WAL-MART/ESCONDIDO UNION SCHOOL DISTRICT PLANNED DEVELOPMENT PROJECT

Appendixes to the Final Environmental Impact Report

SCH # 20033091029
Case No. ER 2003-01

February 2005

RECON

APPENDIXES TO THE FINAL ENVIRONMENTAL IMPACT REPORT FOR THE WAL-MART/ESCONDIDO UNION SCHOOL DISTRICT PLANNED DEVELOPMENT PROJECT

SCH# 2003091029
City Case No. ER 2003-01

Prepared for

CITY OF ESCONDIDO
201 N. BROADWAY
ESCONDIDO, CA 92025

Prepared by

RECON NUMBER 3859E
FEBRUARY 16, 2005

1927 Fifth Avenue
San Diego, CA 92101-2358
619 / 308-9333 fax 308-9334

RECON

APPENDIXES

A: Notice of Preparation
B: Traffic Study for Wal-Mart Site (Linscott Law and Greenspan [LLG])
C: Traffic Study for EUSD Site (LLG)
D: Parking Study (KOA)
E: Noise Technical Report (RECON)
F: Phase I Site Assessment for the Proposed Wal-Mart Supercenter #5214 (Kleinfelder, Inc.)
G: Phase I/II Environmental Site Assessment City of Escondido Green Mutual Building
H: Geotechnical Investigation
I: Water Quality Technical Report and Drainage Study
J: Air Quality Technical Report (RECON)
K: Cultural Resources Letter Report for 1314 East Grand Avenue (RECON)
L: Cultural Resources Report for 1201 East Washington Avenue (RECON)

APPENDIX A

Notice of Preparation

FILED
Gregory J. Smith, Recorder/County Clerk

SEP 11 2003

BY _____ DEPUTY

Notice of Preparation

FROM: The City of Escondido
Planning Division
201 North Broadway
Escondido, CA 92025

TO: Interested Public/Private Parties

Subject: **Notice of Preparation of a Draft Environmental Impact Report**

The City of Escondido will be the Lead Agency and will prepare an Environmental Impact Report for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the Environmental Impact Report (EIR) prepared by the City of Escondido when considering your permit or approval for the project.

The project description, location, and the probable environmental effects are contained in the attached materials. A copy of the Initial Study (☐ is ☒ is not) attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but *not later than 30 days* after receipt of this notice.

Please send your response to Jay Paul, Associate Planner at the address shown above. We will need the name of the designated contact person in your agency.

Project Title **Proposed WAL-MART/Escondido Union School District EIR**

Case No: **ER 2003-01**

Project Applicant: Nasland Engineering, 4740 Ruffner Street, San Diego, CA 92111

Date: September 3, 2003

Signature: Jay Paul
Title: Associate Planner
Telephone: (760) 839-4537

Reference: California Administrative Code, Title 14, Sections 15082(a), 15103, 15375

FILED IN THE OFFICE OF THE COUNTY CLERK
SAN DIEGO COUNTY ON SEP 11 2003
POSTED SEP 11 2003 REMOVED OCT 15 2003
RETURNED TO AGENCY ON SEP 11 2003
DEPUTY

ESCONDIDO
City of Choice

Charles D. Grimm
Director of Community Development
Planning Division
201 North Broadway, Escondido, CA 92025
Phone: 760-839-4671 Fax: 760-839-4313

September 3, 2003

Mr. Scott Morgan
Office of Planning and Research
Office of Permit Assistance
State Clearinghouse
1400 Tenth Street, Room 222
Sacramento, CA 95814

SUBJECT: Notice of Preparation for a Draft Environment Impact Report (City Log No. ER 2003-01).

Dear Mr. Morgan:

I have provided the enclosed documents to the State Clearinghouse for distribution:

- 15 copies – Notice of Preparation of a Draft Environmental Impact Report (ER 2003-01)

The public review period is anticipated to begin by September 8, 2003 and end by October 8, 2003. If you have any questions, or need additional information, please contact me at (760) 839-4537.

Sincerely,

Jay Paul
Associate Planner

OPSND.DOC

Notice of Preparation

FROM: The City of Escondido
Planning Division
201 North Broadway
Escondido, CA 92025

TO: Interested Public/Private Parties

Subject: **Notice of Preparation of a Draft Environmental Impact Report**

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Date: September 3, 2003

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Title: Associate Planner
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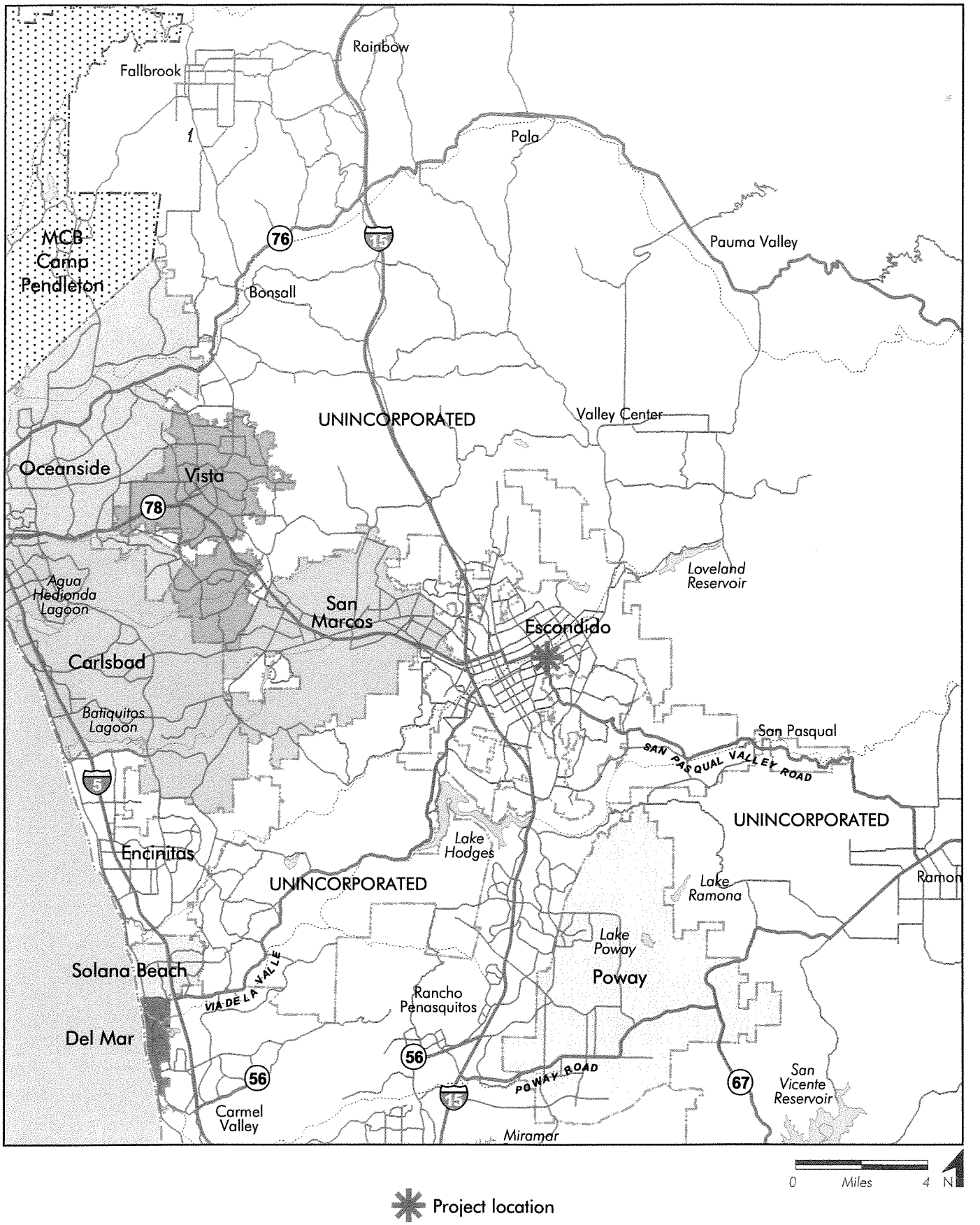


FIGURE 1
Regional Location

RECON

M:\jobs2\3859\env\gis\nop.apr\
fig1 (reg1) 08/08/03

Map Source: USGS 7.5 minute topographic map series, Valley Center and Escondido quadrangles

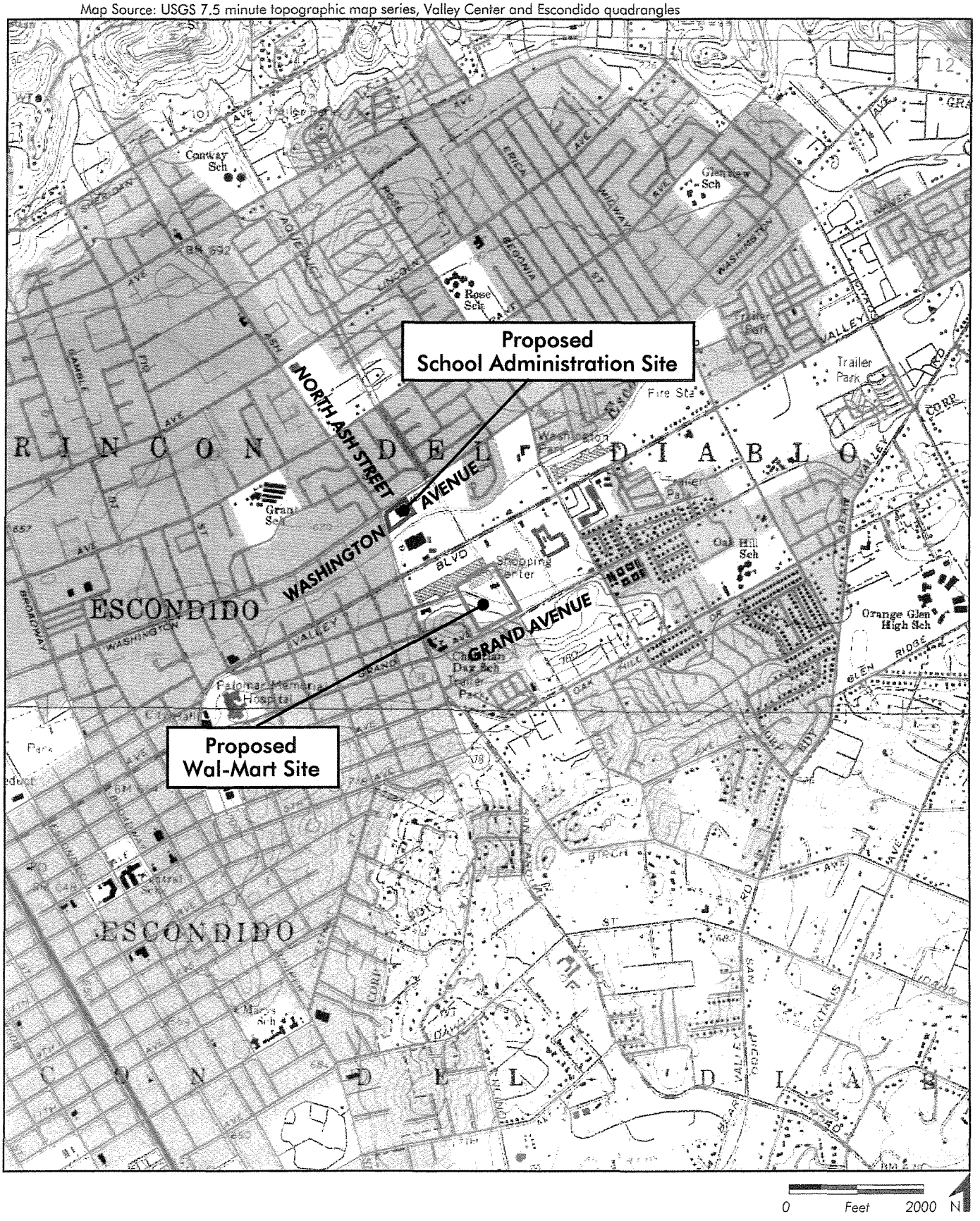
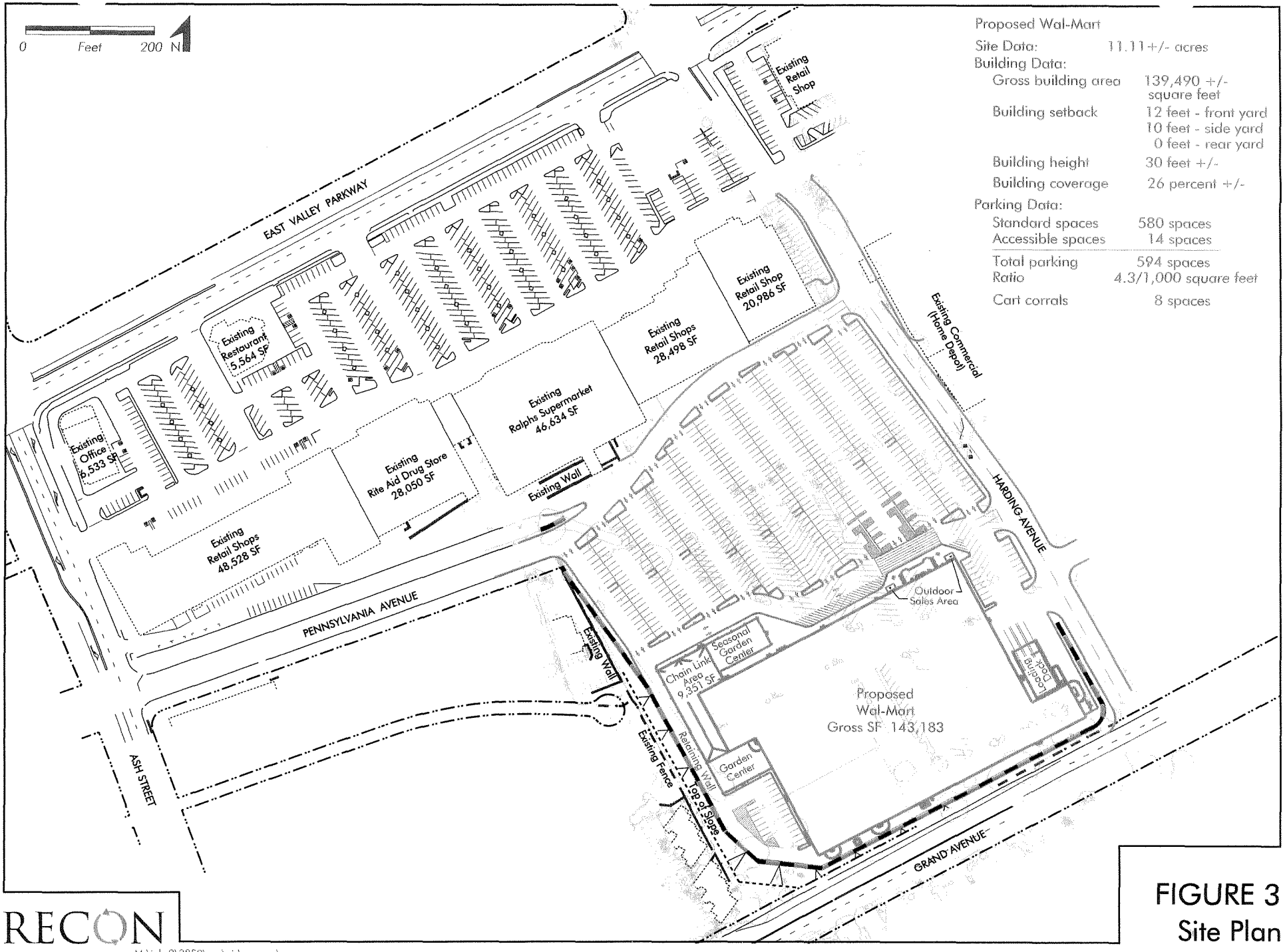


FIGURE 2
Project Location on USGS Map

RECON

M:\jobs2\3859\env\gis\nop.aor\
fig1 (reg) 08/11/03



Proposed Wal-Mart

Site Data:	11.11+/- acres
Building Data:	
Gross building area	139,490 +/- square feet
Building setback	12 feet - front yard 10 feet - side yard 0 feet - rear yard
Building height	30 feet +/-
Building coverage	26 percent +/-
Parking Data:	
Standard spaces	580 spaces
Accessible spaces	14 spaces
Total parking	594 spaces
Ratio	4.3/1,000 square feet
Cart corrals	8 spaces

RECON

M:\jobs2\3859\env\gis\nop.apr\
fig3 (siteplan) 08/13/03

FIGURE 3
Site Plan

Preliminary Project Description

The proposed project includes construction of a commercial retail facility with up to 150,000 square feet of space on approximately 11.11 acres of land zoned General Commercial, addressed as 1330 E. Grand Avenue. In order to proceed with construction of the retail facilities, the proposed project requires removal of the existing administration facilities for the Escondido Union School District that currently occupy the proposed retail site on Grand Avenue. The existing 60,000 SF school administration facilities is proposed to be relocated to an approximately 4.57-acres parcel located at the southeast corner of Ash Street and Washington Avenue, addressed as 1201 E. Washington Avenue. The proposed project therefore considers a site plan for the 11.11-acre WAL-MART project site and conceptual design plans for the approximate 4.57-acre Escondido Union School District administration site.

The project would be located in the City of Escondido, California. Figure 1 shows the regional location of the project; Figure 2 is the project vicinity map and Figure 3 shows a conceptual site plan for the proposed retail project to be located along Grand Avenue, between Ash and Harding Streets, south of East Valley Parkway. Existing land uses surrounding the proposed WAL-MART site include commercial and residential areas. Areas to the north and east are built-out with commercial/retail uses along Valley Parkway. To the south is urban residential development as well as commercial uses along Grand Avenue. To the west is a combination of commercial and higher-density residential development. The proposed new Escondido School District site also is surrounded by a variety of commercial and residential zoning and development. Areas to the north, south and west include commercial/retail uses along Ash Street and Washington Avenue. A senior, multi-story residential facility is located to the east. The Escondido General Plan designation and zoning for the proposed WAL-MART and new school administration sites is General Commercial (GC).

Several discretionary approvals are being considered to administer the proposed project. These discretionary actions could include; a Preliminary Master and Precise Development Plan for the 11.11-acre WAL-MART project site with grading exemptions for cut slopes and a retaining wall in excess of 20 feet in height; a Conditional Use Permit for outdoor retail activities, storage and display; a Zone Change from General Commercial to Planned Development Commercial for the existing Escondido Village shopping center and proposed WAL-MART site; a Master and Precise Development Plan for the existing Escondido Village shopping center; an overlay zone to establish specific development criteria for the existing center and proposed WAL-MART site; and a Regional Water Quality Control Board Section 401 Certification and Waste Discharge Permit. Encroachment and construction permits also would be required for any improvements to Ash Street/State Route 78. Proposed school administration facilities would be an allowed use within the underlying General Commercial zone and no additional discretionary actions are anticipated for this component of the project. A Plot Plan application is required for the School District project.

The project EIR will analyze specific impacts associated with the approval of the project and all actions and approvals required for construction of the project.

Anticipated Environmental Effects

The following is an inventory of impacts expected to occur from project implementation based on information available to date. Additional impacts may be identified during the preparation of the EIR.

A. **Land Use**—The EIR will evaluate the compatibility and potential impacts of the proposed project on existing and planned land uses in the surrounding area(s). This analysis will include consideration of the City's land use policies associated with development patterns, lot sizes, housing goals, and community character as defined by the City's General Plan.

B. **Topography and Aesthetics**—Development of the commercial project will change the existing aesthetic character of the proposed 11.11-acre site primarily through removal of the existing school administration uses, replacement with the approximately 143,000-square-foot retail commercial building and construction of new facilities (approximately 60,000 SF) at the separate school administration site. The aesthetics section of the EIR will discuss the nature of the changes as they relate to the size and scale of the proposed structures, the extent of the grading needed to accomplish the proposed land use goals, and the future visual character of the resulting development(s).

C. **Traffic**—The traffic circulation section of the draft EIR will be based on the traffic study prepared by Linscott, Law & Greenspan (LLG). The LLG traffic study will be included as an appendix to the EIR. Using information contained in the traffic study, the EIR will determine the adequacy of the existing circulation system in the vicinity of the project, determine the impacts resulting from the project, and identify and evaluate required on- and off-site mitigation measures to meet the City's quality of life standard for circulation.

D. **Parking**— The project would consider several discretionary actions to allow a variety of parking ratios for the remaining shopping center and the WAL-MART component, which would provide for a reduction in parking (ranging from 200 spaces to 500+ spaces) for shopping centers. The EIR will discuss the adequacy of the existing and proposed parking for the project.

E. **Noise**—The potential for noise impacts from future vehicular traffic will be addressed. A noise technical study will analyze noise caused by the projected future traffic on project area roadways (e.g., East Valley Parkway, East Washington Avenue, Ash Street, Grand Avenue) and included as an appendix to the EIR. The future traffic conditions will be based on the average daily traffic (ADT) provided in the traffic update for the project.

F. **Hazardous Materials**—The demolition of existing structures and past uses of the properties will be addressed in the EIR for the potential to produce hazardous materials. The analysis will be based on existing geotechnical and other hazardous materials assessments for the site and existing buildings.

G. **Public Services and Utilities**—The EIR will document available public services and utilities. It will describe the project's consistency with the General Plan goals and objectives regarding commercial development. It will evaluate the proposed sewer/potable water system infrastructure based on a review of the grading plans, and water and sewer studies provided by the project applicant. It will also describe and evaluate current and anticipated fire, police, and emergency response times, facilities, and personnel.

H. **Hydrology Water Quality**— The project site(s) are located within a Zone X and Zone AH as indicated on Flood Insurance Rate Maps (FIRM). The ability of the developed site and proposed drainage features (i.e., drainage pipes, detention basins, and inlet/outlet structures) to avoid downstream drainage impacts will be addressed in this section of the EIR. In addition, water quality impacts associated with the developed project condition will also be addressed. The discussion will summarize information included in drainage report(s) provided by the applicant to the City of Escondido and provided as an appendix to the EIR. The discussion will also document National Pollution Discharge Elimination System (NPDES) permitting requirements and best management practices necessary to avoid downstream water quality impacts. These measures will be based on consultation with the City engineers.

I. **Air Quality**—A technical air quality report using Regional Air Quality Standards (RAQS) and the Triennial Update to evaluate existing air quality in the San Diego Air Basin and project consistency with the State Implementation Plan (SIP) will be prepared. The technical report will be included as an appendix and summarized in the EIR.

J. **Cultural/Historic**— Relocation and development of the School District facilities would involve the removal of the existing Quonset Hut building located at the Washington Avenue/Ash Street site. A historic resources technical report will be prepared to analyze the history and significance of the structure(s) on the project site along with potential impacts from the development of the new school facilities.

K. **Cumulative Impacts**—Discussion will be included in the EIR on the cumulative effects of the project in light of any other pending projects in Escondido and adjacent jurisdictions.

L. **Other EIR Sections**—Other sections as required by the California Environmental Quality Act will be included in the EIR. These sections will include growth inducement, project alternatives, effects found not to be significant, and a mitigation monitoring and reporting program.

NOP DISTRIBUTION LIST

City of Escondido – Departments

City of Escondido Engineering Department
City of Escondido Building Division
City of Escondido Fire Department
City of Escondido Police Department
City of Escondido Manager's Office
City of Escondido Public Works
Escondido Public Library, Attn: Library Reference Desk (for public review and comment)
Escondido East Valley Parkway Branch Library, Attn: Library Reference Desk (for public review and comment)

Agencies and Jurisdictions

State Clearinghouse
U.S. Army Corps of Engineers
California Department of Fish and Game
California Department of Fish and Game, Environmental Services
California Department of Transportation District 11 (Caltrans)
California Energy Commission
Caltrans Environmental Planning Branch
Regional Water Quality Control Board
State Water Resources Control Board, Division of Water Quality (Storm Water Permit Unit)
City of San Diego, Environmental Analysis Section
County of San Diego, Department of Planning and Land Use
County of San Diego, Environmental Review Coordinator
County of San Diego, County Clerk
County of San Diego, Recorders Office
County of San Diego, Public Works Director
County of San Diego, Environmental Systems-Public Works

Agencies and Jurisdictions (cont.)

North County Transit District (NCTD)
Pacific Bell, Attn: Right-of-Way Department
San Diego Association of Governments (SANDAG)
San Diego Air Pollution Control District
San Diego County Water Authority
San Diego Gas & Electric
Escondido Union School District
Escondido Union High School District
FEMA

Organizations

Audubon Society, Palomar Chapter
Audubon Society, Attn: Richard Barber
California Institute of Technology, Director of Public Relations
California Native Plant Society
Coalition of Environmental Organizations, Attn: Ed Hall
Escondido Historical Society
Sierra Club
San Diego County Archaeological Society
Southwest Center for Biological Diversity, Attn: David Hogan
Valley Center Planning Group, Attn: Larry Slavinic
Los Arboles Neighborhood

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse

Notice of Preparation

Gray Davis
GOVERNOR

Tal Finney
INTERIM DIRECTOR

September 5, 2003

To: Reviewing Agencies

Re: Proposed Wal-Mart/Escondido Union School District EIR
SCH# 2003091029

Attached for your review and comment is the Notice of Preparation (NOP) for the Proposed Wal-Mart/Escondido Union School District EIR draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Jay Paul
City of Escondido
Planning Division
201 North Broadway
Escondido, CA 92025

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Project Analyst, State Clearinghouse

Attachments
cc: Lead Agency

RECEIVED
SEP - - 2003
PLANNING DIVISION

Document Details Report
State Clearinghouse Data Base

SCH# 2003091029
Project Title Proposed Wal-Mart/Escondido Union School District EIR
Lead Agency Escondido, City of

Type NOP Notice of Preparation

Description The proposed project includes construction of a commercial retail facility with up to 150,000 square feet of space on an approximately 11.11 acres of land. The proposed project requires removal of the existing administration facilities for the Escondido Union School District. The existing 60,000 square foot school administration facilities is proposed to be relocated to an approximately 4.57 acre parcel. The proposed project therefore considers a site plan for the 11.11 acre Wal-Mart project site an conceptual design plans for the approximate 4.57 acre Escondido Union School District administration site.

Lead Agency Contact

Name Jay Paul
Agency City of Escondido
Phone 760-839-4537 **Fax**
email
Address Planning Division
201 North Broadway
City Escondido **State** CA **Zip** 92025

Project Location

County San Diego
City Escondido
Region
Cross Streets 1330 E. Grand Avenue
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways
Airports
Railways
Waterways
Schools Escondido Union School District
Land Use General Commercial

Project Issues Landuse; Aesthetic/Visual; Traffic/Circulation; Noise; Toxic/Hazardous; Public Services; Water Quality; Air Quality; Archaeologic-Historic; Cumulative Effects; Other Issues

Reviewing Agencies Resources Agency; Department of Water Resources; Department of Fish and Game, Region 5; Native American Heritage Commission; California Highway Patrol; Caltrans, District 11; Department of Toxic Substances Control; Regional Water Quality Control Board, Region 9

Date Received 09/05/2003 **Start of Review** 09/05/2003 **End of Review** 10/06/2003

NOP Distribution List

County: San Diego SCH# 2003091016

Resources Agency

- [■] **Resources Agency**
  Nadell Gayou
- [ ] **Dept. of Boating & Waterways**
  Suzi Betzler
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  Resources Agency
  Nadell Gayou

Fish and Game

- [ ] **Dept. of Fish & Game**
  Scott Flint
  Environmental Services Division
- [ ] **Dept. of Fish & Game 1**
  Don Koch
  Re
- [ ] **Dept. of Fish & Game 2**
- [ ] **Dept. of Fish & Game 3**
  Robert Floerke
  Region 3
- [ ] **Dept. of Fish & Game 4**
  William Laudermilk
  Region 4
- [■] **Dept. of Fish & Game 5**
  Don Chadwick
  Region 5, Habitat Conservation Program
- [ ] **Dept. of Fish & Game 6**
  Gabrina Gatchel
  Region 6, Habitat Conservation Program
- [ ] **Dept. of Fish & Game 6 I/M**
  Tammy Allen
  Region 6, Inyo/Mono, Habitat Conservation Program
- [ ] **Dept. of Fish & Game M**
  Tom Napoli
  Marine Region

Other Departments

- [ ] **Food & Agriculture**
  Steve Shaffer
  Dept. of Food and Agriculture
- [ ] **Dept. of General Services**
  Robert Sleppy
  Environmental Services Section
- [ ] **Dept. of Health Services**
  Wayne Hubbard
  Dept. of Health/Drinking Water

Independent Commissions,Boards

- [ ] **Delta Protection Commission**
  Debby Eddy
- [ ] **Office of Emergency Services**
  John Rowden, Manager
- [ ] **Governor's Office of Planning & Research**
  State Clearinghouse

- [■] **Native American Heritage Comm.**
  Debbie Treadway
- [ ] **Public Utilities Commission**
  Ken Lewis
- [ ] **State Lands Commission**
  Jean Sarino
- [ ] **Tahoe Regional Planning Agency (TRPA)**
  Lyn Barnett

Business, Trans & Housing

- [ ] **Caltrans - Division of Aeronautics**
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- [ ] **Caltrans - Planning**
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- [■] **California Highway Patrol**
  Lt. Julie Page
  Office of Special Projects
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  Housing Policy Division

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  Marc Birnbaum
  District 6
- [ ] **Dept. of Transportation 7**
  Stephen J. Buswell
  District 7
- [ ] **Dept. of Transportation 8**
  Linda Grimes,
  District 8
- [ ] **Dept. of Transportation 9**
  Gayle Rosander
  District 9
- [ ] **Dept. of Transportation 10**
  Tom Dumas
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- [■] **Dept. of Transportation 11**
  Bill Figge
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- [ ] **Dept. of Transportation 12**
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  District 12

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- [ ] Industrial Projects
  Mike Tollstrup

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  Sue O'Leary
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- [ ] **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [ ] **State Water Resources Control Board**
  Mike Falkenstein
  Division of Water Rights
- [■] **Dept. of Toxic Substances Control**
  CEQA Tracking Center

Regional Water Quality Control Board (RWQCB)

- [ ] **RWQCB 1**
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  North Coast Region (1)
- [ ] **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [ ] **RWQCB 3**
  Central Coast Region (3)
- [ ] **RWQCB 4**
  Jonathan Bishop
  Los Angeles Region (4)
- [ ] **RWQCB 5S**
  Central Valley Region (5)
- [ ] **RWQCB 5F**
  Central Valley Region (5)
  Fresno Branch Office
- [ ] **RWQCB 5R**
  Central Valley Region (5)
  Redding Branch Office
- [ ] **RWQCB 6**
  Lahontan Region (6)
- [ ] **RWQCB 6V**
  Lahontan Region (6)
  Victorville Branch Office
- [ ] **RWQCB 7**
  Colorado River Basin Region (7)
- [ ] **RWQCB 8**
  Santa Ana Region (8)
- [■] **RWQCB 9**
  San Diego Region (9)

- [ ] **Other** _____

County of San Diego

DEPARTMENT OF PUBLIC WORKS

JOHN L. SNYDER
DIRECTOR

5555 OVERLAND AVE, SAN DIEGO, CALIFORNIA 92123-1295
(858) 694-2233 FAX: (858) 268-0481
Web Site: sdcdpw.org

October 2, 2003

Mr. Jay Paul
City of Escondido
Planning Division
201 North Broadway
Escondido, CA 92025

Dear Mr. Paul:

PROPOSED WAL-MART/ESCONDIDO UNION SCHOOL DISTRICT DEIR
(ER 2003-01)

County staff has reviewed the Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the proposed Wal-Mart and School District projects. The following are our comments:

- As part of the DEIR, a comprehensive Traffic Impact Analysis (TIA) should be prepared.

- The DEIR/TIA should include a description of the existing roadway conditions/geometrics for the following County Circulation Element roads:

  - San Pasqual Valley Road/SR-78 (SA 603.4)
  - Bear Valley Parkway (SA 590)
  - 17th Avenue (SC 1100)

  The description of the roadway conditions should include road width, number of lanes, posted and prevailing speed, daily traffic volumes, and shoulder availability.

- The trips generated by the proposed projects may exceed the 2,400 ADT threshold identified in the Congestion Management Plan (CMP) for the San Diego Region. An assessment of the project's impacts to regional transportation facilities such as SR-78 should be provided. The assessment should utilize the criteria outlined in the CMP.

- City of Escondido staff should coordinate with the County's Department of Planning and Use (DPLU) in order to identify other proposed projects that should be included in the near-term cumulative analysis.

- At a minimum, an AM and PM Peak-hour LOS analysis should be performed for the following intersections:

  - San Pasqual Valley Road/SR-78 @ 17th Avenue
  - San Pasqual Valley Road/SR-78 @ Bear Valley Parkway

  Additional intersections may need to be added to the TIA based on the County's review of the project's trip generation and trip distribution assumptions.

- The DEIR/TIA should include a summary table that identifies the roadway segment and intersection LOS for all scenarios. In addition, the LOS summary table should include columns that identify the net increase in traffic volumes or intersection delays due to the project-related traffic, whether the project has a significant direct or cumulative impact, and recommended mitigation measures.

- The LOS assessment of roadway segments within the County's jurisdiction should be based on the County's Public Road Standard LOS criteria.

- The DEIR/TIA should address the development of the project in multiple phases.

- The TIA should address the project's traffic impacts during the construction phase(s). Construction of the project is expected to include the import or export of fill materials. A truck routing plan for the construction phase of the project should be included.

The County of San Diego appreciates the opportunity to review and comment on the NOP for the proposed Wal-Mart and School District EIRs. If you have any questions concerning our comments, please call Bob Goralka at (858) 874-4202.

Sincerely,

LAWRENCE A.WATT, Deputy Director
Department of Public Works

LAW:fno

cc: Mike Robinson (MS 0338)
Bob Goralka (MS 0343)

N C T D

By Fax (760) 839-4313

October 3, 2003

Mr. Jay Paul
Associate Planner
City of Escondido
201 North Broadway
Escondido, CA 92025-2798

RE: WAL-MART/Escondido Union School District EIR (ER 2003-01)

Dear Mr. Paul;

Thank you for the opportunity to review the Notice of Preparation of a Draft Environmental Impact Report for the proposed WAL-MART/Escondido Union School District project located at 1330 Grand Avenue and 1201 E. Washington Avenue in the City of Escondido.

Route 351 and 352 provide service every 30 minutes on Grand and Washington Avenues, with weekday peak morning and afternoon service every 15 minutes.

Public transportation can serve as a mitigation strategy to both parking and traffic issues that may be identified.

We request that the EIR address the following:

1. Pedestrian access and circulation to the proposed Wal-Mart site from Grand Avenue for bus passengers and pedestrians including people who use wheelchairs;
2. Internal pedestrian circulation between the proposed Wal-Mart site and the existing shopping center to the north;
3. Ability of pedestrians to cross Grand Avenue safely from the proposed Wal-Mart site to bus stops on the south side of Grand Avenue;
4. Provision of upgraded bus stops including passenger shelters and ADA accessible boardings pads to serve the proposed Wal-Mart site and proposed school administration site.

If you have any questions regarding our comments, please feel free to contact me at (760) 966-6539 or by email at smarks@nctd.org.

Sincerely,

Stefan Marks

Stefan Marks, AICP
Manager of Service Development

NORTH COUNTY TRANSIT DISTRICT
810 Mission Avenue, Oceanside, CA 92054-2825
760-967-2828

San Diego County Archaeological Society, Inc.

Environmental Review Committee

6 September 2003

To: Mr. Jay Paul, Associate Planner
Planning Division
City of Escondido
201 North Broadway
Escondido, California 92025

Subject: Notice of Preparation of a Draft Environmental Impact Report
Proposed Walmart/Escondido Union School District EIR
ER 2003-01

Dear Mr. Paul:

Thank you for the Notice of Preparation for the subject project, received by this Society last week.

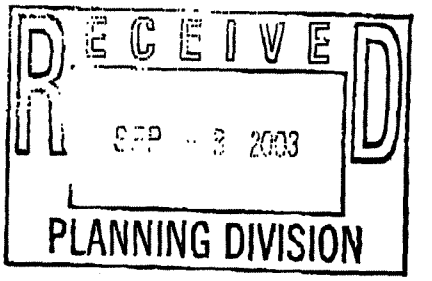
We are pleased to note the inclusion of cultural resources in the list of subject areas to be addressed in the DEIR, and look forward to reviewing it during the upcoming public comment period. To that end, please include us in the distribution of the DEIR, and also provide us with a copy of the cultural resources technical report(s).

SDCAS appreciates being included in the City's environmental review process for this project.

Sincerely,

James W. Royle, Jr., Chairperson
Environmental Review Committee

cc: SDCAS President
File



SANDAG
San Diego's Regional Planning Agency

401 B Street, Suite 800
San Diego, CA 92101-4231
(619) 595-5300
Fax (619) 595-5305
www.sandag.org

September 16, 2003

Mr. Jay Paul
City of Escondido
Planning Division
201 North Broadway
Escondido, CA 92025

RE: NOP – Proposed Wal-Mart/Escondido Union School District EIR

Dear Mr. Paul:

SANDAG would like the opportunity to comment on the above referenced project. As the Congestion Management Agency for the San Diego region, SANDAG is responsible for preparing and coordinating the implementation of a Congestion Management Program (CMP) for region. One of the requirements of the CMP is that local jurisdictions implement a CMP Land Use Analysis Program requiring enhanced CEQA reviews for large projects. A large project is defined as:

> *a project that upon completion would be expected to generate either an equivalent of 2,400 or more average daily vehicle or 200 or more peak-hour trips.*

Attached for your use are the most current CMP guidelines for implementing the Land Use Analysis Program, including the enhanced CEQA review. SANDAG would request that when preparing the EIR for the above referenced project, that the City include the CMP requirements in the EIR scope.

Should you have any questions concerning our request or the CMP, please contact me at (619) 595-5369 or mor@sandag.org. We look forward to reviewing a copy of the draft EIR upon completion.

Sincerely,

MARIO R. OROPEZA
Project Manager

cc: Shelby Tucker, SANDAG
Tueré Farley, SANDAG

MRO/cg

Attachment: CMP Land Use Analysis Program Excerpt

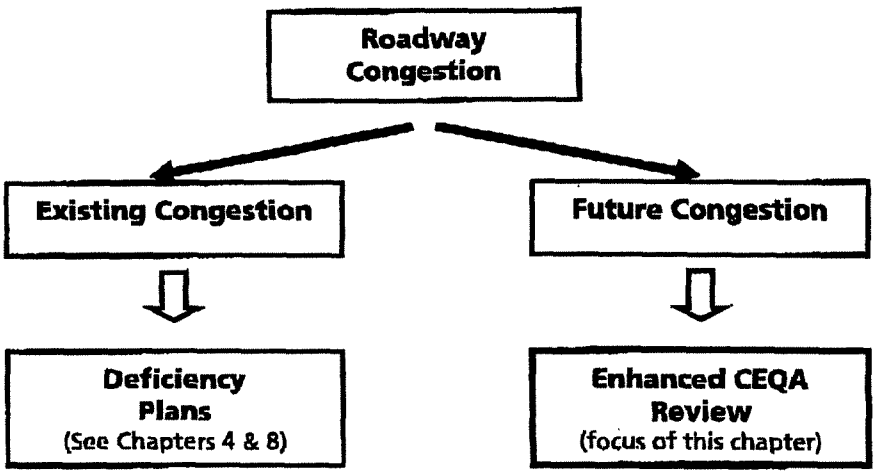
CHAPTER 6: LAND USE ANALYSIS PROGRAM

INTRODUCTION

The California Environmental Quality Act (CEQA) requires that all jurisdictions in the State of California evaluate the potential environmental impacts caused by new development or projects. If impacts are identified, then potential mitigation measures are evaluated and recommended. While cities and the County routinely examine and mitigate impacts to transportation services and facilities within their jurisdiction, this commitment often does not extend to the CMP system (as defined in Chapter 4). State statute highlights the responsibility of local jurisdictions to consider the impact of new development on the CMP system as part of their decision-making process.

The Land Use Analysis Program is an information sharing process that seeks to improve communication between public agencies, private entities and the general public, regarding the impact of new development on the CMP system. It provides a consistent methodology for examining CMP system impacts in an Environmental Impact Report (EIR). This will aid local jurisdictions in determining when mitigation is recommended, and what mitigation strategies are most appropriate.

As shown in the diagram below, the focus of this chapter is on strategies to identify and to address future congestion resulting from *new* development. Existing congestion is addressed through ongoing roadway monitoring and the preparation of Deficiency Plans as described in Chapters 4 (Transportation System Performance Evaluation) and 8 (Deficiency Plan).



LEGISLATIVE REQUIREMENTS

The requirements for the land use impact element of the CMP can be found in Section 65089(4) of the State of California Government Code (see Appendix F). Those requirements are paraphrased below.

- Develop a program to analyze the impacts of land use decisions made by local jurisdictions on the CMP system;
- Include an estimate of costs associated with mitigating those impacts;
- To the extent possible, use the Performance Element measures developed (see Chapter 4) to measure impacts to the CMP system;
- Exclude the costs of mitigating the impacts of interregional travel;
- Provide credit for local public and private contributions for improvements to the CMP system; and
- Incorporate the requirements and analysis under CEQA.

Related to the land use program requirements, the CMP statute also requires that SANDAG, in consultation with the cities and the County, develop a uniform database to assess traffic impacts of new development and to incorporate the results in a countywide transportation computer model. SANDAG also is to review and approve transportation computer models of specific areas within the region that will be used by local jurisdictions to determine the quantitative impacts of development on the circulation system. These models are to be based on a countywide model and be consistent with the modeling methodology and the databases used by SANDAG.

ISSUES

Under current CEQA practices, full project mitigation may not always be possible due to a number of reasons, including, but not limited to institutional considerations, infeasible nature of the proposed mitigation measures, or cost. Additionally, a project's contribution to cumulative traffic impacts on the CMP system may not be mitigated, which over time may result in unacceptable levels of service where no single project is responsible. Finally, local jurisdictions may make a finding of "overriding considerations" and approve a project without mitigating the project impacts. This unmitigated traffic becomes the responsibility of local jurisdictions or through SANDAG's Regional Transportation Plan. Given these considerations, a better means to maintain the link between new development project impacts and a project sponsor's mitigation responsibilities needs to be pursued.

As discussed in Chapter 5, Transportation Demand Management, SANDAG is working on a number of programs to define and promote "smart growth" as one means to better integrate land use and transportation decisions and to improve the quality of life in the region. Two of the smart growth strategies being investigated include locating higher development densities near transit stations and encouraging compatible mixed land uses. Whereas these strategies support the goals of smart growth, current CMP enhanced land use analysis requirements may discourage these types of development since smart growth developments often generate more peak hour trips within the focus areas than traditional development and thus may require increased project mitigation under the CMP. On the other hand, smart growth has the potential to reduce overall congestion on the larger, regional transportation system.

RECOMMENDED APPROACH

The SANDAG approach in meeting the CMP land use impact element requirements consists of four strategies: enhanced CEQA project review (land use analysis program), project mitigation resources, preparation and dissemination of project design guidelines, and regional modeling consistency. These strategies are further discussed below.

Enhanced CEQA Project Review

An enhanced CEQA review process has been established for use by local jurisdictions and/or project sponsors to conduct traffic impact studies and provide mitigation for *new* large project impacts on the CMP transportation system. Local agencies are required to adopt and continually implement this enhanced CEQA review process. The key features of this process include:

- A large project is defined as generating, upon its completion, an equivalent of 2,400 or more average daily vehicle trips or 200 or more peak-hour vehicle trips.
- The review is to include a traffic impact analysis (Traffic Impact Study - TIS) and mitigation for project impacts to the regional transportation system. Updated Traffic Impact Study guidelines have prepared and are incorporated into this update (refer to Appendix D).
- The traffic impact analysis must identify the project's impacts on the CMP transportation system, their associated costs, and appropriate mitigation.
- Early project coordination with affected public agencies and transportation operators is required.
- Local agencies are to coordinate with NCTD and/or MTDB to ensure that transit operators evaluate the impact of new development on CMP transit performance measures.

State regulation requires that all environmental documents prepared for projects in the San Diego region be submitted to the State Clearinghouse, and the State Clearinghouse in turn advises SANDAG of documents it has received. In many instances projects sponsors also send a copy of environmental documents directly to SANDAG. Under its regional intergovernmental review program, SANDAG reviews and comments on environmental documents submitted by various agencies. As part of that process, the documents are reviewed to ensure that the enhanced CEQA review process is followed for large projects, and the results of the required traffic analyses and identified mitigation measures are adequate. Comments, when appropriate, are submitted to the lead agency for the environmental review.

2002 CMP Update Changes

The following changes in the Enhanced CEQA Project Review process are incorporated into this update.

Updated Traffic Impact Studies Guidelines - As noted earlier, updated Traffic Impact Studies (TIS) guidelines have been incorporated into the CMP (Appendix D). These guidelines were prepared jointly by the San Diego Traffic Engineer Council (SANTEC) and the Institute of Transportation Engineers (ITS – California Border Section) in 2000.

Project Mitigation Resources

Resources currently available to mitigate the impacts of new development include specific project mitigation negotiated between the project sponsor and local jurisdictions, local agency funding, and regional funding made available through the Regional Transportation Improvement Program process. Additional new resources and strategies identified this CMP update are discussed below.

2002 CMP Update Changes

The following changes in project mitigation resources are incorporated into this update.

Promote TDM Project Mitigation Strategies: Develop and disseminate information on alternative transportation strategies for local agency and private developer use in mitigating the impacts of development activity. This information would be based upon the "Toolbox of Mitigation Strategies" and "Model TDM Program/Ordinance" referenced in Chapter 5, Transportation Demand Management. These strategies also could be used in preparing Deficiency Plans (see Chapter 8).

Ensure Appropriate Mitigation of Significant Project Impacts: It is the goal of the CMP to ensure appropriate mitigation of significant new large project impacts on the CMP system through use of congestion management strategies (CMP roadway or transit improvements and/or non-traditional approaches, such as Transportation Demand Management) contained within the CMP, including specific strategies identified in adopted Deficiency Plans. For the purpose of meeting CMP requirements, these guidelines do not apply to mitigation which would necessitate construction of freeway improvements, including interchanges until such time that Deficiency Plans have been prepared and adopted identifying specific improvements necessary to bring the freeway segments into conformance with the CMP LOS standard. Mitigation of project impacts may include demand management strategies and/or fair share contributions toward future improvements to be identified with the Deficiency Plan. The Deficiency Plans will identify potential funding sources to implement the recommended improvements including, but not limited to federal, state, local, and private funding sources. The preceding restriction regarding freeway improvements applies only to the CMP project review process and is not intended to limit a local jurisdiction's responsibility under CEQA for ongoing review and mitigation for projects that would impact freeways.

The following guidelines are provided to assist in meeting this goal.

New Large Project – A new development project generating, upon its completion, an equivalent of 2,400 or more new average daily vehicle trips, or 200 or more new peak-hour vehicle trips.

Significant Impacts – An increase in traffic on the CMP system generated by the project that exceeds the standards summarized below which are provided in the Traffic Impact Studies Guidelines (See Table D-1 in Appendix D for a further explanation on how to use these standards).

Level of Service with Project	Allowable Change due to Project Impact					
	Freeways[1]		Roadway Segments		Intersections	Ramp Metering[1]
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec.)	Delay (min.)
D, E, & F (or ramp meter delays above 15 min.)	0.01	1	0.02	1	2	2

[1]These guidelines apply only to freeways with adopted Deficiency Plans.

Project Mitigation – Actions necessary to reduce the project impacts on the CMP system below to or below the standards summarized above and provided in the Traffic Impact Studies Guidelines (Table D-1 in Appendix D).

Available Mitigation Measures - Measures available to mitigate project impacts include, but are not limited, to the measures listed below. The best mix of mitigation measures will vary based on the nature of the development project, nearby land uses and densities, and strategy availability.

- Traditional roadway and/or transit improvements
- Transportation Demand Management or Transportation System Management strategies
- Project Design Guidelines (discussed later in this chapter).
- Additional CMP Toolbox of Mitigation Strategies (to be prepared in 2003)
- Model TDM Program/Ordinance (to be prepared in 2003)

Local jurisdictions have sole responsibility for approving any specific mitigation measures, proposed funding, and/or implementation responsibilities resulting from the enhanced CEQA project review process.

Project Design Guidelines

In support of the CMP and other planning activities, project design guidelines to promote alternative travel modes including walking, bicycle, ridesharing, and public transit have been prepared. The available guidelines are listed below and are available for local agency use in mitigating the impacts of new development projects and in preparing CMP Deficiency Plans.

- "Designing for Transit" (Metropolitan Transit Development Board – July 1993)
- "Land Use Distribution Element of the Regional Growth Management Strategy" (San Diego Association of Governments – February 1995)
- "Tools for Reducing Vehicle Trips Through Land Use Design" (San Diego County Air Pollution Control District – January 1998)
- "Bikeway Planning and Design – California Highway Design Manual" (Caltrans – February 2001)
- "Regional Transit Vision" (San Diego Association of Governments, Metropolitan Transit Development Board, and North San Diego County Transit Development Board – November 2001)
- "Planning and Designing For Pedestrians" (San Diego Association of Governments – June 2002)

Regional Modeling

When evaluating the traffic impacts of any large project, it is SANDAG's goal that a common database and comparable traffic forecast models are used to ensure that all projects are evaluated on a uniform basis. This can be accomplished by local jurisdictions use the most current SANDAG regional or subarea traffic forecasting model, or any other local traffic analysis model that has been approved by SANDAG for use in CMP traffic analysis. Local jurisdictions also are required to use SANDAG's most recent Regional Growth Forecasts as the basic population and land use database.

In addition, local jurisdictions are to provide SANDAG, as part of each Regional Growth Forecast update, information regarding changes to general plan land use designations, major new development approvals, and smaller project information, for use in SANDAG's cumulative traffic forecast analysis. The information is to be provided in the manner, form, and schedule established as part of the Regional Growth Forecast update and review process for local agency information. This information is used to assess the cumulative impacts of all traffic impact analyses completed to date.

RECOMMENDED FOR FURTHER STUDY

In addition to the CMP changes previously noted, the following actions are recommended for further study and potential incorporation into the CMP at a later date:

Reexamine Traffic Impact Studies (TIS) Guidelines: Initiate a study to determine how to incorporate into the TIS guidelines: (1) CMP Performance Element measures; (2) trip generation and distribution rate adjustments for smart growth-supportive land uses; and (3) potential TDM mitigation strategies.

Evaluate Additional Land Use Analysis Program Modifications: Reexamine the CMP Land Use Analysis Program requirements in light of the efforts to develop a Regional Comprehensive Plan and changes in smart growth policies and strategies in the San Diego region. This evaluation would look at potential modifications to be consistent with smart growth including, but not limited to:

- Adjustments in trip generation rates;
- Adjustments in criteria for determining significant impacts;
- Alternative procedures for evaluating/mitigating smart growth projects under the CMP Enhanced CEQA Review

IMPLEMENTATION

Implementation of the preceding land use analyses program recommendations will be the joint responsibility of several agencies, including SANDAG, cities and County, Caltrans, MTDB, NCTD, and the San Diego Air Pollution Control District (APCD). Their respective responsibilities are summarized below in Table 6-1 below.

Table 6-1
Land Use Analysis Program Recommendations Responsibilities

	SANDAG	Cities*/ County*	Caltrans	MTDB/ NCTD	APCD
Enhanced CEQA Review	D / M	R / A	R / M	R / M	R / M
Updated TIS Guidelines	D / M	D / R / A	R	R	R
Promote TDM Measures	D / M	R / A	R	R	R
Full Mitigation Goal	M	R / A	M	M	M
Regional Modeling	D / M	R / A	R	R	R
Project Design Guidelines	D / R	R / A	R	D / R / M	D / R / M
Future Program Modifications	D	R / A	R	R	R

*Including private developers

Key:
D – Develop Initial Proposals
R - Review and Comment
A - Adopt or Implement
M - Monitor

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY GRAY DAVIS, Governor

ARTMENT OF TRANSPORTATION
DISTRICT 11
P. O. BOX 85406, MS 50
SAN DIEGO, CA 92186-5406
PHONE (619) 688-6954
FAX (619) 688-4299

Flex your power!
Be energy efficient!

October 1, 2003

11-SD-078
PM 19.4 (KP 31.2)
SCH 2003091029

Mr. Jay Paul
City of Escondido Planning Div.
201 N. Broadway
Escondido, CA 92025-2709

Re: Wal-Mart / Escondido Union School District – Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR)

Dear Mr. Paul:

The Department of Transportation (Department) appreciates the opportunity to comment on the City of Escondido's Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) for the Wal-Mart / Escondido Union School District, located near the intersection of State Route 78 (SR-78) and Grand Avenue. Given our mission of improving mobility and our direct responsibility as owner / operator of the State Highway System, the Department often reviews and comments on local developments. The Department recognizes that there is a strong link between transportation and land use. In particular, the pattern of land use can affect both total vehicle miles traveled, the number of trips per household, and the viability of alternative transportation options.

Traffic Operations comments:

- The Department requires the applicant to prepare a Traffic Impact Study (TIS), signed by a registered civil or traffic engineer. The TIS shall be prepared in accordance with the Department's Guide for the Preparation of Traffic Impact Studies, dated December 2002 (TIS guide, enclosed). Minimum contents of the traffic impact study are listed in Appendix "A" of the TIS guide.

- All State-owned, signalized intersections affected by the project shall be analyzed using the intersecting lane vehicle (ILV) procedure from the Department's Highway Design Manual, Topic 406.

- The level of service (LOS) for operating State highway facilities is based upon measures of effectiveness (MOE) (see Appendix "C-2" of the TIS guide). The Department endeavors to maintain a target level of service (LOS) at the transition between LOS "C" and LOS "D" (see Appendix "C-3" of the TIS guide). If an existing State highway facility is operating at less than this target LOS, the existing MOE should be maintained.

- In addition to the requirements in the TIS guide, the TIS shall address the adequacy of turning lanes (storage, transition length, etc.) at Grand Avenue and Escondido Valley Parkway. Some measures should be proposed to restrict public access to and from the proposed Wal-Mart via Pennsylvania Avenue.

- Caltrans supports the concept of "fair share" contributions from developers for interchange improvements and/or other mitigation measures due to traffic impacts from their projects.

For specific questions regarding the Traffic Operations comments, please contact Hoa Bui, Highway Operations Branch, at (858) 616-6683.

If you have any general questions on the Department's comments, please contact Brent McDonald, Development Review Branch, at (619) 688-6819. Thanks again for the opportunity to review this NOP.

Sincerely,

MARIO H. ORSO, Chief
Development Review Branch

enclosure

cc:	SMorgan	State Clearinghouse	
	BMcDonald	Caltrans Planning	MS-50
	HBui	Caltrans Hwy. Ops.	MS-55

Department of Toxic Substances Control

Edwin F. Lowry, Director
1001 "I" Street, 25th Floor
P.O. Box 806
Sacramento, California 95812-0806

Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

Gray Davis
Governor

September 12, 2003

Jay Paul
City of Escondido
Planning Division
201 North Broadway
Escondido, CA 92025

Re: Proposed Wal-Mart/Escondido Union School District EIR

The Department of Toxic Substances Control (DTSC) is in receipt of the environmental document identified above. Based on a preliminary review of this document, we have determined that additional review by our regional office will be required to fully assess any potential hazardous waste related impacts from the proposed project. The regional office and contact person listed below will be responsible for the review of this document in DTSC's role as a Responsible Agency under the California Environmental Quality Act (CEQA) and for providing any necessary comments to your office:

Johnson Abraham
Site Mitigation Branch
5796 Corporate Avenue
Cypress, CA 91201

If you have any questions concerning DTSC's involvement in the review of this environmental document, please contact the regional office contact person identified above.

Sincerely,

Guenther W. Moskat

Guenther W. Moskat, Chief
Planning and Environmental Analysis Section

cc: Johnson Abraham
Site Mitigation Branch
5796 Corporate Avenue
Cypress, CA 91201

Department of Toxic Substances Control

Edwin F. Lowry, Director
5796 Corporate Avenue
Cypress, California 90630

September 19, 2003

Mr. Jay Paul
Associate Planner
Planning Division
City of Escondido
201 North Broadway
Escondido, California 92025

NOTICE OF PREPARATION OF DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE PROPOSED WAL-MART/ESCONDIDO UNION SCHOOL DISTRICT PROJECT (SCH #2003091029)

Dear Mr. Paul:

The Department of Toxic Substances Control (DTSC) has received your Notice of Preparation (NOP) of a draft Environmental Impact Report (EIR) for the above-mentioned Project.

Based on the review of the document, DTSC's comments are as follows:

1) The NOP indicates that the proposed project considers a site plan for the 11.11 acre Wal-Mart project site and conceptual design plans for the approximate 4.5 acre Escondido Union School District administration site. It also states that the proposed school administration facilities would be an allowed use within the underlying General Commercial zone and no additional discretionary actions are anticipated for this component of the project. If the proposed school property acquisition and/or construction utilizes state funding, it should be in compliance with Assembly Bill 387 (Wildman) and Senate Bill 162 (Escutia) which require a comprehensive environmental review process and DTSC's approval. DTSC's role in the assessment, investigation, and cleanup of proposed school sites is to ensure that the selected properties are free of contamination.

2) The draft EIR needs to identify and determine whether current or historic uses at the Project sites have resulted in any release of hazardous wastes/substances at the Project areas.

3) The draft EIR needs to identify any known or potentially contaminated sites within the proposed Project areas. For all identified sites, the draft EIR should evaluate whether conditions at the sites pose a threat to human health or the environment.

4) The draft EIR should identify the mechanism to initiate any required investigation and/or remediation for any sites that may be contaminated, and the government agency to provide appropriate regulatory oversight. If hazardous materials/wastes were stored at the sites, an environmental assessment should be conducted to determine if a release has occurred. If so, further studies should be carried out to delineate the nature and extent of the contamination. Also, it is necessary to estimate the potential threat to public health and/or the environment posed by the sites. It may be necessary to determine if an expedited response action is required to reduce existing or potential threats to public health or the environment. If no immediate threat exists, the final remedy should be implemented in compliance with state regulations and policies.

5) All environmental investigation and/or remediation should be conducted under a Workplan which is approved by a regulatory agency that has jurisdiction to oversee hazardous waste cleanup.

6) If the subject properties were previously used for agriculture, onsite soils could contain pesticide residues. Proper investigation and remedial action may be necessary to ensure the sites do not pose a risk to the future residents.

7) If any property adjacent to the project sites is contaminated with hazardous chemicals, and if the proposed project is within 2,000 feet from a contaminated site, then the proposed development may fall within the "Border Zone of a Contaminated Property." Appropriate precautions should be taken prior to construction if the proposed project is within a "Border Zone Property."

8) If building structures are planned to be demolished/renovated, an investigation should be conducted for the presence of lead-based paints and asbestos containing materials (ACMs). If lead-based paints or ACMs are identified, proper precautions should be taken during demolition activities. Additionally, the contaminants should be remediated in compliance with California environmental regulations and policies.

9) If during construction/demolition of the project, soil and/or groundwater contamination is suspected, construction/demolition in the area should cease and appropriate health and safety procedures should be implemented. If it is

determined that contaminated soil and/or groundwater exist, the draft EIR should identify how any required investigation and/or remediation will be conducted, and the government agency to provide appropriate regulatory oversight.

DTSC provides guidance for preparation of a Preliminary Endangerment Assessment (PEA), and cleanup oversight through, the Voluntary Cleanup Program (VCP). For additional information on the VCP, please visit DTSC's web site at www.dtsc.ca.gov. For further information regarding the evaluation and/or cleanup of a proposed school property, please contact Mr. Peter Garcia, Chief, School Property Evaluation and Cleanup Branch, at (714) 484-5310.

If you have any questions regarding this letter, please contact Mr. Johnson P. Abraham, Project Manager, at (714) 484-5476.

Sincerely,

Greg Holmes
Unit Chief
Southern California Cleanup Operations Branch
Cypress Office

cc: Governor's Office of Planning and Research
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044

Mr. Guenther W. Moskat, Chief
Planning and Environmental Analysis Section
CEQA Tracking Center
Department of Toxic Substances Control
P.O. Box 806
Sacramento, California 95812-0806

Mr. Peter Garcia, Chief
School Property Evaluation and Cleanup Branch
Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, California 90630

Post-it® Fax Note 7671	Date	# of pages ▶ 2
To City of Esco	From A. Clausen	
Co./Dept. Planning Dept.	Co.	
Phone #	Phone #	
Fax #	Fax # 760-781-1424	

August 26, 2003

City of Escondido
Planning Department
Planning Commission
Attn: Frank Lorey

Re: Quonset Hut history

In today's North County Times, you were quoted as seeking information on the Quonset Building located on the corner of Washington and Ash. Thank you for bringing attention to one of the few remnants of a part of this nation's history that should not be forgotten. There is no doubt that this architecture is strongly associated with activities relating to World War II.

It is my opinion that each community should strive to preserve some of these structures in place. A few years ago there were several excellent examples behind Lincoln Elementary School that retained their original features. Such structures, if correctly adapted, would serve as excellent examples for the city residents and for school children to launch their study of the WWII era. For most kids, buildings and their architecture evoke a desire to learn more. Escondido took part in many ways to support the War effort. There are probably no more than a dozen people in this City who know this—what a shame!

At the time of my employment as archivist at the Pioneer Room, Escondido's mid-century historic building survey was in progress. To the best of my memory, those involved in the survey had uncovered some information about the structure. I am not sure how much was incorporated into the final report. You may wish to contact Lucy Berk for the information that was uncovered, I believe she added the articles to the newspaper clipping files at the Pioneer Room.

Again, thank you for supporting further study of this (and hopefully all) the Quonset structures in the City.

A. Clausen

Alexa Clausen
2030 Ridgecrest Place
Escondido, CA 92029

760-737-9719

CITY OF ESCONDIDO

Planning and Building Department
FAX TRANSMISSION COVER SHEET

Date: 8-26-2003 Fax #: (619) 308-9334

To: Lee Sherwood, RECON

From: Jay Paul, Escondido Planning Division CC:

Phone: (760) 839-4537

Subject: Walmart Scoping Mtg.

I have attached a draft summary of the EIR Scoping Meeting along with a summary of a phone call from an adjacent property owner to the east. I also have attached a copy of a fax received today regarding the Quonset Hut.

Total pages including Transmittal Form: 3

City of Escondido
201 N. Broadway - Escondido, CA 92025 - (760) 839-4313 Fax

Issues and Comments

EIR Scoping Meeting

Walmart/Esc. School District
ER 2003-01
8-25-03

Comments and Questions:

- How large is the proposed facility. How does the size compare to Vista and San Marcos stores.
- Harding design/width.
- Will Pennsylvania be used for access. How would the project impact traffic along Ash Street.
- Why was this site chosen since there is a store near the Escondido city limits in San Marcos near Nordahl Road.
- Frank Lorey – Would like to see a detailed analysis of the historic status of the Quonset Hut located at the Ash Street and Washington Avenue.

Phone call from owner of apartment complex on Grand Avenue who raised the following issues:

- Visual concerns with potential overviewing onto rooftops, mechanical equipment, parking areas and outdoor storage. Recommended a screen wall along Grand Avenue and appropriate landscaping along the street. Outdoor storage areas should be located and screened to avoid visual impacts.
- Increase in traffic along the street, and noise from traffic and on-site operations impacting existing residents.
- The back of the building should incorporate appropriate architectural elements since the building would be visible along Grand Avenue from passing vehicles and existing residents.

APPENDIX B

Traffic Study for Wal-Mart Site
(Linscott Law and Greenspan)

TRAFFIC IMPACT ANALYSIS
ESCONDIDO WALMART
ESCONDIDO, CALIFORNIA

July 7, 2004

Prepared by:

LINSCOTT LAW & GREENSPAN
ENGINEERS

1565 Hotel Circle South, Suite 310
San Diego, CA 92108
(619) 299-3090

JB/NP
3-03-1322A

LINSCOTT LAW & GREENSPAN
ENGINEERS

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APPENDIX

A. Caltrans and San Diego County Comments on Notice of Preparation and Responses

B. Traffic Counts

C. City of Escondido Segment Threshold Standards

D. Peak Hour Intersection Analysis – Existing

E. Cumulative Projects Traffic Assignments

F. Peak Hour Intersection Analysis Worksheets – Existing + Cumulative Projects

G. Peak Hour Intersection Analysis Worksheets – Existing + Cumulative Projects + Project

H. CMP Analysis Worksheets

I. W 41 Sign and Flashing Beacon - Caltrans Traffic Manual

J. Cumulative Impacts Analysis Worksheets

LINSCOTT LAW & GREENSPAN
ENGINEERS

TRAFFIC IMPACT ANALYSIS
GRAND AVENUE WALMART
ESCONDIDO, CALIFORNIA
July 7, 2004

1.0 Introduction

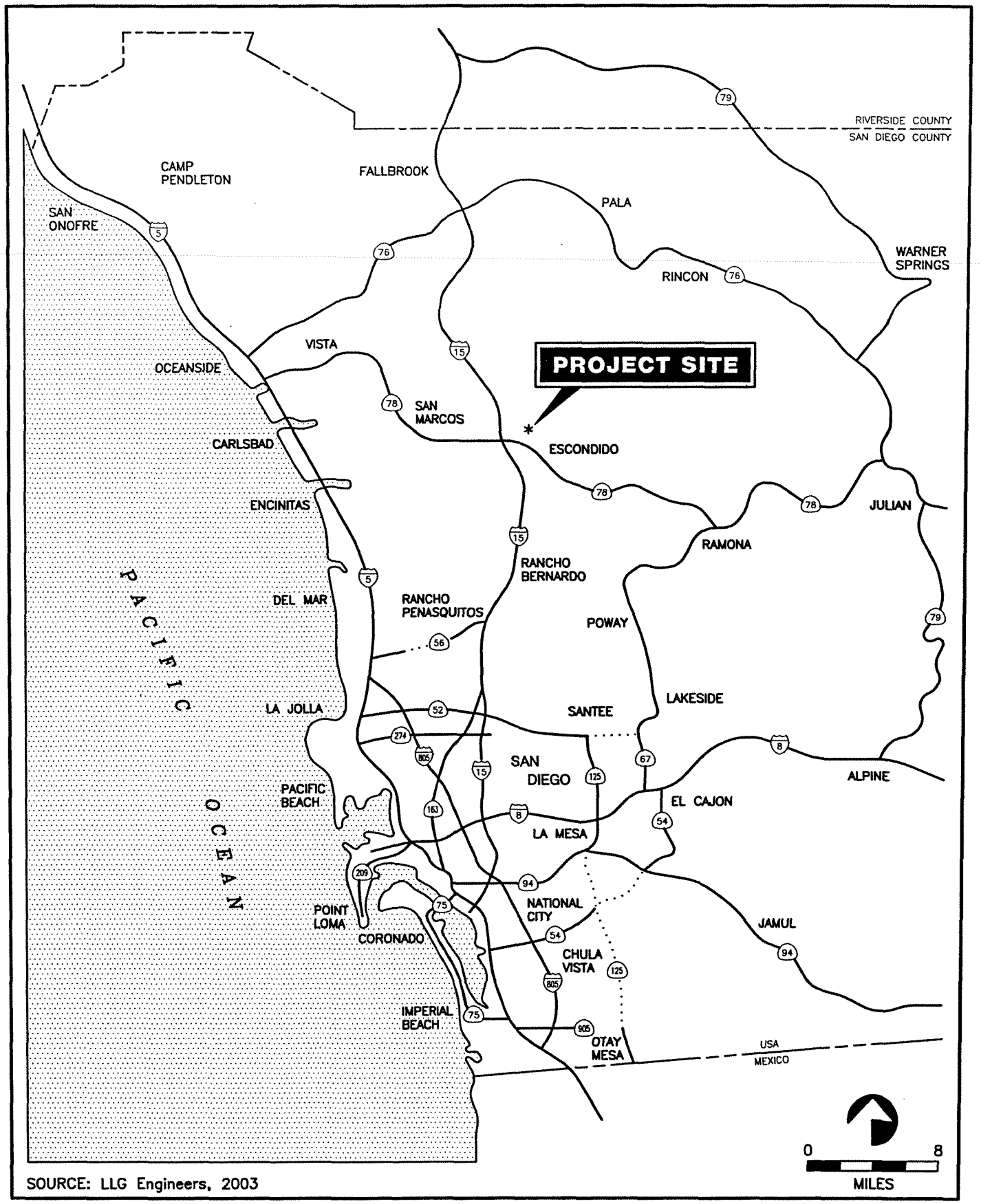
This project consists of replacing an existing school district office building with a 150,000 Square Foot (SF) Walmart store on Grand Avenue in Escondido. The site is located north of Grand Avenue and east of Ash Street. The Escondido Union School District (EUSD) office building is located just north of the proposed Walmart site. This building will be relocated to a site at the northwest corner of the Washington Street/Ash Street intersection. The impacts related to the relocated EUSD office building will be the subject of a separate traffic study. This traffic study will focus on the potential traffic impacts related to the proposed Walmart store.

Comments on the Notice of Preparation for this project were received from Mr. Mario H. Orso, Chief, Development Review Branch, Caltrans dated October 1, 2003 and from Mr. Stefan Marks, Manager of Service Development, San Diego County dated October 2, 2003. The comment letters and responses to these comments are included in **Appendix A.**

The following sections are included in this report:

- Project Description
- Existing Conditions Description
- Traffic Analysis Approach & Methodology
- Significance Criteria
- Analysis of Existing Conditions
- Trip Generation/Distribution/Assignment
- Cumulative Projects
- Analysis of Future Scenarios
- CMP Enhanced CEQA Review
- Significance of Impacts and Mitigation Measures

Figure 1 is a vicinity map and, **Figure 2** shows the project area.



