passenger Cars per Mile per Lane

As shown in **Table 4.2-17**, the southbound off-ramp at the SR 99/20th Street interchange and the northbound off-ramp at the SR 99/SR 32 interchange are projected to operate at LOS "F" during the PM peak hour period.

Weaving Analysis

As noted before, an auxiliary lane would be provided along SR 99 between the Skyway and SR-32 interchanges. Since the spacing between the Skyway and 20th Street interchanges is less than 2500



T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Figure 4.2-12.ai, April 2006

FIGURE 4.2-12

YEAR 2018 NO PROJECT FREEWAY MAINLINE AND RAMP VOLUMES

PMC

feet, mainline weaving analysis was performed for the SR 99 segment between the interchanges. **Table 4.2-18** presents the *Cumulative No Project* conditions' mainline weave peak hour LOS.

A Weaving Analysis consists of the identification of a number of factors to determine potential traffic flow and level of service. These include:

- Weaving - The crossing of two or more traffic streams traveling in the same direction along a significant length of highway, without the aid of traffic control devices (except for guide signs).
- Weaving Configuration - The organization and continuity of lanes in a weaving segment, which determines lane-changing characteristics.
- Weaving Diagram - A schematic drawing of flows in a weaving segment, used in analysis.
- Weaving Flow - The traffic movements in a weaving segment that are engaged in weaving movements.
- Weaving Length - The length from a point on the merge gore at which the right edge of the freeway shoulder lane and the left edge of the merging lane are 0. 6 m apart to a point on the diverge gore at which the edges are 3. 7 m apart.
- Weaving Segment - A length of highway over which traffic streams cross paths through lane-changing maneuvers, without the aid of traffic signals; formed between merge and diverge points.
- Weaving Width - The total number of lanes between the entry and exit gore areas, including the auxiliary lane, if present.

TABLE 4.2-18
CUMULATIVE NO PROJECT CONDITIONS: SR 99 WEAVING LEVELS-OF-SERVICE

Weaving Segment	No. Lanes On Frwy	Target Level of Service	AM Peak Hour		PM Peak Hour		Sat Peak Hour	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Northbound SR 99 – between Skyway and 20th	3	E	27.9	C	**43.8**	**F**	30.7	D
Southbound SR 99 – between Skyway and 20th	3	E	33.5	D	33.4	D	22.1	C

Source: Omni Means
Notes: Bolded entries indicate intersections operating at Unacceptable LOS.
pc/mi/ln = Passenger Cars per Mile per Lane

As shown in **Table 4.2-18**, under *Cumulative No Project* conditions, the southbound SR 99 weave segment between the Skyway and 20th Street interchanges is projected to operate acceptably (LOS E or better), while the northbound weave segment is projected to operate at unacceptable LOS "F" during the PM peak hour period.

CUMULATIVE PLUS PROJECT TRAFFIC OPERATIONS

Cumulative Plus Project conditions are simulated by superimposing traffic generated by the proposed project (as established under Project Trip Generation, page 4.2-23 of this EIR) over the

Cumulative No Project traffic volumes at the study intersections and roadway segments. The resulting Cumulative Plus Project traffic volumes are illustrated on **Figure 4.2-13.**

Intersections

Cumulative Plus Project AM, PM, and Saturday peak hour intersection traffic operations were quantified utilizing the *Cumulative Plus Project* peak hour intersection traffic volumes shown in **Figure 4.2-13**. **Table 4.2-19** contains a summary of the resulting intersection levels of service.

TABLE 4.2-19
CUMULATIVE PLUS PROJECT CONDITIONS INTERSECTION LEVELS-OF-SERVICE

#	Intersection	Control Type[1]	Target LOS	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
				Delay	LOS	Warrant Met[2]	Delay	LOS	Warrant Met[2]	Delay	LOS	Warrant Met[2]
1	E. 20th St / Whitman Ave	Signal	D	15.4	B	-	53.7	D	-	**83.4**	**F**	-
2	E. 20th St / SR 99 SB Ramps	Signal	D	19.8	B	-	45.0	D	-	25.0	C	-
3	E. 20th St / SR 99 NB Ramps	Signal	D	20.1	C	-	**109.9**	**F**	**-**	**70.0**	**E**	**-**
4	E. 20th St / Business Ln	TWSC	D	11.8	B	No	25.8	D	No	24.3	C	No
5	E. 20th St / Chico Mall Access	Signal	D	22.7	C	-	**285.2**	**F**	**-**	**274.7**	**F**	**-**
6	E. 20th St / Forest Ave	Signal	D	**84.4**	**F**	**-**	**308.4**	**F**	**-**	**353.4**	**F**	**-**
7	Business Ln / Chico Mall Access	TWSC	Pvt[3]	12.7	B	No	41.0	E	No	113.4	F	No
8	Baney Ln / Business Ln	TWSC	Pvt[3]	9.4	A	No	12.3	B	No	71.8	F	Yes
9	Baney Ln / Wal-Mart West Driveway	TWSC	Pvt[3]	9.7	A	No	11.2	B	No	13.8	B	No
10	Baney Ln / Wal-Mart Central Driveway	TWSC	Pvt[3]	9.3	A	No	14.1	B	No	19.8	C	No
11	Baney Ln / Wal-Mart East Driveway	TWSC	Pvt[3]	13.2	B	No	446.4	F	No	OVR	F	Yes
12	Forest Ave / Baney Ln-Parkway Village Dr	Signal	D	24.2	C	-	29.1	C	-	32.4	C	-
13	Forest Ave / Wal-Mart Driveway	TWSC	D	11.6	B	No	13.6	B	No	12.9	B	No
14	Forest Ave / Talbert Dr-Wittmeier Dr	TWSC	D	28.0	C	-	29.4	C	-	33.0	C	-
15	Forest Ave / Notre Dame Blvd	Signal	D	20.4	C	-	20.0	B	-	15.6	B	-
16	E. Park Ave-Skyway / Whitman Rd	Signal	D	9.2	A	-	28.8	C	-	25.4	C	-

#	Intersection	Control Type[1]	Target LOS	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
				Delay	LOS	Warrant Met[2]	Delay	LOS	Warrant Met[2]	Delay	LOS	Warrant Met[2]
17	E. Park Ave-Skyway / SR 99 SB Ramps	TWSC	D	20.5	C	-	30.8	C	-	18.3	B	-
18	E. Park Ave-Skyway / SR 99 NB Ramps	Signal	D	12.0	B	-	20.2	C	-	13.4	B	-
19	Skyway / Notre Dame Blvd	Signal	D	40.4	D	-	**109.3**	**F**	**-**	**73.4**	**E**	**-**

Source: Omni Means
Notes: Bolded entries indicate intersections operating as an Unacceptable LOS.
TWSC = Two-Way-Stop-Control (LOS and delay are based on LOS and delay for worst approach).
Warrant = Caltrans peak hour-volume based signal warrant.
Pvt = private roadways, driveways and/or intersections. City LOS criteria not applicable and excess delays analyzed in terms of unacceptable vehicle conflict and safety issues.

Based on a comparison of intersection LOS between the *Cumulative No Project* and *Cumulative Plus Project* conditions as presented in **Tables 4.2-15** and **4.2-19**, the following intersections that were projected to operate at unacceptable LOS under *Cumulative No Project* conditions would continue to operate at unacceptable LOS with an increase in delay due to the addition of project traffic, with the exception of the Forest Avenue/Wittmeier intersection.

- E. 20th Street/Whitman Avenue – This signalized intersection is projected to continue to operate at unacceptable LOS "F" during the PM peak hour period. The proposed expansion would increase the intersection delay by 3.2 seconds during the PM peak hour period.

- E. 20th Street/NB SR 99 Ramps – This signalized intersection is projected to continue to operate at unacceptable LOS "F" during the PM peak hour period, and unacceptable LOS "E" during the Saturday peak hour period. The proposed expansion would increase the intersection delay by 3.6 seconds during the PM peak hour period, and 3.6 seconds during the Saturday peak hour period.

- E. 20th Street/Chico Mall Access – This signalized intersection is projected to continue to operate at unacceptable LOS "F" during the PM and Saturday peak hour periods, with negligible increases in delay following the proposed expansion.

- E. 20th Street/Forest Avenue – This signalized intersection is projected to continue to operate at unacceptable LOS "F" during the PM and Saturday peak hour periods, and the proposed expansion would also result in unacceptable LOS "F" during the AM peak hour. The proposed expansion would increase the intersection delay by 61.3 seconds during the PM peak hour period, and 94 seconds during the Saturday peak hour period.

- Skyway/Notre Dame Boulevard – This signalized intersection is projected to continue to operate at unacceptable LOS "F" during the PM peak hour period, and unacceptable LOS "E" during the Saturday peak hour period. The proposed expansion would increase the intersection delay by 11.8 seconds during the PM peak hour period, and 9.8 seconds during the Saturday peak hour period.

The Forest Avenue/Wittmeier intersection will be signalized as a part of the expansion and is projected to operate at acceptable LOS "C" during all peak hour periods analyzed within the study.

The following private intersections are projected to operate at poor levels of service for *Cumulative Plus Project* conditions. Since there is no LOS threshold for private intersections, potential mitigation will be described later to address any potential vehicle conflict and safety issues.

- Business Lane/Chico Mall Access – This private unsignalized intersection is projected to continue to operate at LOS "E" during the PM peak hour period, and LOS "F" during the Saturday peak hour period. The proposed expansion would increase the intersection delay by less than 2 seconds during the PM and Saturday peak hour periods.

- Business Lane/Baney Lane – This private unsignalized intersection is projected to continue to operate at LOS "F" during the Saturday peak hour period, with negligible increases in delay following the proposed expansion.

- Business Lane/Wal-Mart East Driveway – This private unsignalized intersection is projected to continue operating at LOS "F" during the PM and Saturday peak hour periods, with increases in delays exceeding 100 seconds.

Freeway Mainline Segments

Cumulative Plus Project peak hour mainline operations were evaluated utilizing the peak hour traffic volumes shown on **Figure 4.2-14**. **Table 4.2-20** summarizes SR 99 freeway mainline operations at the two interchange locations in the vicinity of the study area for *Cumulative Plus Project* conditions.

TABLE 4.2-20
CUMULATIVE PLUS PROJECT CONDITIONS: SR 99 MAINLINE LEVELS-OF-SERVICE

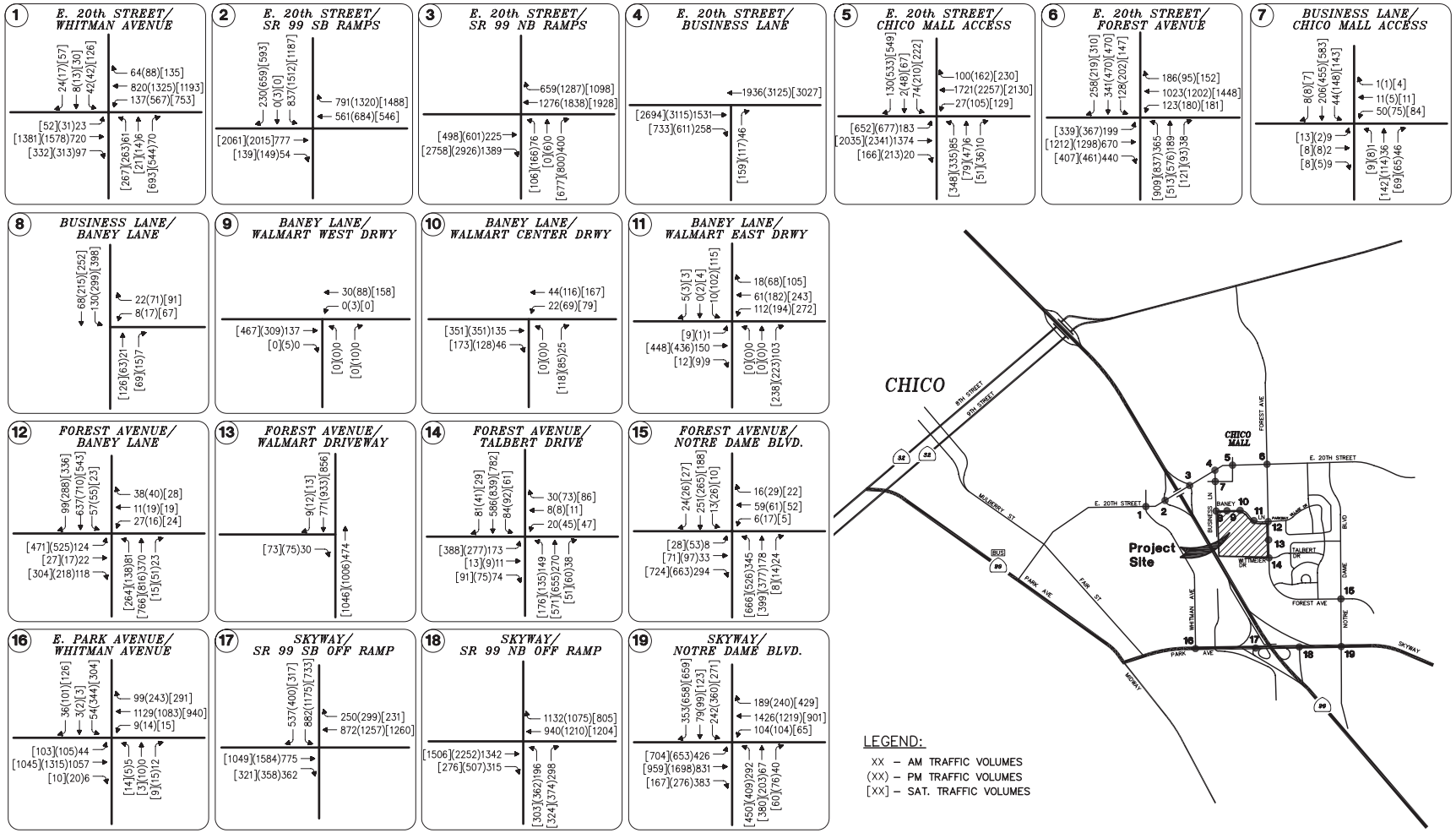
Freeway Mainline Segment	No. Lanes	Target LOS	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
			Volume	Density (pc/mi/ln)	LOS	Volume	Density (pc/mi/ln)	LOS	Volume	Density (pc/mi/ln)	LOS
SR 99 NB, north of Skyway I/C	2	E	2,838	17.0	B	4,259	25.6	C	3,224	19.3	C
SR 99 SB, north of Skyway I/C	2	E	3,766	22.5	C	3,458	20.7	C	2,606	15.6	B
SR 99 NB, north of 20th Street I/C	2	E	3,286	19.7	C	4,914	30.5	D	3,695	22.1	C
SR 99 SB, north of 20th Street I/C	2	E	3,763	22.5	C	3,565	21.3	C	2,651	15.9	B

Source: Omni Means
Notes: pc/mi/ln = Passenger Cars per Mile per Lane

As shown in **Table 4.2-20**, all four mainline segments are projected to operate at acceptable LOS (LOS "E" or better) during AM, PM and Saturday peak hour periods under *Cumulative Plus Project* conditions. As noted before, auxiliary lanes along SR 99 between the Skyway and SR-32 interchanges are assumed to be in place for *Cumulative Plus Project* conditions. As such, the SR 99 mainline operations are evaluated assuming a 6-lane facility.

Freeway Ramp Junctions

Cumulative Plus Project peak hour ramp operations were evaluated utilizing the *Cumulative Plus Project* peak hour traffic volumes shown on **Figure 4.2-14**. **Table 4.2-21** presents the ramp merge/diverge peak hour LOS at the three study interchange locations in the vicinity of the study area for *Cumulative Plus Project* conditions.



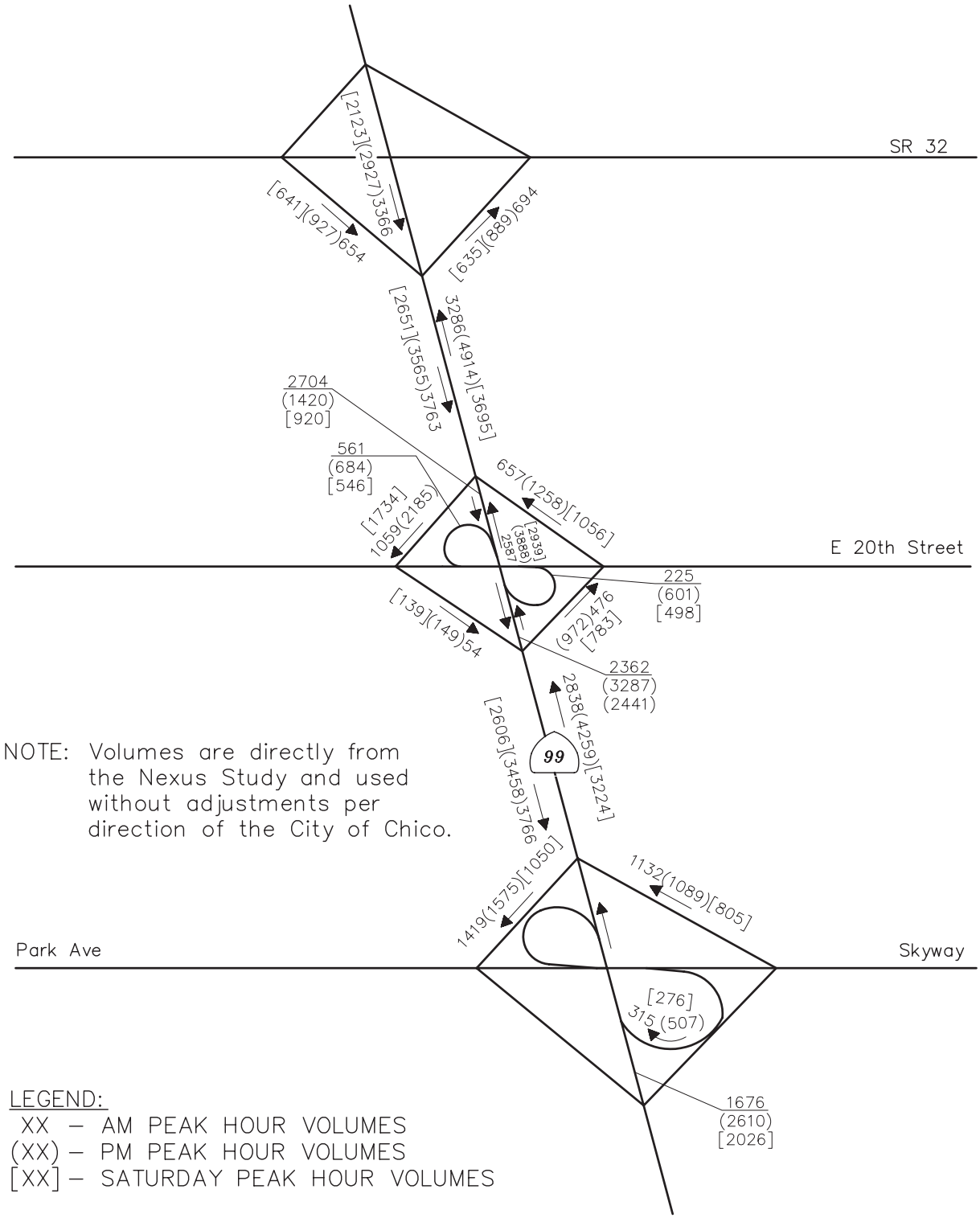
T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Figure 4.2-13.ai, June 2006

N

FIGURE 4.2-13

YEAR 2018 PLUS PROJECT TRAFFIC VOLUMES

PMC



T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Figure 4.2-14.ai, April 2006

N

FIGURE 4.2-14

YEAR 2018 PLUS PROJECT FREEWAY MAINLINE AND RAMP VOLUMES

PMC

TABLE 4.2-21
CUMULATIVE PLUS PROJECT CONDITIONS: SR 99 RAMP JUNCTION LEVELS-OF-SERVICE

SR 99 & Skyway Interchange	Junction Type	Target LOS	AM Peak Hour		PM Peak Hour		Saturday Peak Hour	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
SR 99 NB Loop On-Ramp	Merge	E	16.5	B	26.7	C	19.4	B
SR 99 & 20th Street Interchange	**Junction Type**	**Target LOS**	**AM Peak Hour**		**PM Peak Hour**		**Saturday Peak Hour**	
			Density (pc/mi/ln)	**LOS**	**Density (pc/mi/ln)**	**LOS**	**Density (pc/mi/ln)**	**LOS**
SR 99 NB Loop On-Ramp	Diverge	E	13.6	B	21.9	C	16.4	B
SR 99 NB Direct On-Ramp	Merge	E	19.1	B	32.5	D	24.3	C
SR 99 SB Off-Ramp	Diverge	E	32.1	D	34.9	F	24.6	F
SR 99 SB Loop On-Ramp	Merge	E	18.4	B	12.3	B	8.3	A
SR 99 & SR 32 Interchange	**Junction Type**	**Target LOS**	**AM Peak Hour**		**PM Peak Hour**		**Saturday Peak Hour**	
			Density (pc/mi/ln)	**LOS**	**Density (pc/mi/ln)**	**LOS**	**Density (pc/mi/ln)**	**LOS**
SR 99 NB Off-Ramp	Diverge	E	28.2	C	51.1	F	34.2	D
SR 99 SB On-Ramp	Merge	E	24.8	C	33.7	D	18.6	B

Source: Omni Means
Notes: Bolded entries indicate intersections operating at Unacceptable LOS.
pc/mi/ln = Passenger Cars per Mile per Lane

As shown in **Table 4.2-21**, all of ramp merge/diverge junctions analyzed are projected to operate at acceptable LOS under the cumulative plus project conditions, with the following exceptions:

- The southbound off-ramp at the SR 99/20th Street interchange is projected to continue operating at unacceptable LOS "F" during the PM peak hour (as well as during the Saturday peak hour), with an increase in density of 0.3 pc/mi/ln or less.
- The northbound off-ramp at the SR 99/SR 32 interchange is projected to continue operating at unacceptable LOS "F" during the PM peak hour, with an increase in density of 0.3 pc/mi/ln.

Weaving Analysis

As noted before, an auxiliary lane would be provided along SR 99 between the Skyway and SR-32 interchanges. Since the spacing between the Skyway and 20th Street interchanges is less than 2,500 feet, mainline weaving analysis was performed for the SR 99 segment between the interchanges. **Table 4.2-22** presents the *Cumulative Plus Project* conditions' mainline weave LOS for all study peak hour periods.

TABLE 4.2-22
CUMULATIVE PLUS PROJECT CONDITIONS: SR 99 WEAVING LEVELS-OF-SERVICE

Weaving Segment	No. Lanes On Frwy	Target Level of Service	AM Peak Hour		PM Peak Hour		Sat Peak Hour	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Northbound SR 99 – between Skyway and 20th	3	E	27.9	C	**43.8**	**F**	30.7	D
Southbound SR 99 – between Skyway and 20th	3	E	33.5	D	33.4	D	22.1	C

Source: Omni Means
Notes: Bolded entries indicate intersections operating at Unacceptable LOS.
pc/mi/ln = Passenger Cars per Mile per Lane

As shown in **Table 4.2-22**, with the proposed expansion under *Cumulative Plus Project* conditions, the southbound SR 99 weave segment between the Skyway and 20th Street interchanges is projected to continue operating acceptably. The northbound weave segment is projected to continue operating unacceptably at LOS "F" during the PM peak hour period, with a negligible increase in density.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Plus Project Conditions

Impact 4.2.3 Development of the proposed project and all other cumulative development would increase traffic at sufficient volume to cause LOS to decline below City and Caltrans standards under cumulative conditions. This is considered a **significant** impact.

City/Caltrans Intersections

The following intersections under the jurisdiction of either the City or Caltrans were found to operate at an unacceptable level of service under *Cumulative Plus Project* conditions.

- *E. 20th Street/Whitman Avenue*: The signalized intersection would operate at unacceptable LOS "F" during the Saturday peak hour period under *Cumulative No Project* and *Cumulative Plus Project* conditions. Provision of an additional (2nd) northbound right-turn lane would yield acceptable LOS "D" operations at the intersection.

- *E. 20th Street/SR 99 Northbound Ramps*: The signalized intersection would operate at unacceptable LOS "F" during the PM peak hour period, and unacceptable LOS "E" during the Saturday peak hour period, under *Cumulative No Project* and *Cumulative Plus Project* conditions. The improvement identified under *Short Term No Project* conditions: re-striping the northbound approach to include one shared through-left lane and two exclusive right turn lanes, would provide acceptable LOS C conditions at the intersection.

- *E. 20th Street/Chico Mall Access*: The signalized intersection would operate at unacceptable LOS "F" during the PM and Saturday peak hour periods under *Cumulative No Project* and *Cumulative Plus Project* conditions. The unacceptable LOS is a circulation issue, and it is assumed that when excessive queues begin to develop resulting in poor levels of service, drivers (who are likely frequent visitors familiar with the site) would seek alternative ingress and egress routes. Mitigation measures recommended previously to mitigate poor operations at the intersection of Business Lane/Chico Mall Access (and described for the E.

20th Street/Chico Mall Access intersection for *Short Term No Project* conditions) would also improve the levels of service to LOS D at this intersection.

With respect to other improvements identified under Short Term conditions, it should be noted that even with the provision of exclusive right turn lanes on E. 20th Street, the E. 20th Street/Chico Mall Access intersection would still operate at unacceptable LOS E for *Cumulative No Project* and *Cumulative Plus Project* conditions. In order to provide acceptable operations at the intersection the following improvements would need to be provided in addition to the improvements identified under Short Term conditions:

- the northbound approach would need to be widened to accommodate dual left turn lanes and a shared through right lane
- the southbound approach would need to be widened to provide one left turn lane and one through lane exclusive

- *E. 20th Street/Forest Avenue*: The signalized intersection would operate at unacceptable LOS "F" during the PM and Saturday peak hour periods under *Cumulative No Project* and *Cumulative Plus Project* conditions. Provision of an additional (second) eastbound left turn along E. 20th Street in addition to the improvements suggested under *Short Term No Project* conditions would yield acceptable operations (LOS D) under *Cumulative No Project* conditions.

  As will be noted later, the improvements identified above would not provide acceptable operations for cumulative plus project conditions.

- *Forest Avenue/Wittmeier Drive*: This currently unsignalized intersection would operate unacceptably at LOS "F" during the PM and Saturday peak hour periods under *Cumulative No Project* and *Cumulative Plus Project* conditions. The intersection does meet Caltrans peak hour volume signal warrant criteria for *Cumulative No Project* and *Cumulative Plus Project* conditions. As such, the intersection would operate at unacceptable LOS until the signalization improvements, which will be completed as part of proposed Wal-Mart expansion development, are implemented. Upon implementation of signalization improvements, the intersection would operate at acceptable LOS "C" for all time periods analyzed within the study under *Cumulative No Project* and *Cumulative Plus Project* conditions.

- *Skyway/Notre Dame Boulevard*: The signalized intersection would operate at unacceptable LOS "F" and LOS "E" during the PM and Saturday peak hour periods, respectively, under *Cumulative No Project* and *Cumulative Plus Project* conditions. Implementation of improvements recommended under *Short Term No Project* conditions, including provision of an additional (2nd) right-turn lane along the southbound Notre Dame Boulevard approach, would provide LOS "F" and LOS "E" operations during the PM and Saturday peak hour periods respectively. The following improvements, if implemented, would yield acceptable LOS "D" or better conditions during all peak periods at the intersection:

  - Convert the existing 2nd left-turn lane (inner left-turn lane) to a shared left-through-right lane in the northbound Notre Dame Boulevard approach.
  - Convert the existing through lane in the southbound direction to a shared through left lane and provide split phasing in the north-south approaches.
  - Re-stripe the westbound right-turn lane to include a shared through-right lane and widen the downstream approach such that the third outside through lane continues on as a right-turn only lane to the northbound SR 99 on-ramp.

- Widen westbound approach to accommodate one left-turn lane, three through lanes and one exclusive right-turn lane. As discussed for *Cumulative No Project* conditions, the third outside through lane could continue on as a right-turn only lane to the northbound SR 99 on-ramp.

Private Intersections

The following private intersections (all of which are unsignalized) are projected to operate at an poor level of service under *Cumulative Plus Project* conditions. As there are no LOS threshold for private intersections, potential mitigation is described to address any potential vehicle conflict and safety issues.

- *Business Lane/Chico Mall Access*: This unsignalized intersection is projected to operate at LOS "E" and LOS "F" during the PM and Saturday peak hour periods, respectively, based on the delay along the worst approach (westbound Chico Mall Access). The eastbound gas station driveway is also projected to operate at LOS "D" during the Saturday peak hour period. The high delays along the westbound and eastbound approaches is a circulation issue, and it is anticipated that drivers familiar with the area would seek alternative ingress and egress routes if undesirable queues are observed. Implementation of mitigation measure **MM 4.2.1** and **MM 4.2.2** would reduce potential vehicle conflict and safety issues. No additional mitigation is needed for this intersection.

- *Business Lane/Baney Lane*: This unsignalized intersection is projected to operate at LOS "F" during the Saturday peak hour period based on the delay along the westbound Baney Lane approach under *Cumulative No Project* and *Cumulative Plus Project* conditions.

- *Baney Lane/Wal-Mart East Driveway*: This unsignalized intersection would operate at LOS "F" during the PM and Saturday peak hour periods based on the delay along the worst approach (southbound driveway) under *Cumulative No Project* and *Cumulative Plus Project* conditions. The northbound Wal-Mart Access approach would operate at LOS "D" during both the PM and Saturday peak hour periods based on the delay experienced by the outbound left-turn vehicles. Note that with the proposed expansion the outbound left-turn movement would be prohibited and as a result would yield improved operations along the northbound approach at the intersection.

  The intersection would meet Caltrans peak hour warrant criteria during the Saturday peak hour period. However, it is recognized that this location is undesirable for a signal since it is only ±350 ft. from the Forest Avenue/Baney Lane traffic signal. Per information provided by City staff, the vacant property adjacent to the gas station is planned to be developed as a retail development, and access to the adjacent development will almost certainly be provided to both Forest Avenue and Baney Lane. It is suggested that when developed that a cross access connection be provided between the adjacent property and gas station which would provide alternative ingress and egress options for vehicles accessing the gas station. It is anticipated that provision of alternative ingress and egress options would provide better circulation and thereby improve LOS operations at the intersection.

  The potential new development adjacent to the existing Wal-Mart across Baney Lane was solidified after the traffic study was completed. This information required a re-examination of Baney Lane and the Wal-Mart East Driveway in order to provide acceptable traffic operations. The following traffic information was included in the EIR in response to this information by the City. See **Attachment B2** for the complete analysis.

- Using an ITE methodology for determining queue lengths at unsignalized intersections, it was determined that the westbound left-turn on Baney (to southbound Wal-Mart driveway) will require storage of 125 feet.

- Total Separation between Forest Avenue (western crosswalk limit line) and Eastern Wal-Mart Driveway(eastern edge) – The total separation should include 175 feet for eastbound left-turn, 90 feet of transition and 125 feet of westbound left-turn storage = 395 feet. These recommendations assume that the Pacific Properties (Galleria) driveway near the Shell station is right-turn in/right-turn out only and the Wal-Mart Eastern Driveway has channelization which prohibits left-turn movements out. Since the current plans include the existing 290 feet of separation, it is recommended that the project be conditioned to move the driveway west so that there is 395 feet of separation.

Ramp Junctions

The following ramp junctions were found to operate at an unacceptable level of service under *Cumulative Plus Project* conditions.

- *SR 99/20th Street Interchange – Southbound Off-Ramp:* The southbound off-ramp at the SR 99/20th Street interchange would operate at unacceptable LOS "F" during the PM and Saturday peak hour periods under *Cumulative No Project* conditions. The poor level of service is due to the high volume of traffic utilizing the off-ramp to access Chico Mall and other retail land uses along 20th Street. Implementation of improvements recommended under *Short Term No Project* conditions, including provision of a 2-lane southbound off-ramp (with two lanes exiting the freeway), would yield acceptable operations at the southbound SR 99 off-ramp diverge junction to 20th Street.

- *SR 99/SR-32 Interchange – Northbound Off-Ramp:* The northbound off-ramp at the SR 99/SR-32 interchange would operate at unacceptable LOS "F" during the PM peak hour period under *Cumulative No Project* and *Cumulative Plus Project* conditions. Provision of either a two lane ramp (two lanes exiting the freeway) or an additional through lane on the mainline, would yield acceptable operations at the northbound SR 99 off-ramp diverge junction to 20th Street

Weave Segments

The weave segment along northbound SR 99 between the Skyway and 20th Street interchanges is projected to operate at unacceptable LOS "F" during the PM peak hour period under *Cumulative No Project* and *Cumulative Plus Project* conditions. Provision of an additional northbound through lane (resulting in four lanes including the auxiliary lane) would provide acceptable operations along the segment.

95th Percentile Queue Lengths

As noted earlier, the main access points to the proposed project site would be via the signalized intersection of Forest Avenue/Baney Lane, and the intersection of Forest Avenue/Wittmeier Drive, which will be signalized as part of the proposed project. At the request of City staff, a 95th percentile queuing analysis has been performed at these two intersections to determine the adequacy of turning lane storage bays. **Table 4.2-23** presents the projected 95th percentile queue determined using TRAFFIX software for *Cumulative No Project* and *Cumulative Plus Project* conditions. The queuing analysis assumes that each vehicle within a queue requires 25 feet per vehicle (which includes the length of the vehicle itself and spacing between the next vehicle and includes a mixture of passenger vehicle and trucks). Therefore, all queuing results are converted to vehicle

stacking requirements in multiples of 25 ft. Note that the available storage lengths shown in the table below were measured from aerial photographs.

TABLE 4.2-23
CUMULATIVE (2018) CONDITIONS QUEUING ANALYSIS

Intersection	Movement	Available Storage length (ft)	2018 No Project			2018 Plus Project		
			AM	PM	SAT	AM	PM	SAT
Forest Ave/ Baney Lane	NBL	210	145	**235**	**410**	160	**280**	**500**
	SBL	208	95	115	55	105	155	80
	SBR	220	70	**285**	**405**	100	**395**	**560**
	EBL	156	75	**320**	**290**	115	**425**	**380**
	WBL	128	60	45	65	80	70	115
Forest Ave/ Talbert Wittmeier Drive	NBL	155	Not Applicable[1]			**265**	**285**	**370**
	SBL	100				**135**	**190**	**140**
	EBL	144				**185**	**285**	**375**
	WBL	127				40	70	75

Source: Omni Means
Note: 1) This unsignalized intersection would operate unacceptably at LOS "F" during the PM and Saturday peak hour periods under Cumulative No Project conditions. As such, the intersection would operate at unacceptable LOS until the signalization improvements, which will be completed as part of proposed Wal-Mart expansion development, are implemented.
Bolded entries indicate an exceedance of storage lenght..