SOURCE: LLG Engineers, 2003

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Figure 1

VICINITY MAP

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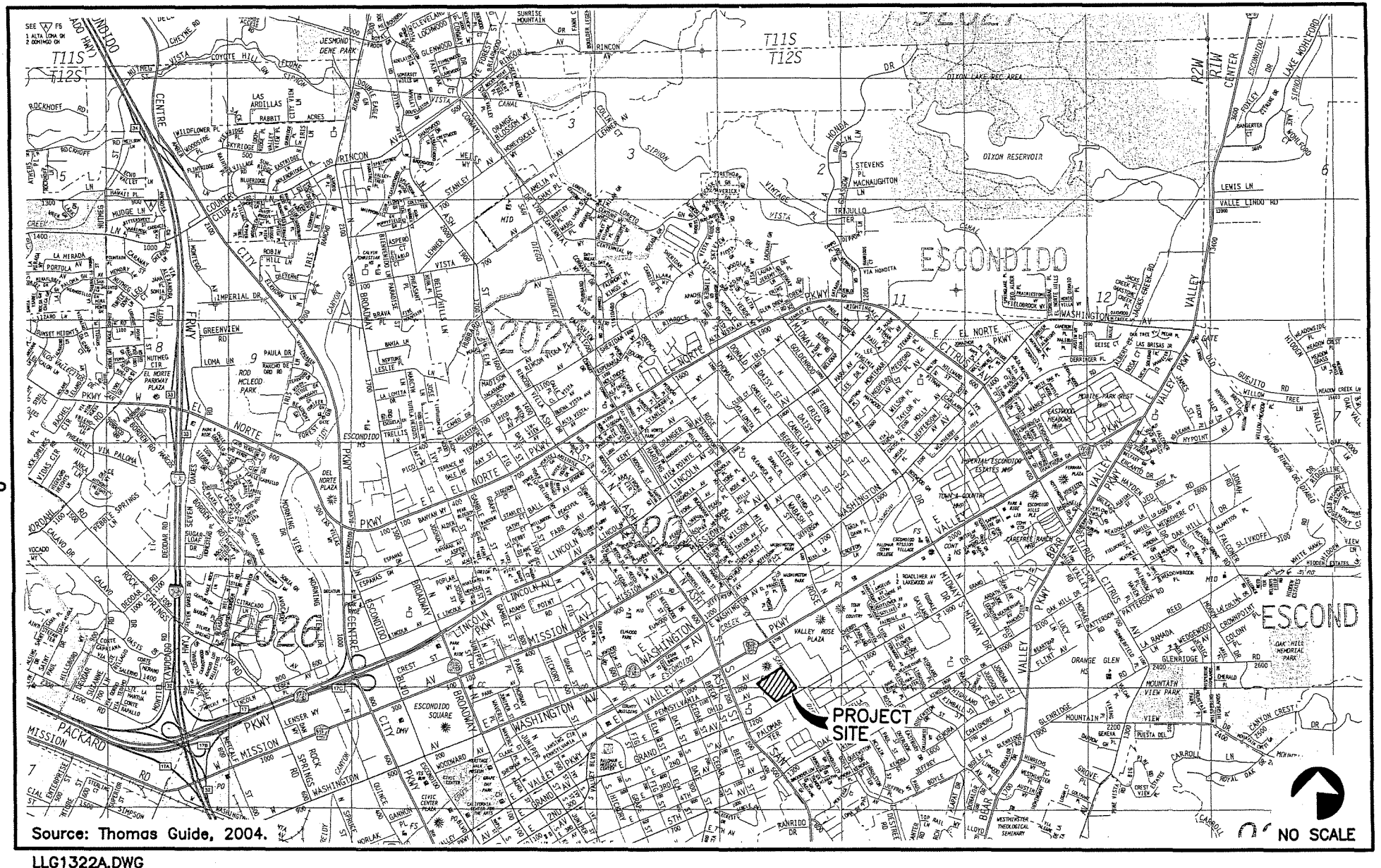

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Figure 2

PROJECT AREA MAP

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2.0 Project Description

2.1 PROJECT LOCATION/DESCRIPTION

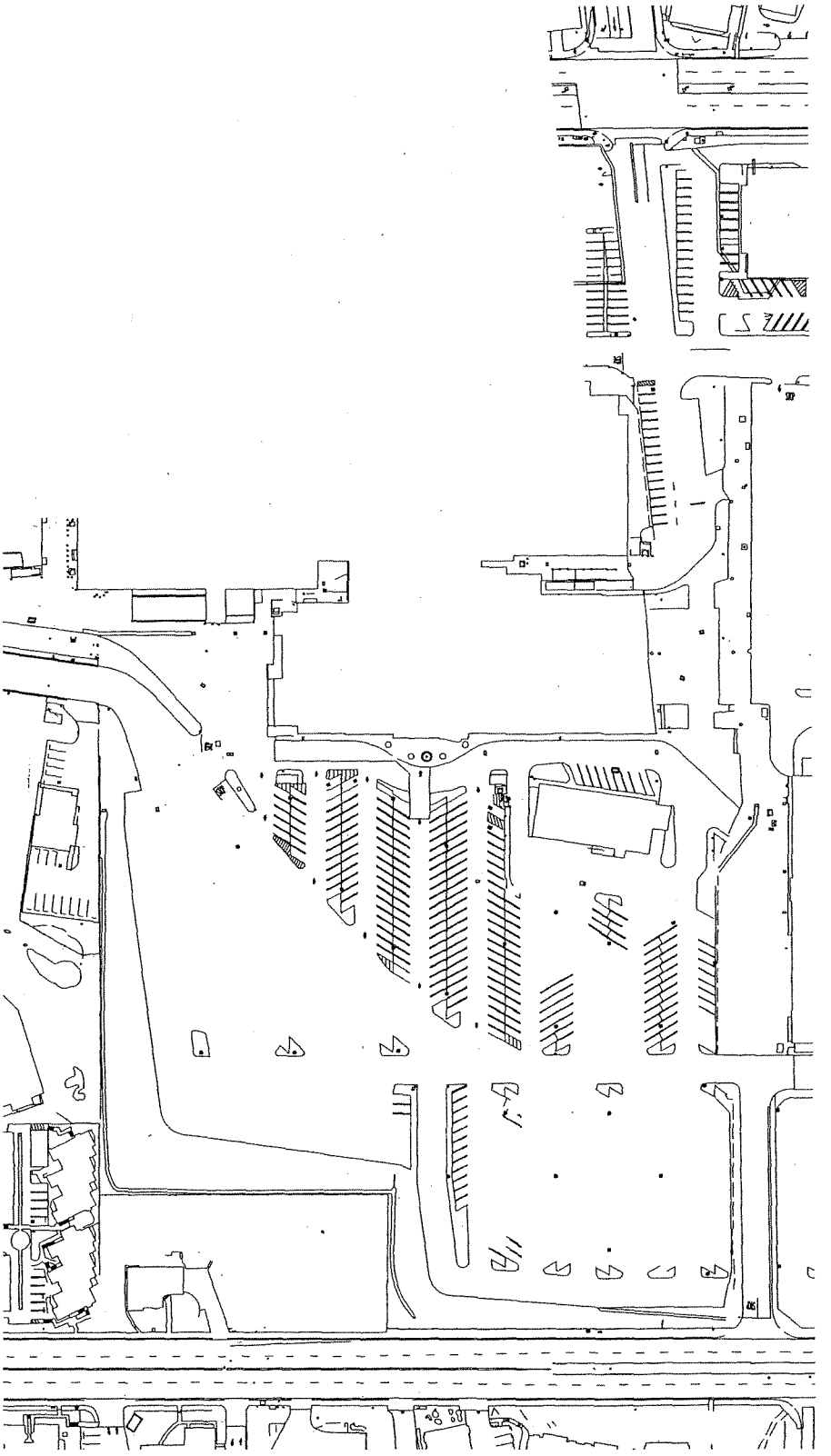
The project is located north of Grand Avenue east of Ash Street. Currently the Escondido Unions School District (EUSD) offices are located at this site. The project proposes to construct a 150,000 SF Walmart store at this site. The existing EUSD will be relocated to a new site at the southeast corner of Ash Street and Washington Street. A separate report will address the access issues at the new EUSD site.

Figure 3A depicts the existing site plan and **Figure 3B** depicts the proposed Walmart site plan.

2.2 ACCESS

As seen on Figure 3, the southern portion of the development fronts on Grand Avenue with full access to and from Grand Avenue. The eastern boundary of the site will be the proposed extension of Harding Street from Valley Parkway to Grand Avenue. Access will also be possible via Pennsylvania Avenue.

It is proposed to signalize the proposed Grand Avenue/Street intersection.



Source: Nasland Engineering, 2003.

NO SCALE

FIG1322.DWG

Figure 3a

EXISTING SITE PLAN

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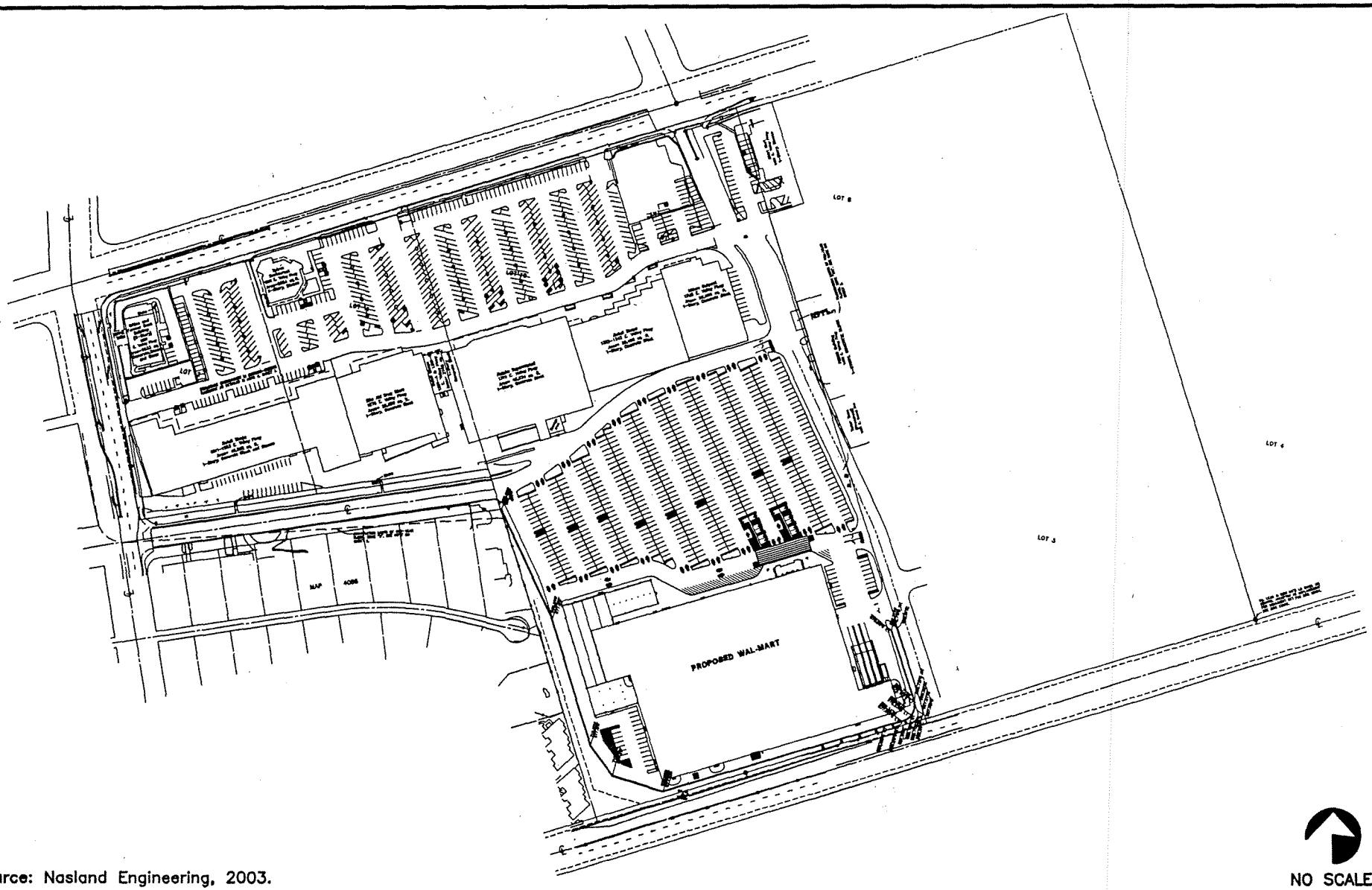

Source: Nasland Engineering, 2003.

NO SCALE

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Figure 3b

PROPOSED WALMART SITEPLAN

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3.0 Existing Conditions

3.1 STUDY AREA

The project study area was determined using a Select Zone Assignment conducted for this project. The Select Zone assignment is prepared by SANDAG and predicts the project trip assignments on the street network using a computer model. Segments with 200 or more trips a day and intersections with 50 or more peak hour trips were included in the study area. The assignment of project traffic is described later in this report in Section 8.0, Project Trip Generation, Distribution and Assignment.

Based on the above criteria, the intersections and segments included in the study area are listed below. **Figure 4** depicts the study area segments and intersections listed above.

Intersections

1. N. Ash St./E. Mission Ave.
2. N. Ash St./E. Washington Ave.
3. N. Ash St./E. Valley Pkwy.
4. N. Ash St./Pennsylvania Ave.*
5. N. Ash St./E. Grand Ave.
6. Harding St./E. Valley Pkwy.
7. Harding St./E. Grand Ave. *
8. N. Rose St./E. Valley Pkwy.
9. N. Rose St./Grand Ave.
10. Midway Dr./E. Valley Pkwy.
11. Midway Dr./E. Grand Ave.
12. Citrus Ave./E. Valley Pkwy.
13. Bear Valley Pkwy./E. Valley Pkwy. *
14. Washington Ave./E. Valley Pkwy.
15. Valley Center Rd./Lake Wohlford Rd.
16. Harding St./Washington Ave.

Note:* Unsignalized intersections, remaining intersections are signalized.

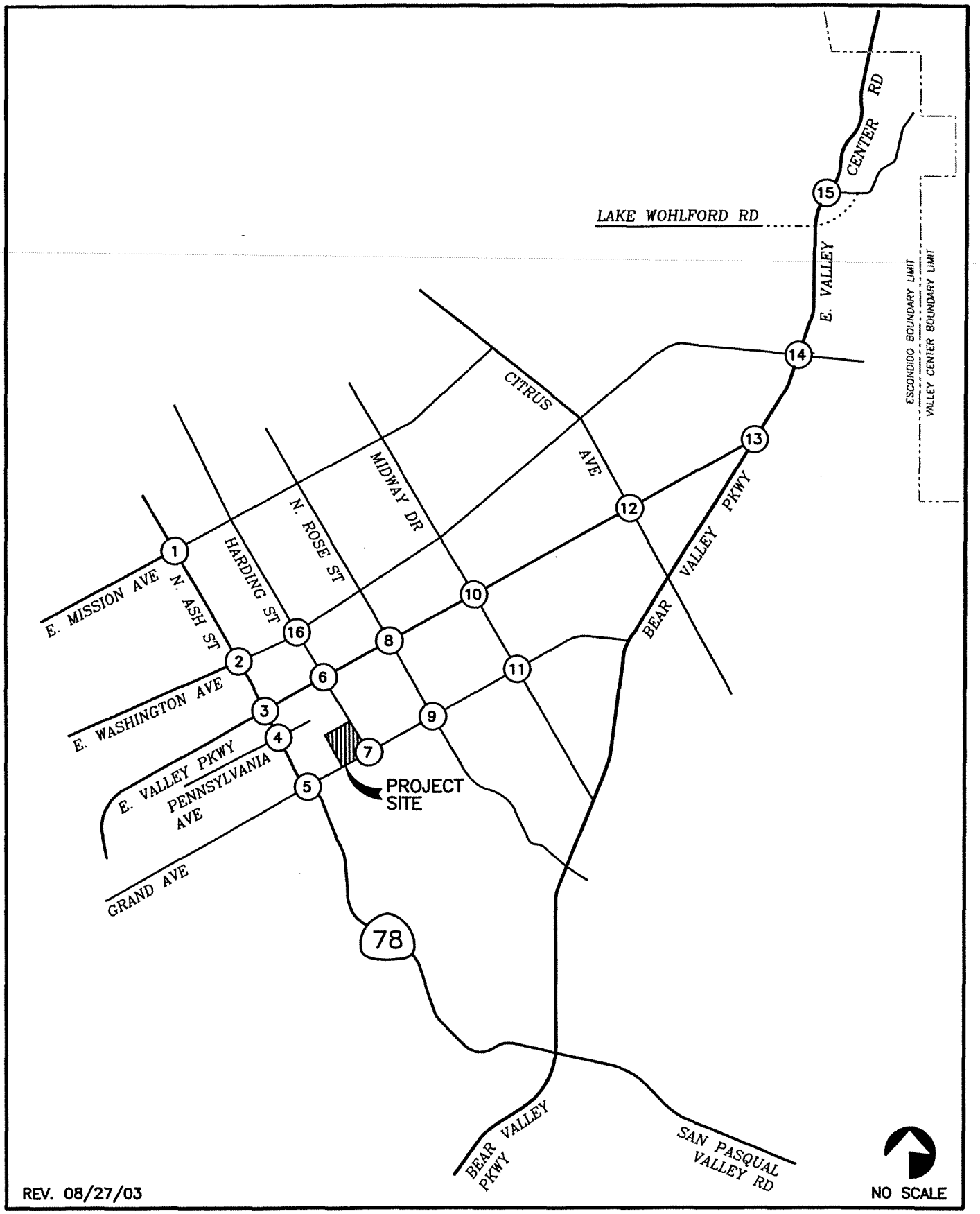

FIG1322.DWG

Figure 4

STUDY AREA

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Segments

- **N. ASH STREET**
  - Mission Avenue to Washington Avenue
  - Washington Avenue to Valley Parkway
  - Valley Parkway to Pennsylvania Avenue
  - Pennsylvania Avenue to Grand Avenue
  - Grand Avenue to Oak Hill Drive

- **N. ROSE STREET**
  - Valley Parkway to Grand Avenue

- **MIDWAY DRIVE**
  - Valley Parkway to Grand Avenue

- **WASHINGTON AVENUE**
  - Date Street to N. Ash Street
  - N. Ash Street to Harding Street
  - Harding Street to N. Rose Street

- **VALLEY PARKWAY**
  - Date Street to N. Ash Street
  - N. Ash Street to Harding Street
  - Harding Street to N. Rose Street
  - N. Rose Street to Midway Drive
  - Midway Drive to Citrus Avenue
  - Citrus Avenue to Bear Valley Parkway
  - Bear Valley Parkway to Washington Avenue
  - Washington Avenue to Lake Wohlford Road

- **VALLEY CENTER ROAD**
  - Lake Wohlford Road to City Limits

- **GRAND AVENUE**
  - Date Street to N. Ash Street
  - N. Ash Street to Harding Street
  - Harding Street to N. Rose Street
  - N. Rose Street to Midway Drive

3.2 STREET NETWORK

According to City of Escondido Street Design Standards, **Prime Arterials** should be 116 feet wide in 136 feet of Right-of-Way (R/W) for eight travel lanes and 106 feet wide in 126 feet of R/W for six travel lanes, providing a raised median/left-turn lane and no curbside parking. They are intended to have very limited access. **Major Roads** should be 90 feet wide in 110 feet of R/W for six travel lanes and 82 feet wide in 102 feet of R/W for four travel lanes, providing a raised median/left-turn lane and generally no curbside parking. **Collectors** should be 64 feet wide in 84 feet of R/W, providing up to four thru lanes, a raised median/left-turn lane and curbside parking. **Local Collectors** should be 42 feet wide in 66 feet of R/W, providing two travel lanes and curbside parking. **Rural Collectors** should be 42 feet wide in 57 to 66 feet of R/W, providing two travel lanes and generally no on-street parking.

The following is a brief description of the existing roadway system in the project area. **Figure 5** shows the existing conditions at the study area intersections.

North Ash Street/SR 78

North Ash Street, also called San Pasqual Valley Road is a designated State Highway (SR 78) south of Washington Avenue. West of Ash Street, Washington Avenue is designated SR 78. In the project vicinity, Ash Street is a four-lane road with two lanes in each direction. Curbside parking is generally not permitted.

Rose Street is classified as a Collector on the City of Escondido's Circulation Element. In the project area, Rose Street is a Two-lane undivided roadway with a posted speed limit of 40 mph. Curbside parking is prohibited and bus stops are provided within the project area.

Midway Drive is classified as a Collector on the City of Escondido's Circulation Element. In the project area, Midway Drive is four-lane roadway with a posted speed limit of 35 mph. Curbside parking is prohibited and bus stops are provided within the project area.

Washington Avenue is classified as a Collector on the City of Escondido's Circulation Element. In the project area, Washington Avenue is four-lane roadway with a posted speed limit of 35 mph. Curbside parking is generally permitted.

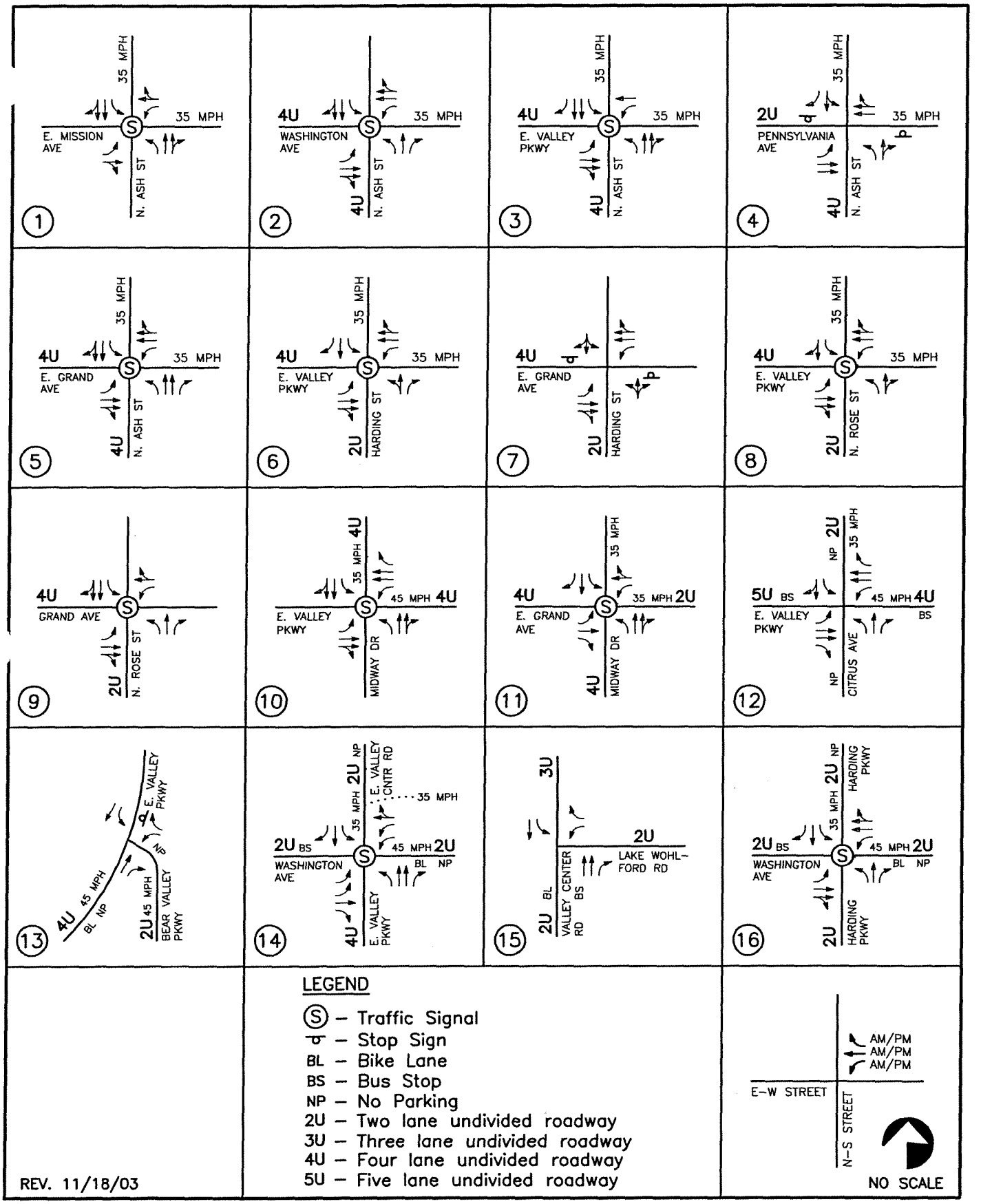

FIG1322.DWG

Figure 5

EXISTING CONDITIONS DIAGRAM

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East Valley Parkway is classified as a Prime Arterial on the City of Escondido Circulation Element. Between Lake Wohlford Road and Washington Avenue, East Valley Parkway is constructed as a two-lane roadway with a posted speed limit of 45 mph. From Washington Avenue to Bear Valley Parkway, East Valley Parkway widens to a four-lane undivided roadway separated by a Two-Way Left-Turn Lane (TWLTL) median. Bike lanes are provided and curbside parking is generally prohibited. Bus stops are provided at regular intervals and the posted speed limit is 45 mph.

Grand Avenue is classified as a Collector on the City of Escondido Circulation Element. The posted speed limit is generally 40 mph. Two lanes of travel are provided in each direction.

Harding Avenue is classified as a Local Collector between Lincoln Avenue and Mission Avenue and a Collector on the City of Escondido Circulation Element between Mission Avenue and Valley Parkway. The posted speed limit is generally 35 mph. Two lanes of travel are provided in each direction.

3.3 EXISTING TRAFFIC VOLUMES

3.3.1 PEAK HOUR INTERSECTION TURNING MOVEMENT VOLUMES

City of Escondido provided AM and PM peak hour intersection counts at ten of the sixteen key intersections. Counts were conducted at the remaining intersections by LLG, in July 2003. **Figure 6** depicts the existing AM and PM peak hour intersection turning movement volumes. **Appendix B** contains the manual turning movement volume count sheets.

3.3.2 DAILY SEGMENT VOLUMES

City of Escondido provided segment ADT counts for several roadway segments. Additional traffic data was collected by LLG in July of 2003. **Table 1** summarizes the existing ADT volumes. **Figure 7** depicts the existing daily segment volumes. Appendix B contains the manual turning movement volume count sheets.

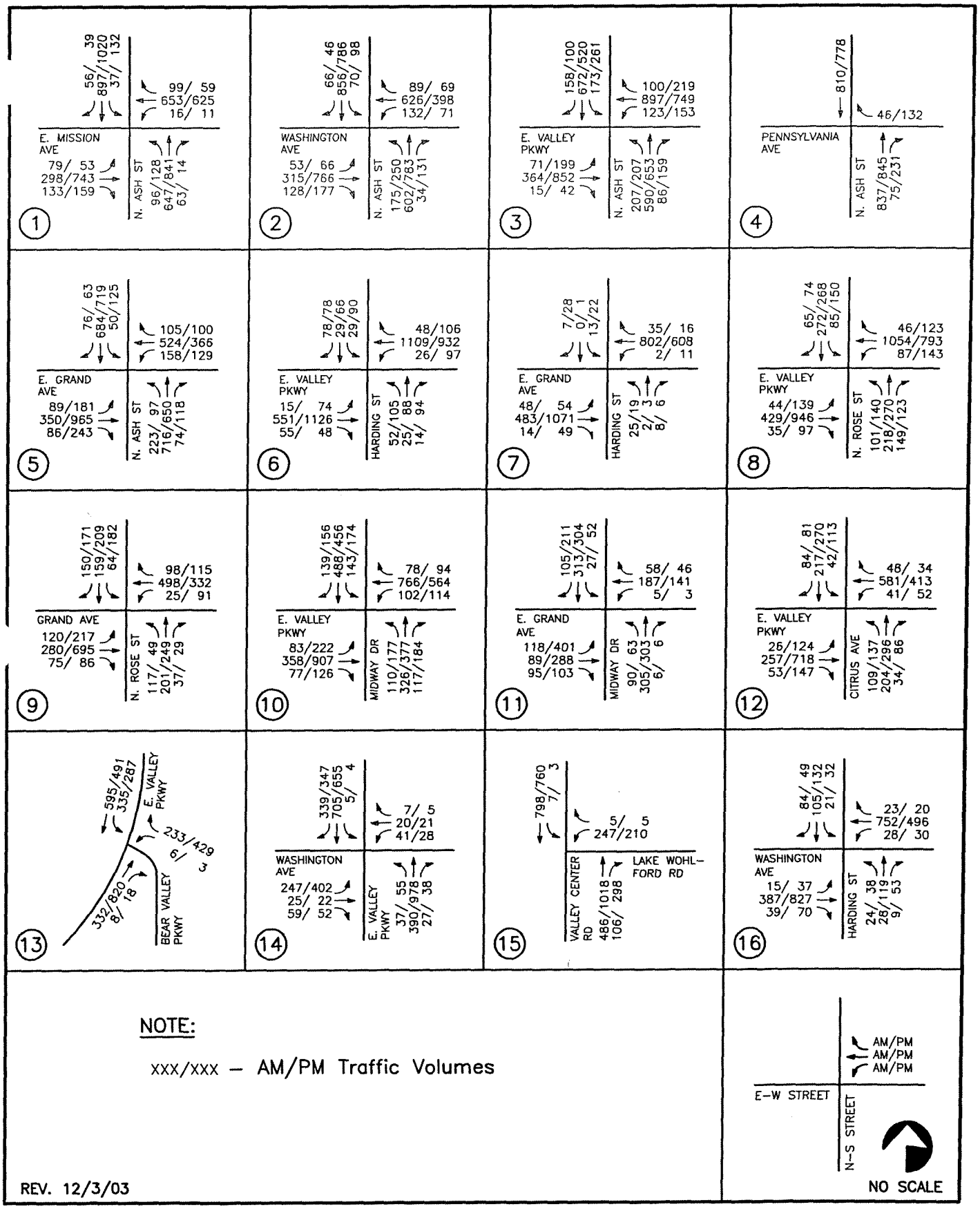

FIG1322.DWG

Figure 6

EXISTING TRAFFIC VOLUMES AM/PM PEAK HOURS

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Table 1

EXISTING STREET SEGMENT VOLUMES

SEGMENT	YEAR 0F COUNT	SOURCE	VOLUME
N. ASH STREET			
Mission Ave. to Washington Ave.	2002	City of Escondido	22,400
Washington Ave. to Valley Pkwy.	2002	City of Escondido	25,800
Valley Pkwy. to Pennsylvania Ave.	2002	City of Escondido	21,400
Pennsylvania Ave. to Grand Ave.	2002	City of Escondido	21,000
Grand Ave. to Oak Hill Dr.	2002	City of Escondido	22,600
SAN PASQUAL VALLEY ROAD			
Oak Hill Dr. to Bear Valley Parkway	2003	LLG Engineers [1]	10,800
N. ROSE STREET			
Valley Pkwy. to Grand Ave.	2002	City of Escondido	12,300
MIDWAY DRIVE			
Valley Pkwy. to Grand Ave.	2003	LLG Engineers	14,000
WASHINGTON AVENUE			
Date St. to N. Ash St.	2003	LLG Engineers [1]	17,000
N. Ash St. to Harding St.	2003	LLG Engineers [1]	15,700
Harding St. to N. Rose St.	2003	LLG Engineers [1]	15,000
VALLEY PARKWAY			
Date St. to N. Ash St.	2002	City of Escondido	24,200
N. Ash St. to Harding St.	2002	City of Escondido	30,600
Harding St. to N. Rose St.	2002	City of Escondido	30,400
N. Rose St. to Midway Dr.	2002	City of Escondido	27,700
Midway Dr. to Citrus Ave.	2002	City of Escondido	24,500
Citrus Ave. to Bear Valley Pkwy.	2003	LLG Engineers	17,500
Bear Valley Pkwy. to Washington Ave.	2002	LLG Engineers	21,000
Washington Ave. to Lake Wohlford Rd.	2003	LLG Engineers	26,900
VALLEY CENTER ROAD			
Lake Wohlford Rd. to City Limits	2002	LLG Engineers	22,400
GRAND AVENUE			
Date St. to N. Ash St.	2002	City of Escondido	18,800
N. Ash St. to Harding St.	2002	City of Escondido	18,400
Harding St. to N. Rose St.	2002	City of Escondido	17,600
N. Rose St. to Midway Dr.	2002	City of Escondido	14,600

Note:
1. Estimated from year 2003 intersection volumes at adjacent intersections, assuming PM peak hour traffic is 10% of ADT.

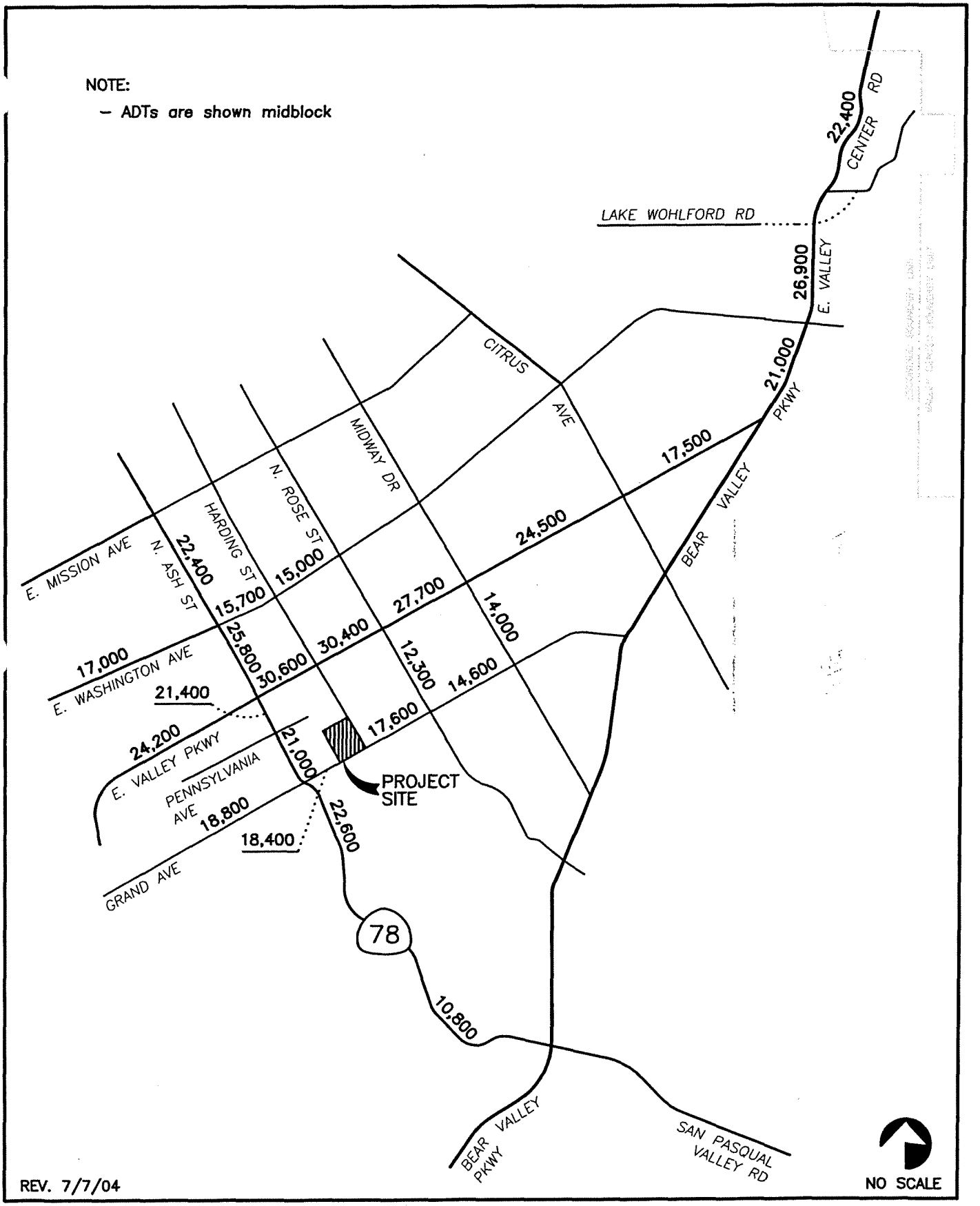

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Figure 7

EXISTING DAILY TRAFFIC VOLUMES

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4.0 Analysis Scenarios & Methodology

The Walmart project is planned on the existing EUSD site. The existing EUSD building will be removed and a new EUSD office building will be constructed at the southeast corner of the Ash Street/Washington Avenue intersection. The EUSD related traffic is included in the existing traffic volumes, as the EUSD office is currently in operation. This analysis includes the traffic generated by the proposed 150,000 SF Walmart project. The impacts of the EUSD project at its new location will be the subject of a separate focused traffic study.

4.1 ANALYSIS SCENARIOS

A computerized Select Zone Assignment using the SANDAG Series 9 Traffic Model was obtained. The following scenarios are analyzed in this report.

- Existing
- Existing + Cumulative Projects
- Existing + Cumulative Projects + Project
- Year 2030 With Project

The study area intersections and segments listed in Section 3.0, Study Area, are analyzed in this report.

4.2 METHODOLOGY

The traffic study analyzes signalized intersections, unsignalized intersections and street segments. There are different methodologies used to analyze these types of facilities, as described below:

4.2.1 SIGNALIZED INTERSECTIONS

The measure of effectiveness for intersection operations is level of service. In the 2000 Highway Capacity Manual (HCM), Level of Service for signalized intersections is defined in terms of delay. The level of service analysis results in seconds of delay expressed in terms of letters A through F. Delay is a measure of driver discomfort, frustration, fuel consumption, and lost travel time.

Table 2

LEVEL OF SERVICE THRESHOLDS FOR SIGNALIZED INTERSECTIONS

AVERAGE CONTROL DELAY PER VEHICLE (SECONDS/VEHICLE)			LEVEL OF SERVICE
0.0	≤	10.0	A
10.1	to	20.0	B
21.1	to	35.0	C
35.1	to	55.0	D
55.1	to	80.0	E
	≥	80.0	F

Source: Highway Capacity Manual, 2000.

For signalized intersections, level of service criteria are stated in terms of the average control delay per vehicle for a 15-minute analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. **Table 2** summarizes the delay thresholds for signalized intersections.

Level of service A describes operations with very low delay, (i.e. less than 10.0 seconds per vehicle). This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

Level of service B describes operations with delay in the range 10.1 seconds and 20.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.

Level of service C describes operations with delay in the range 20.1 seconds and 35.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.

Level of service D describes operations with delay in the range 35.1 seconds and 55.0 seconds per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or higher v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are more frequent.

Level of service E describes operations with delay in the range of 55.1 seconds to 80.0 seconds per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.

Level of service F describes operations with delay in excess of over 80.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with over-saturation (i.e., when arrival flow rates exceed the capacity of the intersection). It may also occur at high v/c ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

4.2.2 UNSIGNALIZED INTERSECTIONS

For unsignalized intersections, level of service is determined by the computed or measured control delay and is defined for each minor movement. Level of service is not defined for the intersection as a whole. **Table 3** depicts the criteria, which are based on the average control delay for any particular minor movement.

Level of Service F exists when there are insufficient gaps of suitable size to allow a side street demand to safely cross through a major street traffic stream. This level of service is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches. The method, however, is based on a constant critical gap size; that is, the critical gap remains constant no matter how long the side-street motorist waits. LOS F may also appear in the form of side-street vehicles selecting smaller-than-usual gaps. In such cases, safety may be a problem, and some disruption to the major traffic stream may result. It is important to note that LOS F may not always result in long queues but may result in adjustments to normal gap acceptance behavior, which are more difficult to observe in the field than queuing.

Table 3

LEVEL OF SERVICE THRESHOLDS FOR UNSIGNALIZED INTERSECTIONS

AVERAGE CONTROL DELAY PER VEHICLE (SECONDS/VEHICLE)			LEVEL OF SERVICE	EXPECTED DELAY TO MINOR STREET TRAFFIC
0.0	≤	10.0	A	Little or no delay
10.1	to	15.0	B	Short traffic delays
15.1	to	25.0	C	Average traffic delays
25.1	to	35.0	D	Long traffic delays
35.1	to	50.0	E	Very long traffic delays
	≥	50.0	F	Severe congestion

Source: Highway Capacity Manual, 2000.

In most cases, at Two-Way STOP controlled (TWSC) intersections, the critical movement is the minor street left-turn movement. As such, the minor street left-turn movement can generally be considered the primary factor affecting overall intersection performance. The lower threshold for LOS F is set at 50 seconds of delay per vehicle. There are many instances, particularly in urban areas, in which the delay equations will predict delays of 50 seconds (LOS F) or more for minor street movements under very low volume conditions on the minor street (less than 25 vehicles per hour or vph). Since the first term of the equation is a function only of capacity, the LOS F threshold of 50 seconds/vehicle is reached with a movement capacity of approximately 85 vph or less.

4.2.3 STREET SEGMENTS

The street segments were analyzed on a daily basis by comparing the Average Daily Traffic (ADT) volume to the City of Escondido Proposed Level of Service Standards - Street Segment Average Daily Vehicle Trip Thresholds. This table is shown in **Appendix C** and provides Level of Service estimates based on traffic volumes and roadway characteristics.

4.2.4 ILV OPERATIONS

The State-owned intersections (i.e. on/off ramps) were analyzed using Intersecting Lane Vehicles (ILV) methodology as described in Chapter 400, Topic 406 of the Department Highway Design Manual, The ILV methodology is based on the concept that capacity of intersecting lanes of traffic is 1,500 vehicles per hour. For the typical local street interchange there is usually a critical intersection of a ramp and the crossroads that establishes the capacity of the interchange. Listed below are the values of ILV/hr for various traffic flow conditions:

- *UNDER* - ILV/hr<1200
  Description: Stable flow with slight, but acceptable delay. Occasional signal loading may develop. Free mid-block operations would occur.
- *NEAR* - ILV/hr 1200 – 1500:
  Description: Unstable flow with considerable delays possible. Some vehicles occasionally wait two or more cycles to pass through the intersection. Continuous backup occurs at some approaches.
- *OVER* - ILV/hr >1500:
  Description: Stop and go operation with severe delay and heavy congestion[1]. Traffic volume is limited by maximum discharge rates of each phase. Continuous backup in varying degrees occurs on all approaches. Where downstream capacity is restrictive, mainline congestion can impede orderly discharge through the intersection.

Notes:
1. The amount of congestion depends on how much the ILV/hr value exceeds 1500. Observed flow rates will normally not exceed 1500 ILV/hr and the excess will be delayed in a queue.

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5.0 Significance Criteria

5.1 SIGNALIZED INTERSECTIONS

A signalized intersection is directly significantly impacted when project traffic degrades the level of service to worse than mid-level D (delay of 45.1 seconds or more). If the intersection is currently operating at a LOS worse than mid-level D, a cumulative impact would occur if the project increases the delay by more than 2 seconds.

5.2 UNSIGNALIZED INTERSECTIONS

An unsignalized intersection is directly significantly impacted when the project traffic degrades the level of service to worse than mid-level D (a delay of 30.1 seconds or more). If the intersection is already worse than mid-level D, a cumulative impact would occur if the project increases the delay by more than 2 seconds.

5.3 STREET SEGMENTS

The City of Escondido has adopted a standard for determining traffic impacts that states that an impact is considered to be a direct significant impact on a street segment when a project degrades the level of service (LOS) to worse than mid-level D and increases the volume/capacity (v/c) ratio by more than 0.02. If the segment already operates at mid-LOS D or worse, a significant cumulative impact is calculated if the project increases the v/c by more than 0.02.

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6.0 Analysis of Existing Conditions

6.1 PEAK HOUR INTERSECTION LEVELS OF SERVICE

Table 4 summarizes the existing AM and PM peak hour intersection analysis results at the key signalized and unsignalized intersections, respectively.

Signalized Intersections

As seen in Table 4, all key signalized intersections in the study are calculated to currently operate at better than Mid-LOS D conditions except the following:

- N. Ash Street/E. Mission Avenue (LOS E in the PM peak hour)
- N. Ash Street/E. Washington Avenue (Worse than mid-LOS D in the PM peak hour)
- N. Rose Street/E. Valley Parkway (Worse than mid-LOS D in the PM peak hour)

Unsignalized Intersections

As seen in Table 4, except at the N. Ash Street/Pennsylvania Avenue intersection, the minor street movements at the following key unsignalized intersections are currently calculated to operate at worse than mid-LOS D:

- Harding Street/E. Grand Avenue (LOS E in the PM peak hour)
- Bear Valley Parkway/E. Valley Parkway (LOS E in the PM peak hour)

Appendix D contains the peak hour analysis work sheets for the key study area intersections under existing conditions.

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Table 4

EXISTING INTERSECTION OPERATIONS

INTERSECTION	PEAK HOUR	DELAY	LOS
1. N. Ash St./E. Mission Ave.	AM	24.8	C
	PM	59.6	E
2. N. Ash St./E. Washington Ave.	AM	31.6	C
	PM	49.8	D
3. N. Ash St./E. Valley Pkwy.	AM	33.3	D
	PM	43.5	D
4. N. Ash St./Pennsylvania Ave. (EBR) [1]	AM	10.8	B
	PM	12.5	B
5. N. Ash St./E. Grand Ave.	AM	28.7	C
	PM	40.3	D
6. Harding St./E. Valley Pkwy.	AM	19.5	B
	PM	29.8	C
7. Harding St./E. Grand Ave. (NBL) [1]	AM	29.1	D
	PM	>60.0	F
8. N. Rose St./E. Valley Pkwy.	AM	42.6	D
	PM	45.9	D
9. N. Rose St./Grand Ave.	AM	27.1	C
	PM	31.4	C
10. Midway Dr./E. Valley Pkwy.	AM	34.5	C
	PM	38.4	D
11. Midway Dr./E. Grand Ave.	AM	22.5	C
	PM	23.7	C
12. Citrus Ave./E. Valley Pkwy.	AM	20.3	C
	PM	26.7	C

Note:
1. Unsignalized intersections.
Mid-LOS D delay for signalized intersections is 45.0 seconds.
Mid-LOS D delay for unsignalized intersections is 30.0 seconds.

Table 4 (Continued)

EXISTING INTERSECTION OPERATIONS

INTERSECTION	PEAK HOUR	DELAY	LOS
13. Bear Valley Pkwy./E. Valley Pkwy. (NBL) [1]	AM	**63.4**	**F**
	PM	**>60.0**	**F**
14. Washington Ave./E. Valley Pkwy.	AM	36.6	D
	PM	41.9	D
15. Valley Center Rd./Lake Wohlford Rd.	AM	12.0	B
	PM	12.3	B
16. Harding St./Washington Ave.	AM	8.0	A
	PM	11.2	B

Note:
1. Unsignalized intersections.
Mid-LOS D delay for signalized intersections is 45.0 seconds.
Mid-LOS D delay for unsignalized intersections is 30.0 seconds.

6.2 INTERSECTION LANE VEHICLE ANALYSIS

Intersection Lane Vehicle (ILV) analysis was conducted for intersections along Ash Avenue, a State Highway. This analysis is based on the methodology described in Section 4.2.4. **Table 5** summarizes the existing Intersection Lane Vehicle (ILV) operations. As seen in Table 5, in the AM peak hour, the Ash Street/Washington Avenue intersection is calculated to be over capacity. The remaining intersections are calculated to operate at under or near capacity. In the PM peak hour, the Ash Street/Mission Avenue and the Ash Street/Washington Avenue intersections are calculated to operate at over capacity. The remaining two intersections are calculated to operate at near capacity.

Table 5

EXISTING ILV ANALYSIS RESULTS

INTERSECTION	PEAK HOUR	CAPACITY
SR 78 (Ash St.)/E. Mission Ave.	AM PM	Near Over
SR 78 (Ash St.)/E. Washington Ave.	AM PM	Over Over
SR 78 (Ash St.)/E. Valley Pkwy.	AM PM	Under Near
SR 78 (Ash St.)/Grand Ave.	AM PM	Under Near

6.3 DAILY SEGMENT LEVELS OF SERVICE

Table 6 summarizes the existing daily segment levels of service on key segments. As seen in Table 6, all key segments are calculated to currently operate at mid-LOS D or better with the exception of the following segments:

- Valley Parkway, Washington Avenue to Lake Wohlford Road (LOS F)
- Valley Center Road north of Lake Wohlford Road (LOS F)

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Table 6

EXISTING DAILY SEGMENT ANALYSIS

SEGMENT	EXISTING ROADWAY CLASS	LOS E CAPACITY [1]	MID-LOS D CAPACITY [1]	ADT	V/C	LOS
N. ASH STREET						
Mission Ave. to Washington Ave.	4-Ln Major Road	37,000	31,500	22,400	0.61	B
Washington Ave. to Valley Pkwy.	4-Ln Major Road	37,000	31,500	25,800	0.70	C
Valley Pkwy. to Pennsylvania Ave.	4-Ln Major Road	37,000	31,500	21,400	0.58	B
Pennsylvania Ave. to Grand Ave.	4-Ln Major Road	37,000	31,500	21,000	0.57	B
Grand Ave. to Oak Hill Dr.	4-Ln Major Road	37,000	31,500	22,600	0.61	B
SAN PASQUAL VALLEY ROAD						
Oak Hill Dr. to Bear Valley Parkway	2-Ln Collector	15,000	11,250	10,800	0.72	D
N. ROSE STREET						
Valley Pkwy. to Grand Ave.	4-Ln Collector	34,200	29,100	12,300	0.36	A
MIDWAY DRIVE						
Valley Pkwy. to Grand Ave.	4-Ln Collector	34,200	29,100	14,000	0.41	B
WASHINGTON AVENUE						
Date St. to N. Ash St.	4-Ln Collector	34,200	29,100	17,000	0.50	B
N. Ash St. to Harding St.	4-Ln Collector	34,200	29,100	15,700	0.46	B
Harding St. to N. Rose St.	4-Ln Collector	34,200	29,100	15,000	0.44	B
VALLEY PARKWAY						
Date St. to N. Ash St.	4-Ln Major Road	37,000	31,500	24,200	0.65	B
N. Ash St. to Harding St.	4-Ln Major Road	37,000	31,500	30,600	0.83	D
Harding St. to N. Rose St.	4-Ln Major Road	37,000	31,500	30,400	0.82	D
N. Rose St. to Midway Dr.	4-Ln Major Road	37,000	31,500	27,700	0.75	C
Midway Dr. to Citrus Ave.	4-Ln Major Road	37,000	31,500	24,500	0.66	B
Citrus Ave. to Bear Valley Pkwy.	4-Ln Major Road	37,000	31,500	17,500	0.47	B
Bear Valley Pkwy. to Washington Ave.	4-Ln Major Road	37,000	31,500	21,000	0.57	B
Washington Ave. to Lake Wohlford Rd.	2-Ln Collector	15,000	11,250	**26,900**	**1.79**	**F**
VALLEY CENTER ROAD						
Lake Wohlford Rd. to City Limits	2-Ln Collector	15,000	11,250	**22,400**	**1.49**	**F**
GRAND AVENUE						
Date St. to N. Ash St.	4-Ln Collector	34,200	29,100	18,800	0.55	B
N. Ash St. to Harding St.	4-Ln Collector	34,200	29,100	18,400	0.54	B
Harding St. to N. Rose St.	4-Ln Collector	34,200	29,100	17,600	0.51	B
N. Rose St. to Midway Dr.	4-Ln Collector	34,200	29,100	14,600	0.43	B

Notes: Delay and LOS worse than Mid-LOS D is shown in **bold**.

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7.0 Cumulative Projects

A list of 22 near-term cumulative projects was obtained from the City of Escondido for inclusion in this analysis. **Figure 8** depicts the location of each cumulative project and **Table 7** summarizes the trip generation for each cumulative project. Following is a brief description of each of the cumulative projects included in this analysis.

7.1 DESCRIPTION OF PROJECTS

7.1.1 Fig and Farr Elementary School

Fig and Farr Elementary is a new school, currently under construction at the northeast corner of Lincoln Avenue and Fig Street. This school will provide instruction to K through 5 grades. The project will consolidate 29 parcels and remove 25 homes. The net traffic generated by the new project is calculated at 550 daily trips, 204 AM peak hour trips (146 inbound and 58 outbound) and 31 PM peak hour trips (a reduction of 18 inbound trips and 49 outbound). The reduction in trips is due to removal of the existing 25 homes.

7.1.2 Ryan Community Park

Ryan Park is a planned active use recreational area encompassing approximately 59 developable acres, which will include six lighted soccer fields, three lighted baseball fields, one playground, and concession stands. This project is calculated to generate 3,210 daily trips, 130 AM peak hour trips (80 inbound and 50 outbound) and 260 PM peak hour trips (130 inbound and 130 outbound). Access is provided via Washington Avenue.

7.1.3 Ryan Park Continuation School

The Ryan Park Continuation School is a proposed project that will construct a continuation-type high school on a 4.6-acre site to accommodate approximately 400 students and 20 staff. The project site is located on the east side of East Valley Parkway, across from Washington Avenue in the City of Escondido. Access to the site will be via the recently constructed east leg of the East Valley Parkway/Washington Avenue intersection. The project is calculated to generate 202 daily trips, 85 AM peak hour trips (61 inbound and 24 outbound) and 10 PM peak hour trips (5 inbound and 5 outbound). Traffic data for this project was obtained from report prepared by LLG in November 2001.

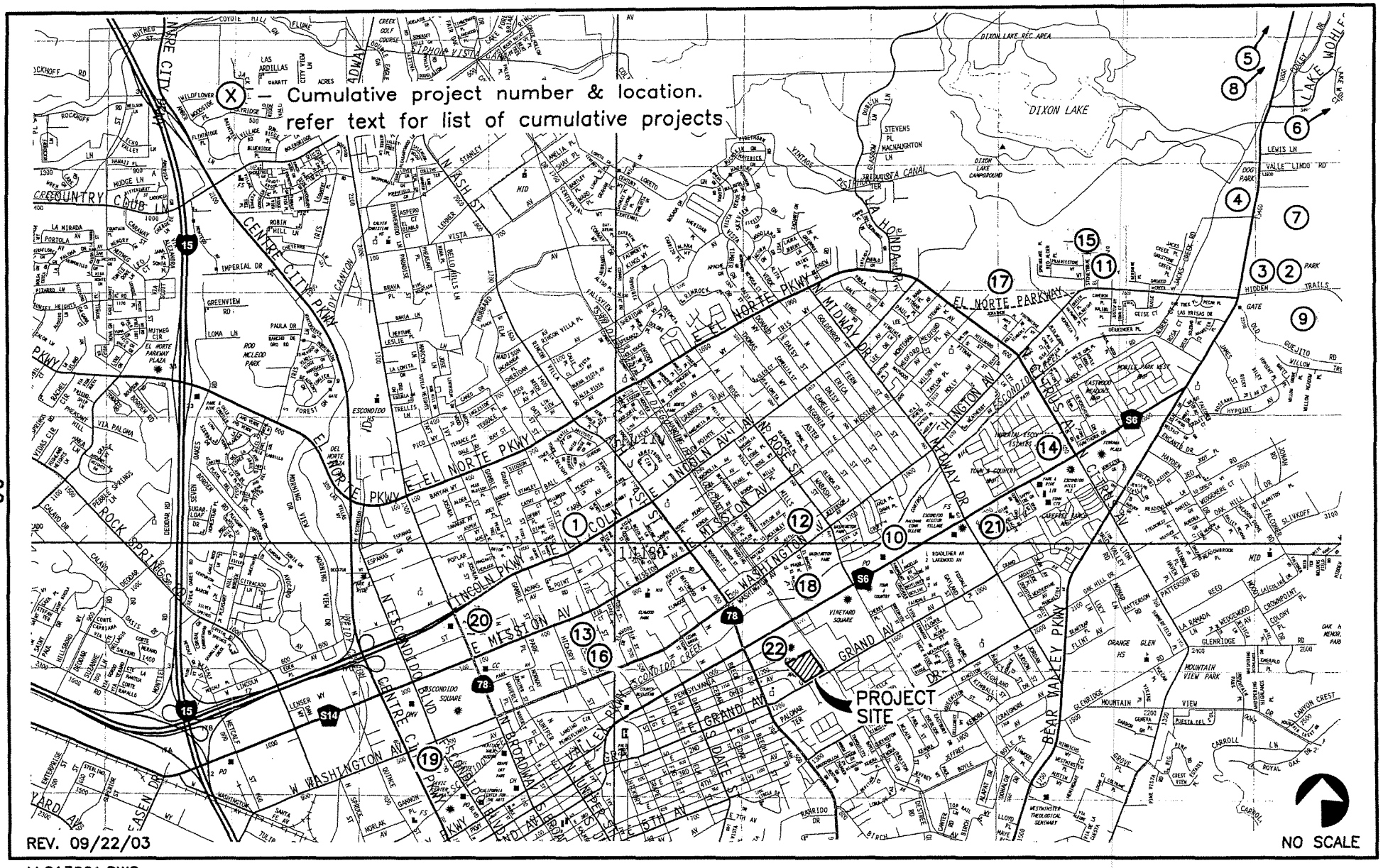

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Figure 8

CUMULATIVE PROJECTS LOCATIONS

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Table 7
CUMULATIVE PROJECTS TRIP GENERATION

CUMULATIVE PROJECTS	LAND USE	SIZE	RATE	ADT	AM PEAK HOUR			PM PEAK HOUR		
					IN	OUT	TOTAL	IN	OUT	TOTAL
1. Fig and Farr Elementary School	Elementary School	800 Students	[1]	550	146	58	204	(18)	49	31
2. Ryan Community Park	Community Park	54 Acres	50 /Acre	3,210	80	50	130	130	130	260
3. Valley High School	Continuation School	450 Students	[2]	202	61	24	85	5	5	10
4. Escondido Humane Society	Animal Shelter		[2]	475	33	10	43	29	47	76
5. Rincon Casino	Hotel and Casino	500 Rooms	3 /Room	1,500	45	30	75	42	63	105
6. Valley View Casino	Casino	31,800 SF	195 /SF	6,200	188	92	280	206	277	483
7. Northeast Gateway	S. F. Residential	340 Units	10 /Unit	3,400	80	190	270	240	100	340
8. Sherwood Ridge	Estate Residential	128 Units	12 /Unit	1,540	35	85	120	105	45	150
9. Hidden Trails/Eastgrove	S. F. Residential	291 Units	10 /Unit	2,910	46	186	232	200	90	290
10. Escondido Charter High School	Charter School	400 Students	1.3 /Student	520	73	31	104	21	31	52
11. TR 821 (2000-51-CZ)	S. F. Residential	15 Units	10 /Unit	150	4	8	12	11	4	15
12. TR 836	S. F. Residential	6 Units	10 /Unit	60	2	3	5	4	2	6
13. TR 842 (2002-14-CP)	Detached Condos.	25 Units	10 /Unit	250	6	14	20	18	7	25
14. TR 846 (2002-45-CP)	Detached Condos.	56 Units	10 /Unit	560	14	31	45	39	17	56
15. TR 847 (ER 2002-12)	S. F. Residential	13 Units	10 /Unit	130	3	7	10	9	4	13
16. Habitat for Humanity	Condominiums	12 Units	8 /Unit	96	2	6	8	7	3	10
SUBTOTAL CUMULATIVE PROJECTS THIS PAGE				***21,753***	***818***	***825***	***1643***	***1048***	***874***	***1922***

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Table 7 (Continued)
CUMULATIVE PROJECTS TRIP GENERATION

CUMULATIVE PROJECTS	LAND USE	SIZE	RATE	ADT	AM PEAK HOUR			PM PEAK HOUR		
					IN	OUT	TOTAL	IN	OUT	TOTAL
SUBTOTAL CUMULATIVE PROJECTSFROM PREVIOUS PAGE				*21,753*	*818*	*825*	*1643*	*1048*	*874*	*1922*
17. TR 850 (2002-65-CZ/GE)	S. F. Residential	125 Units	10 /Unit	1,250	30	70	100	88	37	125
18. 2002-12-CUP	Self-Storage	77,193 SF	2 /KSF	154	5	4	9	7	7	14
19. Escondido City Center	Condominiums	201 Units	8 /Unit	1,608	26	103	129	113	48	161
Other Redevelopment	Theater	3,000 Seats	1.8 /Seat	5400	9	9	18	259	173	432
	Apartments	272 Units	6 /Unit	1,632	26	104	130	103	44	147
	Office	10,000 SF	14 /KSF	140	19	2	21	4	17	21
	Commercial	19,411 SF	80 /KSF	1,553	37	25	62	78	78	156
20. Toyota Dealership	Car Dealership	63,000 SF	50 /KSF	3,150	110	48	158	101	151	252
21. 2003-21-PPL	Car Wash	1 Site	900 /Site	900	18	18	36	41	40	81
22. Farmer's Boy Restaurant	Fast-Food Restaurant	3,100 SF	650 /KSF	1,914	67	67	134	67	67	134
TOTAL CUMULATIVE PROJECTS				39,454	1,165	1,275	2,440	1,909	1,536	3,445

Notes:
1. Trip generation shown is the difference of existing and proposed land uses.
2. Site specific trip generation.
   Rate is a trip-end per acre or dwelling unit.
   Trip-ends are one-way movements, entering or leaving.
   DU - Dwelling Unit
   KSF – 1,000 Square Feet

7.1.4 The Humane Society

The Humane Society is a proposed 7.0-acre development for a new Humane Society facility. The new facility will be constructed in two phases with phase I beginning in 2002. The project proposes to construct a variety of animal care components, and will include limited housing accommodations for students. This project is calculated to generate 475 daily trips, 43 AM peak hour trips (33 inbound and 10 outbound) and 76 PM peak hour trips (29 inbound and 47 outbound). Traffic data for this project was obtained from report prepared by LLG in October 2001.

7.1.5 Rincon Casino

It is proposed to add 500 rooms to the existing Rincon hotel and casino. The project is located on the Rincon Indian reservation, west of Valley Center Road in the Valley Center community of San Diego County. The additional project traffic is calculated at 1,500 daily trips, 75 AM peak hour trips (45 inbound and 30 outbound) and 105 PM peak hour trips (42 inbound and 63 outbound).

7.1.6 Valley View Casino

Valley View Casino (San Pasqual Casino) is a proposed permanent casino. The existing temporary casino is located on the San Pasqual Indian reservation, west of Lake Wohlford Road in the Valley Center community of San Diego County. The proposed facilities at the permanent casino include: 31,800 square feet of gaming area in addition to the existing temporary casino, a coffee shop, and retail space. For the purposes of this report, the traffic data utilized was the difference between the permanent and temporary casinos, since the temporary casino exists. The difference in project traffic is 6,200 daily trips, 99 AM peak hour trips (42 inbound and 57 outbound) and 494 PM peak hour trips (211 inbound and 283 outbound). Traffic data for this project was obtained from report prepared by LLG in December 2000.

7.1.7 Northeast Gateway

The Eureka Ranch is the remaining portion of the Northeast Gateway project and consists of 340 single-family dwelling units with access to East Valley Parkway. The traffic study for this project was prepared by LLG in May 2002. This project is calculated to generate 3,400 daily trips, 270 AM peak hour trips (80 inbound and 190 outbound) and 340 PM peak hour trips (240 inbound and 100 outbound).

7.1.8 Sherwood Ridge

Sherwood Ridge is a planned 128-estate single-family subdivision with primary access from Banbury Drive west of Valley Center Road. The project is located west of Valley Center Road and south of Mirar de Valle Road. LLG manually calculated the project trips utilizing SANDAG trip rates for residential land uses. This project is calculated to generate 1,540 daily trips, 120 AM peak hour trips (35 inbound and 85 outbound) and 150 PM peak hour trips (105 inbound and 45 outbound).

7.1.9 Hidden Trails

Hidden Trails is a planned 290 dwelling unit subdivision with primary access from Valley Parkway. The project is located south of East Washington Avenue and east of Valley Parkway. This project is calculated to generate 2,910 daily trips, 232 AM peak hour trips (46 inbound and 186 outbound) and 290 PM peak hour trips (200 inbound and 90 outbound). Traffic data for this project was manually calculated by LLG and the "*East Grove Specific Plan report (Dated: November 30,* 1995)" was utilized as a reference.

7.1.10 Escondido Charter High School

The Escondido Charter High School has recently been constructed on the north side of East Valley Parkway between Rose Street and Midway Drive. This school replaces 57,000 SF commercial buildings. This project is calculated to generate a net 520 daily trips, 104 AM peak hour trips (73 inbound and 31 outbound) and 52 PM peak hour trips (21 inbound and 31 outbound).

7.1.11 Track 821

Track 821 is a proposed 15-lot single-family residential subdivision on 4.14 acres. The project site is located on the north side of East Washington Avenue, between Kaile Lane and El Norte Hills Place. LLG manually calculated the project trips utilizing SANDAG trip rates for residential land uses. This project is calculated to generate 150 daily trips, 12 AM peak hour trips (4 inbound and 8 outbound) and 15 PM peak hour trips (11 inbound and 4 outbound).

7.1.12 Track 836

Track 836 consists of the construction of six (6) single-family residential homes at 659 N. Rose Street. This project is calculated to generate 60 daily trips, 5 AM peak hour trips (2 inbound and 3 outbound) and 6 PM peak hour trips (4 inbound and 2 outbound).

7.1.13 Track 842

Track 842 consists of the construction of 25 detached condominiums at 643 N. Fig Street. This project is calculated to generate 250 daily trips, 20 AM peak hour trips (6 inbound and 14 outbound) and 25 PM peak hour trips (18 inbound and 7 outbound).

7.1.14 N. Citrus Avenue Condominiums

The proposed project consists of the construction of 56 detached condominiums on a vacant lot at the northwest corner of the North Citrus Avenue/East Valley Parkway intersection in the northeast section of the City of Escondido. The traffic study for this project was prepared by LLG Engineers in 2002. This project is calculated to generate 560 daily trips, 39 AM peak hour trips (14 inbound and 31 outbound) and 56 PM peak hour trips (39 inbound and 17 outbound).

7.1.15 Track 847

Track 847 is a proposed 13-lot single-family residential subdivision at 2818 E. Washington Avenue. The project site is located on the north side of East Washington Avenue, west of Valley Center Road. This project is calculated to generate 130 daily trips, 10 AM peak hour trips (3 inbound and 7 outbound) and 13 PM peak hour trips (9 inbound and 4 outbound).

7.1.16 Habitat for Humanity

A 12-Unit condominium development is proposed at 620 N. Hickory Street. The project site is located north of East Washington Avenue on Hickory Street. This project is calculated to generate 96 daily trips, 8 AM peak hour trips (2 inbound and 6 outbound) and 10 PM peak hour trips (7 inbound and 3 outbound).

7.1.17 Track 850

Track 850 is a proposed 125-unit single-family residential subdivision at 2600 E. Washington Avenue. The project site is located on the north side of East Washington Avenue, west of Valley Center Road. This project is calculated to generate 1,250 daily trips, 100 AM peak hour trips (30 inbound and 70 outbound) and 125 PM peak hour trips (88 inbound and 37 outbound).

7.1.18 Self Storage

This project at 467 N. Rose Street is located immediately east of the proposed project. Construction of this 77,193 SF self-storage project has been completed recently. The project is calculated to generate 154 daily trips, 9 AM peak hour trips (5 inbound and 4 outbound) and 14 PM peak hour trips (7 inbound and 7 outbound).

7.1.19 Escondido City Center

This project located on the north side of West Valley Parkway between Escondido Boulevard and Centre City Parkway is a Redevelopment project replacing existing commercial uses with 201 new Condominiums. A 16-plex, 3200-seat theater complex, 11,00 SF renovated retail buildings and 19,411 SF commercial and dining establishments. The project is calculated to generate a net of 10,333 daily trips, 231 AM peak hour trips (140 inbound and 91 outbound) and 756 PM peak hour trips (444 inbound and 312 outbound).

7.1.20 Toyota Dealership

The Toyota dealership is currently under construction at the N. Broadway/SR 78 intersection. This 63,000 SF project is calculated to generate 3,150 daily trips, 158 AM peak hour trips (110 inbound and 48 outbound) and 252 PM peak hour trips (101 inbound and 151 outbound).

7.1.21 Car Wash

This car wash project is located at the southeast corner of E. Valley Parkway and Midway Drive. The proposed project is calculated to generate 900 daily trips, 36 AM peak hour trips (18 inbound and 18 outbound) and 81 PM peak hour trips (41 inbound and 40 outbound).

7.1.22 Farmer Boys

This fast-food project is located at the southwest corner of E. Valley Parkway and Harding Street. The proposed project is calculated to generate 1,914 daily trips, 134 AM peak hour trips (67 inbound and 67 outbound) and 134 PM peak hour trips (67 inbound and 67 outbound).

7.2 SUMMARY OF CUMULATIVE PROJECTS TRIPS

As seen in Table 7, the 22 cumulative projects are calculated to generate a total of 39,454 daily trips. In the AM peak hour, 2,440 trips will be generated with 1,165 inbound trips and 1,275 outbound trips and in the PM peak hour, 3,445 trips will be generated with 1,909 inbound trips and 1,536 outbound trips.

Figure 9 depicts the total AM and PM peak hour intersection volumes, while **Figure 10** depicts the total ADT volumes for the cumulative projects. **Figure 11** depicts the AM and PM peak hour volumes and **Figure 12** depicts the ADT volumes for the existing + cumulative projects condition. Individual assignments of the traffic generated by each of the cumulative projects are included in **Appendix E.**

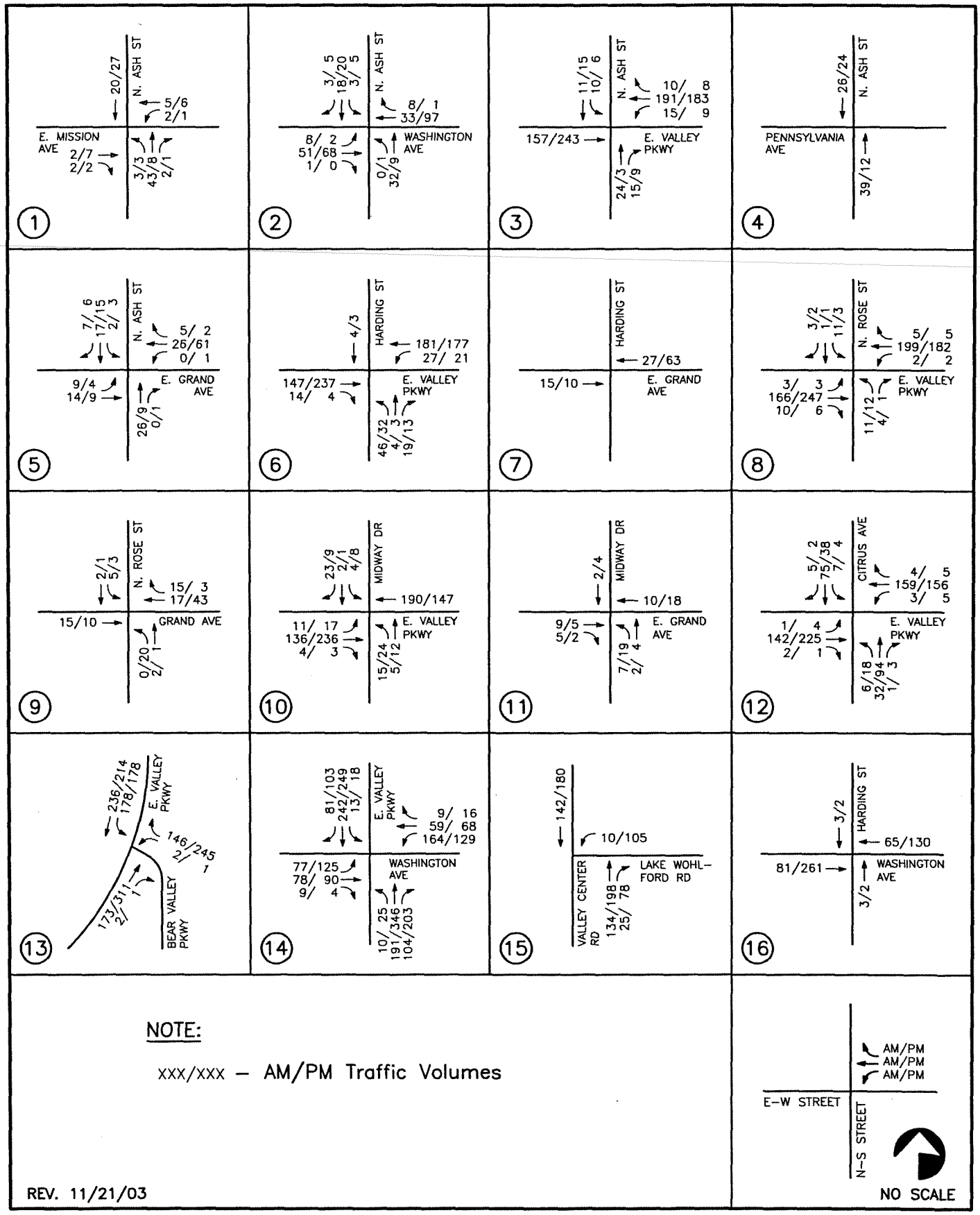

FIG1322.DWG

Figure 9

CUMULATIVE PROJECTS TRAFFIC VOLUMES AM/PM PEAK HOURS

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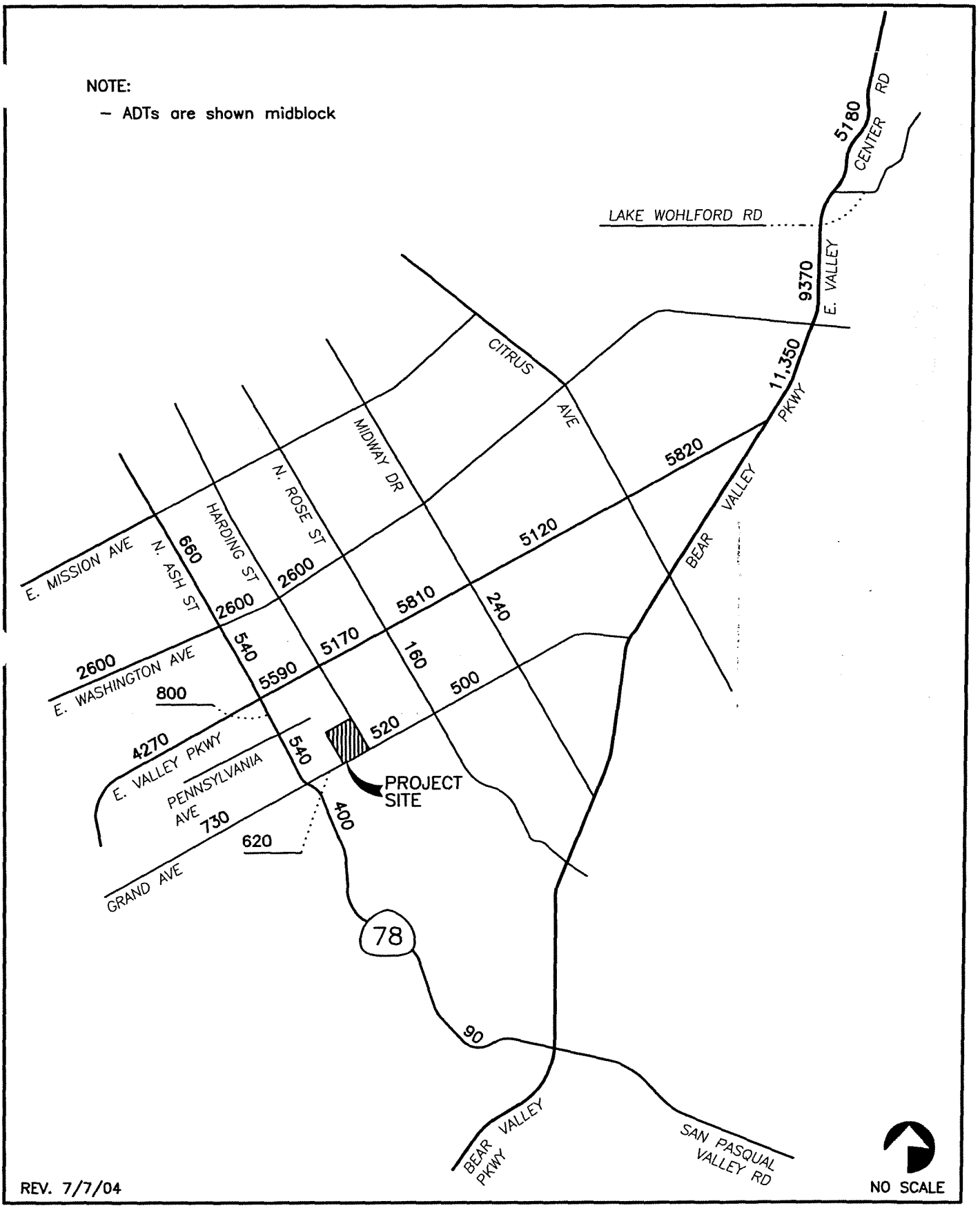

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Figure 10

CUMULATIVE PROJECTS DAILY TRAFFIC VOLUMES

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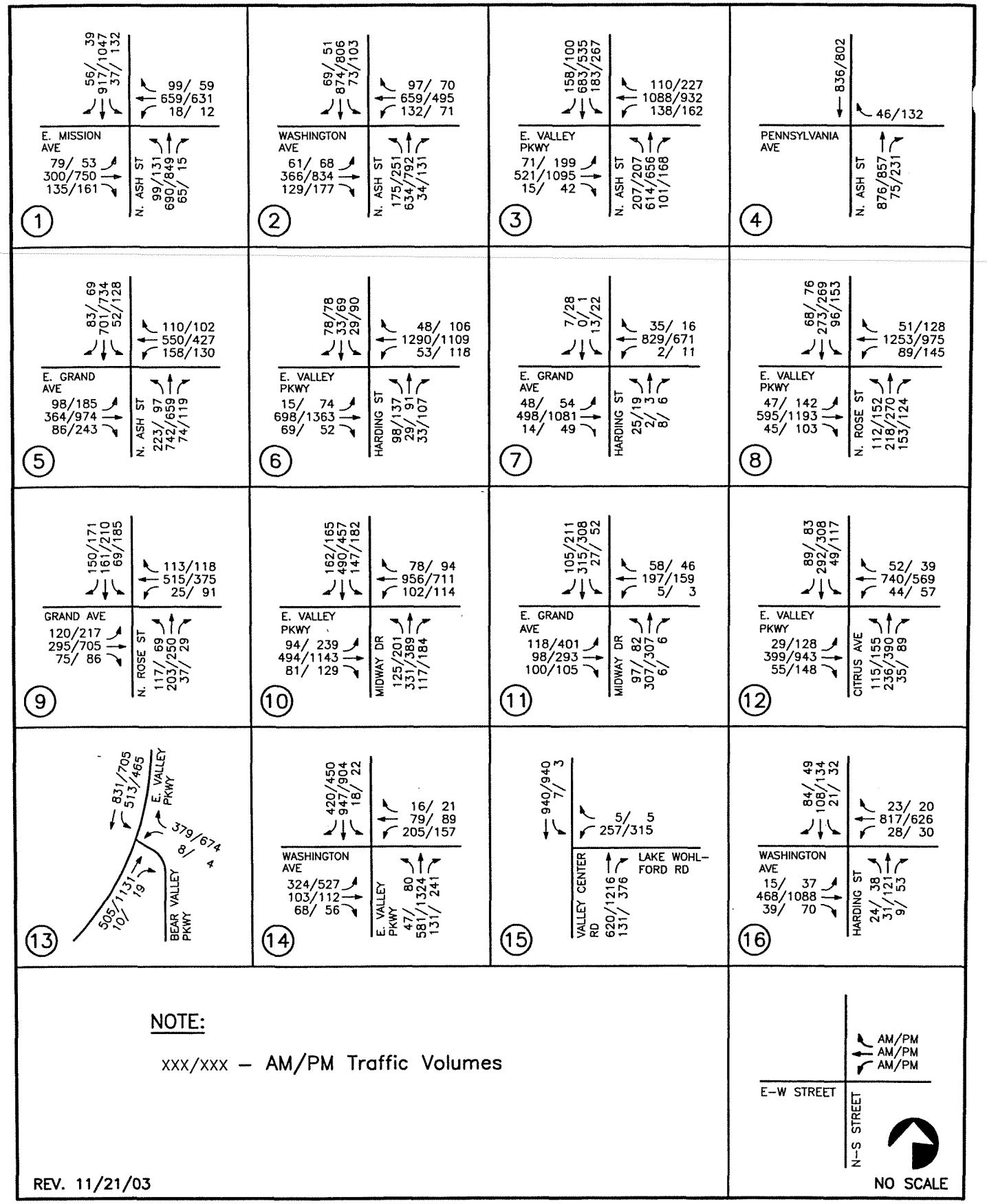

FIG1322.DWG

Figure 11

EXISTING + CUMULATIVE PROJECTS TRAFFIC VOLUMES AM/PM PEAK HOURS

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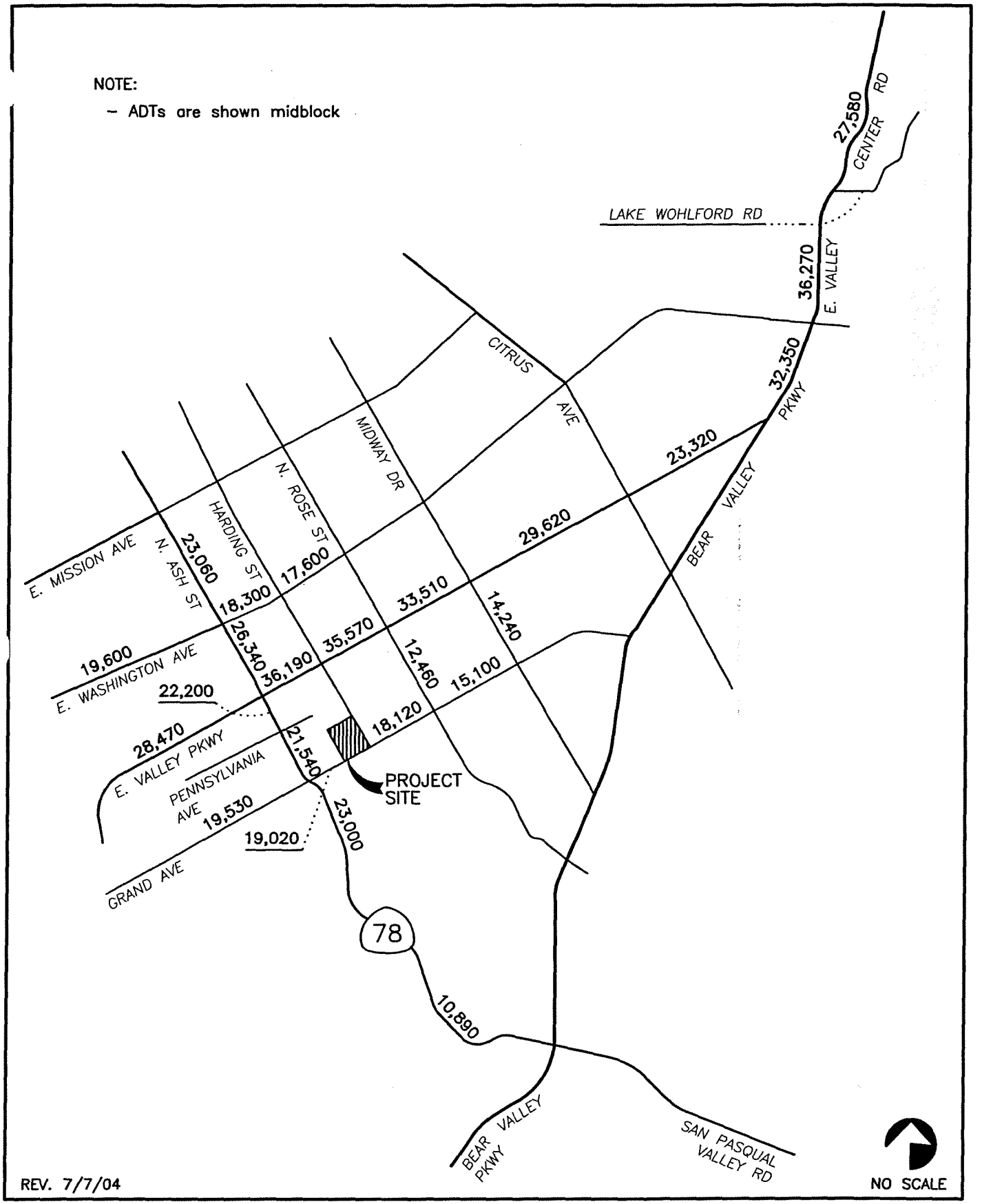

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Figure 12

EXISTING + CUMULATIVE PROJECTS DAILY TRAFFIC VOLUMES

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8.0 Trip Generation/Distribution/Assignment

8.1 TRIP GENERATION

Table 8 summarizes the trip generation for the Walmart development. The trip generation rates are based on the SANDAG *Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, April 2002. As seen in Table 8, the project is calculated to generate a total of 9,000 daily project trips, with 270 trips (162 inbound and 108 outbound trips) in the AM peak hour and 720 trips (360 inbound and 360 outbound trips) in the PM peak hour.

8.2 TRIP DISTRIBUTION/ASSIGNMENT

As explained in the Analysis Approach and Methodology section, the trip distribution was developed based on a Select Zone assignment obtained from SANDAG. The project trip distribution was finalized in consultation with City Staff and modified where appropriate, to provide the most accurate possible distribution estimate.

Figure 13 depicts the regional project traffic distribution percentages. **Figure 14** depicts the total project AM and PM peak hour traffic assignments and **Figure 15** depicts the total project ADT volumes based on this distribution.

Figure 16 depicts the AM and PM peak hour intersection volumes and **Figure 17** depicts the ADT volumes for the existing + cumulative projects + project scenario.

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Table 8

PROJECT TRIP GENERATION

LAND USE	QUANTITY	DAILY TRIP ENDS (ADT)		AM PEAK HOUR					PM PEAK HOUR				
		RATE	VOLUME	% OF ADT	IN:OUT SPLIT	VOLUME			% OF ADT	IN:OUT SPLIT	VOLUME		
						IN	OUT	TOTAL			IN	OUT	TOTAL
Discount Store	150,000 SF	60/1000 SF	9,000	3%	6:4	162	108	270	8%	5:5	360	360	720

Notes:
1. Generation rates obtained from the SANDAG Brief Guide (April 2002).
2. Trip-ends are one-way traffic movements, either entering or leaving.

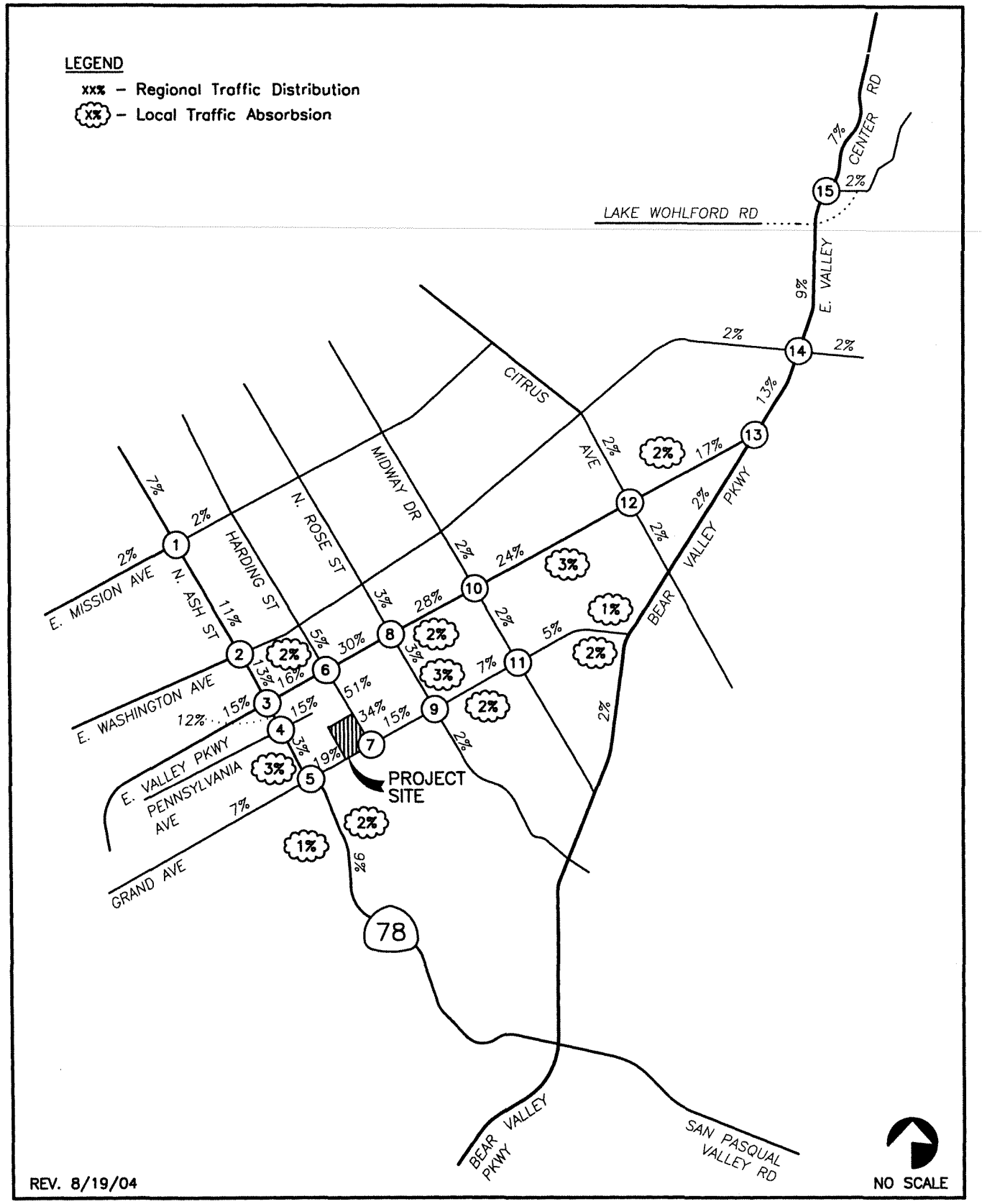

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Figure 13

REGIONAL TRIP DISTRIBUTION

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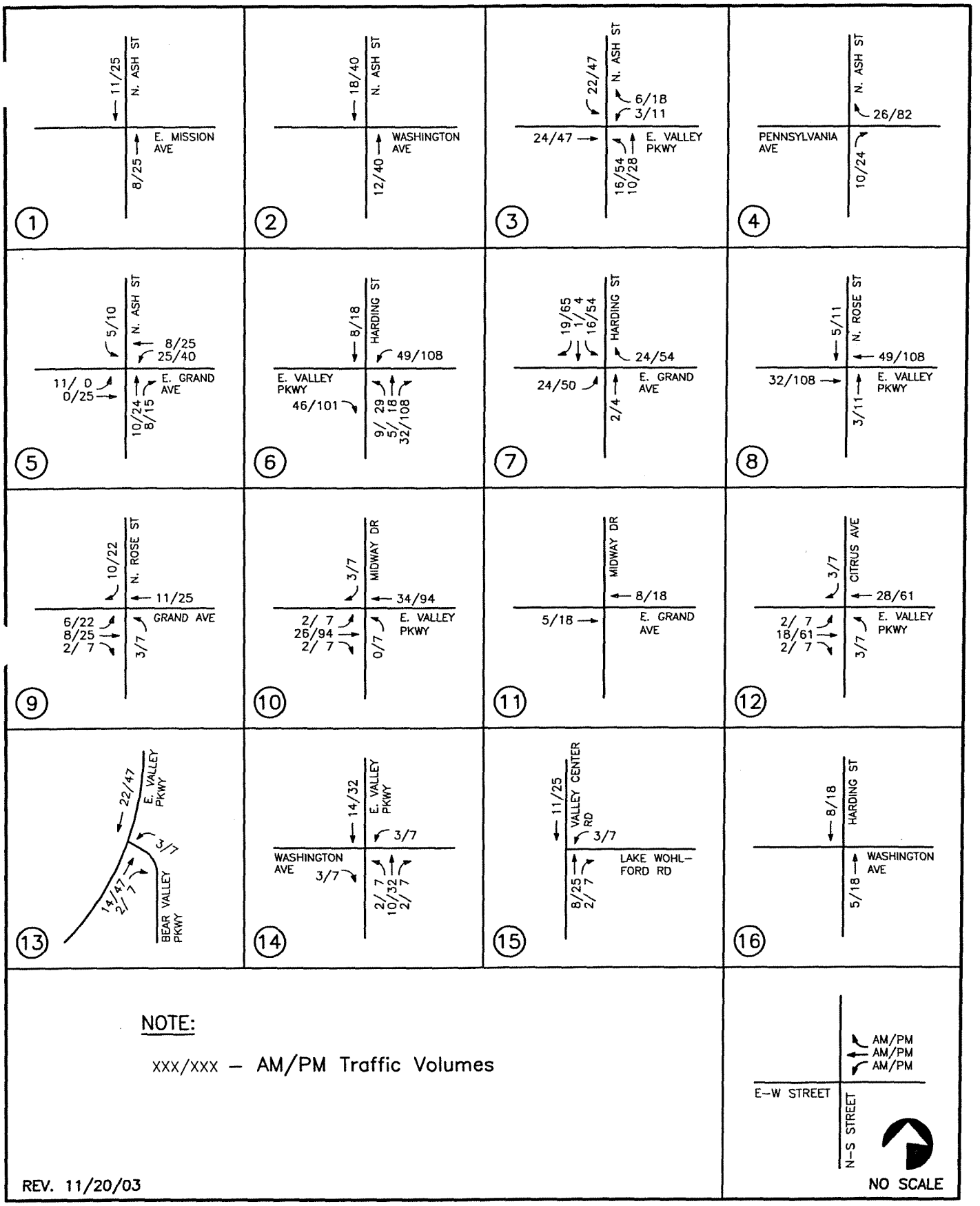

FIG1322.DWG

Figure 14

PROJECT TRAFFIC VOLUMES AM/PM PEAK HOURS

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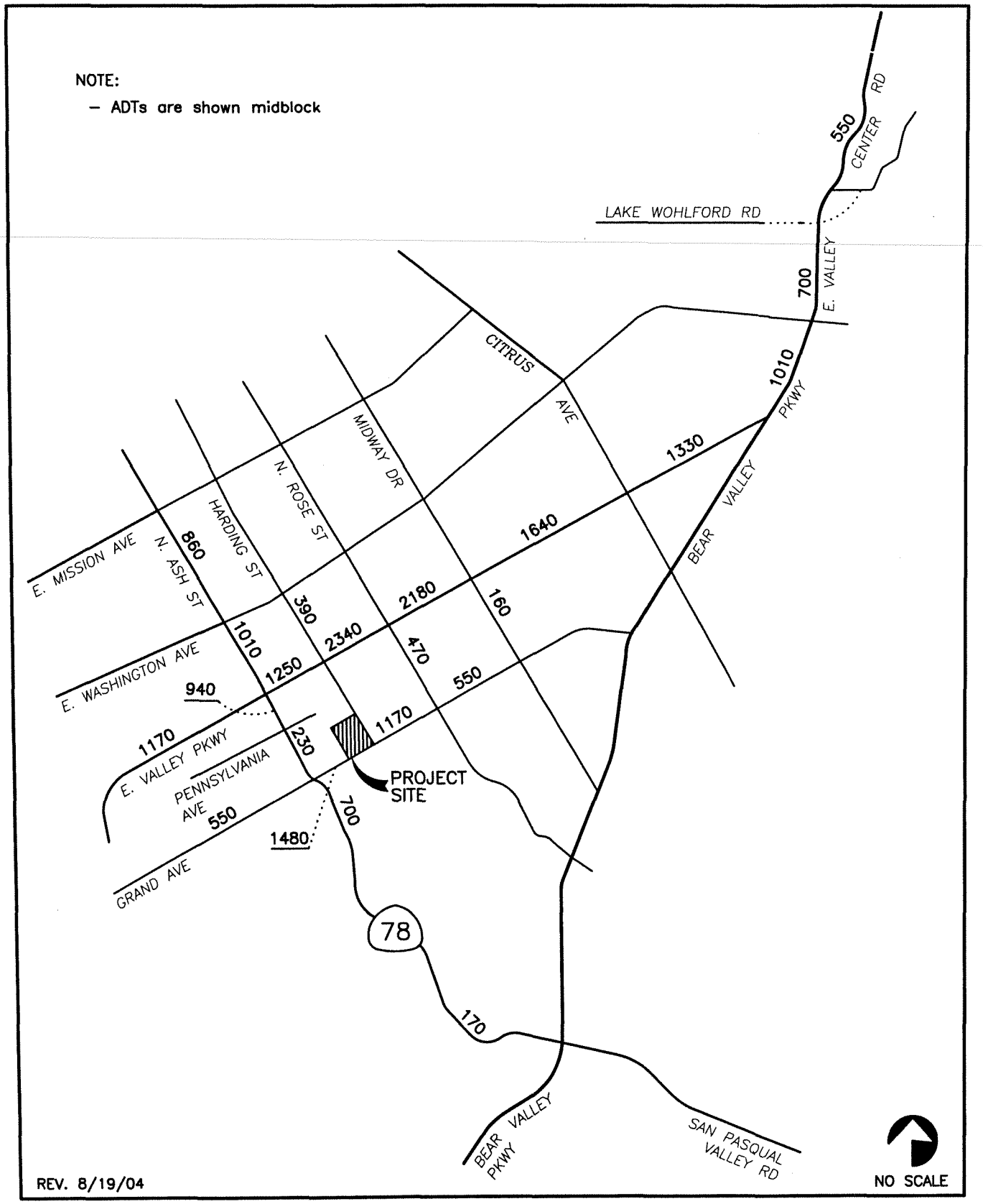

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Figure 15

DAILY PROJECT TRAFFIC VOLUMES

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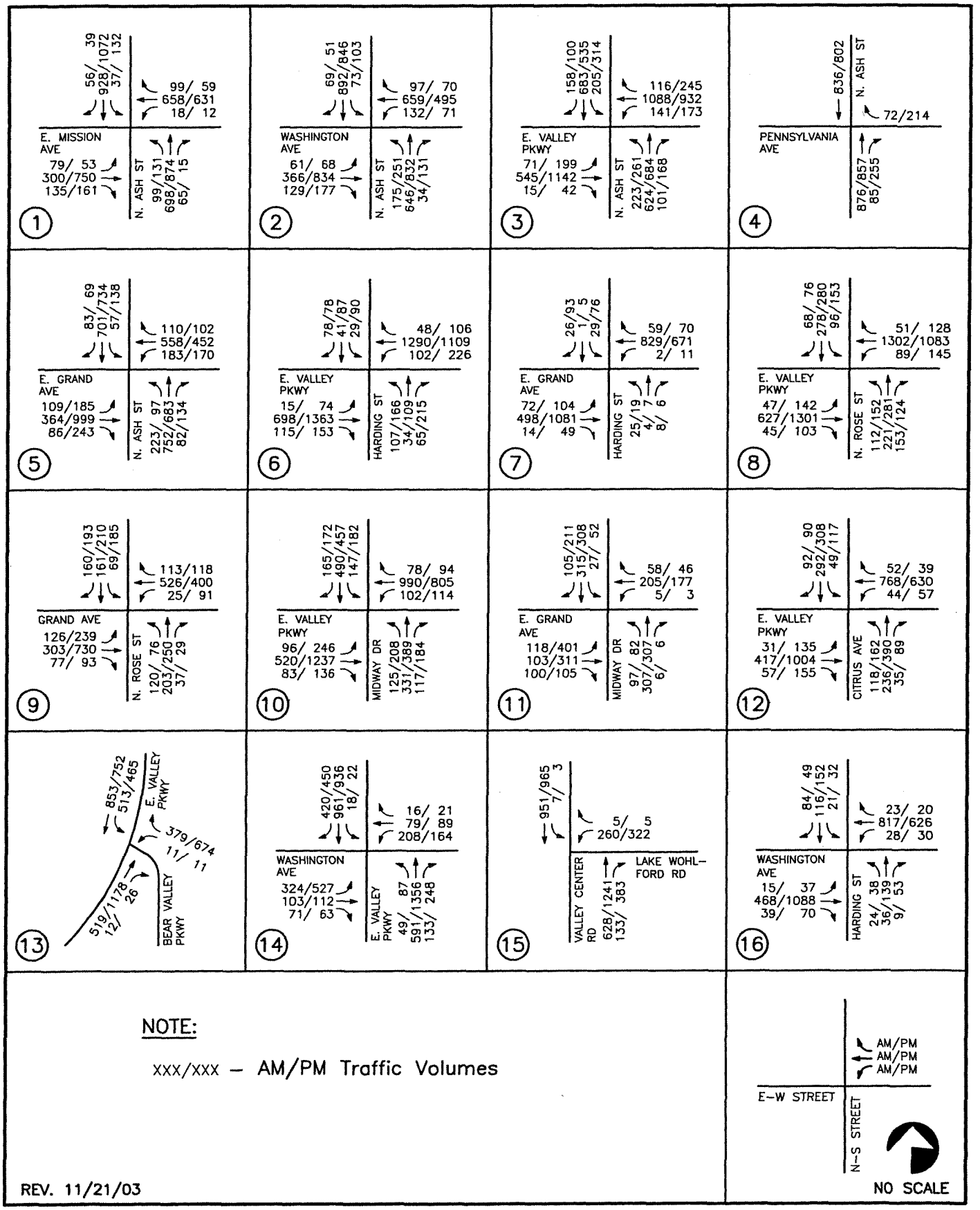

FIG1322.DWG

Figure 16

EXISTING + CUMULATIVE PROJECTS + PROJECT AM/PM TRAFFIC VOLUMES

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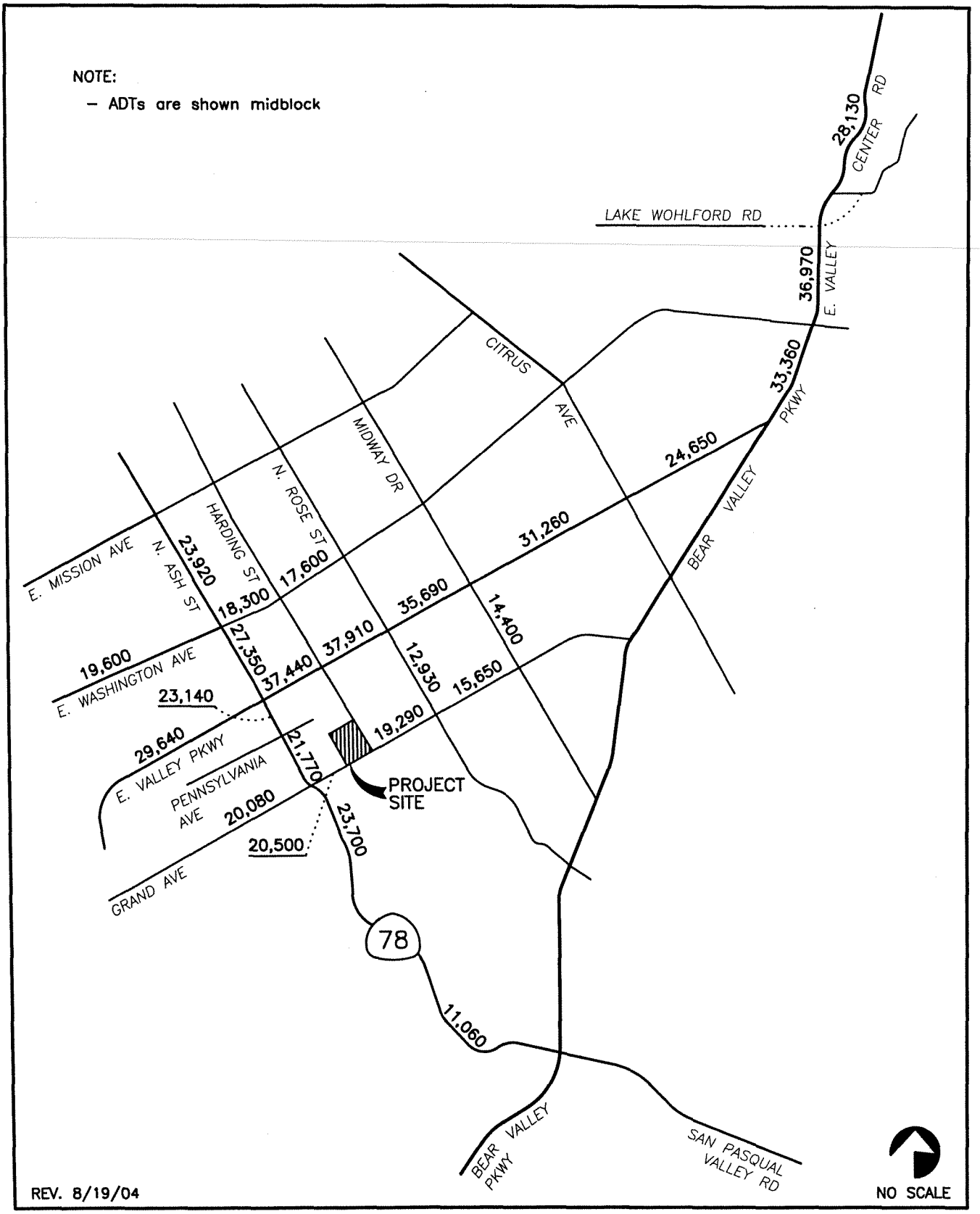

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Figure 17

EXISTING + CUMULATIVE PROJECTS + PROJECT DAILY TRAFFIC VOLUMES

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9.0 Analysis of Future Scenarios

The following future scenarios were analyzed in this report:

- Existing + Cumulative Projects
- Existing + Cumulative Projects + Project
- Year 2030 With Project

9.1 EXISTING + CUMULATIVE PROJECTS

9.1.1 INTERSECTION ANALYSIS

Table 9 summarizes the AM and PM peak hour intersection operations for the existing + cumulative projects scenario. As seen in Table 9, with the addition of cumulative projects traffic, the intersections are calculated to operate at better than mid-LOS D except for the following:

- North Ash Street/East Mission Avenue (LOS E during the PM peak hour)
- North Ash Street/Washington Avenue (LOS E during the PM peak hour)
- North Ash Street/East Valley Parkway (Worse than mid LOS D during the AM peak hour and LOS E during the PM peak hour)
- North Ash Street/E. Grand Ave. (Worse than mid LOS D during the PM peak hour)
- Harding Street/Grand Avenue (Worse than mid LOS D during the AM peak hour and LOS E during the PM peak hour)
- North Rose Street/East Valley Parkway (Worse than mid LOS D during the AM peak hour and LOS E in the PM peak hour)
- Midway Drive/East Valley Parkway (LOS E during the PM peak hour);
- Bear Valley Parkway/East Valley Parkway (LOS F during the AM and PM peak hours).

Appendix F contains the AM/PM peak hour intersection analysis worksheets for existing + cumulative projects condition.

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Table 9

PEAK HOUR INTERSECTION OPERATIONS

INTERSECTION	PEAK HOUR	EXISTING		EXISTING + CUMULATIVE PROJECTS		EXISTING + CUMULATIVE PROJECTS + PROJECT		INCREASE IN DELAY	SIGNIFICANT?
		DELAY	LOS	DELAY	LOS	DELAY	LOS		
1. N. Ash St./E. Mission Ave.	AM	24.8	C	25.6	C	25.8	C	0.2	No
	PM	59.6	E	64.7	E	64.8	E	0.1	No
2. N. Ash St./E. Washington Ave.	AM	31.6	C	33.2	C	33.6	C	0.4	No
	PM	49.8	D	57.1	E	58.2	E	1.1	No
3. N. Ash St./E. Valley Pkwy.	AM	33.3	D	**49.2**	**D**	**53.6**	**D**	**4.4**	**Cumulative**
	PM	43.5	D	**71.9**	**E**	**80.3**	**E**	**8.4**	**Cumulative**
4. N. Ash St./Pennsylvania Ave. (WBL) [1]	AM	10.8	B	10.9	B	11.1	B	0.2	No
	PM	12.5	B	12.6	B	14.3	B	1.7	No
5. N. Ash St./E. Grand Ave.	AM	28.7	C	29.3	C	31.0	C	1.7	No
	PM	40.3	D	45.5	D	47.1	D	1.6	No
6. Harding St./E. Valley Pkwy.	AM	19.5	B	28.3	C	30.2	C	1.9	No
	PM	29.8	C	31.7	C	41.3	D	9.6	No
7. Harding St./E. Grand Ave. (NBL) [2]	AM	29.1	D	30.7	D	**45.8**	**E**	**15.1**	**Project**
	PM	>60.0	F	**44.8**	**E**	**>60.0**	**F**	**>5.0**	**Cumulative**
8. N. Rose St./E. Valley Pkwy.	AM	42.6	D	43.8	D	45.4	D	1.6	No
	PM	45.9	D	57.6	E	**65.5**	**E**	**7.9**	**Cumulative**

Notes:
1. Eastbound right-turn movement operations reported at this unsignalized intersection.
2. Northbound left-turn movement operations reported at this unsignalized intersection.

All intersections are signalized except intersections #'s 4 and 7.

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Table 9 (Continued)

INTERSECTION OPERATIONS

INTERSECTION	PEAK HOUR	EXISTING		EXISTING + CUMULATIVE PROJECTS		EXISTING + CUMULATIVE PROJECTS + PROJECT		INCREASE IN DELAY	SIGNIFICANT?
		DELAY	LOS	DELAY	LOS	DELAY	LOS		
9. N. Rose St./Grand Ave.	AM	27.1	C	27.7	C	28.7	C	1.0	No
	PM	31.4	C	31.7	C	33.4	C	1.7	No
10. Midway Dr./E. Valley Pkwy.	AM	34.5	C	36.5	D	38.8	C	2.3	No
	PM	38.4	D	57.4	E	58.2	E	0.8	No
11. Midway Dr./E. Grand Ave.	AM	22.5	C	22.7	C	22.9	C	0.2	No
	PM	23.7	C	25.6	C	26.3	C	0.7	No
12. Citrus Ave./E. Valley Pkwy.	AM	20.3	C	24.5	C	26.1	C	1.6	No
	PM	26.7	C	33.2	C	36.4	D	3.2	No
13. Bear Valley Pkwy./E. Valley Pkwy. (NBL) [3]	AM	23.1	C	**63.4**	**F**	**69.0**	**F**	**5.6**	**Cumulative**
	PM	37.4	E	**>60.0**	**F**	**>60.0**	**F**	**>5.0**	**Cumulative**
14. Washington Ave./E. Valley Pkwy.	AM	13.2	B	36.6	D	38.6	D	2.0	No
	PM	16.6	B	41.9	D	43.6	D	1.7	No
15. Valley Center Rd./Lake Wohlford Rd.	AM	10.2	B	12.0	B	12.3	B	0.3	No
	PM	8.2	A	12.3	B	13.0	B	0.7	No
16. Harding St./Washington Ave.	AM	8.0	A	8.0	A	8.1	A	0.1	No
	PM	10.6	B	11.2	B	11.6	B	0.4	No

Notes:

3. Northbound left-turn movement operations reported at this unsignalized intersection. All intersections are signalized except intersection #13

9.1.2 INTERSECTION LANE VEHICLES ANALYSIS

ILV analysis was conducted for intersections along Ash Avenue. This analysis is based on the methodology described in Section 4.2.4. **Table 10** summarizes ILV operations with the addition of cumulative projects traffic. As seen in Table 10, in the AM peak hour, the Ash Street/Washington Avenue intersection is calculated to continue to operate at over capacity. The remaining intersections are calculated to operate at under or near capacity. In the PM peak hour, the Ash Street/Mission Avenue and the Ash Street/Washington Avenue intersections are calculated to continue to operate at over capacity. The remaining two intersections are calculated to continue to operate at near capacity.

9.1.3 SEGMENT OPERATIONS

Table 11 summarizes the daily segment levels of service on key segments. As seen in Table 11, with the addition of cumulative projects traffic, all key segments are calculated to operate at mid-LOS D or better with the exception of the following segments:

- Valley Parkway, N. Ash Street to Harding Street (LOS E)
- Valley Parkway, Harding Street to N. Rose Street (LOS E)
- Valley Parkway, N. Rose Street to Midway Drive (Worse than mid-LOS D)
- Valley Parkway, Bear Valley Parkway to Washington Avenue (Worse than mid LOS D)
- Valley Parkway, Washington Avenue to Lake Wohlford Road (LOS F)
- Valley Center Road north of Lake Wohlford Road (LOS F)

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Table 10

ILV ANALYSIS RESULTS

INTERSECTION	PEAK HOUR	CAPACITY		
		EXISTING	EXISTING + CUMULATIVE PROJECTS	EXISTING + CUMULATIVE PROJECTS + PROJECT
SR 78 (Ash St.)/E. Mission Ave.	AM	Near	Near	Near
	PM	Over	Over	Over
SR 78 (Ash St.)/E. Washington Ave.	AM	Near	Near	Near
	PM	Over	Over	Over
SR 78 (Ash St.)/E. Valley Pkwy.	AM	Under	Near	Near
	PM	Near	Near	Over
SR 78 (Ash St.)/Grand Ave.	AM	Under	Under	Under
	PM	Near	Near	Near

Table 11

STREET SEGMENT OPERATIONS

SEGMENT	EXISTING ROADWAY CLASS	LOS E CAPACITY [1]	MID-LOS D CAPACITY [1]	EXISTING			EXISTING + CUMULATIVE PROJECTS			EXISTING + CUMULATIVE PROJECTS + PROJECT			INCREASE IN V/C	SIGNIFICANT ?
				ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS		
N. ASH STREET														
Mission Ave. to Washington Ave. [2]	4-Ln Collector	34,200	29,100	22,400	0. 65	B	23,060	0.67	C	23,920	0.70	C	0.03	Not Significant
Washington Ave. to Valley Pkwy.	4-Ln Major Road	37,000	31,500	25,800	0.70	C	26,340	0.71	C	27,350	0.74	C	0.03	Not Significant
Valley Pkwy. to Pennsylvania Ave.	4-Ln Major Road	37,000	31,500	21,400	0.58	B	22,200	0.60	B	23,140	0.63	B	0.03	Not Significant
Pennsylvania Ave. to Grand Ave.	4-Ln Major Road	37,000	31,500	21,000	0.57	B	21,540	0.58	B	21,770	0.59	B	0.01	Not Significant
Grand Ave. to Oak Hill Dr.	4-Ln Major Road	37,000	31,500	22,600	0.61	B	23,000	0.62	B	23,700	0.64	B	0.02	Not Significant
PASQUAL VALLEY ROAD														
Oak Hill Dr. to Bear Valley Pkwy.	2-Ln Collector	15,000	11,250	10,800	0.72	D	10,890	0.73	D	11,060	0.74	D	0.01	Not Significant
N. ROSE STREET														
Valley Pkwy. to Grand Ave.	4-Ln Collector	34,200	29,100	12,300	0.36	A	12,460	0.36	A	12,930	0.38	A	0.02	Not Significant
MIDWAY DRIVE														
Valley Pkwy. to Grand Ave.	4-Ln Collector	34,200	29,100	14,00	0.41	B	14,240	0.42	B	14,400	0.42	B	0.00	Not Significant
WASHINGTON AVENUE														
Date St. to N. Ash St.	4-Ln Collector	34,200	29,100	17,000	0.50	B	19,600	0.57	B	19,600	0.57	B	-	Not Significant
N. Ash St. to Harding St.	4-Ln Collector	34,200	29,100	15,700	0.46	B	18,300	0.54	B	18,300	0.54	B	-	Not Significant
Harding St. to N. Rose St.	4-Ln Collector	34,200	29,100	15,000	0.44	B	17,600	0.51	B	17,600	0.51	B	-	Not Significant

Notes:
1. City of Escondido standards.
2. This section of Ash Street is currently 2-lanes wide for a short distance north of Washington Avenue and widens to a four-lane roadway further north, to Mission Avenue. Southbound Ash Street widens to additional turn lanes at Washington Avenue and thus provides additional capacity and hence this roadway section was assumed to be a Four-Lane Collector Road.

Bold indicates mid-LOS D or worse operations.
Shading indicates significant cumulative/direct project impacts.

Table 11 (Continued)

STREET SEGMENT OPERATIONS

SEGMENT	EXISTING ROADWAY CLASS	LOS E CAPACITY [1]	MID-LOS D CAPACITY [1]	EXISTING			EXISTING + CUMULATIVE PROJECTS			EXISTING + CUMULATIVE PROJECTS + PROJECT			INCREASE IN V/C	SIGNIFICANT?
				ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS		
VALLEY PARKWAY														
Date St. to N. Ash St.	4-Ln Major Road	37,000	31,500	24,200	0.65	B	28,470	0.77	C	29,640	0.80	C	0.03	Not Significant
N. Ash St. to Harding St.	4-Ln Major Road	37,000	31,500	30,600	0.83	D	**36,190**	**0.98**	**E**	**37,440**	**1.01**	**E**	**0.03**	**Cumulative**
Harding St. to N. Rose St.	4-Ln Major Road	37,000	31,500	30,400	0.82	D	**35,570**	**0.96**	**E**	**37,910**	**1.02**	**F**	**0.06**	**Cumulative**
N. Rose St. to Midway Dr.	4-Ln Major Road	37,000	31,500	27,700	0.75	C	**33,510**	**0.91**	**D**	**35,690**	**0.96**	**E**	**0.06**	**Cumulative**
Midway Dr. to Citrus Ave.	4-Ln Major Road	37,000	31,500	24,500	0.66	B	29,620	0.80	D	31,260	0.84	D	0.04	Not Significant
Citrus Ave. to Bear Valley Pkwy.	4-Ln Major Road	37,000	31,500	17,500	0.47	B	23,320	0.63	B	24,650	0.67	B	0.04	Not Significant
Bear Valley Pkwy. to Washington Ave.	4-Ln Major Road	37,000	31,500	21,000	0.57	B	**32,100**	**0.87**	**D**	**33,110**	**0.89**	**D**	**0.03**	**Cumulative**
Washington Ave. to Lake Wohlford Rd.	2-Ln Collector	15,000	11,250	**26,900**	**1.79**	**F**	**36,270**	**2.42**	**F**	**36,970**	**2.46**	**F**	**0.05**	**Cumulative**
VALLEY CENTER ROAD														
Lake Wohlford Rd. to City Limits	2-Ln Collector	15,000	11,250	**22,400**	**1.49**	**F**	**27,580**	**1.84**	**F**	**28,130**	**1.88**	**F**	**0.04**	**Cumulative**
GRAND AVENUE														
Date St. to N. Ash St.	4-Ln Collector	34,200	29,100	18,800	0.55	B	19,530	0.57	B	20,080	0.59	B	0.02	Not Significant
N. Ash St. to Harding St.	4-Ln Collector	34,200	29,100	18,400	0.54	B	19,020	0.56	B	20,500	0.60	B	0.04	Not Significant
Harding St. to N. Rose St.	4-Ln Collector	34,200	29,100	17,600	0.51	B	18,120	0.53	B	19,290	0.56	B	0.03	Not Significant
N. Rose St. to Midway Dr.	4-Ln Collector	34,200	29,100	14,600	0.43	B	15,100	0.44	B	15,650	0.46	B	0.02	Not Significant

Notes: 1. City of Escondido standards.
Bold indicates mid-LOS D or worse operations.
Shading indicates significant cumulative/direct project impacts.

9.2 EXISTING + CUMULATIVE PROJECTS + PROJECT

9.2.1 INTERSECTION ANALYSIS

Table 9 summarizes the AM and PM peak hour intersection operations for the existing + cumulative projects + project scenario. As seen in Table 9, with the addition of project traffic, the majority of the intersections are calculated to operate at better than mid-LOS D except the following intersections:

- North Ash Street/East Mission Avenue (LOS E during the PM peak hour)
- North Ash Street/Washington Avenue (LOS E during the PM peak hour)
- North Ash Street/East Valley Parkway (Worse than mid LOS D during the AM peak hour and LOS E during the PM peak hour)
- North Ash Street/E. Grand Ave. (Worse than mid LOS D during the PM peak hour)
- Harding Street/Grand Avenue (LOS E during the AM peak hour and LOS F during the PM peak hour)
- North Rose Street/East Valley Parkway (LOS E in the AM and PM peak hours)
- Midway Drive/East Valley Parkway (LOS E during the PM peak hour);
- Bear Valley Parkway/East Valley Parkway (LOS F during the AM and PM peak hours).

Appendix G contains the AM/PM peak hour intersection analysis worksheets for existing + cumulative projects + project conditions.

9.2.2 INTERSECTION LANE VEHICLES ANALYSIS

Table 10 summarizes ILV operations with the addition of project traffic. As seen in Table 10, with the addition of project traffic, during the AM peak hour, the Ash Street/Washington Avenue intersection is calculated to continue to operate at over capacity. The remaining intersections are calculated to operate at under or near capacity. In the PM peak hour, the Ash Street/Mission Avenue and the Ash Street/Washington Avenue intersections are calculated to continue to operate at over capacity. The Ash Street/Valley Parkway intersection is calculated to deteriorate to over capacity. The remaining intersection is calculated to continue to operate at near capacity.

9.2.3 SEGMENT OPERATIONS

Table 11 summarizes the daily segment levels of service on key segments. As seen in Table 11, all key segments are calculated to continue to operate at mid-LOS D or better with the exception of the following segments, with the addition of project traffic:

- Valley Parkway, N. Ash Street to Harding Street (LOS E)
- Valley Parkway, Harding Street to N. Rose Street (LOS F)
- Valley Parkway, N. Rose Street to Midway Drive (LOS E)
- Valley Parkway, Bear Valley Parkway to Washington Avenue (Worse than mid LOS D)
- Valley Parkway, Washington Avenue to Lake Wohlford Road (LOS F)
- Valley Center Road north of Lake Wohlford Road (LOS F)

The significance of project impacts is discussed in a subsequent section of this report.

9.3 YEAR 2030 SEGMENT OPERATIONS

9.3.1 YEAR 2030 TRAFFIC VOLUMES

Year 2030 volumes were obtained form the ANDAG Series 10.0 Forecast plots. **Figure 18** depicts Year 2030 ADT volumes. **Table 12** summarizes the daily segment levels of service on key segments for the Year 2030. The street segment capacities are based on the City of Escondido General Plan Circulation Element roadway classification. As seen in Table 12, all key segments except the following are calculated to operate at better than mid-LOS D in the Year 2030:

- Valley Parkway: N. Ash Street to Harding Street (LOS F)
- Valley Parkway: Harding Street to N. Rose Street (LOS F)
- Valley Parkway: N. Rose Street to Midway Drive (LOS E)
- Valley Parkway: Midway Drive to Citrus Avenue (worse than mid-LOS D)

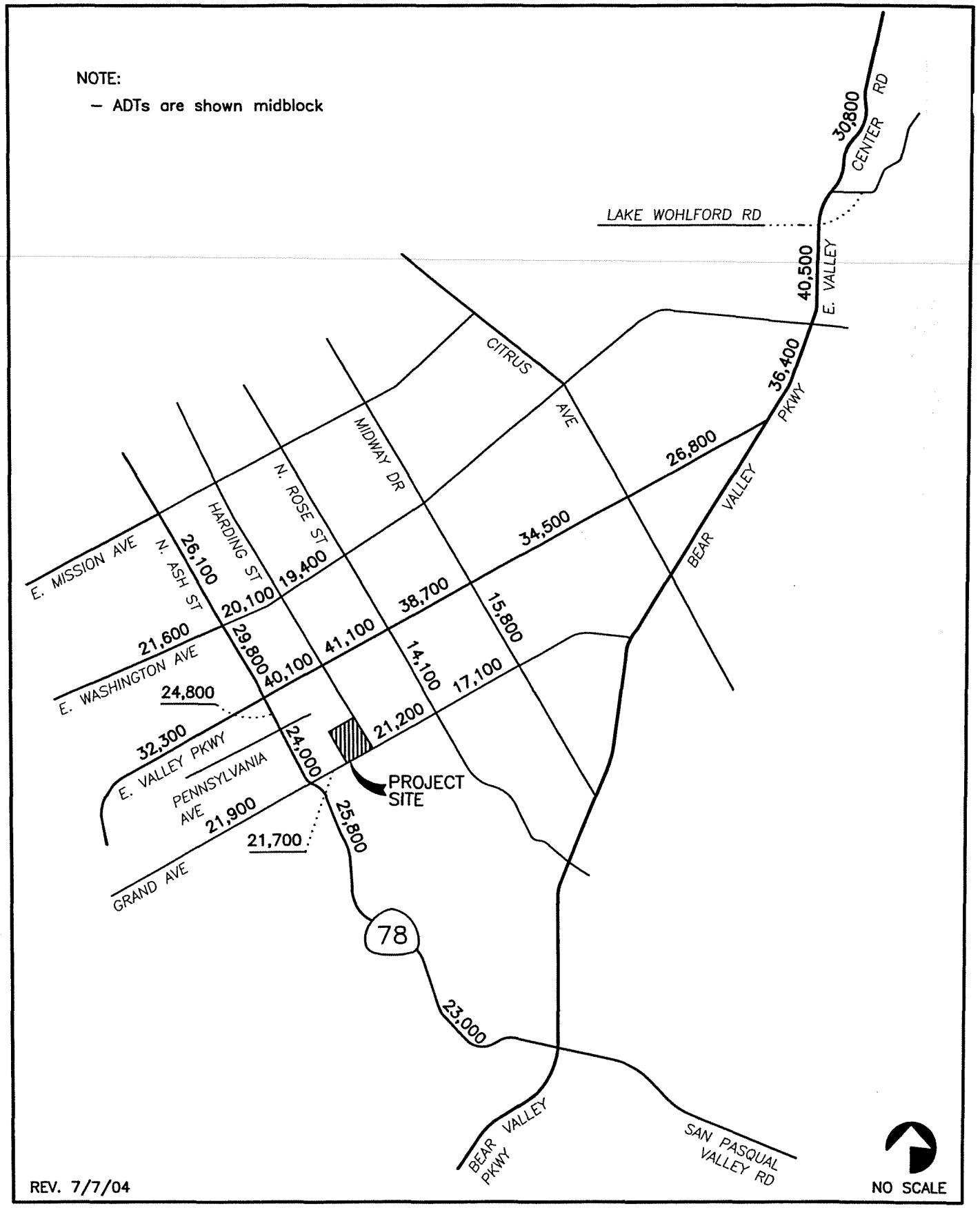

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Figure 18

YEAR 2030 DAILY TRAFFIC VOLUMES

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Table 12

YEAR 2030 STREET SEGMENT OPERATIONS

SEGMENT	ULTIMATE ROADWAY CLASS	LOS D CAPACITY	MID-LOS D CAPACITY	ADT	V/C	LOS
N. ASH STREET						
Mission Ave. to Washington Ave.	4-Ln Major Road	37,000	31,500	26,100	0.71	C
Washington Ave. to Valley Pkwy.	4-Ln Major Road	37,000	31,500	29,800	0.81	D
Valley Pkwy. to Pennsylvania Ave.	4-Ln Major Road	37,000	31,500	24,800	0.67	C
Pennsylvania Ave. to Grand Ave.	4-Ln Major Road	37,000	31,500	24,000	0.65	B
Grand Ave. to Oak Hill Dr.	4-Ln Major Road	37,000	31,500	25,800	0.70	C
SAN PASQUAL VALLEY ROAD						
Oak Hill Dr. to Bear Valley Parkway	4-Ln Major Road	37,000	31,500	23,000	0.62	B
N. ROSE STREET						
Valley Pkwy. to Grand Ave.	4-Ln Collector	34,200	29,100	14,100	0.41	B
MIDWAY DRIVE						
Valley Pkwy. to Grand Ave.	4-Ln Collector	34,200	29,100	15,800	0.46	B
WASHINGTON AVENUE						
Date St. to N. Ash St.	4-Ln Collector	34,200	29,100	21,600	0.63	B
N. Ash St. to Harding St.	4-Ln Collector	34,200	29,100	20,100	0.59	B
Harding St. to N. Rose St.	4-Ln Collector	34,200	29,100	19,400	0.57	B
VALLEY PARKWAY						
Date St. to N. Ash St.	4-Ln Major Road	37,000	31,500	32,300	0.87	D
N. Ash St. to Harding St.	4-Ln Major Road	37,000	31,500	40,100	1.08	F
Harding St. to N. Rose St.	4-Ln Major Road	37,000	31,500	41,100	1.11	F
N. Rose St. to Midway Dr.	4-Ln Major Road	37,000	31,500	38,700	1.05	E
Midway Dr. to Citrus Ave.	4-Ln Major Road	37,000	31,500	34,500	0.93	D
Citrus Ave. to Bear Valley Pkwy.	4-Ln Major Road	37,000	31,500	26,800	0.72	C
Bear Valley Pkwy. to Washington Ave.	6-Ln Prime Arterial	60,000	46,500	35,390	0.59	C
Washington Ave. to Lake Wohlford Rd.	6-Ln Prime Arterial	60,000	46,500	39,800	0.66	C
VALLEY CENTER ROAD						
Lake Wohlford Rd. to City Limits	6-Ln Prime Arterial	60,000	46,500	30,250	0.50	C
GRAND AVENUE						
Date St. to N. Ash St.	4-Ln Collector	34,200	29,100	21,900	0.64	B
N. Ash St. to Harding St.	4-Ln Collector	34,200	29,100	21,700	0.63	B
Harding St. to N. Rose St.	4-Ln Collector	34,200	29,100	21,200	0.62	B
N. Rose St. to Midway Dr.	4-Ln Collector	34,200	29,100	17,100	0.50	B

Note: Bold indicates worse than Mid LOS D operations.

10.0 Congestion Management Program Compliance

The Congestion Management Program (CMP) was adopted on November 22, 1991, and is intended to directly link land use, transportation and air quality through Level of Service performance. Local agencies are required by statute to conform to the CMP.

The CMP requires an Enhanced CEQA Review for all large projects that are expected to generate more than 2,400 ADT or more than 200 peak hour trips. Since the project is calculated to generate over 200 peak hour trips, this level of review is required of the proposed project.

In 1993, the Institute of Transportation Engineers California Border Section and the San Diego Region Traffic Engineer's Council established a set of guidelines to be used in the preparation of traffic impact studies that are subject to the Enhanced CEQA review process. These guidelines were updated in January 2003. This published document, is titled 2002 Congestion Management Program update. The Caltrans traffic Impact Study guidelines require that a project study area be established as follows:

- All streets and intersections on CMP roadways where the project will add 50 or more peak hour trips in either direction.
- Mainline freeway locations where the project will add 150 or more peak hour trips in either direction.

Per these guidelines, the section of Ash Street between Mission Avenue and south of Grand Avenue was analyzed to satisfy the CMP since the project is calculated to add 50 or more peak hour trips to this arterial.

10.1 EXISTING

Table 13 summarizes the arterial operations. As seen in Table 13, during the AM peak hour, all segments of Ash Street between Grand Avenue and Mission Avenue are calculated to currently operate at LOS D in the both the southbound and northbound directions except the segment between Valley Parkway and Washington Avenue, which is calculated to operate at LOS E in the northbound and southbound directions.

During the PM peak hour, all segments of Ash Street between Grand Avenue and Mission Avenue are calculated to operate at LOS E or F in the northbound direction except the segment between Washington Avenue and Mission Avenue, which is calculated to operate at LOS C. In the southbound direction, the segment between Grand Avenue and Valley Parkway is calculated to operate at LOS D the remaining segments are calculated to operate at LOS E.

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Table 13
ASH STREET (SR 78) ARTERIAL OPERATIONS

SEGMENT	EXISTING		EXISTING + CUMULATIVE PROJECTS		EXISTING + CUMULATIVE PROJECTS + PROJECT		SPEED Δ	SIGNIFICANT?
	SPEED (MPH)	LOS	SPEED (MPH)	LOS	SPEED (MPH)	LOS		
AM PEAK HOUR								
Northbound								
Grand Ave. to E. Valley Pkwy.	15.1	D	15.0	D	14.8	D	0.2	Not Significant
E. Valley Pkwy. to Washington Ave.	13.6	E	12.9	E	12.7	E	0.2	Not Significant
Mission Ave. to Washington Ave.	15.5	D	15.4	D	15.3	D	0.1	Not Significant
Overall Northbound	**16.4**	**D**	**16.1**	**D**	**15.8**	**D**	**0.3**	**Not Significant**
Southbound								
Mission Ave. to Washington Ave.	15.5	D	15.4	D	15.3	D	0.1	Not Significant
Washington Ave. to Valley Pkwy.	12.6	E	12.7	E	12.7	E	0.0	Not Significant
E. Valley Pkwy. to Grand Ave.	14.6	D	14.5	D	14.0	D	0.5	Not Significant
Overall Southbound	**13.1**	**E**	**13.0**	**E**	**12.8**	**E**	**0.2**	**Not Significant**
PM PEAK HOUR								
Northbound								
Grand Ave. to E. Valley Pkwy.	11.8	E	11.5	E	10.8	E	0.7	Not Significant
E. Valley Pkwy. to Washington Ave.	8.3	F	7.4	F	6.7	F	0.7	Not Significant
Washington Ave. to Mission Ave.	19.3	C	19.2	C	19.1	C	0.1	Not Significant
Overall Northbound	**12.5**	**E**	**12.0**	**E**	**11.2**	**E**	**0.8**	**Not Significant**
Southbound								
Grand Ave. to E. Valley Pkwy.	14.4	D	13.9	E	13.4	E	0.5	Not Significant
E. Valley Pkwy. to Washington Ave.	11.5	E	11.4	E	11.0	E	0.4	Not Significant
Washington Ave. to Mission Ave.	12.5	E	12.3	E	12.2	E	0.1	Not Significant
Overall Southbound	**12.4**	**E**	**12.2**	**E**	**12.0**	**E**	**0.2**	**Not Significant**

10.2 EXISTING + CUMULATIVE PROJECTS

As seen in Table 16, with the addition of cumulative projects traffic, all segments of Ash Street are calculated to continue to operate at the same levels of service as for the existing condition, except one segment. The southbound segment between Grand Avenue and Valley Parkway is calculated to deteriorate to LOS E in the PM peak hour with the addition of cumulative projects traffic. The speeds are calculated to decrease marginally with the addition of cumulative projects traffic.

Appendix H contains the arterial analysis worksheets.

10.3 EXISTING + CUMULATIVE PROJECTS + PROJECT

As seen in Table 16, with the addition of project traffic, all segments of Ash Street are calculated to continue to operate at the same levels of service as for the existing + cumulative projects condition. The speeds are calculated to decrease marginally with the addition of project traffic. However, since the decrease in speed is less than 1.0 mph, the project has no significant impact on the Ash Street segments.

Appendix H contains the arterial analysis worksheets.

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11.0 Access and Other Issues

With the implementation of the project, access to the proposed Walmart development will be altered. Harding Street currently terminates at Valley Parkway. The south leg of the Valley Parkway/Harding Street intersection is a driveway to the existing shopping center. With the construction of the Walmart store, Harding Street will be extended southwards to Grand Avenue and will be a street.

11.1 ACCESS AT PENNSYLVANIA AVENUE

Currently, Pennsylvania Avenue serves existing businesses east of Ash Street. At its intersection with Ash Street, full access is currently permitted. AM and PM peak hour intersection counts indicate negligible left-turns at this intersection. A vertical curve currently exists in the Ash Street alignment south of Pennsylvania Avenue, which restricts the sight distance to the intersection. Access at the Ash Street/Pennsylvania Avenue should therefore be restricted to right-in/right/out only. Opportunities for making left-turns exist at the Ash Street/Valley Parkway intersection, one block north of Pennsylvania Street. As seen in Figure 3B, access between Pennsylvania Avenue and Harding Street will also be possible via the driving aisle north of the Walmart parking lot.

11.2 IMPROVEMENTS AT E. VALLEY PARKWAY/HARDING STREET

Currently, a driveway is located directly south of this intersection (see location A on Figure 3A). This driveway to the existing business at the southeast corner of this intersection is located very close to this signalized intersection. This driveway should be closed when Harding Street is extended south of Valley Parkway to Grand Avenue.

11.3 VERTICAL CURVE IN THE GRAND AVENUE ALIGNMENT

Currently, a vertical curve exists in the Grand Avenue alignment, west of the future Grand Avenue/Harding Street intersection. Due to this curve, sight restrictions exist. It is therefore recommended that a W41 (Signal Ahead symbol) sign with a flashing beacon be installed on Grand Avenue for eastbound traffic approaching Harding Street (see **Appendix I**).

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12.0 Significance of Impacts and Mitigation Measures

Based on the analysis of key intersections and segments in the study area, the following locations are calculated to be significantly impacted based on City of Escondido significance criteria.

12.1 SIGNIFICANCE OF IMPACTS

12.1.1 DIRECT IMPACTS

Intersections

- Harding Street/Grand Avenue intersection

Street Segments

None

Operational Issues

- Sight restriction at the Pennsylvania Avenue/Ash Street intersection

- Driveway on the south leg of the E. Valley Parkway/Harding Street intersection (driveway) on the east side, immediately south of Valley Parkway (Figure 3).

- Vertical curve in the Grand Avenue alignment, west of the future Grand Avenue/Harding Street intersection

12.1.2 CUMULATIVE IMPACTS

Intersections

- N. Ash Street/E. Valley Parkway
- N. Rose/E. Valley Parkway
- Bear Valley Parkway/E. Valley Parkway

Segments

- Valley Parkway from N. Ash Street to Harding Street
- Valley Parkway from Harding Street to N. Rose Street
- Valley Parkway from N. Rose Street to Midway Drive
- Valley Parkway, Bear Valley Parkway to Washington Avenue
- Valley Parkway from Washington Avenue to Lake Wohlford Road
- Valley Center Road from Lake Wohlford Road to City Limits

12.1.3 CUMULATIVE IMPACTS ANALYSIS

An analysis was conducted to determine the reduction in the project square footage, which would be necessary to avoid cumulative impacts at the N. Ash Street/E. Valley Parkway and N. Rose/E. Valley Parkway intersections. The project traffic at these intersections was reduced by trial and error in terms of percentages and it was determined that at 20% of the proposed square footage (20% of the traffic generated by the proposed project, the increase in delay at these two intersections would be less than the significance threshold of 2.0 seconds. **Table 14** summarizes the results of this analysis. As seen in Table 14, at 20% of the proposed project traffic, the project has no cumulative impacts at the two subject intersections. The Bear Valley Parkway/E. Valley Parkway intersection was not included in this analysis since this intersection will be mitigated with the installation of the planned new traffic signal.

The SYNCHRO analysis worksheets are included in **Appendix J**.

Table 14

EXISTING + CUMULATIVE PROJECTS + PROJECT

(20% OF PROPOSED SQUARE FOOTAGE)

INTERSECTION	PEAK HOUR	EXISTING + CUMULATIVE PROJECTS		EXISTING + CUMULATIVE PROJECTS + PROJECT		INCREASE IN DELAY	SIGNIFICANT?
		DELAY	LOS	DELAY	LOS		
3. N. Ash St./E. Valley Pkwy.	AM	**49.2**	**D**	**50.4**	**D**	**1.2**	No
	PM	**71.9**	**E**	**73.5**	**E**	**1.6**	No
8. N. Rose St./E. Valley Pkwy.	AM	43.8	D	44.2	D	0.4	No
	PM	**57.6**	**E**	**59.0**	**E**	1.4	No

12.2 MITIGATION MEASURES

12.2.1 FOR DIRECT IMPACTS

Intersections

- Install a traffic signal at the Harding Street/Grand Avenue intersection with appropriate modifications to the intersection geometry as shown in **Figure 19**

Segments

None

Access

- Construct Harding Street between Valley Parkway and Grand Avenue to City of Escondido (4-lane) Collector standards

Operational Issues

- Access at the Ash Street/Pennsylvania Avenue should be restricted to right-in/right/out only.

- The driveway to the existing business at the southeast corner of the E Ash Street/Harding Street should be closed when Harding Street is extended south of Valley Parkway to Grand Avenue.

- It is recommended that a W41 (Signal Ahead symbol) sign with a flashing beacon be installed on Grand Avenue for eastbound traffic approaching Harding Street (see Appendix I).