As shown in **Table 4.2-23**, the projected 95th percentile queues for a majority of the turning movements exceed the available storage lengths.

- Forest Avenue/Baney Lane Intersection: It is noted that the left turn lanes along the northbound and eastbound approaches, as well as the right turn lane along the southbound approach, would not accommodate 2018 queues both with and without the proposed project. It is thus recommended that the intersection be improved to lengthen these turning lanes to accommodate the 2018 Plus Project queues, and that the project shall fully fund those improvements.

  The potential new development adjacent to the existing Wal-Mart across Baney Lane was solidified after the traffic study was completed. This information required a re-examination of the queue lenghts on Forest Avenue/Baney Lane intersection in order to provide acceptable traffic operations. The following traffic information was included in the EIR in response to this information by the City. See **Attachment B2** for the complete analysis.

  - Examination of 2018 plus Project(s) conditions and assuming an eastbound double left turn lane on Baney (to northbound Forest), the double left-turn lane will require storage for two (2) 175-foot left-turn lanes.

- Forest Avenue/Talbert-Wittmeier Drive Intersection - It is noted that the existing left turn lanes along the northbound, southbound, and westbound approaches would not accommodate 2018 queues with the proposed project. Thus, it is recommended that the signalization and improvements proposed as part of the project also provide for the lengthening of these left turn pockets to accommodate the 2018 Plus Project queue.

Mitigation Measures

MM 4.2.3a The developer shall pay its fair-share for traffic improvements based on the City's adopted Nexus Study and related fees.

Intersection/Roadway	Improvements	Proposed Project Fair Share Cost	
		Wal-Mart Only	Gas Station and Restaurant
City/Caltrans Intersections			
E. 20th Street/Whitman Avenue	Provision of an additional (2nd) northbound right-turn lane..[1]	Nexus Fee[1]	Nexus Fee[1]
E. 20th Street / Chico Mall Access[2]	Widen the northbound approach accommodate dual left turn lanes and a shared through right lane.	Nexus Fee	Nexus Fee
	Widen the southbound approach to provide one left turn lane and one through lane exclusive.	Nexus Fee	Nexus Fee
E. 20th Street / Forest Avenue[3]	Provide an additional (second) eastbound left turn along E. 20th Street.	Nexus Fee	Nexus Fee
	Provide a third northbound left-turn lane along the northbound Forest Avenue approach.	Nexus Fee	Nexus Fee
Skyway/Notre Dame Boulevard[4]	Convert the existing 2nd left-turn lane (inner left-turn lane) to a shared left-through-right lane in the northbound Notre Dame Boulevard approach.	Nexus Fee	Nexus Fee
	Convert the existing through lane in the southbound direction to a shared through left lane and provide split phasing in the north-south approaches.	Nexus Fee	Nexus Fee
	Re-stripe the westbound right-turn lane to include a shared through-right lane and widen the downstream approach such that the third outside through lane continues on as a right-turn only lane to the northbound SR 99 on-ramp.	Nexus Fee	Nexus Fee
	Widen westbound approach to accommodate one left-turn lane, three through lanes and one exclusive right-turn lane.	Nexus Fee	Nexus Fee
Ramp Junctions			
SR 99/SR-32 Interchange – Northbound Off-Ramp[4]	Provision of an either a two lane ramp (two lanes exiting the freeway) or an additional through lane on the mainline.	Nexus Fee	Nexus Fee
Weave Segments			
NB SR 99 between the Skyway and East 20th Street interchanges[5]	This improvement consisted of provision of an additional northbound through lane (resulting in four lanes including the auxiliary lane).[2]	Nexus Fee	Nexus Fee

Notes: 1) Improvements to the turn lane for the E. 20th/Whitman Avenue intersection will be completed by the Costco project which has been conditioned to provide these improvements.

2) The City's Nexus Fee includes $5,000,000 for the SR 99/East 20th Street interchange. The City considers that part of this fee will be to pursue reconfiguration of the mall access and have initiated discussions with the mall. The City does not consider these improvements economically infeasible. The project's contribution of the nexus fees will address the project's impacts to this intersection.

3) The City's Nexus Fee includes $1.140,000 for this intersection to "Reconfigure and add lanes." The City does not consider the lane improvement economically infeasible. Since these improvements are required under short term conditions, the project should be conditioned to construct these improvements with reimbursements arrangements with the City as appropriate since this project is part of the City's Nexus Fee.

4) *The City considers this project part of the Nexus Fee. The project's contribution of the nexus fees will address the project's impacts to this intersection.*
5) *The City's Nexus Fee includes $2,800,000 for auxiliary lanes on SR 99 for the section between Skyway and East 20th Street.*

Timing/Implementation: *Prior to Final Map Approval.*

Enforcement/Monitoring: *City of Chico Planning Division and Engineering Division.*

MM 4.2.3b The following improvements shall be included as part of project development prior to occupancy of the expanded store area:

Intersection/Roadway	Improvements	Proposed Project Fair Share Cost	
		Wal-Mart Only	Gas Station and Restaurant
Private Intersections	The following private intersections (all of which are unsignalized) are projected to operate at a poor level of service under *Cumulative Plus Project* conditions. Since there is no LOS threshold for private intersections, potential mitigation is described to address any potential vehicle conflict and safety issues		
Eastern Wal-Mart Driveway	The proposed site plan shall be modified to include the following: total separation between Forest Avenue (western crosswalk limit line) and Eastern Wal-Mart Driveway (eastern edge) shall be 395 feet. The total separation shall include 175 feet for eastbound left-turn, 90 feet of transition and 125 feet of westbound left-turn storage.	100%	0%
95th Percentile Queue Lengths			
Forest Avenue/Baney Lane Intersection	Lengthen the left turn lanes along the northbound and eastbound approaches, as well as the right turn lane along the southbound approach to accommodate the 2018 Plus Project queues.	100%	N/a
Forest Avenue/Talbert-Wittmeier Drive Intersection	Lengthen the left turn pockets to accommodate the 2018 Plus Project queue.	100%	N/a

Timing/Implementation: *Prior to occupancy of the expanded store area.*

Enforcement/Monitoring: *City of Chico Planning Division and Engineering Division.*

Implementation of mitigation measures **MM 4.2.1, MM 4.2.2, MM 4.2.3a** and **MM 4.2.3b** would reduce traffic impacts on roadway systems to an acceptable LOS. Therefore, the proposed project would have a **less than significant** traffic impact under cumulative conditions.

REFERENCE:

City of Chico. October 2005. *2005-06 Update of Development Impact Fees, Analysis and Recommendations (Nexus Study) October 2005, Final Report.* Chico, CA.

City of Chico. 1994. *General Plan Updated February 1999*, City of Chico Planning Department. Chico, CA

California Department of Transportation. December 2002. *Guide for the Preparation of Traffic Impact Studies.* Sacramento, California.

Department Of Transportation. November 2002. *Chapter 9 Traffic Signals and Lighting*. Sacramento, CA.

Dowling Associates, Traffix 7.7 for Windows.

Institute of Transportation Engineers.2003. *Trip Generation 7th Edition Volumes 1, 2*. Washington, D.C.

Omni Means. April 2006. *Chico Wal-Mart Store Expansion Traffic Impact Study*. Roseville, CA.

Quincy Engineering. October 2001. *State Route 99 – Chico Corridor Study*.

Transportation Research Board National Research Council. 2000. *Highway Capacity Manual.* Washington, D.C.

4.3 AIR QUALITY

This chapter describes the impacts of the proposed project on air quality. This section presents the results of an air quality analysis performed by Jones & Stokes for the proposed Chico Wal-Mart Store Expansion project in the City of Chico. This technical report discusses the existing regional air quality conditions in the Northern Sacramento Valley, and evaluates the potential air quality impacts associated with the implementation of the proposed project. This report is provided to support the air quality analysis in accordance with the Butte County Air Quality Management District's Indirect Source Review Guidelines and the California Environmental Quality Act (CEQA) Statues and Guidelines.

4.3.1 SETTING

LOCAL TOPOGRAPHY AND CLIMATE

The project is located in Chico, in Butte County, in the Northern Sacramento Valley Air Basin (NSVAB). Chico lies in the middle of the Sacramento Valley, 100 miles northeast of Sacramento and 230 feet above sea level. The area has a moderate year-round climate where the average daily temperature remains above freezing and winds have a mean hourly speed of 10 miles per hour. The average annual temperature is around 62ºF, and the annual precipitation averages about 26 inches (WRCC 2006).

The NSVAB may be described as a bowl, bound on the north and west by the Coastal Mountain Ranges and on the east by the southern portion of the Cascade Range and the northern portion of the Sierra Nevada. These mountain ranges reach heights in excess of 6,000 feet above sea level. During summer, the wide, flat expanse of the Sacramento Valley provides an ideal environment for the formation of photochemical smog. In addition, the prevailing winds in the Sacramento Valley blow from south to north, driven by the marine air traveling through the Carquinez Strait. These winds can transport pollutants from the broader Sacramento area and from the San Francisco Bay Area to the NSVAB. The mountain ranges that surround the NSVAB provide a physical barrier to continued movement of the air mass, thereby significantly hindering the dispersal of pollutants.

AIR QUALITY STANDARDS

Both the U. S. Environmental Protection Agency (EPA) and the California Air Resources Board (ARB) have established ambient air quality standards for common pollutants. The national ambient air quality standards ("NAAQS", or "federal standards") and California ambient air quality standards ("CAAQS", or "state standards") for important pollutants are summarized in **Table 4.3-1**. These ambient air quality standards are levels of contaminants that represent levels that protect public health and welfare, and avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. EPA and ARB have focused on the following air pollutants as indicators of ambient air quality: ozone, carbon monoxide (MO), nitrogen dioxide (NO_2) fix, sulfur dioxide (SO_2), particulate matter (PM), and lead. The federal and state ambient standards were developed independently with differing purposes and methods, although both processes attempted to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California standards are more stringent. This is particularly true for ozone and PM_{10}.

A geographical area identified to have air quality as good as, or better than, the national and / or California ambient air quality standard is referred to as being in attainment of these standards. An area may be an attainment area for one pollutant and a nonattainment area for others.

New national standards for fine particulate matter (diameter 2.5 microns or less) have also been established for 24-hour and annual averaging periods. The current PM_{10} standards were retained, but the method and form for determining compliance with the standards were revised.

ARB developed recommended designations for California air basins, proposing that Butte County be designated as moderate non-attainment for the new 8-hour ozone standard. On April 28, 2005, the ARB approved the 8-hour average standard at 0.070 ppm.

TABLE 4.3-1
FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	Federal Primary Standard	State Standard
Ozone	1-Hour 8-Hour	- 0.08 ppm	0.09 ppm 0.07 ppm
Carbon Monoxide	8-Hour 1-Hour	9 ppm 35 ppm	9.0 ppm 20.0 ppm
Nitrogen Dioxide	Annual Average 1-Hour	0.053 ppm --	-- 0.25 ppm
Sulfur Dioxide	Annual Average 24-Hour 1-Hour	0.03 ppm 0.14 PPM --	-- 0.04 ppm 0.25 ppm
PM_{10}	Annual Average 24-Hour	50 µg/m^3 150 µg/m^3	20 µg/m^3 50 µg/m^3
$PM_{2.5}$	Annual 24-Hour	15 µg/m^3 65 µg/m^3	12 µg/m^3 --

Notes: PPM = Parts per Million; µg/m³ = Micrograms per Cubic Meter
Source: Butte County Air Quality Management District

AIR POLLUTANTS OF CONCERN AND HEALTH EFFECTS

The most problematic pollutants in Chico are ozone, carbon monoxide, and particulate matter. Carbon monoxide in Butte County no longer exceeds the ambient air quality standards in Butte County, but has in the past. The health effects and major sources of these pollutants are described below. Toxic air contaminants are a separate class of pollutants and are discussed later in this section.

Ozone

Ground level ozone, commonly referred to as smog, is greatest on warm, windless, sunny days. Ozone is not emitted directly into the air from point sources (e.g., mobile or stationary); rather, they are formed through a complex series of chemical reactions between reactive organic gases (ROG) and nitrogen oxides (NO_x). These reactions occur over time in the presence of sunlight.

Ozone is a public health concern because it is a respiratory irritant that increases susceptibility to respiratory infections and diseases, and because it can harm lung tissue at high concentrations. In addition, ozone can cause substantial damage to leaf tissues of crops and natural vegetation, and can damage many natural and manmade materials by acting as a chemical

oxidizing agent. The principal sources of the ozone precursors (ROG and NO_x) are the combustion of fuels and the evaporation of solvents, paints, and fuels.

Particulate Matter (PM)

Particulate matter (PM) can be divided into several size fractions. Coarse particles are between 2.5 microns ($PM_{2.5}$) and 10 microns (PM_{10}) in diameter, and arise primarily from natural processes, such as wind-blown dust or soil. Fine particles are less than 2.5 microns in diameter and are produced mostly from combustion, or burning activities. Fuel burned in cars and trucks, power plants, factories, fireplaces and wood stoves produces fine particles.

The level of fine particulate matter in the air is a public health concern because it can bypass the body's natural filtration system more easily than larger particles, and can lodge deep in the lungs. The health effects vary depending on a variety of factors, including the type and size of particles. Research has demonstrated a correlation between high PM concentrations and increased mortality rates. Elevated PM concentrations can also aggravate chronic respiratory illnesses such as bronchitis and asthma.

Carbon Monoxide (CO)

Carbon monoxide (CO) is an odorless, colorless gas that is formed by the incomplete combustion of fuels. Motor vehicle emissions are the dominant source of CO in the Sacramento area. At high concentrations, CO reduces the oxygen-carrying capacity of the blood and can cause dizziness, headaches, unconsciousness, and even death. CO can also aggravate cardiovascular disease. Relatively low concentrations of CO can significantly affect the amount of oxygen in the bloodstream because CO binds to hemoglobin 220–245 times more strongly than oxygen.

CO emissions and ambient concentrations have decreased significantly in recent years. These improvements are due largely to the introduction of cleaner burning motor vehicles and motor vehicle fuels. The Sacramento area has attained the state and national CO standard. The records from the area's monitoring stations show that the CO standard has not been exceeded since 1999. CO is still a pollutant that must be closely monitored, however, due to its severe effect on human health.

Toxic Air Contaminants (TACs)

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. Unlike criteria pollutants, no safe levels of exposure to TACs have been established. There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage and death.

Diesel exhaust is a TAC of growing concern in California. In 1998, ARB identified diesel engine particulate matter as a TAC. The exhaust from diesel engines contains hundreds of different gaseous and particulate components, many of which are toxic. Mobile sources, such as trucks, buses, automobiles, trains, ships and farm equipment are by far the largest source of diesel emissions. Studies show that diesel particulate matter concentrations are much higher near heavily traveled highways and intersections.

It is important to understand that TACs are not considered criteria air pollutants and thus are not specifically addressed through the setting of ambient air quality standards. Instead, EPA and ARB regulate Hazardous Air Pollutants (HAPs) and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology (MACT and BACT) to limit emissions. These in conjunction with additional rules set forth by SMAQMD establish the regulatory framework for TACs.

AMBIENT AIR QUALITY

Air quality monitoring data for the Chico area are summarized in **Table 4.3-2**. These data are the most recent available, from the 2003-2005 monitoring period. Chico experienced occasional violations of the state ozone standard during the 3-year monitoring period. The federal and state CO standards were not violated. The state 24-hour PM_{10} standard was exceeded five times in 2004 and 2005; the state annual PM_{10} standard of 20 micrograms per cubic meter ($\mu g/m^3$) was also exceeded. The federal 24-hour $PM_{2.5}$ standard was never exceeded at any time during the monitoring period.

If a pollutant concentration is lower than the state or federal standard, the area is classified as being in *attainment* for that pollutant. If a pollutant violates the standard, the area is considered a *nonattainment* area. If data are insufficient to determine whether a pollutant is violating the standard, the area is designated *unclassified*. Butte County is classified as a nonattainment area for the state, federal 1-hour ozone standards, the federal 8-hour standards, and the state PM_{10} standard. The County is in attainment for state and federal CO standards.

TABLE 4.3-2
AMBIENT AIR QUALITY MONITORING DATA FROM CHICO – MANZANITA AVENUE MONITORING STATION

Pollutant Standards	2003	2004	2005
Ozone			
Maximum 1-hour concentration (ppm)	0.092	0.088	0.083
Maximum 8-hour concentration (ppm)	0.076	0.073	0.077
Number of Days Standard Exceeded			
NAAQS 1-hour (>0.12 ppm)	0	0	0
CAAQS 1-hour (>0.09 ppm)	0	0	0
NAAQS 8-hour (>0.08 ppm)	0	0	0
Nitrogen Dioxide (NO_2)			
Maximum 1-hour concentration (ppm)	0.057	0.056	0.048
CAAQS 1-hour (>0.25 ppm)	0	0	0
Annual average concentration (ppm)	0.011	0.011	0.009
Carbon Monoxide (CO)			
Maximum 1-hour concentration (ppm)	NA	NA	NA
Maximum 8-hour concentration (ppm)	2.54	2.86	2.74
Number of Days Standard Exceeded			
NAAQS 8-hour ($\geq$9.0 ppm)	0	0	0
CAAQS 8-hour ($\geq$9.0 ppm)	0	0	0
Particulate Matter (PM_{10})[a]			
Maximum 24-hour concentration (μg/m^3)	54.0	115.0	76.0
National[b] annual average concentration (μg/m^3)	12.2	28.1	23.4
State[c] annual average concentration (μg/m^3)	21.7	28.8	23.9
Number of Days Standard Exceeded			
NAAQS 24-hour (>150 μg/m^3)	0	0	0
CAAQS 24-hour (>50 μg/m^3)	1	5	5
Particulate Matter ($PM_{2.5}$)			
Maximum 24-hour concentration (μg/m^3)	56.1	76.3	82.7
National[b] annual average concentration (μg/m^3)	10.5	15.1	12.3
State[c] annual average concentration (μg/m^3)	15.9	16.5	13.8
Number of Days Standard Exceeded			
NAAQS 24-hour (>65 μg/m^3)	0	0	1

Notes:
CAAQS = California Ambient Air Quality Standards.
NAAQS = National Ambient Air Quality Standards.
NA = Insufficient data available to determine the value.
[a] Measurements usually collected every six days.
[b] National annual average based on arithmetic mean.
[c] State annual average based on geometric mean.
[d] There was no monitoring for SO_2 in 2003, 2004, or 2005.
Sources: California Air Resources Board Internet site: http://www.arb.ca.gov/adam/cgi-bin/db2www/adamtop4b.d2w/start; EPA Internet site: http://www.epa.gov/air/data/geosel.html.

Once an area is designated as non-attainment for the federal 1-hour ozone standard, an air quality statistic termed the "design value" helps determine the magnitude of the non-attainment problem. Section 181(a) of the Federal Clean Air Act indicates the following non-attainment classification Design Value (ppm) for ozone:

- Marginal (0.121 up to 0.138),
- Moderate (0.138 up to 0.160),
- Serious (0.160 up to 0.180),
- Severe (0.180 up to 0.280), and
- Extreme (0.280 and above).

The State of California has designated Butte County as being a non-attainment area for both ozone and PM_{10}. The EPA has designated Butte County as being a "Transitional" non-attainment area for 1-hour ozone, a "Basic" non-attainment area for 8-hour ozone and a non-attainment area for PM_{10}. Butte County is in attainment for the state and federal CO, NO_2, and SO_2 standards.

ODORS

Typically odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity. Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

SENSITIVE RECEPTORS

A sensitive receptor is a location where human populations, especially children, seniors, and sick persons are present and where there is a reasonable expectation of continuous human exposure to pollutants. Examples of sensitive receptors include residences, hospitals and schools. For the purposes of air quality analysis, sensitive land uses are defined as locations where people reside or where the presence of pollutant emissions could adversely affect the

use of the land. There are residences located immediately east of the project site. The residential land is set back approximately 500 ft from the east of Forest Avenue.

4.3.2 REGULATORY FRAMEWORK

FEDERAL

U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency (EPA) is responsible for enforcing the Federal Clean Air Act and the 1990 amendments to it ("Federal CAA"), and the national ambient air quality standards (federal standards) that the EPA establishes. These standards identify levels of air quality for six "criteria" pollutants, which are considered the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety, to protect public health and welfare. The six criteria pollutants include ozone, CO, nitrogen dioxide (NO_2 - a form of NO_X), sulfur dioxide (SO_2 - a form of SO_X), particulate matter 10 microns in size and smaller (PM_{10}), and lead. The U.S. EPA also has regulatory and enforcement jurisdiction over emission sources beyond state waters (outer continental shelf), and sources that are under the exclusive authority of the federal government, such as aircraft, locomotives, and interstate trucking.

Federal Hazardous Air Pollutant Program (HAP)

Title III of the CAA requires EPA to promulgate national emissions standards for HAPs (NESHAP). The NESHAP may differ for major sources than for area sources of HAPs. (Major sources are defined as stationary sources with potential to emit more than 10 tons per year [TPY] of any HAP or more than 25 TPY of any combination of HAPs; all other sources are considered area sources.) The emissions standards are to be promulgated in two phases. In the first phase (1992–2000), EPA developed technology-based emission standards designed to produce the maximum emission reduction achievable. These standards are generally referred to as requiring MACT. For area sources, the standards may be different, based on generally available control technology. In the second phase (2001–2008), EPA is required to promulgate health risk–based emissions standards where deemed necessary to address risks remaining after implementation of the technology-based NESHAP standards.

The CAAA required EPA to promulgate vehicle or fuel standards containing reasonable requirements that control toxic emissions, at a minimum to benzene and formaldehyde. Performance criteria were established to limit mobile-source emissions of toxics, including benzene, formaldehyde, and 1, 3-butadiene. In addition, Section 219 required the use of reformulated gasoline in selected U.S. cities (those with the most severe ozone nonattainment conditions) to further reduce mobile-source emissions.

STATE

California Air Resources Board

The California Air Resources Board, a department of the California Environmental Protection Agency (Cal EPA), oversees air quality planning and control throughout California. It is primarily responsible for ensuring implementation of the 1989 amendments to the California Clean Air Act (CCAA), responding to the federal CAA requirements, and for regulating emissions from motor vehicles and consumer products within the State. ARB has established emission standards for

vehicles sold in California and for various types of equipment available commercially. It also sets fuel specifications to further reduce vehicular emissions.

The amendments to the CCAA establish ambient air quality standards for the State (state standards) and a legal mandate to achieve these standards by the earliest practical date (SMAQMD, 1998). These standards apply to the same six criteria pollutants as the Federal CAA, and also include sulfate, visibility, hydrogen sulfide, and vinyl chloride. They are more stringent than the federal standards and, in the case of PM_{10} and SO_2, far more stringent.

Tanner Air Toxics Act

California regulates TACs primarily through the Tanner Air Toxics Act (Tanner Act) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB can designate a substance as a TAC. To date, ARB has identified more than 21 TACs and has adopted EPA's list of HAPs as TACs. Most recently, diesel PM was added to the ARB list of TACs.

Once a TAC is identified, ARB then adopts an Airborne Toxics Control Measure (ATCM) for sources that emit that particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate BACT to minimize emissions.

The AB 2588 requires that existing facilities that emit toxic substances above a specified level prepare a toxic-emission inventory, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures. ARB has adopted diesel exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators). In February 2000, ARB adopted a new public-transit bus-fleet rule and emission standards for new urban buses. These rules and standards provide for (1) more stringent emission standards for some new urban bus engines, beginning with 2002 model year engines; (2) zero-emission bus demonstration and purchase requirements applicable to transit agencies; and (3) reporting requirements under which transit agencies must demonstrate compliance with the urban transit bus fleet rule. Upcoming milestones include the low-sulfur diesel-fuel requirement, and tighter emission standards for heavy-duty diesel trucks (2007) and off-road diesel equipment (2011) nationwide.

LOCAL

County Regulations

At the local level, responsibilities of air districts include overseeing stationary source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality-related sections of environmental documents required by CEQA. Air quality is managed through land use and development planning practices. These practices are implemented in Butte County through the general planning process primarily of the municipalities and Butte County. The Butte County AQMD is responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and state air quality laws but does not have any land use or development planning authority.

The air quality management agencies of direct importance in Butte County include EPA, ARB, and the Butte County AQMD. EPA has established federal ambient air quality standards for which ARB and the Butte County AQMD have primary implementation responsibility. ARB and the Butte County AQMD are also responsible for ensuring that state ambient air quality standards are met. The Butte County Association of Governments is coordinating with the Butte County AQMD to implement strategies for air quality improvement, through implementation of the Regional Transportation Plan.

Because of the regional nature of the ozone and PM_{10} conditions in the Sacramento Valley, the Butte County AQMD is also coordinating efforts with the Sacramento Valley Air Basin Control Council's Technical Advisory Committee, the Sacramento Area Council of Governments, and the Sacramento Metropolitan AQMD.

City of Chico General Plan

The City's General Plan contains an Open Space and Environmental Conservation Element that sets forth goals, objectives, policies and implementation strategies to improve air quality and protect the health and welfare of City residents. This is to be accomplished mainly by promoting development that is compatible with the air quality standard of the Open Space and Environmental Conservation Element and of the County's Air Quality Attainment Plan (AQAP). Goals and policies within the Air Quality Element that pertain to this project are summarized in **Table 4.3-3** below and also provides an evaluation of the proposed project in relation to its consistency with the pertinent General Plan goals and policies.

TABLE 4.3-3
PROJECT CONSISTENCY WITH THE GENERAL PLAN POLICIES: AIR QUALITY

General Plan Policies and Action Items	Consistency with General Plan	Analysis
Policy OS-I-1 Cooperate with the Butte County Air Pollution Control District to achieve five percent annual emissions reductions for nonattainment pollutants, including ozone and particulate matter, by implementation of air pollution control measures as required by state and federal standards. To reduce potential air emissions to the extent feasible, all new stationary sources in the Planning Area will be subject to the "New Source Review Rule" requirements administered by the Butte County Air Pollution Control District, and Best Available Control Technologies (BACT), or the current best technologies available at the time of project review, will have to be used to reduce air polluting emissions.	Consistent	The proposed project includes mitigation of air quality impacts through the use of Standard Mitigations Measures as well as Best Available Mitigation Measures as identified by Butte County Air Quality Management District.

General Plan Policies and Action Items	Consistency with General Plan	Analysis
Policy OS-I-8 Require applicants whose development would result in construction-related fugitive dust emissions to control such emissions as follows: During clearing, grading, earth-moving, or excavation operations, fugitive dust emissions shall be controlled by regular watering, paving of construction roads, or other dust-preventive measures. All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering, with complete coverage, shall occur at least twice daily, preferably in the late morning and after work is done for the day. All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 15 mph averaged over 1 hour. All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust. The area disturbed by demolition, clearing, grading, earth-moving, or excavation operations shall be minimized at all times. Portions of the construction site to remain inactive longer than a period of 3 months shall be seeded and watered until grass cover is grown. All on-site roads shall be paved as soon as feasible or watered periodically or chemically stabilized.	Consistent, with mitigation	The proposed project would be required to implement mitigation measures MM 4.3.1 and MM 4.3.4, which includes the controls listed under this policy.
Policy OS-I-9 Require applicants whose development would result in construction-related exhaust emissions to minimize such emissions by maintaining equipment engines in good condition and in proper tune according to manufacturer's specifications and during smog season (May through October) by not allowing construction equipment to be left idling for long periods.	Consistent	Refer to the analysis for Policy OS-I-1 and OS-I-8 above.
Policy OS-I-10 Require applicants whose development would result in potential carbon monoxide (CO) "hot spot" impacts to consult with the City to ensure that schools, hospitals, or day care facilities are not located near such "hot spots".	Consistent	The proposed project is not located near a school, hospital or day care center, however, a hot spot analysis was completed for the proposed project. Refer to the analysis under Impact4.3.5 for further information.
Policy OS-I-14 All new construction shall comply with the energy efficiencies mandated by Title 24 construction requirements. New facilities will be substantially more energy efficient than the facilities they replace or existing units, even at higher densities.	Consistent	The proposed project would be required to adhere to this policy as part of the building permit process.

4.3.3 IMPACTS AND MITIGATION MEASURES

METHODOLOGY

The proposed project would generate construction-related emissions and operational emissions. The methods used to evaluate construction and operational impacts are described below.

Construction Impact Assessment Methods

Construction of the proposed project would result in the temporary generation of emissions of ROG, NO_x, and PM10. Emissions would originate from construction equipment exhaust, employee vehicle exhaust, dust from clearing the land, exposed soil eroded by wind, and volatile organic compounds (VOCs) from asphalt paving. Construction-related emissions would vary substantially depending on the level of activity, length of the construction period, specific construction operations, types of equipment, number of personnel, wind and precipitation conditions, and soil moisture content.

Construction-related emissions were estimated and analyzed using URBEMIS 2002, which is a computer program used to estimate emissions from construction, vehicle trips, and fuel use resulting from land use development projects. To estimate construction emissions, URBEMIS 2002 analyzes the type of construction equipment used and the duration of the construction period. A detailed inventory of construction equipment that would be used for the proposed project was not provided; therefore, this analysis is based on anticipated construction equipment calculated by URBEMIS 2002 that would be used during construction activities.

Area Source and Vehicular Emissions from Project Operation

The primary operational emissions associated with the project are CO, PM_{10}, and ozone precursors emitted as vehicle exhaust. The effects of CO emissions were evaluated through CO dispersion modeling, while emissions of PM_{10} and ozone precursors were evaluated using the URBEMIS 2002 model. Both models are briefly described below.

URBEMIS Model

Traffic associated with the proposed project is the primary source of operation-related emissions of ROG, NOx, CO, and PM10. Emissions of criteria pollutants associated with development of new building space and increased vehicle trips were estimated using the URBEMIS 2002 model. Criteria pollutants associated with residential, commercial, and industrial development would be emitted from 1) natural gas combustion for water and space heating, 2) personal household product use, and 3) landscape maintenance equipment. In addition, criteria pollutants would be emitted in vehicle exhaust from increased passenger car trips using the average daily trips identified in the *Wal-Mart Store Expansion Traffic Impact Study*. Emissions of ROG, NO_x, CO, SO_x and PM_{10} were estimated using the URBEMIS 2002 model.

Carbon Monoxide Impacts at Congested Intersections

The CALINE4 Model

Localized increases in CO concentrations from vehicle congestion at intersections affected by development were modeled using the California Department of Transportation (Caltrans) CALINE4 line source dispersion model (Benson 1989). CO concentrations at intersections with

level of service (LOS) D or worse near the vicinity of the project site were estimated using CALINE4. LOS is a measure of traffic delay, rated A-F, with F indicating the worst delay.

CO Modeling Procedures

Roadway and Traffic Conditions

Traffic volumes and operating conditions used in the modeling runs were obtained from the traffic analysis prepared by the project traffic engineers, Omni-Means, Ltd. CO modeling was conducted using PM and Saturday peak-hour traffic volumes for build-out year 2010.

Vehicle Emission Rates

Vehicle emission rates were determined using the ARB Board's EMFAC2002 (version 2.2) emission rate program. The free flow vehicle traveling speed for the analyses was selected to be 1 mile per hour (mph) for links at the intersections. A slow speed of 1 mph was selected because it is the highest CO value as compared to all other speeds, including idling, estimated by the EMFAC2002 model.

Receptor Locations

CO concentrations were estimated at four receptor locations near the intersections. Receptors were chosen based on the CO protocol developed for Caltrans by the Institute of Transportation Studies at the University of California, Davis (Garza et al. 1997), and were located 3 meters from the edge of the intersection in all directions to represent a worst-case scenario. Receptor heights were set at 5.9 feet.

Meteorological Conditions

Meteorological inputs to the CALINE4 model were determined using methodology recommended in the CO protocol (Garza et al. 1997). The meteorological conditions used in the modeling represent a calm winter period. The worst-case wind angles option was used to determine a worst-case concentration for each receptor. The meteorological inputs include: 1 meter per second wind speed, ground-level temperature inversion (atmospheric stability class G), wind direction standard deviation equal to five degrees, and a mixing height of 1,000 meters.

Background Concentrations and 8-Hour Values

A background concentration of 2.9 ppm was added to the modeled 2010 1-hour values to account for sources of CO not included in the modeling. Eight-hour modeled values were calculated from the 1-hour values using a persistence factor of 0.7. Background concentration of 4.3 ppm was added to the modeled 2010 8-hour values. All background concentration data were taken from the monitoring data provided by the ARB (California Air Resources Board 2006). Actual 1-hour and 8-hour background concentrations would likely be lower than those used in the CO modeling analysis because the average value for the previous three years was applied as background concentrations, and background levels of CO are anticipated to lower as older, more polluting vehicles are replaced with cleaner, less polluting vehicles.

Toxic Air Contaminant Emissions from Project Operation

Diesel Risk Characterization

Since diesel particulate matter has been identified as a toxic air contaminant, the ARB adopted an Airborne Toxic Control Measure (ATCM) for idling trucks and transport refrigeration units generator sets on refrigerated trucks. The proposed project would include the shopping center, the fast food restaurant, and the gasoline/service station where several diesel-powered delivery truck trips are expected to occur daily.

Transport Refrigeration Units (TRUs) are refrigeration systems powered by diesel internal combustion engines designed to refrigerate or heat perishable products that are transported in various containers, including semi-trailers, truck vans, shipping containers, and rail cars. Although TRU engines are relatively small, ranging from 9 to 36 horsepower, significant numbers of these engines congregate at distribution docks, truck stops, and other facilities, resulting in the potential for health risks to those that live and work nearby.

Benzene Risk Characterization

Gasoline service station is also a source of TAC emission. Benzene is the main source of vapor emission from fueling stations, resulting in the potential for health risks to those that live and work nearby.

STANDARDS OF SIGNIFICANCE

Appendix G of the CEQA Guidelines state that a project would have significant impacts on air quality if it does any of the following:

1) Conflicts with or obstruct implementation of the applicable air quality plan.

2) Violates any air quality standard or contributes substantially to an existing or projected air quality violation.

3) Results in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

4) Exposes sensitive receptors to substantial pollutant concentrations.