12.2.2 FOR CUMULATIVE IMPACTS

Contribute a fairshare towards improvements to the following intersections, to the satisfaction of the City of Escondido/Caltrans:

- N. Ash Street/E. Valley Parkway
- N. Rose/E. Valley Parkway
- Bear Valley Parkway/E. Valley Parkway

Contribute a fairshare towards improvements to the following segments, to the satisfaction of the City of Escondido:

- Valley Parkway from N. Ash Street to Harding Street
- Valley Parkway from Harding Street to N. Rose Street
- Valley Parkway from N. Rose Street to Midway Drive
- Valley Parkway, Bear Valley Parkway to Washington Avenue
- Valley Parkway from Washington Avenue to Lake Wohlford Road
- Valley Center Road from Lake Wohlford Road to City Limits

APPENDIX C

Traffic Study for EUSD Site
(Linscott Law and Greenspan)

TRAFFIC IMPACT ANALYSIS
ESCONDIDO UNION SCHOOL DISTRICT OFFICE BUILDING
ESCONDIDO, CALIFORNIA
July 7, 2004

Prepared by:

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JB/NP
3-03-1322B

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Appendices

APPENDIX

A. Caltrans and San Diego County Comments on Notice of Preparation and Responses

B. Traffic Counts

C. City of Escondido Segment Threshold Standards

D. Peak Hour Intersection Analysis – Existing

E. Cumulative Projects Traffic Assignments

F. Peak Hour Intersection Analysis Worksheets – Existing + Cumulative Projects

G. Peak Hour Intersection Analysis Worksheets – Existing + Cumulative Projects + Project

H. CMP Analysis Worksheets

I. W 41 Sign and Flashing Beacon - Caltrans Traffic Manual

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TRAFFIC IMPACT ANALYSIS
ESCONDIDO UNION SCHOOL DISTRICT OFFICE BUILDING
ESCONDIDO, CALIFORNIA
July 7, 2004

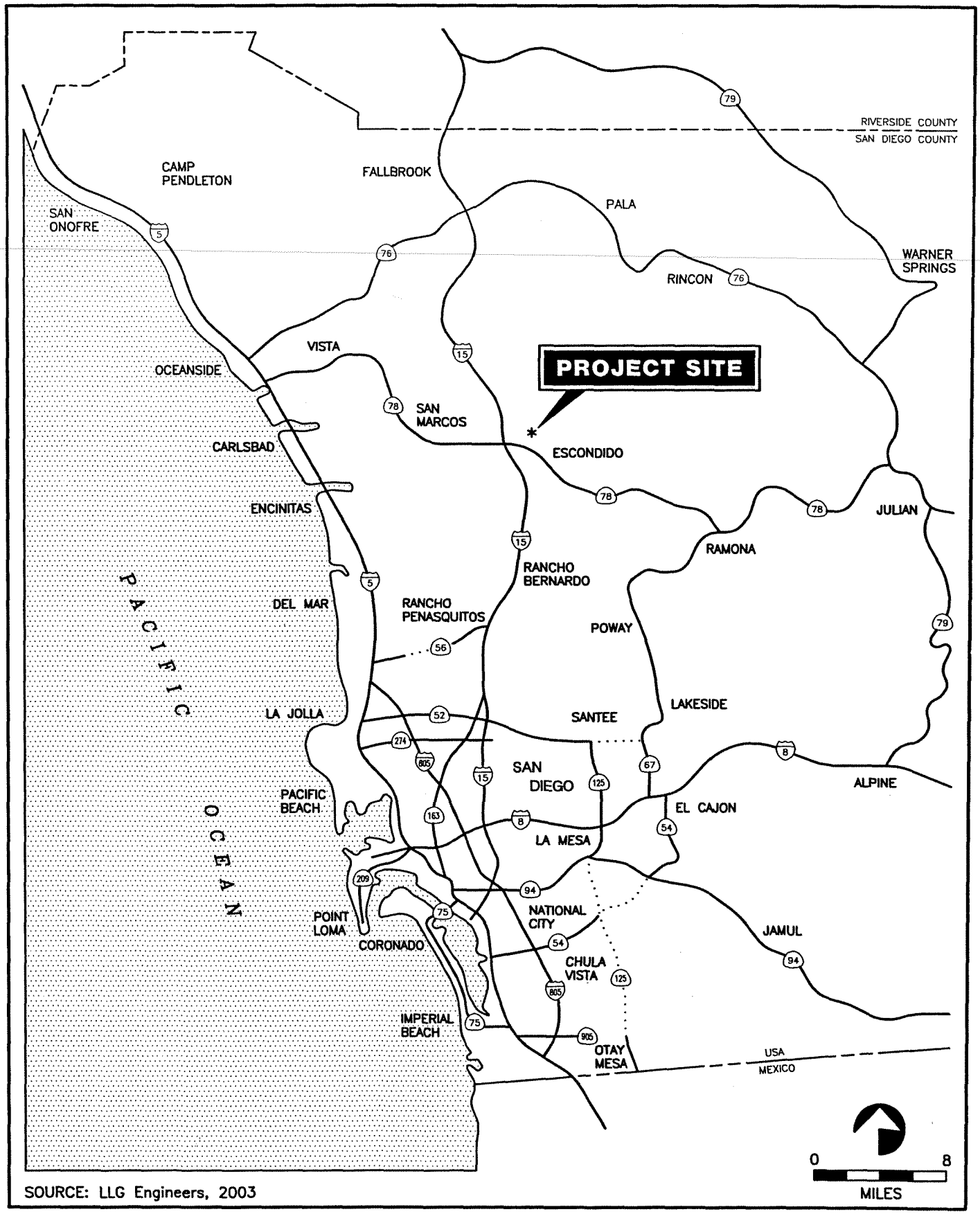
1.0 Introduction

This project consists of relocating the existing Escondido Union School District (EUSD) office building from its current location south of Valley Parkway, north of Grand Avenue, and east of Ash Street to its new location at the southeast corner of the Ash Street/Washington Avenue intersection in Escondido. A 60,000 SF new office building is proposed. A new Wal-Mart store is planned at the current site of the EUSD. The traffic study for Wal-Mart has been prepared by Linscott, Law & Greenspan, Engineers (LLG), and that study addresses the overall traffic impacts in the area. This focused traffic study addresses traffic operations in the immediate vicinity of the new EUSD site.

The following sections are included in this report:

- Project Description
- Existing Conditions Description
- Traffic Analysis Approach & Methodology
- Significance Criteria
- Analysis of Existing Conditions
- Trip Generation/Distribution/Assignment
- Cumulative Projects
- Analysis of Future Scenarios
- Significance of Impacts and Mitigation Measures

Figure 1 is a vicinity map and, **Figure 2** shows the project area.



SOURCE: LLG Engineers, 2003

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Figure 1

VICINITY MAP

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ESCONDIDO UNION SCHOOL DISTRICT

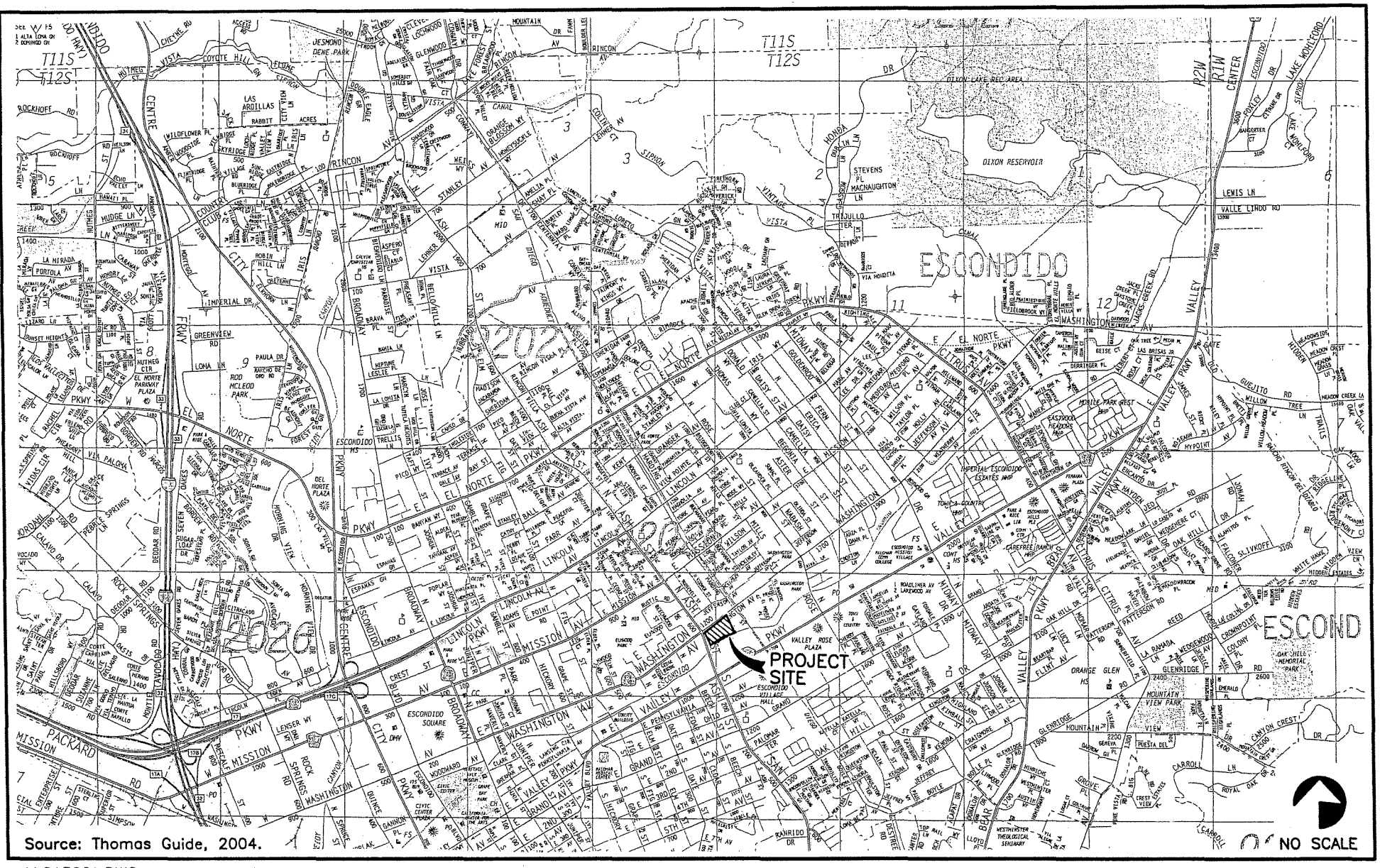

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Figure 2

PROJECT AREA MAP

ESCONDIDO UNION SCHOOL DISTRICT

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2.0 Project Description

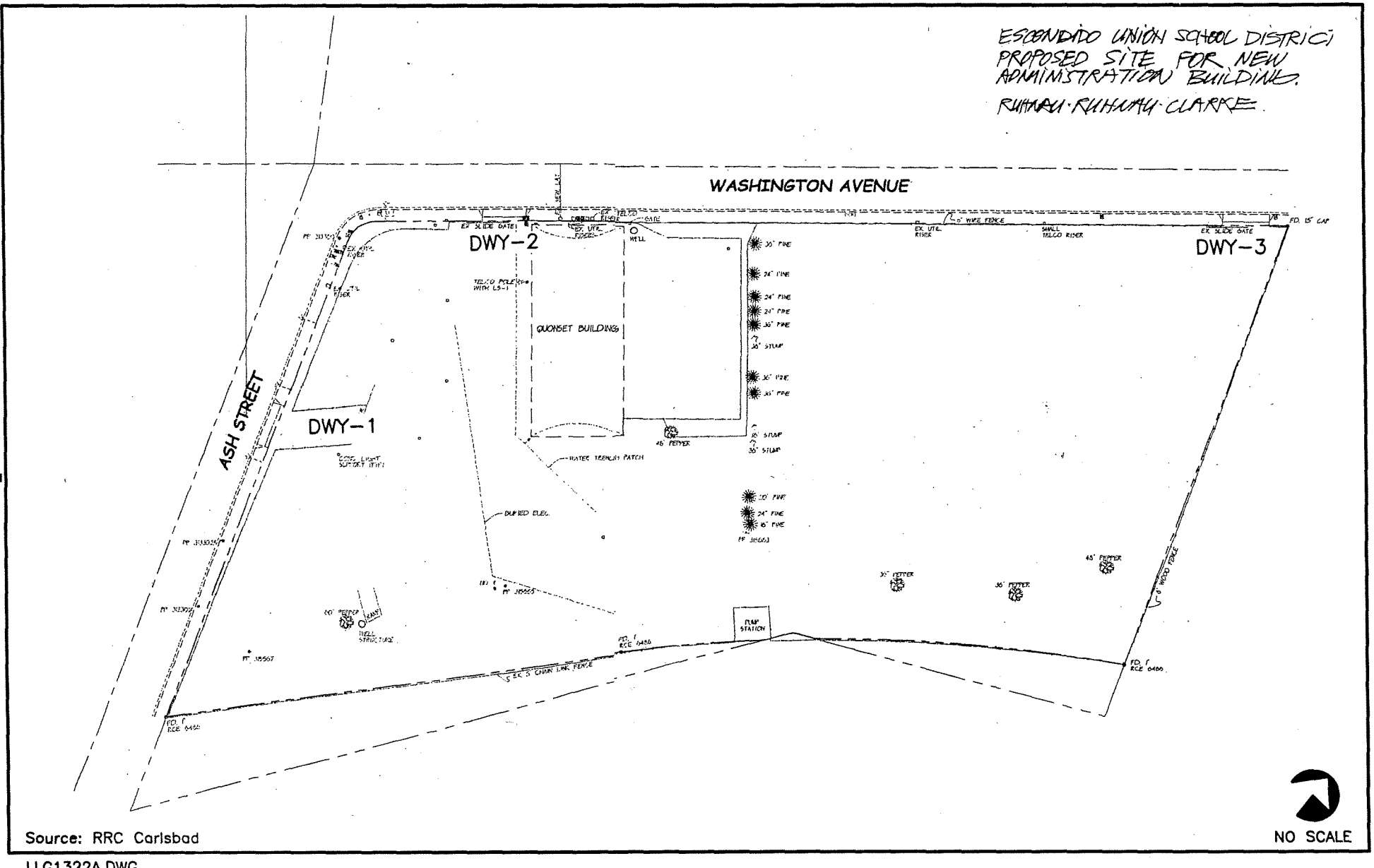
2.1 PROJECT LOCATION/DESCRIPTION

The existing 60,000 SF EUSD building project is to be relocated to an empty lot at the southeast corner of the Washington Street/Ash Street intersection.

Figure 3 depicts the project layout.

2.2 ACCESS

Regional access to the project site is available via Valley Parkway, Ash Street and Washington Avenue. Two driveways are planned on Washington Avenue—one full access driveway (driveway 3) and one right turn only driveway. A right-in/right-out only access will also be available at an existing driveway on Ash Street, south of Washington Avenue.



Source: RRC Carlsbad

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Figure 3

PROPOSED EUSD CONCEPTS PLAN

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ESCONDIDO UNION SCHOOL DISTRICT

3.0 Existing Conditions

3.1 STUDY AREA

Based on the amount of traffic generated by the project, the following intersections and street segments were analyzed.

Intersections

- N. Ash St./E. Washington Ave.
- Harding St./E. Washington Ave.

Segments

- **N. Ash Street**
  - Mission Ave. to Washington Ave.
  - Washington Ave. to Valley Pkwy.

- **Washington Avenue**
  - Date St. to N. Ash St.
  - N. Ash St. to Harding St.
  - Harding St. to N. Rose St.

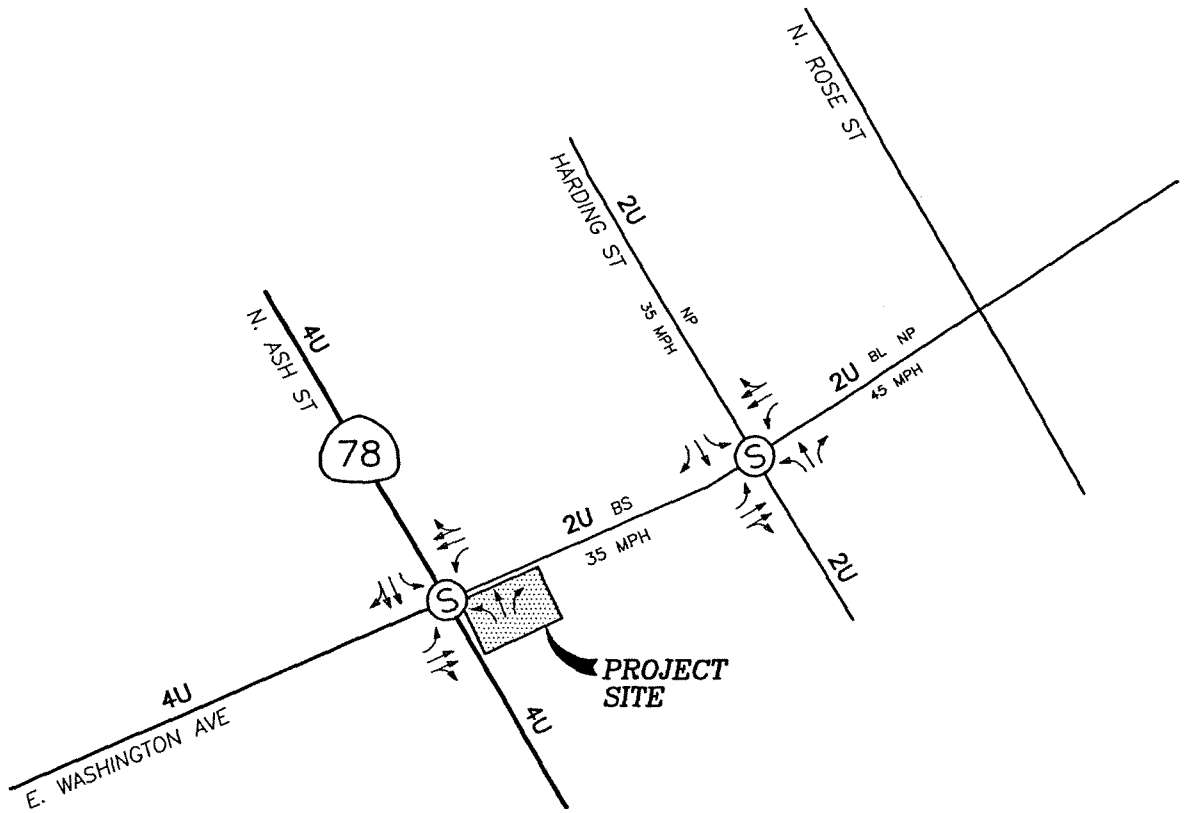
3.2 STREET NETWORK

Descriptions of the existing roadway system in the project area are included in the Escondido Wal-Mart Traffic Study. **Figure 4** is the existing conditions diagram.

3.3 EXISTING TRAFFIC VOLUMES

3.3.1 PEAK HOUR INTERSECTION TURNING MOVEMENT VOLUMES

AM and PM peak hour intersection counts were obtained from the Wal-Mart traffic study. **Figure 5** depicts the existing AM and PM peak hour intersection turning movement volumes. Manual turning movement volume count sheets are included in the appendices in the Escondido Wal-Mart Traffic Study.



LEGEND

- (S) – Traffic Signal
- STOP Sign
- BS – Bus stop
- BL – Bike lane
- NP – No Parking
- 2U – Two lane undivided roadway
- 4D – Four lane divided roadway

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NO SCALE

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Figure 4

EXISTING CONDITIONS DIAGRAM

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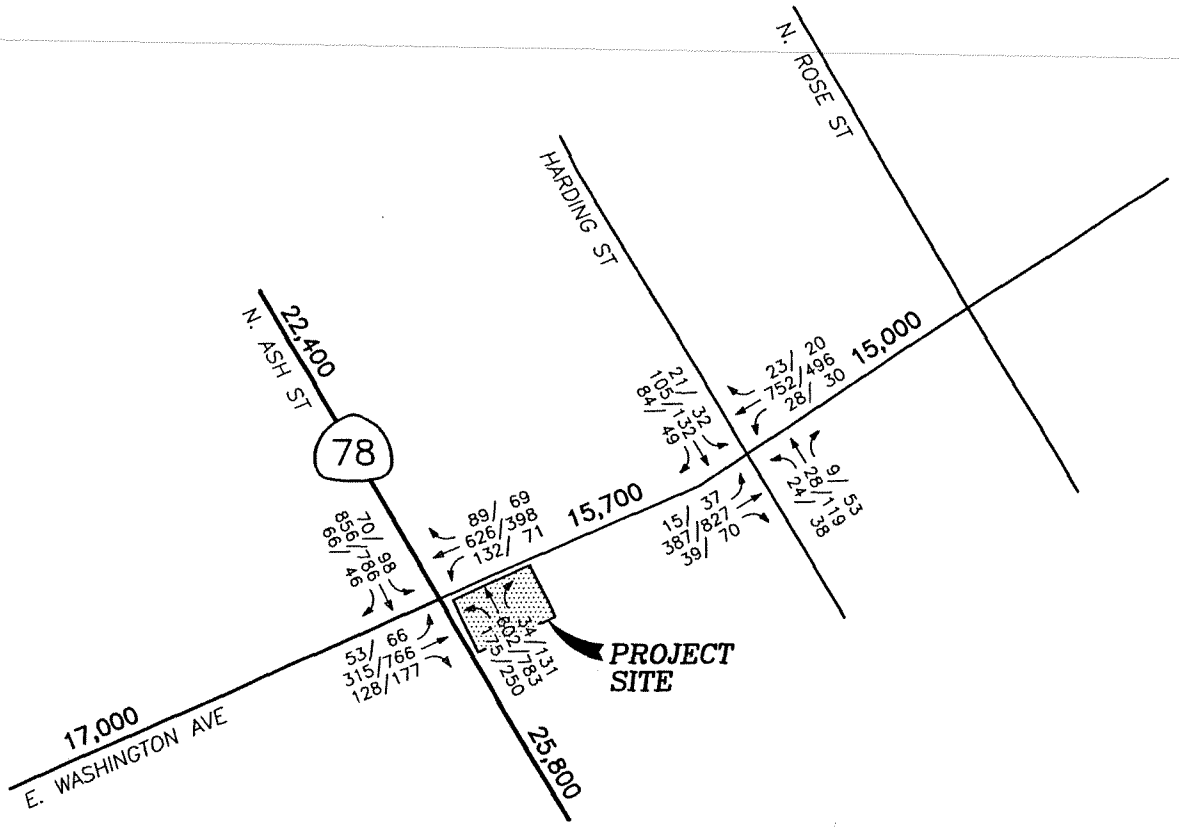
ESCONDIDO UNION SCHOOL DISTRICT



NOTES:

- ADTs are shown midblock
- AM/PM Peak hour volumes are shown at the intersections

NO SCALE

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Figure 5

EXISTING TRAFFIC VOLUMES

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ESCONDIDO UNION SCHOOL DISTRICT

3.3.2 DAILY SEGMENT VOLUMES

Segment Average Daily Traffic (ADT) counts conducted during November 2002 for other traffic studies at several roadway segments were obtained from the City of Escondido. Additional traffic data was collected in July of 2003. **Figure 5** depicts the existing daily segment volumes. **Table 1** summarizes the ADT volumes in the immediate vicinity of the relocated EUSD project.

Table 1
EXISTING STREET SEGMENT VOLUMES

SEGMENT	YEAR OF COUNT	SOURCE	VOLUME
N. Ash Street			
Mission Ave. to Washington Ave.	2002	City of Escondido	22,400
Washington Ave. to Valley Pkwy.	2002	City of Escondido	25,800
Washington Avenue			
Date St. to N. Ash St.	2003	LLG Engineers [1]	17,000
N. Ash St. to Harding St.	2003	LLG Engineers [1]	15,700
Harding St. to N. Rose St.	2003	LLG Engineers [1]	15,000

Note:
1. Estimated from year 2003 intersection volumes at adjacent intersections, assuming PM peak hour traffic is 10% of ADT.

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4.0 Analysis Approach & Methodology

The existing EUSD building will be removed and a new EUSD office building will be constructed at the southeast corner of the Ash Street/Washington Avenue intersection. The EUSD traffic is included in the existing traffic volumes, as the EUSD office is currently in operation. Therefore, the overall traffic generation will not increase, but the location of the traffic will shift toward the Ash Street/Washington Avenue intersection. The existing EUSD traffic was first removed from the existing traffic at the two intersections (Ash Street/Washington Avenue and Harding Street/Washington Avenue). Next, the EUSD traffic generated at its new location was distributed and assigned to the two key intersections (Ash Street/Washington Avenue and Harding Street/Washington Avenue).

4.1 ANALYSIS APPROACH

The following scenarios are analyzed in this report.

- Existing
- Existing + Cumulative Projects
- Existing + Cumulative Projects + Project

4.2 METHODOLOGY

The traffic study analyzes signalized intersections, unsignalized intersections and street segments. There are different methodologies used to analyze these types of facilities.

The measure of effectiveness for intersection operations is level of service. In the 2000 Highway Capacity Manual (HCM), Level of Service for signalized intersections is defined in terms of delay. The level of service analysis results in seconds of delay expressed in terms of letters A through F. Delay is a measure of driver discomfort, frustration, fuel consumption, and lost travel time.

4.2.1 SIGNALIZED INTERSECTIONS

The measure of effectiveness for intersection operations is level of service. In the 2000 Highway Capacity Manual (HCM), Level of Service for signalized intersections is defined in terms of delay. The level of service analysis results in seconds of delay expressed in terms of letters A through F. Delay is a measure of driver discomfort, frustration, fuel consumption, and lost travel time.

For signalized intersections, level of service criteria are stated in terms of the average control delay per vehicle for a 15-minute analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. **Table 2** summarizes the delay thresholds for signalized intersections.

Table 2
LEVEL OF SERVICE THRESHOLDS FOR SIGNALIZED INTERSECTIONS

AVERAGE CONTROL DELAY PER VEHICLE (SECONDS/VEHICLE)			LEVEL OF SERVICE
0.0	≤	10.0	A
10.1	to	20.0	B
21.1	to	35.0	C
35.1	to	55.0	D
55.1	to	80.0	E
	≥	80.0	F

Source: Highway Capacity Manual, 2000.

Level of service A describes operations with very low delay, (i.e. less than 10.0 seconds per vehicle). This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

Level of service B describes operations with delay in the range 10.1 seconds and 20.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.

Level of service C describes operations with delay in the range 20.1 seconds and 35.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.

Level of service D describes operations with delay in the range 35.1 seconds and 55.0 seconds per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or higher v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are more frequent.

Level of service E describes operations with delay in the range of 55.1 seconds to 80.0 seconds per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.

Level of service F describes operations with delay in excess of over 80.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with over-saturation (i.e., when arrival flow rates exceed the capacity of the intersection). It may also occur at high v/c ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

4.2.2 STREET SEGMENTS

The street segments were analyzed on a daily basis by comparing the Average Daily Traffic (ADT) volume to the City of Escondido Proposed Level of Service Standards - Street Segment Average Daily Vehicle Trip Thresholds. This table is shown in **Appendix C** of the Wal-Mart Traffic Study.

5.0 Significance Criteria

5.1 SIGNALIZED INTERSECTIONS

A signalized intersection is directly significantly impacted when project traffic degrades the level of service to worse than mid-level D (delay of 45.1 seconds or more). If the intersection is already operating at a LOS worse than mid-level D, a cumulative impact would occur if the project increases the delay by more than 2 seconds.

5.2 STREET SEGMENTS

The City of Escondido has adopted a standard for determining traffic impacts that states that an impact is considered to be a direct significant impact on a street segment when a project degrades the level of service (LOS) to worse than mid-level D and increases the volume/capacity (v/c) ratio by more than 0.02. If the segment already operates at mid-LOS D or worse, a significant cumulative impact is calculated if the project increases the v/c by more than 0.02.

6.0 Analysis of Existing Conditions

6.1 PEAK HOUR INTERSECTION LEVELS OF SERVICE

Table 3 summarizes the existing AM and PM peak hour intersection analysis results at the key intersections. As seen in Table 3, all key signalized intersections in the study are calculated to currently operate at better than Mid-LOS D except the intersection of N. Ash Street/E. Washington Avenue during the PM peak hour.

Appendix I contains the peak hour analysis work sheets for the key study area intersections under existing conditions.

Table 3
EXISTING INTERSECTION OPERATIONS

INTERSECTION	PEAK HOUR	DELAY	LOS
N. Ash St./E. Washington Ave.	AM	31.6	C
	PM	**49.8**	**D**
Harding St./E. Washington Ave.	AM	8.0	A
	PM	10.6	B

Note:
1. Delay and LOS worse than Mid-LOS D shown in **bold**.
2. Mid-LOS D Delay for signalized intersections is 45.0 seconds.

6.2 DAILY SEGMENT LEVELS OF SERVICE

Table 4 summarizes the existing daily segment levels of service on key segments. As seen in Table 4, all key segments are calculated to currently operate at mid-LOS D or better.

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Table 4

EXISTING DAILY SEGMENT ANALYSIS

SEGMENT	EXISTING ROADWAY CLASS	LOS E CAPACITY [1]	MID-LOS D CAPACITY [1]	ADT	V/C	LOS
N. Ash Street						
Mission Ave. to Washington Ave.	4-Ln Major Road	37,000	31,500	22,400	0.61	B
Washington Ave. to Valley Pkwy.	4-Ln Major Road	37,000	31,500	25,800	0.70	C
Washington Avenue						
Date St. to N. Ash St.	4-Ln Collector	34,200	29,100	17,000	0.50	B
N. Ash St. to Harding St.	4-Ln Collector	34,200	29,100	15,700	0.46	B
Harding St. to N. Rose St.	4-Ln Collector	34,200	29,100	15,000	0.44	B

7.0 Cumulative Projects

A list of 23 near-term cumulative projects was obtained from the City of Escondido for inclusion in this analysis. **Table 5** summarizes the trip generation for each cumulative project. Brief descriptions of each of the cumulative projects included in this analysis are included in the Escondido Wal-Mart Project traffic study.

7.1 SUMMARY OF CUMULATIVE PROJECTS TRIPS

As seen in Table 5, the 23 cumulative projects are calculated to generate a total of 48,454 daily trips. In the AM peak hour, 2,710 trips will be generated with 1,327 inbound trips and 1,383 outbound trips and in the PM peak hour, 4,165 trips will be generated with 2,269 inbound trips and 1,896 outbound trips.

Figure 6 depicts the total AM and PM peak hour intersection volumes, and the total ADT volumes for the cumulative projects as calculated in the Wal-Mart traffic study. **Figure 7** depicts the AM and PM peak hour volumes and the ADT volumes for the existing + cumulative projects condition.

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Table 5
CUMULATIVE PROJECTS TRIP GENERATION

CUMULATIVE PROJECTS	LAND USE	SIZE	RATE	ADT	AM PEAK HOUR			PM PEAK HOUR		
					IN	OUT	TOTAL	IN	OUT	TOTAL
1. Fig and Farr Elementary School	Elementary School	800 Students	[1]	550	146	58	204	(18)	49	31
2. Ryan Community Park	Community Park	54 Acres	50 /Acre	3,210	80	50	130	130	130	260
3. Valley High School	Continuation School	450 Students	[2]	202	61	24	85	5	5	10
4. Escondido Humane Society	Animal Shelter		[2]	475	33	10	43	29	47	76
5. Rincon Casino	Hotel and Casino	500 Rooms	3 /Room	1,500	45	30	75	42	63	105
6. Valley View Casino	Casino	31,800 SF	195 /SF	6,200	188	92	280	206	277	483
7. Northeast Gateway	S. F. Residential	340 Units	10 /Unit	3,400	80	190	270	240	100	340
8. Sherwood Ridge	Estate Residential	128 Units	12 /Unit	1,540	35	85	120	105	45	150
9. Hidden Trails/Eastgrove	S. F. Residential	291 Units	10 /Unit	2,910	46	186	232	200	90	290
10. Escondido Charter High School	Charter School	400 Students	1.3 /Student	520	73	31	104	21	31	52
11. TR 821 (2000-51-CZ)	S. F. Residential	15 Units	10 /Unit	150	4	8	12	11	4	15
12. TR 836	S. F. Residential	6 Units	10 /Unit	60	2	3	5	4	2	6
13. TR 842 (2002-14-CP)	Detached Condos.	25 Units	10 /Unit	250	6	14	20	18	7	25
14. TR 846 (2002-45-CP)	Detached Condos.	56 Units	10 /Unit	560	14	31	45	39	17	56
15. TR 847 (ER 2002-12)	S. F. Residential	13 Units	10 /Unit	130	3	7	10	9	4	13
16. Habitat for Humanity	Condominiums	12 Units	8 /Unit	96	2	6	8	7	3	10
SUBTOTAL CUMULATIVE PROJECTS THIS PAGE				***21,753***	***818***	***825***	***1643***	***1048***	***874***	***1922***

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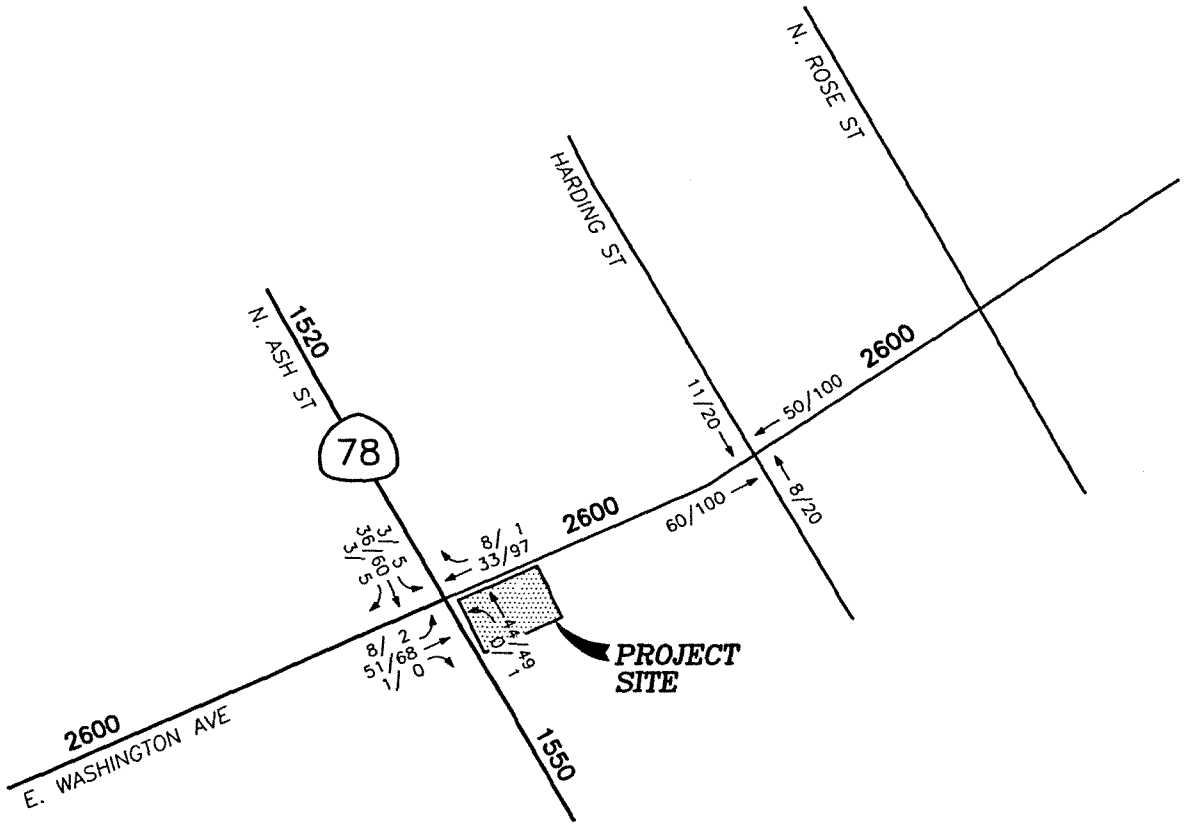
Table 5 (Continued)

CUMULATIVE PROJECTS TRIP GENERATION

CUMULATIVE PROJECTS	LAND USE	SIZE	RATE	ADT	AM PEAK HOUR			PM PEAK HOUR		
					IN	OUT	TOTAL	IN	OUT	TOTAL
SUBTOTAL CUMULATIVE PROJECTSFROM PREVIOUS PAGE				*21,753*	*818*	*825*	*1643*	*1048*	*874*	*1922*
17. TR 850 (2002-65-CZ/GE)	S. F. Residential	125 Units	10 /Unit	1,250	30	70	100	88	37	125
18. 2002-12-CUP	Self-Storage	77,193 SF	2 /KSF	154	5	4	9	7	7	14
19. Escondido City Center	Condominiums	201 Units	8 /Unit	1,608	26	103	129	113	48	161
Other Redevelopment	Theater	3,000 Seats	1.8 /Seat	5400	9	9	18	259	173	432
	Apartments	272 Units	6 /Unit	1,632	26	104	130	103	44	147
	Office	10,000 SF	14 /KSF	140	19	2	21	4	17	21
	Commercial	19,411 SF	80 /KSF	1,553	37	25	62	78	78	156
20. Toyota Dealership	Car Dealership	63,000 SF	50 /KSF	3,150	110	48	158	101	151	252
21. 2003-21-PPL	Car Wash	1 Site	900 /Site	900	18	18	36	41	40	81
22. Farmer's Boy Restaurant	Fast-Food Restaurant	3,100 SF	650 /KSF	1,914	67	67	134	67	67	134
23. Discount Store (Wal-Mart)	Commercial	150,000 SF	60 /KSF	9,000	162	108	270	360	360	720
TOTAL CUMULATIVE PROJECTS				**48,454**	**1,327**	**1,383**	**2,710**	**2,269**	**1,896**	**4,165**

Notes:

1. Trip generation shown is the difference of existing and proposed land uses.
2. Site specific trip generation.
   Rate is a trip-end per acre or dwelling unit.
   Trip-ends are one-way movements, entering or leaving.
   DU - Dwelling Unit
   KSF – 1,000 Square Feet



NOTES:

- ADTs are shown midblock
- AM/PM Peak hour volumes are shown at the intersections

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NO SCALE

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Figure 6

CUMULATIVE PROJECTS TRAFFIC VOLUMES

ESCONDIDO UNION SCHOOL DISTRICT

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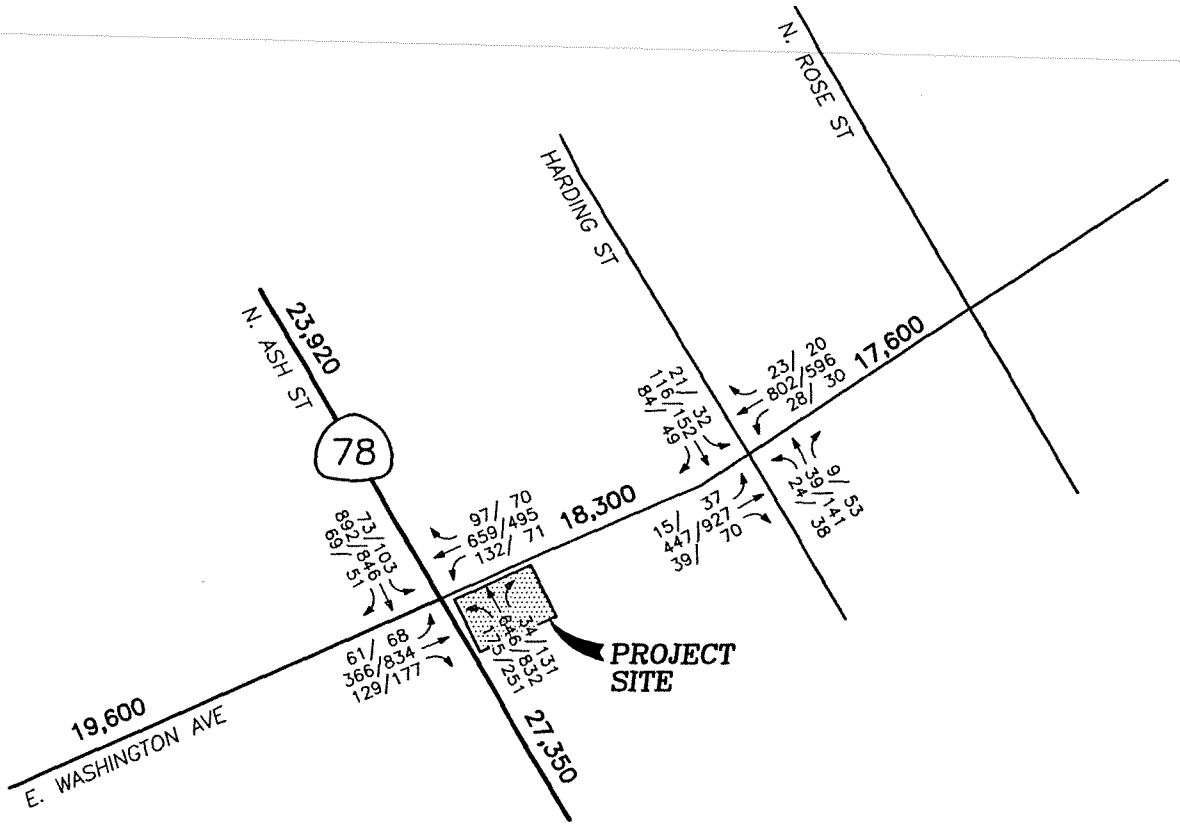

NOTES:

- ADTs are shown midblock
- AM/PM Peak hour volumes are shown at the intersections

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NO SCALE

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Figure 7

EXISTING + CUMULATIVE PROJECTS TRAFFIC VOLUMES

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8.0 Trip Generation/Distribution/Assignment

8.1 TRIP GENERATION

Table 6 summarizes the trip generation for the EUSD development. The trip generation rates are based on the *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, April 2002. As seen in Table 6, the project is calculated to generate a total of 840 daily project trips, with 126 trips (113 inbound and 13 outbound trips) in the AM peak hour and 126 trips (25 inbound and 101 outbound trips) in the PM peak hour.

However, it should again be noted that the project is a relocation and no new traffic would be generated.

8.2 TRIP DISTRIBUTION/ASSIGNMENT

As explained in the Analysis Approach and Methodology section, the trip distribution was developed based on a Select Zone assignment obtained from SANDAG. The project trip distribution was finalized in consultation with City Staff and modified where appropriate, to provide the most accurate possible distribution estimate.

Figure 8 depicts the regional project traffic distribution percentages. **Figure 9** depicts the total project AM and PM peak hour traffic assignment and the total project ADT volumes based on this distribution. The negative volumes are due to the fact that the project is a relocation of a existing facility and traffic will be shifted.

Figure 10 depicts the AM and PM peak hour intersection volumes and the ADT volumes for the same condition for the existing + cumulative projects + project condition.

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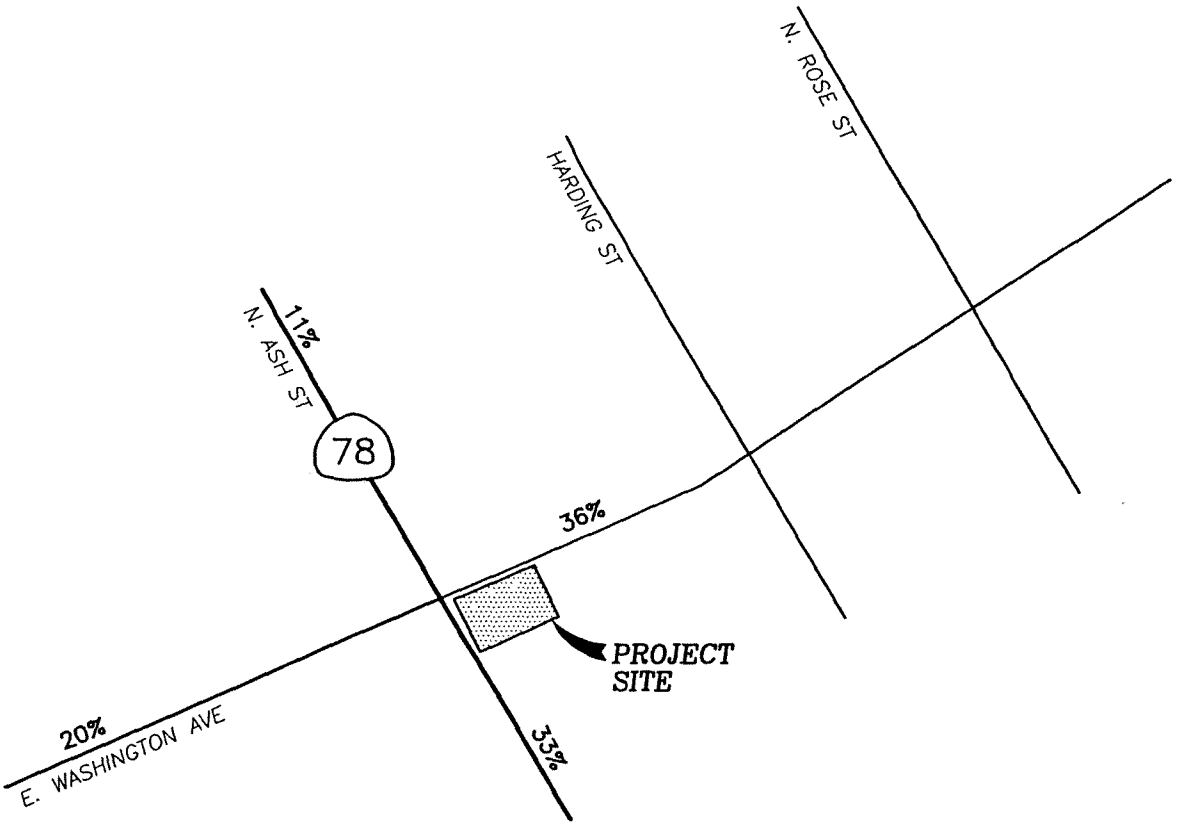
Table 6

PROJECT TRIP GENERATION

LAND USE	QUANTITY	DAILY TRIP ENDS (ADT)		AM PEAK HOUR					PM PEAK HOUR				
		RATE	VOLUME	% OF ADT	IN:OUT SPLIT	VOLUME			% OF ADT	IN:OUT SPLIT	VOLUME		
						IN	OUT	TOTAL			IN	OUT	TOTAL
Single Tenant Office	60,000 SF	14/1000 SF	840	15%	9:1	113	13	126	15%	2:8	25	101	126

Notes:
1. Generation rates obtained from the SANDAG Brief Guide (April 2002).
2. Trip-ends are one-way traffic movements, either entering or leaving.



LEGEND

xx% – Regional Traffic Distribution

NO SCALE

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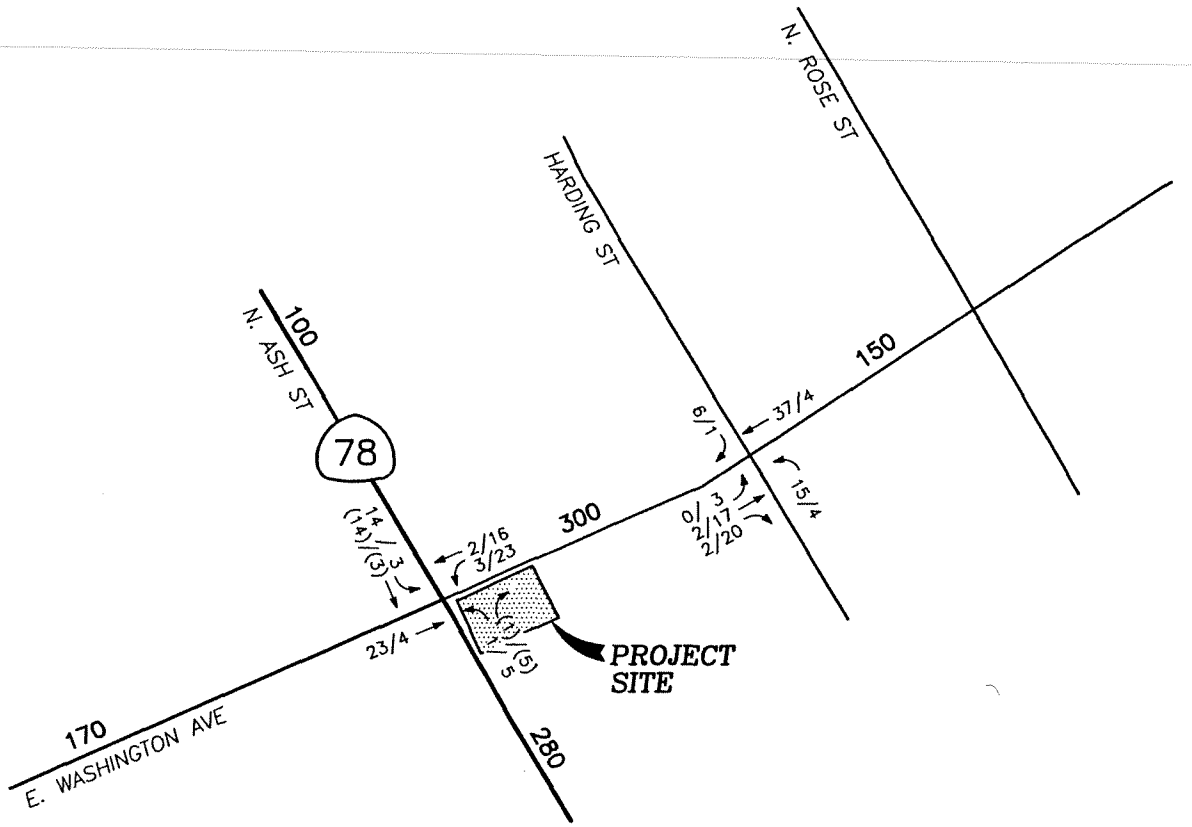
Figure 8

REGIONAL TRIP DISTRIBUTION

LINSCOTT LAW & GREENSPAN ENGINEERS

ESCONDIDO UNION SCHOOL DISTRICT



NOTES:

- ADTs are shown midblock
- AM/PM Peak hour volumes are shown at the intersections
- ( ) indicates negative volume since project is a relocation of an existing facility

REV. 12/10/03

NO SCALE

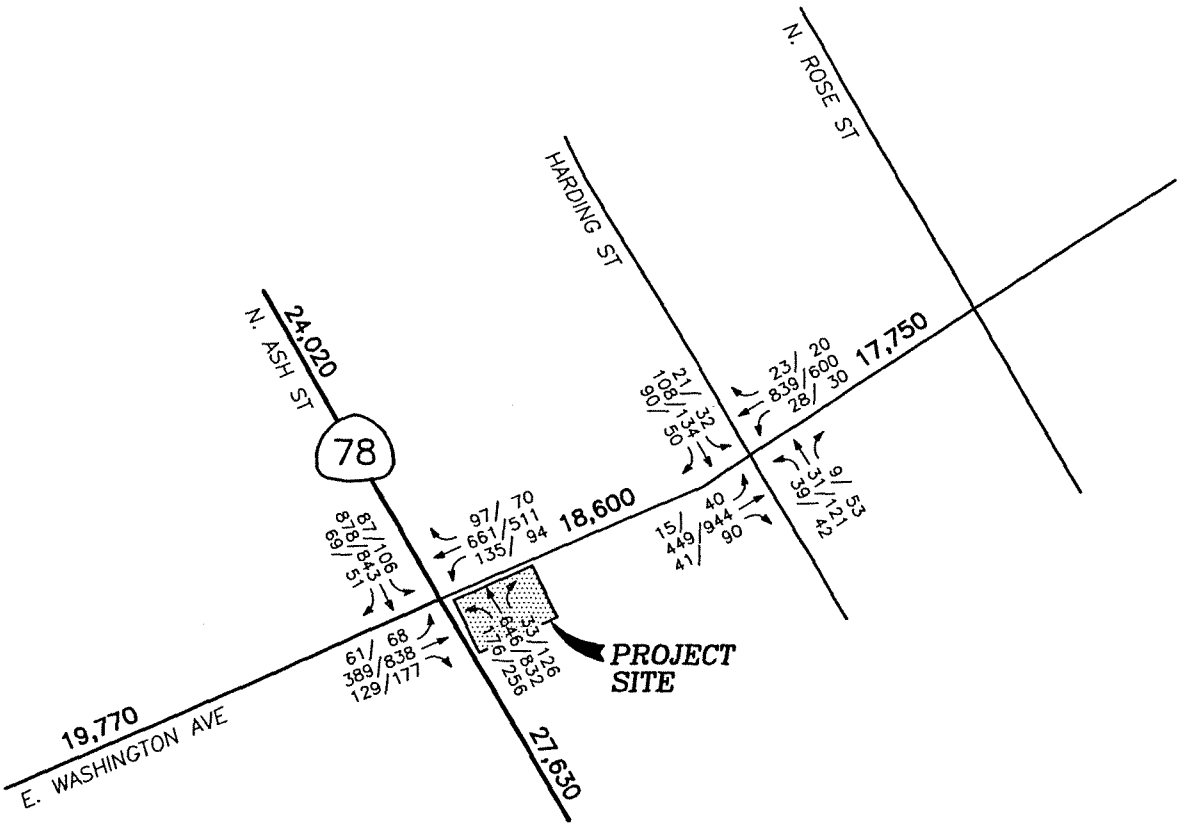
LLG1322B.DWG

Figure 9

PROJECT TRAFFIC VOLUMES

LINSCOTT LAW & GREENSPAN ENGINEERS

ESCONDIDO UNION SCHOOL DISTRICT



NOTES:

- ADTs are shown midblock
- AM/PM Peak hour volumes are shown at the intersections

REV. 12/11/03

NO SCALE

LLG1322B.DWG

Figure 10

EXISTING + CUMULATIVE PROJECTS + PROJECT TRAFFIC VOLUMES

LINSCOTT LAW & GREENSPAN ENGINEERS

ESCONDIDO UNION SCHOOL DISTRICT

LINSCOTT LAW & GREENSPAN
ENGINEERS

9.0 Analysis of Future Scenarios

The following future scenarios were analyzed in this report:

- Existing + Cumulative Projects
- Existing + Cumulative Projects + Project
- Year 2030 With Project

9.1 EXISTING + CUMULATIVE PROJECTS

9.1.1 INTERSECTION ANALYSIS

Table 7 summarizes the AM and PM peak hour intersection operations for the existing + cumulative projects scenario. As seen in Table 7, with the addition of cumulative projects traffic, the majority of the intersections is calculated to operate at better than mid-LOS D except the intersection of N. Ash Street/E. Washington Avenue during the PM peak hour.

Appendix II contains the AM/PM peak hour intersection analysis worksheets for the existing + cumulative projects condition.

9.1.2 SEGMENT OPERATIONS

Table 8 summarizes the daily segment levels of service on key segments. As seen in Table 8, with the addition of cumulative projects traffic, all key segments are calculated to operate at LOS C or better.

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Table 7

PEAK HOUR INTERSECTION OPERATIONS

INTERSECTION	PEAK HOUR	EXISTING		EXISTING + CUMULATIVE PROJECTS		EXISTING + CUMULATIVE PROJECTS + PROJECT		DELAY Δ	SIGNIFICANT?
		DELAY	LOS	DELAY	LOS	DELAY	LOS		
N. Ash St./E. Washington Ave.	AM	31.6	C	38.4	D	39.6	D	1.2	Not Significant
	PM	**49.8**	**D**	**68.7**	**E**	**69.9**	**E**	1.2	Not Significant
Harding St./E. Washington Ave.	AM	8.0	A	9.8	A	9.9	A	0.1	Not Significant
	PM	10.6	B	11.1	B	11.1	B	0.0	Not Significant

9.2 EXISTING + CUMULATIVE PROJECTS + PROJECT

9.2.1 INTERSECTION ANALYSIS

Table 7 summarizes the AM and PM peak hour intersection operations for the existing + cumulative projects + project scenario. As seen in Table 7, with the addition of project traffic, the delay increases are very minimal.

Appendix III contains the AM/PM peak hour intersection analysis worksheets for existing + cumulative projects + project conditions.

9.2.2 SEGMENT OPERATIONS

Table 8 summarizes the daily segment levels of service on key segments. As seen in Table 8, all key segments are calculated to continue to operate at LOS C or better.

The significance of project impacts is discussed in a subsequent section of this report.

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Table 8
NEAR-TERM STREET SEGMENT OPERATIONS

SEGMENT	EXISTING ROADWAY CLASS	LOS E CAPACITY [1]	MID-LOS D CAPACITY [1]	EXISTING			EXISTING + CUMULATIVE PROJECTS			EXISTING + CUMULATIVE PROJECTS + PROJECT			V/C Δ	SIGNIFICANT ?
				ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS		
N. ASH STREET														
Mission Ave. to Washington Ave.	4-Ln Major Road	37,000	31,500	22,400	0.61	B	23,920	0.65	B	24,020	0.65	B	0.00	Not Significant
Washington Ave. to Valley Pkwy.	4-Ln Major Road	37,000	31,500	25,800	0.70	C	27,350	0.74	C	27,630	0.75	C	0.01	Not Significant
WASHINGTON AVENUE														
Date St. to N. Ash St.	4-Ln Collector	34,200	29,100	17,000	0.50	B	19,600	0.57	B	19,770	0.58	B	0.00	Not Significant
N. Ash St. to Harding St.	4-Ln Collector	34,200	29,100	15,700	0.46	B	18,300	0.54	B	18,600	0.54	B	0.01	Not Significant
Harding St. to N. Rose St.	4-Ln Collector	34,200	29,100	15,000	0.44	B	17,600	0.51	B	17,750	0.52	B	0.01	Not Significant

Notes: 1. City of Escondido standards.

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10.0 Project Access

Currently, access to the project is available at one driveway on Ash Street and two driveways on Washington Avenue. The locations and access at these driveways are discussed below. Figure 3 shows the project site layout.

10.1 DRIVEWAY 1 – ASH STREET

This driveway is located approximately 140 feet south of Washington Avenue. It is not possible to relocate this driveway to the south since there is a bridge abutment immediately south of the site on Ash Street. It would also be very difficult to provide a right-turn lane on Ash Street at this driveway since that would involve relocating a 66 KV line. In view of the existing conditions and due to its close proximity to Washington Avenue, access at this driveway should be restricted to right-in/right-out only.

10.2 DRIVEWAY 2 – WASHINGTON AVENUE

There is an existing driveway, approximately 60 feet east of Ash Street. This driveway should be relocated further east to about 250 feet east of Ash Street. An eastbound dedicated right-turn lane should be provided on Washington Avenue at this driveway.

10.3 DRIVEWAY 3 – WASHINGTON AVENUE

There is an existing driveway on the south curb of Washington Avenue, at the eastern boundary of the site. This driveway could remain at its current location. Full access may be permitted at this driveway.

10.4 WASHINGTON AVENUE

Currently, Washington Avenue is a four-lane facility without a center turn lane with parking on both curbs. The pavement striping on Washington Avenue between Ash Street and Harding Street should be modified to provide two travel lanes in each direction with a two-way center turn lane. This will necessitate removing curbside parking.

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11.0 Significance of Impacts and Mitigation Measures

Based on the analysis of key intersections and segments in the study area, the following locations are calculated to be significantly impacted based on City of Escondido significance criteria.

11.1 SIGNIFICANCE OF IMPACTS

Intersections

No significant impacts.

Street Segments

No significant impacts.

Access/Frontage Issues

Significant impacts are calculated.

11.2 MITIGATION MEASURES

Intersections

None

Segments

None

Access/Frontage Issues

- Access at Driveway 1 should be restricted to right-in/right-out only.
- Driveway 2 should be relocated further east to about 250 feet east of Ash Street -.
- Full access may be permitted at Driveway 3.
- The pavement striping on Washington Avenue between Ash Street and Harding Street should be modified to provide two travel lanes in each direction with a two-way center turn lane. Curbside parking will need to be removed.

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List of Appendices

Appendix

I. Peak Hour Intersection Analysis – Existing

II. Peak Hour Intersection Analysis Worksheets – Existing + Cumulative Projects

III. Peak Hour Intersection Analysis Worksheets – Existing + Cumulative Projects + Project

APPENDIX D

Parking Study (KOA)

March 24, 2004
A3470

Larry Thornburg
Nasland Engineering
4740 Ruffner Street
San Diego, CA 92111

Subject: Parking Occupancy Study for Wal-Mart, Escondido

Dear Mr. Thornburg:

This parking demand analysis has been prepared for the proposed Wal-Mart to be developed at the Escondido Village Mall in the City of Escondido. The center is south of Pennsylvania Avenue and east of Ash Street. The proposed project is a 143,183 square-foot discount store that will be located to the south of the existing shopping center. As part of the project, the existing Laundromat and School District buildings would be removed. The proposed Wal-Mart parking design allows for 594 parking spaces. The City of Escondido municipal code would require 716 parking spaces for this size building at 5 parking spaces for every thousand square feet for retail land uses. This analysis has been prepared to evaluate the existing parking demand at the Escondido Village Mall on a typical Thursday, Friday, and Saturday to determine if there would be a future parking shortage with the Wal-Mart assuming full occupancy of the entire shopping center. The analysis finds that the shopping center as a whole will have adequate parking with the addition of the Wal-Mart; however, the Wal-Mart parking lot itself will exceed its capacity for parking. Attachment A illustrates the layout of the shopping center.

Existing Parking Supply

The Escondido Village Mall has north facing retail and a north parking lot that serves this retail as well as a south lot that provides parking for an existing Laundromat and School Administration building. There is currently no internal driveway connection between these two parking lots; however, in the future the driveway from Harding Drive is planned to connect to the south. There is nominal parking interaction between the north lot and the south lot.

Katz, Okitsu & Associates conducted an inventory of the number of parking spaces at Escondido Village Mall. The parking spaces to the north of and on the east of the retail stores are collectively referred to as the "north lot", while the parking spaces next to the Escondido Unified School District building, located behind the retail stores, are collectively referred to as the "south lot". The north lot has a total of 565 parking spaces, which are used primarily by patrons of Escondido Village Mall. The south lot has a total of 218 striped (701 actual) parking spaces, which are used primarily by the Escondido Unified School District.

Existing Parking Demand

Parking stall occupancy counts were conducted by Katz, Okitsu & Associates from Thursday, July 10 through Saturday, July 12, 2003 at Escondido Village Mall. Hourly counts were conducted from 10:00 AM to 8:00 PM on these three days. The results of these counts, which illustrate the existing parking demand, are summarized in Table 1.

Table 1 shows that in the Escondido Village Mall, the highest parking occupancy was 321spaces, or 41%, during the noon hour on Friday, July 11, 2003.

Table 1
Existing Parking Demand

	Thursday, July 10		*Friday, July 11*		*Saturday, July 12*	
Hour	*Total Demand*	*Total % Occu-pied*	*Total Demand*	*Total % Occu-pied*	*Total Demand*	*Total % Occu-pied*
10:00	260	33%	308	39%	225	29%
11:00	**298**	**38%**	299	38%	244	31%
12:00	266	34%	**321**	**41%**	**258**	**33%**
13:00	271	35%	311	40%	241	31%
14:00	282	36%	286	37%	249	32%
15:00	285	36%	271	35%	219	28%
16:00	263	34%	274	35%	212	27%
17:00	246	31%	228	29%	198	25%
18:00	206	26%	268	34%	200	26%
19:00	245	31%	227	29%	155	20%
20:00	169	22%	205	26%	145	19%

Full Occupancy of Existing Vacant Buildings

The shopping center currently has 187,533 square feet of available space in the north facing buildings. Included in the north facing buildings are three vacant stores totaling 46,050 square feet. It is likely that these stores will be occupied in the future. For the purposes of this study we assume that this unoccupied space will be occupied and will generate parking demand at the same rate and daily distribution as the occupied north facing stores (peak occupied north lot spaces / occupied north facing building area)[1]. Table 2 shows the projected parking occupancy assuming full occupancy of existing vacant buildings.

[1] [239 / (187,533-46,050)] = 1.69 spaces per thousand square feet during the weekday peak hour and;
[241 / (187,533-46,050)] = 1.70 spaces per thousand square feet during the weekend peak hour.

Table 2
Existing Plus Vacant Building Demand

Hour	Thursday			Friday			Saturday		
	Existing Demand	*Vacant Demand*	*Total Demand*	*Existing Demand*	*Vacant Demand*	*Total Demand*	*Existing Demand*	*Vacant Demand*	*Total Demand*
10:00	260	*62*	*322*	308	*62*	*370*	225	*71*	*296*
11:00	**298**	*69*	***367***	299	*69*	*368*	244	*74*	*318*
12:00	266	*71*	*337*	**321**	*71*	***392***	**258**	***79***	**337**
13:00	271	*74*	*345*	311	*74*	*385*	241	*73*	*314*
14:00	282	*66*	*348*	286	*66*	*352*	249	*76*	*325*
15:00	285	*64*	*349*	271	*64*	*335*	219	*67*	*286*
16:00	263	*66*	*329*	274	*66*	*340*	212	*66*	*278*
17:00	246	*70*	*316*	228	*70*	*298*	198	*64*	*262*
18:00	206	*77*	*283*	268	*77*	*345*	200	*65*	*265*
19:00	245	***78***	*323*	227	***78***	*305*	155	*50*	*205*
20:00	169	*62*	*231*	205	*62*	*267*	145	*47*	*192*

1) Hourly accumulation by percentage of peak hour estimated by the north lot data.

Projected Peak Parking Demand

The projected parking demand represents full occupancy demand plus the project, which includes the addition of the Wal-Mart and the demolition of the Laundromat and school administration buildings (existing demand + existing vacant building demand + Wal-Mart demand – removed buildings demand). Table 3 shows that under City of Escondido standards, the proposed Wal-Mart is required to provide 716 parking spaces, which is based on the square footage of the project. As shown in Table 4, the peak parking demand on Thursday occurs at 19:00 and on Friday at 18:00. The peak hour demand occurs at 12:00 PM on Saturdays. The highest overall parking demand occurs on Friday between 6:00 PM and 7:00 PM.

Table 3
Parking Requirements for Wal-Mart

Land Use	*Parking Rate*	*Per*	*Intensity/ Size (KSF)*	*Parking Required*
Wal-Mart	5	1,000 s.f.	143.2	716

Source: Article 39,City of Escondido Municipal Code.

Conclusions

During the peak hour of the peak day, if we assume that all existing vacant buildings are occupied and that the Wal-Mart demand is 5 parking spaces for every thousand square feet, then the peak occupancy is 1,054 vehicles, or 91% of all parking spaces in the shopping center during the peak hour. Therefore, assuming that the existing

Shopping Center parking rate remains constant, the entire center will have adequate parking with the addition of the Wal-Mart; however, the south parking lot will exceed its parking capacity and the excess demand will need to seek excess parking in the north lot.

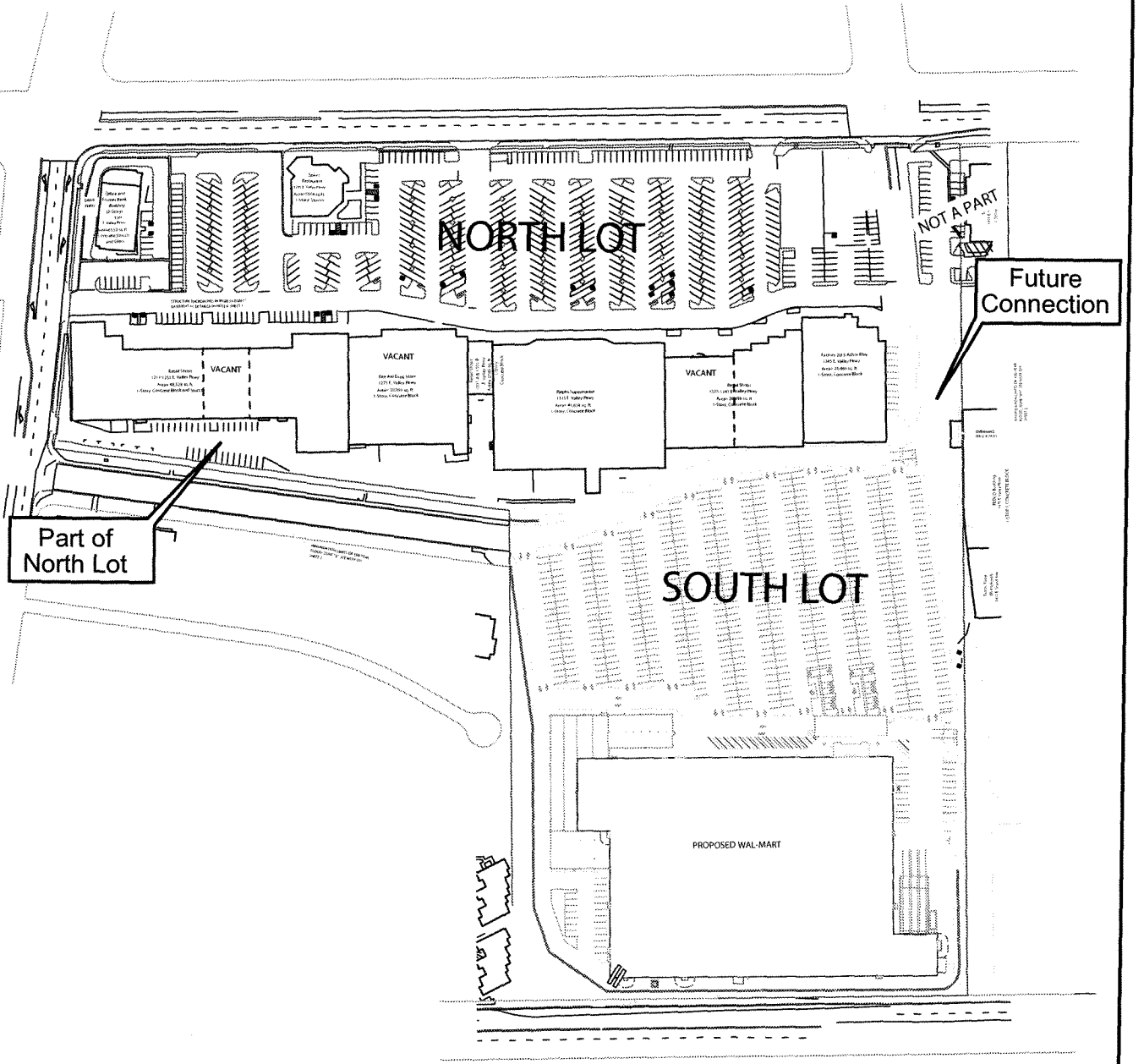
Table 4
Projected Peak Parking Occupancy With Wal-Mart

	Thursday	Friday	Saturday
Existing Demand	323	345	337
Net Project Demand (Wal-Mart Less Removed Buildings)	716-6	716-7	716-17
Total Demand	1,033	1,054	1,035
Total Supply	1,159	1,159	1,159
Total % Occupied	89%	91%	89%

Sincerely,
Katz, Okitsu & Associates

J. Arnold Torma, PE
Principal Engineer

Attachments: A: Shopping Center Layout
B: Existing Parking Demand



N
Not To Scale

A3470
July 2003

Attachment A

Shopping Center Layout

Katz, Okitsu & Associates
Traffic Engineers and Transportation Planners

Wal-Mart, Escondido
Parking Occupancy Study

Attachment B
Existing Parking Demand

Hour	Thursday, July 10						Friday, July 11						Saturday, July 12					
	North Lot[1]	% Occu-pied	South Lot	% Occu-pied	Total	Total % Occu-pied	North Lot	% Occu-pied	South Lot	% Occu-pied	Total	Total % Occu-pied	North Lot	% Occu-pied	South Lot	% Occu-pied	Total	Total % Occu-pied
10:00	153	27%	107	57%	260	35%	215	38%	93	43%	308	39%	218	39%	7	3%	225	29%
11:00	192	34%	106	56%	298	40%	215	38%	84	39%	299	38%	228	40%	16	7%	244	31%
12:00	191	34%	75	40%	266	35%	231	41%	90	41%	321	41%	241	43%	17	8%	258	33%
13:00	197	35%	74	39%	271	36%	241	43%	70	32%	311	40%	225	40%	16	7%	241	31%
14:00	191	34%	91	48%	282	37%	203	36%	83	38%	286	37%	233	41%	16	7%	249	32%
15:00	195	35%	90	48%	285	38%	185	33%	86	39%	271	35%	206	36%	13	6%	219	28%
16:00	182	32%	81	43%	263	35%	207	37%	67	31%	274	35%	203	36%	9	4%	212	27%
17:00	215	38%	31	16%	246	33%	202	36%	26	12%	228	29%	196	35%	2	1%	198	25%
18:00	195	35%	11	6%	206	27%	261	46%	7	3%	268	34%	199	35%	1	0%	200	26%
19:00	239	42%	6	3%	245	33%	223	39%	4	2%	227	29%	153	27%	2	1%	155	20%
20:00	167	30%	2	1%	169	22%	203	36%	2	1%	205	26%	144	25%	1	0%	145	19%

Notes:

187,533 Existing Square Footage (North Facing Buildings)

46,050 Vacant Square Footage (North Facing Buildings)

141,483 Existing Occupied Square Footage (North Facing Buildings)

239 Existing Peak Occupied Weekday Spaces (North Facing Buildings)

1.69 Existing Weekday Peak Parking Rate (spaces per KSF) (North Facing Buildings)

241 Existing Peak Occupied Saturday Spaces (North Facing Buildings)

1.70 Existing Saturday Peak Parking Rate (spaces per KSF) (North Facing Buildings)

565 North Lot Spaces Available

218 Existing South Lot Spaces Available

783 Existing Total Spaces Available

APPENDIX E

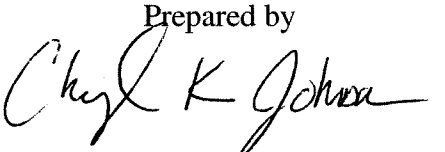
Noise Technical Report (RECON)

NOISE TECHNICAL REPORT
FOR THE
WAL-MART PLANNED DEVELOPMENT PROJECT
CITY OF ESCONDIDO, CALIFORNIA

Prepared for

CITY OF ESCONDIDO
201 N. BROADWAY
ESCONDIDO, CA 92025-2709

Prepared by



CHERYL K. JOHNSON
ACOUSTICAL ANALYST

RECON NUMBER 3859N
MAY 25, 2004

1927 Fifth Avenue
San Diego, CA 92101-2358
P 619.308.9333 F 619.308.9334

RECON

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FIGURES

TABLES

ATTACHMENTS

Summary of Findings

The Grand Avenue Commercial Development project is located in the city of Escondido, California, adjacent to Grand Avenue.