5) Creates objectionable odors affecting a substantial number of people.

Thresholds for Criteria Pollutant Impacts

Emission thresholds are contained in the Indirect Source Review Guidelines produced by the Butte County AQMD (Butte County AQMD, 1997). The Butte County AQMD has three levels of emission thresholds, and depending on the emissions produced from the proposed project, different mitigation measures would be required at different levels. Emission thresholds are presented in **Table 4.3-4** and described below**:**

Level A: Indirect sources which have the potential to emit less than 25 pounds per day of ROG or NOx, or less than 80 pounds per day of PM_{10}, would be subject to the recommended list of

standard mitigation measure unless exempted in writing by the applicable planning agency. Developers would be required to coordinate with the planning agencies to identify feasible mitigation measures.

Level B: Indirect sources which have the potential to emit 25 pounds per day of ROG or NOx, or 80 pounds per day of PM_{10}, would select as many supplemental mitigation measures as are feasible, in addition to the recommended list of standard mitigation measures. Developers would be required to coordinate with the planning agencies to identify feasible mitigation measures.

Level C: Indirect sources which have the potential to emit 137 pounds per day or greater of ROG, NO_x, or PM_{10}, would select as many supplemental mitigation measures as are feasible, in addition to the recommended list of standard mitigation measures. Developers would be required to coordinate with the planning agencies to identify feasible mitigation measures. Depending on factors specific to the project, an environmental impact report may also be necessary under the California Environment Quality Act (CEQA).

TABLE 4.3-4
EMISSION ACTION LEVEL THRESHOLDS

Impact Level	Daily Emissions in Pounds per Day			Action
	ROG	NOx	PM10	
Level A	< 25	< 25	< 80	Subject to standard mitigation measures
Level B	25 - 137	25 - 137	80 - 137	Subject to standard and supplemental mitigation measures
Level C	>137	>137	>137	Subject to standard and supplemental mitigation measures. Subject to Environmental Impact Report.

Local Micro-scale Concentration Standards

The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. If ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a State or federal standard, project emissions are considered significant if they increase one hour CO concentrations by 1.0 part per million (ppm) or more or eight hour CO concentrations by 0.45 ppm or more. The following are applicable local emission concentration standards for carbon monoxide.

- California State one-hour CO standard of 20.0 ppm
- California State eight-hour CO standard of 9.0 ppm

Thresholds for Odor Impacts

Assessing odor impacts depends upon such variables as wind speed, wind direction, and the sensitivity of receptors to different odors. The American Society of Testing Materials (ASTM, Standard Method D 1391) has devised a method that considers how many times an air sample

must be diluted with "clean" air before the odor is no longer detectable to an average adult with average odor sensitivity. The number of dilutions needed to reach this threshold level is referred to as a "dilution to threshold" (D/T) factor. An odor with a D/T of 2 (2 parts of fresh air to one part of odorous air) becomes faintly detectable to almost all receptors. At 5 D/T, people become consciously aware of the presence of an odor, and at 5 to 10 D/T, the odor is strong enough to evoke registered complaints. The standard to utilize in assessing off-site odor exposure is preferably below 5 D/T and acceptable below 10 D/T.

Thresholds for Toxic Air Contaminants

The Butte County AQMD regulates levels of air toxics through a permitting process that covers both construction and operation. The Butte County AQMD has adopted Rule 1000 for both new and modified sources that use materials classified as air toxics. The Butte County AQMD CEQA Guidelines for permit processing consider the following types of projects significant:

- Any project that could accidentally release an acutely hazardous material or routinely release a toxic air contaminant posing an acute health hazard; and
- Any project that could emit an air contaminant that is not currently regulated by AQMD rule, but that is on the federal or State air toxics list.

PROJECT IMPACTS AND MITIGATION MEASURES

Air Quality During Construction Activities

Impact 4.3.1 Construction activities such as clearing, excavation and grading operations, construction vehicle traffic and wind blowing over exposed earth would generate exhaust emissions and fugitive particulate matter emissions that would temporarily affect local air quality for adjacent land uses. This is considered a **significant** impact.

Emissions of pollutants generated during construction include fugitive dust and equipment tailpipe emissions of NO_x, CO, and ROG that are generated during construction and are generally highest near the construction site. Emissions from the construction activities of the project were estimated using the URBEMIS 2002 model. It was estimated that the project construction would require a total of 12 months in 2007 to complete. To estimate fugitive dust emissions associated with site grading, it was assumed that a maximum of 1.2 acres (11% of the total acreage) would be disturbed on a single day.

Construction activities for the proposed project would result in short-term impacts on ambient air quality in the area. Temporary construction emissions would result directly from grading and site preparation activities, and indirectly from construction equipment emissions and construction worker commuting patterns. Pollutant emissions would vary from day to day, depending on the level of activity, the specific operations, and the prevailing weather. It is anticipated that construction activities would continue for approximately 12 months.

Construction generally is broken down into three phases: a demolition phase, a grading/site clearing phase and a building phase. Construction-building phase emissions would result from material handling and heavy equipment operations. Because of the use of heavy construction equipment (with associated dust-generating potential), it is anticipated that site-grading activities would result in the highest daily fugitive dust generation.

Heavy equipment required for construction and associated emissions were estimated based on URBEMIS 2002 default values for site grading, building construction, and paving activities. Non-mitigated ROG emissions from architectural coatings were estimated assuming the facility wide average coatings exhibit a ROG content of 250 grams per liter (that ROG content corresponds to use of solvent-based coatings). Emissions associated with worker travel to the construction site and construction truck deliveries were estimated based on default values in the URBEMIS 2002 model.

The project construction would be subject to the requirements of Butte County AQMD Regulation II, Rule 205 - Fugitive Dust Emissions, which requires the implementation of all standard measures to control fugitive dust. For purposes of applying mitigation measures in the URBEMIS 2002 model, it was assumed that all of the dust control measures identified under Rule 205 would be implemented as part of the project. **Table 4.3-5** provides a summary of the maximum daily construction emission estimates for the construction phase of the proposed project. URBEMIS 2002 model outputs are provided in **Appendix C.**

TABLE 4.3-5
ESTIMATED CONSTRUCTION EMISSIONS

Construction Activity	Year	Maximum Daily Emissions (pounds)				
		ROG	NO_X	CO	SO_X	PM10[a]
Demolition	2007	4.2	32.2	31.4	0.0	1.6
Site Grading	2007	6.1	38.0	51.8	0.0	13.5
Building Construction	2007	34.3	102.4	141.3	0.0	3.9
2007 Maximum Value		**34.3**	**102.4**	**141.3**	**0.0**	**15.8**
Significance Criteria – Impact Level B		>25	>25	–	–	>80
Significant? –Impact Level B		***Yes***	***Yes***	N/A	N/A	*No*
Significance Criteria – Impact Level C		>137	>137	–	–	>137
Significant? – Impact Level C		*No*	*No*	N/A	N/A	*No*

[a] *PM10 emission includes the required fugitive dust control under Butte County AQMD.*
Source: Jones and Stokes; California Air Resources Board—URBEMIS2002 Model.

Because the Standard Mitigation Measures for PM_{10} were incorporated into the URBEMIS 2002 analysis, emissions of PM10 are below the significance thresholds for construction, as shown in **Table 4.3-5**. These mitigation measures are also incorporated into mitigation measure **MM 4.3.1** below. There are no thresholds for CO and SO_X. ROG and NO_X emissions would exceed the significance thresholds for construction. Thus, construction emissions exceed the Level B significance thresholds for ROG and NO_X criteria pollutants. This impact is considered significant. Implementation of mitigation measure **MM 4.3.1** is recommended by the Butte County AQMD as mitigation to reduce construction emissions.

Mitigation Measures

MM 4.3.1 The developer shall implement measures to reduce ROG, NO_X and PM_{10} emissions during construction activities. During construction, the following measures shall be included in construction specifications, and implemented during construction.

- Water all active construction sites at least twice daily. The frequency of watering shall be based on the type of operation, soil, and wind exposure.
- Use chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least 4 consecutive days).
- Limit the speed of on-site vehicles to 15 mph on unpaved roads.
- Suspend land clearing, grading, earth moving, or excavation activities when winds exceed 20 miles per hour.
- Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut-and-fill operations, and hydroseed the area.
- Plant vegetative ground cover in disturbed areas as soon as possible.
- Cover inactive storage piles.
- During initial grading, earth moving, or site preparation, construct a paved (or dust-palliative treated) apron, at least 100 feet long, onto the project site from the adjacent site.
- Sweep or wash paved streets adjacent to the development site at the end of each day as necessary to remove excessive accumulations of silt and/or mud that may have accumulated as a result of activities on the development site.
- Post a publicly visible sign with the telephone number and person to contact regarding dust complaints. This person will respond and take corrective action within 24 hours. The telephone number of the Butte County AQMD will also be visible to ensure compliance with the Butte County AQMD Rules 200 & 205 (Nuisance and Fugitive Dust Emissions).
- Before final occupancy, demonstrate that all ground surfaces are covered or treated sufficiently to minimize fugitive dust emissions.
- Utilize temporary traffic control as appropriate during all phases of construction to improve traffic flow as deemed appropriate by the Community Services Department Engineering Division and/or Caltrans.
- Schedule construction activities that direct traffic flow to off-peak hours as much as practicable.
- All construction equipment shall be maintained according to manufacturers' specifications.
- The idling of construction equipment shall be restricted to no longer than 10 minutes.
- Only diesel equipment or diesel vehicles with engines built in 1996 or later shall be used.

- Off-road machinery shall be restricted to those pieces equipped with lean NO_x engine settings where feasible.

- Measures to reduce ROG emissions from architectural coatings shall be implemented. Water-based coatings for both exterior and interior walls on all building structures shall be required. The recommend average solvent content for architectural coatings is approximately 6 grams per liter. That ROG content corresponds to using water-based coatings for everything other than limited specialty uses.

Table 4.3-6 provides a summary of the mitigated emission estimates for the construction phase of the proposed project. URBEMIS2002 model outputs are provided in **Appendix C.**

TABLE 4.3-6
MITIGATED CONSTRUCTION EMISSIONS

Construction Activity	Year	Maximum Daily Emissions (pounds)				
		ROG	NO_x	CO	SO_x	PM_{10}[a]
Demolition	2007	4.2	22.2	31.4	0.0	0.7
Site Grading	2007	6.1	26.2	51.8	0.0	0.8
Building Construction	2007	34.3	70.5	141.3	0.0	1.5
2007 Maximum Value		**34.3**	**70.5**	**141.3**	**0.0**	**1.6**
Significance Criteria – Impact Level B		>25	>25	–	–	>80
Significant? –Impact Level B		***Yes***	***Yes***	N/A	N/A	*No*
Significance Criteria – Impact Level C		>137	>137	–	–	>137
Significant? – Impact Level C		*No*	*No*	N/A	N/A	*No*

[a] *PM10 emission includes the required fugitive dust control under Butte County AQMD.*
Source: Jones and Stokes; California Air Resources Board—URBEMIS2002 Model.

As shown in **Table 4.3-6**, with implementation of mitigation measure **MM 4.3.1**, mitigated construction emissions would lower the NO_x emissions. However, the project construction emissions of ROG and NO_x would still result in a **significant and unavoidable** impact on air quality, as they are beyond the threshold for significance for Level B.

Timing/Implementation: *Upon commencement of construction activities.*

Enforcement/Monitoring: *City of Chico Building and Engineering Divisions and Butte County Air Quality Management District.*

Potential TAC Emissions in Construction-Related Diesel Health Risk

Impact 4.3.2 During the construction of the proposed project, the use of diesel powered vehicles and equipment will produce potential harmful TAC emissions. This is considered **less than signifcant**.

Diesel particulate matter is considered a carcinogenic by California regulatory agencies, and it is recognized that sensitive receivers exposed to high concentrations of diesel particulate matter for many years of duration could experience a significant cancer risk. An example of such a significant cancer risk would be people living for many years next to a heavily used railroad yard. However, it is highly unlikely that off-site receptors downwind of temporary construction sites would experience any significant cancer risk directly associated with diesel emissions from the construction project.

The assessment of human health cancer risk is typically based on a 70-year exposure period (ARB, 2000). Construction activities are sporadic, transitory, and short-term in nature, and once construction activities have ceased, so too have emissions from construction activities. Because the duration of exposure to diesel exhaust during the temporary construction projects will be much shorter than the assumed 70-year exposure period used to estimate lifetime cancer risks, construction of the proposed project is not anticipated to result in an elevated cancer risk to exposed persons due to the short-term nature construction-related diesel exposure. It is estimated that construction activities for the project would continue for approximately 12 months, and most of the diesel emissions would occur during site grading and building construction.

In addition, **Table 4.3-5** indicates that PM_{10} emissions from diesel equipment are relatively low and well below the Butte County AQMD's daily threshold of 80 pounds per day. Consequently, the human health impact of diesel risks associated with construction activities is considered to be **less than significant**.

Mitigation Measures

None Required

Temporary Increase in Construction-Related Odor Emissions

Impact 4.3.3 The project would generate temporary, localized odors during the construction phases, similar to any other construction project in the City. This is considered to be **less than significant**.

Odors would be generated by tailpipe emissions from diesel powered construction equipment, and during paving and painting operations. Odor impacts would be temporary and limited to the area adjacent to the construction operation. Odors would not impact a substantial number of residences for an extended period of time. Therefore, odor impacts would be **less than significant**.

Mitigation Measures

None required.

Potential Increase in ROG and NO_x Emissions from Mobile and Area Sources during Project Operation

Impact 4.3.4 Operation of the proposed project would increase the ROG and NO_x emissions from mobile and area sources. This is considered a **significant** impact.

The main operational impacts associated with the proposed project would be mainly associated with project-related traffic. Minor air quality impacts would be associated with area sources, such as space heating and landscape maintenance activities (mowers, blowers, etc.).

The proposed project would produce long term emissions from vehicle trips generated by the new and expanded retail land uses. Emissions associated with new vehicle trips were estimated based on the land uses of the proposed project, an addition of 97,124 sq. ft. to the south side of the existing Wal-Mart store, a 5,000 sq. ft. fast food restaurant with a drive-through and a gasoline/service station with 12 fueling stations. The trip generation rates for these proposed land uses were based on the average daily trips identified in the *Wal-Mart Store Expansion Traffic Impact Study*.

To estimate emissions associated with proposed project operations, the URBEMIS 2002 model was used. Operational emissions were modeled for maximum daily emissions at build-out condition year 2010. The URBEMIS 2002 model outputs are presented in **Appendix C**. Emissions associated with landscape maintenance activcities and energy use were also included in the area source emission estimates. **Table 4.3-7** presents the total operational emissions anticipated from the project.

TABLE 4.3-7
ESTIMATED OPERATIONAL EMISSIONS (2010 FULL BUILDOUT CONDITIONS)

	Maximum Daily Emissions (pounds per day)				
	ROG	NO_X	CO	SO_X	PM10
Summer Period					
Area Source Emissions	0.45	1.01	3.18	0.00	0.01
Vehicular Emissions	51.90	47.33	577.04	0.41	58.41
Total Emissions	52.34	48.34	580.21	0.41	58.42
Winter Period					
Area Source Emissions	0.07	1.00	0.84	0.00	0.00
Vehicular Emissions	59.21	76.33	579.28	0.34	58.41
Total Emissions	59.29	77.32	598.11	0.34	58.41
Significance Criteria – Level B	>25	>25	--	--	>150
Significant? – Level B	*Yes*	*Yes*	N/A	N/A	*No*
Significance Criteria – Level C	>137	>137	--	--	>137
Significant? – Level C	*No*	*No*	N/A	N/A	*No*

Sources: Jones and Stokes; California Air Resources Board—EMFAC2002 and URBEMIS 2002 Models.

As shown in **Table 4.3-7**, emissions of PM10 are below the significance thresholds for the proposed project operations. There are no thresholds for CO and SO_X. ROG and NO_X emissions would exceed the significance thresholds for the proposed project operations. Thus, operational emissions exceed the Level B significance thresholds for ROG and NO_X criteria pollutants. This impact is considered significant.

Mitigation Measures

MM 4.3.4 The project developer shall implement the following mitigation measures as part of project design:

I. Energy Conservation:

- Use of energy-efficient lighting (includes controls) and process systems such as water heaters, furnaces, and boiler units.
- Use of energy-efficient and automated controls for air conditioning.
- Improve the thermal efficiency of commercial and industrial structures as appropriate by: (1) reducing thermal load with automated and timed temperature controls or (2) occupancy load limits.
- Incorporate shade trees, adequate in number and proportional to the project size, throughout the project site to reduce building heating and cooling requirements.

II. Ancillary Services:

- Provide on-site services such as cafeterias, food vending machines, automatic tellers, etc., as appropriate and in compliance with local development regulations.

III. Transit:

- Provide transit-use incentives, as approved by applicable transportation planning agencies (City of Chico, Caltrans, and Butte County Association of Governments), such as subsidized transit passes and accommodation of staggered or unusual work schedules to encourage transit use.
- Provide on-site/off-site bus turnouts, passenger benches, or shelters where deemed appropriate by local transportation planning agencies.

Table 4.3-8 provides a summary of the mitigated emission estimates for the operational phase of the proposed project.

TABLE 4.3-8
MITIGATED OPERATIONAL EMISSIONS (2010 FULL BUILDOUT CONDITIONS WITH MITIGATION MEASURES)

	Maximum Daily Emissions (pounds per day)				
	ROG	NOx	CO	SOx	PM10
Summer Period					
Area Source Emissions	0.45	1.01	3.18	0.00	0.01
Vehicular Emissions	51.90	47.33	577.04	0.41	58.41
Total Emissions	**52.34**	**48.34**	**580.21**	**0.41**	**58.42**
Winter Period					
Area Source Emissions	0.07	1.00	0.84	0.00	0.00
Vehicular Emissions	59.21	76.33	579.28	0.34	58.41
Total Emissions	**59.29**	**77.32**	**598.11**	**0.34**	**58.41**
Significance Criteria – Level B	>25	>25	--	--	>150
Significant? – Level B	***Yes***	***Yes***	N/A	N/A	*No*
Significance Criteria – Level C	>137	>137	--	--	>137
Significant? – Level C	*No*	*No*	N/A	N/A	*No*

Sources: Jones and Stokes; California Air Resources Board—EMFAC2002 and URBEMIS 2002 Models.

All measures listed in **MM 4.3.4** were incorporated into the mitigated operational emissions analysis. As shown in **Table 4.3-7**, with implementation of mitigation measure **MM 4.3.4**, mitigated operational emissions would lower the NOx emissions. However, the project operation emissions of ROG and NOx would still result in a **significant and unavoidable** impact on air quality, as the project would surpass the Level B thresholds established by BCAQMD.

Timing/Implementation: *Inclusion of mitigation measures into project design plan prior to commencement of construction activities.*

Enforcement/Monitoring: *City of Chico Building and Engineering Divisions and Butte County Air Quality Management District.*

Potential for Local CO Concentrations at Nearby Intersections

Impact 4.3.5: Project-generated vehicle trips would increase traffic volumes at roadway intersections in the project site vicinity once the project became operational. During periods of near-calm winds, heavily congested intersections can produce elevated levels of CO that could potentially impact nearby sensitive receptors. This is considered a **less than significant** impact.

Traffic Related CO Concentrations (CO Hot Spot Analysis)

Project-generated vehicle trips would increase traffic volumes at roadway intersections in the project site vicinity once the project became operational. During periods of near-calm winds, heavily congested intersections can produce elevated levels of CO that could potentially impact nearby sensitive receptors. Therefore, a CO hot spot analysis was conducted to determine whether the Proposed Project would contribute to a violation of the ambient air quality standards for CO at any local intersections.

The Transportation Project-Level Carbon Monoxide Protocol (Garza et al. 1997) was followed to determine whether a CO hot spot is likely to form due to project-generated traffic. In accordance with the Protocol, CO hot spots are typically evaluated when (a) the level of service (LOS) of an intersection decreases to a LOS E or worse; (b) signalization and/or channelization is added to an intersection; and (c) sensitive receptors such as residences, commercial developments, schools, or hospitals, etc. are located in the vicinity of the affected intersection. In general, CO hot spots would be anticipated near affected intersections because operation of vehicles in the vicinity of congested intersections involves vehicle stopping and idling for extended periods.

Three intersections with LOS E or F and having high PM and Saturday peak hour volumes under 2010 with project conditions were modeled for CO impacts because they represent worst case conditions (Omni-Means, Ltd. 2006). For the purposes of providing a worst-case analysis, CO concentrations have been modeled at sidewalk locations adjacent to these study intersections. The three selected intersections are listed below:

- East 20th Street and SR 99 Freeway Northbound Ramps
- East 20th Street and Forest Avenue
- Skyway and Notre Dame Boulevard

The analysis was conducted using the CALINE4 line source dispersion model. Input parameters required for the CALINE4 model include traffic volumes, CO emission factors, receptor locations, meteorological conditions, and background concentrations. The evening peak-hour traffic volumes that include the proposed and cumulative project-generated traffic were modeled. The EMFAC2002 emission rate program was used to estimate CO emission factors in year 2010. EMFAC2002 model outputs are presented in **Appendix C**.

Meteorological inputs to the CALINE4 model were determined using methodology recommended in the CO Protocol (Garza et al. 1997**Error! Bookmark not defined.**). The meteorological conditions used in the modeling represent a calm winter period. The worst-case wind angles option was used to determine a worst-case concentration for each receptor.

A background concentration of 4.3 ppm was added to the modeled 1-hour values to account for sources of CO not included in the modeling. Eight-hour modeled values were calculated from the 1-hour values using a persistence factor of 0.7. A background concentration of 2.9 ppm was added to the modeled 8-hour values. All background concentration data were taken from the highest of the three recent years of monitoring data provided by ARB (ARB 2006) and USEPA (USEPA 2006).

Table 4.3-9 presents maximum 1-hour and 8-hour CO concentrations predicted at locations 3 meters from the edge of the intersection in all directions. The CALINE4 model outputs are presented in **Appendix C**.

TABLE 4.3-9
CO MODELING CONCENTRATIONS (PPM)

Intersection	1-hour	8-hour	1-hour	8-hour
	PM	PM	Sat	Sat
E. 20th Street / SR 99 NB Ramp	7.7	5.3	7.5	5.1
E. 20th Street / Forest Avenue	7.2	4.9	7.5	5.1
Skyway / Notre Dame Blvd	7.8	5.3	7.8	5.3
CAAQS Standard	20.0	9.0	20.0	9.0
Significant?	No	No	No	No

Note: Background concentrations of 4.3 ppm and 2.9 ppm were added to the modeling 1-hour and 8-hour results, respectively.
Source: Jones and Stokes

The results show that the State one- and eight- hour standards of 20 ppm and 9 ppm, respectively, would not be exceeded at any of the three intersections. Therefore, the proposed project is not anticipated to significantly contribute to CO ambient concentration impacts. No violations of either the 1-hour or the 8-hour state CO standard were found. Therefore, this impact is considered **less than significant**.

Mitigation Measures

None required.

Potential Increase in TAC Emissions from Stationary and Mobile Sources during Project Operation

Impact 4.3.6: Diesel emissions from delivery truck traffic, Transport Refrigeration Units (TRUs) and the gas station at the proposed project may result in elevated diesel PM concentrations in neighborhoods surrounding the site. This is considered a **potentially significant** impact.

Delivery Trucks and TRUs

The potential toxic air contaminants impacts associated with the proposed project would be associated with diesel-powered delivery trucks, TRUs, and the gas service station. Diesel emissions from delivery trucks traffic and TRUs at the proposed project may result in elevated diesel PM concentrations in neighborhoods surrounding the site. To address whether the proposed project would result in diesel PM concentrations that would contribute substantial health risks to sensitive receptors in the neighborhood, the emissions associated with project-generated delivery truck traffic and TRUs were compared to the ARB significance criteria.

ARB significance criteria takes into account (1) the amount of daily truck traffic, and (2) the proximity of circulation routes and loading dock areas to sensitive receptor locations. Based on ARB project siting recommendations in their "Air Quality and Land Use Handbook," the project proponent should:

- Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week); and

- Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.

According to the ARB siting recommendation (i.e., sensitive receptors no closer than 1,000 feet from facility that accommodates more than 100 trucks per day), if no residences, schools, convalescent homes, etc. are located (or proposed to be located) within 1,000 feet of this facility, then potential health effects are likely to be less-than-significant and as such, no health risk assessment is needed.

According to the Traffic Impact Study (Omni-Means, Ltd. 2006), the proposed project will have an average of 85 delivery trucks per week. The traffic data indicated that the total number of 12 to 13 trucks per day is below the ARB's 100 trucks per day threshold. Assuming that all delivery trucks will have TRUs, the total number of 12 to 13 TRU trucks per day would be below the ARB's 40 TRUs per day threshold. Also, assuming that all 85 trucks with TRUs per week will complete their delivery stops within 2 hours at the project site, an estimated total number of TRUs operating onsite would be approximately 170 hours per week, which is below the ARB advisory threshold of 300 hours per week. The nearest sensitive receptors are located more than 1,000 feet of the proposed project site, primarily because Wal-Mart Supercenter is more than 800 feet from Forest Avenue. Consequently, diesel emissions associated with the project were estimated as part of the PM_{10} emissions analysis but a diesel exhaust health risk assessment is not warranted by this project because the project is not expected to generate a significant number of diesel truck trips and TRUs. Therefore, this impact is considered **less than significant**.

Gas Service Station

The proposed project may include a two-island vehicle fueling facility. Each island is usually designed with two double-sided gasoline dispensers, for a total of 12 fueling pumps. Scenario 6B of the California Air Pollution Control Officers Association (CAPCOA) Air Toxics "Hot Spots" Program Gasoline Service Station Industry wide Risk Assessment Guidelines was used to estimate benzene emissions that will result from the proposed gasoline station.

Benzene is the main TAC emission resulting from fueling stations. Benzene emissions results from the following four processes:

- Loading – Loading emissions occur when a cargo tank truck unloads gasoline to the storage tanks at the gasoline station. Storage tanks vapors are emitted from the vent pipe during the initial fuel transfer period. These emissions are significantly reduced when the vent pipe includes a pressure/vacuum valve.

- Breathing – Gasoline vapors are emitted from the storage tank vent pipe due to temperature and pressure changes within the storage tank vapor space.

- Refueling – During the refueling process, gasoline vapors are emitted at the vehicle/nozzle interface.

- Spillage – Spillage emissions occur from the spills during vehicle fueling.

At this time, the throughput level of the proposed fueling station is unknown. Operation of the proposed gas service station is expected to generate potential TAC vapor emissions. The proposed gas station will be required to comply with the Butte County AQMD's Regulation and Rules on an on-going basis. Prior to construction, the gas station will be required to obtain an AQMD permit and, possibly, conduct an associated Health Risk Assessment. Given that AQMD permit will be required, which ensures that all equipment and processes comply with state and federal requirements, and District rules and regulations, this impact is considered **less than significant**.

Mitigation Measures

None required.

Potential Increase in Odor Emissions from Stationary and Mobile Sources during Project Operation

Impact 4.3.7: The project would generate potential odors and gaseous fumes by evaporative emissions and tailpipe emissions from passenger vehicles and diesel powered delivery trucks during operations and will include a fast food restaurant, which may emit food odors that may be perceived by surrounding residents. This is considered a **less than significant** impact.

Objectionable Odors from Passenger Vehicles and Diesel-powered Trucks

The project would generate potential odors and gaseous fumes by evaporative emissions and tailpipe emissions from passenger vehicles and diesel powered delivery trucks during operations. Odor impacts would be limited to the circulation routes and loading dock areas. Operation of the proposed project may create a nuisance when located in close proximity to sensitive receptors. However, these potential odors are not expected to impact a substantial number of sensitive receptor land uses for an extended period of time, primarily because all sensitive receptors are more than 1,000 feet from the odor sources. Therefore, odor impacts would be **less than significant**.

Objectionable Odors from Fast Food Restaurant

The proposed project will include a fast food restaurant, which may emit food odors that may be perceived surrounding residents. These odors will be intermittent and very faint, and, like the construction odors, will likely disperse before being received by adjacent residences. The on-site restaurants would be required to comply on an on-going basis with the Butte County Public Health Department, Environmental Health Division regulations concerning odors. The Public Health Department has requirements for food preparation and storage as well as ventilation requirements. Therefore, the proposed project is not expected to create objectionable odors. Therefore, odor impacts would be **less than significant**.

Mitigation Measures

None required.

Conflict with the BCAQMD Air Quality Attainment Plan

Impact 4.3.8 The implementation of the proposed project may have the potential to create uses and/or air quality impacts for the project area beyond those

assumed in the BCAQMD Air Quality Attainment Plan. This is considered a **less than significant** impact to air quality.

Implementation of the proposed project would increase traffic to the area, which may result in traffic level beyond those assumed in the Air Quality Management Plan. The proposed project is located in an area designated for commercial development by the City of Chico in the General Plan. The Wal-Mart Expansion project does not propose development beyond those allowed in the Community Commercial and Community Services land use designations. The General Plan land use designations were developed, in part, to be compatible with the air quality standard of the Open Space and Environmental Conservation Element of the City General Plan and of the BCAQMD Air Quality Attainment Plan. Because the proposed project is an allowable use in the land use designations for the site, is consistent with the policies and actions in the Open Space and Environmental Conservation Element, does not create uses or long term air quality impacts (with implementation of mitigation measures listed above) beyond those envisioned for the site, the proposed Wal-Mart Expansion is compatible with the BCAQMD Air Quality Attainment Plan. Therefore, this impact is considered **less than significant**.

Mitigation Measures

None required

CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

Setting

The cumulative setting for air quality is Butte County and the northern Sacramento Valley Air Basin. The climate and geography of the Northern Sacramento Valley Air Basin limits the dilution and transportation of any air pollutants that are released to the atmosphere. At current levels of development and activity the air basin exceeds the state ambient standards for particulates and ozone. Exceedances of the federal ambient air quality standards have occurred in Butte County and the County was recommended for designation as a basic nonattainment area for the federal 8-hour ozone standard (BCAQMD, 2005). Cumulative growth in population, vehicle use and industrial activity could inhibit efforts to improve regional air quality and attain the ambient air quality standards.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Impacts to Air Quality

Impact 4.3.9 The project would contribute to cumulative air quality impacts. These impacts would be **cumulatively considerable and significant** impacts**.**

The primary localized (as compared to regional) cumulative impact would be due to carbon monoxide (CO) emitted by vehicles attracted to the site. Worst-case carbon monoxide concentrations both with project traffic and cumulative traffic increases were predicted and are shown in **Table 4.3-9**. Concentrations were found to be well below the ambient air quality standards, so local-scale cumulative impacts would be less than significant.

Butte County is a nonattainment area for the federal ozone standards and state particulate matter (PM_{10}/$PM_{2.5}$) standards. Growth in emissions from the proposed project, other institutional entities such as the California State University, Chico, and continuing regional growth in population, employment and commerce within Chico, Butte County and the Northern

Sacramento Air Basin would add to the emissions burden within the air basin. The *Northern Sacramento Valley Air Basin 2003 Air Quality Attainment Plan* projects declining emissions of ozone precursors and particulate matter through the year 2020, but does not demonstrate that the ozone and particulate matter standards will be attained by this date (even with the application of the most stringent BCAQMD standards to all projects constructed in the Chico area). Consequently, emissions from the project and cumulative development would likely delay eventual attainment of the state/federal ambient air quality standards in Butte County and the Northern Sacramento Valley Air Basin.

Mitigation Measure

MM 4.3.9 Implement mitigation measures **MM 4.3.1** and **4.3.4.**

These measures include Standard Mitigations Measures as well as Best Available Mitigation Measures as identified in the BCAQMD's *Indirect Source Review Guidelines* and City of Chico's *Best Practices Manual.* Implementation of the above listed mitigation measures would reduce air quality impact however this impact cannot be mitigated to a less than significant level. Therefore, this is considered a **significant and unavoidable** impact.

REFERENCES

Butte County Air Quality Management District. 1997. *Indirect Source Review Guidelines*.

Butte County Air Quality Management District. 2005. *Air Quality Summary for 2005*. Refer to: http://www.bcaqmd.org/FORMS/2005%20AIRQUALITYSUMMARY.pdf

California Air Resources Board (ARB). 2006. Top 4 Measurements and Days Above the Standard. Refer to: http://www.arb.ca.gov/adam/cgi-bin/db2www/adamtop4.d2w/start>.

California Air Resources Board. July 9, 2003. *Ambient Air Quality Standards*. Refer to: (http://www.arb.ca.gov.aq./aaqs2.pdf)

California Air Resources Board. 2004. *Aerometric Data Analysis and Management (ADAM)*. Refer to: (http://www.arb.ca.gov./adam/cgi-bin/adamtop/d2wstart)

California Air Resources Board. October 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. Refer to: http://www.arb.ca.gov/diesel/documents/rrpFinal.pdf

Garza, Vincente J.; Peter Granly; Daniel Sperling. 1997. *Transportation Project-Level Carbon Monoxide Protocol.* Institute of Transportation Studies, University of California, Davis. Report UCD-ITS-RR-97-21

Jones and Stokes. 2006. *Draft Air Quality Analysis of the Wal-Mart Store Expansion Project in Chico, California*. San Diego, CA

Northern Sacramento Valley Air Basin. 2003. *Northern Sacramento Valley Air Basin 2003 Air Quality Attainment Plan*.

4.4 Biological Resources

This section evaluates the potential for individual and cumulative impacts to biological resources resulting from the proposed Wal-Mart Expansion project. The analysis of biological resources presented in this section is based on a review of the current project description as well as data collected from the site survey presented in the wetland delineation, botanical survey, and biological resource reports prepared by Hanover (Hanover 2002, Hanover 2003a, Hanover 2003b), which are contained in their entirety in **Appendix D**.

4.4.1 EXISTING SETTING

The following section describes conditions at the proposed project site with emphasis on biological resources.

REGIONAL SETTING

The proposed Wal-Mart Expansion project site is located within Butte County, California on the Chico United States Geological Survey (USGS) 7.5-minute topographic quadrangle map (T22N, R2E, Section 31). As defined by the California Department of Fish and Game (DFG) Wildlife and Habitat Data Analysis Branch, wildlife habitat within Butte County consists of (but is not limited to) 36 different classifications, including annual grassland, fresh emergent wetland, montane riparian, urban, and valley foothill riparian (DFG 2004). **Table 4.4-1** in **Appendix E** identifies species commonly occurring within Butte County.