The project site is currently occupied by a single-family home, a school administration building, a commercial building containing a laundry and dry cleaners, and a parking lot. To the north and east of the project site is commercial development. Residential development exists to the west and south of the project site.

The proposed project would remove these buildings, construct a 143,183-square-foot Wal-Mart building, and provide 594 parking spaces on 11.11 acres.

The primary source of noise in the project area is vehicular traffic on Grand Avenue along the southern project boundary. Future noise will be generated from the loading docks, parking lot activity, and heating, ventilation, and air conditioning (HVAC) equipment.

A. On-Site Operations

Parking lot noise and deliveries are not anticipated to violate noise ordinance standards. However, in order to reduce "nuisance noise" to residential areas, nighttime deliveries shall not access the project site from Grand Avenue.

Assuming the same HVAC model would be used at all proposed rooftop locations, it was determined that each unit could produce a maximum of 56 A-weighted decibels [dB(A)] at 50 feet from the source without exceeding the noise ordinance standards. Therefore, prior to issuance of grading permits, the project applicant shall provide specifications for the selection and placement of rooftop HVAC. Selected units shall not produce sound levels in excess of 56 dB(A) at 50 feet from the source. A sound-rated manufacturer's enclosure may be used to achieve the desired noise level.

The rooftop plan indicates two different sized icons for HVAC equipment, as shown below. It should be noted that if the smaller icons correspond to smaller pieces of HVAC equipment with lower noise levels, the maximum noise level restriction on the larger units could be revised. In this case, an acoustical report shall be prepared showing, to the satisfaction of the City Engineer, that equipment will not exceed applicable noise ordinance standards at the project boundaries.

B. Traffic Noise

No significant traffic noise impacts are projected, and no mitigation is required.

C. Construction Noise

Construction shall be limited to the hours of 7:00 A.M. to 6:00 P.M. Mondays through Fridays and from 9:00 A.M. to 5:00 P.M. on Saturdays as stated in the City of Escondido's Noise Ordinance. In accordance with the City's noise ordinance, no construction shall take place on Sundays or on days appointed by the President, Governor, or City Council as a public holiday.

Compliance with the City's noise ordinance will ensure that construction noise impacts are not significant.

Introduction

The Grand Avenue Commercial Development project is located in the city of Escondido, California, adjacent to Grand Avenue. The proposed Wal-Mart commercial retail facility will be located on 11.11 acres. Figure 1 shows the regional location of the project site. Figure 2 shows an aerial photograph of the project site and vicinity.

The project site is currently developed and occupied by a single-family home, a school administration building, a commercial building containing a laundry and dry cleaners, and a parking lot.

The proposed project would remove these buildings, construct a 143,183-square-foot Wal-Mart building, and provide 594 parking spaces. Figure 3 shows the site plan for the project.

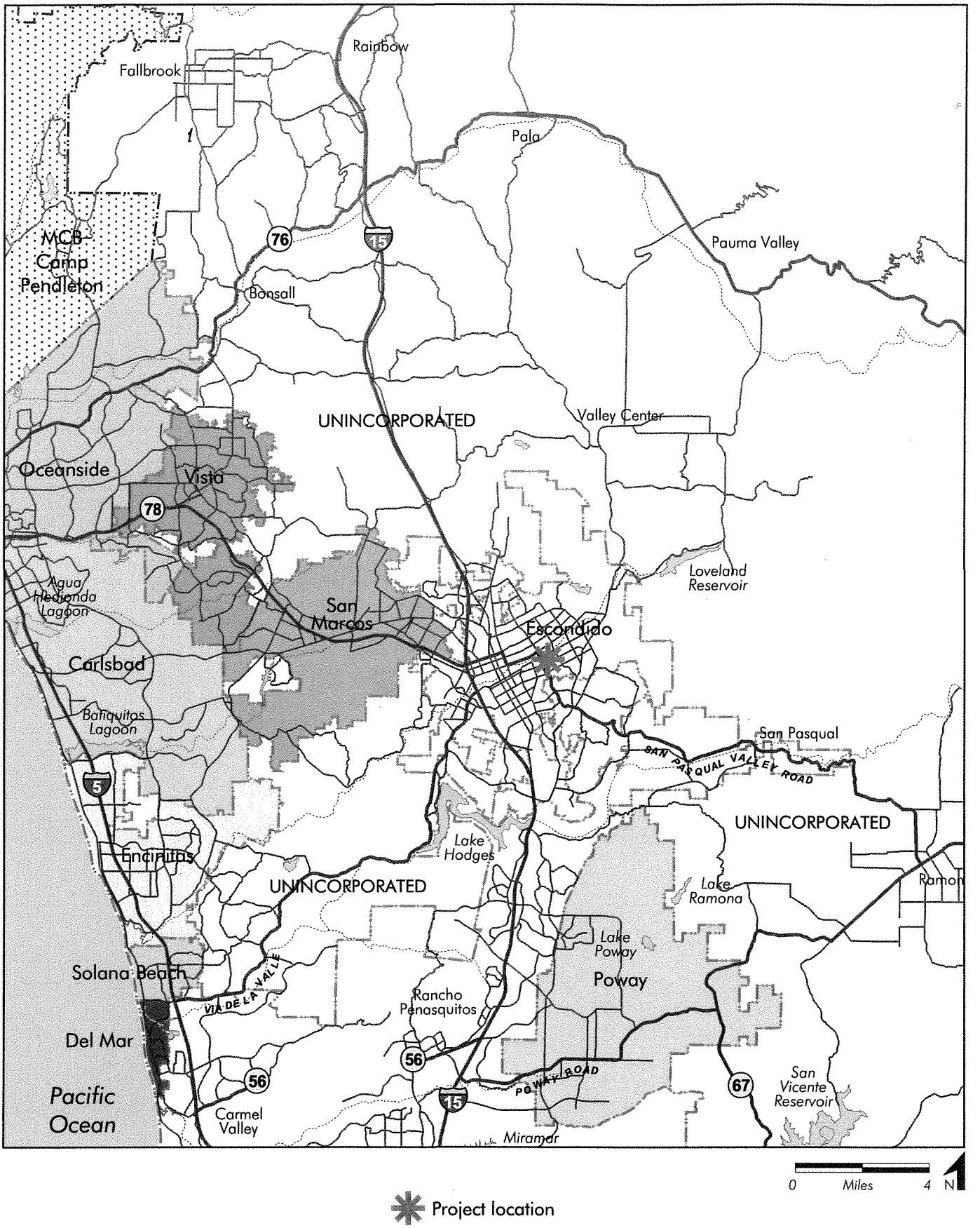
This report summarizes the results of the exterior acoustical analysis. Impacts are assessed in accordance with the guidelines, policies, and standards established by the City of Escondido. Measures are recommended, as required, to reduce significant noise impacts to noise-sensitive areas.

The analysis is based on traffic figures for the year 2030.

Analysis Methodology

A. Applicable Standards and Definitions of Terms

The hourly equivalent sound level (L_{eq}) is the average A-weighted decibel [dB(A)] sound level over a one-hour period. A-weighting is a frequency correction that often correlates well with the subjective response of humans to noise.



RECON

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fig1 (regl) 05/04/04

FIGURE 1
Regional Location

Image Source: Copyright 2001 AirPhotoUSA, LLC, All Rights Reserved (flown January 2001)

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fig2 (aerial) 05/04/04

FIGURE 2
Aerial Photograph of the Project Vicinity

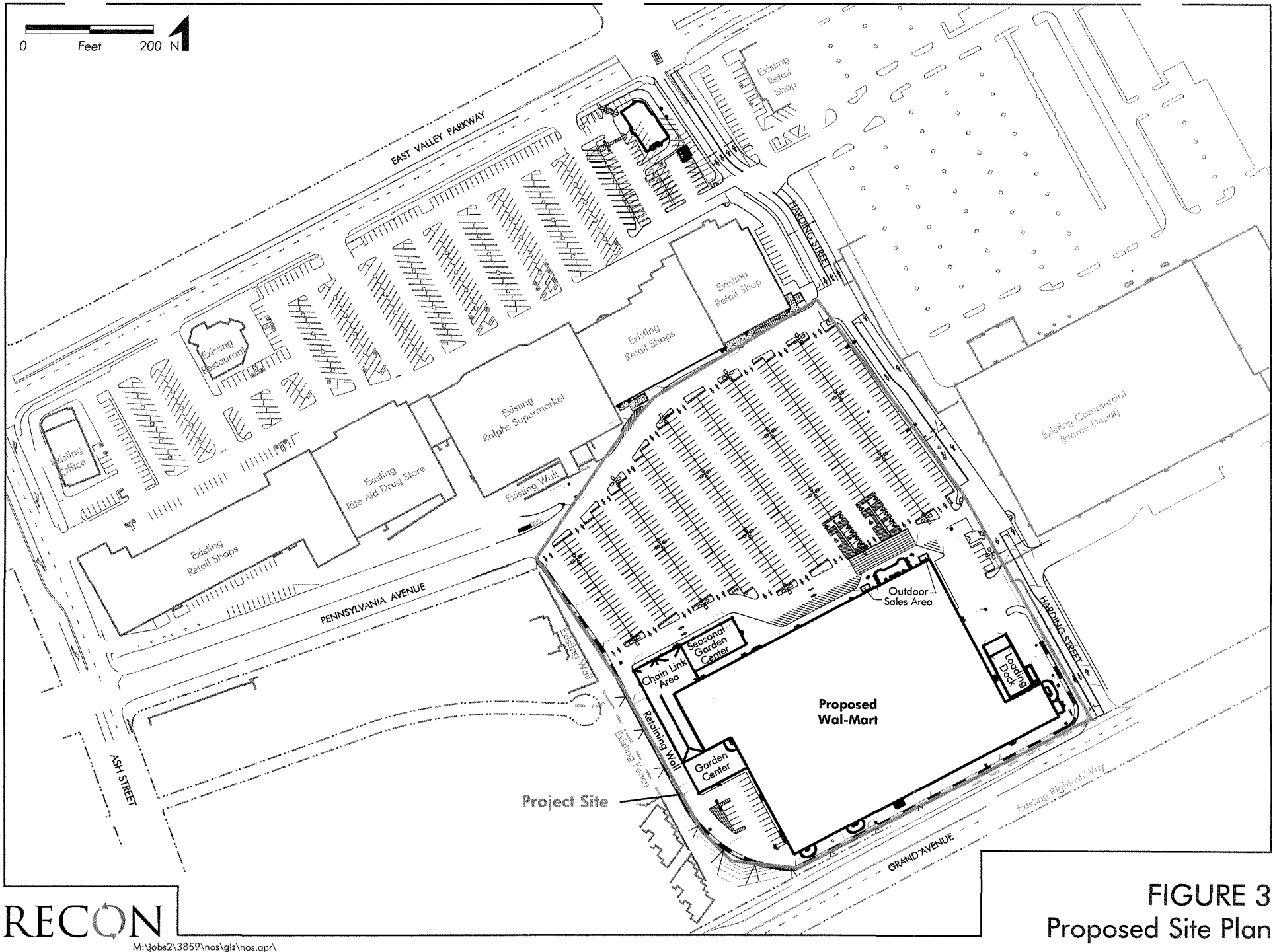

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fig3 (siteplan) 05/04/04

FIGURE 3
Proposed Site Plan

The community noise equivalent level (CNEL) is a 24-hour A-weighted average sound level [dB(A) L_{eq}] from midnight to midnight obtained after the addition of five dB to sound levels occurring between 7:00 P.M. and 10:00 P.M. and of 10 dB to the sound levels occurring between 10:00 P.M. and 7:00 A.M. A-weighting is a frequency correction that often correlates well with the subjective response of humans to noise. Adding 5 dB and 10 dB to the evening and nighttime hours, respectively, accounts for the added sensitivity of humans to noise during these time periods.

Impacts to future project sensitive receivers were evaluated in relation to the noise level standards promulgated in the City of Escondido's *General Plan Noise Element* (1990) and the City's Noise Ordinance (1999).

For comparing the change in ambient noise levels along roadways that would have traffic increases due to implementation of the proposed project, a change in exterior noise levels of 3 dB is considered perceptible; changes of less than 3 decibels in general are not noticeable in the outdoor environment (Bolt, Beranek, and Newman 1973:1-20; Beranek 1988:598-599). Therefore, if the increase in traffic-generated noise along a roadway segment is less than 3 decibels, in general it is not considered a significant impact.

1. City of Escondido

a. On-Site Generated Stationary Noise

All properties adjacent to the proposed project site are zoned as C-G (General Commercial), R-3 (Medium Multiple Residential), or H-P (Hospital Professional). The project site is zoned C-G.

The City of Escondido regulates noise produced on commercial property through the noise ordinance. The City's noise ordinance establishes a limit for one-hour average noise level at any time at the property line of 60 decibels in commercial zones between the hours of 7:00 A.M. and 10:00 P.M. and 55 decibels between the hours of 10:00 P.M. and 7:00 A.M. The adjacent zones of C-G and H-P fall into the commercial category. The City's noise ordinance establishes a limit for one-hour average noise level at any time at the property line of 55 decibels in multi-family residential zones between the hours of 7:00 A.M. and 10:00 P.M. and 50 decibels between the hours of 10:00 P.M. and 7:00 A.M.

Furthermore, the City of Escondido's Noise Ordinance states that:

> (c)(4) If the measured ambient level exceeds that permissible in Subsection (a) above, the allowable noise exposure standard shall be the ambient noise level. The ambient level shall be measured when the alleged noise violations source is not operating.

(c)(5) The sound level limit at a location on a boundary between two (2) land use classifications is the limit applicable to the receiving land use…

b. Off-Highway Vehicle Noise

Truck access to the Wal-Mart site is covered by section 17-230(c) of the Noise Ordinance. This section states that:

> (c) Off-Highway. Except as otherwise provided for in this ordinance, it shall be unlawful to operate any motor vehicle of any type on any site other than on a public street or highway as defined in the California Vehicle Code in a manner so as to cause noise in excess of those noise levels permitted for On-Highway motor vehicles as specified in the table "35 miles per hour or less speed limits" contained in Section 23130 of the California Vehicle Code.

This limit is 86 dB(A) at 50 feet from the source.

c. Traffic Noise

The City of Escondido's General Plan Noise Element establishes a 65 CNEL exterior noise standard for receivers located in commercial land uses. The project site is designated for commercial use. Existing surrounding uses include residences. The City's noise goal for residential exterior use receivers is 60 CNEL. The Noise Element states that this goal should be applied at sensitive outdoor use areas, such as single-family residential backyards, or multi-family housing recreation areas.

d. Construction Noise

The City of Escondido's noise ordinance limits the hours of construction to between 7:00 A.M. and 6:00 P.M. Monday through Friday and between 9:00 A.M. and 5:00 P.M. on Saturday. Construction is not allowed on Sunday. Furthermore, the noise ordinance establishes a limit for one-hour average noise level generated by construction equipment of 75 decibels.

B. Existing Noise Level Measurements

On-site existing noise levels were measured using three Larson-Davis Model 720 Type 2 Integrating Sound Level Meters, serial numbers 0261, 0264 and 0266. The meters were calibrated before use and the following parameters were used:

Filter:	A-weighted
Response:	Fast
Time History Period:	5 seconds

Three simultaneous ground-floor measurements (five feet above the ground) were made for a 15-minute period. Additionally, during the measurements traffic volumes were counted on the adjacent roadways.

C. Traffic Noise Analysis

1. Traffic Parameters

Existing traffic volumes on Grand Avenue were obtained from the project traffic report (Linscott Law & Greenspan [LLG] 2004). The existing traffic volume on Grand Avenue adjacent to the project site is 18,400 average daily trips (ADT). The existing traffic volume on Grand Avenue east of Harding Street is 17,600 ADT. Existing traffic volume on Harding Street adjacent to the project site is approximately 1,300 ADT (Prasad, pers. com. 2004).

Adjacent to the project site, Grand Avenue is a four-lane road with a painted median/turning lane. Grand Avenue has a posted speed limit of 35 miles per hour (mph).

Harding Street provides access to the project site, but is not currently a through street, but will provide through access between Grand Avenue and East Valley Parkway in the future. Harding Street is currently a two-lane road. The speed limit for Harding Street is not posted in the project vicinity.

Future Year 2030 traffic volumes on Grand Avenue were obtained from the project traffic report (Linscott Law & Greenspan; LLG 2003). The future traffic volume on Grand Avenue adjacent to the project site is 21,700 ADT. The future traffic volume on Grand Avenue east of Harding Street is 21,200 ADT. Future traffic volume on Harding Street adjacent to the project site is estimated to be approximately 3,000 ADT (Prasad per. com 2004).

The traffic mix for modeling future conditions on Grand Avenue and Harding Street was based on the mix observed during field traffic counts. The traffic mix used was 98 percent cars, 1.3 percent medium trucks, and 0.7 percent heavy trucks for both roadways.

The average traffic speeds used for modeling future conditions on Grand Avenue was 40 mph and 20 mph on Harding Street, which were found to match the noise measurement data, as discussed below.

A traffic distribution of 77 percent of the ADT during daytime hours, 10 percent during evening hours, and 13 percent during the nighttime hours was assumed for modeling the traffic. With this distribution, the CNEL is approximately two decibels greater than a noise level for an average daytime hour.

2. Analysis of Traffic Noise

Noise generated by future traffic was projected using the STAMINA 2.0 computer model from Vanderbilt University (1991). This model is a computerized version of the Federal Highway Administration (FHWA) Noise Prediction Model (1979), which uses California vehicle noise emission levels (California Department of Transportation [Caltrans] 1983).

The STAMINA program calculates noise levels at selected receiver locations using input parameter estimates such as projected hourly average traffic rates; vehicle mix, distribution, and speed; roadway lengths and gradients; distances between sources, barriers, and receivers; and shielding provided by intervening terrain, barriers, and structures.

Exterior traffic noise levels to first-floor receivers were calculated. First-floor receivers were placed five feet above ground level. Calculations were completed for a daytime hour and the resulting hourly L_{eq}s were weighted and combined into CNEL values. Projected CNEL values based on the traffic distributions used here are approximately two decibels higher than the daytime hourly L_{eq} calculated by STAMINA.

Locations and elevations of pads and slopes for the project site were obtained from the computer-aided design (CAD) files and drawings prepared for the project (Nasland 2003). The alignment and elevations of Grand Avenue and Harding Street were also obtained from the CAD files and from U.S.G.S. topography.

Receivers, roadways, and barriers are entered into the STAMINA model using three-dimensional coordinates. The coordinate system used for the STAMINA model was the NAD83 stateplane coordinate system used in the CAD files.

D. On-Site Activity Noise Analysis

Noise generated by on-site activities was evaluated in reference to the city of Escondido's noise ordinance. Future noise will be generated from the loading docks, parking lot activity, and HVAC equipment.

For parking lot noise, the inverse square law was used to adjust reference noise levels for distance assuming the noise can be treated as a point source. The equation for this calculation is as follows:

$$\Delta = 20 \log (D_o \backslash D)$$

where

Δ = total noise attenuation due to distance
D = distance from source
D_o = reference distance from source

This calculated attenuation was then subtracted from the reference value to determine the noise level at the desired distance.

HVAC noise was modeled with the use of the point source component of the 1991 FHWA Highway Construction Noise Prediction Model (HICNOM) developed by Bowlby and Cohn at Vanderbilt University (1982). The HICNOM program calculates noise levels at selected receiver locations using input parameter estimates such as the location of the point sources, the reference noise levels, the location of receivers, and the size and location of barriers.

Receivers, sources, and barriers are entered into the HICNOM model using three-dimensional coordinates. The coordinate system used for the HICNOM model was NAD83 State Plane.

Locations and elevations of the project site and proposed building were obtained from CAD files and drawings prepared for the project (Nasland 2003, 2004). The elevations of the surrounding topography were also obtained from the CAD files. Locations of adjacent uses were obtained from site visits and aerial photographs.

For modeling future noise levels due to on-site sources, the future elevations of the sources on the project site were used. Elevations of the adjacent uses were also taken into account. Hard-site attenuation was conservatively assumed. The noise source height for the HVAC units was 30 feet above the building pad (five feet above the roof). Sensitive receivers were modeled at five feet above ground elevation. Second-floor multi-family uses were also modeled at 15 feet above the ground elevation. The roof edge and the existing topography along Grand Avenue were modeled as barriers.

Existing Conditions

A. General Information

The project site is currently occupied by a single-family home, a school administration building, a commercial building containing a laundry and dry cleaners, and a parking lot.

To the north and east of the project site is commercial development. Residential development exists to the west and south of the project site.

The primary source of noise in the project area is vehicular traffic on Grand Avenue along the southern project boundary.

All properties adjacent to the proposed project site are zoned as C-G (General Commercial), R-3 (Medium Multiple Residential), or H-P (Hospital Professional). The project site is zoned C-G.

B. Existing Noise Environment

Noise measurements were taken on the project site on Friday, August 25, 2003, between the hours of 1:30 P.M. and 1:45 P.M. The weather was warm, and sunny with a slight breeze. A total of three measurements were taken on the project site. Figure 4 shows the existing site topography and locations of the measurements. The noise measurement data are contained in Attachment 1.

Measurements 1, 2, and 3 were located adjacent to Grand Avenue on the project site as shown in Figure 4. Measurement 1 was located 50 feet west of the Harding Street centerline and 50 feet north of the Grand Avenue centerline. Measurement 2 was located 100 feet west of the Harding Street centerline and 100 feet north of the Grand Avenue centerline. Measurement 3 was located 150 feet west of the Harding Street centerline and 50 feet north of the Grand Avenue centerline. The existing ground is paved with asphalt. The project site is at the same level as Grand Avenue at Harding Street. To the west of Harding Street, Grand Avenue slopes upwards.

Traffic on Grand Avenue and Harding Street was counted during this measurement interval. The average measured noise level was 66.4 dB(A) at Location 1, 58.9 dB(A) at Location 2, and 57.3 dB(A) at Location 3.

Table 1 provides the results of the traffic counts. The noise measurement results are summarized in Table 2.

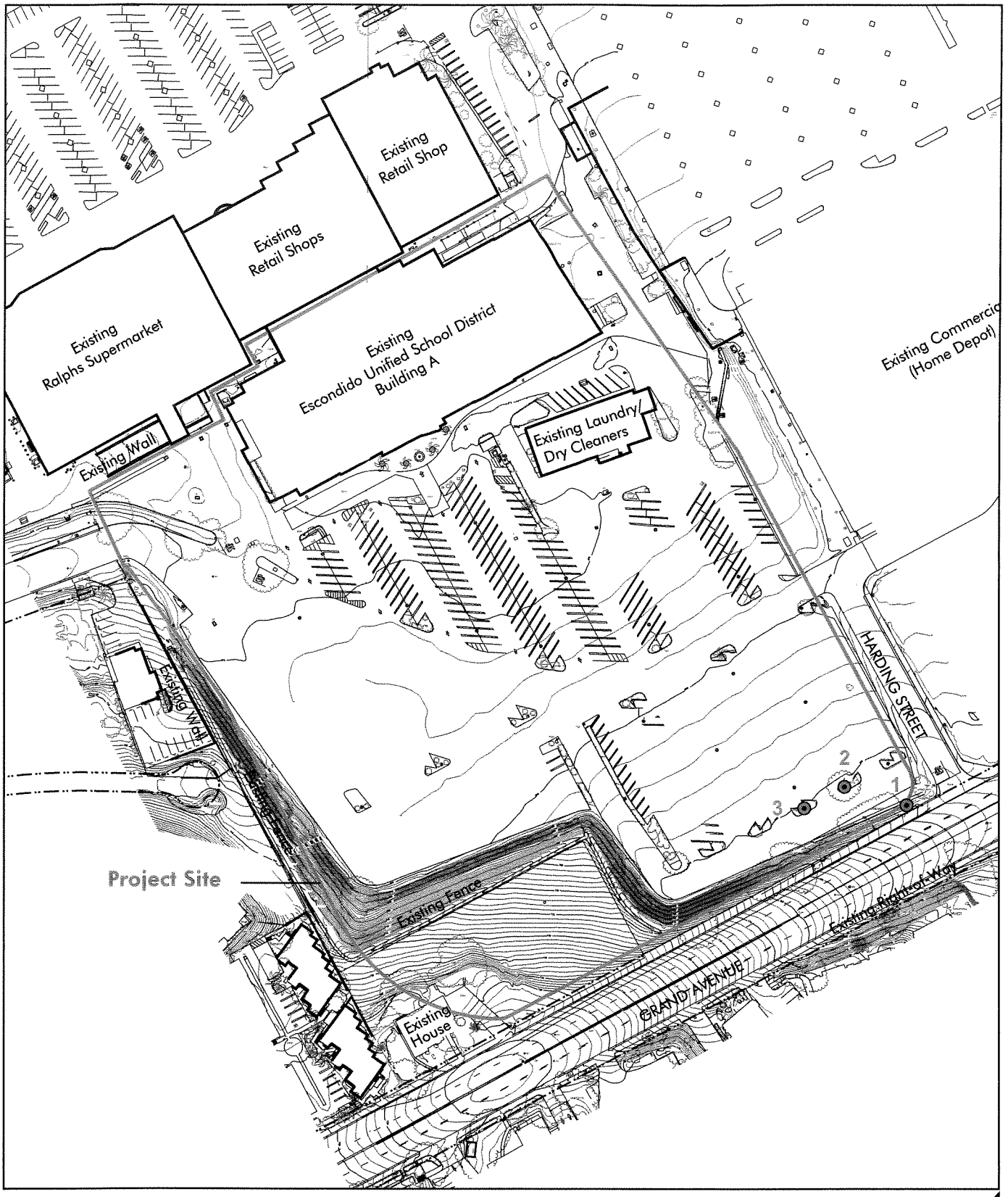

FIGURE 4
Existing Topography and
Noise Measurement Locations

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TABLE 1
15-MINUTE TRAFFIC COUNTS

Roadway	Cars	Motorcycles	Medium Trucks	Buses	Heavy Trucks
Harding Street, northbound	24	0	0	0	0
Harding Street, southbound	9	0	0	0	0
Grand Avenue, eastbound	115	0	2	1	0
Grand Avenue, westbound	179	0	1	0	0

TABLE 2
SUMMARY OF NOISE MEASUREMENT DATA
[dB(A) L_{eq}]

Measurement Location	Measured Noise Levels	Modeled Noise Levels	Difference
1	66.4	66.0	-0.4
2	58.9	58.9	0.0
3	57.3	57.7	+0.4

To determine whether the computer-modeled parameters to be used were reasonable, the STAMINA model was run using the observed traffic volumes and mix data indicated in Table 1, as well as the existing topography.

The STAMINA model allows the user to choose between acoustically "hard" or "soft" site conditions. Hard sites have an attenuation of 3 dB for every doubling of distance from a line source; soft sites have an attenuation of 4.5 dB for every doubling of distance. Hard site conditions are generally appropriate for all situations except where:

> The height of the line of sight [between the source and receiver] is less than three meters; and
>
> The view of the roadway is interrupted by isolated buildings, clumps of bushes, scattered trees, or the intervening ground is soft or covered with vegetation (FHWA 1979).

Under those situations, soft site conditions may be assumed.

Using these criteria, hard site conditions were assumed for all measurement locations.

The model output should be close to the same level as the measured value if the model is accurately representing the existing physical conditions. STAMINA input and output data for modeling the measured conditions are provided in Attachment 2.

The traffic volumes and mixes observed during the measurements were used in the model and the average traffic speeds on the roadways were varied until the STAMINA output reasonably matched the measured noise levels.

Table 2 shows the measured noise levels compared with the modeled noise levels using these assumptions. The modeled noise levels indicated in Table 2 were generated assuming an average speed of 40 mph on Grand Avenue and 20 mph on Harding Street.

From Table 2, it can be seen that the modeled parameters in STAMINA result in relatively good agreement between the measured and modeled noise levels.

Future Acoustical Environment and Impacts

The methods used in the analysis of future conditions are described in the Analysis Methodology section of this report. The traffic parameters used are listed in the Traffic Parameters section above.

A. On-Site Operations

Future noise will be generated from the loading docks, parking lot activity, and HVAC equipment.

The City of Escondido's noise ordinance states that if existing noise levels exceed the noise ordinance levels, the existing noise levels shall be used as the standard, as discussed in the Applicable Standards section above. Therefore, existing nighttime traffic noise levels were modeled using STAMINA at 10 receiver locations at the project boundaries to determine if nighttime traffic noise levels exceed the noise ordinance standards. Ground-floor noise levels were modeled at all 10 locations. Additionally, second-floor noise levels were modeled at residential locations. The resulting noise levels are shown in Table 3. The receiver locations are shown in Figure 5. STAMINA input and output are provided in Attachment 3. The traffic mix and distribution for Grand Avenue and Harding Street discussed above for nighttime hours was used. The nighttime noise ordinance levels and the applicable nighttime noise standards to be used in the project analysis for on-site activity at each receiver location are also shown in Table 3.

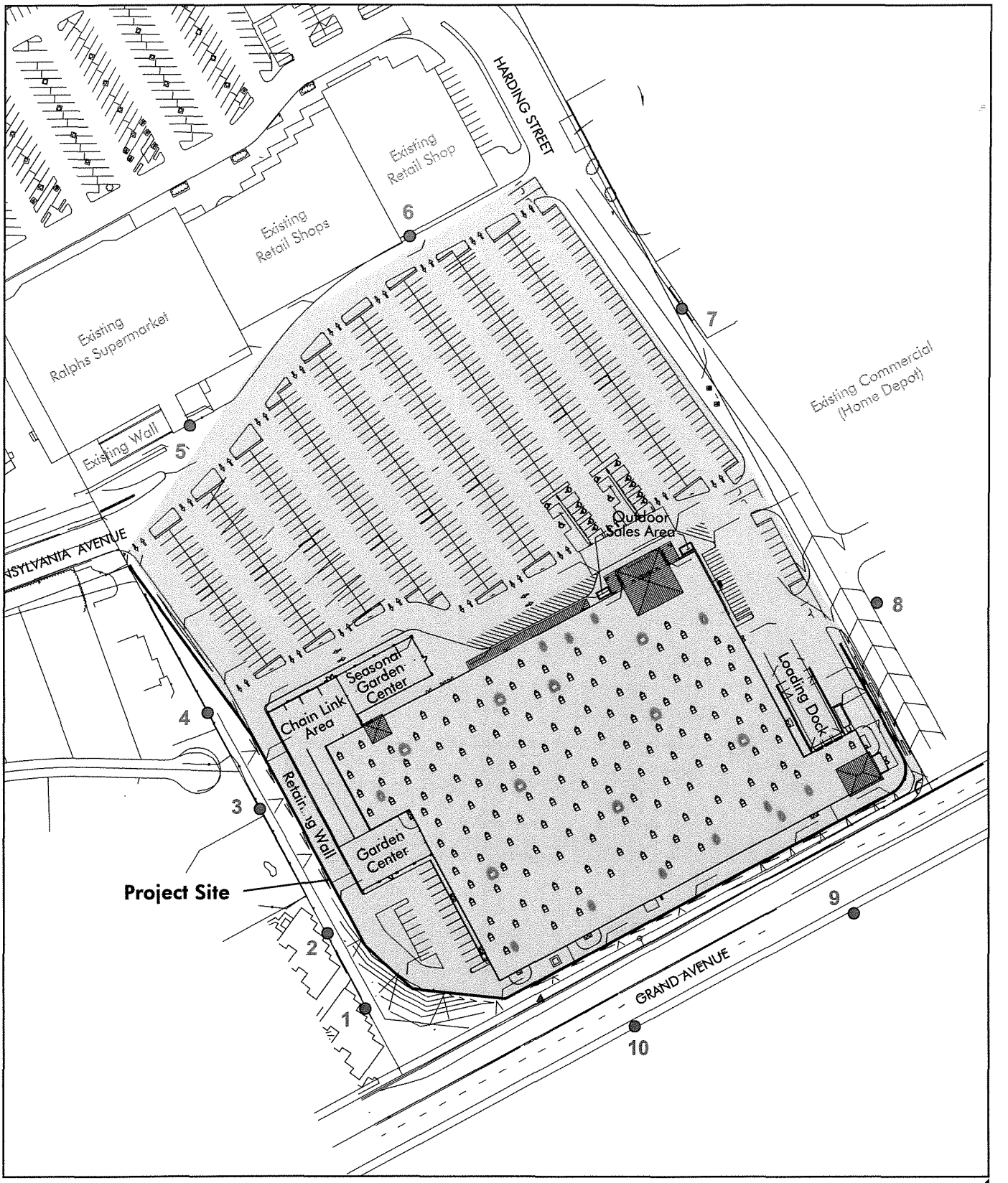

FIGURE 5
Adjacent Property Receiver Locations and Rooftop Design

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TABLE 3
EXISTING NIGHTTIME TRAFFIC NOISE LEVELS
AND APPLICABLE NIGHTTIME NOISE ORDINANCE STANDARDS

Receiver Location	Nighttime Traffic Noise Level [dB(A) L_{eq}]	Land Use Category	Land Use Nighttime Noise Ordinance Standard	Applicable Noise Ordinance Standard
1 first floor)	55	Multi-Family	50	55
1 (second floor)	57	Multi-Family	50	57
2 (first floor)	53	Multi-Family	50	53
2 (second floor)	53	Multi-Family	50	53
3	50	Commercial	55	55
4	48	Commercial	55	55
5	46	Commercial	55	55
6	45	Commercial	55	55
7	47	Commercial	55	55
8	54	Commercial	55	55
9 (first floor)	63	Multi-Family	50	63
9 (second floor)	62	Multi-Family	50	62
10 (first floor)	63	Multi-Family	50	63
10 (second floor)	63	Multi-Family	50	63

1. Parking Lot Activity

Noise measurements taken at an office building parking lot indicate a reference hourly noise level of 33.7 dB(A) per vehicle at 50 feet from the source (RECON 2002). The project parking lot is designed to have 594 parking spaces. The project traffic report specifies that worst-case peak hour project trip generation is 720 one-way trips. The resulting noise level for 720 cars entering or leaving the parking lot would be 62.3 dB(A) $L_{eq(1)}$ at 50 feet from the center of the parking lot. The center of the parking lot is approximately 175 feet from the nearest project boundary. Average hourly noise levels due to parking lot noise would attenuate to 51.4 dB(A) $L_{eq(1)}$ at the nearest property boundary. Therefore, no significant impacts due to activities in the parking lot are anticipated.

2. Deliveries

The proposed project will accept delivery trucks 24 hours a day, 7 days a week. Noise will be generated from these deliveries by trucks driving through the parking lot to and from the loading docks; by trucks detaching or attaching a trailer; and by forklifts moving pallets.

The truck activity driving to and from the loading docks is regulated by the City's noise ordinance for off-highway vehicles, which has a noise limit of 86 dB(A) at 50 feet from the source. Pass-by effects of trucks were measured to range between 67 and 73 decibels for passes taking between three and four minutes at a distance of 25 feet (RECON 2003). Truck activity is therefore anticipated to be within the noise ordinance standard.

Noise levels due to miscellaneous loading dock activities such as trucks attaching or detaching a trailer and forklifts moving pallets generate 63 dB(A) L_{eq} at a distance of 50 feet, as measured at another Wal-Mart facility (Gonzalez, pers. com. 2003). These noises would be short-term individual events and are therefore not anticipated to exceed hourly average noise ordinance standards.

Noise levels due to truck and delivery activity at the loading dock would be shielded from nearby residences by the proposed building. Therefore, noise from the project site is not anticipated to violate noise ordinances. However, if nighttime deliveries access the project site from Grand Avenue, they could be perceived as a "nuisance noise." Therefore, it is recommended that nighttime deliveries do not access the project site from Grand Avenue.

3. HVAC Noise

Figure 5 shows the rooftop design for the project along with the 10 modeled receiver locations from Table 3. As seen in Figure 5, HVAC units are proposed at 21 locations.

Manufacturer's noise specifications for a variety of HVAC equipment was provided by the project engineer (Gonzalez, pers. com. 2004). It is not known at this time which unit or units will be selected for use in the project. Therefore, a worst-case assessment was performed using data for the loudest unit. The loudest unit produces a noise level of 73 dB(A) at 50 feet from the source.

Using this loudest noise level, HVAC noise was modeled with the use of HICNOM. HICNOM input and output are provided in Attachment 4. The modeled receivers (see Figure 5) were placed at the property lines where the noise ordinance standards apply. The noise sources were located at the approximate centers of the HVAC units. The resulting noise levels at the modeled receivers are shown in Table 4.

TABLE 4
HVAC NOISE LEVELS

Receiver	Worst-Case Projected Noise Level ($L_{eq[1]}$)	Applicable Noise Ordinance Standard	Projected Noise Level ($L_{eq[1]}$) with 56 dB(A) Sources
1 (first floor)	69	55	52
1 (second floor)	69	57	52
2 (first floor)	70	53	53
2 (second floor)	70	53	53
3	70	55	53
4	66	55	49
5	60	55	43
6	60	55	42
7	60	55	43
8	64	55	47
9 (first floor)	70	63	53
9 (second floor)	71	62	54
10 (first floor)	70	63	53
10 (second floor)	70	63	53

As seen in Table 4, the loudest HVAC model at all locations would result in noise levels exceeding the noise ordinance at all project boundaries.

Assuming the same HVAC model would be used at all locations, it was determined that each unit could produce a maximum of 56 dB(A) at 50 feet from the source without exceeding the noise ordinance standards. The resulting noise levels with 56 dB(A) sources are also shown in Table 4.

B. Traffic Noise

1) Project Receivers

The only outdoor useable area of the proposed Wal-Mart adjacent to Grand Avenue is the Garden Center located on the southwest corner of the building. The remaining outdoor useable areas (seasonal garden center and outdoor sales areas) are shielded from traffic

noise by the building, and are not considered further in this analysis. Future traffic noise levels at existing residential buildings were also modeled.

Noise levels were modeled at one outdoor useable location at the project site to determine the future noise level due to traffic on the area roadways. The receiver was modeled at five feet above the local ground. The receiver location is shown in Figure 6.

STAMINA input and output are provided in Attachment 5. This noise level includes the effects of future grading on the property. The noise level does not take into account any shielding provided by the proposed building. Hard site conditions were used in modeling the noise levels at this receiver.

The resulting noise level is shown in Table 5. As shown from this table, future noise levels at the project's Garden Center are projected to be within the City's 65 CNEL standard for commercial outdoor sensitive receivers. Future traffic noise levels at all exterior noise sensitive areas on the project site are therefore projected to be less than 65 CNEL.

TABLE 5
FUTURE PROJECTED TRAFFIC NOISE LEVELS

Receiver	Year 2030 Noise (CNEL)
Garden Center	56.1

2) Adjacent Residential Receivers

To assess the effects of project traffic on adjacent residences, existing noise levels were modeled at five locations at existing residences adjacent to Grand Avenue.

The receivers were modeled at five feet above the local ground. The receiver locations are shown in Figure 7.

STAMINA input and output are provided in Attachment 6. These noise levels include the effects of future grading on the property. The noise levels do not take into account any shielding provided by the proposed building. Hard site conditions were used in modeling the noise levels at these receivers.

The resulting noise levels are shown in Table 6. As seen in Table 6, existing noise levels at the existing residences exceed the City's exterior noise standard of 60 CNEL. The

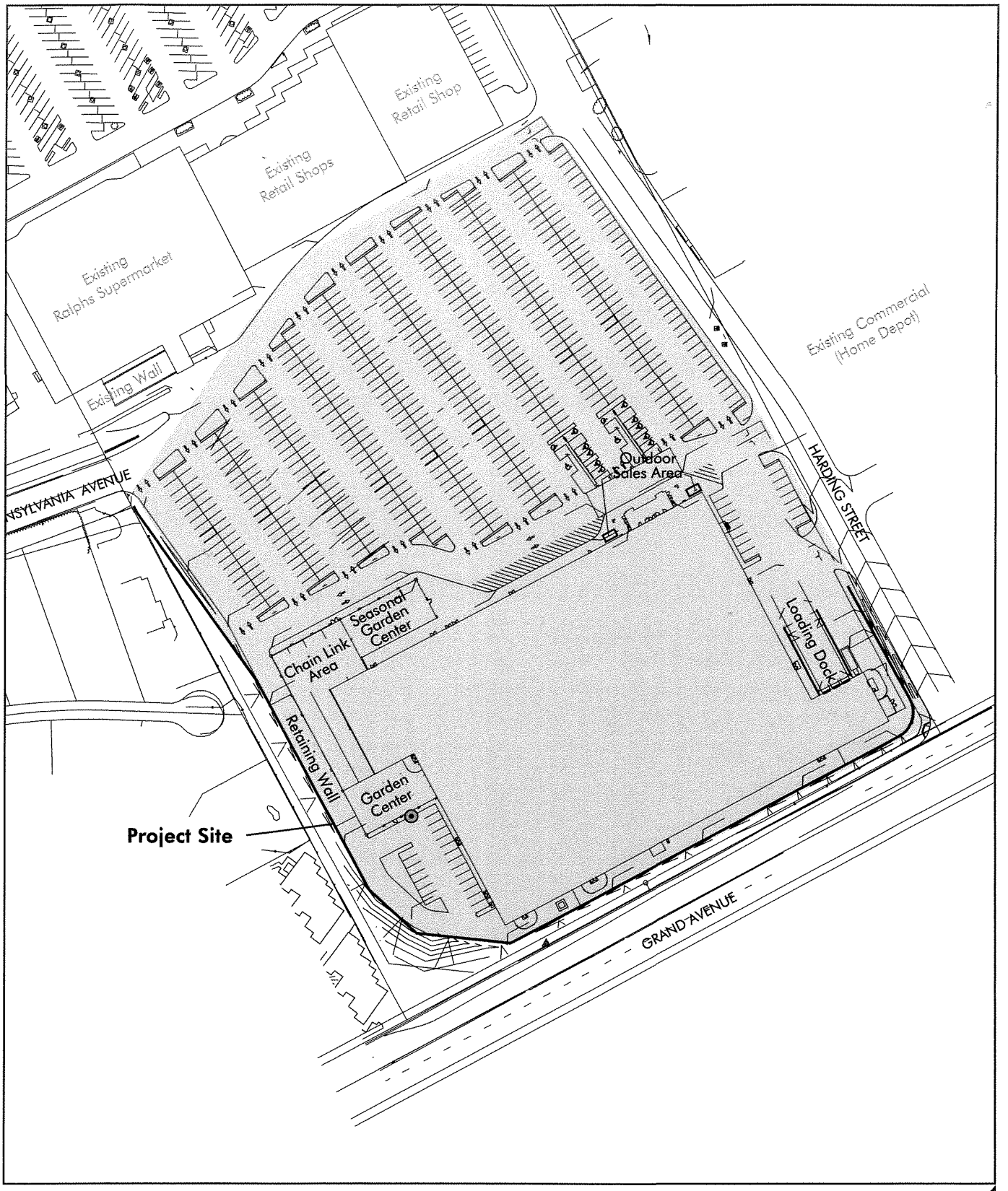

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FIGURE 6
Future Traffic Noise Project Receiver Location

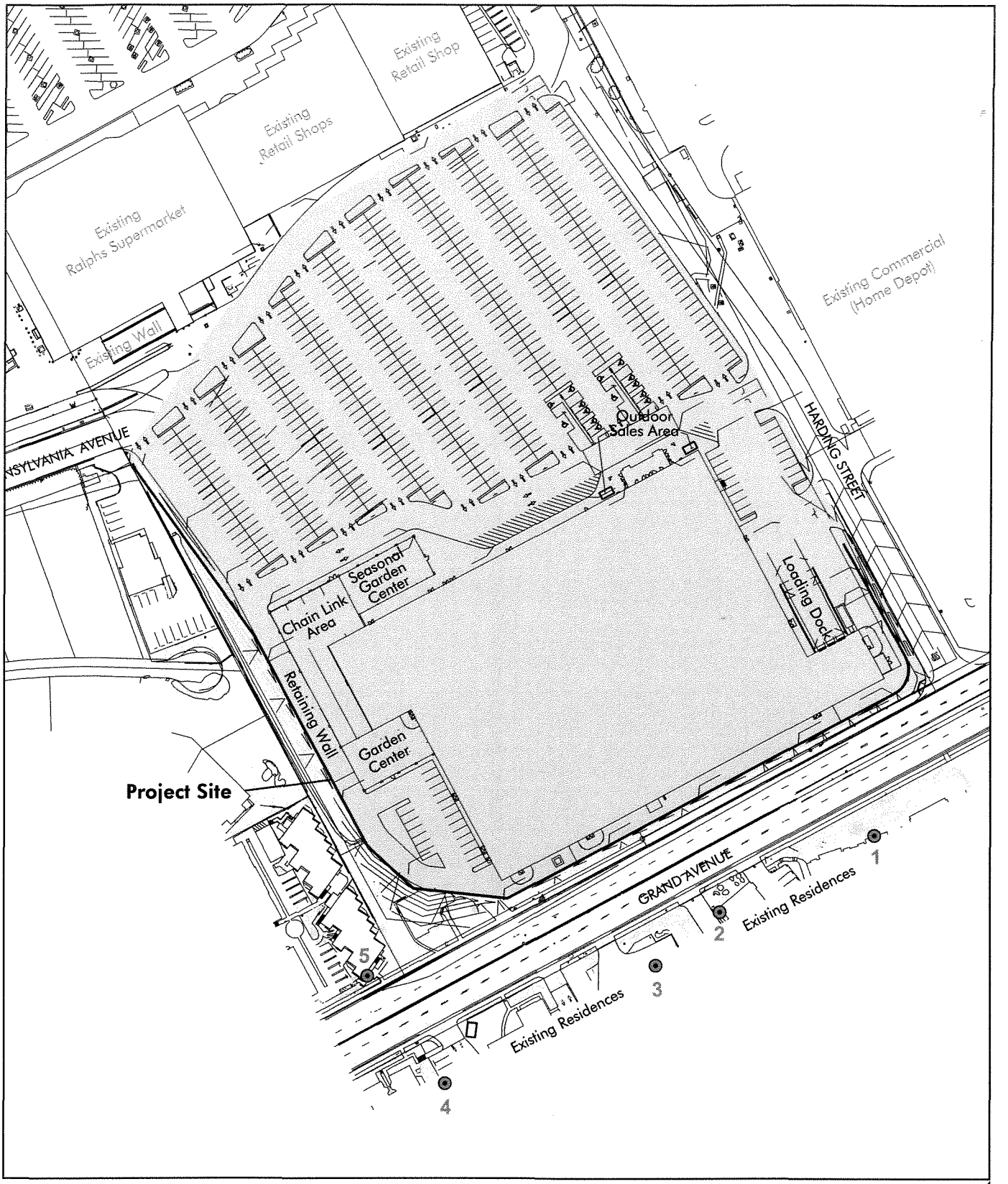

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FIGURE 7
Future Traffic Noise Residential Receiver Locations

location of these modeled residential receivers was at the front of the buildings. Noise levels at exterior useable areas may be lower.

To assess the contribution of project traffic on noise levels at existing residences, existing traffic volumes plus the project traffic contribution were also modeled, and are shown in Table 6.

TABLE 6
PROJECTED TRAFFIC NOISE LEVELS AT RESIDENTIAL RECEIVERS

Receiver Number	Existing Noise (w/o Project Traffic) (CNEL)	Existing + Project Traffic Noise (CNEL)	Project Traffic Noise Contribution [dB(A)]	Existing + Project + Cumulative Projects Traffic Noise (CNEL)	Project + Cumulative Projects Traffic Noise Contribution [dB(A)]
1	68.2	68.4	0.2	68.7	0.5
2	68.6	68.9	0.3	69.2	0.6
3	67.4	67.6	0.2	68.0	0.6
4	67.3	67.5	0.2	67.9	0.6
5	69.8	70.0	0.2	70.4	0.6

As can be seen in Table 6, future noise levels at residential receiver locations adjacent to Grand Avenue are projected to exceed the City's 60 CNEL residential noise goal. As seen in Table 6, the project-generated traffic only contributes between two and three-tenths of a decibel. The two- to three-tenths of a decibel contributed by project traffic is not a perceptible difference, and would not result in a significant impact.

To assess cumulative significance, noise levels due to existing traffic volumes plus project and cumulative projects traffic (LLG 2004) are also shown in Table 6. STAMINA input and output are provided in Attachment 6. As can be seen in Table 6, the project traffic plus cumulative project traffic would result in a noise increase of approximately five- to six-tenths of a decibel, and would not result in a cumulatively considerable significant impact.

C. Construction

Noise associated with the earthwork, demolition, construction, and surface preparation of the proposed project will result in short-term impacts. A variety of noise-generating equipment would be used during the construction phase of the project such as scrapers, dump trucks, backhoes, front-end loaders, jackhammers, concrete mixers, along with others.

Table 7 indicates the types of construction equipment typically involved in the construction projects. This type of equipment can individually generate noise levels that range between 77 and 91 dB(A) at 50 feet from the source as listed in Table 7. Construction activities are estimated to generate average noise levels of 83-84 dB(A) L_{eq} 50 feet from the site of construction (Bolt, Beranek, and Newman, Inc. 1971). This value is based on empirical data on the number and types of equipment at a construction site and their average cycle of operation.

TABLE 7
MEASURED NOISE LEVELS OF
COMMON CONSTRUCTION EQUIPMENT

Equipment	Approximate Noise Level (dBA)
Air compressor	81
Backhoe	85
Concrete Mixer	85
Dozer	80
Generator	78
Grader	85
Jackhammer	88
Loader	79
Paver	89
Pneumatic tool	86
Saw	78
Scraper	88
Truck	91

SOURCE: Bolt, Beranek, and Newman 1971.

NOTE: Noise levels at 50 feet from the source.

Construction noise generally can be treated as a point source and would attenuate at approximately 6 dB(A) for every doubling of distance. A noise level of 84 dB(A) L_{eq} would attenuate to 75 dB(A) L_{eq} at approximately 150 feet from the noise source.

As stated above, the City of Escondido establishes a one-hour average noise level limit of 75 decibels for noise generated by construction equipment. Since a distance from the source where this limit applies is not specified, it would be reasonable to assume that this noise limit would apply at the property boundaries.

Construction activities, such as grading, which generate the loudest noise levels will occur over the entire site and would not be situated at any one location for a long period

of time. Therefore, the acoustic center of the construction activity was assumed to be the center of the project site. As can be seen in Figure 2, the center of the project site is approximately 330 feet from the nearest project boundaries. Therefore, construction noise levels are projected to be below City standards.

Mitigation

A. On-Site Operations

In order to reduce "nuisance noise" to residential areas, nighttime deliveries shall not access the project site from Grand Avenue.

As discussed above, assuming the same HVAC model would be used at all proposed locations, it was determined that each unit could produce a maximum of 56 dB(A) at 50 feet from the source without exceeding the noise ordinance standards. Therefore, prior to issuance of grading permits, the project applicant shall provide specifications for the selection and placement of rooftop HVAC. Selected units shall not produce sound levels in excess of 56 dB(A) at 50 feet from the source. A sound-rated manufacturer's enclosure may be used to achieve the desired noise level.

As seen in Figure 5 the rooftop plan indicates two different-sized icons for HVAC equipment. It should be noted that if the smaller icons correspond to smaller pieces of HVAC equipment with lower noise levels, the maximum noise level restriction on the larger units could be revised. In this case, an acoustical report shall be prepared showing, to the satisfaction of the City Engineer, that equipment will not exceed applicable noise ordinance standards at the project boundaries.

B. Traffic Noise

No significant traffic noise impacts are projected, and no mitigation is required.

C. Construction

Construction shall be limited to the hours of 7:00 A.M. to 6:00 P.M. Mondays through Fridays and from 9:00 A.M. to 5:00 P.M. on Saturdays as stated in the City of Escondido's Noise Ordinance. In accordance with the City's noise ordinance, no construction shall take place on Sundays or on days appointed by the President, Governor, or City Council as a public holiday.

Compliance with the City's noise ordinance will ensure that construction noise impacts are not significant.

References Cited

Beranek, Leo L., editor

1988 *Noise and Vibration Control.* Rev. ed. Institute of Noise Control Engineering. Washington, D.C.

Bolt, Beranek, and Newman, Inc.

1971 *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances.* Prepared for the U.S. Environmental Protection Agency, Office of Noise Abatement and Control. NTID300.1. December 31. Cambridge, Mass.

California Department of Transportation (Caltrans)

1983 California Vehicle Noise Emission Levels. Report No. FHWA/CA/Tl-84/13. August.

Federal Highway Administration (FHWA)

1979 Federal Highway Administration Noise Prediction Model, Report No. FHWA-RD-77-108, with California Vehicle Noise Emissions Levels. Federal Highway Administration, Washington, D.C.

Escondido, City of

1990 Escondido General Plan, Noise Element. Adopted June 6.

1999 Ordinance No. 90-8, Article XII. Noise Abatement and Control. Received January 7.

Gonzalez, Anthony

2003 Personal communications with Donna Steel, RECON. Nasland Engineering. November 5.

2004 Personal communications with Cheryl Johnson, RECON. Nasland Engineering. March 17.

Linscott Law & Greenspan

2004 Traffic Impact Analysis; Escondido Walmart; Escondido, California. July 7.

Nasland Engineering

2003 CAD files and project drawings received by RECON. July 23, August 27, and November 5.

2004 Rooftop project drawings received by RECON. March 8.

Prasad, Narasimha
2004 Personal communications with Cheryl Johnson, RECON. Linscott Law & Greenspan. April 26.

RECON
2002 Noise Technical Report for the Parking Structure for Corporate Plaza Office Building. RECON Number 3749N. December 12.

2003 Noise Assessment for the Villages at Lomas Santa Fe Plaza. RECON Number 3864N. July 8.

Vanderbilt University
1982 User's Manual for FHWA Highway Construction Noise Computer Program, HICNOM. Highway Construction Noise – Environmental Assessment and Abatement, Volume IV. VTR 81-2. May.

1991 STAMINA 2.0/OPTIMA Noise Prediction Program. Version 1.2. Prepared by Bowlby and Associates.

ATTACHMENTS

ATTACHMENT 1

KEY TO FILE CODES

ATTACHMENT 1

Walmart Site_Meter264	Walmart Site Measurement Location 1
Walmart Site_Meter261	Walmart Site Measurement Location 2
Walmart Site_Meter266	Walmart Site Measurement Location 3

C:\NOISE\LARDAV\SLMUTIL\22AUG_13.bin Interval Data

Site	Location	Meas Number	Date	Time	Duration	Leq	SEL	Lmax	Lmin	Peak	Uwpk
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0		0	22Aug 03	13:25:00	60.0	67.5	85.2	82.8	52.5	93.7	99.4
0		0	22Aug 03	13:26:00	60.0	66.5	84.2	73.2	50.6	87.5	0.0
0		0	22Aug 03	13:27:00	60.0	64.0	81.7	72.6	47.4	83.9	0.0
0		0	22Aug 03	13:28:00	60.0	63.7	81.5	71.8	50.8	82.8	0.0
0		0	22Aug 03	13:29:00	60.0	63.7	81.4	72.2	50.6	83.9	0.0
0		0	22Aug 03	13:30:00	60.0	65.9	83.7	74.2	54.7	85.9	0.0
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0		0	22Aug 03	13:33:00	60.0	67.2	85.0	76.3	46.8	87.9	96.9
0		0	22Aug 03	13:34:00	60.0	67.6	85.4	76.6	48.7	87.5	96.9
0		0	22Aug 03	13:35:00	60.0	63.1	80.9	73.7	47.0	85.4	0.0
0		0	22Aug 03	13:36:00	60.0	65.9	83.7	73.0	51.2	84.3	0.0
0		0	22Aug 03	13:37:00	60.0	66.7	84.5	72.5	54.6	84.8	0.0
0		0	22Aug 03	13:38:00	60.0	66.1	83.9	73.2	54.2	85.9	0.0
0		0	22Aug 03	13:39:00	60.0	65.2	83.0	73.3	51.4	85.8	0.0
0		0	22Aug 03	13:40:00	60.0	63.8	81.6	73.8	48.3	85.8	96.9
0		0	22Aug 03	13:41:00	60.0	68.6	86.4	77.5	55.0	89.1	96.9
0		0	22Aug 03	13:42:00	60.0	63.8	81.5	70.7	52.6	82.1	0.0
0		0	22Aug 03	13:43:00	60.0	66.0	83.8	74.6	50.8	85.5	96.9
0		0	22Aug 03	13:44:00	60.0	66.7	84.5	74.2	51.6	85.8	0.0
0		0	22Aug 03	13:45:00	60.0	63.4	81.2	72.1	51.0	82.9	0.0
0		0	22Aug 03	13:46:00	45.0	68.5	85.1	74.5	58.2	86.4	96.9

C:\NOISE\LARDAV\SLMUTIL\22AUG_13.bin Time History Data
Sample Period (sec): 5.000

Site	Location	Meas Number	Date	Time	Level	Lmax
Measurement 1						
0		0	22Aug 03	13:24:40	68.4	70.6
0		0	22Aug 03	13:24:45	69.9	72.0
0		0	22Aug 03	13:24:50	67.1	69.3
0		0	22Aug 03	13:24:55	60.2	66.0
0		0	22Aug 03	13:25:00	65.1	74.3
0		0	22Aug 03	13:25:05	75.5	82.8
0		0	22Aug 03	13:25:10	68.3	73.5
0		0	22Aug 03	13:25:15	67.6	71.0
0		0	22Aug 03	13:25:20	65.5	70.6
0		0	22Aug 03	13:25:25	57.9	65.7
0		0	22Aug 03	13:25:30	65.4	72.1
0		0	22Aug 03	13:25:35	63.8	71.6
0		0	22Aug 03	13:25:40	59.4	67.9
0		0	22Aug 03	13:25:45	64.4	68.9
0		0	22Aug 03	13:25:50	59.4	64.1
0		0	22Aug 03	13:25:55	57.6	62.8
0		0	22Aug 03	13:26:00	54.2	57.7
0		0	22Aug 03	13:26:05	69.3	72.6
0		0	22Aug 03	13:26:10	67.8	70.6
0		0	22Aug 03	13:26:15	66.9	69.3
0		0	22Aug 03	13:26:20	70.1	73.2
0		0	22Aug 03	13:26:25	64.6	67.6
0		0	22Aug 03	13:26:30	67.4	71.7
0		0	22Aug 03	13:26:35	66.7	70.2
0		0	22Aug 03	13:26:40	65.4	71.1
0		0	22Aug 03	13:26:45	62.9	69.0
0		0	22Aug 03	13:26:50	63.7	67.0
0		0	22Aug 03	13:26:55	64.2	66.7
0		0	22Aug 03	13:27:00	66.8	71.0
0		0	22Aug 03	13:27:05	54.0	57.7
0		0	22Aug 03	13:27:10	49.1	52.2
0		0	22Aug 03	13:27:15	58.6	64.8
0		0	22Aug 03	13:27:20	60.2	66.5
0		0	22Aug 03	13:27:25	66.3	72.6
0		0	22Aug 03	13:27:30	51.0	55.3
0		0	22Aug 03	13:27:35	60.1	67.1
0		0	22Aug 03	13:27:40	66.3	69.5
0		0	22Aug 03	13:27:45	65.5	69.1
0		0	22Aug 03	13:27:50	67.7	69.8
0		0	22Aug 03	13:27:55	65.8	69.1
0		0	22Aug 03	13:28:00	67.2	70.8
0		0	22Aug 03	13:28:05	60.2	62.5
0		0	22Aug 03	13:28:10	58.2	60.3
0		0	22Aug 03	13:28:15	60.7	64.6
0		0	22Aug 03	13:28:20	54.9	56.1
0		0	22Aug 03	13:28:25	66.7	70.8
0		0	22Aug 03	13:28:30	63.8	67.0
0		0	22Aug 03	13:28:35	59.7	66.2
0		0	22Aug 03	13:28:40	61.8	64.5
0		0	22Aug 03	13:28:45	55.4	59.0
0		0	22Aug 03	13:28:50	65.0	71.5
0		0	22Aug 03	13:28:55	68.2	71.8
0		0	22Aug 03	13:29:00	58.5	61.3
0		0	22Aug 03	13:29:05	52.8	54.3
0		0	22Aug 03	13:29:10	67.0	72.0
0		0	22Aug 03	13:29:15	60.3	68.2
0		0	22Aug 03	13:29:20	55.6	61.2
0		0	22Aug 03	13:29:25	64.4	66.1
0		0	22Aug 03	13:29:30	69.5	72.2
0		0	22Aug 03	13:29:35	66.7	68.6
0		0	22Aug 03	13:29:40	59.2	62.6
0		0	22Aug 03	13:29:45	61.2	64.3
0		0	22Aug 03	13:29:50	59.2	63.7
0		0	22Aug 03	13:29:55	60.7	63.3
0		0	22Aug 03	13:30:00	60.8	63.2
0		0	22Aug 03	13:30:05	62.5	71.1
0		0	22Aug 03	13:30:10	67.9	71.0
0		0	22Aug 03	13:30:15	66.0	70.0
0		0	22Aug 03	13:30:20	57.8	62.0
0		0	22Aug 03	13:30:25	63.0	67.3
0		0	22Aug 03	13:30:30	66.9	72.1
0		0	22Aug 03	13:30:35	57.4	59.1
0		0	22Aug 03	13:30:40	69.4	74.2
0		0	22Aug 03	13:30:45	60.1	64.6
0		0	22Aug 03	13:30:50	71.0	73.8
0		0	22Aug 03	13:30:55	65.2	69.1
0		0	22Aug 03	13:31:00	59.0	63.3
0		0	22Aug 03	13:31:05	67.1	70.6
0		0	22Aug 03	13:31:10	74.6	79.2
0		0	22Aug 03	13:31:15	71.3	74.7
0		0	22Aug 03	13:31:20	69.0	70.1
0		0	22Aug 03	13:31:25	68.0	69.6
0		0	22Aug 03	13:31:30	63.9	65.7
0		0	22Aug 03	13:31:35	62.3	65.6
0		0	22Aug 03	13:31:40	60.8	65.5
0		0	22Aug 03	13:31:45	53.4	57.3
0		0	22Aug 03	13:31:50	68.5	74.8
0		0	22Aug 03	13:31:55	67.7	74.7
0		0	22Aug 03	13:32:00	69.8	74.7
0		0	22Aug 03	13:32:05	69.9	74.1
0		0	22Aug 03	13:32:10	68.6	73.0
0		0	22Aug 03	13:32:15	65.7	70.1
0		0	22Aug 03	13:32:20	62.2	65.6
0		0	22Aug 03	13:32:25	54.7	58.3
0		0	22Aug 03	13:32:30	50.3	51.7
0		0	22Aug 03	13:32:35	51.4	52.5
0		0	22Aug 03	13:32:40	55.5	59.0
0		0	22Aug 03	13:32:45	67.1	70.3
0		0	22Aug 03	13:32:50	67.9	69.6
0		0	22Aug 03	13:32:55	70.2	72.6
0		0	22Aug 03	13:33:00	68.6	71.6
0		0	22Aug 03	13:33:05	66.5	71.1
0		0	22Aug 03	13:33:10	71.1	74.2
0		0	22Aug 03	13:33:15	66.7	72.5
0		0	22Aug 03	13:33:20	63.0	66.7
0		0	22Aug 03	13:33:25	52.0	56.5
0		0	22Aug 03	13:33:30	60.4	65.1
0		0	22Aug 03	13:33:35	49.3	51.8
0		0	22Aug 03	13:33:40	48.1	49.1
0		0	22Aug 03	13:33:45	54.0	60.3
0		0	22Aug 03	13:33:50	72.1	76.3
0		0	22Aug 03	13:33:55	71.6	74.3
0		0	22Aug 03	13:34:00	71.5	76.1
0		0	22Aug 03	13:34:05	67.1	71.0
0		0	22Aug 03	13:34:10	65.2	70.7
0		0	22Aug 03	13:34:15	51.6	54.5
0		0	22Aug 03	13:34:20	55.0	59.0
0		0	22Aug 03	13:34:25	66.0	69.7
0		0	22Aug 03	13:34:30	69.4	74.8
0		0	22Aug 03	13:34:35	70.9	74.8
0		0	22Aug 03	13:34:40	72.1	76.6
0		0	22Aug 03	13:34:45	63.3	67.2
0		0	22Aug 03	13:34:50	61.0	63.6
0		0	22Aug 03	13:34:55	61.1	65.5
0		0	22Aug 03	13:35:00	69.1	72.8
0		0	22Aug 03	13:35:05	61.4	68.0
0		0	22Aug 03	13:35:10	55.1	58.7
0		0	22Aug 03	13:35:15	62.7	67.1
0		0	22Aug 03	13:35:20	58.9	65.2
0		0	22Aug 03	13:35:25	67.7	73.7
0		0	22Aug 03	13:35:30	52.7	56.1
0		0	22Aug 03	13:35:35	48.4	49.3
0		0	22Aug 03	13:35:40	47.7	48.9
0		0	22Aug 03	13:35:45	53.4	57.9
0		0	22Aug 03	13:35:50	62.8	67.9
0		0	22Aug 03	13:35:55	65.8	69.1
0		0	22Aug 03	13:36:00	53.4	56.3
0		0	22Aug 03	13:36:05	56.4	59.7
0		0	22Aug 03	13:36:10	69.1	73.0
0		0	22Aug 03	13:36:15	69.3	72.4
0		0	22Aug 03	13:36:20	69.2	70.4
0		0	22Aug 03	13:36:25	69.4	72.7
0		0	22Aug 03	13:36:30	65.1	68.4
0		0	22Aug 03	13:36:35	60.7	64.2
0		0	22Aug 03	13:36:40	57.6	58.7
0		0	22Aug 03	13:36:45	59.3	62.8
0		0	22Aug 03	13:36:50	67.2	69.2
0		0	22Aug 03	13:36:55	61.6	65.2
0		0	22Aug 03	13:37:00	68.0	71.6
0		0	22Aug 03	13:37:05	68.0	72.3
0		0	22Aug 03	13:37:10	68.7	70.8
0		0	22Aug 03	13:37:15	65.8	70.8
0		0	22Aug 03	13:37:20	63.0	65.3
0		0	22Aug 03	13:37:25	59.1	61.6
0		0	22Aug 03	13:37:30	65.8	71.0
0		0	22Aug 03	13:37:35	66.4	69.4
0		0	22Aug 03	13:37:40	64.4	70.3
0		0	22Aug 03	13:37:45	68.1	72.5
0		0	22Aug 03	13:37:50	66.4	70.9
0		0	22Aug 03	13:37:55	68.9	71.6
0		0	22Aug 03	13:38:00	68.7	71.0
0		0	22Aug 03	13:38:05	70.1	72.2
0		0	22Aug 03	13:38:10	65.1	66.8
0		0	22Aug 03	13:38:15	65.7	71.3
0		0	22Aug 03	13:38:20	65.9	71.5
0		0	22Aug 03	13:38:25	67.0	71.6
0		0	22Aug 03	13:38:30	59.6	61.0
0		0	22Aug 03	13:38:35	62.4	65.8
0		0	22Aug 03	13:38:40	65.3	70.8
0		0	22Aug 03	13:38:45	61.9	65.1
0		0	22Aug 03	13:38:50	57.1	61.1
0		0	22Aug 03	13:38:55	68.8	73.2
0		0	22Aug 03	13:39:00	68.8	73.2
0		0	22Aug 03	13:39:05	62.0	65.2
0		0	22Aug 03	13:39:10	60.9	64.0
0		0	22Aug 03	13:39:15	58.5	62.1
0		0	22Aug 03	13:39:20	66.7	69.1
0		0	22Aug 03	13:39:25	66.0	73.3
0		0	22Aug 03	13:39:30	68.2	73.2
0		0	22Aug 03	13:39:35	66.1	69.2
0		0	22Aug 03	13:39:40	64.3	68.8
0		0	22Aug 03	13:39:45	67.3	71.1
0		0	22Aug 03	13:39:50	58.7	60.1
0		0	22Aug 03	13:39:55	55.2	58.6
0		0	22Aug 03	13:40:00	59.5	62.3
0		0	22Aug 03	13:40:05	63.3	70.7
0		0	22Aug 03	13:40:10	67.7	73.8
0		0	22Aug 03	13:40:15	66.3	72.0
0		0	22Aug 03	13:40:20	51.8	55.6
0		0	22Aug 03	13:40:25	64.0	69.6
0		0	22Aug 03	13:40:30	57.0	64.5
0		0	22Aug 03	13:40:35	49.7	51.1
0		0	22Aug 03	13:40:40	52.6	56.3
0		0	22Aug 03	13:40:45	63.1	67.3
0		0	22Aug 03	13:40:50	63.3	73.0
0		0	22Aug 03	13:40:55	69.0	72.5
0		0	22Aug 03	13:41:00	65.1	67.6
0		0	22Aug 03	13:41:05	69.8	72.8
0		0	22Aug 03	13:41:10	73.9	77.5
0		0	22Aug 03	13:41:15	69.9	72.8
0		0	22Aug 03	13:41:20	69.0	71.0
0		0	22Aug 03	13:41:25	68.6	70.8
0		0	22Aug 03	13:41:30	69.2	72.6
0		0	22Aug 03	13:41:35	60.1	62.1
0		0	22Aug 03	13:41:40	63.4	65.8
0		0	22Aug 03	13:41:45	68.4	74.1
0		0	22Aug 03	13:41:50	65.4	71.0
0		0	22Aug 03	13:41:55	65.3	71.8
0		0	22Aug 03	13:42:00	57.9	66.7
0		0	22Aug 03	13:42:05	63.8	69.6
0		0	22Aug 03	13:42:10	65.3	70.7
0		0	22Aug 03	13:42:15	58.9	63.5
0		0	22Aug 03	13:42:20	65.2	69.2
0		0	22Aug 03	13:42:25	58.1	60.3
0		0	22Aug 03	13:42:30	63.2	67.5
0		0	22Aug 03	13:42:35	57.4	62.3
0		0	22Aug 03	13:42:40	64.6	69.2
0		0	22Aug 03	13:42:45	60.6	66.7
0		0	22Aug 03	13:42:50	67.8	70.6
0		0	22Aug 03	13:42:55	66.5	68.2
0		0	22Aug 03	13:43:00	67.3	69.6
0		0	22Aug 03	13:43:05	66.6	69.2
0		0	22Aug 03	13:43:10	66.2	68.7
0		0	22Aug 03	13:43:15	59.4	65.6
0		0	22Aug 03	13:43:20	69.9	74.6
0		0	22Aug 03	13:43:25	66.3	69.1
0		0	22Aug 03	13:43:30	67.2	71.5
0		0	22Aug 03	13:43:35	58.9	60.8
0		0	22Aug 03	13:43:40	68.2	70.8
0		0	22Aug 03	13:43:45	67.2	72.6
0		0	22Aug 03	13:43:50	55.3	58.5
0		0	22Aug 03	13:43:55	54.9	57.0
0		0	22Aug 03	13:44:00	66.8	73.6
0		0	22Aug 03	13:44:05	60.5	63.3
0		0	22Aug 03	13:44:10	66.0	70.7
0		0	22Aug 03	13:44:15	68.2	71.7
0		0	22Aug 03	13:44:20	60.3	65.0
0		0	22Aug 03	13:44:25	65.5	68.2
0		0	22Aug 03	13:44:30	55.2	58.8
0		0	22Aug 03	13:44:35	65.8	70.3
0		0	22Aug 03	13:44:40	68.4	72.2
0		0	22Aug 03	13:44:45	66.5	69.3
0		0	22Aug 03	13:44:50	71.3	74.2
0		0	22Aug 03	13:44:55	68.3	70.6
0		0	22Aug 03	13:45:00	61.4	63.8
0		0	22Aug 03	13:45:05	65.1	67.6
0		0	22Aug 03	13:45:10	65.7	70.0
0		0	22Aug 03	13:45:15	62.1	67.0
0		0	22Aug 03	13:45:20	62.6	67.2
0		0	22Aug 03	13:45:25	57.0	61.2
0		0	22Aug 03	13:45:30	57.1	61.4
0		0	22Aug 03	13:45:35	60.3	68.3
0		0	22Aug 03	13:45:40	64.3	68.5
0		0	22Aug 03	13:45:45	66.7	71.6
0		0	22Aug 03	13:45:50	60.8	63.8
0		0	22Aug 03	13:45:55	65.8	72.1
0		0	22Aug 03	13:46:00	64.9	68.6
0		0	22Aug 03	13:46:05	68.8	74.4
0		0	22Aug 03	13:46:10	72.8	74.5

0		0	22Aug 03	13:46:15	67.8 70.6
0		0	22Aug 03	13:46:20	67.6 68.5
0		0	22Aug 03	13:46:25	68.7 73.1
0		0	22Aug 03	13:46:30	66.4 68.0
0		0	22Aug 03	13:46:35	65.7 70.3
0		0	22Aug 03	13:46:40	68.7 71.0

Stop Key

C:\NOISE\LARDAV\SLMUTIL\22AUG_13.bin Interval Data

Site	Location	Meas Number	Date	Time	Duration	Leq	SEL	Lmax	Lmin	Peak	Uwpk
Measurement 2											
0		0	22Aug 03	13:23:20	39.8	62.0	78.1	67.9	54.2	87.2	0.0
0		0	22Aug 03	13:24:00	60.0	61.1	78.9	65.1	52.0	78.0	0.0
0		0	22Aug 03	13:25:00	60.0	59.4	77.2	71.2	50.1	82.0	0.0
0		0	22Aug 03	13:26:00	60.0	59.4	77.2	67.7	50.7	79.1	0.0
0		0	22Aug 03	13:27:00	60.0	56.1	73.9	61.2	48.8	74.1	0.0
0		0	22Aug 03	13:28:00	60.0	56.8	74.6	61.3	49.9	77.0	0.0
0		0	22Aug 03	13:29:00	60.0	56.9	74.7	62.3	49.2	79.1	0.0
0		0	22Aug 03	13:30:00	60.0	58.1	75.9	64.3	51.9	75.7	0.0
0		0	22Aug 03	13:31:00	60.0	61.8	79.5	70.0	49.9	82.1	0.0
0		0	22Aug 03	13:32:00	60.0	58.8	76.6	62.8	49.0	74.9	0.0
0		0	22Aug 03	13:33:00	60.0	59.1	76.9	68.0	46.7	78.7	0.0
0		0	22Aug 03	13:34:00	60.0	59.3	77.1	65.5	47.9	77.2	0.0
0		0	22Aug 03	13:35:00	60.0	55.2	72.9	61.0	47.4	73.4	0.0
0		0	22Aug 03	13:36:00	60.0	58.1	75.9	62.4	51.3	74.9	0.0
0		0	22Aug 03	13:37:00	60.0	58.4	76.2	64.0	50.6	74.5	0.0
0		0	22Aug 03	13:38:00	60.0	58.7	76.5	63.3	52.8	74.9	0.0
0		0	22Aug 03	13:39:00	60.0	59.9	77.7	64.7	49.4	76.3	0.0
0		0	22Aug 03	13:40:00	60.0	55.7	73.4	61.8	47.8	73.9	0.0
0		0	22Aug 03	13:41:00	60.0	61.0	78.8	67.3	52.9	79.0	0.0
0		0	22Aug 03	13:42:00	60.0	56.2	73.9	60.5	50.2	76.7	0.0
0		0	22Aug 03	13:43:00	60.0	59.3	77.1	64.1	49.9	76.8	0.0
0		0	22Aug 03	13:44:00	60.0	59.2	77.0	66.3	51.4	76.8	0.0
0		0	22Aug 03	13:45:00	60.0	56.2	74.0	61.0	50.1	73.5	0.0
0		0	22Aug 03	13:46:00	60.0	60.5	78.3	66.0	51.5	80.4	0.0
0		0	22Aug 03	13:47:00	40.3	60.4	76.5	68.7	50.4	85.2	97.7

C:\NOISE\LARDAV\SLMUTIL\22AUG_13.bin Time History Data
Sample Period (sec): 5.000

Site	Location	Meas Number	Date	Time	Level	Lmax
Measurement 2						
0		0	22Aug 03	13:23:20	59.4	63.0
0		0	22Aug 03	13:23:25	60.8	64.2
0		0	22Aug 03	13:23:30	65.3	67.9
0		0	22Aug 03	13:23:35	65.8	67.6
0		0	22Aug 03	13:23:40	62.3	63.5
0		0	22Aug 03	13:23:45	59.2	61.1
0		0	22Aug 03	13:23:50	57.8	59.4
0		0	22Aug 03	13:23:55	55.9	58.8
0		0	22Aug 03	13:24:00	60.6	62.6
0		0	22Aug 03	13:24:05	59.4	61.6
0		0	22Aug 03	13:24:10	61.5	65.0
0		0	22Aug 03	13:24:15	62.5	65.1
0		0	22Aug 03	13:24:20	59.8	61.6
0		0	22Aug 03	13:24:25	61.3	62.7
0		0	22Aug 03	13:24:30	61.2	62.4
0		0	22Aug 03	13:24:35	61.5	63.0
0		0	22Aug 03	13:24:40	63.5	64.9
0		0	22Aug 03	13:24:45	62.9	64.7
0		0	22Aug 03	13:24:50	59.2	61.0
0		0	22Aug 03	13:24:55	53.9	57.2
0		0	22Aug 03	13:25:00	58.4	64.6
0		0	22Aug 03	13:25:05	67.0	71.2
0		0	22Aug 03	13:25:10	60.8	63.6
0		0	22Aug 03	13:25:15	58.2	59.2
0		0	22Aug 03	13:25:20	57.0	58.9
0		0	22Aug 03	13:25:25	55.0	58.7
0		0	22Aug 03	13:25:30	56.7	59.6
0		0	22Aug 03	13:25:35	56.9	60.0
0		0	22Aug 03	13:25:40	52.7	56.5
0		0	22Aug 03	13:25:45	56.4	57.9
0		0	22Aug 03	13:25:50	53.6	55.7
0		0	22Aug 03	13:25:55	51.9	53.1
0		0	22Aug 03	13:26:00	52.5	55.5
0		0	22Aug 03	13:26:05	62.3	67.7
0		0	22Aug 03	13:26:10	61.4	62.5
0		0	22Aug 03	13:26:15	59.5	61.0
0		0	22Aug 03	13:26:20	61.2	63.2
0		0	22Aug 03	13:26:25	58.8	61.3
0		0	22Aug 03	13:26:30	60.6	62.6
0		0	22Aug 03	13:26:35	59.1	60.6
0		0	22Aug 03	13:26:40	57.6	60.0
0		0	22Aug 03	13:26:45	58.2	60.6
0		0	22Aug 03	13:26:50	56.2	58.2
0		0	22Aug 03	13:26:55	57.7	60.0
0		0	22Aug 03	13:27:00	57.7	61.2
0		0	22Aug 03	13:27:05	54.0	56.8
0		0	22Aug 03	13:27:10	50.3	51.6
0		0	22Aug 03	13:27:15	52.2	54.3
0		0	22Aug 03	13:27:20	52.2	54.7
0		0	22Aug 03	13:27:25	57.1	60.2
0		0	22Aug 03	13:27:30	51.9	54.7
0		0	22Aug 03	13:27:35	55.0	58.2
0		0	22Aug 03	13:27:40	56.8	58.0
0		0	22Aug 03	13:27:45	58.5	59.6
0		0	22Aug 03	13:27:50	58.8	59.7
0		0	22Aug 03	13:27:55	58.0	59.8
0		0	22Aug 03	13:28:00	59.1	61.3
0		0	22Aug 03	13:28:05	54.7	56.9
0		0	22Aug 03	13:28:10	57.4	59.4
0		0	22Aug 03	13:28:15	54.5	57.4
0		0	22Aug 03	13:28:20	52.0	53.7
0		0	22Aug 03	13:28:25	57.7	59.7
0		0	22Aug 03	13:28:30	59.3	61.1
0		0	22Aug 03	13:28:35	54.9	56.7
0		0	22Aug 03	13:28:40	54.9	57.4
0		0	22Aug 03	13:28:45	54.3	57.7
0		0	22Aug 03	13:28:50	56.2	59.8
0		0	22Aug 03	13:28:55	59.6	60.9
0		0	22Aug 03	13:29:00	56.8	59.3
0		0	22Aug 03	13:29:05	53.2	61.1
0		0	22Aug 03	13:29:10	56.4	60.4
0		0	22Aug 03	13:29:15	57.8	60.3
0		0	22Aug 03	13:29:20	54.7	56.3
0		0	22Aug 03	13:29:25	57.9	59.9
0		0	22Aug 03	13:29:30	61.1	62.3
0		0	22Aug 03	13:29:35	57.9	59.9
0		0	22Aug 03	13:29:40	54.0	57.8
0		0	22Aug 03	13:29:45	55.0	57.4
0		0	22Aug 03	13:29:50	55.1	56.4
0		0	22Aug 03	13:29:55	55.9	57.2
0		0	22Aug 03	13:30:00	55.4	57.4
0		0	22Aug 03	13:30:05	55.4	59.5
0		0	22Aug 03	13:30:10	59.0	60.3
0		0	22Aug 03	13:30:15	58.5	60.4
0		0	22Aug 03	13:30:20	54.7	56.7
0		0	22Aug 03	13:30:25	54.8	56.6
0		0	22Aug 03	13:30:30	58.3	60.9
0		0	22Aug 03	13:30:35	56.1	58.8
0		0	22Aug 03	13:30:40	60.0	62.8
0		0	22Aug 03	13:30:45	58.1	60.5
0		0	22Aug 03	13:30:50	61.9	64.3
0		0	22Aug 03	13:30:55	58.1	59.9
0		0	22Aug 03	13:31:00	56.6	58.4
0		0	22Aug 03	13:31:05	59.4	61.2
0		0	22Aug 03	13:31:10	66.1	70.0
0		0	22Aug 03	13:31:15	67.3	69.9
0		0	22Aug 03	13:31:20	64.3	67.0
0		0	22Aug 03	13:31:25	61.3	62.8
0		0	22Aug 03	13:31:30	57.5	59.5
0		0	22Aug 03	13:31:35	55.9	57.7
0		0	22Aug 03	13:31:40	55.0	56.7
0		0	22Aug 03	13:31:45	51.3	53.4
0		0	22Aug 03	13:31:50	59.0	63.9
0		0	22Aug 03	13:31:55	60.0	62.8
0		0	22Aug 03	13:32:00	60.6	62.8
0		0	22Aug 03	13:32:05	60.7	62.8
0		0	22Aug 03	13:32:10	61.7	62.8
0		0	22Aug 03	13:32:15	59.2	62.0
0		0	22Aug 03	13:32:20	54.5	55.7
0		0	22Aug 03	13:32:25	51.8	54.0
0		0	22Aug 03	13:32:30	50.6	55.2
0		0	22Aug 03	13:32:35	50.4	51.0
0		0	22Aug 03	13:32:40	55.9	59.4
0		0	22Aug 03	13:32:45	60.1	61.5
0		0	22Aug 03	13:32:50	60.2	61.8
0		0	22Aug 03	13:32:55	61.0	62.2
0		0	22Aug 03	13:33:00	59.8	61.7
0		0	22Aug 03	13:33:05	59.2	62.4
0		0	22Aug 03	13:33:10	63.6	68.0
0		0	22Aug 03	13:33:15	60.7	63.6
0		0	22Aug 03	13:33:20	56.2	60.0
0		0	22Aug 03	13:33:25	48.8	50.6
0		0	22Aug 03	13:33:30	51.7	53.6
0		0	22Aug 03	13:33:35	49.4	51.3
0		0	22Aug 03	13:33:40	47.4	48.2
0		0	22Aug 03	13:33:45	49.5	53.4
0		0	22Aug 03	13:33:50	63.3	66.0
0		0	22Aug 03	13:33:55	61.8	63.3
0		0	22Aug 03	13:34:00	61.7	63.8
0		0	22Aug 03	13:34:05	59.4	60.9
0		0	22Aug 03	13:34:10	57.6	60.3
0		0	22Aug 03	13:34:15	51.5	54.6
0		0	22Aug 03	13:34:20	52.9	55.0
0		0	22Aug 03	13:34:25	57.7	59.1
0		0	22Aug 03	13:34:30	60.1	63.3
0		0	22Aug 03	13:34:35	62.7	64.1
0		0	22Aug 03	13:34:40	63.5	65.5
0		0	22Aug 03	13:34:45	56.5	60.4
0		0	22Aug 03	13:34:50	54.2	55.6
0		0	22Aug 03	13:34:55	55.6	58.3
0		0	22Aug 03	13:35:00	59.6	61.0
0		0	22Aug 03	13:35:05	54.9	58.3
0		0	22Aug 03	13:35:10	53.4	55.5
0		0	22Aug 03	13:35:15	54.3	55.5
0		0	22Aug 03	13:35:20	53.6	56.1
0		0	22Aug 03	13:35:25	58.2	60.6
0		0	22Aug 03	13:35:30	52.0	54.9
0		0	22Aug 03	13:35:35	48.5	51.3
0		0	22Aug 03	13:35:40	48.2	49.8
0		0	22Aug 03	13:35:45	51.8	54.5
0		0	22Aug 03	13:35:50	54.4	57.0
0		0	22Aug 03	13:35:55	57.8	59.1
0		0	22Aug 03	13:36:00	53.6	55.8
0		0	22Aug 03	13:36:05	54.3	55.9
0		0	22Aug 03	13:36:10	59.8	62.1
0		0	22Aug 03	13:36:15	61.3	62.4
0		0	22Aug 03	13:36:20	61.2	61.9
0		0	22Aug 03	13:36:25	60.7	62.0
0		0	22Aug 03	13:36:30	57.5	59.0
0		0	22Aug 03	13:36:35	54.5	55.5
0		0	22Aug 03	13:36:40	53.2	54.0
0		0	22Aug 03	13:36:45	56.3	58.1
0		0	22Aug 03	13:36:50	58.8	59.9
0		0	22Aug 03	13:36:55	54.0	57.1
0		0	22Aug 03	13:37:00	57.7	60.9
0		0	22Aug 03	13:37:05	60.1	63.4
0		0	22Aug 03	13:37:10	60.8	64.0
0		0	22Aug 03	13:37:15	57.9	60.5
0		0	22Aug 03	13:37:20	55.2	56.4
0		0	22Aug 03	13:37:25	51.7	52.8
0		0	22Aug 03	13:37:30	56.1	60.0
0		0	22Aug 03	13:37:35	59.5	60.4
0		0	22Aug 03	13:37:40	56.5	59.9
0		0	22Aug 03	13:37:45	59.3	61.0
0		0	22Aug 03	13:37:50	58.8	60.9
0		0	22Aug 03	13:37:55	60.2	61.4
0		0	22Aug 03	13:38:00	61.3	62.5
0		0	22Aug 03	13:38:05	61.9	63.3
0		0	22Aug 03	13:38:10	59.2	61.6
0		0	22Aug 03	13:38:15	57.9	60.4
0		0	22Aug 03	13:38:20	59.4	61.4
0		0	22Aug 03	13:38:25	58.3	60.8
0		0	22Aug 03	13:38:30	55.3	57.1
0		0	22Aug 03	13:38:35	55.5	56.4
0		0	22Aug 03	13:38:40	57.8	61.3
0		0	22Aug 03	13:38:45	56.8	58.5
0		0	22Aug 03	13:38:50	54.4	55.8
0		0	22Aug 03	13:38:55	59.5	61.7
0		0	22Aug 03	13:39:00	61.5	63.5
0		0	22Aug 03	13:39:05	62.3	64.7
0		0	22Aug 03	13:39:10	62.0	64.5
0		0	22Aug 03	13:39:15	60.2	64.0
0		0	22Aug 03	13:39:20	59.8	62.8
0		0	22Aug 03	13:39:25	59.3	62.1
0		0	22Aug 03	13:39:30	60.8	64.1
0		0	22Aug 03	13:39:35	58.9	63.1
0		0	22Aug 03	13:39:40	58.6	61.5
0		0	22Aug 03	13:39:45	59.3	60.8
0		0	22Aug 03	13:39:50	57.1	58.5
0		0	22Aug 03	13:39:55	51.6	55.3
0		0	22Aug 03	13:40:00	53.1	55.5
0		0	22Aug 03	13:40:05	55.0	60.0
0		0	22Aug 03	13:40:10	59.1	61.4
0		0	22Aug 03	13:40:15	57.6	59.6
0		0	22Aug 03	13:40:20	51.5	54.5
0		0	22Aug 03	13:40:25	54.0	58.0
0		0	22Aug 03	13:40:30	54.5	56.6
0		0	22Aug 03	13:40:35	50.2	51.6
0		0	22Aug 03	13:40:40	49.1	52.0
0		0	22Aug 03	13:40:45	55.3	56.8
0		0	22Aug 03	13:40:50	55.3	56.8
0		0	22Aug 03	13:40:55	59.9	61.8
0		0	22Aug 03	13:41:00	60.1	60.9
0		0	22Aug 03	13:41:05	62.5	64.5
0		0	22Aug 03	13:41:10	66.0	67.3
0		0	22Aug 03	13:41:15	62.7	64.1
0		0	22Aug 03	13:41:20	61.7	63.1
0		0	22Aug 03	13:41:25	60.5	62.1
0		0	22Aug 03	13:41:30	61.3	62.6
0		0	22Aug 03	13:41:35	57.0	59.3
0		0	22Aug 03	13:41:40	54.5	55.6
0		0	22Aug 03	13:41:45	58.8	61.3
0		0	22Aug 03	13:41:50	57.0	58.9
0		0	22Aug 03	13:41:55	56.1	59.4
0		0	22Aug 03	13:42:00	54.9	58.4
0		0	22Aug 03	13:42:05	54.0	57.5
0		0	22Aug 03	13:42:10	56.5	58.6
0		0	22Aug 03	13:42:15	54.8	57.5
0		0	22Aug 03	13:42:20	55.9	57.5
0		0	22Aug 03	13:42:25	54.9	57.4
0		0	22Aug 03	13:42:30	54.4	56.0
0		0	22Aug 03	13:42:35	52.4	54.3
0		0	22Aug 03	13:42:40	56.4	57.6
0		0	22Aug 03	13:42:45	56.3	59.0
0		0	22Aug 03	13:42:50	59.1	60.5
0		0	22Aug 03	13:42:55	59.0	60.1
0		0	22Aug 03	13:43:00	60.3	61.9
0		0	22Aug 03	13:43:05	60.4	61.4
0		0	22Aug 03	13:43:10	59.0	60.6
0		0	22Aug 03	13:43:15	56.7	57.9
0		0	22Aug 03	13:43:20	61.3	64.1
0		0	22Aug 03	13:43:25	61.3	63.5
0		0	22Aug 03	13:43:30	59.2	60.7
0		0	22Aug 03	13:43:35	58.3	60.8
0		0	22Aug 03	13:43:40	61.6	63.1
0		0	22Aug 03	13:43:45	58.9	61.8
0		0	22Aug 03	13:43:50	52.1	54.9
0		0	22Aug 03	13:43:55	52.4	55.4
0		0	22Aug 03	13:44:00	57.0	60.6
0		0	22Aug 03	13:44:05	57.0	58.8
0		0	22Aug 03	13:44:10	58.1	60.6
0		0	22Aug 03	13:44:15	59.6	61.1
0		0	22Aug 03	13:44:20	54.8	58.1
0		0	22Aug 03	13:44:25	56.4	57.8
0		0	22Aug 03	13:44:30	53.9	55.8
0		0	22Aug 03	13:44:35	57.1	61.4
0		0	22Aug 03	13:44:40	61.5	62.9
0		0	22Aug 03	13:44:45	60.0	61.1
0		0	22Aug 03	13:44:50	63.4	66.3

0		0	22Aug 03	13:44:55	61.0	65.5
0		0	22Aug 03	13:45:00	57.1	57.9
0		0	22Aug 03	13:45:05	56.4	58.6
0		0	22Aug 03	13:45:10	58.1	59.3
0		0	22Aug 03	13:45:15	55.0	57.1
0		0	22Aug 03	13:45:20	54.3	57.3
0		0	22Aug 03	13:45:25	53.3	54.5
0		0	22Aug 03	13:45:30	53.0	55.4
0		0	22Aug 03	13:45:35	52.4	56.9
0		0	22Aug 03	13:45:40	56.8	58.0
0		0	22Aug 03	13:45:45	58.4	61.0
0		0	22Aug 03	13:45:50	57.1	60.3
0		0	22Aug 03	13:45:55	57.6	60.6
0		0	22Aug 03	13:46:00	57.3	59.4
0		0	22Aug 03	13:46:05	60.8	64.1
0		0	22Aug 03	13:46:10	65.1	66.0
0		0	22Aug 03	13:46:15	63.5	64.7
0		0	22Aug 03	13:46:20	61.6	62.9
0		0	22Aug 03	13:46:25	61.3	62.9
0		0	22Aug 03	13:46:30	59.6	60.8
0		0	22Aug 03	13:46:35	57.7	59.0
0		0	22Aug 03	13:46:40	59.2	60.4
0		0	22Aug 03	13:46:45	56.9	60.0
0		0	22Aug 03	13:46:50	52.8	54.4
0		0	22Aug 03	13:46:55	56.0	59.8
0		0	22Aug 03	13:47:00	59.5	62.3
0		0	22Aug 03	13:47:05	53.5	55.1
0		0	22Aug 03	13:47:10	53.1	56.0
0		0	22Aug 03	13:47:15	58.8	61.7
0		0	22Aug 03	13:47:20	60.8	61.8
0		0	22Aug 03	13:47:25	63.9	68.7
0		0	22Aug 03	13:47:30	62.5	67.5
0		0	22Aug 03	13:47:35	61.0	65.0
0		0	22Aug 03	13:47:40	60.9	61.1
Stop	Key					
Run	Key					

C:\NOISE\LARDAV\SLMUTIL\22AUG_13.bin Interval Data

Site	Location	Meas Number	Date	Time	Duration	Leq	SEL	Lmax	Lmin	Peak	Uwpk
Measurement 3											
0		0	22Aug 03	13:22:25	34.7	54.1	69.5	59.5	48.5	73.3	0.0
0		0	22Aug 03	13:23:00	60.0	60.3	78.0	66.4	54.4	77.7	0.0
0		0	22Aug 03	13:24:00	60.0	59.5	77.2	63.7	50.6	75.3	0.0
0		0	22Aug 03	13:25:00	60.0	57.6	75.4	68.5	48.6	79.3	0.0
0		0	22Aug 03	13:26:00	60.0	57.4	75.2	66.2	48.6	78.4	0.0
0		0	22Aug 03	13:27:00	60.0	54.4	72.2	58.5	47.7	71.0	0.0
0		0	22Aug 03	13:28:00	60.0	55.2	73.0	59.9	49.1	70.9	0.0
0		0	22Aug 03	13:29:00	60.0	55.1	72.9	61.2	48.6	72.9	0.0
0		0	22Aug 03	13:30:00	60.0	56.5	74.3	62.5	50.5	74.4	0.0
0		0	22Aug 03	13:31:00	60.0	60.1	77.9	68.6	49.5	80.6	0.0
0		0	22Aug 03	13:32:00	60.0	57.5	75.3	62.4	48.4	75.2	0.0
0		0	22Aug 03	13:33:00	60.0	57.4	75.2	64.1	46.2	75.9	0.0
0		0	22Aug 03	13:34:00	60.0	57.8	75.6	63.6	47.6	75.7	0.0
0		0	22Aug 03	13:35:00	60.0	53.9	71.7	59.3	47.3	71.6	0.0
0		0	22Aug 03	13:36:00	60.0	57.0	74.8	61.0	50.2	74.0	0.0
0		0	22Aug 03	13:37:00	60.0	57.2	74.9	63.1	49.4	74.7	0.0
0		0	22Aug 03	13:38:00	60.0	56.9	74.6	60.6	52.1	72.7	0.0
0		0	22Aug 03	13:39:00	60.0	58.5	76.3	65.7	48.4	78.0	0.0
0		0	22Aug 03	13:40:00	60.0	54.1	71.9	60.2	47.4	72.2	0.0
0		0	22Aug 03	13:41:00	60.0	59.3	77.0	65.6	51.2	77.0	0.0
0		0	22Aug 03	13:42:00	60.0	54.6	72.3	58.2	50.2	70.1	0.0
0		0	22Aug 03	13:43:00	60.0	57.6	75.4	62.5	48.8	73.6	0.0
0		0	22Aug 03	13:44:00	60.0	57.4	75.2	64.2	50.2	75.2	0.0
0		0	22Aug 03	13:45:00	60.0	54.5	72.3	59.6	48.5	71.6	0.0
0		0	22Aug 03	13:46:00	60.0	58.6	76.4	64.0	50.2	75.6	0.0
0		0	22Aug 03	13:47:00	60.0	58.4	76.2	66.0	50.1	75.5	0.0
0		0	22Aug 03	13:48:00	10.1	57.8	67.9	64.4	55.2	85.7	0.0

C:\NOISE\LARDAV\SLMUTIL\22AUG_13.bin Time History Data
Sample Period (sec): 5.000

Site	Location	Meas Number	Date	Time	Level	Lmax
Measurement 3						
0		0	22Aug 03	13:22:25	52.5	55.3
0		0	22Aug 03	13:22:30	50.7	53.4
0		0	22Aug 03	13:22:35	53.1	54.9
0		0	22Aug 03	13:22:40	51.4	53.8
0		0	22Aug 03	13:22:45	54.2	57.3
0		0	22Aug 03	13:22:50	55.8	56.9
0		0	22Aug 03	13:22:55	57.5	60.1
0		0	22Aug 03	13:23:00	59.2	59.9
0		0	22Aug 03	13:23:05	60.5	63.1
0		0	22Aug 03	13:23:10	60.9	63.0
0		0	22Aug 03	13:23:15	58.2	60.4
0		0	22Aug 03	13:23:20	57.4	58.3
0		0	22Aug 03	13:23:25	58.9	61.1
0		0	22Aug 03	13:23:30	63.3	65.6
0		0	22Aug 03	13:23:35	64.4	66.4
0		0	22Aug 03	13:23:40	60.5	61.6
0		0	22Aug 03	13:23:45	57.9	59.5
0		0	22Aug 03	13:23:50	56.6	58.4
0		0	22Aug 03	13:23:55	56.1	57.6
0		0	22Aug 03	13:24:00	59.2	60.7
0		0	22Aug 03	13:24:05	58.3	60.4
0		0	22Aug 03	13:24:10	59.5	62.4
0		0	22Aug 03	13:24:15	60.7	63.4
0		0	22Aug 03	13:24:20	58.4	60.6
0		0	22Aug 03	13:24:25	59.0	60.5
0		0	22Aug 03	13:24:30	59.4	61.0
0		0	22Aug 03	13:24:35	59.9	61.4
0		0	22Aug 03	13:24:40	62.3	63.7
0		0	22Aug 03	13:24:45	60.9	62.0
0		0	22Aug 03	13:24:50	57.2	61.0
0		0	22Aug 03	13:24:55	51.7	53.5
0		0	22Aug 03	13:25:00	55.9	63.1
0		0	22Aug 03	13:25:05	65.2	68.5
0		0	22Aug 03	13:25:10	59.2	61.5
0		0	22Aug 03	13:25:15	56.4	57.4
0		0	22Aug 03	13:25:20	55.4	57.1
0		0	22Aug 03	13:25:25	54.2	56.7
0		0	22Aug 03	13:25:30	55.0	58.4
0		0	22Aug 03	13:25:35	55.3	58.6
0		0	22Aug 03	13:25:40	50.7	54.7
0		0	22Aug 03	13:25:45	54.8	56.4
0		0	22Aug 03	13:25:50	51.6	53.9
0		0	22Aug 03	13:25:55	49.9	51.1
0		0	22Aug 03	13:26:00	50.6	53.6
0		0	22Aug 03	13:26:05	59.9	66.2
0		0	22Aug 03	13:26:10	59.2	61.2
0		0	22Aug 03	13:26:15	57.8	58.6
0		0	22Aug 03	13:26:20	59.2	60.6
0		0	22Aug 03	13:26:25	56.9	60.0
0		0	22Aug 03	13:26:30	58.5	59.9
0		0	22Aug 03	13:26:35	57.2	59.2
0		0	22Aug 03	13:26:40	56.1	57.7
0		0	22Aug 03	13:26:45	56.7	58.4
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0		0	22Aug 03	13:26:55	55.7	57.1
0		0	22Aug 03	13:27:00	55.2	56.7
0		0	22Aug 03	13:27:05	52.7	55.6
0		0	22Aug 03	13:27:10	49.4	50.2
0		0	22Aug 03	13:27:15	50.7	52.6
0		0	22Aug 03	13:27:20	50.2	52.0
0		0	22Aug 03	13:27:25	55.7	57.9
0		0	22Aug 03	13:27:30	50.3	53.1
0		0	22Aug 03	13:27:35	53.2	55.9
0		0	22Aug 03	13:27:40	55.2	56.5
0		0	22Aug 03	13:27:45	57.4	58.5
0		0	22Aug 03	13:27:50	56.9	57.6
0		0	22Aug 03	13:27:55	56.2	57.9
0		0	22Aug 03	13:28:00	57.1	58.7
0		0	22Aug 03	13:28:05	53.5	54.9
0		0	22Aug 03	13:28:10	56.5	59.0
0		0	22Aug 03	13:28:15	52.4	54.4
0		0	22Aug 03	13:28:20	50.9	52.2
0		0	22Aug 03	13:28:25	55.5	59.1
0		0	22Aug 03	13:28:30	57.9	59.9
0		0	22Aug 03	13:28:35	53.9	55.6
0		0	22Aug 03	13:28:40	53.5	57.1
0		0	22Aug 03	13:28:45	53.4	56.6
0		0	22Aug 03	13:28:50	54.1	57.2
0		0	22Aug 03	13:28:55	57.9	59.1
0		0	22Aug 03	13:29:00	54.7	57.5
0		0	22Aug 03	13:29:05	49.7	51.5
0		0	22Aug 03	13:29:10	54.2	57.4
0		0	22Aug 03	13:29:15	56.6	59.6
0		0	22Aug 03	13:29:20	52.8	54.9
0		0	22Aug 03	13:29:25	56.4	58.1
0		0	22Aug 03	13:29:30	59.3	61.2
0		0	22Aug 03	13:29:35	55.8	58.6
0		0	22Aug 03	13:29:40	52.6	54.6
0		0	22Aug 03	13:29:45	53.4	54.9
0		0	22Aug 03	13:29:50	52.5	54.1
0		0	22Aug 03	13:29:55	54.6	55.9
0		0	22Aug 03	13:30:00	53.4	54.7
0		0	22Aug 03	13:30:05	54.1	55.7
0		0	22Aug 03	13:30:10	57.4	58.6
0		0	22Aug 03	13:30:15	56.5	58.1
0		0	22Aug 03	13:30:20	53.5	57.4
0		0	22Aug 03	13:30:25	53.4	55.2
0		0	22Aug 03	13:30:30	56.6	59.1
0		0	22Aug 03	13:30:35	54.7	57.5
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0		0	22Aug 03	13:31:15	66.7	68.6
0		0	22Aug 03	13:31:20	62.5	65.0
0		0	22Aug 03	13:31:25	58.9	60.9
0		0	22Aug 03	13:31:30	55.7	57.6
0		0	22Aug 03	13:31:35	54.2	55.1
0		0	22Aug 03	13:31:40	53.1	54.3
0		0	22Aug 03	13:31:45	50.7	52.6
0		0	22Aug 03	13:31:50	56.9	60.7
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0		0	22Aug 03	13:32:00	59.4	61.4
0		0	22Aug 03	13:32:05	59.3	62.2
0		0	22Aug 03	13:32:10	60.3	62.4
0		0	22Aug 03	13:32:15	58.5	61.1
0		0	22Aug 03	13:32:20	53.2	54.2
0		0	22Aug 03	13:32:25	51.9	53.3
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0		0	22Aug 03	13:32:40	53.9	57.3
0		0	22Aug 03	13:32:45	58.9	60.5
0		0	22Aug 03	13:32:50	58.8	60.1
0		0	22Aug 03	13:32:55	59.9	60.7
0		0	22Aug 03	13:33:00	58.2	60.0
0		0	22Aug 03	13:33:05	57.9	60.3
0		0	22Aug 03	13:33:10	61.0	63.7
0		0	22Aug 03	13:33:15	59.3	61.8
0		0	22Aug 03	13:33:20	54.2	57.8
0		0	22Aug 03	13:33:25	48.9	50.5
0		0	22Aug 03	13:33:30	51.1	52.3
0		0	22Aug 03	13:33:35	48.7	50.5
0		0	22Aug 03	13:33:40	46.8	47.7
0		0	22Aug 03	13:33:45	49.0	53.7
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0		0	22Aug 03	13:34:10	56.4	58.2
0		0	22Aug 03	13:34:15	50.3	52.5
0		0	22Aug 03	13:34:20	51.7	54.3
0		0	22Aug 03	13:34:25	56.1	57.5
0		0	22Aug 03	13:34:30	58.5	60.5
0		0	22Aug 03	13:34:35	61.2	62.7
0		0	22Aug 03	13:34:40	62.1	63.6
0		0	22Aug 03	13:34:45	54.9	59.0
0		0	22Aug 03	13:34:50	53.1	55.1
0		0	22Aug 03	13:34:55	54.6	57.7
0		0	22Aug 03	13:35:00	58.0	59.3
0		0	22Aug 03	13:35:05	54.1	57.6
0		0	22Aug 03	13:35:10	52.2	53.8
0		0	22Aug 03	13:35:15	53.1	54.0
0		0	22Aug 03	13:35:20	53.1	54.2
0		0	22Aug 03	13:35:25	56.2	58.2
0		0	22Aug 03	13:35:30	51.1	53.5
0		0	22Aug 03	13:35:35	48.6	52.2
0		0	22Aug 03	13:35:40	48.1	49.0
0		0	22Aug 03	13:35:45	51.3	53.6
0		0	22Aug 03	13:35:50	53.0	54.5
0		0	22Aug 03	13:35:55	56.6	58.5
0		0	22Aug 03	13:36:00	53.6	56.3
0		0	22Aug 03	13:36:05	53.0	55.1
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0		0	22Aug 03	13:36:15	60.3	61.0
0		0	22Aug 03	13:36:20	59.6	60.3
0		0	22Aug 03	13:36:25	59.4	60.8
0		0	22Aug 03	13:36:30	56.3	58.3
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0		0	22Aug 03	13:36:40	52.6	53.5
0		0	22Aug 03	13:36:45	55.6	57.8
0		0	22Aug 03	13:36:50	57.2	59.4
0		0	22Aug 03	13:36:55	53.1	55.6
0		0	22Aug 03	13:37:00	56.6	60.7
0		0	22Aug 03	13:37:05	60.0	63.1
0		0	22Aug 03	13:37:10	58.9	62.1
0		0	22Aug 03	13:37:15	56.8	59.0
0		0	22Aug 03	13:37:20	54.0	55.6
0		0	22Aug 03	13:37:25	50.9	52.6
0		0	22Aug 03	13:37:30	53.8	57.0
0		0	22Aug 03	13:37:35	58.1	59.5
0		0	22Aug 03	13:37:40	55.2	59.1
0		0	22Aug 03	13:37:45	58.0	59.7
0		0	22Aug 03	13:37:50	57.2	58.7
0		0	22Aug 03	13:37:55	58.8	59.8
0		0	22Aug 03	13:38:00	59.3	60.5
0		0	22Aug 03	13:38:05	59.8	60.6
0		0	22Aug 03	13:38:10	57.2	59.9
0		0	22Aug 03	13:38:15	56.0	59.2
0		0	22Aug 03	13:38:20	57.7	59.4
0		0	22Aug 03	13:38:25	56.4	57.5
0		0	22Aug 03	13:38:30	54.3	57.3
0		0	22Aug 03	13:38:35	53.9	55.9
0		0	22Aug 03	13:38:40	55.8	57.4
0		0	22Aug 03	13:38:45	54.9	56.9
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0		0	22Aug 03	13:38:55	57.4	59.7
0		0	22Aug 03	13:39:00	59.9	61.6
0		0	22Aug 03	13:39:05	61.2	63.2
0		0	22Aug 03	13:39:10	61.7	65.7
0		0	22Aug 03	13:39:15	59.1	63.5
0		0	22Aug 03	13:39:20	57.8	60.2
0		0	22Aug 03	13:39:25	57.5	59.4
0		0	22Aug 03	13:39:30	58.8	60.0
0		0	22Aug 03	13:39:35	57.2	61.7
0		0	22Aug 03	13:39:40	57.0	58.7
0		0	22Aug 03	13:39:45	57.2	58.1
0		0	22Aug 03	13:39:50	54.9	56.4
0		0	22Aug 03	13:39:55	50.1	52.5
0		0	22Aug 03	13:40:00	51.8	54.4
0		0	22Aug 03	13:40:05	53.6	58.0
0		0	22Aug 03	13:40:10	57.5	59.0
0		0	22Aug 03	13:40:15	56.2	57.9
0		0	22Aug 03	13:40:20	50.3	53.2
0		0	22Aug 03	13:40:25	52.0	55.3
0		0	22Aug 03	13:40:30	53.9	56.3
0		0	22Aug 03	13:40:35	48.9	50.4
0		0	22Aug 03	13:40:40	48.9	52.4
0		0	22Aug 03	13:40:45	54.0	56.5
0		0	22Aug 03	13:40:50	53.8	56.5
0		0	22Aug 03	13:40:55	58.1	60.2
0		0	22Aug 03	13:41:00	58.7	60.0
0		0	22Aug 03	13:41:05	60.6	62.2
0		0	22Aug 03	13:41:10	64.1	65.6
0		0	22Aug 03	13:41:15	61.2	63.0
0		0	22Aug 03	13:41:20	59.7	61.1
0		0	22Aug 03	13:41:25	58.0	60.2
0		0	22Aug 03	13:41:30	59.8	61.1
0		0	22Aug 03	13:41:35	56.1	58.6
0		0	22Aug 03	13:41:40	52.8	54.9
0		0	22Aug 03	13:41:45	57.5	59.4
0		0	22Aug 03	13:41:50	55.5	56.9
0		0	22Aug 03	13:41:55	54.1	55.7
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0		0	22Aug 03	13:42:10	55.2	56.7
0		0	22Aug 03	13:42:15	53.9	56.4
0		0	22Aug 03	13:42:20	54.4	56.5
0		0	22Aug 03	13:42:25	53.2	55.0
0		0	22Aug 03	13:42:30	52.9	54.1
0		0	22Aug 03	13:42:35	51.2	53.2
0		0	22Aug 03	13:42:40	54.3	55.9
0		0	22Aug 03	13:42:45	54.5	55.7
0		0	22Aug 03	13:42:50	56.9	58.2
0		0	22Aug 03	13:42:55	57.3	58.1
0		0	22Aug 03	13:43:00	57.9	59.2
0		0	22Aug 03	13:43:05	58.2	59.5
0		0	22Aug 03	13:43:10	57.1	59.0
0		0	22Aug 03	13:43:15	55.1	56.0
0		0	22Aug 03	13:43:20	59.4	62.5
0		0	22Aug 03	13:43:25	60.2	62.1
0		0	22Aug 03	13:43:30	58.0	60.0
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0		0	22Aug 03	13:43:40	59.4	61.5
0		0	22Aug 03	13:43:45	57.1	58.7
0		0	22Aug 03	13:43:50	50.7	53.2
0		0	22Aug 03	13:43:55	51.2	53.1

0	0	22Aug 03	13:44:00	54.7	58.2
0	0	22Aug 03	13:44:05	55.8	58.9
0	0	22Aug 03	13:44:10	56.4	58.6
0	0	22Aug 03	13:44:15	57.4	58.9
0	0	22Aug 03	13:44:20	53.6	55.5
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0	0	22Aug 03	13:44:35	55.5	60.4
0	0	22Aug 03	13:44:40	59.8	61.4
0	0	22Aug 03	13:44:45	57.7	58.7
0	0	22Aug 03	13:44:50	61.4	64.2
0	0	22Aug 03	13:44:55	59.4	63.9
0	0	22Aug 03	13:45:00	55.3	56.5
0	0	22Aug 03	13:45:05	53.9	56.1
0	0	22Aug 03	13:45:10	56.6	59.1
0	0	22Aug 03	13:45:15	53.0	55.5
0	0	22Aug 03	13:45:20	52.2	54.2
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0	0	22Aug 03	13:45:45	56.4	59.6
0	0	22Aug 03	13:45:50	56.1	59.5
0	0	22Aug 03	13:45:55	55.9	57.7
0	0	22Aug 03	13:46:00	55.4	56.6
0	0	22Aug 03	13:46:05	58.9	62.4
0	0	22Aug 03	13:46:10	63.2	64.0
0	0	22Aug 03	13:46:15	61.4	63.5
0	0	22Aug 03	13:46:20	59.4	60.6
0	0	22Aug 03	13:46:25	59.3	60.4
0	0	22Aug 03	13:46:30	57.9	59.9
0	0	22Aug 03	13:46:35	55.9	57.3
0	0	22Aug 03	13:46:40	57.3	58.6
0	0	22Aug 03	13:46:45	55.9	57.1
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0	0	22Aug 03	13:46:55	54.5	57.7
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0	0	22Aug 03	13:47:05	52.6	55.0
0	0	22Aug 03	13:47:10	51.6	53.7
0	0	22Aug 03	13:47:15	56.6	59.4
0	0	22Aug 03	13:47:20	59.0	60.6
0	0	22Aug 03	13:47:25	60.3	65.9
0	0	22Aug 03	13:47:30	62.0	66.0
0	0	22Aug 03	13:47:35	58.6	60.4
0	0	22Aug 03	13:47:40	56.9	58.2
0	0	22Aug 03	13:47:45	58.9	60.1
0	0	22Aug 03	13:47:50	59.3	60.1
0	0	22Aug 03	13:47:55	58.4	59.0
0	0	22Aug 03	13:48:00	58.6	64.4
0	0	22Aug 03	13:48:05	56.7	59.2

Stop Key

ATTACHMENT 2

KEY TO FILE CODES

ATTACHMENT 2

*.STA	-	STAMINA output file
FIELDGA	-	Noise measurement locations, Grand Avenue Walmart Site, measured conditions.

****
STAM2VU1
Version 1.20
****
STAMINA 2.0/BCR
MODIFIED FROM FHWA VERSION 3 (MARCH 1983)
TRAFFIC NOISE PREDICTION MODEL

MODIFIED TO:
1. ALLOW EQUIVALENT SPEEDS BELOW 30 MPH PER NCHRP 311;
2. CORRECT MEDIUM TRUCK BARRIER CALCULATION ERROR BY USING VEH4, VEH5 AND VEH6 FOR CARS, MT AND HT; AND
3. PLACE REFERENCE ENGERGY MEAN EMISSION LEVELS IN A DATA FILE CALLED REMEL.DTA TO ALLOW USER TO USE LEVELS OTHER THAN THE FHWA NATIONAL AVERAGES.

****
MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
BY VANDERBILT UNIVERSITY, NASHVILLE, TN 37235
AND BOWLBY & ASSOCIATES, INC.
2014 BROADWAY, SUITE 210
NASHVILLE, TN 37203-2425
TEL 615-327-8130, FAX 615-327-8137

NOTE:
IN STAM2VU1, THE TRAFFIC DATA FROM THE ORIGINAL DATA FILE HAS BEEN SHIFTED TO CORRECT THE STAMINA 2.0 MEDIUM TRUCK CALCULATION ERROR. THIS SHIFT IS REFLECTED BELOW IN THE *.STA OUTPUT FILE. THE ORIGINAL DATA FILE IS UNCHANGED.

(INPUT UNITS- ENGLISH , OUTPUT UNITS- ENGLISH)

Wal-Mart Noise Measurements, Grand Site

EMISSION LEVELS: Calveno Levels (trucks>30mph)

0PROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
.00	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.00	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)
.000	6	HEIGHT ADJUSTMENT FOR TYPE4 VEHICLES (VEH4) CARS--CALVENO C0 = 5.20 C1 = 38.80 S0 = .00
2.300	7	HEIGHT ADJUSTMENT FOR TYPE5 VEHICLES (VEH5) MT--CALVENO C0 = 35.30 C1 = 25.60 S0 = .00
8.000	8	HEIGHT ADJUSTMENT FOR TYPE6 VEHICLES (VEH6) HT--CALVENO C0 = 50.40 C1 = 19.20 S0 = .00

0ROADWAY 1 Grand Avenue, eb

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	460.	40.0
VEH5	12.	40.0
VEH6	0.	40.0

0	COORDINATES X	Y	Z	GRADE
1	6312007.5	1990830.1	680.3	1
2	6312241.2	1990925.7	696.5	1
3	6312421.8	1991029.8	710.4	1
4	6312605.2	1991131.1	724.5	1
5	6312679.4	1991171.5	730.0	1
6	6312720.9	1991193.8	734.0	1
7	6312781.0	1991226.3	739.0	1
8	6312819.8	1991247.2	741.0	0
9	6312872.4	1991275.5	741.0	0
10	6312912.6	1991297.1	739.0	0
11	6312947.9	1991316.1	736.0	0
12	6313014.4	1991351.8	727.0	0
13	6313092.2	1991393.6	716.0	0
14	6313164.8	1991432.8	706.0	0
15	6313223.3	1991464.6	699.0	0

0ROADWAY 2 Grand Avenue, eb cont'd.

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	460.	40.0
VEH5	12.	40.0
VEH6	0.	40.0

0	COORDINATES X	Y	Z	GRADE
15	6313223.3	1991464.6	699.0	0
16	6313276.4	1991492.7	694.0	0
17	6313347.9	1991531.7	689.0	0
18	6313412.8	1991566.7	686.0	0
19	6313561.8	1991646.5	681.5	0
20	6313689.9	1991715.4	677.4	0
21	6313888.5	1991822.1	671.1	0
22	6314095.0	1991933.5	664.6	0

0ROADWAY 3 Grand Ave, wb

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	716.	40.0
VEH5	4.	40.0
VEH6	0.	40.0

0	COORDINATES X	Y	Z	GRADE
1	6314080.2	1991960.1	664.6	1
2	6313875.3	1991850.2	671.1	1
3	6313676.6	1991741.3	677.4	1
4	6313547.5	1991672.4	681.5	1
5	6313404.5	1991595.7	686.0	1
6	6313331.4	1991556.6	689.0	1
7	6313258.1	1991516.8	694.0	1
8	6313205.8	1991488.2	699.0	1
9	6313143.5	1991455.2	706.0	1
10	6313071.0	1991416.1	716.0	1
11	6312995.7	1991376.5	727.0	1
12	6312926.5	1991338.6	736.0	1
13	6312893.6	1991320.1	739.0	1
14	6312851.7	1991298.4	741.0	0
15	6312808.2	1991274.9	741.0	0

0ROADWAY 4 Grand Ave, wb cont'd.

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	716.	40.0
VEH5	4.	40.0
VEH6	0.	40.0

0	COORDINATES X	Y	Z	GRADE
15	6312808.2	1991274.9	741.0	0
16	6312764.1	1991251.5	739.0	0
17	6312705.5	1991219.7	734.0	0
18	6312664.2	1991197.9	730.0	0
19	6312590.6	1991157.2	724.5	0
20	6312405.3	1991054.5	710.4	0
21	6312225.6	1990950.8	696.5	0
22	6312001.3	1990861.5	680.3	0

0ROADWAY 5 Harding Street, nb

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	96.	20.0
VEH5	0.	20.0
VEH6	0.	20.0

0	COORDINATES X	Y	Z	GRADE
1	6313349.5	1991569.1	688.0	0
2	6313331.7	1991601.6	687.0	0
3	6313292.1	1991673.4	685.0	0
4	6313246.2	1991757.3	682.0	0
5	6313204.8	1991833.0	680.0	0
6	6313188.2	1991863.1	679.0	0

0ROADWAY 6 Harding Street, sb

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	36.	20.0
VEH5	0.	20.0
VEH6	0.	20.0

0	COORDINATES X	Y	Z	GRADE
1	6313182.0	1991848.7	678.0	1
2	6313199.1	1991817.2	680.0	1
3	6313247.1	1991730.6	683.0	1
4	6313295.9	1991641.9	686.0	1
5	6313335.4	1991570.3	688.0	1

1

BARRIER 1 TYPE(A) Northern road edge

	COORDINATES X	Y	Z	Z0	DELZ	P
1	6313247.0	1991692.8	683.0	683.0	.0	0
2	6313291.8	1991612.4	686.0	686.0		
3	6313300.1	1991580.1	687.0	687.0		
4	6313303.3	1991573.2	689.0	689.0		
5	6313225.8	1991530.1	695.0	695.0		
6	6313132.9	1991480.1	705.0	705.0		
7	6313058.3	1991440.2	715.0	715.0		
8	6312991.6	1991397.1	725.0	725.0		
9	6312918.3	1991358.6	735.0	735.0		
10	6312855.6	1991322.7	740.0	740.0		

1

BARRIER 2 TYPE(A) Northern road edge cont'd.

	COORDINATES X	Y	Z	Z0	DELZ	P
10	6312855.6	1991322.7	740.0	740.0	.0	0
11	6312775.5	1991280.0	740.0	740.0		
12	6312706.6	1991242.6	735.0	735.0		
13	6312654.0	1991215.1	730.0	730.0		

1

BARRIER 3 TYPE(A) Existing Pad topo

	COORDINATES X	Y	Z	Z0	DELZ	P
7	6313058.3	1991440.2	715.0	715.0	.0	0
14	6313022.0	1991430.0	715.0	715.0		
15	6312995.5	1991431.5	715.0	715.0		
16	6312974.5	1991444.2	715.0	715.0		
17	6312959.3	1991473.2	710.0	710.0		
18	6312944.1	1991501.8	705.0	705.0		
19	6312929.6	1991528.7	701.0	701.0		
20	6312883.9	1991504.4	705.0	705.0		
21	6312834.6	1991477.9	710.0	710.0		

1

BARRIER 4 TYPE(A) Existing Pad topo cont'd.

	COORDINATES X	Y	Z	Z0	DELZ	P
21	6312834.6	1991477.9	710.0	710.0	.0	0
22	6312785.3	1991451.1	715.0	715.0		
23	6312725.4	1991418.8	720.0	720.0		
24	6312666.7	1991386.9	724.0	724.0		

1

Field Receivers, Grand Ave Site

	COORDINATES X	Y	Z
1	6313280.4	1991568.1	692.0
2	6313212.5	1991588.2	690.2
3	6313168.6	1991564.9	690.1

1

ALPHA FACTORS - RECEIVER ACROSS,ROADWAY DOWN

1 * .0 .0 .0
2 * .0 .0 .0

```
  3 *  .0  .0  .0
  4 *  .0  .0  .0
  5 *  .0  .0  .0
  6 *  .0  .0  .0
1

  SHIELDING FACTORS - RECEIVER ACROSS,ROADWAY DOWN

  1 *  .0  .0  .0
  2 *  .0  .0  .0
  3 *  .0  .0  .0
  4 *  .0  .0  .0
  5 *  .0  .0  .0
  6 *  .0  .0  .0
1

 RECEIVER     LEQ(H)    L10
 1             66.0    69.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            28.1 31.0 34.0 31.8 30.1 33.0 32.4 35.5 35.7 36.1

            39.9 42.4 44.8 47.5
    2         1    2    3    4    5    6    7
            52.0 56.8 52.6 49.1 43.7 43.6 41.2
    3         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            42.5 45.6 47.4 53.2 55.4 62.5 53.6 48.5 45.5 43.5

            41.4 36.8 36.6 35.2
    4         1    2    3    4    5    6    7
            33.8 33.7 31.2 32.5 32.6 27.4 23.5
    5         1    2    3    4    5
            37.5 40.5 33.9 28.6 25.2
    6         1    2    3    4
            21.5 26.9 32.2 38.6
1

 RECEIVER     LEQ(H)    L10
 2             58.9    61.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            22.3 21.4 23.1 22.3 22.6 27.6 29.3 33.7 33.9 34.5

            38.6 41.4 43.8 45.5
    2         1    2    3    4    5    6    7
            46.5 47.1 44.2 44.6 40.1 38.8 36.1
    3         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            37.4 40.3 41.6 46.2 47.5 51.0 50.3 48.4 45.6 42.8

            40.1 35.3 35.2 32.9
    4         1    2    3    4    5    6    7
            29.4 27.2 23.1 24.7 28.2 26.1 23.9
    5         1    2    3    4    5
            28.4 33.2 33.6 32.3 26.2
    6         1    2    3    4
            22.6 29.7 30.7 29.5
1

 RECEIVER     LEQ(H)    L10
 3             57.7    60.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            22.2 22.1 23.5 22.1 21.8 26.6 28.3 32.9 34.4 35.1

            39.3 42.3 43.9 44.6
    2         1    2    3    4    5    6    7
            44.2 44.1 41.5 42.6 38.6 37.7 35.0
    3         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            36.4 39.0 40.1 44.3 44.7 47.8 48.7 48.9 47.1 44.1

            41.2 36.2 35.5 32.6
    4         1    2    3    4    5    6    7
            29.4 27.5 23.6 25.3 28.5 25.7 23.6
    5         1    2    3    4    5
            25.1 29.6 31.5 31.1 25.4
    6         1    2    3    4
            21.8 28.2 27.8 25.7
```

ATTACHMENT 3

KEY TO FILE CODES

ATTACHMENT 3

*.STA	-	STAMINA output file
WALNIGHT	-	Grand Avenue and Harding Street, existing nighttime traffic. First-floor adjacent property receivers.
2WALNITE	-	Grand Avenue and Harding Street, existing nighttime traffic. Second-floor adjacent property multi-family residential receivers.

****
STAM2VU1
Version 1.20
****
STAMINA 2.0/BCR
MODIFIED FROM FHWA VERSION 3 (MARCH 1983)
TRAFFIC NOISE PREDICTION MODEL

MODIFIED TO:
1. ALLOW EQUIVALENT SPEEDS BELOW 30 MPH PER NCHRP 311;
2. CORRECT MEDIUM TRUCK BARRIER CALCULATION ERROR BY USING VEH4, VEH5 AND VEH6 FOR CARS, MT AND HT; AND
3. PLACE REFERENCE ENGERGY MEAN EMISSION LEVELS IN A DATA FILE CALLED REMEL.DTA TO ALLOW USER TO USE LEVELS OTHER THAN THE FHWA NATIONAL AVERAGES.

****
MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
BY VANDERBILT UNIVERSITY, NASHVILLE, TN 37235
AND BOWLBY & ASSOCIATES, INC.
2014 BROADWAY, SUITE 210
NASHVILLE, TN 37203-2425
TEL 615-327-8130, FAX 615-327-8137

NOTE:
IN STAM2VU1, THE TRAFFIC DATA FROM THE ORIGINAL DATA FILE HAS BEEN SHIFTED TO CORRECT THE STAMINA 2.0 MEDIUM TRUCK CALCULATION ERROR. THIS SHIFT IS REFLECTED BELOW IN THE *.STA OUTPUT FILE. THE ORIGINAL DATA FILE IS UNCHANGED.

(INPUT UNITS- ENGLISH , OUTPUT UNITS- ENGLISH)

Wal-Mart, Grand Site, Exst, nighttime

EMISSION LEVELS: Calveno Levels (trucks>30mph)

0PROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
.00	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.00	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)
.000	6	HEIGHT ADJUSTMENT FOR TYPE4 VEHICLES (VEH4)
		CARS--CALVENO
		C0 = 5.20 C1 = 38.80 S0 = .00
2.300	7	HEIGHT ADJUSTMENT FOR TYPE5 VEHICLES (VEH5)
		MT--CALVENO
		C0 = 35.30 C1 = 25.60 S0 = .00
8.000	8	HEIGHT ADJUSTMENT FOR TYPE6 VEHICLES (VEH6)
		HT--CALVENO
		C0 = 50.40 C1 = 19.20 S0 = .00

0ROADWAY 1 Grand Avenue, eb (w of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	130.	40.0
VEH5	2.	40.0
VEH6	1.	40.0

0	COORDINATES			
	X	Y	Z	GRADE
1	6312007.5	1990830.1	680.3	1
2	6312241.2	1990925.7	696.5	1
3	6312421.8	1991029.8	710.4	1
4	6312605.2	1991131.1	724.5	1
5	6312679.4	1991171.5	730.0	1
6	6312720.9	1991193.8	734.0	1
7	6312781.0	1991226.3	739.0	1
8	6312819.8	1991247.2	741.0	0
9	6312872.4	1991275.5	741.0	0
10	6312912.6	1991297.1	739.0	0
11	6312947.9	1991316.1	736.0	0
12	6313014.4	1991351.8	727.0	0
13	6313092.2	1991393.6	716.0	0
14	6313164.8	1991432.8	706.0	0
15	6313223.3	1991464.6	699.0	0

0ROADWAY 2 Grand Avenue, eb cont'd.(w of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	130.	40.0
VEH5	2.	40.0
VEH6	1.	40.0

0	COORDINATES			
	X	Y	Z	GRADE
15	6313223.3	1991464.6	699.0	0
16	6313276.4	1991492.7	694.0	0
17	6313347.9	1991531.7	689.0	0

0ROADWAY 3 Grand Avenue, eb cont'd.(e of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	125.	40.0
VEH5	2.	40.0
VEH6	1.	40.0

0	COORDINATES			
	X	Y	Z	GRADE
17	6313347.9	1991531.7	689.0	0
18	6313412.8	1991566.7	686.0	0
19	6313561.8	1991646.5	681.5	0
20	6313689.9	1991715.4	677.4	0
21	6313888.5	1991822.1	671.1	0
22	6314095.0	1991933.5	664.6	0

0ROADWAY 4 Grand Ave, wb(e of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	125.	40.0
VEH5	2.	40.0
VEH6	1.	40.0

0	COORDINATES			
	X	Y	Z	GRADE
1	6314080.2	1991960.1	664.6	1
2	6313875.3	1991850.2	671.1	1
3	6313676.6	1991741.3	677.4	1
4	6313547.5	1991672.4	681.5	1
5	6313404.5	1991595.7	686.0	1
6	6313331.4	1991556.6	689.0	1

0ROADWAY 5 Grand Ave, wb(w of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	130.	40.0
VEH5	2.	40.0
VEH6	1.	40.0

0	COORDINATES			
	X	Y	Z	GRADE
6	6313331.4	1991556.6	689.0	1
7	6313258.1	1991516.8	694.0	1
8	6313205.8	1991488.2	699.0	1
9	6313143.5	1991455.2	706.0	1
10	6313071.0	1991416.1	716.0	1
11	6312995.7	1991376.5	727.0	1
12	6312926.5	1991338.6	736.0	1
13	6312893.6	1991320.1	739.0	1
14	6312851.7	1991298.4	741.0	0
15	6312808.2	1991274.9	741.0	0

0ROADWAY 6 Grand Ave, wb cont'd.(w of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	130.	40.0
VEH5	2.	40.0
VEH6	1.	40.0

0	COORDINATES			
	X	Y	Z	GRADE
15	6312808.2	1991274.9	741.0	0
16	6312764.1	1991251.5	739.0	0
17	6312705.5	1991219.7	734.0	0
18	6312664.2	1991197.9	730.0	0
19	6312590.6	1991157.2	724.5	0
20	6312405.3	1991054.5	710.4	0
21	6312225.6	1990950.8	696.5	0
22	6312001.3	1990861.5	680.3	0

0ROADWAY 7 Harding Street, nb

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	9.	20.0
VEH5	1.	20.0
VEH6	0.	20.0

0	COORDINATES			
	X	Y	Z	GRADE
1	6313349.5	1991569.1	688.0	0
2	6313331.7	1991601.6	687.0	0
3	6313292.1	1991673.4	685.0	0
4	6313246.2	1991757.3	682.0	0
5	6313204.8	1991833.0	680.0	0
6	6313188.2	1991863.1	679.0	0

0ROADWAY 8 *Harding Street, nb*

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	9.	20.0
VEH5	1.	20.0
VEH6	0.	20.0

0	COORDINATES			
	X	Y	Z	GRADE
1	6313182.0	1991848.7	678.0	1
2	6313199.1	1991817.2	680.0	1
3	6313247.1	1991730.6	683.0	1
4	6313295.9	1991641.9	686.0	1
5	6313335.4	1991570.3	688.0	1
1				

BARRIER 1 TYPE(A) Northern road edge

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
1	6313247.0	1991692.8	683.0	683.0	.0	0
2	6313291.8	1991612.4	686.0	686.0		
3	6313300.1	1991580.1	687.0	687.0		
4	6313303.3	1991573.2	689.0	689.0		
5	6313225.8	1991530.1	695.0	695.0		
6	6313132.9	1991480.1	705.0	705.0		
7	6313058.3	1991440.2	715.0	715.0		
8	6312991.6	1991397.1	725.0	725.0		
9	6312918.3	1991358.6	735.0	735.0		
10	6312855.6	1991322.7	740.0	740.0		
1						

BARRIER 2 TYPE(A) Northern road edge cont'd.