LOCAL SETTING

The project site consists of a flat vacant area and an existing Wal-Mart store and parking lot. The vacant portion of the site appears to be disked on a regular basis for weed abatement. Habitat consists of valley grassland with scattered riparian areas and associated seasonal wetlands (Hanover 2003a). The surrounding areas are commercial and urban. A footpath oriented in a northeast to southwest direction bisects the site.

BIOLOGICAL COMMUNITIES

Habitat occurring on the project site is discussed below. Special-status wildlife species, sensitive plants, and critical habitat expected or known to occur within the general project area are also addressed in this section. The project site consists of developed urban areas and valley grassland and scattered riparian habitat with associated seasonal wetlands (Hanover 2003a).

Valley Grassland

As described in the botanist report, valley grassland habitats are comprised of predominately annual species that typically germinate during the fall and winter rainy season. The onset of summer usually completes the life cycle for annual species. A few perennials may emerge and flower in late summer and early fall. Valley grassland also supports vernal pool areas, which contain their own unique flora. Onsite survey for special status plants conducted on April 14 and 15, 2003, found no well-developed vernal pools or associated flora (Hanover 2003a). Various ruderal alien species were identified in areas of disturbance throughout the project location.

Riparian and Wetland Community

Riparian vegetation at the project location is associated with seasonal wetlands scattered throughout the vacant site. Some of the wetlands are thought to be the product of over spray

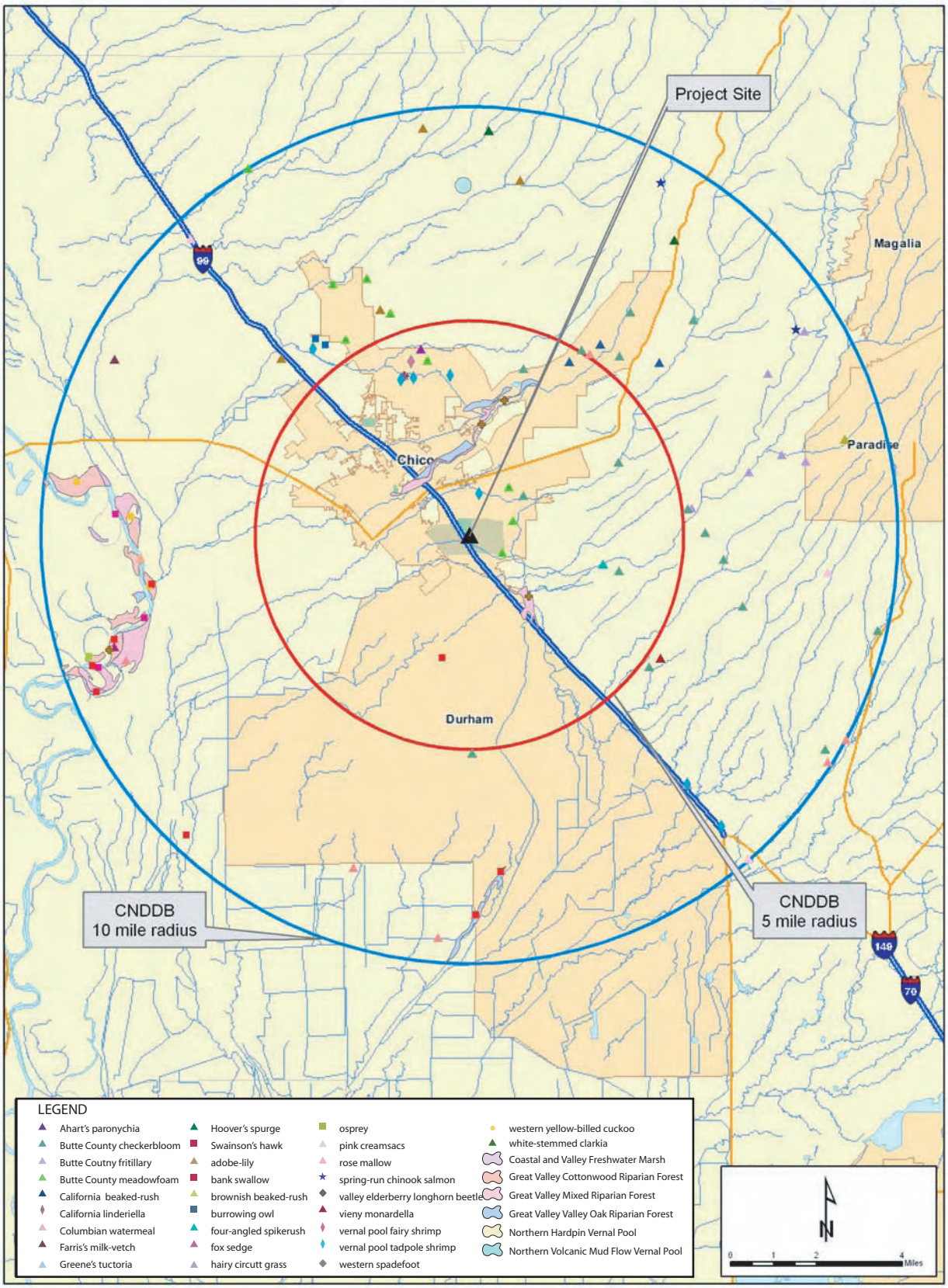
from the adjacent Wal-Mart landscape irrigation (Hanover 2002). Onsite botanical investigations reported that riparian elements are not well developed and are primarily located along the north and west margins of the site. Species associated with riparian vegetation identified by Hanover (2003a) during the botanical survey included, arroyo willow (*Salix lasiolepis*), cocklebur (*Xanthium strumarium*), coyote thistle (*Eryngium castrense*), curly dock (*Rumex crispus*), Fremont's cottonwood (*Populus fremontii*), Fremont's zigadene (*Zigadenus fremontii*), mule fat (*Baccharis salicifolia*), pickleseed buttercup (*Ranunculus muricatus*); spike rush (*Eleocharis sp.*), stipitate popcorn flower (*Plagiobothrys stipitatus*), and tall cyperus (*Cyperus eragrostis*).

Special-Status Species

In general, special-status species include plants and wildlife that are:

- Listed and protected under the Federal and/or California Endangered Species Acts;
- Listed and protected under other federal and/or state regulations;
- Sufficiently rare to qualify for listing or protection under federal and/or state regulations; or
- Considered unique or in decline by the scientific community.

Table 4.4-2 of **Appendix E** lists special status species identified by the United States Fish and Wildlife Service (USFWS) that may be affected by projects in Butte County as well as species listed in the California Natural Diversity Database (CNDDB) and California Native Plant Society (CNPS) inventory within a nine USGS topographical quadrangle search range (USFWS 2004; DFG 2006; CNPS 2004). Quadrangles included in the data search were Chico, Hamlin Canyon, Llano Seco, Nelson, Nord, Ord Ferry, Paradise West, Richardson Springs, and Shippee. Species listed as being unlikely to occur within the project area are considered to be beyond their known range or to have low habitat suitability for reproduction, cover, and/or foraging. **Figure 4.4-1** shows occurrences of special-status species listed in the CNDDB within a ten-mile radius of the project area. Species that possibly or will likely occur within the project area and therefore potentially need further study are listed in **Table 4.4-3** of **Appendix E**.



Source: CNDDB, 2003; Tiger 2000

T:\Chico\Chico Wal-Mart\Graphic Development\AI Files\Figure 4.4-1.ai, April 2006

N

FIGURE 4.4-1
CNDDB 5 AND 10 MILE RADIUS MAP

PMC

LISTED AND SPECIAL-STATUS PLANTS

As shown on **Figure 4.4-1**, several special-status plant species occur within ten miles of the project area. Many of these species are associated with critical habitat and wetland areas located within the region. Based on literature review (e.g., CNPS Inventory of Rare and Endangered Plants), soil survey analysis, the botanical survey report (Hanover 2003a), and species range information; none of these special-status plant species has the potential for occurrence within the project area.

Listed and Special-Status Animals

Based on USFWS and CNDDB information, several special-status animals have a potential for occurrence within habitat (valley grassland with scattered riparian areas) found at the project site (see **Table 4.4-2** of **Appendix E**). As described by Hanover (2003b), the project location provides low suitability for many of these species such as the western burrowing owl or giant garter snake; therefore, they are not expected to be adversely affected by the development of the Wal-Mart Expansion project.[1] However a variety of transient, nesting, or foraging raptor and migratory bird species do have a potential for occurrence within the project area. These special-status species are discussed below.

Raptors and Migratory Birds

Raptor nests are protected under the Migratory Bird Treaty Act (MBTA) and Section 3503.5 of the California Fish and Game Code. Scattered trees associated with riparian areas within the project vicinity provide potential nest sites for raptors, which could also forage at the project site.

Migratory birds, such as those described below, forage and nest in a variety of habitats including valley grassland and riparian. Active migratory bird nests are also protected under the MBTA, which outlaws their destruction. Therefore, pre-construction nest surveys should be completed.

Aleutian Canada Goose

The Central Valley is one of the main wintering areas for the Aleutian Canada goose (*Branta canadensis leucopareia*), which is a federal delisted species that continues to be monitored by the USFWS as required for the delisting process in the Endangered Species Act of 1973. This goose forages on the ground and in water (or moist fields) for submergent vegetation, grasses, winter wheat, clovers, and waste grain, especially corn and grit (Stokes 1996). This species typically roosts on open water in lakes or ponds. Nesting occurs from March to June in northeastern California and February to June on coastal slopes. Predation of nest sites, hunting, and overgrazing of foraging areas contribute to the decline of this species (DFG 2002).

American Peregrine Falcon

American peregrine falcon (*Falco peregrinus anatum*) is a federal delisted, California listed endangered, California fully protected, California protected, and California Department of Forestry (CDF) sensitive species. This falcon typically catches prey in mid flight (not from a perch)

[1] Inquiries about proposed development and its impact on the giant garter snake and western burrowing owl have become important issues within the City of Chico recently and as such are specifically identified herein. According to the Biological Survey Report competed by Hanover, Inc., the site is not likely to support either the giant garter snake or the western burrowing owl and therefore they are not identified as a potentially impacted species for the proposed project (Hanover, 2003b).

and eats a variety of birds, mammals, insects, and fish. This species requires protected cliffs and ledges for cover. Peregrine falcon breed from early March through August. Competition for nest sites and predation contribute to this species decline (DFG 2002).

Bank Swallow

Bank swallow (*Riparia riparia*) is a California listed threatened species. This bird forages primarily over open riparian areas for a variety of insects including, flies, bees, and beetles. Bank swallow use holes in cliffs and river banks as well as shoreline vegetation for cover. Reproduction occurs from early May through July, with peak activity from May to June. Alteration of rivers and streams have disturbed historic nesting areas and contributed to the decline of this species (DFG 2002).

California Thrasher

California thrasher (*Toxostoma redivivum*) is a federal species of concern. This bird forages primarily on the ground for insects, spiders, terrestrial invertebrates, fruits, acorns, and seeds. California thrasher require dense chaparral or riparian vegetation for cover. Reproduction occurs from early December into August, with peak periods from mid-May to mid-June. Predation by hawks, feral cats, and domestic cats contribute to this species' decline (DFG 2002).

Ferruginous Hawk

Ferruginous hawk (*Buteo regalis*) is a federal and California species of concern. This hawk glides low over open areas to intercept prey on the ground or hunts from high mound perches. Prey mainly consists of lagomorphs, ground squirrel, and mice, but also includes birds, reptiles, and amphibians. Lagomorph population cycles may have a direct relation to ferruginous hawk population trends. This species roosts in open areas, such as a single trees or utility poles, and breeds from Oregon to Canada with egg-laying beginning in April. Competition for prey as well as urban development and loss of suitable wintering habitat in California contributes to the decline of this species (DFG 2002).

Great Blue Heron

The great blue heron (*Ardea herodias*) nest sites are considered special by the DFG and protected under the MBTA. This bird is fairly common yearlong throughout most of California, including Butte County. This species typically hunts by standing motionless, or walking slowly, in shallow water (less than 12 inches) or less commonly in open fields. Fish makes up nearly 75 percent of this species diet, which also includes small rodents, amphibians, snakes, lizards, insects, crustaceans, and occasionally small birds. Great blue heron will perch and roost in secluded tall trees as well as perch on offshore kelp beds. In early February this heron begins courtship and nest building followed by egg laying in late February or March. Great blue heron are sensitive to human disturbance near nest sites and are probably also sensitive to pesticides and herbicides in nesting and foraging areas (DFG 2002).

Great Egret

Great egret (*Ardea alba*) nest sites are considered special by the DFG and protected under the MBTA. This bird is fairly common yearlong throughout most of California, including Butte County. This species forages is shallow water, along shores of estuaries, lakes, ditches, slow-moving streams, salt ponds, mudflats, irrigated cropland, and pasture by standing motionless or stalking prey slowly, then striking rapidly with its bill. Prey consists mainly of fish, but also includes

amphibians, snakes, snails, crustaceans, insects, and small mammals. Great egret roost communally in trees and typically rest during the day in or near the same habitat where it forages. This species usually nests from March through July. Great egret are sensitive to human intrusion into nesting colonies; high wind destroying eggs and nests; eggshell thinning from pesticides; and reduction of habitat from wetland drainage (DFG 2002).

Greater Sandhill Crane

Greater sandhill crane (*Grus Canadensis tabida*) is a California threatened, California fully protected, and United States Forest Service (USFS) sensitive species. This crane winters in the Butte County region, where it frequents annual and perennial grassland habitats, moist croplands with rice or corn stubble, and open emergent wetlands. Greater sandhill crane prefers to feed on open shortgrass plains, grain fields, and open wetlands, but also uses dry plains far from water. This crane has a varying diet, which includes grasses, forbs, cereal crops, roots, tubers, seeds, grains, earthworms, insects, mice, small birds, snakes, frogs, and crayfish. The sandhill crane uses its bill to probe the soil and rip prey to small pieces before being consumed. This species roosts in flocks at night in moist fields, shallow water, expansive dry grassland, island sites, and wide sandbars. Courtship begins in April, breeding peaks between May and June, and nesting is completed by late August. This species is particularly sensitive to human disturbance up to a mile away from nest sites and has lost foraging area to grazing (DFG 2002).

Lawrence's Goldfinch

Lawrence's goldfinch (*Carduelis lawrencei*) is a federal species of concern. This bird feeds mostly on seeds and an occasional insect. Trees, especially oaks, and shrubs are used for nesting, escape, and cover. Reproduction typically occurs in March and April. Competition with other avian species for nest sites contributes to the decline of this species (DFG 2002).

Lewis' Woodpecker

Lewis' woodpecker (*Melanerpes lewis*) is a federal species of concern. This bird feeds primarily on insects during the spring and summer, and fruits and berries in the fall and winter. Lewis' woodpecker uses cavities and foliage of trees and shrubs for cover. Reproduction occurs from early May through July, with a peak in late May and early June. Competition and loss of habitat contributes to the decline of this species (DFG 2002).

Loggerhead Shrike

Loggerhead shrike (*Lanius ludovicianus*) is a federal and California species of concern. This bird preys mostly on large insects, which it frequently skewers on thorns, sharp twigs, or barbwire to feed or cache for a later feeding. Loggerhead shrike use shrubs and small trees for cover. Reproduction occurs from March through May, but young remain in nests until July or August. Nest predation and possible eggshell thinning due to contamination contributes to the decline of this species (DFG 2002).

Long-billed Curlew

Long-billed curlew (*Numenius americanus*) is a federal and California species of concern. This species uses its long bill to probe into the substrate or to grab prey from mud surfaces. Inland prey includes insects, worms, spiders, berries, crayfish, snails, and small crustaceans. This bird typically roosts in coastal estuaries, but uses high salt marsh, pastures, and salt ponds during high tide periods. Breeding season for long-billed curlew occurs from mid-April to September.

Reduction in breeding range and increased agriculture contributes to the decline of this species (DFG 2002).

Nuttall's Woodpecker

Nuttall's woodpecker (*Picoides nuttallii*) is a species of local concern to the Sacramento Fish and Wildlife Office. This bird feeds mainly on beetles, but also eats fruits, poison oak seeds, nuts, and sap. Nuttall's woodpecker uses tree cavities and foliage of oak and riparian habitats for cover. Reproduction occurs from late March to early July, with peak activity from April to June. Loss of habitat and predation contribute to the decline of this species (DFG 2002).

Oak (Plain) Titmouse

Oak titmouse (*Baeolophus inornatus*) is a species of local concern. This bird eats insects, spiders, berries, acorns, and seeds that it gleans from twigs and branches of trees. Oak titmouse finds cover primarily in oak and pine-oak woodlands, but also in riparian habitats. Reproduction occurs from March to July, with peak activity in April and May. Predation by small mammals and hawks as well as nest predation contributes to the decline of this species (DFG 2002).

Red-breasted Sapsucker

Red-breasted sapsucker (*Sphyrapicus ruber*) is a federal species of concern. This bird feeds on insects, primarily ants, as well as sap and soft tissues from trees. Red-breasted sapsucker nest and roost in aspen, willow, birch, and orchard trees near streams. Reproduction for this species peaks from early June to early July. Loss of habitat contributes to the decline of this species (DFG 2002).

Rufous Hummingbird

Rufous hummingbird (*Selasphorus rufus*) is a federal species of concern. This bird takes nectar from a variety of flowering plants, but also eats insects, spiders, and tree sap. Trees and shrubs in several different habitats, including riparian, provide cover for this hummingbird. Reproduction occurs from late April through July. Predation and unseasonable cold weather that kills food sources contribute to the decline of this species (DFG 2002).

Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is a California listed threatened species. This raptor catches prey in flight (not from a perch), including mice, gophers, ground squirrels, rabbits, amphibians, reptiles, other birds, and bats. Swainson's hawk roost in large trees and occasionally on the ground. Reproduction occurs from late March to late August, with peak activity from late May through July. Loss and/or disturbance of roost sites contribute to the decline of this species (DFG 2002).

Tricolored Blackbird

Tricolored blackbird (*Agelaius tricolor*) is a federal and California species of concern. This bird eats mainly insects and spiders in the spring and summer and seeds, grains, rice, and oats during the fall and winter. Tricolored blackbird roost in large flocks within emergent wetlands, trees, or shrubs. Typical breeding season occurs from mid April through late July, however breeding in the Sacramento Valley has been reported in October and November. Nest destruction as well as predation by mammals and other birds contribute to the decline of this species (DFG 2002).

Western Yellow-billed Cuckoo

Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) is a federal candidate for listing and a California listed endangered species. This bird preys mostly on insects, but also eats frogs, lizards, and fruit. Roosting sites consist of densely vegetated areas, typically with willows. Reproduction occurs from mid June to mid July. Loss of riparian habitat contributes to the decline of this species (DFG 2002).

White-tailed (Black-shouldered) Kite

White-tailed kite (*Elanus leucurus*) is a federal species of concern. This raptor preys primarily on voles and small mammals, but also eats other birds, insects, reptiles, and amphibians. Broad-leafed deciduous trees with dense canopies are typically used by this species for cover. Reproduction occurs from February to October, with peak activity from May to August. Nest predation and loss of habitat contribute to the decline of this species (DFG 2002).

Willow Flycatcher

Willow flycatcher (*Empidonax traillii*) is a California listed endangered species. This bird hunts from exposed perches for flying insects and occasionally eats berries and seeds. Willow flycatcher nest, roost, and hunt from dense willow thickets. Reproduction peaks in June, when egg laying most frequently occurs. Loss of habitat, grazing of willow by livestock, and cowbird parasitism contribute to the decline of this species (DFG 2002).

Sensitive Habitats

Sensitive habitats include a) areas of special concern to resource agencies, b) areas protected under the California Environmental Quality Act (CEQA), c) areas designated as sensitive natural communities by DFG, d) areas outlined in Section 1600 of the California Fish and Game Code, e) areas regulated under Section 404 of the federal Clean Water Act (CWA), and f) areas protected under local regulations and policies. Sensitive habitat at the project location includes potential jurisdictional waters of the United States requiring consultation with the US Army Corps of Engineers (USACE).

JURISDICTIONAL WATERS

In October 2002, Hanover performed a wetland delineation of the project site following guidelines outlined in the USACE wetland delineation manual (USACE 1987). **Figure 4.4-2** identifies wetlands on the project site. Hanover determined that 0.269 acres of potentially jurisdictional seasonal wetlands could be impacted from the proposed project (Hanover 2002). Additionally, they believe it likely that some of the wetlands are the product of over spray from the adjacent Wal-Mart landscape irrigation (Hanover 2002). Hanover's findings were submitted to the Sacramento office of the USACE for verification. The application was assigned identification number 200300094 for USACE processing. To date, no verification has been made. Should the onsite seasonal wetlands be determined (by USACE) to be jurisdictional Waters of the United States as defined in Title 33 of the Code of Federal Regulations (Clean Water Act), authorization (through the appropriate permit application) would be required from USACE for the proposed project to proceed.

WILDLIFE CORRIDORS

Wildlife corridors refer to established migration routes commonly used by resident and migratory species for passage from one geographic location to another. Corridors are present in a variety of habitats and link otherwise fragmented acres of undisturbed area. Maintaining the continuity of established wildlife corridors is important to a) sustain species with specific foraging requirements, b) preserve a species' distribution potential, and c) retain diversity among many wildlife populations. Therefore, resource agencies consider wildlife corridors to be a sensitive resource. Hanover identified the project site as being small in size within an urban location; as a result, no established wildlife corridors are expected to occur in the project area (Hanover 2003b). Consequently, wildlife corridors are not expected to be adversely affected by the proposed project.

4.4.2 Regulatory Framework

This section lists specific environmental review and consultation requirements and identifies permits and approvals that must be obtained from local, state, and federal agencies before construction of the proposed project.

FEDERAL

Federal Endangered Species Act

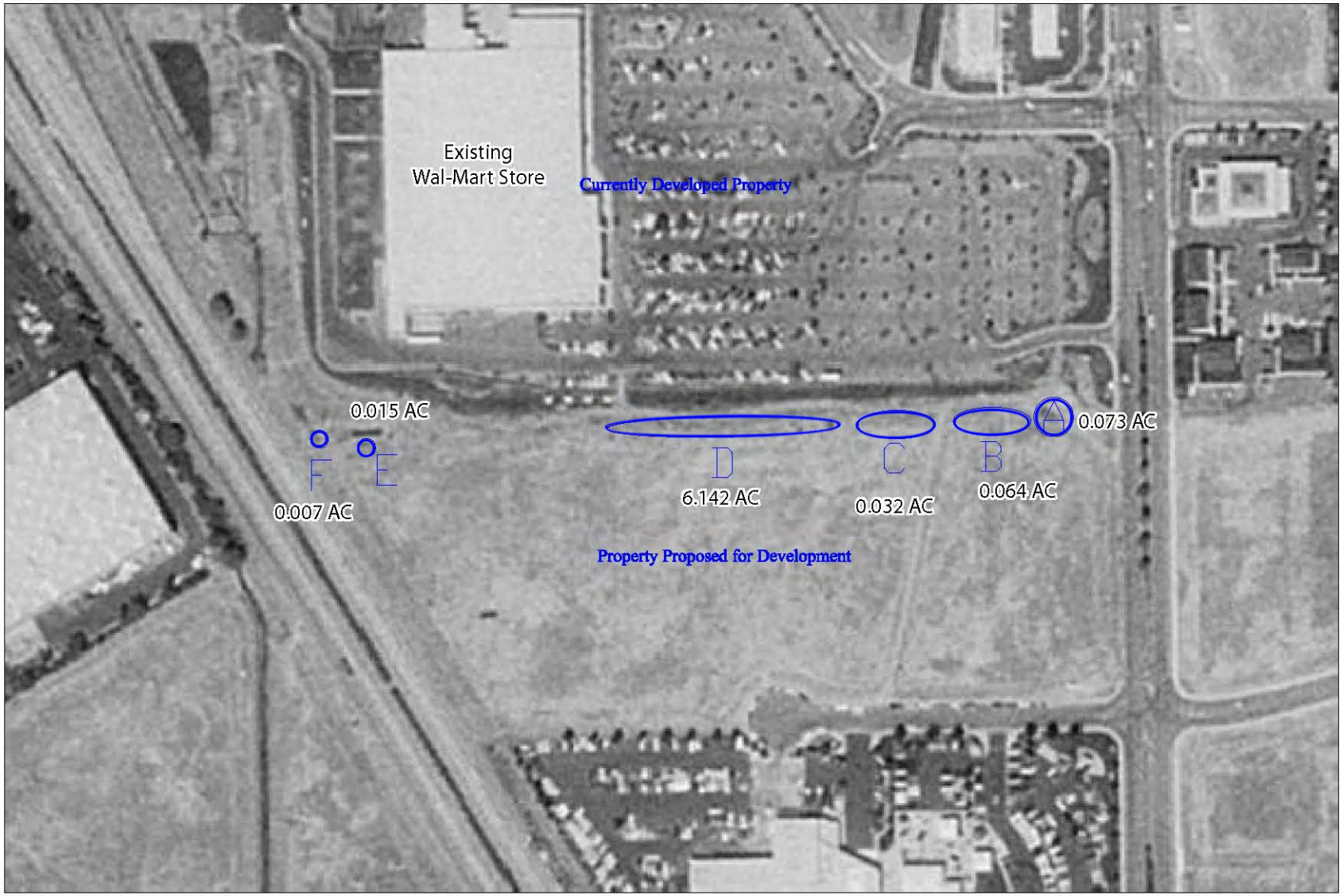
The federal Endangered Species Act (FESA) was enacted in 1973 to protect species that are endangered or threatened with extinction. FESA prohibits the "take" of a listed (endangered or threatened) species and defines "take" as harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct (16 USC 1531 et seq.; 50 CFR 17.1 et seq.). Section 7 of FESA directs all Federal agencies to conserve endangered and threatened species and, in consultation with the USFWS, to ensure that their actions (or actions under their jurisdiction) do not jeopardize listed species or adversely modify critical habitat. Section 10 of FESA directs private landowners, corporations, state and local governments, or other non-Federal landowners to develop a Habitat Conservation Plan (HCP) and obtain an incidental take permit from USFWS before conducting any activity on their land that potentially may harm (or "take") a listed species.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, possessing, or trading of migratory birds or their nests except in accordance with regulations prescribed by the USFWS and DFG (16 USC 703-711).

Clean Water Act

The Clean Water Act, as amended in 1977, established the basic structure for regulating discharges of pollutants into waters of the United States. Section 404 of the Clean Water Act requires U.S. Army Corps of Engineers authorization for the discharge of dredged or fill material into all waters of the United States, including adjacent and isolated wetlands. Discharge of fill material includes, but is not limited to: placement of fill that is necessary for the construction of any other structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; dams and dikes; artificial islands; property protection or



Source: Hanover Inc.

N

FIGURE 4.4-2
POTENTIAL WETLAND AREAS

PMC

T:\Chico\Chico Wal-Mart\Graphic Development\All Files\Section 3.0\Revised Sept2006\Figure 4.4-2.ai, September 2006

reclamation devices such as riprap, groins, seawalls, breakwaters, and revetments; beach nourishment; levees; fill for intake and outfall pipes and subaqueous utility lines; fill associated with creation of ponds; dewatering of dredged material prior to final disposal; fills for access roadways, cofferdams, storage and work areas; and any other work involving the discharge of fill or dredged material (33 CFR 26). A Section 404 permit is required for both permanent and temporary discharges. Section 401 of the Clean Water Act requires any activity that may result in a discharge of a pollutant into waters of the United States comply with applicable regulatory water quality standards. The State Regional Water Quality Control Board administers Section 401 permits for these activities.

STATE

California Endangered Species Act

The California Endangered Species Act (CESA) was enacted in 1984 to ensure that actions under state agency jurisdiction do not jeopardize the existence of state-listed endangered or threatened species. Similar to the FESA, the CESA prohibits taking of state-listed endangered or threatened plants and wildlife. CESA requires state agencies to consult with the DFG when preparing CEQA documents for projects or actions potentially impacting listed species or special habitats. The DFG determines whether jeopardy of a state-listed species may occur and offers reasonable project alternatives or guidance for mitigation planning.

California Code of Regulations

In addition to formally listed species, many other species in California have regulatory protection under various sections of the California Code of Regulations enforced by the DFG. Species that may be considered for listing, due to declining numbers or threatened habitat, are protected as "rare" or "species of special concern." Certain species are also designated as "fully protected," which prevents take of an individual or their habitat unless for scientific purposes. In addition, the California Code of Regulations protects avian species by making it unlawful to take or possess migratory non-game birds, raptors, or the nest or eggs of any bird species.

Natural areas to be protected are also designated in the California Code of Regulations, including significant wildlife habitat, refuges, natural sloughs, riparian areas, and vernal pools. Waterways in particular are protected, such that, any project that may divert or obstruct the natural flow or substantially alter the bed, channel, or bank of any waterway is subject to regulatory review by the DFG.

California Native Plant Society

The CNPS maintains and publishes an Inventory of Rare and Endangered Vascular Plants of California. The Inventory presents information regarding native California plant species that show a declining population, limited distribution, or are considered by the scientific community to be threatened with extinction. Projects under CEQA review are required to address potential impact to CNPS-listed plants. CNPS definitions for listed plants are as follows:

List 1A: Plants believed extinct.

List 1B: Plants rare, endangered, or threatened in California and elsewhere.

List 2: Plants rare, endangered, or threatened in California, but more numerous elsewhere.

List 3: Plants about which we need more information.

List 4: Plants of limited distribution.

LOCAL

City of Chico General Plan

The City of Chico General Plan identifies open space and environmental conservation guidelines (City of Chico 1999). **Table 4.4-4** analyzes the proposed project with respect to City of Chico General Plan policies.

TABLE 4.4-4
PROJECT CONSISTENCY WITH GENERAL PLAN BIOLOGICAL RESOURCES

City of Chico General Plan Guiding Policy	Consistency with General Plan	Analysis
Policy OS-G-5: Protect habitats that are sensitive, rare, declining, unique or represent valuable biological resources in the Planning Area. These include Resource Conservation and Resource Management areas.	Consistent	The project area consists of valley grassland and riparian habitat within an urban setting. The area is subject to on-going disturbance and does not qualify as sensitive, rare, or unique. In addition, the project site is not identified as a Resource Conservation or Resource Management area in the City's General Plan.
Policy OS-G-6: Preserve and protect populations and supporting habitat of special status species within the Planning Area, including species that are state or federally-listed as Rare, Threatened, or Endangered, all federal "candidate" species for listing and other species on officially adopted federal and/or state listings, and all California Species of Special Concern.	Consistent, with mitigation	Conditions (i.e., location and disturbance) within the project area result in a limited suitability for potential wildlife species to occur. Special status species listed by the USFWS, DFG, and CNPS have been analyzed as part of this evaluation. No special status plant species were found to be impacted by the project. Impacts to raptors and migratory birds and wetlands were identified in Section 4.4. Implementation of the mitigation measures **MM 4.4.4** and **MM 4.4.5** will reduce project impact to a less than significant level.
Policy OS-G-7: Minimize impacts to sensitive natural habitats throughout the Planning Area.	Consistent, with mitigation	Refer to analysis for Policy OS-G-6.
OS-G-8: Preserve and protect areas determined to function as regional wildlife corridors, particularly those areas that provide natural connections permitting wildlife movement between designated sensitive habitats and all areas being considered for future conservation because of their high value.	Consistent	Established wildlife corridors have not been identified within the vicinity of the project area.
Policy OS-G-9: Provide for no net loss of overall wetland acreage; where such losses may be unavoidable at the project level, require mitigation that meets the no net loss goal.	Consistent, with mitigation	Refer to analysis for Policy OS-G-6.

Notes: CNPS = California Native Plant Society, USACE = US Army Corps of Engineers, DFG = California Department of Fish and Game, and USFWS = US Fish and Wildlife Service

4.4.3 IMPACTS AND MITIGATION MEASURES

A discussion of potential impacts and an evaluation of their significance to biological resources related to the proposed Wal-Mart expansion project are included in the following sections.

METHODOLOGY

Available information pertaining to biological resources potentially affected directly or indirectly by the proposed action within the vicinity of the project area, was reviewed during this analysis. References used are contained in the list of references at the conclusion of this section.

Hanover staff including, Ms. Lyna Black, a biologist/environmental scientist, Mr. Will Bishop, environmental regulatory specialist/wildlife biologist, and Dr. Kingsley Stern, botanist, surveyed the project area in October 2002 and April 2003. Field investigations included a general inspection of the project site to determine the presence or absence of special status species (Hanover 2003b). General observation survey techniques were used to note habitat and species within the area as well as survey for the presence of nests either in trees, shrubs, or burrows (Hanover 2003b).

STANDARDS OF SIGNIFICANCE

Impact to a biological resource is considered potentially significant if implementation of the project would result in any of the following:

1) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, endangered, threatened, or other special-status in local or regional plans, policies and regulations, or by the DFG or USFWS.

2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies and regulations, or by the DFG or USFWS.

3) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, coastal, riverine, stream, marsh, vernal pool, etc.) through direct removal, filling, hydrological interruption, or other means.

4) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

5) Conflict with any local polices or ordinances protecting biological resources.

6) Result in fragmentation of an existing wildlife habitat, such as blue oak woodland or riparian, and an increase in the amount of edge with adjacent habitats.

An evaluation of the significance of potential impacts to biological resources must consider both direct effects to the resource as well as indirect effects in a local or regional context. Potentially significant impacts would generally result in the loss of a biological resource or obviously conflict with local, state, or federal agency conservation plans, goals, policies, or regulations. Actions that would potentially result in a significant impact locally may not be considered significant

under CEQA if the action would not substantially affect the resource on a population-wide or region-wide basis.

PROJECT IMPACTS AND MITIGATION MEASURES

Upon review of the proposed project in relation to the Standards of Significance, development of the site would not likely interfere with the movement of any fish or wildlife species or impede the use of native nursery sites or corridors. Also, this investigation revealed no adopted HCP for Butte County or conservation plans related to the project location. Therefore, no project-related impact to the movement of migratory wildlife would occur and the potential project would not conflict with any conservation plans.

Further consideration of the Standards of Significance results in potential impact from implementation of the proposed project and is discussed below.

Removal/Modification of Existing Habitat

Impact 4.4.1 Implementation of the proposed project would result in the removal of valley grassland habitat with scattered riparian vegetation. This would be considered a **less than significant** impact.