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
10	6312855.6	1991322.7	740.0	740.0	.0	0
11	6312775.5	1991280.0	740.0	740.0		
12	6312706.6	1991242.6	735.0	735.0		
13	6312654.0	1991215.1	730.0	730.0		
1						

BARRIER 3 TYPE(A) Existing Pad topo

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
7	6313058.3	1991440.2	715.0	715.0	.0	0
14	6313022.0	1991430.0	715.0	715.0		
15	6312995.5	1991431.5	715.0	715.0		
16	6312974.5	1991444.2	715.0	715.0		
17	6312959.3	1991473.2	710.0	710.0		

```
18        6312944.1 1991501.8     705.0     705.0
19        6312929.6 1991528.7     701.0     701.0
20        6312883.9 1991504.4     705.0     705.0
21        6312834.6 1991477.9     710.0     710.0
1

BARRIER   4   TYPE(A)     Existing Pad topo cont'd.

          ---------COORDINATES---------
               X         Y         Z        Z0       DELZ         P
21        6312834.6 1991477.9     710.0     710.0        .0         0
22        6312785.3 1991451.1     715.0     715.0
23        6312725.4 1991418.8     720.0     720.0
24        6312666.7 1991386.9     724.0     724.0
1

Source & Receivers

                          ------------COORDINATES-------------
                                X          Y          Z
1                         6312693.0   1991328.0      738.0
2                         6312652.0   1991411.0      727.0
3                         6312578.0   1991547.0      718.0
4                         6312520.0   1991652.0      704.0
5                         6312501.0   1991967.0      678.0
6                         6312740.0   1992173.0      676.0
7                         6313040.0   1992095.0      681.0
8                         6313254.0   1991773.0      687.0
9                         6313229.0   1991433.0      708.0
10                        6312989.0   1991309.0      738.0
1

 ALPHA FACTORS - RECEIVER ACROSS,ROADWAY DOWN

 1 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

 2 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

 3 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

 4 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

 5 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

 6 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

 7 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

 8 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

1

 SHIELDING FACTORS - RECEIVER ACROSS,ROADWAY DOWN

 1 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

 2 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

 3 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

 4 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

 5 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

 6 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

 7 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

 8 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

1

 RECEIVER     LEQ(H)    L10
 1             55.3    58.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           38.0 40.6 45.2 43.5 42.3 44.9 41.1 39.8 36.9 34.0

           33.4 30.7 28.4 26.6
    2        1    2
           25.5 26.5
    3        1    2    3    4    5
           25.9 28.9 27.4 28.5 27.8
    4        1    2    3    4    5
           28.9 28.8 27.8 29.1 27.4
    5        1    2    3    4    5    6    7    8    9
           29.2 28.3 29.7 32.1 34.4 38.0 37.7 39.2 40.6
    6        1    2    3    4    5    6    7
           42.8 44.8 41.9 44.4 44.6 39.6 36.9
    7        1    2    3    4    5
            7.1 12.2 15.5 15.8 11.6
    8        1    2    3    4
           12.0 16.7 16.1 11.4
1

 RECEIVER     LEQ(H)    L10
 2             52.6    55.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           37.6 39.9 43.6 41.1 37.1 39.7 36.1 35.9 33.6 30.5

           31.5 29.9 28.4 26.4
    2        1    2
           25.6 26.9
    3        1    2    3    4    5
           26.1 28.7 27.6 29.7 29.2
    4        1    2    3    4    5
           30.3 30.3 28.9 29.3 28.6
    5        1    2    3    4    5    6    7    8    9
           29.9 29.3 29.9 32.5 36.1 37.4 35.8 36.2 36.7
    6        1    2    3    4    5    6    7
           37.2 38.7 36.7 41.7 43.1 39.0 36.6
    7        1    2    3    4    5
            8.1 13.5 16.4 16.2 12.1
    8        1    2    3    4
           12.5 17.0 16.4 12.2
1

 RECEIVER     LEQ(H)    L10
 3             50.1    53.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           36.9 38.6 41.0 37.9 33.4 35.1 31.7 31.8 29.7 28.7

           29.8 29.2 27.5 26.0
    2        1    2
           25.4 26.4
    3        1    2    3    4    5
           26.1 29.6 28.3 29.5 29.9
    4        1    2    3    4    5
           30.2 30.6 29.1 30.3 28.2
    5        1    2    3    4    5    6    7    8    9
           30.0 29.8 31.1 32.7 34.2 34.7 32.5 32.2 32.2
    6        1    2    3    4    5    6    7
           32.2 33.6 31.8 37.8 40.5 37.8 36.0
    7        1    2    3    4    5
           10.1 14.5 16.1 16.2 12.2
    8        1    2    3    4
           12.6 16.9 16.2 14.2
1

 RECEIVER     LEQ(H)    L10
 4             48.4    51.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           36.2 37.4 39.3 35.7 29.6 31.5 28.4 29.2 27.2 26.4

           27.6 27.5 26.2 24.8
    2        1    2
           24.2 25.6
    3        1    2    3    4    5
           25.1 28.6 26.7 31.0 29.8
    4        1    2    3    4    5
           29.9 31.3 28.9 29.0 27.4
    5        1    2    3    4    5    6    7    8    9
           29.2 28.8 30.0 31.4 32.4 32.8 30.3 29.8 29.5
    6        1    2    3    4    5    6    7
           29.4 30.7 29.1 35.4 38.7 36.6 35.3
    7        1    2    3    4    5
            9.0 13.8 15.7 15.8 12.0
    8        1    2    3    4
           12.3 16.5 15.6 13.6
1

 RECEIVER     LEQ(H)    L10
 5             45.8    49.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           33.6 34.1 35.3 31.1 24.0 26.5 24.3 25.2 23.5 23.5

           26.2 26.4 25.6 24.4
    2        1    2
           23.3 25.0
    3        1    2    3    4    5
           24.6 29.9 30.0 30.9 29.8
    4        1    2    3    4    5
           29.9 31.1 30.3 30.8 26.2
    5        1    2    3    4    5    6    7    8    9
           27.9 27.3 28.3 29.4 29.7 29.6 26.7 25.9 25.5
    6        1    2    3    4    5    6    7
           25.0 26.2 24.3 30.9 34.5 33.3 32.6
    7        1    2    3    4    5
            6.1 11.3 15.1 15.5 12.0
    8        1    2    3    4
           12.3 16.1 14.9 12.1
1

 RECEIVER     LEQ(H)    L10
 6             45.4    48.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           31.6 32.0 33.2 27.8 21.2 23.7 22.9 23.9 23.5 22.9

           25.8 26.8 26.6 25.7
    2        1    2
           25.0 26.2
    3        1    2    3    4    5
           27.2 32.6 31.3 32.2 31.2
    4        1    2    3    4    5
           31.4 32.6 31.6 32.8 29.1
    5        1    2    3    4    5    6    7    8    9
           28.6 27.8 28.7 29.4 29.3 29.0 25.4 24.9 24.0
    6        1    2    3    4    5    6    7
           23.4 24.2 22.1 28.3 32.3 31.1 30.5
    7        1    2    3    4    5
            7.0 14.0 16.6 17.3 14.1
    8        1    2    3    4
           14.2 17.7 16.3 11.8
1

 RECEIVER     LEQ(H)    L10
 7             47.3    50.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           31.0 31.6 29.9 22.4 20.6 22.8 21.9 24.5 24.1 24.5

           27.7 29.0 29.0 28.1
    2        1    2
           27.8 30.0
    3        1    2    3    4    5
           32.4 35.8 34.4 35.2 33.7
    4        1    2    3    4    5
           34.0 35.6 34.9 36.1 33.6
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   5        1    2    3    4    5    6    7    8    9
           32.0 30.6 31.2 31.6 31.3 30.4 26.4 25.7 24.3
   6        1    2    3    4    5    6    7
           23.8 24.1 21.5 23.6 30.4 30.6 29.9
   7        1    2    3    4    5
           13.9 18.4 20.7 22.3 19.9
   8        1    2    3    4
           19.8 22.5 20.5 17.9
1

 RECEIVER    LEQ(H)   L10
 8            54.2   57.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           23.1 25.0 25.1 18.9 18.4 22.6 22.8 26.7 27.4 28.0

           32.6 34.6 34.7 34.7
    2        1    2
           35.0 39.1
    3        1    2    3    4    5
           40.6 43.2 40.1 39.1 36.3
    4        1    2    3    4    5
           36.5 39.5 40.7 44.0 42.4
    5        1    2    3    4    5    6    7    8    9
           41.0 38.1 37.7 37.2 36.0 34.1 29.6 28.2 26.0
    6        1    2    3    4    5    6    7
           23.9 22.2 19.6 21.3 27.6 24.2 22.0
    7        1    2    3    4    5
           23.3 30.1 41.5 45.0 29.9
    8        1    2    3    4
           30.8 42.8 36.5 28.3
1

 RECEIVER    LEQ(H)   L10
 9            62.5   65.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           33.0 34.2 36.4 34.1 32.7 35.2 33.6 35.5 35.5 36.0

           40.6 44.7 50.0 56.8
    2        1    2
           54.6 48.7
    3        1    2    3    4    5
           43.4 42.9 38.4 37.3 34.7
    4        1    2    3    4    5
           34.8 37.4 38.5 42.6 43.8
    5        1    2    3    4    5    6    7    8    9
           48.9 52.3 53.4 49.3 45.0 41.6 36.6 35.8 34.6
    6        1    2    3    4    5    6    7
           33.6 33.9 31.4 33.0 35.3 33.1 31.9
    7        1    2    3    4    5
           24.0 25.4 24.2 22.0 16.7
    8        1    2    3    4
           17.3 23.0 25.1 26.6
1

 RECEIVER    LEQ(H)   L10
 10           63.1   66.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           35.3 37.1 40.2 38.9 38.2 41.7 41.2 44.7 47.2 51.4

           59.0 51.6 44.9 40.6
    2        1    2
           38.2 37.7
    3        1    2    3    4    5
           35.5 37.1 34.2 34.1 32.2
    4        1    2    3    4    5
           32.3 34.2 34.3 36.9 36.2
    5        1    2    3    4    5    6    7    8    9
           38.6 39.3 42.1 46.0 51.4 54.9 49.2 46.3 43.2
    6        1    2    3    4    5    6    7
           41.0 40.2 36.9 37.8 39.1 35.9 34.2
    7        1    2    3    4    5
           16.2 19.2 19.6 18.3 13.8
    8        1    2    3    4
           14.2 19.3 20.2 19.3
```

****
STAM2VU1
Version 1.20
****
STAMINA 2.0/BCR
MODIFIED FROM FHWA VERSION 3 (MARCH 1983)
TRAFFIC NOISE PREDICTION MODEL

MODIFIED TO:
1. ALLOW EQUIVALENT SPEEDS BELOW 30 MPH PER NCHRP 311;
2. CORRECT MEDIUM TRUCK BARRIER CALCULATION ERROR BY USING VEH4, VEH5 AND VEH6 FOR CARS, MT AND HT; AND
3. PLACE REFERENCE ENGERGY MEAN EMISSION LEVELS IN A DATA FILE CALLED REMEL.DTA TO ALLOW USER TO USE LEVELS OTHER THAN THE FHWA NATIONAL AVERAGES.

****
MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
BY VANDERBILT UNIVERSITY, NASHVILLE, TN 37235
AND BOWLBY & ASSOCIATES, INC.
2014 BROADWAY, SUITE 210
NASHVILLE, TN 37203-2425
TEL 615-327-8130, FAX 615-327-8137

NOTE:
IN STAM2VU1, THE TRAFFIC DATA FROM THE ORIGINAL DATA FILE HAS BEEN SHIFTED TO CORRECT THE STAMINA 2.0 MEDIUM TRUCK CALCULATION ERROR. THIS SHIFT IS REFLECTED BELOW IN THE *.STA OUTPUT FILE. THE ORIGINAL DATA FILE IS UNCHANGED.

(INPUT UNITS- ENGLISH , OUTPUT UNITS- ENGLISH)

Wal-Mart, Grand Site, Exst, nighttime

EMISSION LEVELS: Calveno Levels (trucks>30mph)

0PROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
.00	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.00	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)
.000	6	HEIGHT ADJUSTMENT FOR TYPE4 VEHICLES (VEH4) CARS--CALVENO C0 = 5.20 C1 = 38.80 S0 = .00
2.300	7	HEIGHT ADJUSTMENT FOR TYPE5 VEHICLES (VEH5) MT--CALVENO C0 = 35.30 C1 = 25.60 S0 = .00
8.000	8	HEIGHT ADJUSTMENT FOR TYPE6 VEHICLES (VEH6) HT--CALVENO C0 = 50.40 C1 = 19.20 S0 = .00

0ROADWAY 1 Grand Avenue, eb (w of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	130.	40.0
VEH5	2.	40.0
VEH6	1.	40.0

0 COORDINATES

	X	Y	Z	GRADE
1	6312007.5	1990830.1	680.3	1
2	6312241.2	1990925.7	696.5	1
3	6312421.8	1991029.8	710.4	1
4	6312605.2	1991131.1	724.5	1
5	6312679.4	1991171.5	730.0	1
6	6312720.9	1991193.8	734.0	1
7	6312781.0	1991226.3	739.0	1
8	6312819.8	1991247.2	741.0	0
9	6312872.4	1991275.5	741.0	0
10	6312912.6	1991297.1	739.0	0
11	6312947.9	1991316.1	736.0	0
12	6313014.4	1991351.8	727.0	0
13	6313092.2	1991393.6	716.0	0
14	6313164.8	1991432.8	706.0	0
15	6313223.3	1991464.6	699.0	0

0ROADWAY 2 Grand Avenue, eb cont'd.(w of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	130.	40.0
VEH5	2.	40.0
VEH6	1.	40.0

0 COORDINATES

	X	Y	Z	GRADE
15	6313223.3	1991464.6	699.0	0
16	6313276.4	1991492.7	694.0	0
17	6313347.9	1991531.7	689.0	0

0ROADWAY 3 Grand Avenue, eb cont'd.(e of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	125.	40.0
VEH5	2.	40.0
VEH6	1.	40.0

0 COORDINATES

	X	Y	Z	GRADE
17	6313347.9	1991531.7	689.0	0
18	6313412.8	1991566.7	686.0	0
19	6313561.8	1991646.5	681.5	0
20	6313689.9	1991715.4	677.4	0
21	6313888.5	1991822.1	671.1	0
22	6314095.0	1991933.5	664.6	0

0ROADWAY 4 Grand Ave, wb(e of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	125.	40.0
VEH5	2.	40.0
VEH6	1.	40.0

0 COORDINATES

	X	Y	Z	GRADE
1	6314080.2	1991960.1	664.6	1
2	6313875.3	1991850.2	671.1	1
3	6313676.6	1991741.3	677.4	1
4	6313547.5	1991672.4	681.5	1
5	6313404.5	1991595.7	686.0	1
6	6313331.4	1991556.6	689.0	1

0ROADWAY 5 Grand Ave, wb(w of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	130.	40.0
VEH5	2.	40.0
VEH6	1.	40.0

0 COORDINATES

	X	Y	Z	GRADE
6	6313331.4	1991556.6	689.0	1
7	6313258.1	1991516.8	694.0	1
8	6313205.8	1991488.2	699.0	1
9	6313143.5	1991455.2	706.0	1
10	6313071.0	1991416.1	716.0	1
11	6312995.7	1991376.5	727.0	1
12	6312926.5	1991338.6	736.0	1
13	6312893.6	1991320.1	739.0	1
14	6312851.7	1991298.4	741.0	0
15	6312808.2	1991274.9	741.0	0

0ROADWAY 6 Grand Ave, wb cont'd.(w of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	130.	40.0
VEH5	2.	40.0
VEH6	1.	40.0

0 COORDINATES

	X	Y	Z	GRADE
15	6312808.2	1991274.9	741.0	0
16	6312764.1	1991251.5	739.0	0
17	6312705.5	1991219.7	734.0	0
18	6312664.2	1991197.9	730.0	0
19	6312590.6	1991157.2	724.5	0
20	6312405.3	1991054.5	710.4	0
21	6312225.6	1990950.8	696.5	0
22	6312001.3	1990861.5	680.3	0

0ROADWAY 7 Harding Street, nb

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	9.	20.0
VEH5	1.	20.0
VEH6	0.	20.0

0 COORDINATES

	X	Y	Z	GRADE
1	6313349.5	1991569.1	688.0	0
2	6313331.7	1991601.6	687.0	0
3	6313292.1	1991673.4	685.0	0
4	6313246.2	1991757.3	682.0	0
5	6313204.8	1991833.0	680.0	0
6	6313188.2	1991863.1	679.0	0

0ROADWAY 8 Harding Street, nb

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	9.	20.0
VEH5	1.	20.0
VEH6	0.	20.0

0 COORDINATES

	X	Y	Z	GRADE
1	6313182.0	1991848.7	678.0	1
2	6313199.1	1991817.2	680.0	1
3	6313247.1	1991730.6	683.0	1
4	6313295.9	1991641.9	686.0	1
5	6313335.4	1991570.3	688.0	1

1

BARRIER 1 TYPE(A) Northern road edge

	X	Y	Z	Z0	DELZ	P
1	6313247.0	1991692.8	683.0	683.0	.0	0
2	6313291.8	1991612.4	686.0	686.0		
3	6313300.1	1991580.1	687.0	687.0		
4	6313303.3	1991573.2	689.0	689.0		
5	6313225.8	1991530.1	695.0	695.0		
6	6313132.9	1991480.1	705.0	705.0		
7	6313058.3	1991440.2	715.0	715.0		
8	6312991.6	1991397.1	725.0	725.0		
9	6312918.3	1991358.6	735.0	735.0		
10	6312855.6	1991322.7	740.0	740.0		

1

BARRIER 2 TYPE(A) Northern road edge cont'd.

	X	Y	Z	Z0	DELZ	P
10	6312855.6	1991322.7	740.0	740.0	.0	0
11	6312775.5	1991280.0	740.0	740.0		
12	6312706.6	1991242.6	735.0	735.0		
13	6312654.0	1991215.1	730.0	730.0		

1

BARRIER 3 TYPE(A) Existing Pad topo

	X	Y	Z	Z0	DELZ	P
7	6313058.3	1991440.2	715.0	715.0	.0	0
14	6313022.0	1991430.0	715.0	715.0		
15	6312995.5	1991431.5	715.0	715.0		
16	6312974.5	1991444.2	715.0	715.0		
17	6312959.3	1991473.2	710.0	710.0		

```
 18         6312944.1 1991501.8      705.0      705.0
 19         6312929.6 1991528.7      701.0      701.0
 20         6312883.9 1991504.4      705.0      705.0
 21         6312834.6 1991477.9      710.0      710.0
1

 BARRIER    4   TYPE(A)      Existing Pad topo cont'd.

            ---------COORDINATES----------
                  X          Y          Z          ZO       DELZ          P
 21         6312834.6 1991477.9      710.0      710.0          .0          0
 22         6312785.3 1991451.1      715.0      715.0
 23         6312725.4 1991418.8      720.0      720.0
 24         6312666.7 1991386.9      724.0      724.0
1

 2nd floor Receivers (@15')


                         ------------COORDINATES-------------
                               X          Y               Z
 1                         6312693.0   1991328.0        748.0
 2                         6312652.0   1991411.0        737.0
 3                         6312578.0   1991547.0        728.0
 4                         6312520.0   1991652.0        714.0
 5                         6312501.0   1991967.0        688.0
 6                         6312740.0   1992173.0        686.0
 7                         6313040.0   1992095.0        691.0
 8                         6313254.0   1991773.0        697.0
 9                         6313229.0   1991433.0        718.0
 10                        6312989.0   1991309.0        748.0
1

  ALPHA FACTORS - RECEIVER ACROSS,ROADWAY DOWN

   1 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

   2 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

   3 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

   4 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

   5 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

   6 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

   7 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

   8 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

1

  SHIELDING FACTORS - RECEIVER ACROSS,ROADWAY DOWN

   1 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

   2 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

   3 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

   4 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

   5 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

   6 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

   7 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

   8 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0

1

 RECEIVER     LEQ(H)    L10
 1              56.8    60.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             38.0 40.5 45.2 45.3 44.8 47.4 44.2 42.9 39.4 35.8

             35.9 33.1 30.5 28.3
    2          1    2
             27.2 27.8
    3          1    2    3    4    5
             26.6 31.4 31.4 31.7 30.3
    4          1    2    3    4    5
             30.4 32.0 31.5 33.4 29.3
    5          1    2    3    4    5    6    7    8    9
             30.6 29.4 30.9 33.7 37.2 39.2 37.9 40.2 42.6
    6          1    2    3    4    5    6    7
             44.9 47.2 43.6 44.6 44.6 39.6 36.9
    7          1    2    3    4    5
             10.1 15.5 16.5 15.8 11.6
    8          1    2    3    4
             12.0 16.6 16.6 15.0
1

 RECEIVER     LEQ(H)    L10
 2              53.0    56.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             37.6 39.9 43.6 41.4 38.2 40.1 36.7 36.5 34.4 32.7

             33.7 31.4 29.7 27.6
    2          1    2
             26.7 27.8
    3          1    2    3    4    5
             26.8 30.9 31.3 31.6 30.3
    4          1    2    3    4    5
             30.3 31.9 31.4 32.8 28.8
    5          1    2    3    4    5    6    7    8    9
             30.8 30.9 31.3 34.2 36.3 37.7 36.0 36.5 37.2
    6          1    2    3    4    5    6    7
             37.7 39.1 37.1 41.7 43.1 39.0 36.6
    7          1    2    3    4    5
             10.6 15.1 16.5 16.2 12.1
    8          1    2    3    4
             12.5 17.0 16.6 14.8
1

 RECEIVER     LEQ(H)    L10
 3              50.3    53.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             36.9 38.6 41.0 37.9 33.7 35.3 32.0 32.2 30.4 29.6

             31.0 30.4 28.5 26.9
    2          1    2
             26.2 27.2
    3          1    2    3    4    5
             26.7 30.6 30.3 31.4 30.0
    4          1    2    3    4    5
             30.2 31.6 31.1 31.5 28.5
    5          1    2    3    4    5    6    7    8    9
             30.1 29.9 31.3 32.8 34.3 34.9 32.6 32.4 32.5
    6          1    2    3    4    5    6    7
             32.5 33.8 32.1 37.8 40.5 37.7 36.0
    7          1    2    3    4    5
             10.3 14.7 16.2 16.2 12.2
    8          1    2    3    4
             12.6 16.9 16.3 14.3
1

 RECEIVER     LEQ(H)    L10
 4              48.6    52.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             36.2 37.4 39.3 35.8 31.1 32.7 29.3 29.6 28.0 27.3

             28.7 28.5 27.1 25.6
    2          1    2
             25.0 26.4
    3          1    2    3    4    5
             25.9 29.1 27.8 31.0 29.8
    4          1    2    3    4    5
             29.9 31.3 29.4 29.5 27.7
    5          1    2    3    4    5    6    7    8    9
             29.3 29.0 30.2 31.5 32.6 32.9 30.4 30.0 29.7
    6          1    2    3    4    5    6    7
             29.7 31.0 29.3 35.5 38.7 36.6 35.3
    7          1    2    3    4    5
              9.8 13.9 15.7 15 8 12.0
    8          1    2    3    4
             12.3 16.5 15.7 13.7
1

 RECEIVER     LEQ(H)    L10
 5              45.9    49.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             33.6 34.1 35.3 31.2 24.7 27.5 24.7 25.5 24.1 23.7

             26.5 26.8 26.4 25.2
    2          1    2
             24.1 25.5
    3          1    2    3    4    5
             24.7 30.0 30.0 30.9 29.8
    4          1    2    3    4    5
             29.9 31.1 30.3 30.8 26.4
    5          1    2    3    4    5    6    7    8    9
             28.0 27.3 28.4 29.5 29.8 29.7 26.8 26.1 25.6
    6          1    2    3    4    5    6    7
             25.2 26.4 24.5 30.9 34.5 33.3 32.6
    7          1    2    3    4    5
              6.8 12.9 15.2 15.5 12.0
    8          1    2    3    4
             12.3 16.1 14.9 12.7
1

 RECEIVER     LEQ(H)    L10
 6              45.4    49.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             31.6 32.0 33.2 27.9 21.6 24.3 23.3 24.1 23.6 23.0

             25.9 26.9 26.7 25.8
    2          1    2
             25.1 26.3
    3          1    2    3    4    5
             27.3 32.6 31.3 32.2 31.2
    4          1    2    3    4    5
             31.4 32.6 31.6 32.8 29.2
    5          1    2    3    4    5    6    7    8    9
             28.7 27.9 28.7 29.5 29.4 29.1 25.5 25.0 24.1
    6          1    2    3    4    5    6    7
             23.5 24.3 22.3 28.3 32.3 31.1 30.5
    7          1    2    3    4    5
              8.2 14.3 16.6 17.3 14.1
    8          1    2    3    4
             14.2 17.7 16.4 13.7
1

 RECEIVER     LEQ(H)    L10
 7              47.3    50.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             31.0 31.6 30.1 22.9 20.9 23.2 22.7 24.8 24.2 25.0

             28.3 29.6 29.5 28.3
    2          1    2
             28.0 30.2
    3          1    2    3    4    5
             32.4 35.8 34.4 35.2 33.7
    4          1    2    3    4    5
             34.0 35.6 34.9 36.1 33.6
```

```
    5         1    2    3    4    5    6    7    8    9
             32.3 30.8 31.3 31.8 31.5 30.5 26.6 25.9 24.4
    6         1    2    3    4    5    6    7
             24.2 24.2 21.7 24.0 30.5 30.6 29.9
    7         1    2    3    4    5
             13.9 18.4 20.7 22.3 19.9
    8         1    2    3    4
             19.8 22.5 20.5 17.9
1

 RECEIVER    LEQ(H)   L10
 8            54.2   57.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
             25.6 27.0 26.3 19.8 19.5 23.8 23.6 27.4 28.5 29.7

             34.6 36.7 36.8 36.7
    2         1    2
             36.5 39.8
    3         1    2    3    4    5
             40.6 43.2 40.1 39.1 36.3
    4         1    2    3    4    5
             36.5 39.5 40.7 44.0 42.4
    5         1    2    3    4    5    6    7    8    9
             41.5 38.7 38.3 37.8 36.7 34.6 30.1 28.4 26.6
    6         1    2    3    4    5    6    7
             24.8 22.8 20.1 21.9 28.5 26.2 24.5
    7         1    2    3    4    5
             23.3 30.0 40.5 43.2 29.8
    8         1    2    3    4
             30.7 42.1 36.3 28.3
1

 RECEIVER    LEQ(H)   L10
 9            62.1   65.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
             33.0 34.2 36.4 34.1 32.7 35.2 33.6 35.5 35.5 36.1

             40.6 44.7 50.0 56.1
    2         1    2
             53.9 48.5
    3         1    2    3    4    5
             43.3 42.8 38.4 37.3 34.7
    4         1    2    3    4    5
             34.8 37.4 38.5 42.5 43.7
    5         1    2    3    4    5    6    7    8    9
             48.8 52.0 53.2 49.3 45.0 41.6 36.7 35.8 34.6
    6         1    2    3    4    5    6    7
             33.6 33.9 31.4 33.1 35.3 33.1 31.9
    7         1    2    3    4    5
             24.0 25.9 24.6 22.0 16.7
    8         1    2    3    4
             17.2 23.1 25.7 27.1
1

 RECEIVER    LEQ(H)   L10
 10           62.6   65.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
             35.3 37.0 40.2 38.9 38.2 41.6 41.2 44.7 47.2 51.2

             58.1 51.3 44.8 40.6
    2         1    2
             38.1 37.7
    3         1    2    3    4    5
             35.4 37.1 34.2 34.1 32.2
    4         1    2    3    4    5
             32.3 34.2 34.3 36.9 36.2
    5         1    2    3    4    5    6    7    8    9
             38.6 39.3 42.0 45.9 51.1 54.6 49.1 46.3 43.2
    6         1    2    3    4    5    6    7
             41.0 40.1 36.9 37.8 39.1 35.9 34.2
    7         1    2    3    4    5
             16.2 19.3 19.6 18.3 13.8
    8         1    2    3    4
             14.2 19.3 20.2 19.6
```

ATTACHMENT 4

KEY TO FILE CODES

*.OUT	-	HICNOM input file
*.RES	-	HICNOM output file
WORST	-	First-floor adjacent property receiver locations, noise from project sources, with worst-case noise level (73 dB[A]) from each HVAC unit.
2WORST	-	Second-floor adjacent property receiver locations, noise from project sources, with worst-case noise level (73 dB[A]) from each HVAC unit.
LOW	-	First-floor adjacent property receiver locations, noise from project sources, with 56 dB(A) from each HVAC unit.
2LOW	-	Second-floor adjacent property receiver locations, noise from project sources, with 56 dB(A) from each HVAC unit.

WALMART

10 RECEIVERS

X	Y	Z	EX. ATT.(DB/DD)	DESCRIPTION
6312693.0	1991328.0	738.0	.00	1
6312652.0	1991411.0	727.0	.00	2
6312578.0	1991547.0	718.0	.00	3
6312520.0	1991652.0	704.0	.00	4
6312501.0	1991967.0	678.0	.00	5
6312740.0	1992173.0	676.0	.00	6
6313040.0	1992095.0	681.0	.00	7
6313254.0	1991773.0	687.0	.00	8
6313229.0	1991433.0	708.0	.00	9
6312989.0	1991309.0	738.0	.00	10

21 POINT SOURCES

X	Y	Z	LEQ(REF)	FREQ.	SOURCE	DESCRIPTION
6312737.0	1991612.0	708.0	73.0	500	USER DEFINED1	HVAC1
6312841.0	1991667.0	708.0	73.0	500	USER DEFINED2	HVAC2
6312900.0	1991681.0	708.0	73.0	500	USER DEFINED3	HVAC3
6312998.0	1991733.0	708.0	73.0	500	USER DEFINED4	HVAC4
6313012.0	1991651.0	708.0	73.0	500	USER DEFINED5	HVAC5
6312863.0	1991572.0	708.0	73.0	500	USER DEFINED6	HVAC6
6312833.0	1991476.0	708.0	73.0	500	USER DEFINED7	HVAC7
6312971.0	1991549.0	708.0	73.0	500	USER DEFINED8	HVAC8
6313109.0	1991622.0	708.0	73.0	500	USER DEFINED9	HVAC9
6312710.0	1991560.0	708.0	73.0	500	USER DEFINED10	HVAC10
6312888.0	1991725.0	708.0	73.0	500	USER DEFINED11	HVAC11
6312917.0	1991734.0	708.0	73.0	500	USER DEFINED12	HVAC12
6312945.0	1991756.0	708.0	73.0	500	USER DEFINED13	HVAC13
6313065.0	1991756.0	708.0	73.0	500	USER DEFINED14	HVAC14
6312857.0	1991396.0	708.0	73.0	500	USER DEFINED15	HVAC15
6312942.0	1991441.0	708.0	73.0	500	USER DEFINED16	HVAC16
6313020.0	1991477.0	708.0	73.0	500	USER DEFINED17	HVAC17
6313079.0	1991513.0	708.0	73.0	500	USER DEFINED18	HVAC18
6313135.0	1991550.0	708.0	73.0	500	USER DEFINED19	HVAC19
6313151.0	1991540.0	708.0	73.0	500	USER DEFINED20	HVAC20
6313180.0	1991567.0	708.0	73.0	500	USER DEFINED21	HVAC21

0 LINE SOURCES

0 AREA SOURCES

2 BARRIERS

8 POINTS DESCRIPTION: roadedge

X	Y	Z
6313303.3	1991573.2	689.0
6313225.7	1991530.1	695.0
6313132.9	1991480.1	705.0
6313058.3	1991440.2	715.0
6312991.5	1991397.0	725.0
6312918.3	1991358.6	735.0
6312855.6	1991322.7	740.0
6312775.5	1991279.9	740.0

9 POINTS DESCRIPTION:roof

X	Y	Z
6312839.4	1991359.4	703.0
6312740.7	1991545.2	703.0
6312699.6	1991524.6	703.0
6312651.1	1991615.9	703.0
6313055.5	1991830.4	703.0
6313175.5	1991605.2	703.0
6313229.8	1991632.3	703.0
6313260.2	1991580.5	703.0
6312839.4	1991359.4	703.0

****
HICNOMVU
****
CALCULATION PROGRAM
FHWA HIGHWAY CONSTRUCTION NOISE MODEL
****
MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
IN MARCH 1990 BY
VANDERBILT ENGINEERING CENTER FOR TRANSPORTATION
OPERATIONS AND RESEARCH (VECTOR)
BOX 96-B, VANDERBILT UNIVERSITY, NASHVILLE, TENNESSEE 37235
(615) 322-3683
****
LICENSED FOR USE ON ONE MICROCOMPUTER TO:

WALMART

RECEIVER NUMBER	LEQ	DESCRIPTION
1	69.1	1
2	69.9	2
3	69.9	3
4	65.6	4
5	59.7	5
6	59.2	6
7	60.3	7
8	63.6	8
9	70.4	9
10	69.7	10

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 1

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.603952E+06	57.8	USER DEFINED1	HVAC1
2	.364565E+06	55.6	USER DEFINED2	HVAC2
3	.297875E+06	54.7	USER DEFINED3	HVAC3
4	.194054E+06	52.9	USER DEFINED4	HVAC4
5	.242038E+06	53.8	USER DEFINED5	HVAC5
6	.564041E+06	57.5	USER DEFINED6	HVAC6
7	.120185E+07	60.8	USER DEFINED7	HVAC7
8	.395493E+06	56.0	USER DEFINED8	HVAC8
9	.192228E+06	52.8	USER DEFINED9	HVAC9
10	.921804E+06	59.6	USER DEFINED10	HVAC10
11	.254974E+06	54.1	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.155120E+06	51.9	USER DEFINED14	HVAC14
15	.158254E+07	62.0	USER DEFINED15	HVAC15
16	.667133E+06	58.2	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.203891E+06	53.1	USER DEFINED19	HVAC19
20	.195838E+06	52.9	USER DEFINED20	HVAC20
21	.169498E+06	52.3	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 2

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.104736E+07	60.2	USER DEFINED1	HVAC1
2	.492623E+06	56.9	USER DEFINED2	HVAC2
3	.371132E+06	55.7	USER DEFINED3	HVAC3
4	.223284E+06	53.5	USER DEFINED4	HVAC4
5	.266461E+06	54.3	USER DEFINED5	HVAC5
6	.708122E+06	58.5	USER DEFINED6	HVAC6
7	.134866E+07	61.3	USER DEFINED7	HVAC7
8	.412910E+06	56.2	USER DEFINED8	HVAC8
9	.196872E+06	52.9	USER DEFINED9	HVAC9
10	.195117E+07	62.9	USER DEFINED10	HVAC10
11	.323293E+06	55.1	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.172247E+06	52.4	USER DEFINED14	HVAC14
15	.118063E+07	60.7	USER DEFINED15	HVAC15
16	.586842E+06	57.7	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.197465E+06	53.0	USER DEFINED19	HVAC19
20	.187777E+06	52.7	USER DEFINED20	HVAC20
21	.164560E+06	52.2	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 3

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.169056E+07	62.3	USER DEFINED1	HVAC1
2	.596891E+06	57.8	USER DEFINED2	HVAC2
3	.410075E+06	56.1	USER DEFINED3	HVAC3
4	.236410E+06	53.7	USER DEFINED4	HVAC4
5	.250445E+06	54.0	USER DEFINED5	HVAC5
6	.609427E+06	57.8	USER DEFINED6	HVAC6
7	.711923E+06	58.5	USER DEFINED7	HVAC7
8	.322956E+06	55.1	USER DEFINED8	HVAC8
9	.173449E+06	52.4	USER DEFINED9	HVAC9
10	.283531E+07	64.5	USER DEFINED10	HVAC10
11	.390358E+06	55.9	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.177609E+06	52.5	USER DEFINED14	HVAC14
15	.495634E+06	57.0	USER DEFINED15	HVAC15
16	.347046E+06	55.4	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.160774E+06	52.1	USER DEFINED19	HVAC19
20	.151903E+06	51.8	USER DEFINED20	HVAC20
21	.137489E+06	51.4	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 4

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.684720E+06	58.4	USER DEFINED1	HVAC1
2	.285041E+06	54.5	USER DEFINED2	HVAC2
3	.177409E+06	52.5	USER DEFINED3	HVAC3
4	.103134E+06	50.1	USER DEFINED4	HVAC4
5	.893637E+05	49.5	USER DEFINED5	HVAC5
6	.184627E+06	52.7	USER DEFINED6	HVAC6
7	.244365E+06	53.9	USER DEFINED7	HVAC7
8	.993485E+05	50.0	USER DEFINED8	HVAC8
9	.594706E+05	47.7	USER DEFINED9	HVAC9
10	.926287E+06	59.7	USER DEFINED10	HVAC10
11	.278884E+06	54.5	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.741339E+05	48.7	USER DEFINED14	HVAC14
15	.185354E+06	52.7	USER DEFINED15	HVAC15
16	.103370E+06	50.1	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.524974E+05	47.2	USER DEFINED19	HVAC19
20	.495103E+05	46.9	USER DEFINED20	HVAC20
21	.458219E+05	46.6	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 5

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.129668E+06	51.1	USER DEFINED1	HVAC1
2	.113022E+06	50.5	USER DEFINED2	HVAC2
3	.772587E+05	48.9	USER DEFINED3	HVAC3
4	.609761E+05	47.9	USER DEFINED4	HVAC4
5	.304792E+05	44.8	USER DEFINED5	HVAC5
6	.374031E+05	45.7	USER DEFINED6	HVAC6
7	.224855E+05	43.5	USER DEFINED7	HVAC7
8	.204100E+05	43.1	USER DEFINED8	HVAC8
9	.173038E+05	42.4	USER DEFINED9	HVAC9
10	.747973E+05	48.7	USER DEFINED10	HVAC10
11	.239432E+06	53.8	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.442310E+05	46.5	USER DEFINED14	HVAC14
15	.149895E+05	41.8	USER DEFINED15	HVAC15
16	.145169E+05	41.6	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.124502E+05	41.0	USER DEFINED19	HVAC19
20	.115810E+05	40.6	USER DEFINED20	HVAC20
21	.115546E+05	40.6	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 6

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.774284E+05	48.9	USER DEFINED1	HVAC1
2	.927717E+05	49.7	USER DEFINED2	HVAC2
3	.757033E+05	48.8	USER DEFINED3	HVAC3
4	.779418E+05	48.9	USER DEFINED4	HVAC4
5	.330309E+05	45.2	USER DEFINED5	HVAC5
6	.306201E+05	44.9	USER DEFINED6	HVAC6
7	.179826E+05	42.5	USER DEFINED7	HVAC7
8	.196549E+05	42.9	USER DEFINED8	HVAC8
9	.197867E+05	43.0	USER DEFINED9	HVAC9
10	.432831E+05	46.4	USER DEFINED10	HVAC10
11	.224078E+06	53.5	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.616893E+05	47.9	USER DEFINED14	HVAC14
15	.119233E+05	40.8	USER DEFINED15	HVAC15
16	.126329E+05	41.0	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.134169E+05	41.3	USER DEFINED19	HVAC19
20	.125051E+05	41.0	USER DEFINED20	HVAC20
21	.129172E+05	41.1	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 7

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.535155E+05	47.3	USER DEFINED1	HVAC1
2	.796569E+05	49.0	USER DEFINED2	HVAC2
3	.792669E+05	49.0	USER DEFINED3	HVAC3
4	.115456E+06	50.6	USER DEFINED4	HVAC4
5	.405096E+05	46.1	USER DEFINED5	HVAC5
6	.286014E+05	44.6	USER DEFINED6	HVAC6
7	.165340E+05	42.2	USER DEFINED7	HVAC7
8	.218022E+05	43.4	USER DEFINED8	HVAC8
9	.435088E+05	46.4	USER DEFINED9	HVAC9
10	.325300E+05	45.1	USER DEFINED10	HVAC10
11	.270279E+06	54.3	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.125797E+06	51.0	USER DEFINED14	HVAC14
15	.114465E+05	40.6	USER DEFINED15	HVAC15
16	.131583E+05	41.2	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.291005E+05	44.6	USER DEFINED19	HVAC19
20	.314927E+05	45.0	USER DEFINED20	HVAC20
21	.750564E+05	48.8	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 8

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.150543E+05	41.8	USER DEFINED1	HVAC1
2	.282525E+05	44.5	USER DEFINED2	HVAC2
3	.428170E+05	46.3	USER DEFINED3	HVAC3
4	.132459E+06	51.2	USER DEFINED4	HVAC4
5	.100667E+06	50.0	USER DEFINED5	HVAC5
6	.252283E+05	44.0	USER DEFINED6	HVAC6
7	.168213E+05	42.3	USER DEFINED7	HVAC7
8	.437710E+05	46.4	USER DEFINED8	HVAC8
9	.348840E+06	55.4	USER DEFINED9	HVAC9
10	.124868E+05	41.0	USER DEFINED10	HVAC10
11	.436274E+05	46.4	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.706932E+06	58.5	USER DEFINED14	HVAC14
15	.149231E+05	41.7	USER DEFINED15	HVAC15
16	.244664E+05	43.9	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.194807E+06	52.9	USER DEFINED19	HVAC19
20	.192924E+06	52.9	USER DEFINED20	HVAC20
21	.330751E+06	55.2	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 9

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.672921E+05	48.3	USER DEFINED1	HVAC1
2	.146364E+06	51.7	USER DEFINED2	HVAC2
3	.209072E+06	53.2	USER DEFINED3	HVAC3
4	.347944E+06	55.4	USER DEFINED4	HVAC4
5	.501668E+06	57.0	USER DEFINED5	HVAC5
6	.130407E+06	51.2	USER DEFINED6	HVAC6
7	.500447E+05	47.0	USER DEFINED7	HVAC7
8	.293589E+06	54.7	USER DEFINED8	HVAC8
9	.995223E+06	60.0	USER DEFINED9	HVAC9
10	.490962E+05	46.9	USER DEFINED10	HVAC10
11	.192435E+06	52.8	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12

13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.380122E+06	55.8	USER DEFINED14	HVAC14
15	.194926E+05	42.9	USER DEFINED15	HVAC15
16	.577814E+05	47.6	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.221450E+07	63.5	USER DEFINED19	HVAC19
20	.284501E+07	64.5	USER DEFINED20	HVAC20
21	.245034E+07	63.9	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 10

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.321168E+06	55.1	USER DEFINED1	HVAC1
2	.332393E+06	55.2	USER DEFINED2	HVAC2
3	.340942E+06	55.3	USER DEFINED3	HVAC3
4	.270569E+06	54.3	USER DEFINED4	HVAC4
5	.336922E+06	55.3	USER DEFINED5	HVAC5
6	.586531E+06	57.7	USER DEFINED6	HVAC6
7	.955128E+06	59.8	USER DEFINED7	HVAC7
8	.538269E+06	57.3	USER DEFINED8	HVAC8
9	.443909E+06	56.5	USER DEFINED9	HVAC9
10	.354167E+06	55.5	USER DEFINED10	HVAC10
11	.272195E+06	54.3	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.242632E+06	53.8	USER DEFINED14	HVAC14
15	.199582E+07	63.0	USER DEFINED15	HVAC15
16	.657117E+06	58.2	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.628255E+06	58.0	USER DEFINED19	HVAC19
20	.626613E+06	58.0	USER DEFINED20	HVAC20
21	.484076E+06	56.8	USER DEFINED21	HVAC21

KEY TO INDEX:
X - POINT SOURCE, WHERE X OR XX IS INPUT SEQUENCE # OF POINT SOURCES.
XX
YXX - LINE SOURCE, WHERE XX IS INPUT SEQUENCE # OF LINE SOURCES
YYXX AND Y OR YY IS SEQUENCE # OF POINTS FOR THE XXTH LINE.
1YYXX - AREA SOURCE, WHERE XX AND YY ARE ANALAGOUS TO LINE SOURCE VARIABLES.

WALMART

10 RECEIVERS

X	Y	Z	EX. ATT.(DB/DD)	DESCRIPTION
6312693.0	1991328.0	748.0	.00	1-2
6312652.0	1991411.0	737.0	.00	2-2
6312578.0	1991547.0	728.0	.00	3-2
6312520.0	1991652.0	714.0	.00	4-2
6312501.0	1991967.0	688.0	.00	5-2
6312740.0	1992173.0	686.0	.00	6-2
6313040.0	1992095.0	691.0	.00	7-2
6313254.0	1991773.0	697.0	.00	8-2
6313229.0	1991433.0	718.0	.00	9-2
6312989.0	1991309.0	748.0	.00	10-2

21 POINT SOURCES

X	Y	Z	LEQ(REF)	FREQ.	SOURCE	DESCRIPTION
6312737.0	1991612.0	708.0	73.0	500	USER DEFINED1	HVAC1
6312841.0	1991667.0	708.0	73.0	500	USER DEFINED2	HVAC2
6312900.0	1991681.0	708.0	73.0	500	USER DEFINED3	HVAC3
6312998.0	1991733.0	708.0	73.0	500	USER DEFINED4	HVAC4
6313012.0	1991651.0	708.0	73.0	500	USER DEFINED5	HVAC5
6312863.0	1991572.0	708.0	73.0	500	USER DEFINED6	HVAC6
6312833.0	1991476.0	708.0	73.0	500	USER DEFINED7	HVAC7
6312971.0	1991549.0	708.0	73.0	500	USER DEFINED8	HVAC8
6313109.0	1991622.0	708.0	73.0	500	USER DEFINED9	HVAC9
6312710.0	1991560.0	708.0	73.0	500	USER DEFINED10	HVAC10
6312888.0	1991725.0	708.0	73.0	500	USER DEFINED11	HVAC11
6312917.0	1991734.0	708.0	73.0	500	USER DEFINED12	HVAC12
6312945.0	1991756.0	708.0	73.0	500	USER DEFINED13	HVAC13
6313065.0	1991756.0	708.0	73.0	500	USER DEFINED14	HVAC14
6312857.0	1991396.0	708.0	73.0	500	USER DEFINED15	HVAC15
6312942.0	1991441.0	708.0	73.0	500	USER DEFINED16	HVAC16
6313020.0	1991477.0	708.0	73.0	500	USER DEFINED17	HVAC17
6313079.0	1991513.0	708.0	73.0	500	USER DEFINED18	HVAC18
6313135.0	1991550.0	708.0	73.0	500	USER DEFINED19	HVAC19
6313151.0	1991540.0	708.0	73.0	500	USER DEFINED20	HVAC20
6313180.0	1991567.0	708.0	73.0	500	USER DEFINED21	HVAC21

0 LINE SOURCES

0 AREA SOURCES

2 BARRIERS

8 POINTS DESCRIPTION: roadedge

X	Y	Z
6313303.3	1991573.2	689.0
6313225.7	1991530.1	695.0
6313132.9	1991480.1	705.0
6313058.3	1991440.2	715.0
6312991.5	1991397.0	725.0
6312918.3	1991358.6	735.0
6312855.6	1991322.7	740.0
6312775.5	1991279.9	740.0

9 POINTS DESCRIPTION:roof

X	Y	Z
6312839.4	1991359.4	703.0
6312740.7	1991545.2	703.0
6312699.6	1991524.6	703.0
6312651.1	1991615.9	703.0
6313055.5	1991830.4	703.0
6313175.5	1991605.2	703.0
6313229.8	1991632.3	703.0
6313260.2	1991580.5	703.0
6312839.4	1991359.4	703.0

****
HICNOMVU
****
CALCULATION PROGRAM
FHWA HIGHWAY CONSTRUCTION NOISE MODEL
****
MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
IN MARCH 1990 BY
VANDERBILT ENGINEERING CENTER FOR TRANSPORTATION
OPERATIONS AND RESEARCH (VECTOR)
BOX 96-B, VANDERBILT UNIVERSITY, NASHVILLE, TENNESSEE 37235
(615) 322-3683
****
LICENSED FOR USE ON ONE MICROCOMPUTER TO:

WALMART

RECEIVER NUMBER	LEQ	DESCRIPTION
1	69.1	1-2
2	69.9	2-2
3	69.9	3-2
4	67.6	4-2
5	60.7	5-2
6	60.1	6-2
7	61.7	7-2
8	66.0	8-2
9	70.8	9-2
10	70.3	10-2

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 1

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.603952E+06	57.8	USER DEFINED1	HVAC1
2	.364565E+06	55.6	USER DEFINED2	HVAC2
3	.297875E+06	54.7	USER DEFINED3	HVAC3
4	.194054E+06	52.9	USER DEFINED4	HVAC4
5	.242038E+06	53.8	USER DEFINED5	HVAC5
6	.564041E+06	57.5	USER DEFINED6	HVAC6
7	.120185E+07	60.8	USER DEFINED7	HVAC7
8	.395493E+06	56.0	USER DEFINED8	HVAC8
9	.192228E+06	52.8	USER DEFINED9	HVAC9
10	.921804E+06	59.6	USER DEFINED10	HVAC10
11	.254974E+06	54.1	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.155120E+06	51.9	USER DEFINED14	HVAC14
15	.158254E+07	62.0	USER DEFINED15	HVAC15
16	.667133E+06	58.2	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.203891E+06	53.1	USER DEFINED19	HVAC19
20	.195838E+06	52.9	USER DEFINED20	HVAC20
21	.169498E+06	52.3	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 2

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.104736E+07	60.2	USER DEFINED1	HVAC1
2	.492623E+06	56.9	USER DEFINED2	HVAC2
3	.371132E+06	55.7	USER DEFINED3	HVAC3
4	.223284E+06	53.5	USER DEFINED4	HVAC4
5	.266461E+06	54.3	USER DEFINED5	HVAC5
6	.708122E+06	58.5	USER DEFINED6	HVAC6
7	.134866E+07	61.3	USER DEFINED7	HVAC7
8	.412910E+06	56.2	USER DEFINED8	HVAC8
9	.196872E+06	52.9	USER DEFINED9	HVAC9
10	.195117E+07	62.9	USER DEFINED10	HVAC10
11	.323293E+06	55.1	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.172247E+06	52.4	USER DEFINED14	HVAC14
15	.118063E+07	60.7	USER DEFINED15	HVAC15
16	.586842E+06	57.7	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.197465E+06	53.0	USER DEFINED19	HVAC19
20	.187777E+06	52.7	USER DEFINED20	HVAC20
21	.164560E+06	52.2	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 3

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.169056E+07	62.3	USER DEFINED1	HVAC1
2	.596891E+06	57.8	USER DEFINED2	HVAC2
3	.410075E+06	56.1	USER DEFINED3	HVAC3
4	.236410E+06	53.7	USER DEFINED4	HVAC4
5	.250445E+06	54.0	USER DEFINED5	HVAC5
6	.609427E+06	57.8	USER DEFINED6	HVAC6
7	.711923E+06	58.5	USER DEFINED7	HVAC7
8	.322956E+06	55.1	USER DEFINED8	HVAC8
9	.173449E+06	52.4	USER DEFINED9	HVAC9
10	.283531E+07	64.5	USER DEFINED10	HVAC10
11	.390358E+06	55.9	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.177609E+06	52.5	USER DEFINED14	HVAC14
15	.495634E+06	57.0	USER DEFINED15	HVAC15
16	.347046E+06	55.4	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.160774E+06	52.1	USER DEFINED19	HVAC19
20	.151903E+06	51.8	USER DEFINED20	HVAC20
21	.137489E+06	51.4	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 4

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.102449E+07	60.1	USER DEFINED1	HVAC1
2	.477475E+06	56.8	USER DEFINED2	HVAC2
3	.310109E+06	54.9	USER DEFINED3	HVAC3
4	.168899E+06	52.3	USER DEFINED4	HVAC4
5	.191303E+06	52.8	USER DEFINED5	HVAC5
6	.402112E+06	56.0	USER DEFINED6	HVAC6
7	.360659E+06	55.6	USER DEFINED7	HVAC7
8	.233081E+06	53.7	USER DEFINED8	HVAC8
9	.138891E+06	51.4	USER DEFINED9	HVAC9
10	.111932E+07	60.5	USER DEFINED10	HVAC10
11	.354391E+06	55.5	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.123474E+06	50.9	USER DEFINED14	HVAC14
15	.249681E+06	54.0	USER DEFINED15	HVAC15
16	.188387E+06	52.8	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.128353E+06	51.1	USER DEFINED19	HVAC19
20	.121454E+06	50.8	USER DEFINED20	HVAC20
21	.112644E+06	50.5	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 5

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.168551E+06	52.3	USER DEFINED1	HVAC1
2	.145197E+06	51.6	USER DEFINED2	HVAC2
3	.981751E+05	49.9	USER DEFINED3	HVAC3
4	.766615E+05	48.8	USER DEFINED4	HVAC4
5	.432895E+05	46.4	USER DEFINED5	HVAC5
6	.538770E+05	47.3	USER DEFINED6	HVAC6
7	.348894E+05	45.4	USER DEFINED7	HVAC7
8	.310561E+05	44.9	USER DEFINED8	HVAC8
9	.253829E+05	44.0	USER DEFINED9	HVAC9
10	.994275E+05	50.0	USER DEFINED10	HVAC10
11	.239432E+06	53.8	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.578969E+05	47.6	USER DEFINED14	HVAC14
15	.239579E+05	43.8	USER DEFINED15	HVAC15
16	.231282E+05	43.6	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.194553E+05	42.9	USER DEFINED19	HVAC19
20	.181508E+05	42.6	USER DEFINED20	HVAC20
21	.179930E+05	42.6	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 6

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.953121E+05	49.8	USER DEFINED1	HVAC1
2	.115770E+06	50.6	USER DEFINED2	HVAC2
3	.927078E+05	49.7	USER DEFINED3	HVAC3
4	.956516E+05	49.8	USER DEFINED4	HVAC4
5	.452118E+05	46.6	USER DEFINED5	HVAC5
6	.416873E+05	46.2	USER DEFINED6	HVAC6
7	.251952E+05	44.0	USER DEFINED7	HVAC7
8	.279941E+05	44.5	USER DEFINED8	HVAC8
9	.282197E+05	44.5	USER DEFINED9	HVAC9
10	.554928E+05	47.4	USER DEFINED10	HVAC10
11	.224078E+06	53.5	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.795175E+05	49.0	USER DEFINED14	HVAC14
15	.180575E+05	42.6	USER DEFINED15	HVAC15
16	.192094E+05	42.8	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.204485E+05	43.1	USER DEFINED19	HVAC19
20	.190843E+05	42.8	USER DEFINED20	HVAC20
21	.196667E+05	42.9	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 7

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.697985E+05	48.4	USER DEFINED1	HVAC1
2	.105956E+06	50.3	USER DEFINED2	HVAC2
3	.109294E+06	50.4	USER DEFINED3	HVAC3
4	.159264E+06	52.0	USER DEFINED4	HVAC4
5	.694173E+05	48.4	USER DEFINED5	HVAC5
6	.462985E+05	46.7	USER DEFINED6	HVAC6
7	.274247E+05	44.4	USER DEFINED7	HVAC7
8	.376591E+05	45.8	USER DEFINED8	HVAC8
9	.681629E+05	48.3	USER DEFINED9	HVAC9
10	.430095E+05	46.3	USER DEFINED10	HVAC10
11	.311752E+06	54.9	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.187327E+06	52.7	USER DEFINED14	HVAC14
15	.196987E+05	42.9	USER DEFINED15	HVAC15
16	.228950E+05	43.6	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.469071E+05	46.7	USER DEFINED19	HVAC19
20	.480615E+05	46.8	USER DEFINED20	HVAC20
21	.943309E+05	49.7	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 8

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.371954E+05	45.7	USER DEFINED1	HVAC1
2	.654853E+05	48.2	USER DEFINED2	HVAC2
3	.942932E+05	49.7	USER DEFINED3	HVAC3
4	.251983E+06	54.0	USER DEFINED4	HVAC4
5	.214861E+06	53.3	USER DEFINED5	HVAC5
6	.601677E+05	47.8	USER DEFINED6	HVAC6
7	.415640E+05	46.2	USER DEFINED7	HVAC7
8	.966597E+05	49.9	USER DEFINED8	HVAC8
9	.575406E+06	57.6	USER DEFINED9	HVAC9
10	.309913E+05	44.9	USER DEFINED10	HVAC10
11	.965851E+05	49.8	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.107363E+07	60.3	USER DEFINED14	HVAC14
15	.365981E+05	45.6	USER DEFINED15	HVAC15
16	.567311E+05	47.5	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.340057E+06	55.3	USER DEFINED19	HVAC19
20	.336159E+06	55.3	USER DEFINED20	HVAC20
21	.549599E+06	57.4	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 9

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.181980E+06	52.6	USER DEFINED1	HVAC1
2	.242969E+06	53.9	USER DEFINED2	HVAC2
3	.293862E+06	54.7	USER DEFINED3	HVAC3
4	.347944E+06	55.4	USER DEFINED4	HVAC4
5	.527217E+06	57.2	USER DEFINED5	HVAC5
6	.325434E+06	55.1	USER DEFINED6	HVAC6
7	.125194E+06	51.0	USER DEFINED7	HVAC7
8	.623364E+06	57.9	USER DEFINED8	HVAC8
9	.995223E+06	60.0	USER DEFINED9	HVAC9
10	.133727E+06	51.3	USER DEFINED10	HVAC10
11	.247496E+06	53.9	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12

13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.380122E+06	55.8	USER DEFINED14	HVAC14
15	.312012E+05	44.9	USER DEFINED15	HVAC15
16	.103506E+06	50.1	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.221450E+07	63.5	USER DEFINED19	HVAC19
20	.284501E+07	64.5	USER DEFINED20	HVAC20
21	.245034E+07	63.9	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 10

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.321168E+06	55.1	USER DEFINED1	HVAC1
2	.332393E+06	55.2	USER DEFINED2	HVAC2
3	.340942E+06	55.3	USER DEFINED3	HVAC3
4	.277340E+06	54.4	USER DEFINED4	HVAC4
5	.424549E+06	56.3	USER DEFINED5	HVAC5
6	.586531E+06	57.7	USER DEFINED6	HVAC6
7	.955128E+06	59.8	USER DEFINED7	HVAC7
8	.861155E+06	59.4	USER DEFINED8	HVAC8
9	.443909E+06	56.5	USER DEFINED9	HVAC9
10	.354167E+06	55.5	USER DEFINED10	HVAC10
11	.272195E+06	54.3	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.242632E+06	53.8	USER DEFINED14	HVAC14
15	.199582E+07	63.0	USER DEFINED15	HVAC15
16	.166958E+07	62.2	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.628255E+06	58.0	USER DEFINED19	HVAC19
20	.626613E+06	58.0	USER DEFINED20	HVAC20
21	.484076E+06	56.8	USER DEFINED21	HVAC21

KEY TO INDEX:
X - POINT SOURCE, WHERE X OR XX IS INPUT SEQUENCE # OF POINT SOURCES.
XX
YXX - LINE SOURCE, WHERE XX IS INPUT SEQUENCE # OF LINE SOURCES
YYXX AND Y OR YY IS SEQUENCE # OF POINTS FOR THE XXTH LINE.
1YYXX - AREA SOURCE, WHERE XX AND YY ARE ANALAGOUS TO LINE SOURCE VARIABLES.

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WALMART
 10  RECEIVERS
     X          Y          Z      EX. ATT.(DB/DD)     DESCRIPTION
 6312693.0 1991328.0      738.0          .00      1
 6312652.0 1991411.0      727.0          .00      2
 6312578.0 1991547.0      718.0          .00      3
 6312520.0 1991652.0      704.0          .00      4
 6312501.0 1991967.0      678.0          .00      5
 6312740.0 1992173.0      676.0          .00      6
 6313040.0 1992095.0      681.0          .00      7
 6313254.0 1991773.0      687.0          .00      8
 6313229.0 1991433.0      708.0          .00      9
 6312989.0 1991309.0      738.0          .00     10
 21  POINT SOURCES
     X          Y          Z       LEQ(REF)    FREQ.     SOURCE          DESCRIPTION
 6312737.0 1991612.0      708.0        56.0    500  USER DEFINED1    HVAC1
 6312841.0 1991667.0      708.0        56.0    500  USER DEFINED2    HVAC2
 6312900.0 1991681.0      708.0        56.0    500  USER DEFINED3    HVAC3
 6312998.0 1991733.0      708.0        56.0    500  USER DEFINED4    HVAC4
 6313012.0 1991651.0      708.0        56.0    500  USER DEFINED5    HVAC5
 6312863.0 1991572.0      708.0        56.0    500  USER DEFINED6    HVAC6
 6312833.0 1991476.0      708.0        56.0    500  USER DEFINED7    HVAC7
 6312971.0 1991549.0      708.0        56.0    500  USER DEFINED8    HVAC8
 6313109.0 1991622.0      708.0        56.0    500  USER DEFINED9    HVAC9
 6312710.0 1991560.0      708.0        56.0    500  USER DEFINED10   HVAC10
 6312888.0 1991725.0      708.0        56.0    500  USER DEFINED11   HVAC11
 6312917.0 1991734.0      708.0        56.0    500  USER DEFINED12   HVAC12
 6312945.0 1991756.0      708.0        56.0    500  USER DEFINED13   HVAC13
 6313065.0 1991756.0      708.0        56.0    500  USER DEFINED14   HVAC14
 6312857.0 1991396.0      708.0        56.0    500  USER DEFINED15   HVAC15
 6312942.0 1991441.0      708.0        56.0    500  USER DEFINED16   HVAC16
 6313020.0 1991477.0      708.0        56.0    500  USER DEFINED17   HVAC17
 6313079.0 1991513.0      708.0        56.0    500  USER DEFINED18   HVAC18
 6313135.0 1991550.0      708.0        56.0    500  USER DEFINED19   HVAC19
 6313151.0 1991540.0      708.0        56.0    500  USER DEFINED20   HVAC20
 6313180.0 1991567.0      708.0        56.0    500  USER DEFINED21   HVAC21
  0  LINE SOURCES
  0  AREA SOURCES
  2  BARRIERS
  8  POINTS     DESCRIPTION: roadedge
     X          Y          Z
 6313303.3 1991573.2      689.0
 6313225.7 1991530.1      695.0
 6313132.9 1991480.1      705.0
 6313058.3 1991440.2      715.0
 6312991.5 1991397.0      725.0
 6312918.3 1991358.6      735.0
 6312855.6 1991322.7      740.0
 6312775.5 1991279.9      740.0
  9  POINTS     DESCRIPTION:roof
     X          Y          Z
 6312839.4 1991359.4      703.0
 6312740.7 1991545.2      703.0
 6312699.6 1991524.6      703.0
 6312651.1 1991615.9      703.0
 6313055.5 1991830.4      703.0
 6313175.5 1991605.2      703.0
 6313229.8 1991632.3      703.0
 6313260.2 1991580.5      703.0
 6312839.4 1991359.4      703.0
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****
HICNOMVU
****
CALCULATION PROGRAM
FHWA HIGHWAY CONSTRUCTION NOISE MODEL
****
MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
IN MARCH 1990 BY
VANDERBILT ENGINEERING CENTER FOR TRANSPORTATION
OPERATIONS AND RESEARCH (VECTOR)
BOX 96-B, VANDERBILT UNIVERSITY, NASHVILLE, TENNESSEE 37235
(615) 322-3683
****
LICENSED FOR USE ON ONE MICROCOMPUTER TO:

WALMART

RECEIVER NUMBER	LEQ	DESCRIPTION
1	52.1	1
2	52.9	2
3	52.9	3
4	48.6	4
5	42.7	5
6	42.2	6
7	43.3	7
8	46.6	8
9	53.4	9
10	52.7	10

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 1

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.120504E+05	40.8	USER DEFINED1	HVAC1
2	.727402E+04	38.6	USER DEFINED2	HVAC2
3	.594339E+04	37.7	USER DEFINED3	HVAC3
4	.387188E+04	35.9	USER DEFINED4	HVAC4
5	.482929E+04	36.8	USER DEFINED5	HVAC5
6	.112541E+05	40.5	USER DEFINED6	HVAC6
7	.239800E+05	43.8	USER DEFINED7	HVAC7
8	.789112E+04	39.0	USER DEFINED8	HVAC8
9	.383545E+04	35.8	USER DEFINED9	HVAC9
10	.183924E+05	42.6	USER DEFINED10	HVAC10
11	.508740E+04	37.1	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.309505E+04	34.9	USER DEFINED14	HVAC14
15	.315758E+05	45.0	USER DEFINED15	HVAC15
16	.133111E+05	41.2	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.406816E+04	36.1	USER DEFINED19	HVAC19
20	.390749E+04	35.9	USER DEFINED20	HVAC20
21	.338193E+04	35.3	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 2

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.208976E+05	43.2	USER DEFINED1	HVAC1
2	.982913E+04	39.9	USER DEFINED2	HVAC2
3	.740505E+04	38.7	USER DEFINED3	HVAC3
4	.445509E+04	36.5	USER DEFINED4	HVAC4
5	.531660E+04	37.3	USER DEFINED5	HVAC5
6	.141289E+05	41.5	USER DEFINED6	HVAC6
7	.269093E+05	44.3	USER DEFINED7	HVAC7
8	.823863E+04	39.2	USER DEFINED8	HVAC8
9	.392812E+04	35.9	USER DEFINED9	HVAC9
10	.389309E+05	45.9	USER DEFINED10	HVAC10
11	.645055E+04	38.1	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.343677E+04	35.4	USER DEFINED14	HVAC14
15	.235566E+05	43.7	USER DEFINED15	HVAC15
16	.117090E+05	40.7	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.393994E+04	36.0	USER DEFINED19	HVAC19
20	.374665E+04	35.7	USER DEFINED20	HVAC20
21	.328341E+04	35.2	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 3

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.337310E+05	45.3	USER DEFINED1	HVAC1
2	.119095E+05	40.8	USER DEFINED2	HVAC2
3	.818208E+04	39.1	USER DEFINED3	HVAC3
4	.471700E+04	36.7	USER DEFINED4	HVAC4
5	.499703E+04	37.0	USER DEFINED5	HVAC5
6	.121597E+05	40.8	USER DEFINED6	HVAC6
7	.142047E+05	41.5	USER DEFINED7	HVAC7
8	.644382E+04	38.1	USER DEFINED8	HVAC8
9	.346077E+04	35.4	USER DEFINED9	HVAC9
10	.565718E+05	47.5	USER DEFINED10	HVAC10
11	.778867E+04	38.9	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.354377E+04	35.5	USER DEFINED14	HVAC14
15	.988919E+04	40.0	USER DEFINED15	HVAC15
16	.692447E+04	38.4	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.320787E+04	35.1	USER DEFINED19	HVAC19
20	.303086E+04	34.8	USER DEFINED20	HVAC20
21	.274327E+04	34.4	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 4

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.136620E+05	41.4	USER DEFINED1	HVAC1
2	.568732E+04	37.5	USER DEFINED2	HVAC2
3	.353978E+04	35.5	USER DEFINED3	HVAC3
4	.205779E+04	33.1	USER DEFINED4	HVAC4
5	.178304E+04	32.5	USER DEFINED5	HVAC5
6	.368380E+04	35.7	USER DEFINED6	HVAC6
7	.487573E+04	36.9	USER DEFINED7	HVAC7
8	.198226E+04	33.0	USER DEFINED8	HVAC8
9	.118659E+04	30.7	USER DEFINED9	HVAC9
10	.184818E+05	42.7	USER DEFINED10	HVAC10
11	.556446E+04	37.5	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.147917E+04	31.7	USER DEFINED14	HVAC14
15	.369829E+04	35.7	USER DEFINED15	HVAC15
16	.206249E+04	33.1	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.104746E+04	30.2	USER DEFINED19	HVAC19
20	.987861E+03	29.9	USER DEFINED20	HVAC20
21	.914267E+03	29.6	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 5

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.258721E+04	34.1	USER DEFINED1	HVAC1
2	.225509E+04	33.5	USER DEFINED2	HVAC2
3	.154151E+04	31.9	USER DEFINED3	HVAC3
4	.121663E+04	30.9	USER DEFINED4	HVAC4
5	.608140E+03	27.8	USER DEFINED5	HVAC5
6	.746290E+03	28.7	USER DEFINED6	HVAC6
7	.448645E+03	26.5	USER DEFINED7	HVAC7
8	.407234E+03	26.1	USER DEFINED8	HVAC8
9	.345255E+03	25.4	USER DEFINED9	HVAC9
10	.149240E+04	31.7	USER DEFINED10	HVAC10
11	.477729E+04	36.8	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.882524E+03	29.5	USER DEFINED14	HVAC14
15	.299080E+03	24.8	USER DEFINED15	HVAC15
16	.289650E+03	24.6	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.248413E+03	24.0	USER DEFINED19	HVAC19
20	.231071E+03	23.6	USER DEFINED20	HVAC20
21	.230545E+03	23.6	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 6

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.154490E+04	31.9	USER DEFINED1	HVAC1
2	.185104E+04	32.7	USER DEFINED2	HVAC2
3	.151048E+04	31.8	USER DEFINED3	HVAC3
4	.155514E+04	31.9	USER DEFINED4	HVAC4
5	.659053E+03	28.2	USER DEFINED5	HVAC5
6	.610952E+03	27.9	USER DEFINED6	HVAC6
7	.358801E+03	25.5	USER DEFINED7	HVAC7
8	.392167E+03	25.9	USER DEFINED8	HVAC8
9	.394796E+03	26.0	USER DEFINED9	HVAC9
10	.863611E+03	29.4	USER DEFINED10	HVAC10
11	.447094E+04	36.5	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.123086E+04	30.9	USER DEFINED14	HVAC14
15	.237902E+03	23.8	USER DEFINED15	HVAC15
16	.252060E+03	24.0	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.267702E+03	24.3	USER DEFINED19	HVAC19
20	.249510E+03	24.0	USER DEFINED20	HVAC20
21	.257733E+03	24.1	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 7

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.106777E+04	30.3	USER DEFINED1	HVAC1
2	.158936E+04	32.0	USER DEFINED2	HVAC2
3	.158158E+04	32.0	USER DEFINED3	HVAC3
4	.230365E+04	33.6	USER DEFINED4	HVAC4
5	.800274E+03	29.1	USER DEFINED5	HVAC5
6	.570673E+03	27.6	USER DEFINED6	HVAC6
7	.329897E+03	25.2	USER DEFINED7	HVAC7
8	.435012E+03	26.4	USER DEFINED8	HVAC8
9	.868111E+03	29.4	USER DEFINED9	HVAC9
10	.649058E+03	28.1	USER DEFINED10	HVAC10
11	.539277E+04	37.3	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.250997E+04	34.0	USER DEFINED14	HVAC14
15	.228387E+03	23.6	USER DEFINED15	HVAC15
16	.262543E+03	24.2	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.580631E+03	27.6	USER DEFINED19	HVAC19
20	.628362E+03	28.0	USER DEFINED20	HVAC20
21	.149757E+04	31.8	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 8

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.300373E+03	24.8	USER DEFINED1	HVAC1
2	.563711E+03	27.5	USER DEFINED2	HVAC2
3	.854312E+03	29.3	USER DEFINED3	HVAC3
4	.264289E+04	34.2	USER DEFINED4	HVAC4
5	.200856E+04	33.0	USER DEFINED5	HVAC5
6	.503372E+03	27.0	USER DEFINED6	HVAC6
7	.335628E+03	25.3	USER DEFINED7	HVAC7
8	.873347E+03	29.4	USER DEFINED8	HVAC8
9	.696028E+04	38.4	USER DEFINED9	HVAC9
10	.249145E+03	24.0	USER DEFINED10	HVAC10
11	.870481E+03	29.4	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.141051E+05	41.5	USER DEFINED14	HVAC14
15	.297755E+03	24.7	USER DEFINED15	HVAC15
16	.488164E+03	26.9	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.388690E+04	35.9	USER DEFINED19	HVAC19
20	.384935E+04	35.9	USER DEFINED20	HVAC20
21	.659936E+04	38.2	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 9

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.134265E+04	31.3	USER DEFINED1	HVAC1
2	.292034E+04	34.7	USER DEFINED2	HVAC2
3	.417154E+04	36.2	USER DEFINED3	HVAC3
4	.694239E+04	38.4	USER DEFINED4	HVAC4
5	.100096E+05	40.0	USER DEFINED5	HVAC5
6	.260196E+04	34.2	USER DEFINED6	HVAC6
7	.998522E+03	30.0	USER DEFINED7	HVAC7
8	.585787E+04	37.7	USER DEFINED8	HVAC8
9	.198573E+05	43.0	USER DEFINED9	HVAC9
10	.979598E+03	29.9	USER DEFINED10	HVAC10
11	.383957E+04	35.8	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12

13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.758444E+04	38.8	USER DEFINED14	HVAC14
15	.388929E+03	25.9	USER DEFINED15	HVAC15
16	.115289E+04	30.6	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.441850E+05	46.5	USER DEFINED19	HVAC19
20	.567654E+05	47.5	USER DEFINED20	HVAC20
21	.488907E+05	46.9	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 10

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.640814E+04	38.1	USER DEFINED1	HVAC1
2	.663211E+04	38.2	USER DEFINED2	HVAC2
3	.680269E+04	38.3	USER DEFINED3	HVAC3
4	.539857E+04	37.3	USER DEFINED4	HVAC4
5	.672247E+04	38.3	USER DEFINED5	HVAC5
6	.117028E+05	40.7	USER DEFINED6	HVAC6
7	.190573E+05	42.8	USER DEFINED7	HVAC7
8	.107399E+05	40.3	USER DEFINED8	HVAC8
9	.885714E+04	39.5	USER DEFINED9	HVAC9
10	.706656E+04	38.5	USER DEFINED10	HVAC10
11	.543100E+04	37.3	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.484115E+04	36.8	USER DEFINED14	HVAC14
15	.398219E+05	46.0	USER DEFINED15	HVAC15
16	.131112E+05	41.2	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.125353E+05	41.0	USER DEFINED19	HVAC19
20	.125026E+05	41.0	USER DEFINED20	HVAC20
21	.965858E+04	39.8	USER DEFINED21	HVAC21