Development of the proposed Wal-Mart expansion project would result in the removal of approximately 11 acres of valley grassland habitat with isolated riparian vegetation and wetland community. Losses of vegetation would occur from direct removal and loss impacts associated with the construction and operation of the expanded Wal-Mart on Parcel 1 (including the Wal-Mart store, parking lot, landscaping and infrastructure) and eventually development of Parcel 2.

Valley grassland habitat is common throughout central California. Because the habitat is widely distributed, there are currently no federal, state, or local regulatory protections regarding removal of this vegetation community. The riparian vegetation and wetland community found onsite were isolated and affected by ongoing weed abatement activities from the surrounding urban areas, making this habitat a limited resource (Hanover 2003b). Loss of the common plant community with limited isolated riparian vegetation and wetland community at the project site would not constitute a significant impact to central California or Butte County. Therefore, impact to these habitat types is considered **less than significant**. Furthermore, impact to regionally and locally common wildlife species supported by these habitat types is also considered **less than significant** because direct loss and increased human disturbance is not likely to cause substantial adverse decline of their populations.

Mitigation Measures

None required.

Potential Disturbance of Habitat for Special-Status Plant Species

Impact 4.4.2 Implementation of the proposed project would result in temporary and direct alteration of site conditions that could support special-status plant species. This would be considered a **potentially significant** impact.

The project location is isolated and highly disturbed. No special-status plants were observed during field reconnaissance or any evidence of current or recent past presence of any special

status plants was indicated, and the botanical survey concluded that no special status plants are present on the site (Hanover 2003a). Therefore, alteration of the project site is considered a **less than significant** impact to special status plant species.

Mitigation Measures

None required.

Potential Disturbance of Raptors and Migratory Birds

Impact 4.4.3 Development of the proposed project could result in temporary and direct disturbance to nesting raptors and migratory birds (see the discussion in Section 4.4.1 under Listed and Special-status Animals). This would be considered a **potentially significant** impact.

Trees associated with the isolated riparian vegetation located at the project site as well as trees in the vicinity of the project area could provide nesting habitat for raptors and migratory birds. Habitat at the site also provides suitable foraging opportunities for many avian species, including some raptors (especially Swainson's hawk) and migratory birds. Raptors and raptor nests are considered to be a special resource by federal and state agencies and are protected under the MBTA and California Code of Regulations. All migratory birds are also protected under the MBTA. Project implementation would impact an area that potentially provides suitable habitat for these avian species.

Construction activities that require the disturbance of trees and vegetation could cause direct impact to nesting raptor and migratory birds. Removal of habitat at the project site would be considered a direct and significant impact if sensitive bird species were taken or deterred from traditional nesting locations. Construction could also result in noise, dust, increased human activity, and other indirect impacts to nesting raptors or migratory bird species in the project vicinity. Potential nest abandonment, mortality to eggs and chicks, as well as stress from loss of foraging areas would also be considered potentially significant impact.

Mitigation Measure

MM 4.4.3 If proposed grading, site preparation, or construction activities are planned to occur during the nesting seasons for local avian species (typically March 1st through August 31st), a focused survey shall be conducted by a qualified biologist, approved by the City of Chico, for active nests of raptors and migratory birds within and in the vicinity of (no less than 100-feet outside project boundaries, where possible) the construction area no more than 72 hours prior to ground disturbance. If an active nest is located during pre-construction surveys, USFWS and/or DFG (as appropriate) shall be notified regarding the status of the nest. Furthermore, construction activities shall be restricted, as necessary, to avoid disturbance of the nest until it is abandoned and the consulting regulatory agency deems disturbance potential to be minimal. Restrictions may include establishment of exclusion zones (no ingress of personnel or equipment) at a minimum radius of 100-feet around the nest) or alteration of the construction schedule.

If construction will occur during the nonbreeding season (generally September 1st through February 28th), a policy of avoidance and passive relocation (allowing an animal to move out of harms way without any purposeful interference by

humans) for any wildlife found onsite shall be implemented for the duration of the project. The appropriate regulatory agency (USFWS or DFG) shall be contacted regarding any species of wildlife that do not passively relocate from the project area.

Timing/Implementation: *No more than 72 hours prior to the onset of construction activities.*

Enforcement/Monitoring: *City of Chico Planning Division and Engineering Division Staff.*

Implementation of the above mitigation measure would reduce impacts to nesting raptors (including Swainson's hawk) and migratory birds to a **less than significant** level.

Waters of the United States

Impact 4.4.4 Implementation of the proposed project would potentially fill jurisdictional waters of the United States. This is considered a **potentially significant** impact.

A wetland delineation identified 0.269 acres of potentially jurisdictional wetlands located at the project site (Hanover 2002). Because there are potentially jurisdictional waters that the proposed project would impact by filling, project activities could possibly be regulated by USACE under Section 404 of the Clean Water Act. Therefore, loss of waters of the United States at the project site is considered a potentially significant impact.

Mitigation Measure

MM 4.4.4 The project applicant shall consult with USACE to verify the original wetland delineation processed under identification number 200300094. If the USACE verifies the delineation and determines wetlands at the project location are deemed to be jurisdictional, the appropriate permits (e.g., Section 404) under the Clean Water Act shall be obtained prior to issuance of grading permits.

The project applicant shall comply with all permit conditions (established by USACE) to compensate for potential impact to any jurisdictional waters.

Additionally, the project applicant shall comply with the City of Chico 'no net loss of wetlands' policy (05-G-9). This can be achieved by paying in-lieu mitigation fees to the City, which will be used to purchase credits at an approved mitigation bank.

Timing/Implementation: *Prior to approval of the grading permit.*

Enforcement/Monitoring: *City of Chico Planning Division and Engineering Division Staff.*

Implementation of the above mitigation measure would reduce impacts to jurisdictional waters of the United States to a **less than significant** level.

CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

This section addresses cumulative impacts from the proposed project and other related projects within the project vicinity.

CUMULATIVE SETTING

When considering the cumulative biological effects of a proposed project, the setting is based on a regional area and not necessarily on a project specific site, as biological resources are not limited to one specific area and changes in other areas may affect resources on the project site. The cumulative setting for the proposed Wal-Mart Expansion project is much the same as the existing setting in the sense that it takes into account the regional area, as well as the project site. This cumulative analysis considered other related projects within the general vicinity of the project site. Issues on the project site which may be affected by cumulative development are the potential for damage to and removal of possible nesting sites and wetlands. Refer to Region Setting at the beginning of this section for a description of the cumulative setting.

CUMULATIVE IMPACT AND MITIGATION MEASURES

Disturbance to Special-Status Species, Critical Habitats, and Interference with Wildlife Movement

Impact 4.4.5 Development of the project in addition to anticipated cumulative development conditions in the project vicinity would result in disturbance to critical riparian habitat and wetlands throughout the region. These impacts are considered **potentially cumulative significant.**

As presented in the impact discussions above (see Impacts 4.4.1 through MM 4.4.5), implementation of the proposed project would result in a loss of habitat and contribute to biological resource impacts, including potential disturbance of raptors and migratory bird species and potential disturbance to jurisdictional waters of the United States. Anticipated development and urban expansion of the area is expected to further contribute to these impacts and is considered potentially cumulative significant for impact to biological resources.

Mitigation Measures

MM 4.4.5 Implement mitigation measures **MM 4.4.3** and **MM 4.4.4.**

Implementation of these mitigation measures would reduce the overall contribution to cumulative biological resource impacts resulting from construction of the project. Therefore, proposed project contributions to the potential loss and/or restriction of biological resources in the region are considered **less than significant.**

REFERENCES

Alden, P. *et.al.* 1998. *National Audubon Society Field Guide to California.* Chanticleer Press, Inc. New York, CA.

California Department of Fish and Game (DFG). California Interagency Wildlife Task Group. 2002. *CWHR version 8.0 personal computer program*. Sacramento, CA.

DFG. 2006. *California Natural Diversity Database.* CNDDB RareFind version 3.0.3 personal computer program. Sacramento, CA.

DFG. Wildlife and Habitat Data Analysis Branch. 2004. *Wildlife Habitats by County.* On-line Inventory. Sacramento, CA.

California Native Plant Society (CNPS). 2004. *Inventory of Rare and Endangered Plants.* On-line Inventory-6th Edition. Sacramento, CA.

City of Chico. 1999. *Open Space and Environmental Conservation.* General Plan.

City of Chico. 2004. *Tentative Parcel Map PM 03-17 (Wal-Mart/PacLand).* Revised Initial Study. Chico, CA.

Hanover Environmental Services, Inc. (Hanover). 2002. *Wetlands Delineation-Duncan Shopping Center Expansion.* Chico, CA.

Hanover. 2003a. *Survey for Vascular Plants Listed by Federal, State, or Other Agencies as Sensitive or of Special Status.* Chico, CA.

Hanover. 2003b. *Biological Resources Survey.* Letter Report. Chico, CA.

Hickman, J., ed. 1993. *The Jepson manual: Higher Plants of California*. University of California Press. Berkeley, CA.

Sierra Club. 2004. *Common Species of the California Sacramento Valley Area Including Butte County.* On-line Database. Chico, CA.

Stokes, Donald W. and Lillian Q. 1996. *Field Guide to Birds, Western Region.* Little, Brown and Company. Boston.

U.S. Army Corps of Engineers (USACE). 1987. *Wetlands Delineation Manual.* Technical Report Y87-1. Vicksburg, MS.

U.S. Fish and Wildlife Service (USFWS). 2004. *Federal Endangered and Threatened Species that Occur In or May Be Affected by Projects in Butte County*. Sacramento, CA.

4.5 Cultural and Paleontological Resources

This section considers and evaluates the potential impacts of the proposed Wal-Mart Expansion project on cultural and paleontological resources. Cultural resources include historic buildings and structures, historic districts, historic sites, prehistoric and historic archaeological sites, and other prehistoric and historic objects and artifacts.

4.5.1 EXISTING SETTING

PREHISTORY

The archaeology of the Central Valley is complex and also related to surrounding areas such as the Central Sierra Nevada, Southern Sierra Nevada, and the Great Basin. The Wal-Mart Expansion project, however, is located in an area primarily associated with the Mesilla, Bidwell, Sweetwater, and Oroville Cultural Complexes.

Extensive archaeological investigations are relatively scant in the project area, but large-scale archaeological investigations were undertaken in the neighboring Lake Oroville area during the 1960s through the 1970s for the construction of Oroville Dam and Lake Oroville. Indeed, archaeological research in the Lake Oroville area may be used to characterize the prehistory of the project area. Ritter (1970) summarized the archaeological investigations in the area, which identified four prehistoric cultural complexes. These four cultural complexes are the: Mesilla, 1,000 B.C.-A.D. 1; Bidwell, A.D. 1-A.D. 800; Sweetwater A.D. 800-A.D. 1500; and Oroville A.D. 1500-A.D. 1850 (Ritter 1970). The characteristics of these four cultural complexes is included in the cultural report contained in **Appendix F.**

ETHNOGRAPHY

Prior to the arrival of Euroamericans in the region, California was inhabited by groups of Native Americans speaking more than 100 different languages and occupying a variety of ecological settings. Kroeber (1925, 1936) subdivided California into four subculture areas, Northwestern, Northeastern, Southern, and Central. The Wal-Mart Expansion Project area is located in the Central area within the boundaries of Konkow territory.

Konkow or Northwestern Maidu occupied a territory both along the Sacramento River and east into the foothills of the Sierra Nevada in the vicinity of Willows, Chico, and Oroville (Riddell 1978). Konkow are members of the Maiduan Language Family of Penutian Stock. Their population was divided into several “village communities” which were recognized as autonomous political units (Kroeber 1925). Subsistence activities included hunting, fishing, and the collecting of a variety of plant resources including acorns, which were a staple food source for the Konkow. Konkow made a variety of bone, wood, and stone tools and basketry, which was both an artistic and necessary activity.

Euroamerican contact with Native American groups living in the Central Valley of California began during the last half of the eighteenth century. At this time, the attention of Spanish missionaries shifted away from the coast, and its dwindling Native American population, to the conversion and missionization of interior populations. Luis Argüello led an early expedition into the area in 1821 (Beck and Haase 1974). Regardless, the area remained relatively unoccupied by Euroamericans until the Gold Rush. The latter half of the nineteenth century witnessed an ongoing and growing immigration of Euroamericans into the area, which was also accompanied by regional cultural and economic changes. These changes are highlighted by the development of towns and businesses associated with either gold mining or agriculture, and a dramatic decline of Native American culture and people.

HISTORIC PERIOD

The first European to enter the Butte County area was probably Gabriel Moraga, a Spanish soldier, who led an expedition into Alta California, crossing the Feather River in 1808 near Oroville (Beck and Haase 1974). In 1820, Captain Luis Arguello explored Butte County and named the Feather River (Rio de la Plumas) (Hoover et al. 1966). In 1825, Jedediah Strong Smith entered California from the south and, by 1827, had made his way to the Feather River (Brooks 1977). In the 1820s and 1830s, Hudson's Bay Company trappers extensively explored the area looking for furs (Hoover et al. 1966). Joseph R. Walker in 1833 and 1843 and Joseph B. Chiles in 1843 also explored parts of Butte County, traveling along the Sacramento River and the South Fork of the Feather River (Beck and Haase 1974).

John Bidwell led one of the first immigrant parties from the eastern United States to California in 1841. Subsequently, he worked at Sutter's Fort until gold was discovered at Sutter's Mill in Coloma. John Bidwell became interested in gold mining and in June 1848 he discovered gold on the Feather River near Hamilton (Bidwell 1877; Hoover et al. 1966). Subsequently, Bidwell purchased Rancho del Arroyo Chico from William Dickey and Edward A. Farwell in 1849, and settled in what would become Butte County (Hoover et al. 1966). Bidwell began planting wheat, barley, and fruit bearing trees (e.g., apple, pear, peach, walnut, almond, fig, cherry, and olive) on his property and established a very successful agricultural business. Bidwell founded the City of Chico on Rancho del Arroyo Chico property in 1860, in 1868 built the Bidwell Mansion, and his widow donated 2,200 acres of their estate along Big Chico Creek to the City of Chico (Hoover et al. 1966), which became Bidwell Park. Other significant individuals in the history of the City of Chico include Edward Farwell and Thomas Fallon who obtained a land grant from the Mexican government, a portion of which became downtown Chico (Beck and Haase 1974; Talbitzer 1987).

The City of Chico prospered at the end of the 19th century and into the 20th century because of the abundant agricultural production, contributions of individuals like Bidwell, and extension of the Northern California Railroad from Marysville to Chico.

4.5.2 REGULATORY FRAMEWORK

STATE

California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires that lead agencies determine whether projects may have a significant effect on archaeological and historical resources. This determination applies to those resources that meet significance criteria qualifying them as "unique," "important," listed on the California Register of Historic Resources (CRHR), or eligible for listing on the CRHR. If the lead agency determines that a project may have a significant effect on an archaeological or historical resource, the project is determined to have a significant effect on the environment, and these effects must be addressed. If a cultural resource is found not to be significant under the qualifying criteria, it need not be considered further in the planning process.

CEQA emphasizes avoidance of archaeological and historical resources as the preferred means of reducing potential significant effects. If avoidance is not feasible, an excavation program or some other form of mitigation must be developed to mitigate these impacts.

LOCAL

City of Chico General Plan

The City of Chico General Plan serves as the overall guiding policy document for the City of Chico. **Table 4.5.1** below identifies and analyzes for consistency the General Plan policies with regard to cultural resources that are applicable to the proposed project.

TABLE 4.5.1
PROJECT CONSISTENCY WITH GENERAL PLAN CULTURAL RESOURCE POLICIES

General Plan Goals and Policies	Consistency with General Plan	Analysis
Policy OS-G-26: Protect archaeologic, historic, and paleontologic resources for their aesthetic, scientific, educational, and cultural values.	Consistent, with Mitigation	The project would represent further development of a previously disturbed site (cleared and graded) within an area of low to moderate archaeological sensitivity, according to Figure 7-3 in the Chico General Plan. No resources have been identified on site. Mitigation is proposed in the event unknown resources are uncovered during project grading and construction.

4.5.3 IMPACTS AND MITIGATION MEASURES

METHODOLOGY

Archaeological investigations for the Chico Wal-Mart Expansion Project were conducted by John Furry, of Cultural Resources Specialties, and documented in a letter report (Furry 2002). The archaeological investigations conducted in October 2002 included a records search at the Northeast Information Center at California State University, Chico and pedestrian surface survey of the proposed project site. Cultural resources staff of PMC requested a sacred lands search and a list of Native American contacts for the project from the Native American Heritage Commission (NAHC) in October 2004. The sacred lands search did not identify any Native American cultural resources in the project area, and PMC consulted with all groups and individuals identified by the NAHC regarding the project. Archaeological investigations (i.e., record search and pedestrian surface survey) conducted by Cultural Resources Specialties for the project are adequate to identify typical prehistoric and historic resources that would likely be present in the project area. Personal communication with Mr. Furry (Nadolski 2004) clarified the research strategy and investigation results. Archaeological investigations did not identify any cultural resources (e.g., prehistoric sites, historic sites, or isolated artifacts) within the boundaries for the proposed project and no comments, to date, have been received from the Native American community regarding the project.

STANDARDS OF SIGNIFICANCE

The NOP/Initial Study for the proposed project determined that no structures are presently located on the property nor is there evidence of historic structures (foundations, rock walls, wagon wheel tracks, etc.) and the City General Plan update does not identify these features to be located on the project site. The site is not an area of high sensitivity for paleontological resources and the presence of alluvial soils underlying the site would make it unlikely that these

resources would be found on-site. As such, impacts to known historical or paleontological resources are not discussed further in this EIR.

Listed below are standards of significance for potential affects on cultural resources.

1. CEQA, at Public Resources Code Section 21083.2, requires planning agencies to determine if a project may have a significant effect on archaeological resources. Following CEQA guidelines in section 15064.5 an "historical resource" includes:

    a) A resource listed in, or determined to be eligible by the State Historical Resources Commission for listing in, the California Register of Historical Resources.

    b) A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code, or identified as significant in an historical resource survey meeting the requirements in Section 5024.1(g) of the Public Resources Code shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

    c) Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources.

2. Public Resources Code 5024.1 presents criteria for determining the eligibility of a cultural resource for inclusion in the California Register of Historical Resources (CRHR). These criteria include:

    a) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

    b) Is associated with the lives of persons important in our past;

    c) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual or possesses high artistic value; or

    d) Has yielded, or may yield, information important in prehistory or history.

3. CEQA also requires planning agencies to consider the effects of a project on unique archaeological resources. If an archaeological artifact, object, or site meets the definition of a unique archaeological resource, then the artifact, object, or site must be treated in accordance with the special provisions for such resources as presented at Public Resources Code 21083.2(e). Public Resources Code 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site that:

    a) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

b) Has a special and particular quality, such as being the oldest of its type or the best available example of its type.

c) Is associated with a scientifically recognized important prehistoric or historic person or event.

CEQA, at §15064.5, defines a significant effect as one that may cause a substantial adverse change in the significance of an historical resource. A "substantial adverse change" means physical demolition, destruction, relocation or alteration of the resource or its immediate surroundings such that the significance of an historical resource is materially impaired. The Lead Agency shall identify potentially feasible mitigation measures to mitigate significant adverse changes in the significance of an historical resource.

PROJECT IMPACTS AND MITIGATION MEASURES

Undiscovered Prehistoric Resources, Historic Resources, and Human Remains

Impact 4.5.1 Implementation of the proposed project could result in the potential disturbance of undiscovered cultural resources. This is considered a **potentially significant** impact.

Archaeological investigations did not identify any prehistoric or historic resources in the area. However, there is a possibility of unanticipated and accidental archaeological discoveries during ground-disturbing project-related activities. Unanticipated and accidental archaeological discoveries during project implementation have the potential to affect significant archaeological resources.

Mitigation Measures

MM 4.5.1a If any prehistoric or historic artifacts, or other indications of archaeological resources are found once grading and project construction is underway, all work in the immediate vicinity shall stop and the City shall be immediately notified. An archaeologist meeting the Secretary of Interior's Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, shall be retained to evaluate the finds and recommend appropriate mitigation measures for the inadvertently discovered cultural resources.

Timing/Implementation: *As a condition of the Tentative Map, and implemented during construction activities.*

Enforcement/Monitoring: *City of Chico Planning Division and Engineering Division.*

MM 4.5.1b If human remains are discovered, all work must stop in the immediate vicinity of the find, and the County Coroner must be notified, according to Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed.

Timing/Implementation: *As a condition of the Tentative Map, and implemented during construction activities.*

Enforcement/Monitoring: *City of Chico Planning Division and Engineering Division.*

MM 4.5.1c Mitigation measures MM 4.5.1a and MM 4.5.1b shall be incorporated into construction contracts and documents to ensure contractor knowledge and responsibility for the proper implementation. Should cultural resources be encountered, the supervising contractor shall be responsible for reporting any such findings to the Planning Division, and a qualified archaeologist will be contacted to conduct meetings with on-site employees and monitor the referenced mitigation measures**.**

Timing/Implementation: *As a condition of the Tentative Map, and implemented during construction activities.*

Enforcement/Monitoring: *City of Chico Planning Division and Engineering Division.*

Implementation of the above mitigation measures MM 4.5.1a through MM 4.5.1c would reduce impacts to undiscovered cultural resources to a **less than significant** level.

Paleontological Resources

Impact 4.5.2 Implementation of the proposed project could result in the potential damage or destruction of undiscovered paleontological resources. This is considered a **potentially significant** impact.

Pedestrian surface survey of the project site and other research (i.e., a search of the University of California, Berkeley Museum of Paleontology collections database) did not identify any evidence of paleontological resources. However, there is a possibility of unanticipated and accidental paleontological discoveries during ground-disturbing project-related activities. Unanticipated and accidental paleontological discoveries during project implementation have the potential to affect significant paleontological resources.

Mitigation Measures

MM 4.5.2 If any paleontological resources (fossils) are found once grading and project construction is underway, all work in the immediate vicinity must stop and the City shall be immediately notified. A qualified paleontologist shall be retained to evaluate the find and recommend appropriate mitigation measures for the inadvertently discovered paleontological resources.

Timing/Implementation: *As a condition of the Tentative Map, and implemented during construction activities.*

Enforcement/Monitoring: *City of Chico Planning Division.*

Implementation of Mitigation Measure MM 4.5.2 would reduce impacts to paleontological resources to a **less than significant** level.

4.5.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting associated with the proposed project includes proposed, planned, reasonably foreseeable, and approved projects in the vicinity of the project site as listed in Section 3.0 Project Description, Table 3.0-2.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Prehistoric and Historic Resources

Impact 4.5.3 Implementation of the proposed project, along with any foreseeable development in the project vicinity, could result in cumulative impacts to cultural resources. This is considered a **less than significant** cumulative impact.

Implementation of the proposed project in combination with cumulative development in the City of Chico would increase the potential to disturb known and undiscovered cultural resources. Mitigation measures MM 4.5.1a and b would mitigate the potential for the development of the Wal-Mart Expansion project to contribute to loss of prehistoric and historic cultural resources. Therefore, cumulative impacts related to prehistoric and historic cultural resources are **less than significant**.

Mitigation Measures

None required.

Paleontological Resources

Impact 4.5.4 Implementation of the proposed project, along with any foreseeable development in the project vicinity, could result in cumulative impacts to paleontological resources. This is considered a **less than significant** cumulative impact.

Implementation of the proposed project in combination with cumulative development in the City of Chico would increase the potential to disturb known and undiscovered paleontological resources. Mitigation measures MM 4.5.2 would mitigate the potential for the development of the Wal-Mart Expansion project to contribute to loss of paleontological resources. Therefore, cumulative impacts related to paleontological resources are **less than significant**.

Mitigation Measures

None required.

REFERENCES

Beck, Warren and Ynez D. Haase. 1974. *Historical Atlas of California.* University of Oklahoma Press, Norman, Oklahoma.

Bidwell, J. 1877. *On the Discovery of Gold, January 1848. In The Elephant as They Saw It: A Collection of Contemporary Pictures and Statements on Gold Mining in California.* Edited by Elizabeth A. Engenhoff, pp. 39-40. 1949 printing. State of California, Sacramento.

Brooks, George (editor). 1977. *The Southwest Expedition of Jedediah S. Smith: His Personal Account of the Journey to California 1826-1827*. Arthur C. Clarke Company, Glendale, California.

Elsasser, A.B. 1978. Development of Regional Prehistoric Cultures. Pp 37-57 *in Handbook of North American Indians*, California Volume 8. Robert F. Heizer, ed. Smithsonian Institution, Washington, D.C.

Furry, John. 2002. *Archaeological Inventory Survey of the Duncan Shopping Center Expansion Project*. Report on file at the City of Chico.

Hoover, M.B., H.E. Rensch, E.G. Rensch, and W.N. Abeloe. 1966. *Historic Spots in California. Third Edition*. Revised by D.E. Kyle. Stanford, CA: Stanford University Press.

Kowta, M. 1988. *The Archaeology and Prehistory of Plumas and Butte Counties, California: an Introduction and Interpretive Model*. California Archaeological Site Inventory, Northeast Information Center, California State University, Chico, CA.

Kroeber, A.V. 1925. *Handbook of the Indians of California*. Bureau of American Ethnology Bulletin 78. Washington, D.C. Reprinted in 1976 by Dover Publications, Inc., New York, New York.

Kroeber, A.V. 1936. *Culture Element Distributions: III, Area and Climax*. University of California Publications in American Archaeology and Ethnology 37(3): 101-116, Berkeley, California.

Nadolski, John. 2004. Personal Communication on July 27, 2004 with John Furry Regarding the Chico Wal-Mart Expansion Project.

Olsen and Riddell. 1963. *The Archaeology of the Western Pacific Railroad Relocation Project, Butte County, California*. State Division of Beaches and Parks. Archaeological Project 7, Sacramento, California.

Riddell, F. 1978. *Maidu and Konkow. In Handbook of the North American Indians, Volume* 8, *California*, edited by R. F. Heizer, pp. 370-386. Smithsonian Institution, Washington, D.C.

Ritter, Eric W. 1968. *Culture History of the Tie Wiah (4-But-84), Oroville Locality, California.* Unpublished Master's Thesis Department of Anthropology, University of California, Davis.

Ritter, Eric W. 1970. *Northern Sierra Foothill Archaeology: Culture History and Culture Process.* University of California, Center for Archaeological Research at Davis, Publications 2: 171-184.

Talbitzer, Bill. 1987. *Butte County: an Illustrated History*. Windsor Publications. Northridge, California.

Wells, H.L and W.L. Chambers. 1882. *History of Butte County, California*. Howell-North Books.

4.6 Economics Analysis

This section of the EIR considers whether the proposed Wal-Mart Expansion project would result in significant adverse physical deterioration of properties or structures, or urban decay, due to (1) economic impacts on existing businesses (specifically, groceries and under cumulative conditions general merchandise retailers), and (2) the inability of property owners to lease buildings that may be vacated as a consequence of economic impacts resulting from the proposed Wal-Mart Expansion project. The analysis within this section is based on a economic impact analysis prepared by Sedway Group entitled *Wal-Mart Supercenter Economic Impact Analysis: South Store Expansion Chico, California*, included as **Appendix G** to this EIR. The purpose of this analysis was as follows:

1) to analyze the potential impacts of the proposed Wal-Mart Expansion project on existing City of Chico retailers, especially grocery and general merchandise stores;

2) to determine if Downtown Chico retailers might be impacted by the expansion of the existing Wal-Mart store;

3) to develop an estimate of the extent to which implementation of the proposed Wal-Mart Expansion project may or may not contribute to urban decay in Chico; and

4) estimate the cumulative impacts of other selected retail projects in the primary and secondary market areas.

4.6.1 EXISTING SETTING

MARKET AREA

Sedway, in their analysis, identified a primary and secondary market area for retail demand in the Chico area. The primary market area was the City of Chico, with the residents of Chico comprising the largest share of retail sales demand. Visual observation and analysis of data suggest that Chico has a larger retail base than would be expected given its size and population, retail sales analysis documented in Sedway's analysis indicates that the equivalent of 60 percent of Chico sales are estimated to be generated by Chico residents, including those residents living in the City's sphere of influence. While Chico generates many of its own retail sales, the City also captures significant sales from non-residents and is considered as a regional hub for retail.

The secondary market area has been defined by Sedway to include the following locations:

- Glenn County;
- Tehama County; and
- Butte County (excluding Chico).

This secondary market area definition reflects the existing nature of retailing in Chico and the location of other major general merchandise retailers, including Wal-Mart stores. Sedway Group identified all major general merchandise retailers located in the general area, including Yuba and Sutter counties to the south, Shasta County to the north, the City of Reno to the east, and Glenn County to the west. The boundaries of the secondary market area are reflective of the area the proposed Wal-Mart Expansion project will most likely draw from. It is assumed that residents south of the secondary market area will be attracted to general merchandise retailers in Yuba City; residents located north of the secondary market area will be attracted to general merchandise retailers located in Redding; and residents to the west will be attracted to yet other more remote locations. The next nearest Wal-Mart stores to Chico are located in Oroville,

Willows, and Red Bluff. These stores are approximately 22, 40, and 47 miles from the proposed site, respectively.

COMPETITIVE STORES

The *Wal-Mart Supercenter Economic Impact Analysis* identified the potential economic impacts of the proposed Wal-Mart Expansion project on those existing City of Chico retailers determined to be most directly competitive, including general merchandise, grocery stores, and stand-alone convenience stores, as well as the retail market in Downtown Chico.

Grocery Stores

Sedway Group identified the existing grocery stores considered competitive with the proposed Wal-Mart South Supercenter Store via store location information provided by InfoUSA, and reviewed by the City of Chico staff. The list of competitive grocery stores includes the following existing stores in Chico: Albertson's, Chico Grocery Outlet[1], Foodmaxx, two Raley's stores, three Safeway stores, Winco Foods, as well as the stores considered niche markets; Asian Market, Chico Natural Foods, and S&S Produce. **Table 4.6-1** identifies grocery stores and their location that are considered potentially competitive to the proposed Wal-Mart South Supercenter store.

TABLE 4.6-1
COMPETITIVE GROCERY STORES

Store	Location	Distance from Project
Albertson's	146 W. East Avenue	4.7 miles
Grocery Outlet	396 E. Park Avenue	1.5 miles
Foodmaxx	2051 Whitman Avenue	1.0 miles
Raley's	2485 Notre Dame Boulevard 211 W. East Avenue	0.8 miles 4.8 miles
Safeway	720 Mangrove Avenue 1366 East Avenue 1016 West Sacramento Ave.	2.9 miles 4.1 miles 4.5 miles
Winco Foods	20th St. and Forest Ave.	0.4 miles
Niche Markets		
Asian Market	347 Nord Avenue	4.0 miles
Chico Natural Foods	Main Street between 8th and 9th Streets	2.5 miles
S&S Produce	1924 Mangrove Avenue	4.0 miles

Source: Sedway Group

[1] *The Grocery Outlet is not technically a full-service grocery store, as it does not sell the full complement of traditional grocery goods. However, products sold at the store are all available at traditional grocery stores.*

General Merchandise Stores

Identified competitive general merchandise stores within the market areas are Big Lots, JC Penney, K-Mart, Costco, Sears, and Target. **Table 4.6-2** identifies general merchandise stores and their location that are considered competitive to the Project.

TABLE 4.6-2
COMPETITIVE GENERAL MERCHANDISE STORES

Store	Location	Distance from Project
Big Lots	1927 E. 20th Street	0.3 miles
JC Penney	1932 E. 20th Street	0.4 miles
K-Mart	2155 Pillsbury Road	3.7 miles
Costco	2100 Whitman Avenue	1.0 miles
Sears	1982 E. 20th Street	0.4 miles
Target	1951 E. 20th Street	0.3 miles

Source: Pacific Municipal Consultants

Convenience Stores

The Sedway Group report identified, at the request of the City of Chico, many stand-alone convenience stores in Chico to assess the degree to which they may actually incur impacts resulting from the Wal-Mart Expansion project. The list of competitive convenience stores includes the following existing stores in Chico: 5th and Ivy Liquor, three 7-Eleven stores, ABC Market, Bear Country Market, California Park Market, Chinca's Market, Laurel Street Grocery, Nord Avenue Market, Quick Check Market, Tony's Market, U.S. Market, and Warner Street Grocery. The stand-alone convenience stores are dispersed throughout Chico, but are concentrated primarily near downtown and the Chico State University campus. Of the stores included in this analysis, none are located within less than 1.8 miles of the proposed Wal-Mart Expansion project.

Downtown Retailers

As a part of the economic analysis, Sedway Group toured Downtown Chico to document the existing tenant mix, to identify vacant storefronts, and to better understand the retail niche served by Downtown. The Downtown consists primarily of independent specialty retail and services, with many sit-down and quick serve restaurants. Downtown street frontages are dominated by boutique retail stores and services, including restaurants, apparel stores, tanning salons, stained glass stores, gift shops, banks, collectibles stores, bicycle stores, and an art gallery. Entertainment uses include many bars focused on serving California State University at Chico students. There are several restaurants scattered throughout Downtown serving a variety of cuisines from Thai, Chinese, and Japanese to Mexican and American.

Downtown Chico is a niche market focused on specialty items, services, and entertainment. A majority of Downtown retailers provide a product or service not found at a Wal-Mart Supercenter store. With the exception of Chico Natural Foods Stores, there are no major food stores in Downtown. As a result, the grocery component of the proposed Wal-Mart Expansion project is projected to have no negative impact on Downtown businesses. Furthermore, due to the nature of the Downtown retail market, the incremental addition to the general merchandise

component of the project is also insignificant. Downtown retailers provide specialized products and services that the Wal-Mart Supercenter Store will not, and any impacts as a result of the general merchandise component of the Project were likely already experienced with the opening of the existing Wal-Mart Discount Store. For this reason, the economic analysis concluded there would be no potential for economic impacts from the proposed Wal-Mart Expansion project. Therefore, impacts to Downtown retailers will not further discussed in this section.

4.6.2 REGULATORY FRAMEWORK

CEQA provides that "[i]n evaluating the significance of the environmental effect of a project, the lead agency shall consider direct physical changes in the environment which may be caused by the project and *reasonably foreseeable* indirect physical changes in the environment which may be caused by the project." (CEQA Guidelines Section 15064(d) (emphasis added).) "A change which is speculative or unlikely to occur is not reasonably foreseeable." (CEQA Guidelines section 15064(d)(3).)

CEQA further provides that "[e]conomic and social changes resulting from a project shall not be treated as significant effects on the environment." (CEQA Guidelines Section 15064(e).) However, "[a]n EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes in turn caused by the economic or social changes." (CEQA Guidelines section 15131(a).) In other words, economic and social changes are not, in themselves, considered under CEQA to be significant effects on the environment.

Therefore, "[t]he focus of the analysis shall be on the physical changes." (CEQA Guidelines section 15131(a).) "[S]ocial, economic and business competition concerns are not relevant to CEQA analysis unless it is demonstrated that those concerns will have a significant effect on the physical environment." (Maintain Our Desert Environment v. Town of Apple Valley (2004) 120 Cal.App.4th 396, 422.)

The relevant inquiry concerns whether substantial evidence demonstrates that it is reasonably likely that economic impacts will indirectly cause significant, sustained physical impacts. (Friends of Davis v. City of Davis (2000) 83 Cal.App.4th 104, 1022.)

Since only physical effects are to be considered under CEQA, economic and social changes resulting for a project may be considered if they, in turn, produce changes in the physical environment. In this context, the specific physical effect that would be expected to occur as a result of a negative economic effect would be a physical deterioration of the built environment, or urban decay.

As the terms "physical deterioration" and "urban decay" are not clearly defined in the CEQA statute or Guidelines, or in related case law. However for the purposes of the study prepared by Sedway Group, the following definition was applied:

> Urban decay is based upon a finding of negative economic impact resulting in multiple store closures, and that those store buildings, rather than being reused within a reasonable time, would remain vacant in the long term, deteriorate, and lead to the decline of the associated or nearby real estate – i.e., a significant adverse physical deterioration of existing property or structures, or urban decay. If no or minimal negative impact is found, then urban decay would not be a logical result. Isolated, short-term store closures would not be enough to cause urban decay, as such closures could

provide an opportunity for new retailers or other tenants to occupy the vacated space or for property owners to engage in economic development efforts to improve properties. There would need to be multiple closures resulting in long-term vacancies that would eventually result in a significant adverse physical change in the environment.

CITY OF CHICO GENERAL PLAN

While all elements of the Chico General Plan are equally important, the Land Use Element and Economic Development Element specifically set forth goals and policies applicable to land use development. Goals and Policies in the Land Use and Economic Development elements that pertain to this economic analysis include the following:

TABLE 4.6.3
PROJECT CONSISTENCY WITH GENERAL PLAN GOALS AND POLICIES

General Plan Goals and Policies	Consistency with General Plan	Analysis
Policy LU-G-13: Maintain and enhance Downtown's vitality and economic well-being, and its presence as the City's symbolic center.	Consistent	According to the economic analysis completed for proposed Wal-Mart Expansion project, the project would have no impact on the Downtown area due to the different nature of the products and service offered.
Policy LU-G-16: Maintain Chico's prominence as the center of retail activity in the Tri-County area.	Consistent	The project would be compatible with other "big box" commercial uses in the vicinity of the project and could support or strengthen retail activity in the project area.
Policy ED-G-1: Maintain a balanced land use program that provides opportunities for commercial and industrial development, dispersed throughout the community and at appropriate locations within the urban area served by adequate infrastructure.	Consistent	The proposed project is a commercial development consistent with the land use designation for the site in a developed commercial area served by adequate infrastructure.

4.6.3 IMPACTS AND MITIGATION MEASURES

METHODOLOGY

The methodology for this economic impact analysis is based on a report prepared by Sedway Group entitled Wal-*Mart Supercenter Economic Impact Analysis: South Store Expansion Chico, California*, included as **Appendix G** to this EIR, and the study tasks included in that report. These study tasks are identified by Sedway Group as:

- Identified major general merchandise retailers in the City of Chico region and beyond;
- Conducted fieldwork to identify and evaluate existing Chico general merchandise, grocery, and stand-alone convenience stores;
- Conducted fieldwork to assess the existing market and retail niche served by Downtown;
- Estimated existing Wal-Mart Discount Store sales and planned Wal-Mart South Supercenter Store sales;

- Identified a secondary market area for prospective South Supercenter Store shoppers;
- Collected and analyzed City of Chico and secondary market area taxable retail sales;
- Conducted retail leakage analyses for the City of Chico and the secondary market area;
- Estimated the share of the South Supercenter Store's sales to be generated by the primary and secondary market areas versus a tertiary market area;
- Estimated the maximum South Supercenter Store impacts on existing City of Chico retailers;
- Estimated the share of the South Supercenter Store's sales likely to be new to the City of Chico;
- Assessed the competitiveness of existing City of Chico grocery and general merchandise stores and likely South Supercenter Store impacts;
- Estimated the planned North Supercenter's sales;
- Identified planned retail projects in the primary and secondary market areas;
- Assessed the cumulative impacts of the selected retail projects in the primary and secondary market areas; and
- Assessed the extent to which opening of the South Supercenter Store may or may not contribute to urban decay in the City of Chico.

The methodology also incorporates information provided in interviews with City of Chico staff, comments made by the public during the Notice of Preparation comment hearing and field visits by Pacific Municipal Consultants (PMC).

Mitigating Effects of Population Growth

The greatest mitigating factor to any potential negative impacts as a result of the proposed project is the anticipated population growth and the associated spending of these new residents. For example, between 2008 and 2013, Chico's population is anticipated to grow by 15,913, with primary and secondary market area population growth estimated at 18,418. Given the estimated per capita spending for City of Chico and combined primary and secondary market area residents, and Chico's historic share of combined primary and secondary market area sales, estimates indicate that by 2013, Chico retailers will capture an additional $22.5 million in general merchandise sales and $30.1 million in new food stores sales. These estimates exceed the maximum $11.1 million in general merchandise sales and $8.3 million in food sales estimated to be diverted away from Chico retailers as a result of the net proposed Wal-Mart Expansion project sales.

SIGNIFICANCE CRITERIA

In the context of this section of the EIR, an impact would be considered significant under the following circumstances:

The development of the proposed Wal-Mart Expansion project would directly or indirectly result in urban decay. For the purpose of this study, urban decay is defined as a finding of negative economic impact resulting in multiple store closures, and that those store buildings, rather than being reused within a reasonable time, would remain vacant in the long term, deteriorate, and lead to the decline of the associated or nearby real estate – i.e., a significant adverse physical deterioration of existing property or structures, or urban decay. Physical deterioration includes, but is not limited to, abnormally high business vacancies, abandoned buildings and industrial sites, boarded doors and windows, parked trucks and long term unauthorized use of properties and parking lots, extensive gang or offensive graffiti painted on buildings, dumping of refuse or overturned dumpsters on properties, dead trees or shrubbery and uncontrolled weed growth or homeless encampments.

PROJECT IMPACTS AND MITIGATION MEASURES

Contribute to Physical Deterioration and Urban Decay

Impact 4.6.1 The proposed Wal-Mart Expansion project would offer products and services that would compete with existing businesses, including general retailers, convenience stores, and groceries, in the City of Chico. Potential closure of competing businesses may result in vacancies that would contribute to physical deterioration and urban decay. This impact is considered to be **less than significant**.

General Merchandise Stores

The economic impacts associated with competition generated by the general merchandise aspect of Wal-Mart largely occurred in the City of Chico approximately twelve years ago when the existing Wal-Mart Discount store opened. The store's opening did not result in the closure of multiple general merchandise stores, nor did the extent of closures result in urban decay. In fact, Wal-Mart has co-existed with several merchandise stores in Chico including Target, Big Lots, JC Penney, K-Mart, Costco, and Sears.

The economic impacts of the general retail sales (i.e., non-grocery) of the proposed Wal-Mart Expansion project will not be significantly new or different from the impacts that already exist from the Wal-Mart store presently operating in the City. According to the Sedway Group analysis, a maximum of $11.1 million in sales may be diverted away from existing general merchandise stores in the City of Chico, comprising only 3.1 percent of estimated 2008 general merchandise sales of $351.5 million. This level of sales is equivalent to support for approximately 43,000 to 54,000 square feet of general merchandise store space. However, this level of sales is also equivalent to the low end of the estimated major general merchandise performance. Therefore, these stores should be able to sustain a temporary reduction in sales, at least until new demand is generated by growth. The cumulative retail demand estimates due to population growth indicate that $11.1 million of Chico general merchandise sales will be generated by new growth within three years following the assumed 2008 full year operation of the proposed Wal-Mart Expansion project. Sedway Group believes the existing stores should be able to sustain a temporary downturn for up to this length of time and result in no store closures. Therefore potential physical deterioration and urban decay impacts as a result general merchandise store closures due to the Wal-Mart Expansion project are considered less than significant.

Convenience Stores

The Sedway Group report identified, at the request of the City of Chico, many stand-alone convenience stores in Chico (as identified previously) to assess the degree to which they may actually incur economic impacts resulting from the proposed Wal-Mart Expansion project.

The *Wal-Mart Supercenter Economic Impact Analysis* established that existing City of Chico stand-alone convenience stores are not competitive with the planned Wal-Mart Expansion and will not experience any short- or long-term negative impacts due to the proposed expansion. Each of these stores has already withstood the competitive influence of the existing Wal-Mart Discount Store. Further, the existing stand-alone convenience stores are well positioned relative to existing residential neighborhoods and have well-established market niches. Although many of the stand-alone convenience stores appear marginal, any operational changes are not expected to have much to do with the expansion of Wal-Mart. Therefore, potential physical deterioration and urban decay impacts from convenience store closures would not be cause by the Wal-Mart Expansion project and are considered less than significant.

Grocery Stores

The economic analysis completed by Sedway Group identified nine grocery stores which would be in direct competition with the proposed Wal-Mart Expansion project (see **Table 4.6-1**). Sedway Group's analysis suggested a maximum sales impact on the City of Chico food stores from the addition of grocery sales as a part of the Wal-Mart Expansion project of $8.3 million and this level of sales is equivalent to support for approximately 15,000 to 19,000 square feet of food store space. The cumulative retail demand estimates due to population growth indicate that $8.3 million of Chico food sales will be generated by new growth in less than two years following the assumed 2008 full-year operations of the Wal-Mart Expansion project. Sedway Group determined that if stores could not withstand this temporary downturn in sales, it is possible that one existing conventional grocery may close or less likely, a price-impact warehouse store.

The niche markets, such as Asian Markets and Chico Natural Foods, are quite distinct from a Wal-Mart Supercenter and are not believed to be impacted by the proposed Wal-Mart Expansion project.

Potential for Physical Deterioration and Urban Decay

Sedway Group, as a part of their economic analysis, contacted several real estate brokers to determine the retail demand in the Chico area. The real estate brokers indicated that if any major existing retail operations close due to the implementation of the proposed Wal-Mart Expansion project, then it would be possible to backfill or even redevelop the space without damaging the Chico retail market. This information was based on the retailer inquiries they frequently receive and the retail market activity. A recent example of retail retenanting is the site of the former Home Base on Whitman Avenue. The former Home Base building was divided into three spaces and occupied by Cost Plus, Bed Bath and Beyond, and Ashley Furniture Homestore. Another example of reuse is the former Fred Meyers building which was demolished to build the new Lowe's. While such backfilling might take up to two years to facilitate tenant outreach, business negotiations, tenant improvements, and ultimately store opening (all of these steps are time-consuming regardless of location), the real estate brokers stated that these steps would most likely occur in the short-term.

Given the above, the economic analysis concludes that there is has no evidence that significant business closures would occur due to the development of the proposed Wal-Mart Expansion

project, nor that urban decay from store closures is reasonably foreseeable. Therefore, this impact is determined to be **less than significant**.

Mitigation Measures

None required.

CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

This section addresses cumulative impacts from the proposed Wal-Mart Expansion project and other related projects within the project vicinity.

CUMULATIVE SETTING

"Cumulative impacts" refers to two or more individual effects which, when considered together, are significant or which compound or increase the level of significance of other environmental impacts. The cumulative impact from several projects results in a change in the environment as a result of individual project impact considered in addition to other closely related past, present, and reasonably foreseeable future projects (CEQA Guidelines 15355). An assessment of cumulative impact considers all potential impacts, including those deemed as either potentially significant or less than significant. For purposes of this investigation, projects considered for cumulative affect are under the jurisdiction of the City of Chico General Plan.

Identified Projects

Primary Market Area

Sedway Group identified selected retail projects of significance in the City of Chico. The selected retail projects include the proposed North Wal-Mart Supercenter, the proposed Costco expansion, and Kohl's, which is currently under construction.

The North Supercenter Store would be located west of Highway 99 and east of Esplanade in Butte County, and would require annexation into the City of Chico. It is 0.5 miles northwest of the City of Chico, but within the City's sphere of influence. The proposed North Wal-Mart Supercenter will result in an addition of 231,115 square feet of store space (inclusive of the outdoor garden center). Approximately 58,000 square feet of this space will be dedicated to food sales, as the North Wal-Mart Supercenter will include a full-service grocery component. The North Wal-Mart Supercenter is anticipated to open in 2008.

In addition, a proposal to replace the existing Costco, located along Whitman Avenue, with a new, larger building on the same site has been submitted to the City. The new building results in a net increase of 25,687 square feet of retail space. The planned use for this incremental space is not identified. The City is reviewing the Environmental Impact Report for this project and approvals are expected in mid-2006. Completion of the new Costco building is expected in mid-2007.

Furthermore, Kohl's is constructing an approximately 96,077-square-foot store with an additional 38,086 square feet of retail space in four pads.

Secondary Market Area

Within the secondary market area, Sedway Group identified the following planned or approved retail projects: Wal-Mart Supercenter expansion in the City of Willows, a Wal-Mart Supercenter expansion in the City of Red Bluff, and a new retail center in the Town of Paradise. The Willows Supercenter Store is an expansion of the existing Willows Discount Store. This project was approved by the City of Willows City Council on May 7th 2006. The Willows Supercenter expansion will result in an incremental addition of 109,929 square feet of store space. The Willows Supercenter Store will include a full-service grocery component, which is not present in the existing Willows Discount Store. If approved, the Red Bluff Supercenter Store is a planned expansion of the existing Red Bluff Discount Store. The Red Bluff Supercenter expansion will result in an incremental addition of approximately 96,100 square feet of store space. The Red Bluff Supercenter Store will also include a full-service grocery component, which is not present in the existing Red Bluff Discount Store. The Red Bluff Wal-Mart store is currently in the process of environmental review and the EIR anticipated to be certified by the City Council sometime in May or June.

A 60-acre site adjacent to the Town of Paradise has been approved for a General Plan Amendment and Zone Change to allow for a retail center of approximately 290,000 square feet. According to the Town of Paradise Planning Department the project is in the approvals process with a conceptual layout prepared for the General Plan Amendment. A "big box" type of store is proposed as the anchor store, but no other potential tenants have been identified. The project site will require LAFCO approval for annexation into the Town of Paradise.

CUMULATIVE IMPACT AND MITIGATION MEASURES

Cumulatively Contribute to Physical Deterioration and Urban Decay

Impact 4.6.2 Expansion of the Wal-Mart store in Chico along with the opening of other retail stores may result in closure of competing businesses. This may increase the inability of property owners to lease vacant buildings that could result in physical deterioration. This impact is considered to be **less than significant**.

Primary Market Area

Sedway Group has identified a maximum diverted sales resulting from development of the proposed Wal-Mart Expansion project in south Chico, the development of a new Wal-Mart Supercenter store in north Chico, and the Costco expansion. These results indicate that, at worst, $80.2 million in sales will comprise sales diverted away from existing City of Chico general merchandise and food retailers. The diverted sales impact estimate is $58.9 million on general merchandise stores, and $21.3 million on food stores.

General Merchandise. Net of the referenced over performance ($12.0 to $40.0 million in 2008 dollars), the maximum sales diversion of $58.9 million is reduced to $18.9 to $46.8 million. Chico is projected to require four or more years to generate this level of additional demand, which is equivalent to the support of roughly 74,000 to 226,000 square feet of space. Thus, it appears at minimum one mid-sized store is at risk of closing, with the maximum potential of three or more stores, depending upon their size are at risk of closing.

Grocery Stores. The estimated $21.3 million in diverted food store sales is equivalent to around 39,000 to 49,000 square feet of supportable space. If the existing stores are not strong enough to withstand a potential two- to three-year downturn in sales, then one additional existing

conventional grocery or price-impact warehouse store may close. This could instead include two of the City's smaller more conventional stores. It is unlikely any niche market will close due to these impacts.

Secondary Market Area

The identified projects in the secondary market area include two proposed expansions of existing Wal-Mart Discount Stores to Supercenters and a retail development in the Town of Paradise with a proposed "big box" store as the anchor tenant. The Supercenters and the retail development in Paradise may dilute some demand away from Chico retailers given the broader range and mix of non-food goods that will be available closer to home, reducing the need to shop in Chico. However, this would likely not include food stores, as food purchases are typically more local-oriented unless they are included with a larger shopping trip for other goods. Therefore, the food offerings at these additional stores are likely to have no incremental impacts on food stores in the primary market area. Even with a big box store available in their local market, there will still be a strong need to shop for more regional goods in Chico. Thus, any incremental negative effects attributable to these projects are likely to be minimal in the primary market area, mitigated by new or expanded retailer demand and the previously analyzed population growth.

The new retail project in the Town of Paradise is likely to enter the market substantially after any of the other identified development projects. Moreover, as this project will be located in Paradise, it will primarily serve the retail shopping needs of Paradise residents. Paradise residents are included in the secondary market area analyzed in this study, and therefore are considered part of the identified demand base. The location of a "big box" type of store at the new shopping center, if approved, may reduce some of the secondary market area demand for the North Wal-Mart store, but until this store is confirmed or more information is available regarding the other prospective tenants, it is difficult to truly assess the likely impacts of this development on the Chico primary market area. There is leakage in the combined primary and secondary market areas that these stores could fill. Therefore, based upon the current project information available, it is anticipated that this project will not have a significant impact on Chico's retail market.

Potential for Physical Deterioration and Urban Decay

As discussed previously, Sedway Group contacted several real estate brokers to determine the retail demand in the Chico area. The real estate brokers indicated that if any major existing retail operations close due to the implementation of the proposed Wal-Mart Expansion project, then it would be possible to backfill or even redevelop the space without damaging the Chico retail market. This information was based on the retailer inquiries they frequently receive and the retail market activity.

Sedway Group's retail market research indicated that the retail market in Chico is strong and getting stronger. This suggests that any retail spaces vacated as a result of the proposed Wal-Mart Expansion project and other identified new development and store expansions will be successfully retenanted, including by tenants new to Chico and the regional market. This retenanting will only serve to benefit the market and expand local and regional shopping opportunities. Thus, Sedway Group concludes that the development of the proposed project and the identified cumulative development projects will not contribute to urban decay in Chico.

Given the above, there is no evidence to suggest that prolonged vacancies would occur due to the cumulative development, and that urban decay is reasonably foreseeable due to such vacancies. Therefore, this impact is determined to be **less than significant**.

REFERENCES

Chico, City of. 1994. *City of Chico General Plan, Updated February 1999.*

Sedway Group. *Draft Wal-Mart Supercenter Economic Expansion Analysis: South Store Expansion Chico, California*. February 2006.

5.0 Cumulative Impact Summary

This section summarizes the cumulative impacts associated with the Wal-Mart Expansion project that are identified in the environmental analysis contained in Sections 4.1 through 4.6 of this Draft EIR. Cumulative impacts are the result of combining the potential effects of the project with other planned developments, as well as foreseeable development projects. The following discussion considers the cumulative impacts of the relevant environmental issue areas.

5.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) contain an assessment of the cumulative impacts that could be associated with the proposed project. According to CEQA Guidelines Section 15130(a), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (as defined by Section 15130). As defined in CEQA Guidelines Section 15355, cumulative impacts refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. A cumulative impact from several projects is:

> ...the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

In addition, Section 15130(b) identifies that the following three elements are necessary for an adequate cumulative analysis:

1) Either:

   (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or,

   (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the Lead Agency.

2) When utilizing a list, as suggested in paragraph (1) of subdivision (B), factors to consider when determining whether to include a related project should include the nature of each environmental resource being examined, the location of the project and its type. Location may be important, for example, when water quality impacts are at issue since project outside the watershed would probably not contribute to a cumulative effect. Project type may be important, for example, when the impact is specialized, such as a particular air pollutant or mode of traffic.

3) Lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used.

4) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available, and

5) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

This Wal-Mart Expansion project EIR utilizes both the "list" and the "general plan" approach in the cumulative analysis. The most relevant related planning document for the project is the City of Chico General Plan, and therefore it is utilized in consideration of the general cumulative conditions, impacts, and mitigation measures for development of the City of Chico, through the planning horizon of the City's General Plan and associated EIR. However, this cumulative analysis is not based solely on the City's General Plan. This Draft EIR looks beyond the City's General Plan cumulative setting and buildout condition and also analyzes the potential cumulative impacts of the project in conjunction with past and proposed or reasonably foreseeable development in the southern area of the City. This area has experienced intensive commercial development and has attracted commercial uses that have a more regional draw. In some cases, the type of commercial development in this area may have resulted in slightly higher than expected traffic levels (and associated noise and air quality levels) than assumed in the General Plan for commercial development, which are based on an average of many different types of commercial development.

The type and location of these newer major commercial developments and a list of probable future development (Table 3.0-2 Operational and Pending Development as of January 2006) are contained in Section 3.0 Project Description. Section 4.6 Economic Analysis describes also the Downtown commercial area, which represents both the historic past and existing commercial development. Section 4.1 Land Use describes the land use designations for the area contained in the General Plan. These contain a thorough and complete description of the cumulative setting for past, present and future impacts of projects in the Chico area, against the backdrop of the City's General Plan, that contribute to related or cumulative impacts analyzed in the Wal-Mart Expansion project Draft EIR. Further, each topical environmental section contains a description of the cumulative setting as it relates to that particular topic to further define the geographic scope of the cumulative effect. For example, because airborne pollutants or traveling vehicles easily move beyond such static boundaries as those defined by the City's planning area boundaries, the cumulative settings have been customized to a more appropriate regional setting. This approach provides a sufficient geographic setting for making determinations of cumulative significance.

5.2 CUMULATIVE SETTING

Cumulative effects are those which result from the incremental effects of an action when considering past, present, and reasonably foreseeable future actions, regardless of the agencies or parties involved. Cumulative effects can result from individually minor but collectively significant factors taking place over time as they may relate to an entire region. This section identifies the general cumulative setting as that area comprised of the City of Chico, an area of land that is approximately 70 square miles (44,800 acres) in the Northern Central Sacramento Valley, and including the adjacent portions of Butte County.

Land use projects in the vicinity are listed and briefly described in **Table 3.0-2** in the Project Description, Section 3.0. This table identifies proposed, under application, and approved land use projects in the City of Chico. The table is not intended to be all-inclusive of all development

activity in the area, but rather a description of projects with which the Wal-Mart Expansion project may share cumulative impacts. Further, there is no specific timeline for when projects that are either proposed or under application will be developed, or whether they will be developed at all.

However, as noted above, the analytical approach utilized to address certain key environmental issues considers the broader implications of development outside the City of Chico. For example, the cumulative setting for regional ozone impacts is the multi-County air basin. The cumulative setting for biological resources considers the limit of the resource (i.e. habitat type, or range of the species). The cumulative setting for traffic considers the effect of regional development on the local street system and SR 99. The cumulative setting for the economic analysis is the regional market area for the products offered.

5.3 CUMULATIVE IMPACT ANALYSIS AND SUMMARY

Identified below is a compilation of the cumulative impacts that would result from the implementation of the project and future development in the region. Based on project conditions, assessment of the project's contribution to cumulative impacts were previously discussed for each of the environmental topic areas addressed in Sections 4.1 through 4.6. For each section, the discussion of cumulative impacts follows direct project impacts and mitigation measures. Cumulative impacts are summarized below. Each cumulative impact is determined to have one of the following levels of significance: **less than significant**; **potentially significant**; **significant but subject to mitigation**; or **significant and unavoidable**. Where appropriate, the Draft EIR identifies mitigation measures to ensure that the project will not have a cumulatively considerable contribution to the cumulative condition.

In some cases this Draft EIR requires payment of fees for mitigation. CEQA Guidelines recognize that, under appropriate circumstances, the payment of a fee under an adopted program may suffice to mitigate the project's otherwise "cumulatively considerable" incremental contribution to significant cumulative impacts. "A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact." (CEQA Guidelines, § 15130, subd. (a)(3).)

The mitigation measures identified in the Draft EIR for traffic improvements include payment of fees to address improvements to the local circulation system. The City of Chico has recently adopted the 2005-06 Update of Development Impact Fees, Analysis and Recommendations (Nexus Study) establishing the needed circulation improvements and method of assessment. The City will use this money, together with fees paid by other development, to construct priority traffic improvements to address congestion including the City's contribution to the upgrading of SR 99. The payment of this fee represents the applicant's fair share towards regional traffic improvements.

The traffic mitigation fees were adopted in order to address local and region-wide impacts. Because the applicant will pay these fees, the Draft EIR concludes that the project will not have a cumulatively considerable impact on local traffic congestion. The Courts and the CEQA Guidelines recognize that the payment of such fees serves to mitigate cumulative impacts. (See Save Our Peninsula Committee. v. Monterey County Board of Supervisors (2001) 87 Cal.App.4th 99; Gentry v. City of Murrieta (1995) 36 Cal.App.4th 1359; CEQA Guidelines, § 15130, subd. (a)(3).)

However, the City's contribution toward improvements to SR 99 may not represent a plan of mitigation that the relevant agency commits itself to implementing (Anderson First Coalition v. City of Anderson (2005) 130 Cal. App. 4th 1173. The improvement of SR 99 is the responsibility of Caltrans and outside of the City's control. The timing of construction is dependant upon the ranking of these desired improvements against all of the other projects in the state and ultimately is tied to the availability of federal and state funding. Due to the uncertainty of the timing of full funding and construction of the needed improvements to SR 99 ramps in relation to the very certain planned construction and full operation of the Wal-Mart Supercenter in 2007, the impact has been deemed to be significant and unavoidable.

5.4 CUMULATIVE IMPACTS SUMMARY

Based on project conditions, assessment of the project's contribution to cumulative impacts were discussed for each of the environmental topic areas addressed in Sections 4.1 through 4.6. For each section, the discussion of cumulative impacts follows direct project impacts and mitigation measures. Cumulative impacts are summarized below. Each cumulative impact is determined to have one of the following levels of significance: less than significant; significant; or cumulatively significant and unavoidable.

CUMULATIVE IMPACTS

Section 4.1 Land Use

None.

Section 4.2 Traffic and Circulation

Cumulative Plus Project Conditions

Impact 4.2.3 Development of the proposed project and all other short-term and cumulative development would increase traffic at sufficient volume to cause LOS to decline below City standards under cumulative conditions. This is considered a **significant** impact.

Implementation of mitigation measures **MM 4.2.1** and **MM 4.2.2** would reduce traffic impacts on a number of roadway systems to an acceptable LOS. Therefore, the proposed project would have a **less than significant** traffic impact under cumulative conditions.

Section 4.3 Air Quality

Cumulative Impacts to Air Quality

Impact 4.3.9 The project would contribute to cumulative air quality impacts. These impacts would be **significant and unavoidable** impacts.

MM 4.3.9 Implement mitigation measures **MM 4.3.1** and **4.3.4.**

These measures include Standard Mitigations Measures as well as Best Available Mitigation Measures as identified in the BCAQMD's *Indirect Source Review Guidelines* and City of Chico's *Best Practices Manual.* Implementation of the above listed mitigation measures would reduce

air quality impact however this impact cannot be mitigated to a less than significant level. Therefore, this is considered a **significant and unavoidable** impact.

Section 4.4 Biological Resources

Disturbance to Special-Status Species, Critical Habitats, and Interference with Wildlife Movement

Impact 4.4.5 Development of the project in addition to anticipated cumulative development conditions in the project vicinity would result in disturbance to critical riparian habitat and wetlands throughout the region. These impacts are considered **potentially cumulative significant.**

MM 4.4.5 Implement mitigation measures **MM 4.4.4** and **MM 4.4.5.**

Implementation of these mitigation measures would reduce the overall contribution to cumulative biological resource impacts resulting from construction of the project. Therefore, proposed project contributions to the potential loss and/or restriction of biological resources in the region are considered **less than significant.**

Section 4.5 Cultural and Paleontological Resources

Prehistoric and Historic Resources

Impact 4.5.3 Implementation of the proposed project, along with any foreseeable development in the project vicinity, could result in cumulative impacts to cultural resources. This is considered a **less than significant cumulative** impact.

Paleontological Resources

Impact 4.5.4 Implementation of the proposed project, along with any foreseeable development in the project vicinity, could result in cumulative impacts to paleontological resources. This is considered a **less than significant cumulative** impact.

Section 4.6 Economic Analysis

Cumulatively Contribute to Physical Deterioration and Urban Decay

Impact 4.6.2 Expansion of the Wal-Mart store in Chico along with the opening of other retail stores may result in closure of competing businesses. This may increase the inability of property owners to lease vacant buildings that could result in physical deterioration. This impact is considered to be **less than significant**.

6.0 Alternatives to the Proposed Project

The alternatives analysis consists of the following components: an overview of CEQA requirements for alternatives analysis, descriptions of the alternatives evaluated, a description of alternatives considered but rejected, a comparison between the anticipated environmental effects of the alternatives and those of the proposed project, and identification of an "environmentally superior" alternative.

6.1 GENERAL CEQA REQUIREMENTS

The CEQA Guidelines require that an EIR describe a reasonable range of alternatives to a project that would feasibly attain the basic project objectives but would avoid or substantially lessen one or more of the project's significant effects (CEQA Guidelines Section 15126.6(a)).

In addition, Section 15126.6(a) and (b) of the CEQA Guidelines require the consideration of alternatives that could reduce or eliminate any significant adverse environmental effects of the proposed project, including alternatives that may be more costly or could otherwise impede the project's objectives. The range of alternatives considered must include those that offer substantial environmental advantages over the proposed project and may be feasibly accomplished in a successful manner considering economic, environmental, social, technological and legal factors. CEQA Guidelines also require the identification of an "environmentally superior" alternative among the alternatives analyzed.

6.2 DEVELOPMENT OF PROJECT ALTERNATIVES

This section discusses the reasoning for selecting the alternatives and summarizes the assumptions identified for the alternatives. The range of alternatives included for analysis in an EIR is governed by the "rule of reason." The primary objective is formulating potential alternatives and choosing which ones to analyze to ensure that the selection and discussion of alternatives fosters informed decision-making and informed public participation. This is accomplished by providing sufficient information to enable readers to reach conclusions themselves about such alternatives. This approach avoids assessing an unmanageable number of alternatives or analyzing alternatives which differ too little to provide additional meaningful insights about their environmental effects. The alternatives addressed in this EIR were selected in consideration of one or more of the following factors:

- The extent to which the alternative would accomplish most of the basic objectives of the project.
- The extent to which the alternative would avoid or lessen any of the identified significant effects of the project.
- The feasibility of the alternative, taking into account site suitability and parcel size, and consistency with applicable public plans, policies, and regulations.
- The appropriateness of the alternative in contributing to a "reasonable range" of alternatives necessary to permit a reasoned choice.

The alternatives analyzed in this EIR were ultimately chosen based on each the alternative's ability to feasibly attain the basic project objectives while avoiding or reducing one or more the project's significant effects. The analysis provides readers with adequate information to compare the effectiveness of identified mitigation or significant adverse impacts and to enable readers to make decisions about the project. CEQA requires EIRs to address a reasonable range of reasonable alternatives, not all potential alternatives.

PROJECT OBJECTIVES

As noted above, an EIR must describe a reasonable range of alternatives to a project that would feasibly attain the basic project objectives while avoid or reducing one or more of the project's significant effects (CEQA Guidelines Section 15126.6(a)). In identifying the range of alternatives for analysis in this EIR, the following objectives listed below, as submitted by Wal-Mart, for the project were considered:

- Design a project consistent with the City of Chico Zoning Ordinance and develop the site consistent with general retail development allowed under the Community Commercial zoning District.

- Develop a store that satisfies General Plan goals and policies for commercial and retail development and that is consistent with the site's Commercial Services Designation.

- Develop a store that enhances the economic vitality of the City of Chico and contributes to the community.

- Develop a large, state of the art retail store in close proximity to Highway 99 that will accommodate the retail demands of the Chico community and surrounding areas and to expand/replace the existing small, outdated retail store.

- Develop an architectural design that softens the scale and mass of the building and provides access that minimizes potential automobile and pedestrian conflicts, and a pedestrian scale in and around the entry to the store.

- Design a site plan to minimize overall access and circulation conflicts, such as facilitation of the circulation between the store, service station and future development on the adjacent parcel.

- Provide landscaping to soften the design and create a pleasant, attractive appearance that unifies the site and complements the surrounding area.

- Design storage areas to blend in with the building itself and confine the areas to a defined space.

- Design seasonal sales areas to complement the building design and minimize pedestrian and automobile conflicts.

- Implement planned improvements and mitigation measures that minimize traffic impacts:

- Implement traffic mitigation measures in conjunction with the City's planned improvements;

- Develop and implement planned improvements and mitigations in conjunction with the City, to minimize traffic both in the near term and by Year 2020.

- Phase the demolition of existing store and construction of the store to minimize economic impacts to employees and the community and potential hazards to the health and safety of employees and customers.

- Provide sufficient off-street parking to meet the City's standards of 5 spaces for every 1,000 square feet in order to ensure that adequate on-site parking is provided for store customers and employees.

- Increase the site's acreage in order to accommodate the larger 223,605 square foot facility.

- Provide adequate infrastructure to support the project and develop a storm drainage system in compliance with standards set forth by the City of Chico.

- Provide a store that will provide significant benefits to the City and community in terms of employment opportunities, sales tax revenues, shopping opportunities and community programs.

In addition to the above objectives provided by Wal-Mart, the City's objectives for development of the site expressed in the General Plan site designation and associated policies were considered.

CONSISTENCY WITH ADOPTED PLANS AND POLICIES

The project site is designated as Community Commercial and Commercial Services under the City of Chico General Plan. The entire project site is currently zoned as CC, Community Commercial. The General Plan land use designation assigned to the site is intended to provide sites for commercial business not permitted in other commercial areas because they attract high volumes of vehicle traffic and may have adverse impacts on other uses. Offices not accessory to a permitted use and retail use are excluded, eliminating business park/office commercial as an alternative land use. Residential development (live-work) in a mixed-use development is only permitted above commercial development subject to additional standards. As previously stated, the project site is within a CC Community Commercial zoning district, the stated purpose of which is " ...applied to areas appropriate for retail shopping, primarily in shopping centers, including a wide range of retail businesses. (see Figure 4.1.1 for the City of Chico General Plan designations and Figure 4.1.2 for the zoning classifications of the Wal-Mart Expansion project site and lands surrounding the proposed project site).

The surrounding area is presently intensively developed and commercial in character. The Chico Mall, the Village Center, and other commercial establishments are located along East 20th Street. The Wittmeier Auto Center, Butte Community College extension, and Lowe's are located on Forest Avenue, south of the project site. The Chico Crossroads Center and Costco are on the west side of State Route 99. North of the proposed site is a Shell gasoline station, vacant land which has been proposed as a 73,000 square foot retail center, and the Oxford Suites hotel. The In-and-Out Burger restaurant and the building formerly occupied by the Krispy Kreme Donut store are located west of the project (See Section 3.0, Figure 3.0-3 Surrounding Uses).

As a result, options for land uses that would meet the selection factors of meeting the basic project objectives and consistency with local plans, policies, and regulations are limited to commercial development. Thus, alternative land uses for the project site were not considered for further evaluation in the alternatives analysis.

REASONING FOR SELECTION OF ALTERNATIVES

Reduced Density Alternative

Project alternatives that consider the reduction of project density are often included in alternatives analyses as a means of reducing impacts such as traffic to less-than-significant levels. Such alternatives are typically considered for higher density residential projects where the reduced density alternative would provide a meaningful alternative for comparison. For residential development, a given land area can be considered for a lower intensity of development as housing types are available for feasible development at low, medium or high housing densities. However, retail commercial development lacks the flexibility of residential development and is limited to a more narrow range of building types and intensities. In suburban settings such as in Chico, feasible retail commercial development is limited by building coverage to about 25 percent of site area, as dictated by parking, circulation, and landscaping requirements. (It should be noted that the development intensity reflected in the project is consistent with City of Chico limits of building coverage). To represent a meaningful alternative under CEQA, the development intensity would need to be substantially reduced from that proposed. A project alternative with a distinctly lower building intensity would have substantially reduced floor area and parking, and substantially increased landscaped areas. It is unlikely that such a reduced intensity retail commercial development would be economically feasible and thus, would not be developed.

General Plan Alternative

The General Plan alternative evaluates development of the site consistent with the General Plan with a different commercial development. Because the traffic study identified that the existing Wal-Mart store generates a higher trip generation rate than that identified by industry standards (ITE) for similar discount retail, the Wal-Mart Expansion project was evaluated at a weekday peak hour rate 34 percent higher than the ITE rates and a Saturday peak hour rate 25 percent higher than the ITE rate. The General Plan alternative considers development of the site with a comparably sized commercial development at approximately 25 percent site coverage but assuming standard ITE traffic generation rates, thus resulting in less traffic and related air quality impacts.

In terms of land use planning, this alternative represents an efficient use of land that satisfies the overall strong market demand for commercial retail space and does not merely shift the development pressure to other lands. This alternative is also consistent with City policies to promote efficient development patterns, minimize conversion of open space and agricultural lands, and encourage the most efficient use of the City's capital investments in urban infrastructure.

Reduced Project Size

This EIR also addresses a feasible and viable reduced size and intensity commercial development in the Grocery Only alternative, which considers development of the Wal-Mart expansion project with the grocery store component only, and eliminates all unrelated additional proposed retail square footage. It is expected that this alternative may result in a reduction of traffic levels and related air quality impacts. In this case, consideration of a more substantial reduction of the site development may indicate a reduction in the level of impacts but would ultimately be illusory as it would ignore the remaining acreage on the property, which could still be developed for commercial land use under the applicable General Plan designation and zoning district. Further reduction of the size of the development then does not

represent a meaningful alternative under CEQA because the remainder of the site would still be developed (as considered in the General Plan alternative) and thus would not result ultimately in a substantial reduction or avoidance of significant impacts. Therefore, a further reduced project size alternative was not selected for further consideration.

No Project Alternative

CEQA Guidelines Section 15126.6(e) requires that a "No Project" alternative be evaluated in an EIR. In the case where the project is a development project on identifiable property, such as the Wal-Mart Expansion project, the No Project analysis must discuss the circumstance under which the project does not proceed. Thus the comparison is that of the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved. Thus, the analysis allows the decision makers to compare the impacts of approving the project with the impacts of not approving the project (CEQA Guidelines Section 15126.6(e)(3)(B).

Alternative Locations

The analysis of alternative locations is generally limited in the case of a private development due to the limited number of sites to select from that are owned by or can readily be purchased by the project proponent, and that are consistent with the applicable General Plan. This is contrasted with a federally sponsored project where the government entity owns and manages large tracts of properties and has a multitude of choices available for site selection. However, in this case, Wal-Mart currently has actively applied for entitlements to build or expand in the city of Chico on two sites. Two other optional sites that would meet some, if not all, of the project objectives were also considered. Selection of an alternative location may have the potential to reduce impacts to site-specific features such as biological resources or impacts to the local circulation system.

6.3 ALTERNATIVES ANALYSIS

In accordance with the provisions of CEQA Guidelines Section 15126.6, this EIR evaluates a range of alternatives to the proposed project. These alternatives are compared to the proposed project and its significant environmental impacts identified in Sections 4.1 through 4.6. The project alternatives are evaluated in less detail than the project is analyzed and are described in terms of difference in outcome compared with implementing the project. The alternatives analysis focuses on determining the extent to which alternatives could avoid or mitigate the proposed project's impacts. **Table 6.0-1** at the end of this section provides a comparison of the environmental benefits and impacts of each alternative. The environmentally superior alternative is identified.

- ***No Project Alternative.*** The CEQA guidelines require evaluation of the "No Project" alternative in order "to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project" (CEQA Guidelines 15126.6(e)). This alternative assumes that the site remains in it's partially developed state with the existing Wal-Mart store continuing in operation and the remainder of the site remaining vacant.

- ***General Plan Alternative***. This alternative differs from the "No Project" alternative as it assumes development of the proposed project site consistent with the existing zoning and general plan designation. This alternative does not discuss a "no physical change" scenario as found with the "No Project" alternative because given the property's current commercial general plan designation and zoning as well as its location in an intensively

developed commercial area, it is unrealistic that the site will remain undeveloped in the foreseeable future. This alternative assumes continued operation of the existing Wal-Mart store and full development of the remainder of the site as a commercial use. An alternative commercial development would potentially generate slightly lower traffic generation rate.

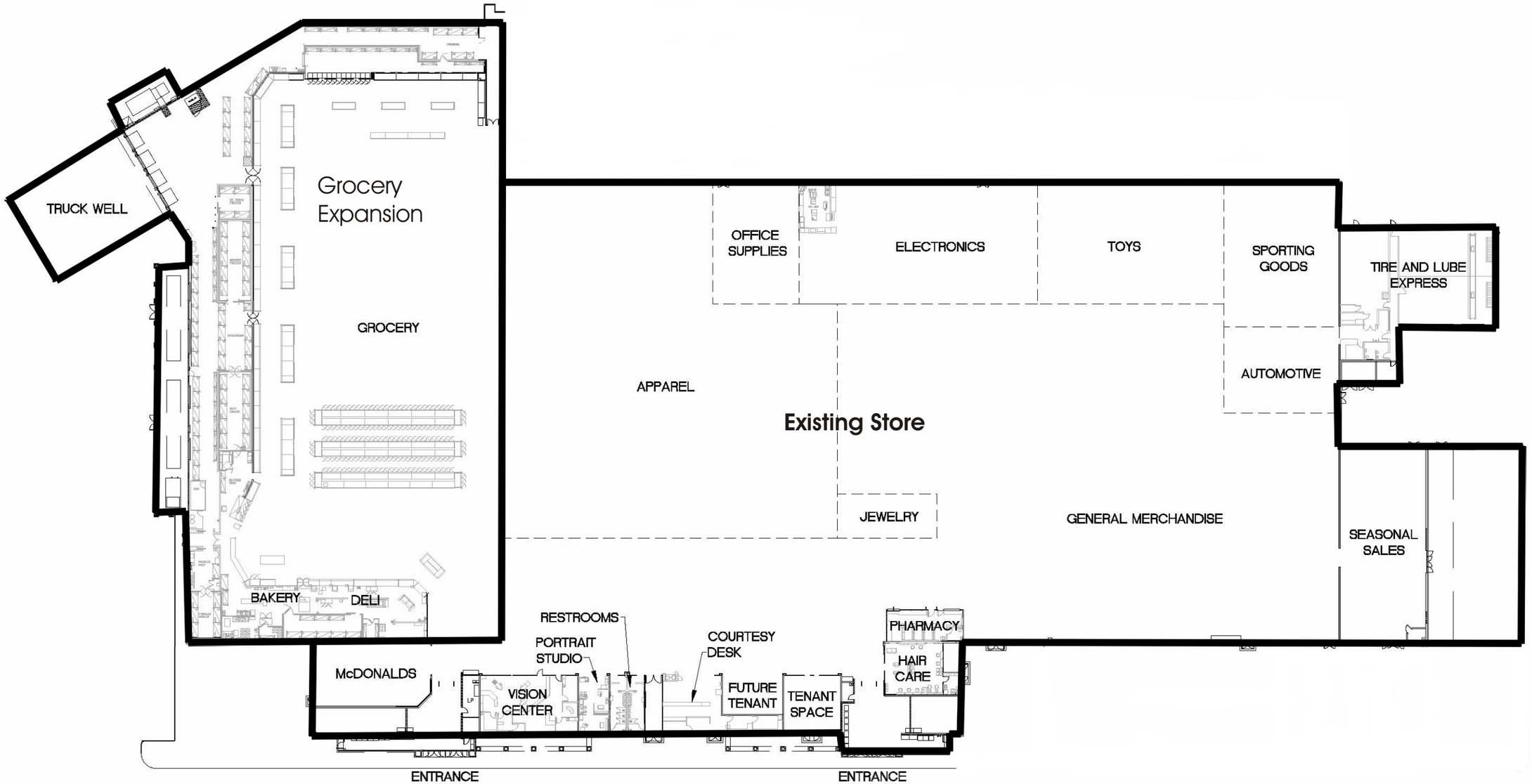
- ***Grocery Only Alternative.*** This alternative assumes expansion of the existing Wal-Mart with only the components related to the proposed grocery expansion. No other proposed components of the Wal-Mart expansion proposal would be constructed. The gas station and restaurant would be constructed on the remainder of the property. **Figures 6.0-1** display the lay out of the proposed grocery only alternative.

- ***Alternative Project Sites*:** Three potential alternative sites were examined for the proposed project. This alternative assumes that the full Wal-Mart Supercenter store, the gas station, and the restaurant would be developed on the alternate sites. The characteristics of each site are discussed briefly followed by a summary analysis of the environmental issues. It should be noted that the City of Chico has received an application to develop a Wal-Mart Supercenter at the North Chico Alternative site and the entitlements and environmental review for this project are being processed simultaneously with this subject application and EIR.

  - North Chico Alternative (Figures 6.0-2).

  - Nord Highway Alternative (Figure 6.0-2 and Figure 6.0-3).

  - Eaton Road Alternative (Figure 6.0-2).



Source: PACLAND

FIGURE 6.0-1
GROCERY ONLY EXPANSION ALTERNATIVE

PMC

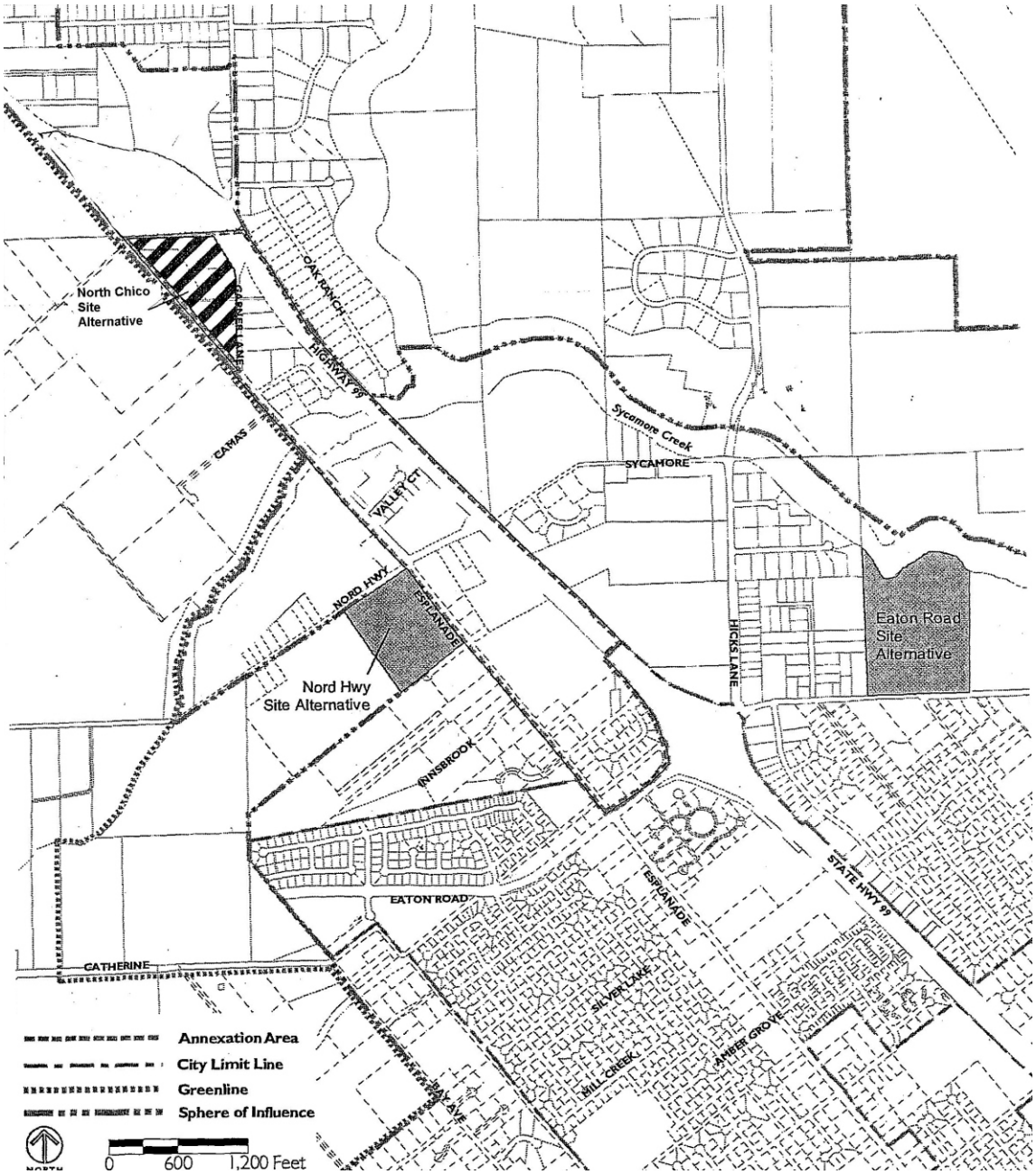
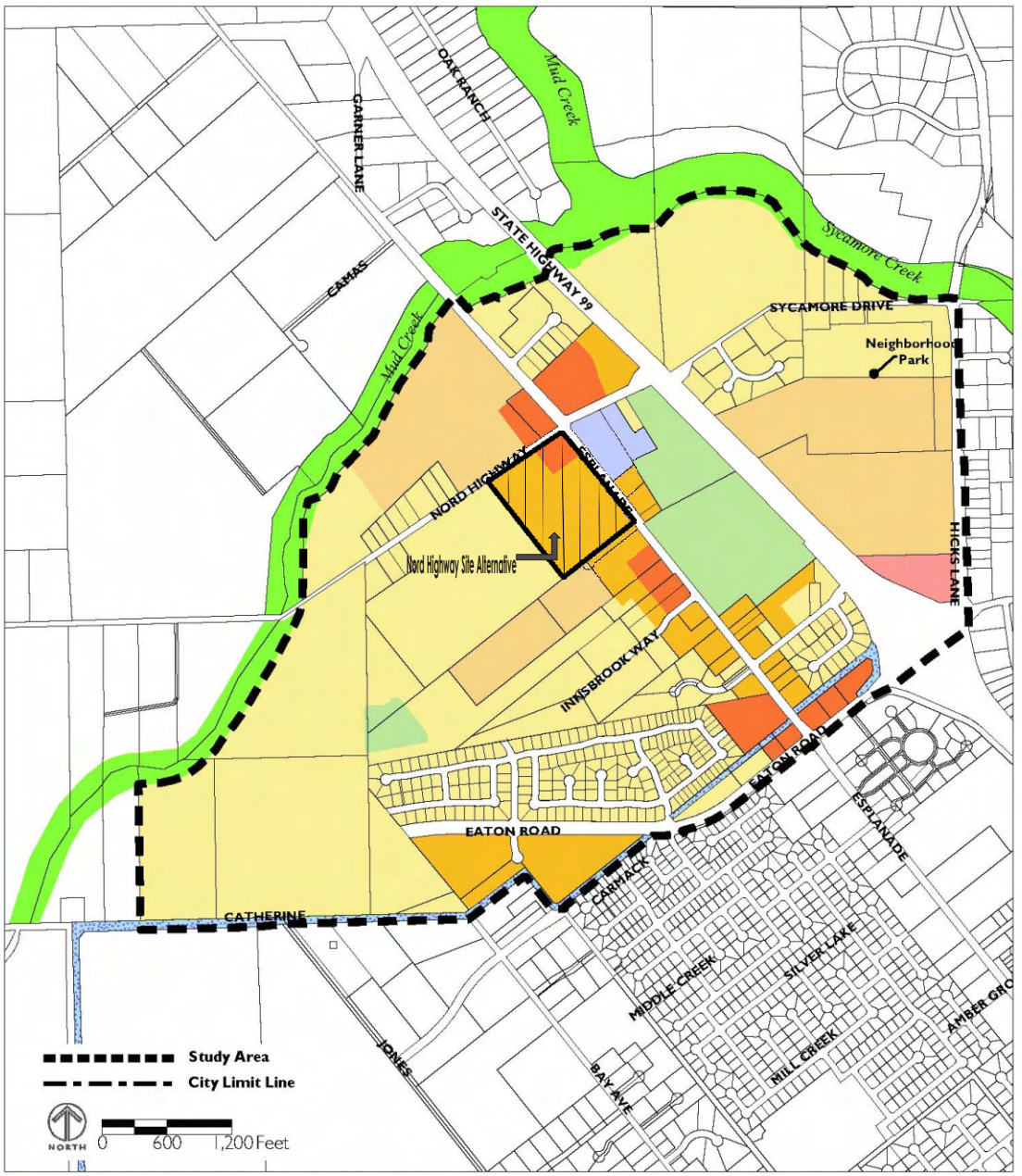


FIGURE 6.0-2

SITE ALTERNATIVES

PMC



Low Density Residential (2.01-6 du/ac)
Medium Density Residential (4.01-14 du/ac)
Medium-High Density Residential (14.01-22 du/ac)
Commercial Services
Mixed-Use Neighborhood Core
Public Facility & Services
Creekside Greenway
Park
SUDAD

FIGURE 6-1

GENERAL PLAN
LAND USE MAP

NORTHWEST CHICO SPECIFIC PLAN
PUBLIC REVIEW DRAFT

Source: city of Chico

FIGURE 6.0-3

NORTHWEST SPECIFIC PLAN - NORD HIGHWAY SITE ALTERNATIVE

PMC

NO PROJECT ALTERNATIVE

Characteristics

Under the No Project Alternative the proposed expansion of the Wal-Mart store, the gas station and the restaurant would not be built. This alternative assumes that the site remains in it's partially developed state with the existing Wal-Mart store continuing in operation and the remainder of the site remaining vacant.

Comparative Impacts

Land Use

The No Project Alternative would not result in implementation of commercial development consistent with the City of Chico General Plan land use designations for the site and the adopted City of Chico zoning. Development of this site with commercial land use was analyzed as part of the City's comprehensive economic development strategy and land use plan as a commercial site with the adoption of the 1994 General Plan (amended in 1999) and is contemplated in the goals and policies of the General Plan. This General Plan land use designation is intended to provide sites for commercial business not permitted in other commercial areas because they attract high volumes of vehicle traffic and may have adverse impacts on other uses. Allowable uses include automotive sales and services, building materials, nurseries, agricultural equipment rentals, contractors' yards, wholesaling, warehousing, storage, and similar uses.

The subject site is not designated or contemplated for an agricultural use, thus there is no gain of agriculturally valued land by the choice to not develop the site. The surrounding area is presently intensively developed with commercial uses and a vacant lot is not compatible with surrounding land use. The choice to not develop this site would be inconsistent with the City of Chico General Plan and would not contribute to the achievement of the City's goals and policies associated with commercial land use and economic development.

Transportation and Circulation

The No Project Alternative would not result in implementation of commercial development consistent with the City of Chico General Plan land use designations for the site and the adopted City of Chico zoning. No development would occur on this site, thus no traffic would be generated. Planned development in the surrounding area would continue to develop and the traffic impacts identified in the traffic analysis in Section 4.2, Table 4.2-9 would occur but no increase in traffic volumes from development of the site (identified in Table 4.2-12) would occur. Thus, the No Project Alternative would not result in significant contributions to impacted intersections and would be superior in terms of traffic impact compared to the proposed Wal-Mart Expansion project.

Air Quality

The air quality analysis for the Wal-Mart Expansion project identified that construction activities such as clearing, excavation and grading; and operation of the project would attract vehicle trips resulting in significant emissions of NOx and ROG. The No Project Alternative would not result in impacts to air quality from construction or from operation of a commercial retail development and would be superior in terms of air quality to the Wal-Mart Expansion project.

Biological Resources

The biological assessment for the site identified wetlands and the potential for disturbance to nesting raptors and migratory birds. The No Project Alternative would not result in further site disturbance and the wetlands and nesting habitat would be undisturbed. The hydrologic and habitat values of the site would remain. The No Project Alternative is superior in terms of biological resources to the proposed project.

Cultural and Paleontological Resources

No cultural or paleontological resources have been identified on the project site. However, development of the site would have the potential for disturbance of undiscovered and presently unknown cultural and paleontological resources at the time the site is graded, which is a significant impact. The No Project Alternative would not result in site disturbance and would not have the potential to disturb unknown resources. The No Project Alternative is superior in terms of cultural resources to the proposed project.

Economic Analysis

The No Project Alternative would not result in the addition of new commercial development that could compete with existing retail development therefore there would be no potential for this alternative to actively cause urban decay.

GENERAL PLAN ALTERNATIVE

Characteristics

Under the General Plan Alternative the proposed project would not be built and the site would remain in its current semi-developed condition with no further development until such time as a different commercial/retail project is constructed on the site. The project site is designated Community Commercial and Commercial Services under the current General Plan and zoned as Community Commercial. In addition, the undeveloped parcel is currently surrounded by other commercial enterprises.

Comparative Impacts

Land Use

The General Plan Alternative would result in implementation of commercial development consistent with the City of Chico General Plan land use designations for the site and the adopted City of Chico zoning. This contemplated commercial land use was analyzed as part of the City's comprehensive economic development strategy and land use plan as a commercial site with the adoption of the 1994 General Plan (amended in 1999) and is consistent with the goals and policies of the General Plan. This General Plan land use designation is intended to provide sites for commercial business not permitted in other commercial areas because they attract high volumes of vehicle traffic and may have adverse impacts on other uses. Allowable uses include automotive sales and services, building materials, nurseries, agricultural equipment rentals, contractors' yards, wholesaling, warehousing, storage, and similar uses. The expansion of the existing use does not divide an established community as no residential community exists, or is contemplated, on the project site or in the immediate project surrounds, in the adopted General Plan. The subject site is not designated or contemplated for an agricultural use, thus there is no loss of agriculturally valued land. The surrounding area is presently intensively

developed with commercial uses. Similar to the proposed Wal-Mart expansion project, no land use impacts would occur.

Transportation and Circulation

The General Plan Alternative would result in implementation of commercial development consistent with the City of Chico General Plan land use designations for the site and the adopted City of Chico zoning. As noted above, the Community Commercial and Commercial Services General Plan designation is intended to provide sites for commercial business not permitted in other commercial areas, in part, because they attract high volumes of vehicle traffic. The existing Wal-Mart at this site currently generates traffic volumes higher than those identified in the ITE range for discount retail businesses. The high volumes result from a number of market factors including a limited competitive market in this area and the synergy of the attraction of the surrounding commercial development. It is expected that commercial development at this site would generate similar but possibly lower traffic levels, more in line with the mid-range of the ITE range. These traffic levels would still result in significant impacts to all of the surrounding local streets, intersections and freeway ramps and mainline to the proposed Wal-Mart Expansion project, but the actual volume contribution would be slightly less.

Mitigation measures would be similar for the General Plan Alternative. Similar to the Wal-Mart Expansion project, fair share contributions would be required that would ultimately result in improvements that would provide acceptable (less than significant) conditions. The General Plan Alternative would also likely result in significant and unavoidable impacts to the local circulation system due to the potential for a gap in the timing of completion of all necessary improvements as compared to the timing of the store opening.

Air Quality

The air quality analysis for the Wal-Mart Expansion project identified that construction activities such as clearing, excavation and grading; and operation of the project would attract vehicle trips resulting in significant emissions of Nox and ROG. Development under the General Plan alternative would be expected to result in similar impacts to air quality from construction and operation of a commercial retail development to the Wal-Mart Expansion project, but because traffic volumes would be lower the emissions would be slightly lower. The mitigation measures proposed would be equally applicable to the General Plan Alternative project and could mitigate the impact to a less than significant level.

Biological Resources

The biological assessment for the site identified wetlands and the potential for disturbance to nesting raptors and migratory birds. Development of the project site consistent with the commercial land use designation could allow for avoidance of the on-site wetlands and associated riparian vegetation because the new development would stand alone and would not require connection to the existing Wal-Mart store. The wetlands are located at the perimeter of the north end of the vacant site. Due to the orientation of these existing wetlands on the site, it is possible that at least some wetland acreage could be avoided and allowed to remain with commercial development. However, parking and landscaping requirements would make it unlikely that the wetlands would be preserved and even in the event that their preservation was attempted, alteration of the site drainage to provide a level building pad, addition of surrounding landscaping, soil compaction, the potential for vandalism, and the isolated nature of the resource could eventually damage or destroy the hydrologic and habitat value of the existing wetlands. For these reasons, implementation of the General Plan

Alternative is considered to result in similar impacts to biological resources at this site. Mitigation measures were identified that would prevent disturbance to active nests and compensate for the loss of wetlands to a less than significant level. The mitigation measures proposed would be equally applicable to the General Plan Alternative project and could mitigate the impact to a less than significant level.

Cultural and Paleontological Resources

No cultural or paleontological resources have been identified on the project site. However, there is the potential for implementation of the proposed Wal-Mart Expansion project to result in disturbance of undiscovered and presently unknown cultural and paleontological resources at the time the site is graded, which is a significant impact. Because the General Plan alternative would also result in site development, this alternative would have similar impacts as the proposed project. The mitigation measures proposed would be equally applicable to the General Plan Alternative project and could mitigate the impact to a less than significant level.

Economic Analysis

The Market Impact Analysis (Sedway) determined that the Wal-Mart Expansion project would offer products and services that would compete with existing businesses in the City of Chico. If competitive stores could not withstand a temporary downturn in sales, it is possible that one existing conventional grocery store or less likely, a price-impact warehouse store, may close as a result of development of the proposed project. However, the study concluded that the Chico commercial market is strong and it would be possible to backfill the space without damaging the Chico retail market. The economic analysis concluded that there is no evidence that significant business closures would result from the development of the proposed Wal-Mart Expansion project nor that urban decay would result from the closure of directly competitive stores and the potential for the project to result in a significant environmental impact is less than significant.

Allowable uses in the Community Commercial and Commercial Services General Plan designation include automotive sales and services, building materials, nurseries, agricultural equipment rentals, contractors' yards, wholesaling, warehousing, storage, and similar uses. Development of a commercial project on the site under the General Plan Alternative would result in a commercial development that would compete with any similar type of commercial business. It is anticipated that due to the strong Chico retail market, that it would be possible to backfill any of these types of commercial businesses, in this location, that would close from direct competition. Similar to the proposed project, urban decay is not indicated to result from development under the General Plan Alternative and no significant environmental impact is anticipated to result.

GROCERY ONLY ALTERNATIVE

Characteristics

Under the Grocery Only Alternative the expansion would only include those expansion components related to the grocery store (**Figure 6.0-1 & Figure 6.0-2)** on the Wal-Mart site. The development of the adjacent parcel with a gas station and restaurant are assumed to be included. This alternative would include expansion of the existing Wal-Mart with the grocery sales, grocery stockroom, and ancillary components of approximately 75,145 square feet. The alternative would eliminate the rear expansion of general merchandise stock and offices, front expansion for pharmacy, or the garden center expansion that totals 22,411 square feet. Site

circulation would be similar; landscaping would be slightly increased, parking would be slightly decreased.

Comparative Impacts

Land Use

The Grocery Only Alternative would result in implementation of commercial development consistent with the City of Chico General Plan land use designations for the site and the adopted City of Chico zoning. This contemplated commercial land use was analyzed as part of the City's comprehensive economic development strategy and land use plan as a commercial site with the adoption of the 1994 General Plan (amended in 1999) and is consistent with the goals and policies of the General Plan. This General Plan land use designation is intended to provide sites for commercial business not permitted in other commercial areas because they attract high volumes of vehicle traffic and may have adverse impacts on other uses. Allowable uses include automotive sales and services, building materials, nurseries, agricultural equipment rentals, contractors' yards, wholesaling, warehousing, storage, and similar uses. In addition, the expansion of the existing use does not divide an established community as no residential community exists, or is contemplated, on the project site or in the immediate project surrounds, in the adopted General Plan. The subject site is not designated or contemplated for an agricultural use, thus there is no loss of agriculturally valued land. The surrounding area is presently intensively developed with commercial uses. Similar to the proposed Wal-Mart expansion project, no land use impacts would occur.

Transportation and Circulation

The Grocery Only Alternative would generate development of approximately 77 percent of the Wal-Mart store floor area compared to the proposed project, thus approximately 20 percent lower traffic volumes for the Wal-Mart component of the Grocery Only Alternative as compared to the Wal-Mart expansion component of the Wal-Mart Expansion project. Traffic volumes associated with the gas station and restaurant would be the same. Thus, the net new project trips for the superstore could be reduced by approximately 25 trips in the peak hours from the average of 340 peak hour trips for the entire project (see Table 4.2-8). Table 4.2-9 and Table 4.2-11 indicate three ramps, four intersections, and three private streets fall below the LOS standards without the Wal-Mart Expansion project. With addition of traffic generated by the Wal-Mart Expansion project, the same intersections were impacted although volumes were increased over levels without the project. The only exception was that the addition of project related improvements improved conditions at the intersection of Forest Avenue/Talbert-Wittmeier Drive to an acceptable LOS.

Due to the fact that these intersections fail with or without the project, it is not anticipated that the reduction in traffic levels that would result from the Grocery Only Alternative would reduce the *number* of impacted intersections as compared to the Wal-Mart Expansion project. However, the *volumes* at the impacted facilities would be slightly lower.

Mitigation measures would be similar for the Grocery Only Alternative although the project's required fair share contribution to the needed improvements would be commensurately lower. Thus, the City's ability to collect enough monies to fully fund these improvements may take slightly longer. Similar to the Wal-Mart Expansion project, the Grocery Only Alternative would result in significant and unavoidable impacts to the local circulation system due to the potential for a gap in the timing of completion of all necessary improvements as compared to the timing of the store opening.

Air Quality

The air quality analysis for the Wal-Mart Expansion project identified that construction activities such as clearing, excavation, and grading; and operation of the project would attract vehicle trips resulting in significant emissions of NOx and ROG. Development under the Grocery Only Alternative would be expected to result in similar impacts to air quality from construction and slightly lower impacts from operation due to the reduced floor area and related reduction in traffic. The mitigation measures proposed would be equally applicable to the General Plan Alternative project and could mitigate the impact to a less than significant level.

Biological Resources

The biological assessment for the site identified wetlands and the potential for disturbance to nesting raptors and migratory birds. Development of the Grocery Only Alternative is expected to have identical impacts because the addition would be attached to the existing Wal-Mart store in the location of the wetlands and would require their removal. Mitigation measures were identified that would prevent disturbance to active nests and compensate for the loss of wetlands to a less than significant level. The mitigation measures proposed would be equally applicable to the Grocery Only Alternative and could mitigate the impact to a less than significant level.

Cultural and Paleontological Resources

There are no known historic, archaeological or paleontological resources present on the site, and there would be no impacts to cultural resources associated with either the proposed project or the Grocery Only Expansion. In the event of discovery of previously unknown resources on the site, contingent mitigations to be applied would reduce impacts to less-than-significant levels for both alternatives.

Economic Analysis

The Market Impact Analysis (Sedway) determined that the Wal-Mart Expansion project would offer products and services that would compete with existing businesses in the City of Chico. If competitive stores could not withstand a temporary downturn in sales, it is possible that one existing conventional grocery store or less likely, a price-impact warehouse store, may close as a result of development of the proposed project. The Market Analysis also concluded that competition posed by the price-impact warehouse component of the Wal-Mart store has already largely occurred as the store has been open for some time. Removal of the expansion associated with this component is unlikely to pose much improvement to the potential for resulting store closures.

The study concluded that the Chico commercial market is strong and it would be possible to backfill the space without damaging the Chico retail market. The economic analysis concluded that there is no evidence that urban decay would result from closure of directly competitive stores and the potential for the project to result in a significant environmental impact is less than significant. Similar to the proposed project, urban decay is not indicated to result from development under the Grocery Only Alternative and no significant environmental impact is anticipated to result.

ALTERNATIVE PROJECT SITES

Three alternative sites were reviewed (**Figure 6.0-2** and **Figure 6.0-3**).

- Site 1, North Chico Alternative, corner of Garner Lane and Esplanade.
- Site 2, Nord Highway Site Alternative, southwest corner of Nord Highway and Esplanade.
- Site 3, Eaton Road Alternative, north of the intersection of Eaton Road and Godman Avenue.

North Chico Alternative

Characteristics

The North Chico Alternative development scenario would relocate the proposed Wal-Mart Supercenter store, gas station, and restaurant to a parcel within an approximately 112-acre site currently designated for Commercial Services in the Chico General Plan, located between Garner Lane and Esplanade (**Figure 6.0-2**). The complete development, including the existing building and parking lot, is proposed to be approximately 25 acres. State Route Highway 99 is adjacent to the eastern portion of the site, with light industrial uses on the other three sides. This site is presently under recreational use as a golf driving range. The City of Chico has received an application for a Wal-Mart Supercenter on this site. This request and the associated environmental impact report are being processed concurrently with the analysis of the subject Wal-Mart Expansion project on Forest Avenue.

Comparative Impacts

Land Use

The North Chico Alternative site is currently designated for Commercial Services in the Chico General Plan. This contemplated commercial land use was analyzed as part of the City's comprehensive economic development strategy and land use plan as a commercial site with the adoption of the 1994 General Plan (amended in 1999) and is consistent with the goals and policies of the General Plan. This General Plan land use designation is intended to provide sites for commercial business not permitted in other commercial areas because they attract high volumes of vehicle traffic and may have adverse impacts on other uses. Allowable uses include automotive sales and services, building materials, nurseries, agricultural equipment rentals, contractors' yards, wholesaling, warehousing, storage, and similar uses. The North Chico Alternative project would be consistent with this land use designation.

Although the North Chico Alternative site is not in agricultural use and would not directly result in the loss of existing agricultural land, it is located adjacent to agricultural land and the City's Green Line. There is the potential for intensive commercial development to result in conflicts or compatibility issues at this site with adjacent agricultural development. In addition, the non-agriculturally related commercialization of this site may encourage further conversion of adjacent agricultural lands to urban uses. Land use impacts associated with the potential loss of farmland would be greater than for the proposed project. By contrast, the proposed project would not present any land use conflicts.

Traffic and Circulation

The North Chico Alternative would be expected to result in significant additional traffic on the local circulation network. The new trips added to the local circulation network would be greater for the North Chico Alternative than for the proposed project because roughly half of the square footage at the Forest Avenue site exists and is already on the road network. The entirety of the

Supercenter would be new, thus adding a greater amount of new trips at the North Chico Alternative site. The potential for significant and unavoidable traffic impacts may occur in this area as a result of the development of the Supercenter at this location. The existing roadway infrastructure at the North Chico Alternative site (both city and SR 99) is not currently designed for intensive urban development and it is expected that impacts to the local network would be greater than at the Forest Avenue location.

Air Quality

The air quality analysis for the Wal-Mart Expansion project identified that construction activities such as clearing, excavation and grading, and operation of the project would attract vehicle trips resulting in significant emissions of Nox and ROG. Development under the North Chico Alternative would be expected to result in similar impacts to air quality from construction though the North Chico Alternative would contribute more to construction related air quality impact as the entire Supercenter would need to be built and the area disturbed would be larger. Operation of a commercial retail development would also generate more trips because the number of new trips added to the local circulation network would be greater for the North Chico Alternative than for the proposed project as roughly half of the square footage at the Forest Avenue site exists and is already on the road network. The entirety of the Supercenter would be new, thus adding a greater amount of new trips at the North Chico Alternative site. compared to the Wal-Mart Expansion project. Thus, the North Chico Alternative would present no benefits to air quality impacts and would probably be worse than the proposed project.

Biological Resources

Biological resource impacts associated with this alternative could be less as it is unknown if this site contains any wetlands. However, it is likely that improvements would have to be made to the bridge crossing Mud Creek that could result in impacts to a stream. The impacts to nesting birds would be similar as there are mature trees located on the North Chico site that would have to be removed. Thus, the North Chico Alternative is unlikely to present benefits to biological resources.

Cultural and Paleontological Resources

There are no known cultural resources on either the proposed project site or the North Chico site. Therefore, the North Chico site cultural resource impacts associated with undiscovered historic and prehistoric resources would be similar to impacts associated with the project; however, developing a larger area could result in greater potential for unanticipated discovery of unknown cultural resources. As the same mitigations would apply to potential resource discovery, the impact is essentially the same for the North Chico site as with the proposed project.

Economic Analysis

Because the City of Chico has received applications for development of two Wal-Mart stores, one at this location and one at the Forest Avenue site, the Market Impact Analysis (Sedway assumed development of Wal-Mart Supercenter stores at both locations in the cumulative analysis. The analysis determined that the Wal-Mart Supercenter stores would offer products and services that would compete with existing businesses in the City of Chico. If competitive stores could not withstand a two to three year downturn in sales, it is possible that two existing conventional grocery stores or price-impact warehouse stores may close as a result of development of the two proposed Wal-Mart Supercenter projects. However, the study

concluded that the Chico commercial market is very strong and it would be possible to backfill the space without damaging the Chico retail market. The economic analysis concluded that there is no evidence that urban decay would result from closure of directly competitive stores and the potential for the project to result in a significant environmental impact is less than significant.

Nord Highway Alternative

Characteristics

The North Chico Alternative proposes a development scenario in which the proposed Wal-Mart Supercenter, gas station, and restaurant project is constructed at the southwest corner of the intersection of Nord Highway and the Esplanade (**Figure 6.0-3**). The site is located generally northwest of the City core and within the adopted Northwest Chico Specific Plan area; thus, the site is currently within Butte County but annexation to the City is pending. The entire proposed project would fit on the site. The site is currently used as an orchard. Mud Creek is located north of the site.

Comparative Impacts

Land Use

This site is part of the proposed Northwest Chico Specific Plan. The City of Chico has designated the site Medium-High Density Residential and Mixed-Use Neighborhood Core. The Medium High Density Residential designation is applied to a number of parcels along the Esplanade, adjacent to commercial areas. This designation allows 14.1 to 22 units per gross acre (31.0 to 48.4 persons per gross acre).

Land uses identified under the Specific Plan for the site include include townhouses, garden apartments, and other forms of multi-family housing. The average density assumed for build out calculations is 17 units per gross acre. The Mixed-Use Neighborhood Core designation is intended to create nodes of neighborhood-serving retail, civic uses and housing. This designation allows businesses, institutions and service organizations serving the daily needs of nearby residents. Allowable uses include retail shops, small-scale financial, business and personal services and small-scale restaurants; the maximum non-residential Floor Area Ratio is 1.0. Upper-story residential uses are permitted, subject to appropriate standards and a maximum limit of 22 units per gross acre. Limitations on the size and location of parking, coupled with building orientation and design standards, will ensure that a pedestrian-oriented environment is created in these areas.

If the proposed retail supercenter were constructed on the Nord Highway site, it would be inconsistent with the newly adopted land use designations; amendment of the General Plan and Northwest Chico Specific would be required for the property to be developed with the project. The highly intensive nature of the project with high traffic and noise levels, as well as late night deliveries could result in compatibility issues with adjacent planned residential use and may overburden the local circulation system. By contrast, the proposed project would be entirely consistent with the General Plan designation and zoning at the Forest Avenue site and is surrounded by compatible commercial development.

Traffic and Circulation

The Nord Highway Alternative would be expected to result in significant additional traffic on the local circulation network. The new trips added to the local circulation network would be greater for the Nord Highway Alternative than for the proposed project because roughly half of the square footage at the Forest Avenue site exists and is already on the road network. The entirety of the Supercenter at Nord Highway would be new, thus adding a greater amount of new trips. The effect of these new trips would also be greater at the Nord Highway Alternative site because the existing roadway infrastructure (both city and SR 99) is not currently designed for intensive urban development and it is expected that impacts to the local network would be greater than at the Forest Avenue location.

Air Quality

The air quality analysis for the Wal-Mart Expansion project identified that construction activities such as clearing, excavation and grading, and operation of the project would attract vehicle trips resulting in significant emissions of Nox and ROG. Development under the Nord Highway Alternative would be expected to result in similar impacts to air quality from construction though the Nord Highway Alternative would contribute more to construction related air quality impacts, as the entire Supercenter would need to be built and the ground area disturbed would be larger. Operation of a commercial retail development would also generate more trips because the number of new trips added to the local circulation network would be greater for the Nord Highway Alternative than for the proposed project as roughly half of the square footage at the Forest Avenue site exists and is already on the road network. The entirety of the Supercenter would be new, thus adding a greater amount of new trips at the Nord Highway Alternative site compared to the Forest Avenue site. Thus, the Nord Highway Alternative would present no benefits to air quality impacts and would probably be worse than the proposed project.

Biological Resources

Biological resource impacts associated with this alternative could be less as it is unknown if this site contains any wetlands. The site is south of Mud Creek and it is unlikely that improvements to this bridge would be required to serve the Nord Highway site, thus eliminating biological impacts to the stream associated with bridge improvement that would be associated with the North Chico Alternative. The impacts to nesting birds would be similar as there are mature orchard trees located on the Nord Highway site that would have to be removed. Thus, the Nord Highway Alternative may have reduced wetland impacts but would still have the potential to effecting nesting birds.

Cultural and Paleontological Resources

There are no known cultural resources on either the proposed project site or the Nord Highway Alternative site. Therefore, the Nord Highway site cultural resource impacts associated with undiscovered historic and prehistoric resources would be similar to impacts associated with the project; however, developing a larger area could result in greater potential for discovery of unknown cultural resources. As the same mitigations would apply to potential resource discovery, the impact is essentially the same for the Nord Highway site as with the proposed project.

Economic Analysis

Because the City of Chico has received applications for development of two Wal-Mart stores, one at the North Chico alternative site discussed above, the Market Impact Analysis (Sedway assumed development of Wal-Mart Supercenter stores at both locations in the cumulative analysis. The analysis is equally applicable to the Nord Highway Alternative as the sites are in the same general north Chico location. The Sedway study determined that the Wal-Mart Supercenter stores would offer products and services that would compete with existing businesses in the City of Chico. If competitive stores could not withstand a two to three year downturn in sales, it is possible that two existing conventional grocery stores or price-impact warehouse stores may close as a result of development of the two proposed Wal-Mart Supercenter projects. However, the study concluded that the Chico commercial market is very strong and it would be possible to backfill the space without damaging the Chico retail market. The economic analysis concluded that there is no evidence that urban decay would result from closure of directly competitive stores and the potential for the project to result in a significant environmental impact is less than significant. Similar to the proposed project, urban decay is not indicated to result from development at the Nord Highway site and no significant environmental impact is anticipated to result.

The Eaton Road Alternative

Characteristics

The Eaton Road Alternative proposes a development scenario in which the proposed Wal-Mart Supercenter, gas station, and restaurant project is constructed north of the intersection of Eaton Road and Godman Avenue **(Figure 6.0-2).** The entire proposed project would fit on the site. The site is currently vacant, though several large piles of earth suggest that is may have been used as a construction staging area.

Comparative Impacts

Land Use

The two parcels that make up the Eaton Road Alternative site are currently designated as Low-Density Residential and Medium Density Residential by the City of Chico. If the proposed retail Supercenter were constructed on the Eaton Road site, it would conflict with the land use designations for the site, thus requiring amendment of the City's General Plan to be developed for commercial use. The highly intensive nature of the project with high traffic and noise levels, as well as late night deliveries could result in compatibility issues with adjacent planned residential use and may overburden the planned local circulation system. By contrast, the proposed project would be entirely consistent with the General Plan designation and zoning at the Forest Avenue site and is surrounded by compatible commercial development.

Traffic and Circulation

The Eaton Road Alternative would be expected to result in significant additional traffic on the local circulation network. The new trips added to the local circulation network would be greater for the Eaton Road Alternative than for the proposed project because roughly half of the square footage at the Forest Avenue site exists and is already on the road network. The entirety of the Supercenter at Eaton Road would be new, thus adding a greater amount of new trips. The effect of these new trips would also be greater at the Eaton Road Alternative site because the existing roadway infrastructure (city) is not currently designed for intensive urban development.

In contrast to the North Chico and Nord Highway Alternatives, traffic generated at the Eaton Road site would utilize the urban interchange at Eaton Road and SR 99, thus improvements needed to this interchange would be less than the improvements needed at the more northerly entrances to SR 99. It is expected that the Eaton Road Alternative would result in higher traffic levels and greater impacts to the local circulation network than at the Forest Avenue location.

Air Quality

The air quality analysis for the Wal-Mart Expansion project identified that construction activities such as clearing, excavation and grading, and operation of the project would attract vehicle trips resulting in significant emissions of Nox and ROG. Development at the Eaton Road Alternative site would be expected to result in similar impacts to air quality from construction though the Eaton Road Alternative would contribute more to construction related air quality impacts, as the entire Supercenter would need to be built and the ground area disturbed would be larger. Operation of a commercial retail development would also generate more trips because the number of new trips added to the local circulation network would be greater for the Eaton Road Alternative than for the proposed project as roughly half of the square footage at the Forest Avenue site exists and is already on the road network. The entirety of the Supercenter would be new, thus adding a greater amount of new trips at the Eaton Road Alternative site compared to the Forest Avenue site. Thus, the Eaton Road Alternative would present no benefits to air quality impacts and would probably be worse than the proposed project.

Biological Resources

Biological resource impacts associated with this alternative could be greater as the site is bordered entirely on the north by Sycamore Creek and may generate significant wetland impacts, impacts to riparian habit, impacts to nesting birds, and the creek probably serves as a wildlife corridor. Thus, the Eaton Road Alternative may have grater impacts to biological resources.

Cultural and Paleontological Resources

There are no known cultural resources on either the proposed project site or the Nord Highway Alternative site. Therefore, the Eaton Road site cultural resource impacts associated with undiscovered historic and prehistoric resources would be similar to impacts associated with the project; however, developing a larger area could result in greater potential for discovery of unknown cultural resources. As the same mitigations would apply to potential resource discovery, the impact is essentially the same for the Eaton Road site as with the proposed project.

Economic Analysis

Because the City of Chico has received applications for development of two Wal-Mart stores, one at the North Chico alternative site discussed above, the Market Impact Analysis (Sedway assumed development of Wal-Mart Supercenter stores at both locations in the cumulative analysis. The analysis is equally applicable to the Eaton Road Alternative as the sites are in the same general north Chico location. The Sedway study determined that the Wal-Mart Supercenter stores would offer products and services that would compete with existing businesses in the City of Chico. If competitive stores could not withstand a two to three year downturn in sales, it is possible that two existing conventional grocery stores or price-impact warehouse stores may close as a result of development of the two proposed Wal-Mart

Supercenter projects. However, the study concluded that the Chico commercial market is very strong and it would be possible to backfill the space without damaging the Chico retail market. The economic analysis concluded that there is no evidence that urban decay would result from closure of directly competitive stores and the potential for the project to result in a significant environmental impact is less than significant. Similar to the proposed project, urban decay is not indicated to result from development at the Eaton Road site and no significant environmental impact is anticipated to result.

6.4 IDENTIFICATION OF THE ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Based upon the evaluation contained in section 6.3, the No Project Alternative would be the environmentally superior alternative. The No Project Alternative would not result in the implementation of the City's land use goals and policies as contained in the General Plan for commercial development of the site. However, because the No Project Alternative would not result in any development, impacts related to construction and operation would not be generated resulting in reduced impacts to transportation and circulation, air quality, biological, and cultural resources. As the presence of the vacant parcel has not created urban decay thus far, the continuation of this circumstance is not expected to create urban decay. CEQA guidelines require that if the alternative with the least environmental impact is the No Project Alternative, then this document must also designate the next most environmentally preferable alternative.

The General Plan Alternative would be the next most environmentally superior in that it would be consistent with the City's land use goals and policies contained in the General Plan for commercial land use, but would generate reduced traffic levels and related operational air quality emissions levels. Because the General Plan Alternative at least provides for the possibility that the development could be designed to avoid on-site wetlands, it is possibly superior in terms of biological resources to the Grocery Only Alternative which would provide similar reductions in traffic levels and air quality emissions but the need to provide connection to the existing Wal-Mart store preclude the preservation of the wetlands.

All three of the alternative locations result in worse environmental impacts than the project as detailed above.

Table 6.0-1 provides a summary of the potential impacts of the alternatives evaluated in this section, as compared with the potential impacts of the proposed project.

TABLE 6.0-1
COMPARISON OF ALTERNATIVES TO THE PROPOSED PROJECT

Environmental Issue	No Project Alternative	General Plan Alternative	Grocery Only Alternative	North Chico Alternative	Nord Highway Alternative	Eaton Road Alternative
Land Use	W	S	S	W	W	W
Transportation & Circulation	B	B	B	W	W	W
Air Quality	B	B	B	W	W	W
Biological Resources	B	B	S	S	B	W

Environmental Issue	No Project Alternative	General Plan Alternative	Grocery Only Alternative	North Chico Alternative	Nord Highway Alternative	Eaton Road Alternative
Cultural & Paleontological Resources	B	S	S	S	S	S
Economic Analysis	B	S	S	S	S	S

B - Impacts better than those under proposed project
S - Impacts the same as those under proposed project, or no better or worse
W-Impacts worse than those under proposed project

REFERENCES

Chico, City of. 1999. *City of Chico Municipal Code, Title 19, Land Use & Development Regulations.* Ordinance 2185, effective 10/21/99.

Chico, City of. 1994. *City of Chico General Plan, Updated February 1999.*

Sedway Group. *Draft Wal-Mart Supercenter Economic Expansion Analysis: South Store Expansion Chico, California*. February 2006.

Lodi, City of. 2004. *Lodi Shopping Center Draft Environmental Impact Report.* August 2004.

7.0 Other CEQA Requirements

This section contains discussions and analysis of various topical issues mandated by CEQA including significant unavoidable environmental effects and significant irreversible environmental changes that cannot be avoided if the project is implemented, and growth inducing impacts.

7.1 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES/IRRETRIEVABLE COMMITMENT OF RESOURCES

LEGAL CONSIDERATIONS

CEQA Section 15126.2(c) and Public Resources Code Sections 21100(b)(2) and 21100.1(a) require that the EIR include a discussion of significant irreversible environmental changes which would be involved in the proposed action should it be implemented.

Determining whether the proposed project would result in significant irreversible effects requires a determination of whether key resources would be degraded or destroyed such that there would be little possibility of restoring them. Irretrievable commitment of resources is evaluated to assure that such current consumption is justified.

ANALYSIS

Implementation of the project would result in an increased intensity of development, but not beyond the level planned in the City of Chico General Plan. With the conversion of currently vacant land to commercial land use a variety of resources would be irretrievably committed for project construction and maintenance, including land, water, energy, construction materials, and human resources.

An increase in the intensity of land uses on the site would result in an increase in regional energy consumption. Electricity and gas would be provided by PG&E, which obtains its electricity and gas supplies from numerous sources. Land uses on the project site would consume other energy sources such as gasoline. These energy resource demands relate to initial project construction, transport of people and goods, and lighting, heating, and cooling of buildings. Project construction would require the commitment of a variety of other nonrenewable natural resources, or natural resources that require a long time for renewal. These include lumber and other forest products, sand and gravel, asphalt, petrochemicals, and metals.

Development of the site to support urban uses may be regarded as a permanent and irreversible change. Although the site is currently vacant, it was probably used historically as grazing land. Site development would essentially prohibit historic uses and would eliminate the small wetland and existing trees. Grading, utility extensions, drainage improvements, improved roadways, and construction of commercial buildings, would permanently alter the character of the site from a vacant infill parcel to one that is more urbanized. The project would commit future generations to similar urban uses on the site.

7.2 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL EFFECTS

CEQA Guidelines Section 15126.2(b) requires that an EIR discuss unavoidable significant environmental effects, including those that can be mitigated but not reduced to a level of insignificance. In addition, Section 15093(a) of the CEQA Guidelines allows the decision-making agency to determine if the benefits of a proposed project outweigh the unavoidable adverse

impacts if it prepares a "Statement of Overriding Considerations" setting forth the specific reasons for making such a judgment.

The following significant and unavoidable impacts were identified for the project in this EIR:

4.2 TRANSPORTATION AND CIRCULATION

The corresponding mitigation measures for the following listed significant and unavoidable impacts are available in section 4.2 Traffic and Circulation of this document.

Short Term Plus Wal-Mart Project Traffic Impacts

Impact 4.2.1 Development of the proposed project would increase traffic at sufficient volume to cause LOS to decline below City standards. This is considered a **significant** impact.

Implementation of mitigation measure **MM 4.2.1** would reduce traffic impacts on the roadway systems listed to an acceptable LOS and upon completion of the improvements, the proposed project would have a less than significant traffic impact under short-term conditions. There is a gap in timing between the planned opening of the store and the completion of the SR 99 ramp improvements. The improvements to the SR 99 ramps are included within the needed improvements identified in the *State Route 99 – Chico Corridor Study (Nexus Study)*, and the city is collecting fair share contributions for these improvements. However, Caltrans will determine when these ramp improvements will be constructed, as they are state, not City, facilities. Caltrans will rely upon state (and possibly federal) funding for a portion of the construction costs. When and if these funding sources will be programmed and allocated and construction will be scheduled, is not presently known, at least under near-term conditions. Therefore, this impact is considered to be **significant and unavoidable** in the short-term.

Cumulative Plus Project Conditions

Impact 4.2.3 Development of the proposed project and all other short-term and cumulative development would increase traffic at sufficient volume to cause LOS to decline below City standards under cumulative conditions. This is considered a **significant** impact.

Implementation of mitigation measures **MM 4.2.1** and **MM 4.2.2** would reduce traffic impacts on a number of roadway systems to an acceptable LOS. Therefore, the proposed project would have a **less than significant** traffic impact under cumulative conditions.

4.3 AIR QUALITY

The corresponding mitigation measures for the following listed significant and unavoidable impacts are available in section 4.3 Air Quality of this document.

Air Quality During Construction Activities

Impact 4.3.1 Construction activities such as clearing, excavation and grading operations, construction vehicle traffic and wind blowing over exposed earth would generate exhaust emissions and fugitive particulate matter emissions that would temporarily affect local air quality for adjacent land uses. This is considered a **significant impact.**

As shown in **Table 4.3-6**, with implementation of mitigation measure **MM 4.3.1**, mitigated construction emissions would lower the NOx emissions. However, the project construction emissions of ROG and NOx would still result in a **significant** and **unavoidable impact** on air quality.

Potential Increase in ROG and NO_x Emissions from Mobile and Area Sources during Project Operation

Impact 4.3.4 Operation of the proposed project would increase the ROG and NO_x emissions from mobile and area sources. This is considered a **significant impact**.

As shown in **Table 4.3-7**, with implementation of mitigation measure **MM 4.3.4**, mitigated operational emissions would lower the NOx emissions. However, the project operation emissions of ROG and NOx would still result in a **significant and unavoidable impact** on air quality.

Cumulative Impacts to Air Quality

Impact 4.4.8 The project would contribute to cumulative air quality impacts. These impacts would be **cumulatively considerable** and **significant** impacts**.**

MM 4.4.8 Implement mitigation measures **MM 4.3.1** and **4.3.4.**

These measures include Standard Mitigations Measures as well as Best Available Mitigation Measures as identified in the BCAQMD's *Indirect Source Review Guidelines* and City of Chico's *Best Practices Manual.* Implementation of the above listed mitigation measures would reduce air quality impact however this impact cannot be mitigated to a less than significant level. Therefore, this is considered a **significant and unavoidable** impact.

7.3 GROWTH-INDUCING IMPACTS

LEGAL CONSIDERATIONS

Public Resources Code Section 21100(a)(5) requires that the growth-inducing impacts of a project be addressed in the environmental impact report. A project may be growth-inducing if it directly or indirectly fosters economic or population growth or additional housing, removes obstacles to growth, taxes community service facilities, or encourages or facilitates other activities that cause significant environmental effects (CEQA Guidelines Section 15126[g]).

Under CEQA, induced growth is not considered necessarily detrimental or beneficial. Induced growth is considered a significant impact only if it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be demonstrated that the potential growth could significantly affect the environment in some other way.

ANALYSIS

The project site comprises 27.11 acres with an existing 125,889 square feet Wal-Mart store on the site that opened for business in 1994. The site is located in a Community Commercial and Commercial Services General Plan designation and CC Community Commercial zoning district that allows the retail use "by right". The proposed store expansion on Parcel 1 does not require a use permit. However, the proposed store expansion would take place across a common property line, which is not allowed by the City of Chico. Wal-Mart has submitted an application

requesting reconfiguration of the two parcel lines to facilitate the expansion of the exiting store into a Wal-Mart Supercenter. The Tentative Parcel Map will alleviate the parcel configuration impediment by reconfiguring the lot lines of the existing parcels (a 16.75-acre parcel and a 10.36-acre parcel) to create on 24.69-acre (Parcel 1) and one 2.42-acre parcel (Parcel 2). The exiting Wal-Mart store and all improvements associated with the expansion of the store would be contained entirely within Parcel 1. The proposed project will add an additional 97,556 square feet to the existing Wal-Mart store, for a total area of 223,445 square feet. No development is currently planned for Parcel 2, but a 5,000 square foot fast food restaurant with a drive-through lane, and a gas station including 12 pumps on two islands with a convenience store is analyzed as a reasonable development scenario for this parcel in terms of environmental impact. All services to the site exist and there is adequate capacity although they will require extension and relocation.

The site is surrounded by commercial development and the development of the project is not expected to indirectly induce growth in areas not currently planned for growth. The area also has existing local and regional transportation infrastructure, a freeway interchange at 20th Street and SR 99, and area roads. The City's recently adopted Nexus Study assumed development of commercial use at this site. A number of road improvements are planned or under consideration, to which the project proponent would be required to contribute fair share fees.

The proposed commercial use is consistent with the City of Chico General Plan. The impacts of commercial development of this site were anticipated and addressed in the General Plan EIR. The development of the site is consistent with and guided by the City's General Plan, thus the project would have no direct or indirect growth-inducing impacts.

8.0 Report Preparers and References

8.1 REPORT PREPARERS

CITY OF CHICO

Planning Director	Stephen Peterson
Senior Planner	Patrick Murphy

PACIFIC MUNICIPAL CONSULTANTS – EIR CONSULTANT

Project Manager	Holly Keeler
Asst. Project Manager	Mike Martin
Associate Planner	Seth Myers
Associate Planner	Lana Alder
Senior Biologist	Joyce Hunting
Cultural Resource Specialist	John Nadolski
Project Coordinator	Brandon Schoradt

OMNI MEANS – TRAFFIC AND CIRCULATION CONSULTANT

Traffic Analysis	Larry Wymer

JONES & STOKES – AIR QUALITY ANALYSIS CONSULTANT

Air Quality Analysis	Michael Slavick

SEDWAY GROUP – ECONOMIC ANALYSIS CONSULTANT

Managing Director	Amy Herman

8.2 REFERENCES

SECTION 4.1

Chico, City of. 1999. *City of Chico Municipal Code, Title 19, Land Use & Development Regulations.* Ordinance 2185, effective 10/21/99.

Chico, City of. 1994. *City of Chico General Plan, Updated February 1999.*

Chico, City of. 1994. *Master Environmental Assessment for the Chico General Plan, SCH No. 92123062*. January 1994.

SECTION 4.2

City of Chico. October 2005*. 2005-06 Update of Development Impact Fees, Analysis and Recommendations (Nexus Study) October 2005, Final Report.* Chico, CA.

City of Chico. 1994. *General Plan Updated February 1999*, City of Chico Planning Department. Chico, CA

California Department of Transportation. December 2002. *Guide for the Preparation of Traffic Impact Studies.* Sacramento, California.

Department Of Transportation. November 2002. *Chapter 9 Traffic Signals and Lighting*. Sacramento, CA.

Dowling Associates, Traffix 7.7 for Windows.

Institute of Transportation Engineers.2003. *Trip Generation 7th Edition Volumes 1, 2*. Washington, D.C.

Omni Means. April 2006. *Chico Wal-Mart Store Expansion Traffic Impact Study*. Roseville, CA.

Quincy Engineering. October 2001. *State Route 99 – Chico Corridor Study*.

Transportation Research Board National Research Council. 2000. *Highway Capacity Manual.* Washington, D.C.

SECTION 4.3

Butte County Air Quality Management District. 1997. *Indirect Source Review Guidelines*.

Butte County Air Quality Management District. 2005. *Air Quality Summary for 2005*. Refer to: http://www.bcaqmd.org/FORMS/2005%20AIRQUALITYSUMMARY.pdf

California Air Resources Board (ARB). 2006. Top 4 Measurements and Days Above the Standard. Refer to: http://www.arb.ca.gov/adam/cgi-bin/db2www/adamtop4.d2w/start>.

California Air Resources Board. July 9, 2003. *Ambient Air Quality Standards*. Refer to: (http://www.arb.ca.gov.aq./aaqs2.pdf)

California Air Resources Board. 2004. *Aerometric Data Analysis and Management (ADAM)*. Refer to: (http://www.arb.ca.gov./adam/cgi-bin/adamtop/d2wstart)

California Air Resources Board. October 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. Refer to: http://www.arb.ca.gov/diesel/documents/rrpFinal.pdf

Garza, Vincente J.; Peter Granly; Daniel Sperling. 1997. *Transportation Project-Level Carbon Monoxide Protocol.* Institute of Transportation Studies, University of California, Davis. Report UCD-ITS-RR-97-21

Jones and Stokes. 2006. *Draft Air Quality Analysis of the Wal-Mart Store Expansion Project in Chico, California*. San Diego, CA

Northern Sacramento Valley Air Basin. 2003. *Northern Sacramento Valley Air Basin 2003 Air Quality Attainment Plan*.

SECTION 4.4

Alden, P. *et.al.* 1998. *National Audubon Society Field Guide to California.* Chanticleer Press, Inc. New York, CA.

California Department of Fish and Game (DFG). California Interagency Wildlife Task Group. 2002. *CWHR version 8.0 personal computer program*. Sacramento, CA.

DFG. 2006. *California Natural Diversity Database.* CNDDB RareFind version 3.0.3 personal computer program. Sacramento, CA.

DFG. Wildlife and Habitat Data Analysis Branch. 2004. *Wildlife Habitats by County.* On-line Inventory. Sacramento, CA.

California Native Plant Society (CNPS). 2004. *Inventory of Rare and Endangered Plants.* On-line Inventory-6th Edition. Sacramento, CA.

City of Chico. 1999. *Open Space and Environmental Conservation.* General Plan.

City of Chico. 2004. *Tentative Parcel Map PM 03-17 (Wal-Mart/PacLand).* Revised Initial Study. Chico, CA.

Hanover Environmental Services, Inc. (Hanover). 2002. *Wetlands Delineation-Duncan Shopping Center Expansion.* Chico, CA.

Hanover. 2003a. *Survey for Vascular Plants Listed by Federal, State, or Other Agencies as Sensitive or of Special Status.* Chico, CA.

Hanover. 2003b. *Biological Resources Survey.* Letter Report. Chico, CA.

Hickman, J., ed. 1993. *The Jepson manual: Higher Plants of California*. University of California Press. Berkeley, CA.

Sierra Club. 2004. *Common Species of the California Sacramento Valley Area Including Butte County.* On-line Database. Chico, CA.

Stokes, Donald W. and Lillian Q. 1996. *Field Guide to Birds, Western Region.* Little, Brown and Company. Boston.

U.S. Army Corps of Engineers (USACE). 1987. *Wetlands Delineation Manual.* Technical Report Y87-1. Vicksburg, MS.

U.S. Fish and Wildlife Service (USFWS). 2004. *Federal Endangered and Threatened Species that Occur In or May Be Affected by Projects in Butte County*. Sacramento, CA.

SECTION 4.5

Beck, Warren and Ynez D. Haase. 1974. *Historical Atlas of California.* University of Oklahoma Press, Norman, Oklahoma.

Bidwell, J. 1877. *On the Discovery of Gold, January 1848. In The Elephant as They Saw It: A Collection of Contemporary Pictures and Statements on Gold Mining in California.* Edited by Elizabeth A. Engenhoff, pp. 39-40. 1949 printing. State of California, Sacramento.

Brooks, George (editor). 1977. *The Southwest Expedition of Jedediah S. Smith: His Personal Account of the Journey to California 1826-1827*. Arthur C. Clarke Company, Glendale, California.

Elsasser, A.B. 1978. Development of Regional Prehistoric Cultures. Pp 37-57 *in Handbook of North American Indians*, California Volume 8. Robert F. Heizer, ed. Smithsonian Institution, Washington, D.C.

Furry, John. 2002. *Archaeological Inventory Survey of the Duncan Shopping Center Expansion Project*. Report on file at the City of Chico.

Hoover, M.B., H.E. Rensch, E.G. Rensch, and W.N. Abeloe. 1966. *Historic Spots in California. Third Edition*. Revised by D.E. Kyle. Stanford, CA: Stanford University Press.

Kowta, M. 1988. *The Archaeology and Prehistory of Plumas and Butte Counties, California: an Introduction and Interpretive Model*. California Archaeological Site Inventory, Northeast Information Center, California State University, Chico, CA.

Kroeber, A.V. 1925. *Handbook of the Indians of California*. Bureau of American Ethnology Bulletin 78. Washington, D.C. Reprinted in 1976 by Dover Publications, Inc., New York, New York.

Kroeber, A.V. 1936. *Culture Element Distributions: III, Area and Climax*. University of California Publications in American Archaeology and Ethnology 37(3): 101-116, Berkeley, California.

Nadolski, John. 2004. Personal Communication on July 27, 2004 with John Furry Regarding the Chico Wal-Mart Expansion Project.

Olsen and Riddell. 1963. *The Archaeology of the Western Pacific Railroad Relocation Project, Butte County, California*. State Division of Beaches and Parks. Archaeological Project 7, Sacramento, California.

Riddell, F. 1978. *Maidu and Konkow. In Handbook of the North American Indians, Volume* 8, *California*, edited by R. F. Heizer, pp. 370-386. Smithsonian Institution, Washington, D.C.

Ritter, Eric W. 1968. *Culture History of the Tie Wiah (4-But-84), Oroville Locality, California.* Unpublished Master's Thesis Department of Anthropology, University of California, Davis.

Ritter, Eric W. 1970. *Northern Sierra Foothill Archaeology: Culture History and Culture Process.* University of California, Center for Archaeological Research at Davis, Publications 2: 171-184.

Talbitzer, Bill. 1987. *Butte County: an Illustrated History*. Windsor Publications. Northridge, California.

Wells, H.L and W.L. Chambers. 1882. *History of Butte County, California*. Howell-North Books.

SECTION 4.6

Chico, City of. 1994. *City of Chico General Plan, Updated February 1999.*

Sedway Group. *Draft Wal-Mart Supercenter Economic Expansion Analysis: South Store Expansion Chico, California*. February 2006.