KEY TO INDEX:
X - POINT SOURCE, WHERE X OR XX IS INPUT SEQUENCE # OF POINT SOURCES.
XX
YXX - LINE SOURCE, WHERE XX IS INPUT SEQUENCE # OF LINE SOURCES
YYXX AND Y OR YY IS SEQUENCE # OF POINTS FOR THE XXTH LINE.
1YYXX - AREA SOURCE, WHERE XX AND YY ARE ANALAGOUS TO LINE SOURCE VARIABLES.

```
WALMART
 10  RECEIVERS
     X          Y          Z      EX. ATT.(DB/DD)     DESCRIPTION
 6312693.0 1991328.0      748.0          .00      1-2
 6312652.0 1991411.0      737.0          .00      2-2
 6312578.0 1991547.0      728.0          .00      3-2
 6312520.0 1991652.0      714.0          .00      4-2
 6312501.0 1991967.0      688.0          .00      5-2
 6312740.0 1992173.0      686.0          .00      6-2
 6313040.0 1992095.0      691.0          .00      7-2
 6313254.0 1991773.0      697.0          .00      8-2
 6313229.0 1991433.0      718.0          .00      9-2
 6312989.0 1991309.0      748.0          .00      10-2
 21  POINT SOURCES
     X          Y          Z       LEQ(REF)    FREQ.     SOURCE          DESCRIPTION
 6312737.0 1991612.0      708.0       56.0    500  USER DEFINED1    HVAC1
 6312841.0 1991667.0      708.0       56.0    500  USER DEFINED2    HVAC2
 6312900.0 1991681.0      708.0       56.0    500  USER DEFINED3    HVAC3
 6312998.0 1991733.0      708.0       56.0    500  USER DEFINED4    HVAC4
 6313012.0 1991651.0      708.0       56.0    500  USER DEFINED5    HVAC5
 6312863.0 1991572.0      708.0       56.0    500  USER DEFINED6    HVAC6
 6312833.0 1991476.0      708.0       56.0    500  USER DEFINED7    HVAC7
 6312971.0 1991549.0      708.0       56.0    500  USER DEFINED8    HVAC8
 6313109.0 1991622.0      708.0       56.0    500  USER DEFINED9    HVAC9
 6312710.0 1991560.0      708.0       56.0    500  USER DEFINED10   HVAC10
 6312888.0 1991725.0      708.0       56.0    500  USER DEFINED11   HVAC11
 6312917.0 1991734.0      708.0       56.0    500  USER DEFINED12   HVAC12
 6312945.0 1991756.0      708.0       56.0    500  USER DEFINED13   HVAC13
 6313065.0 1991756.0      708.0       56.0    500  USER DEFINED14   HVAC14
 6312857.0 1991396.0      708.0       56.0    500  USER DEFINED15   HVAC15
 6312942.0 1991441.0      708.0       56.0    500  USER DEFINED16   HVAC16
 6313020.0 1991477.0      708.0       56.0    500  USER DEFINED17   HVAC17
 6313079.0 1991513.0      708.0       56.0    500  USER DEFINED18   HVAC18
 6313135.0 1991550.0      708.0       56.0    500  USER DEFINED19   HVAC19
 6313151.0 1991540.0      708.0       56.0    500  USER DEFINED20   HVAC20
 6313180.0 1991567.0      708.0       56.0    500  USER DEFINED21   HVAC21
  0  LINE SOURCES
  0  AREA SOURCES
  2  BARRIERS
  8  POINTS     DESCRIPTION: roadedge
     X          Y          Z
 6313303.3 1991573.2      689.0
 6313225.7 1991530.1      695.0
 6313132.9 1991480.1      705.0
 6313058.3 1991440.2      715.0
 6312991.5 1991397.0      725.0
 6312918.3 1991358.6      735.0
 6312855.6 1991322.7      740.0
 6312775.5 1991279.9      740.0
  9  POINTS     DESCRIPTION:roof
     X          Y          Z
 6312839.4 1991359.4      703.0
 6312740.7 1991545.2      703.0
 6312699.6 1991524.6      703.0
 6312651.1 1991615.9      703.0
 6313055.5 1991830.4      703.0
 6313175.5 1991605.2      703.0
 6313229.8 1991632.3      703.0
 6313260.2 1991580.5      703.0
 6312839.4 1991359.4      703.0
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****
HICNOMVU
****
CALCULATION PROGRAM
FHWA HIGHWAY CONSTRUCTION NOISE MODEL
****
MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
IN MARCH 1990 BY
VANDERBILT ENGINEERING CENTER FOR TRANSPORTATION
OPERATIONS AND RESEARCH (VECTOR)
BOX 96-B, VANDERBILT UNIVERSITY, NASHVILLE, TENNESSEE 37235
(615) 322-3683
****
LICENSED FOR USE ON ONE MICROCOMPUTER TO:

WALMART

RECEIVER NUMBER	LEQ	DESCRIPTION
1	52.1	1-2
2	52.9	2-2
3	52.9	3-2
4	50.6	4-2
5	43.7	5-2
6	43.1	6-2
7	44.7	7-2
8	49.0	8-2
9	53.8	9-2
10	53.3	10-2

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 1

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.120504E+05	40.8	USER DEFINED1	HVAC1
2	.727402E+04	38.6	USER DEFINED2	HVAC2
3	.594339E+04	37.7	USER DEFINED3	HVAC3
4	.387188E+04	35.9	USER DEFINED4	HVAC4
5	.482929E+04	36.8	USER DEFINED5	HVAC5
6	.112541E+05	40.5	USER DEFINED6	HVAC6
7	.239800E+05	43.8	USER DEFINED7	HVAC7
8	.789112E+04	39.0	USER DEFINED8	HVAC8
9	.383545E+04	35.8	USER DEFINED9	HVAC9
10	.183924E+05	42.6	USER DEFINED10	HVAC10
11	.508740E+04	37.1	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.309505E+04	34.9	USER DEFINED14	HVAC14
15	.315758E+05	45.0	USER DEFINED15	HVAC15
16	.133111E+05	41.2	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.406816E+04	36.1	USER DEFINED19	HVAC19
20	.390749E+04	35.9	USER DEFINED20	HVAC20
21	.338193E+04	35.3	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 2

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.208976E+05	43.2	USER DEFINED1	HVAC1
2	.982913E+04	39.9	USER DEFINED2	HVAC2
3	.740505E+04	38.7	USER DEFINED3	HVAC3
4	.445509E+04	36.5	USER DEFINED4	HVAC4
5	.531660E+04	37.3	USER DEFINED5	HVAC5
6	.141289E+05	41.5	USER DEFINED6	HVAC6
7	.269093E+05	44.3	USER DEFINED7	HVAC7
8	.823863E+04	39.2	USER DEFINED8	HVAC8
9	.392812E+04	35.9	USER DEFINED9	HVAC9
10	.389309E+05	45.9	USER DEFINED10	HVAC10
11	.645055E+04	38.1	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.343677E+04	35.4	USER DEFINED14	HVAC14
15	.235566E+05	43.7	USER DEFINED15	HVAC15
16	.117090E+05	40.7	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.393994E+04	36.0	USER DEFINED19	HVAC19
20	.374665E+04	35.7	USER DEFINED20	HVAC20
21	.328341E+04	35.2	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 3

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.337310E+05	45.3	USER DEFINED1	HVAC1
2	.119095E+05	40.8	USER DEFINED2	HVAC2
3	.818208E+04	39.1	USER DEFINED3	HVAC3
4	.471700E+04	36.7	USER DEFINED4	HVAC4
5	.499703E+04	37.0	USER DEFINED5	HVAC5
6	.121597E+05	40.8	USER DEFINED6	HVAC6
7	.142047E+05	41.5	USER DEFINED7	HVAC7
8	.644382E+04	38.1	USER DEFINED8	HVAC8
9	.346077E+04	35.4	USER DEFINED9	HVAC9
10	.565718E+05	47.5	USER DEFINED10	HVAC10
11	.778867E+04	38.9	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.354377E+04	35.5	USER DEFINED14	HVAC14
15	.988919E+04	40.0	USER DEFINED15	HVAC15
16	.692447E+04	38.4	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.320787E+04	35.1	USER DEFINED19	HVAC19
20	.303086E+04	34.8	USER DEFINED20	HVAC20
21	.274327E+04	34.4	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 4

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.204413E+05	43.1	USER DEFINED1	HVAC1
2	.952688E+04	39.8	USER DEFINED2	HVAC2
3	.618749E+04	37.9	USER DEFINED3	HVAC3
4	.336997E+04	35.3	USER DEFINED4	HVAC4
5	.381699E+04	35.8	USER DEFINED5	HVAC5
6	.802318E+04	39.0	USER DEFINED6	HVAC6
7	.719609E+04	38.6	USER DEFINED7	HVAC7
8	.465057E+04	36.7	USER DEFINED8	HVAC8
9	.277123E+04	34.4	USER DEFINED9	HVAC9
10	.223335E+05	43.5	USER DEFINED10	HVAC10
11	.707102E+04	38.5	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.246363E+04	33.9	USER DEFINED14	HVAC14
15	.498178E+04	37.0	USER DEFINED15	HVAC15
16	.375882E+04	35.8	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.256097E+04	34.1	USER DEFINED19	HVAC19
20	.242332E+04	33.8	USER DEFINED20	HVAC20
21	.224754E+04	33.5	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 5

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.336303E+04	35.3	USER DEFINED1	HVAC1
2	.289707E+04	34.6	USER DEFINED2	HVAC2
3	.195885E+04	32.9	USER DEFINED3	HVAC3
4	.152960E+04	31.8	USER DEFINED4	HVAC4
5	.863739E+03	29.4	USER DEFINED5	HVAC5
6	.107499E+04	30.3	USER DEFINED6	HVAC6
7	.696135E+03	28.4	USER DEFINED7	HVAC7
8	.619651E+03	27.9	USER DEFINED8	HVAC8
9	.506455E+03	27.0	USER DEFINED9	HVAC9
10	.198384E+04	33.0	USER DEFINED10	HVAC10
11	.477729E+04	36.8	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.115520E+04	30.6	USER DEFINED14	HVAC14
15	.478023E+03	26.8	USER DEFINED15	HVAC15
16	.461467E+03	26.6	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.388184E+03	25.9	USER DEFINED19	HVAC19
20	.362157E+03	25.6	USER DEFINED20	HVAC20
21	.359008E+03	25.6	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 6

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.190173E+04	32.8	USER DEFINED1	HVAC1
2	.230992E+04	33.6	USER DEFINED2	HVAC2
3	.184976E+04	32.7	USER DEFINED3	HVAC3
4	.190850E+04	32.8	USER DEFINED4	HVAC4
5	.902093E+03	29.6	USER DEFINED5	HVAC5
6	.831770E+03	29.2	USER DEFINED6	HVAC6
7	.502711E+03	27.0	USER DEFINED7	HVAC7
8	.558555E+03	27.5	USER DEFINED8	HVAC8
9	.563058E+03	27.5	USER DEFINED9	HVAC9
10	.110723E+04	30.4	USER DEFINED10	HVAC10
11	.447094E+04	36.5	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.158658E+04	32.0	USER DEFINED14	HVAC14
15	.360295E+03	25.6	USER DEFINED15	HVAC15
16	.383278E+03	25.8	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.408001E+03	26.1	USER DEFINED19	HVAC19
20	.380782E+03	25.8	USER DEFINED20	HVAC20
21	.392403E+03	25.9	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 7

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.139266E+04	31.4	USER DEFINED1	HVAC1
2	.211409E+04	33.3	USER DEFINED2	HVAC2
3	.218070E+04	33.4	USER DEFINED3	HVAC3
4	.317774E+04	35.0	USER DEFINED4	HVAC4
5	.138506E+04	31.4	USER DEFINED5	HVAC5
6	.923776E+03	29.7	USER DEFINED6	HVAC6
7	.547194E+03	27.4	USER DEFINED7	HVAC7
8	.751398E+03	28.8	USER DEFINED8	HVAC8
9	.136003E+04	31.3	USER DEFINED9	HVAC9
10	.858153E+03	29.3	USER DEFINED10	HVAC10
11	.622027E+04	37.9	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.373767E+04	35.7	USER DEFINED14	HVAC14
15	.393040E+03	25.9	USER DEFINED15	HVAC15
16	.456816E+03	26.6	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.935919E+03	29.7	USER DEFINED19	HVAC19
20	.958953E+03	29.8	USER DEFINED20	HVAC20
21	.188215E+04	32.7	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 8

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.742146E+03	28.7	USER DEFINED1	HVAC1
2	.130660E+04	31.2	USER DEFINED2	HVAC2
3	.188136E+04	32.7	USER DEFINED3	HVAC3
4	.502771E+04	37.0	USER DEFINED4	HVAC4
5	.428704E+04	36.3	USER DEFINED5	HVAC5
6	.120050E+04	30.8	USER DEFINED6	HVAC6
7	.829310E+03	29.2	USER DEFINED7	HVAC7
8	.192861E+04	32.9	USER DEFINED8	HVAC8
9	.114809E+05	40.6	USER DEFINED9	HVAC9
10	.618358E+03	27.9	USER DEFINED10	HVAC10
11	.192713E+04	32.8	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.214218E+05	43.3	USER DEFINED14	HVAC14
15	.730228E+03	28.6	USER DEFINED15	HVAC15
16	.113193E+04	30.5	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.678502E+04	38.3	USER DEFINED19	HVAC19
20	.670726E+04	38.3	USER DEFINED20	HVAC20
21	.109659E+05	40.4	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 9

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.363097E+04	35.6	USER DEFINED1	HVAC1
2	.484787E+04	36.9	USER DEFINED2	HVAC2
3	.586331E+04	37.7	USER DEFINED3	HVAC3
4	.694239E+04	38.4	USER DEFINED4	HVAC4
5	.105194E+05	40.2	USER DEFINED5	HVAC5
6	.649326E+04	38.1	USER DEFINED6	HVAC6
7	.249795E+04	34.0	USER DEFINED7	HVAC7
8	.124377E+05	40.9	USER DEFINED8	HVAC8
9	.198573E+05	43.0	USER DEFINED9	HVAC9
10	.266819E+04	34.3	USER DEFINED10	HVAC10
11	.493819E+04	36.9	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12

13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.758444E+04	38.8	USER DEFINED14	HVAC14
15	.622546E+03	27.9	USER DEFINED15	HVAC15
16	.206522E+04	33.1	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.441850E+05	46.5	USER DEFINED19	HVAC19
20	.567654E+05	47.5	USER DEFINED20	HVAC20
21	.488907E+05	46.9	USER DEFINED21	HVAC21

COMPONENT CONTRIBUTIONS FOR RECEIVER NUMBER: 10

INDEX	INTENSITY	LEVEL	SOURCE	DESCRIPTION
1	.640814E+04	38.1	USER DEFINED1	HVAC1
2	.663211E+04	38.2	USER DEFINED2	HVAC2
3	.680269E+04	38.3	USER DEFINED3	HVAC3
4	.553166E+04	37.4	USER DEFINED4	HVAC4
5	.847087E+04	39.3	USER DEFINED5	HVAC5
6	.117028E+05	40.7	USER DEFINED6	HVAC6
7	.190573E+05	42.8	USER DEFINED7	HVAC7
8	.171823E+05	42.4	USER DEFINED8	HVAC8
9	.885714E+04	39.5	USER DEFINED9	HVAC9
10	.706656E+04	38.5	USER DEFINED10	HVAC10
11	.543100E+04	37.3	USER DEFINED11	HVAC11
12	.100000E+02	10.0	USER DEFINED12	HVAC12
13	.100000E+02	10.0	USER DEFINED13	HVAC13
14	.484115E+04	36.8	USER DEFINED14	HVAC14
15	.398219E+05	46.0	USER DEFINED15	HVAC15
16	.333125E+05	45.2	USER DEFINED16	HVAC16
17	.100000E+02	10.0	USER DEFINED17	HVAC17
18	.100000E+02	10.0	USER DEFINED18	HVAC18
19	.125353E+05	41.0	USER DEFINED19	HVAC19
20	.125026E+05	41.0	USER DEFINED20	HVAC20
21	.965858E+04	39.8	USER DEFINED21	HVAC21

KEY TO INDEX:
X - POINT SOURCE, WHERE X OR XX IS INPUT SEQUENCE # OF POINT SOURCES.
XX
YXX - *LINE SOURCE, WHERE XX IS INPUT SEQUENCE # OF LINE SOURCES*
YYXX AND Y OR YY IS SEQUENCE # OF POINTS FOR THE XXTH LINE.
1YYXX - AREA SOURCE, WHERE XX AND YY ARE ANALAGOUS TO LINE SOURCE VARIABLES.

ATTACHMENT 5

KEY TO FILE CODES

ATTACHMENT 5

*.STA	-	STAMINA output file
G&H2030	-	Grand Avenue and Harding Street Year 2030 Traffic. Walmart exterior use receiver.

****
STAM2VU1
Version 1.20
****
STAMINA 2.0/BCR
MODIFIED FROM FHWA VERSION 3 (MARCH 1983)
TRAFFIC NOISE PREDICTION MODEL

MODIFIED TO:
1. ALLOW EQUIVALENT SPEEDS BELOW 30 MPH PER NCHRP 311;
2. CORRECT MEDIUM TRUCK BARRIER CALCULATION ERROR BY USING VEH4, VEH5 AND VEH6 FOR CARS, MT AND HT; AND
3. PLACE REFERENCE ENGERGY MEAN EMISSION LEVELS IN A DATA FILE CALLED REMEL.DTA TO ALLOW USER TO USE LEVELS OTHER THAN THE FHWA NATIONAL AVERAGES.

****
MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
BY VANDERBILT UNIVERSITY, NASHVILLE, TN 37235
AND BOWLBY & ASSOCIATES, INC.
2014 BROADWAY, SUITE 210
NASHVILLE, TN 37203-2425
TEL 615-327-8130, FAX 615-327-8137

NOTE:
IN STAM2VU1, THE TRAFFIC DATA FROM THE ORIGINAL DATA FILE HAS BEEN SHIFTED TO CORRECT THE STAMINA 2.0 MEDIUM TRUCK CALCULATION ERROR. THIS SHIFT IS REFLECTED BELOW IN THE *.STA OUTPUT FILE. THE ORIGINAL DATA FILE IS UNCHANGED.

(INPUT UNITS- ENGLISH , OUTPUT UNITS- ENGLISH)

Wal-Mart, Grand Site, Year 2030

EMISSION LEVELS: Calveno Levels (trucks>30mph)

0PROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
.00	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.00	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)
.000	6	HEIGHT ADJUSTMENT FOR TYPE4 VEHICLES (VEH4) CARS--CALVENO C0 = 5.20 C1 = 38.80 S0 = .00
2.300	7	HEIGHT ADJUSTMENT FOR TYPE5 VEHICLES (VEH5) MT--CALVENO C0 = 35.30 C1 = 25.60 S0 = .00
8.000	8	HEIGHT ADJUSTMENT FOR TYPE6 VEHICLES (VEH6) HT--CALVENO C0 = 50.40 C1 = 19.20 S0 = .00

0ROADWAY 1 Grand Avenue, eb (w of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	682.	40.0
VEH5	19.	40.0
VEH6	5.	40.0

0	X	Y	Z	GRADE
1	6312007.5	1990830.1	680.3	1
2	6312241.2	1990925.7	696.5	1
3	6312421.8	1991029.8	710.4	1
4	6312605.2	1991131.1	724.5	1
5	6312679.4	1991171.5	730.0	1
6	6312720.9	1991193.8	734.0	1
7	6312781.0	1991226.3	739.0	1
8	6312819.8	1991247.2	741.0	0
9	6312872.4	1991275.5	741.0	0
10	6312912.6	1991297.1	739.0	0
11	6312947.9	1991316.1	736.0	0
12	6313014.4	1991351.8	727.0	0
13	6313092.2	1991393.6	716.0	0
14	6313164.8	1991432.8	706.0	0
15	6313223.3	1991464.6	699.0	0

0ROADWAY 2 Grand Avenue, eb cont'd.(w of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	682.	40.0
VEH5	19.	40.0
VEH6	5.	40.0

0	X	Y	Z	GRADE
15	6313223.3	1991464.6	699.0	0
16	6313276.4	1991492.7	694.0	0
17	6313347.9	1991531.7	689.0	0

0ROADWAY 3 Grand Avenue, eb cont'd.(e of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	667.	40.0
VEH5	9.	40.0
VEH6	5.	40.0

0	X	Y	Z	GRADE
17	6313347.9	1991531.7	689.0	0
18	6313412.8	1991566.7	686.0	0
19	6313561.8	1991646.5	681.5	0
20	6313689.9	1991715.4	677.4	0
21	6313888.5	1991822.1	671.1	0
22	6314095.0	1991933.5	664.6	0

0ROADWAY 4 Grand Ave, wb(e of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	667.	40.0
VEH5	9.	40.0
VEH6	5.	40.0

0	X	Y	Z	GRADE
1	6314080.2	1991960.1	664.6	1
2	6313875.3	1991850.2	671.1	1
3	6313676.6	1991741.3	677.4	1
4	6313547.5	1991672.4	681.5	1
5	6313404.5	1991595.7	686.0	1
6	6313331.4	1991556.6	689.0	1

0ROADWAY 5 Grand Ave, wb(w of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	682.	40.0
VEH5	9.	40.0
VEH6	5.	40.0

0	X	Y	Z	GRADE
6	6313331.4	1991556.6	689.0	1
7	6313258.1	1991516.8	694.0	1
8	6313205.8	1991488.2	699.0	1
9	6313143.5	1991455.2	706.0	1
10	6313071.0	1991416.1	716.0	1
11	6312995.7	1991376.5	727.0	1
12	6312926.5	1991338.6	736.0	1
13	6312893.6	1991320.1	739.0	1
14	6312851.7	1991298.4	741.0	0
15	6312808.2	1991274.9	741.0	0

0ROADWAY 6 Grand Ave, wb cont'd.(w of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	682.	40.0
VEH5	9.	40.0
VEH6	5.	40.0

0	X	Y	Z	GRADE
15	6312808.2	1991274.9	741.0	0
16	6312764.1	1991251.5	739.0	0
17	6312705.5	1991219.7	734.0	0
18	6312664.2	1991197.9	730.0	0
19	6312590.6	1991157.2	724.5	0
20	6312405.3	1991054.5	710.4	0
21	6312225.6	1990950.8	696.5	0
22	6312001.3	1990861.5	680.3	0

0ROADWAY 7 Harding Street, nb

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	94.	20.0
VEH5	1.	20.0
VEH6	1.	20.0

0	X	Y	Z	GRADE
1	6313349.5	1991569.1	688.0	0
2	6313331.7	1991601.6	687.0	0
3	6313292.1	1991673.4	685.0	0
4	6313246.2	1991757.3	682.0	0
5	6313204.8	1991833.0	680.0	0
6	6313188.2	1991863.1	679.0	0

0ROADWAY 8 Harding Street, sb

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	189.	20.0
VEH5	3.	20.0
VEH6	1.	20.0

0	X	Y	Z	GRADE
1	6313182.0	1991848.7	678.0	1
2	6313199.1	1991817.2	680.0	1
3	6313247.1	1991730.6	683.0	1
4	6313295.9	1991641.9	686.0	1
5	6313335.4	1991570.3	688.0	1

1

BARRIER 1 TYPE(A) Northern road edge

	X	Y	Z	Z0	DELZ	P
1	6313247.0	1991692.8	683.0	683.0	.0	0
2	6313291.8	1991612.4	686.0	686.0		
3	6313300.1	1991580.1	687.0	687.0		
4	6313303.3	1991573.2	689.0	689.0		
5	6313225.8	1991530.1	695.0	695.0		
6	6313132.9	1991480.1	705.0	705.0		
7	6313058.3	1991440.2	715.0	715.0		
8	6312991.6	1991397.1	725.0	725.0		
9	6312918.3	1991358.6	735.0	735.0		
10	6312855.6	1991322.7	740.0	740.0		

1

BARRIER 2 TYPE(A) Northern road edge cont'd.

	X	Y	Z	Z0	DELZ	P
10	6312855.6	1991322.7	740.0	740.0	.0	0
11	6312775.5	1991280.0	740.0	740.0		
12	6312706.6	1991242.6	735.0	735.0		
13	6312654.0	1991215.1	730.0	730.0		

1

BARRIER 3 TYPE(A) Existing Pad topo cont'd.

	X	Y	Z	Z0	DELZ	P
12	6312706.6	1991242.6	735.0	735.0	.0	0
24	6312666.7	1991386.9	724.0	724.0		

1

Receivers, Grand Ave Site

```
                    ------------COORDINATES-------------
                          X           Y            Z
 garden                6312738.4   1991477.4     685.0
1

  ALPHA FACTORS - RECEIVER ACROSS,ROADWAY DOWN

  1 *   .0
  2 *   .0
  3 *   .0
  4 *   .0
  5 *   .0
  6 *   .0
  7 *   .0
  8 *   .0
1

  SHIELDING FACTORS - RECEIVER ACROSS,ROADWAY DOWN

  1 *   .0
  2 *   .0
  3 *   .0
  4 *   .0
  5 *   .0
  6 *   .0
  7 *   .0
  8 *   .0
1

 RECEIVER    LEQ(H)   L10
 garden       54.2   57.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
          43.8 42.9 29.9 30.8 33.3 36.6 34.5 35.5 33.8 33.4

          34.7 34.5 32.9 31.0
    2       1    2
          30.6 32.0
    3       1    2    3    4    5
          31.6 35.5 33.9 34.0 32.3
    4       1    2    3    4    5
          32.5 34.4 34.3 37.2 34.6
    5       1    2    3    4    5    6    7    8    9
          35.9 35.1 36.5 38.5 41.6 42.1 41.6 40.8 41.2
    6       1    2    3    4    5    6    7
          39.2 39.5 32.4 29.6 28.8 44.3 42.5
    7       1    2    3    4    5
          20.0 24.1 26.2 26.3 22.2
    8       1    2    3    4
          26.1 29.6 28.5 26.0
```

ATTACHMENT 6

KEY TO FILE CODES

ATTACHMENT 6

*.STA	-	STAMINA output file
G&HEXST	-	Grand Avenue and Harding Street. Existing traffic. Adjacent residential receivers.
EXST&PRJ	-	Grand Avenue and Harding Street. Existing traffic plus project traffic. Adjacent residential receivers.
EXPRJCUM	-	Grand Avenue and Harding Street. Existing traffic plus project traffic and cumulative projects traffic. Adjacent residential receivers.

****
STAM2VU1
Version 1.20
****
STAMINA 2.0/BCR
MODIFIED FROM FHWA VERSION 3 (MARCH 1983)
TRAFFIC NOISE PREDICTION MODEL

MODIFIED TO:
1. ALLOW EQUIVALENT SPEEDS BELOW 30 MPH PER NCHRP 311;
2. CORRECT MEDIUM TRUCK BARRIER CALCULATION ERROR BY USING VEH4, VEH5 AND VEH6 FOR CARS, MT AND HT; AND
3. PLACE REFERENCE ENGERGY MEAN EMISSION LEVELS IN A DATA FILE CALLED REMEL.DTA TO ALLOW USER TO USE LEVELS OTHER THAN THE FHWA NATIONAL AVERAGES.

****

MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
BY VANDERBILT UNIVERSITY, NASHVILLE, TN 37235
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2014 BROADWAY, SUITE 210
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TEL 615-327-8130, FAX 615-327-8137

NOTE:
IN STAM2VU1, THE TRAFFIC DATA FROM THE ORIGINAL DATA FILE HAS BEEN SHIFTED TO CORRECT THE STAMINA 2.0 MEDIUM TRUCK CALCULATION ERROR. THIS SHIFT IS REFLECTED BELOW IN THE *.STA OUTPUT FILE. THE ORIGINAL DATA FILE IS UNCHANGED.

(INPUT UNITS- ENGLISH , OUTPUT UNITS- ENGLISH)

Wal-Mart, Grand Site, Exst Traff.

EMISSION LEVELS: Calveno Levels (trucks>30mph)

0PROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
.00	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.00	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)
.000	6	HEIGHT ADJUSTMENT FOR TYPE4 VEHICLES (VEH4) CARS--CALVENO C0 = 5.20 C1 = 38.80 S0 = .00
2.300	7	HEIGHT ADJUSTMENT FOR TYPE5 VEHICLES (VEH5) MT--CALVENO C0 = 35.30 C1 = 25.60 S0 = .00
8.000	8	HEIGHT ADJUSTMENT FOR TYPE6 VEHICLES (VEH6) HT--CALVENO C0 = 50.40 C1 = 19.20 S0 = .00

0ROADWAY 1 Grand Avenue, eb (w of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	578.	40.0
VEH5	8.	40.0
VEH6	4.	40.0

0 ------------COORDINATES------------

	X	Y	Z	GRADE
1	6312007.5	1990830.1	680.3	1
2	6312241.2	1990925.7	696.5	1
3	6312421.8	1991029.8	710.4	1
4	6312605.2	1991131.1	724.5	1
5	6312679.4	1991171.5	730.0	1
6	6312720.9	1991193.8	734.0	1
7	6312781.0	1991226.3	739.0	1
8	6312819.8	1991247.2	741.0	0
9	6312872.4	1991275.5	741.0	0
10	6312912.6	1991297.1	739.0	0
11	6312947.9	1991316.1	736.0	0
12	6313014.4	1991351.8	727.0	0
13	6313092.2	1991393.6	716.0	0
14	6313164.8	1991432.8	706.0	0
15	6313223.3	1991464.6	699.0	0

0ROADWAY 2 Grand Avenue, eb cont'd.(w of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	578.	40.0
VEH5	8.	40.0
VEH6	4.	40.0

0 ------------COORDINATES------------

	X	Y	Z	GRADE
15	6313223.3	1991464.6	699.0	0
16	6313276.4	1991492.7	694.0	0
17	6313347.9	1991531.7	689.0	0

0ROADWAY 3 Grand Avenue, eb cont'd.(e of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	553.	40.0
VEH5	7.	40.0
VEH6	4.	40.0

0 ------------COORDINATES------------

	X	Y	Z	GRADE
17	6313347.9	1991531.7	689.0	0
18	6313412.8	1991566.7	686.0	0
19	6313561.8	1991646.5	681.5	0
20	6313689.9	1991715.4	677.4	0
21	6313888.5	1991822.1	671.1	0
22	6314095.0	1991933.5	664.6	0

0ROADWAY 4 Grand Ave, wb(e of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	553.	40.0
VEH5	7.	40.0
VEH6	4.	40.0

0 ------------COORDINATES------------

	X	Y	Z	GRADE
1	6314080.2	1991960.1	664.6	1
2	6313875.3	1991850.2	671.1	1
3	6313676.6	1991741.3	677.4	1
4	6313547.5	1991672.4	681.5	1
5	6313404.5	1991595.7	686.0	1
6	6313331.4	1991556.6	689.0	1

0ROADWAY 5 Grand Ave, wb(w of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0	30.0
MT	0.	30.0
VEH4	578.	40.0
VEH5	8.	40.0
VEH6	4.	40.0

0 ------------COORDINATES------------

	X	Y	Z	GRADE
6	6313331.4	1991556.6	689.0	1
7	6313258.1	1991516.8	694.0	1
8	6313205.8	1991488.2	699.0	1
9	6313143.5	1991455.2	706.0	1
10	6313071.0	1991416.1	716.0	1
11	6312995.7	1991376.5	727.0	1
12	6312926.5	1991338.6	736.0	1
13	6312893.6	1991320.1	739.0	1
14	6312851.7	1991298.4	741.0	0
15	6312808.2	1991274.9	741.0	0

0ROADWAY 6 Grand Ave, wb cont'd.(w of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	578.	40.0
VEH5	8.	40.0
VEH6	4.	40.0

0 ------------COORDINATES------------

	X	Y	Z	GRADE
15	6312808.2	1991274.9	741.0	0
16	6312764.1	1991251.5	739.0	0
17	6312705.5	1991219.7	734.0	0
18	6312664.2	1991197.9	730.0	0
19	6312590.6	1991157.2	724.5	0
20	6312405.3	1991054.5	710.4	0
21	6312225.6	1990950.8	696.5	0
22	6312001.3	1990861.5	680.3	0

0ROADWAY 7 Harding Street, nb

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	41.	20.0
VEH5	1.	20.0
VEH6	1.	20.0

0 ------------COORDINATES------------

	X	Y	Z	GRADE
1	6313349.5	1991569.1	688.0	0
2	6313331.7	1991601.6	687.0	0
3	6313292.1	1991673.4	685.0	0
4	6313246.2	1991757.3	682.0	0
5	6313204.8	1991833.0	680.0	0
6	6313188.2	1991863.1	679.0	0

0ROADWAY 8 Harding Street, sb

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	41.	20.0
VEH5	1.	20.0
VEH6	1.	20.0

0 ------------COORDINATES------------

	X	Y	Z	GRADE
1	6313182.0	1991848.7	678.0	1
2	6313199.1	1991817.2	680.0	1
3	6313247.1	1991730.6	683.0	1
4	6313295.9	1991641.9	686.0	I
5	6313335.4	1991570.3	688.0	1

1

BARRIER 1 TYPE(A) Northern road edge

---------COORDINATES----------

	X	Y	Z	Z0	DELZ	P
1	6313247.0	1991692.8	683.0	683.0	.0	0
2	6313291.8	1991612.4	686.0	686.0		
3	6313300.1	1991580.1	687.0	687.0		
4	6313303.3	1991573.2	689.0	689.0		
5	6313225.8	1991530.1	695.0	695.0		
6	6313132.9	1991480.1	705.0	705.0		
7	6313058.3	1991440.2	715.0	715.0		
8	6312991.6	1991397.1	725.0	725.0		
9	6312918.3	1991358.6	735.0	735.0		
10	6312855.6	1991322.7	740.0	740.0		

1

BARRIER 2 TYPE(A) Northern road edge cont'd.

---------COORDINATES----------

	X	Y	Z	Z0	DELZ	P
10	6312855.6	1991322.7	740.0	740.0	.0	0
11	6312775.5	1991280.0	740.0	740.0		
12	6312706.6	1991242.6	735.0	735.0		
13	6312654.0	1991215.1	730.0	730.0		

1

BARRIER 3 TYPE(A) Existing Pad topo cont'd.

---------COORDINATES----------

	X	Y	Z	Z0	DELZ	P
12	6312706.6	1991242.6	735.0	735.0	.0	0
24	6312666.7	1991386.9	724.0	724.0		

1

Residential Receivers, Grand Ave

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                       ------------COORDINATES-------------
                            X            Y              Z
 1                     6313248.0    1991408.9        705.0
 2                     6313079.2    1991325.2        725.0
 3                     6313008.8    1991266.5        745.0
 4                     6312778.4    1991137.4        745.0
 5                     6312693.6    1991254.6        742.1
1

  ALPHA FACTORS - RECEIVER ACROSS,ROADWAY DOWN

  1 *   .0   .0   .0   .0   .0
  2 *   .0   .0   .0   .0   .0
  3 *   .0   .0   .0   .0   .0
  4 *   .0   .0   .0   .0   .0
  5 *   .0   .0   .0   .0   .0
  6 *   .0   .0   .0   .0   .0
  7 *   .0   .0   .0   .0   .0
  8 *   .0   .0   .0   .0   .0
1

  SHIELDING FACTORS - RECEIVER ACROSS,ROADWAY DOWN

  1 *   .0   .0   .0   .0   .0
  2 *   .0   .0   .0   0    .0
  3 *   .0   .0   .0   .0   .0
  4 *   .0   .0   .0   .0   .0
  5 *   .0   .0   .0   .0   .0
  6 *   .0   .0   .0   .0   .0
  7 *   .0   .0   .0   .0   .0
  8 *   .0   .0   .0   .0   .0
1

 RECEIVER    LEQ(H)   L10
 1             66.3   69.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
         39.3 40.4 42.6 40.3 38.8 41.4 39.8 41.7 41.7 42.2

         46.7 50.4 54.7 58.3
    2      1    2
         57.6 54.4
    3      1    2    3    4    5
         49.6 49.2 44.7 43.7 41.1
    4      1    2    3    4    5
         41.1 43.8 44.8 48.8 49.8
    5      1    2    3    4    5    6    7    8    9
         54.2 55.9 56.5 54.0 50.6 47.5 42.6 41.9 40.7
    6      1    2    3    4    5    6    7
         39.8 40.1 37.7 39.3 41.6 39.4 38.2
    7      1    2    3    4    5
         30.9 32.0 30.1 27.6 21.5
    8      1    2    3    4
         24.5 29.5 32.0 33.7
1

 RECEIVER    LEQ(H)   L10
 2             66.7   70.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
         40.8 42.3 45.1 43.3 42.3 45.3 44.2 46.8 47.7 49.3

         56.1 60.8 56.2 50.5
    2      1    2
         47.3 46.3
    3      1    2    3    4    5
         43.6 44.8 41.6 41.3 39.3
    4      1    2    3    4    5
         39.3 41.4 41.7 44.6 44.2
    5      1    2    3    4    5    6    7    8    9
         47.1 48.1 51.5 55.9 58.3 55.2 49.0 47.5 45.6
    6      1    2    3    4    5    6    7
         44.1 43.9 41.0 42.3 44.0 41.3 39.7
    7      1    2    3    4    5
         25.4 27.5 27.4 25.7 20.9
    8      1    2    3    4
         24.2 27.4 28.8 28.4
1

 RECEIVER    LEQ(H)   L10
 3             65.5   69.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
         41.6 43.3 46.5 45.2 44.4 47.7 47.1 50.4 52.0 53.9

         57.8 55.1 50.4 46.6
    2      1    2
         44.2 43.8
    3      1    2    3    4    5
         41.6 43.3 40.4 40.4 38.5
    4      1    2    3    4    5
         38.5 40.5 40.5 43.1 42.2
    5      1    2    3    4    5    6    7    8    9
         44.7 45.2 47.8 51.1 54.7 56.3 52.2 50.8 48.6
    6      1    2    3    4    5    6    7
         46.7 46.1 43.0 44.0 45.4 42.3 40.5
    7      1    2    3    4    5
         23.4 26.1 26.4 25.2 20.6
    8      1    2    3    4
         23.5 26.8 27.7 26.9
1

 RECEIVER    LEQ(H)   L10
 4             65.4   69.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
         44.6 47.4 52.8 54.4 55.4 58.1 53.5 51.6 47.9 45.6

         46.5 45.0 42.8 40.5
    2      1    2
         39.0 39.3
    3      1    2    3    4    5
         37.6 39.9 37.7 38.0 36.6
    4      1    2    3    4    5
         36.6 38.1 37.8 39.7 38.3
    5      1    2    3    4    5    6    7    8    9
         40.1 40.0 41.8 43.9 45.9 47.7 46.2 48.0 49.7
    6      1    2    3    4    5    6    7
         51.7 54.2 52.0 52.2 51.4 46.3 43.5
    7      1    2    3    4    5
         19.2 20.2 17.5 15.0  9.9
    8      1    2    3    4
         12.8 16.7 19.2 21.9
1

 RECEIVER    LEQ(H)   L10
 5             67.9   71.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
         44.8 47.8 53.6 55.9 57.3 58.7 53.0 50.9 47.2 42.9

         42.0 39.2 35.7 32.6
    2      1    2
         30.4 30.2
    3      1    2    3    4    5
         27.9 31.0 29.9 32.2 31.4
    4      1    2    3    4    5
         32.0 33.1 32.5 33.6 31.9
    5      1    2    3    4    5    6    7    8    9
         32.8 30.8 32.5 35.4 38.8 42.7 43.0 45.4 50.9
    6      1    2    3    4    5    6    7
         54.6 61.8 60.0 56.4 53.0 46.8 43.8
    7      1    2    3    4    5
         15.9 22.2 23.1 22.6 18.4
    8      1    2    3    4
         21.3 24.1 24.0 21.8
```

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                    *************************
                            STAM2VU1
                          Version 1.20
                    *************************
                        STAMINA 2.0/BCR
               MODIFIED FROM FHWA VERSION 3 (MARCH 1983)
                   TRAFFIC NOISE PREDICTION MODEL

         MODIFIED TO:
           1.   ALLOW EQUIVALENT SPEEDS BELOW 30 MPH PER NCHRP 311;
           2.   CORRECT MEDIUM TRUCK BARRIER CALCULATION ERROR BY
                USING VEH4, VEH5 AND VEH6 FOR CARS, MT AND HT; AND
           3.   PLACE REFERENCE ENGERGY MEAN EMISSION LEVELS IN A
                DATA FILE CALLED REMEL.DTA TO ALLOW USER TO USE
                LEVELS OTHER THAN THE FHWA NATIONAL AVERAGES.
                    *************************
            MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
                BY VANDERBILT UNIVERSITY, NASHVILLE, TN 37235
                       AND BOWLBY & ASSOCIATES, INC.
                         2014 BROADWAY, SUITE 210
                         NASHVILLE, TN 37203-2425
                     TEL 615-327-8130, FAX 615-327-8137

NOTE:
IN STAM2VU1, THE TRAFFIC DATA FROM THE ORIGINAL DATA FILE
HAS BEEN SHIFTED TO CORRECT THE STAMINA 2.0 MEDIUM TRUCK
CALCULATION ERROR. THIS SHIFT IS REFLECTED BELOW IN THE
*.STA OUTPUT FILE. THE ORIGINAL DATA FILE IS UNCHANGED.


           (INPUT UNITS- ENGLISH , OUTPUT UNITS- ENGLISH )


 Wal-Mart, Grand Site, Exst+prj Traff.

EMISSION LEVELS: Calveno Levels (trucks>30mph)

OPROGRAM INITIALIZATION PARAMETERS

      HEIGHT       CODE           DESCRIPTION
        .00          1      RECEIVER HEIGHT ADJUSTMENT
       1.00          2      A-WEIGHTED SOUND LEVEL ONLY
        .00          3      HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
        .00          4      HEIGHT ADJUSTMENT FOR HEAVY TRUCKS   (HT)
        .00          5      HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS  (MT)
       .000          6      HEIGHT ADJUSTMENT FOR TYPE4 VEHICLES (VEH4)
                            CARS--CALVENO
                            C0 =       5.20  C1 =      38.80  S0 =         .00
      2.300          7      HEIGHT ADJUSTMENT FOR TYPE5 VEHICLES (VEH5)
                            MT--CALVENO
                            C0 =      35.30  C1 =      25.60  S0 =         .00
      8.000          8      HEIGHT ADJUSTMENT FOR TYPE6 VEHICLES (VEH6)
                            HT--CALVENO
                            C0 =      50.40  C1 =      19.20  S0 =         .00


OROADWAY   1      Grand Avenue, eb (w of Hard.)


                    VEHICLE TYPE   VEHICLES/HOUR     SPEED
                         CARS              0.         30.0
                         HT                0.         30.0
                         MT                0.         30.0
                         VEH4            623.         40.0
                         VEH5              8.         40.0
                         VEH6              4.         40.0
0                   ------------COORDINATES------------
                         X           Y              Z     GRADE
 1                   6312007.5   1990830.1        680.3     1
 2                   6312241.2   1990925.7        696.5     1
 3                   6312421.8   1991029.8        710.4     1
 4                   6312605.2   1991131.1        724.5     1
 5                   6312679.4   1991171.5        730.0     1
 6                   6312720.9   1991193.8        734 0     1
 7                   6312781.0   1991226.3        739.0     1
 8                   6312819.8   1991247.2        741.0     0
 9                   6312872.4   1991275.5        741.0     0
 10                  6312912.6   1991297.1        739.0     0
 11                  6312947.9   1991316.1        736.0     0
 12                  6313014.4   1991351.8        727.0     0
 13                  6313092.2   1991393.6        716.0     0
 14                  6313164.8   1991432.8        706.0     0
 15                  6313223.3   1991464.6        699.0     0

OROADWAY   2      Grand Avenue, eb cont'd.(w of Hard.)


                    VEHICLE TYPE   VEHICLES/HOUR     SPEED
                         CARS              0.         30.0
                         HT                0.         30.0
                         MT                0.         30.0
                         VEH4            623.         40.0
                         VEH5              8.         40.0
                         VEH6              4.         40.0
0                   ------------COORDINATES------------
                         X           Y              Z     GRADE
 15                  6313223.3   1991464.6        699.0     0
 16                  6313276.4   1991492.7        694.0     0
 17                  6313347.9   1991531.7        689.0     0

OROADWAY   3      Grand Avenue, eb cont'd.(e of Hard.)


                    VEHICLE TYPE   VEHICLES/HOUR     SPEED
                         CARS              0.         30.0
                         HT                0.         30.0
                         MT                0.         30.0
                         VEH4            590.         40.0
                         VEH5              7.         40.0
                         VEH6              4.         40.0
0                   ------------COORDINATES------------
                         X           Y              Z     GRADE
 17                  6313347.9   1991531.7        689.0     0
 18                  6313412.8   1991566.7        686.0     0
 19                  6313561.8   1991646.5        681.5     0
 20                  6313689.9   1991715.4        677.4     0
 21                  6313888.5   1991822.1        671.1     0
 22                  6314095.0   1991933.5        664.6     0

OROADWAY   4      Grand Ave, wb(e of Hard.)


                    VEHICLE TYPE   VEHICLES/HOUR     SPEED
                         CARS              0.         30.0
                         HT                0.         30.0
                         MT                0.         30.0
                         VEH4            590.         40.0
                         VEH5              7.         40.0
                         VEH6              4.         40.0
0                   ------------COORDINATES------------
                         X           Y              Z     GRADE
 1                   6314080.2   1991960.1        664.6     1
 2                   6313875.3   1991850.2        671.1     1
 3                   6313676.6   1991741.3        677.4     1
 4                   6313547.5   1991672 4        681.5     1
 5                   6313404.5   1991595.7        686.0     1
 6                   6313331.4   1991556.6        689.0     1

OROADWAY   5      Grand Ave, wb(w of Hard.)


                    VEHICLE TYPE   VEHICLES/HOUR     SPEED
                         CARS              0.         30.0
                         HT                0.         30.0
                         MT                0.         30.0
                         VEH4            623.         40.0
                         VEH5              8.         40.0
                         VEH6              4.         40.0
0                   ------------COORDINATES------------
                         X           Y              Z     GRADE
 6                   6313331.4   1991556.6        689.0     1
 7                   6313258.1   1991516.8        694.0     1
 8                   6313205.8   1991488.2        699.0     1
 9                   6313143.5   1991455.2        706.0     1
 10                  6313071.0   1991416.1        716.0     1
 11                  6312995.7   1991376.5        727.0     1
 12                  6312926.5   1991338.6        736.0     1
 13                  6312893.6   1991320.1        739.0     1
 14                  6312851.7   1991298.4        741.0     0
 15                  6312808.2   1991274.9        741.0     0

OROADWAY   6      Grand Ave, wb cont'd.(w of Hard.)


                    VEHICLE TYPE   VEHICLES/HOUR     SPEED
                         CARS              0.         30.0
                         HT                0.         30.0
                         MT                0.         30.0
                         VEH4            623.         40.0
                         VEH5              8.         40.0
                         VEH6              4.         40.0
0                   ------------COORDINATES------------
                         X           Y              Z     GRADE
 15                  6312808.2   1991274.9        741.0     0
 16                  6312764.1   1991251.5        739.0     0
 17                  6312705.5   1991219.7        734.0     0
 18                  6312664.2   1991197.9        730.0     0
 19                  6312590.6   1991157.2        724.5     0
 20                  6312405.3   1991054.5        710.4     0
 21                  6312225.6   1990950.8        696.5     0
 22                  6312001.3   1990861.5        680.3     0

OROADWAY   7      Harding Street, nb


                    VEHICLE TYPE   VEHICLES/HOUR     SPEED
                         CARS              0.         30.0
                         HT                0.         30.0
                         MT                0.         30.0
                         VEH4             41.         20.0
                         VEH5              1.         20.0
                         VEH6              1.         20.0
0                   ------------COORDINATES------------
                         X           Y              Z     GRADE
 1                   6313349.5   1991569.1        688.0     0
 2                   6313331.7   1991601.6        687.0     0
 3                   6313292.1   1991673.4        685.0     0
 4                   6313246.2   1991757.3        682.0     0
 5                   6313204.8   1991833.0        680.0     0
 6                   6313188.2   1991863.1        679.0     0

OROADWAY   8      Harding Street, sb


                    VEHICLE TYPE   VEHICLES/HOUR     SPEED
                         CARS              0.         30.0
                         HT                0.         30.0
                         MT                0.         30.0
                         VEH4             41.         20.0
                         VEH5              1.         20.0
                         VEH6              1.         20.0
0                   ------------COORDINATES------------
                         X           Y              Z     GRADE
 1                   6313182.0   1991848.7        678.0     1
 2                   6313199.1   1991817.2        680.0     1
 3                   6313247.1   1991730.6        683.0     1
 4                   6313295.9   1991641.9        686.0     1
 5                   6313335.4   1991570.3        688.0     1
1

 BARRIER    1   TYPE(A)      Northern road edge

           ---------COORDINATES----------
                 X          Y           Z         Z0        DELZ          P
 1         6313247.0 1991692.8      683.0      683.0          .0          0
 2         6313291.8 1991612.4      686.0      686.0
 3         6313300.1 1991580.1      687.0      687.0
 4         6313303.3 1991573.2      689.0      689.0
 5         6313225.8 1991530.1      695.0      695.0
 6         6313132.9 1991480.1      705.0      705.0
 7         6313058.3 1991440.2      715.0      715.0
 8         6312991.6 1991397.1      725.0      725.0
 9         6312918.3 1991358.6      735.0      735.0
 10        6312855.6 1991322.7      740.0      740.0
1

 BARRIER    2   TYPE(A)      Northern road edge cont'd.

           ---------COORDINATES----------
                 X          Y           Z         Z0        DELZ          P
 10        6312855.6 1991322.7      740.0      740.0          .0          0
 11        6312775.5 1991280.0      740.0      740.0
 12        6312706.6 1991242.6      735.0      735.0
 13        6312654.0 1991215.1      730.0      730.0
1

 BARRIER    3   TYPE(A)      Existing Pad topo cont'd.

           ---------COORDINATES----------
                 X          Y           Z         Z0        DELZ          P
 12        6312706.6 1991242.6      735.0      735.0          .0          0
 24        6312666.7 1991386.9      724.0      724.0
1

 Residential Receivers, Grand Ave
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                                   ------------COORDINATES------------
                                        X            Y            Z
 1                                  6313248.0    1991408.9      705.0
 2                                  6313079.2    1991325.2      725.0
 3                                  6313008.8    1991266.5      745.0
 4                                  6312778.4    1991137.4      745.0
 5                                  6312693.6    1991254.6      742.1
1

  ALPHA FACTORS - RECEIVER ACROSS,ROADWAY DOWN

  1 *   .0   .0   0   .0   0
  2 *   .0   .0   .0   .0   .0
  3 *   .0   .0   .0   .0   .0
  4 *   .0   .0   .0   .0   .0
  5 *   .0   .0   .0   .0   .0
  6 *   .0   .0   .0   .0   .0
  7 *   .0   .0   .0   .0   .0
  8 *   .0   .0   .0   .0   .0
1

  SHIELDING FACTORS - RECEIVER ACROSS,ROADWAY DOWN

  1 *   .0   .0   .0   .0   .0
  2 *   .0   .0   .0   .0   .0
  3 *   .0   .0   .0   .0   .0
  4 *   .0   .0   .0   .0   .0
  5 *   .0   .0   .0   .0   .0
  6 *   .0   .0   .0   .0   .0
  7 *   .0   .0   .0   .0   .0
  8 *   .0   .0   .0   .0   .0
1

 RECEIVER     LEQ(H)    L10
 1             66.5    70.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
         39.5 40.6 42.8 40.5 39.0 41.6 40.0 42.0 41.9 42.4

         46.9 50.7 55.0 58.6
    2        1    2
         57.8 54.7
    3        1    2    3    4    5
         49.8 49.4 45.0 43.9 41.3
    4        1    2    3    4    5
         41.3 44.0 45.0 49.0 50.0
    5        1    2    3    4    5    6    7    8    9
         54.4 56.1 56.7 54.2 50.8 47.7 42.8 42.1 41.0
    6        1    2    3    4    5    6    7
         40.1 40.3 37.9 39.6 41.8 39.6 38.4
    7        1    2    3    4    5
         30.9 32.0 30.1 27.6 21.5
    8        1    2    3    4
         24.5 29.5 32.0 33.7
1

 RECEIVER     LEQ(H)    L10
 2             67.0    70.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
         41.0 42.5 45.3 43.6 42.5 45.5 44.4 47.1 48.0 49.5

         56.3 61.1 56.5 50.8
    2        1    2
         47.5 46.5
    3        1    2    3    4    5
         43.8 45.1 41.9 41.6 39.5
    4        1    2    3    4    5
         39.5 41.7 42.0 44.8 44.4
    5        1    2    3    4    5    6    7    8    9
         47.3 48.3 51.7 56.2 58.5 55.4 49.2 47.7 45.8
    6        1    2    3    4    5    6    7
         44.4 44.1 41.3 42.6 44.3 41.5 40.0
    7        1    2    3    4    5
         25.4 27.5 27.4 25.7 20.9
    8        1    2    3    4
         24.2 27.4 28.8 28.4
1

 RECEIVER     LEQ(H)    L10
 3             65.7    69.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
         41.8 43.6 46.7 45.4 44.6 47.9 47.4 50.6 52.2 54.1

         58.1 55.4 50.6 46.8
    2        1    2
         44.5 44.1
    3        1    2    3    4    5
         41.8 43.5 40.7 40.6 38.7
    4        1    2    3    4    5
         38.8 40.7 40.8 43.3 42.5
    5        1    2    3    4    5    6    7    8    9
         44.9 45.4 48.0 51.3 54.9 56.5 52.4 51.0 48.8
    6        1    2    3    4    5    6    7
         47.0 46.4 43.3 44.3 45.7 42.5 40.8
    7        1    2    3    4    5
         23.4 26.1 26.4 25.2 20.6
    8        1    2    3    4
         23.5 26.8 27.7 26.9
1

 RECEIVER     LEQ(H)    L10
 4             65.6    69.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
         44.8 47.6 53.0 54.6 55.6 58.3 53.7 51.9 48.1 45.9

         46.8 45.2 43.1 40.7
    2        1    2
         39.2 39.5
    3        1    2    3    4    5
         37.8 40.1 37.9 38.3 36.8
    4        1    2    3    4    5
         36.8 38.4 38.0 40.0 38.5
    5        1    2    3    4    5    6    7    8    9
         40.4 40.2 42.0 44.1 46.1 47.9 46.4 48.2 50.0
    6        1    2    3    4    5    6    7
         51.9 54.5 52.2 52.4 51.7 46.5 43.7
    7        1    2    3    4    5
         19.2 20.2 17.5 15.0  9.9
    8        1    2    3    4
         12.8 16.7 19.2 21.9
1

 RECEIVER     LEQ(H)    L10
 5             68.1    71.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
         45.1 48.0 53.8 56.2 57.5 58.9 53.2 51.2 47.5 43.1

         42.3 39.4 36.0 32.8
    2        1    2
         30.7 30.4
    3        1    2    3    4    5
         28.1 31.3 30.1 32.4 31.6
    4        1    2    3    4    5
         32.2 33.3 32.7 33.8 32.1
    5        1    2    3    4    5    6    7    8    9
         32.9 31.0 32.7 35.6 39.0 42.9 43.1 45.6 51.1
    6        1    2    3    4    5    6    7
         54.9 62.0 60.3 56.7 53.2 47.1 44.1
    7        1    2    3    4    5
         15.9 22.2 23.1 22.6 18.4
    8        1    2    3    4
         21.3 24.1 24.0 21.8
```

****
STAM2VU1
Version 1.20
****
STAMINA 2.0/BCR
MODIFIED FROM FHWA VERSION 3 (MARCH 1983)
TRAFFIC NOISE PREDICTION MODEL

MODIFIED TO:
1. ALLOW EQUIVALENT SPEEDS BELOW 30 MPH PER NCHRP 311;
2. CORRECT MEDIUM TRUCK BARRIER CALCULATION ERROR BY USING VEH4, VEH5 AND VEH6 FOR CARS, MT AND HT; AND
3. PLACE REFERENCE ENGERGY MEAN EMISSION LEVELS IN A DATA FILE CALLED REMEL.DTA TO ALLOW USER TO USE LEVELS OTHER THAN THE FHWA NATIONAL AVERAGES.

****
MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
BY VANDERBILT UNIVERSITY, NASHVILLE, TN 37235
AND BOWLBY & ASSOCIATES, INC.
2014 BROADWAY, SUITE 210
NASHVILLE, TN 37203-2425
TEL 615-327-8130, FAX 615-327-8137

NOTE:
IN STAM2VU1, THE TRAFFIC DATA FROM THE ORIGINAL DATA FILE HAS BEEN SHIFTED TO CORRECT THE STAMINA 2.0 MEDIUM TRUCK CALCULATION ERROR. THIS SHIFT IS REFLECTED BELOW IN THE *.STA OUTPUT FILE. THE ORIGINAL DATA FILE IS UNCHANGED.

(INPUT UNITS- ENGLISH , OUTPUT UNITS- ENGLISH)

Wal-Mart, Grand Site, Exst+prj+cum Traff.

EMISSION LEVELS: Calveno Levels (trucks>30mph)

0PROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
.00	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.00	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)
.000	6	HEIGHT ADJUSTMENT FOR TYPE4 VEHICLES (VEH4) CARS--CALVENO C0 = 5.20 C1 = 38.80 S0 = .00
2.300	7	HEIGHT ADJUSTMENT FOR TYPE5 VEHICLES (VEH5) MT--CALVENO C0 = 35.30 C1 = 25.60 S0 = .00
8.000	8	HEIGHT ADJUSTMENT FOR TYPE6 VEHICLES (VEH6) HT--CALVENO C0 = 50.40 C1 = 19.20 S0 = .00

0ROADWAY 1 Grand Avenue, eb (w of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	642.	40.0
VEH5	9.	40.0
VEH6	5.	40.0

0 ----------COORDINATES----------

	X	Y	Z	GRADE
1	6312007.5	1990830.1	680.3	1
2	6312241.2	1990925.7	696.5	1
3	6312421.8	1991029.8	710.4	1
4	6312605.2	1991131.1	724.5	1
5	6312679.4	1991171.5	730.0	1
6	6312720.9	1991193.8	734.0	1
7	6312781.0	1991226.3	739.0	1
8	6312819.8	1991247.2	741.0	0
9	6312872.4	1991275.5	741.0	0
10	6312912.6	1991297.1	739.0	0
11	6312947.9	1991316.1	736.0	0
12	6313014.4	1991351.8	727.0	0
13	6313092.2	1991393.6	716.0	0
14	6313164.8	1991432.8	706.0	0
15	6313223.3	1991464.6	699.0	0

0ROADWAY 2 Grand Avenue, eb cont'd.(w of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	642.	40.0
VEH5	9.	40.0
VEH6	5.	40.0

0 ----------COORDINATES----------

	X	Y	Z	GRADE
15	6313223.3	1991464.6	699.0	0
16	6313276.4	1991492.7	694.0	0
17	6313347.9	1991531.7	689.0	0

0ROADWAY 3 Grand Avenue, eb cont'd.(e of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	607.	40.0
VEH5	8.	40.0
VEH6	4.	40.0

0 ----------COORDINATES----------

	X	Y	Z	GRADE
17	6313347.9	1991531.7	689.0	0
18	6313412.8	1991566.7	686.0	0
19	6313561.8	1991646.5	681.5	0
20	6313689.9	1991715.4	677.4	0
21	6313888.5	1991822.1	671.1	0
22	6314095.0	1991933.5	664.6	0

0ROADWAY 4 Grand Ave, wb(e of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	607.	40.0
VEH5	8.	40.0
VEH6	4.	40.0

0 ----------COORDINATES----------

	X	Y	Z	GRADE
1	6314080.2	1991960.1	664.6	1
2	6313875.3	1991850.2	671.1	1
3	6313676.6	1991741.3	677.4	1
4	6313547.5	1991672.4	681.5	1
5	6313404.5	1991595.7	686.0	1
6	6313331.4	1991556.6	689.0	1

0ROADWAY 5 Grand Ave, wb(w of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	642.	40.0
VEH5	9.	40.0
VEH6	5.	40.0

0 ----------COORDINATES----------

	X	Y	Z	GRADE
6	6313331.4	1991556.6	689.0	1
7	6313258.1	1991516.8	694.0	1
8	6313205.8	1991488.2	699.0	1
9	6313143.5	1991455.2	706.0	1
10	6313071.0	1991416.1	716.0	1
11	6312995.7	1991376.5	727.0	1
12	6312926.5	1991338.6	736.0	1
13	6312893.6	1991320.1	739.0	1
14	6312851.7	1991298.4	741.0	0
15	6312808.2	1991274.9	741.0	0

0ROADWAY 6 Grand Ave, wb cont'd.(w of Hard.)

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	642.	40.0
VEH5	9.	40.0
VEH6	5.	40.0

0 ----------COORDINATES----------

	X	Y	Z	GRADE
15	6312808.2	1991274.9	741.0	0
16	6312764.1	1991251.5	739.0	0
17	6312705.5	1991219.7	734.0	0
18	6312664.2	1991197.9	730.0	0
19	6312590.6	1991157.2	724.5	0
20	6312405.3	1991054.5	710.4	0
21	6312225.6	1990950.8	696.5	0
22	6312001.3	1990861.5	680.3	0

0ROADWAY 7 Harding Street, nb

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	41.	20.0
VEH5	1.	20.0
VEH6	1.	20.0

0 ----------COORDINATES----------

	X	Y	Z	GRADE
1	6313349.5	1991569.1	688.0	0
2	6313331.7	1991601.6	687.0	0
3	6313292.1	1991673.4	685.0	0
4	6313246.2	1991757.3	682.0	0
5	6313204.8	1991833.0	680.0	0
6	6313188.2	1991863.1	679.0	0

0ROADWAY 8 Harding Street, sb

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	41.	20.0
VEH5	1.	20.0
VEH6	1.	20.0

0 ----------COORDINATES----------

	X	Y	Z	GRADE
1	6313182.0	1991848.7	678.0	1
2	6313199.1	1991817.2	680.0	1
3	6313247.1	1991730.6	683.0	1
4	6313295.9	1991641.9	686.0	1
5	6313335.4	1991570.3	688.0	1

1

BARRIER 1 TYPE(A) Northern road edge

---------COORDINATES---------

	X	Y	Z	Z0	DELZ	P
1	6313247.0	1991692.8	683.0	683.0	.0	0
2	6313291.8	1991612.4	686.0	686.0		
3	6313300.1	1991580.1	687.0	687.0		
4	6313303.3	1991573.2	689.0	689.0		
5	6313225.8	1991530.1	695.0	695.0		
6	6313132.9	1991480.1	705.0	705.0		
7	6313058.3	1991440.2	715.0	715.0		
8	6312991.6	1991397.1	725.0	725.0		
9	6312918.3	1991358.6	735.0	735.0		
10	6312855.6	1991322.7	740.0	740.0		

1

BARRIER 2 TYPE(A) Northern road edge cont'd.

---------COORDINATES---------

	X	Y	Z	Z0	DELZ	P
10	6312855.6	1991322.7	740.0	740.0	.0	0
11	6312775.5	1991280.0	740.0	740.0		
12	6312706.6	1991242.6	735.0	735.0		
13	6312654.0	1991215.1	730.0	730.0		

1

BARRIER 3 TYPE(A) Existing Pad topo cont'd.

---------COORDINATES---------

	X	Y	Z	Z0	DELZ	P
12	6312706.6	1991242.6	735.0	735.0	.0	0
24	6312666.7	1991386.9	724.0	724.0		

1

Residential Receivers, Grand Ave

```
                   ------------COORDINATES------------
                          X           Y           Z
 1                    6313248.0   1991408.9     705.0
 2                    6313079.2   1991325.2     725.0
 3                    6313008.8   1991266.5     745.0
 4                    6312778.4   1991137.4     745.0
 5                    6312693.6   1991254.6     742.1
1

  ALPHA FACTORS - RECEIVER ACROSS,ROADWAY DOWN

  1 *  .0  .0  .0  .0  .0
  2 *  .0  .0  .0  .0  .0
  3 *  .0  .0  .0  .0  .0
  4 *  .0  .0  .0  .0  .0
  5 *  .0  .0  .0  .0  .0
  6 *  .0  .0  .0  .0  .0
  7 *  .0  .0  .0  .0  .0
  8 *  .0  .0  .0  .0  .0
1

  SHIELDING FACTORS - RECEIVER ACROSS,ROADWAY DOWN

  1 *  .0  .0  .0  .0  .0
  2 *  .0  .0  .0  .0  .0
  3 *  .0  .0  .0  .0  .0
  4 *  .0  .0  .0  .0  .0
  5 *  .0  .0  .0  .0  .0
  6 *  .0  .0  .0  .0  .0
  7 *  .0  .0  .0  .0  .0
  8 *  .0  .0  .0  .0  .0
1

 RECEIVER    LEQ(H)   L10
 1            66.8   70.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
          39.9 41.0 43.2 40.9 39.5 42.0 40.4 42.2 42.2 42.7

          47.2 51.0 55.2 58.9
    2       1    2
          58.1 55.0
    3       1    2    3    4    5
          49.9 49.6 45.1 44.1 41.4
    4       1    2    3    4    5
          41.5 44.1 45.1 49.1 50.1
    5       1    2    3    4    5    6    7    8    9
          54.8 56.5 57.2 54.7 51.2 48.1 43.3 42.5 41.2
    6       1    2    3    4    5    6    7
          40.3 40.6 38.2 39.8 42.1 39.9 38.7
    7       1    2    3    4    5
          30.9 32.0 30.1 27.6 21.5
    8       1    2    3    4
          24.5 29.5 32.0 33.7
1

 RECEIVER    LEQ(H)   L10
 2            67.3   70.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
          41.4 42.9 45.7 44.0 42.9 45.9 44.8 47.3 48.2 49.8

          56.6 61.3 56.8 51.0
    2       1    2
          47.8 46.8
    3       1    2    3    4    5
          44.0 45.2 42.0 41.7 39.6
    4       1    2    3    4    5
          39.7 41.8 42.1 45.0 44.5
    5       1    2    3    4    5    6    7    8    9
          47.7 48.8 52.1 56.6 58.9 55.8 49.6 48.1 46.1
    6       1    2    3    4    5    6    7
          44.6 44.4 41.5 42.8 44.6 41.8 40.3
    7       1    2    3    4    5
          25.4 27.5 27.4 25.7 20.9
    8       1    2    3    4
          24.2 27.4 28.8 28.4
1

 RECEIVER    LEQ(H)   L10
 3            66.1   69.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
          42.2 44.0 47.1 45.8 45.0 48.4 47.7 50.9 52.5 54.4

          58.4 55.6 50.9 47.1
    2       1    2
          44.8 44.4
    3       1    2    3    4    5
          42.0 43.6 40.8 40.7 38.9
    4       1    2    3    4    5
          38.9 40.8 40.9 43.4 42.6
    5       1    2    3    4    5    6    7    8    9
          45.3 45.8 48.4 51.8 55.3 56.9 52.8 51.3 49.1
    6       1    2    3    4    5    6    7
          47.3 46.7 43.5 44.6 45.9 42.8 41.1
    7       1    2    3    4    5
          23.4 26.1 26.4 25.2 20.6
    8       1    2    3    4
          23.5 26.8 27.7 26.9
1

 RECEIVER    LEQ(H)   L10
 4            66.0   69.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
          45.2 48.0 53.4 55.0 56.0 58.7 54.1 52.1 48.4 46.1

          47.0 45.5 43.3 41.0
    2       1    2
          39.5 39.8
    3       1    2    3    4    5
          38.0 40.2 38.0 38.4 36.9
    4       1    2    3    4    5
          37.0 38.5 38.1 40.1 38.7
    5       1    2    3    4    5    6    7    8    9
          40.8 40.6 42.4 44.5 46.5 48.3 46.8 48.6 50.2
    6       1    2    3    4    5    6    7
          52.2 54.7 52.5 52.7 51.9 46.8 44.0
    7       1    2    3    4    5
          19.2 20.2 17.5 15.0  9.9
    8       1    2    3    4
          12.8 16.7 19.2 21.9
1

 RECEIVER    LEQ(H)   L10
 5            68.5   72.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
          45.5 48.4 54.2 56.6 57.9 59.4 53.6 51.5 47.8 43.5

          42.6 39.7 36.3 33.1
    2       1    2
          31.0 30.7
    3       1    2    3    4    5
          28.3 31.4 30.2 32.5 31.7
    4       1    2    3    4    5
          32.3 33.4 32.9 33.9 32.2
    5       1    2    3    4    5    6    7    8    9
          33.4 31.5 33.2 36.1 39.5 43.3 43.7 46.1 51 4
    6       1    2    3    4    5    6    7
          55.2 62.3 60.6 57.0 53.5 47.4 44.4
    7       1    2    3    4    5
          15.9 22.2 23.1 22.6 18.4
    8       1    2    3    4
          21.3 24.1 24.0 21.8
```

APPENDIX F

Phase I Site Assessment for the Proposed Wal-Mart Supercenter #5214 (Kleinfelder, Inc.)

A report prepared for:

Nasland Engineering
4740 Ruffner Street
San Diego, California 92111

Attn: Mr. Larry Thornburgh

PHASE I ENVIRONMENTAL SITE ASSESSMENT
PROPOSED WAL-MART SUPERCENTER #5214
ESCONDIDO, CALIFORNIA
APNs: 230-230-1400, -1500, -3100, AND -3200

Kleinfelder Job No. 29714

Prepared by:

Melissa Valdovinos, EIT
Staff Engineer

Reviewed by:

Jacques P. Lord, CEG #2232
Environmental Department Manager

REGISTERED GEOLOGIST
JACQUES PASSERAT LORD
NO. 2232
CERTIFIED ENGINEERING GEOLOGIST
EXP 5/05
STATE OF CALIFORNIA

KLEINFELDER, INC.
5015 Shoreham Place
San Diego, California 92122
(858) 320-2000

June 13, 2003

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APPENDICES

EXECUTIVE SUMMARY

At the request of Mr. Larry Thornburgh of Nasland Engineering (Client), Kleinfelder, Inc. (Kleinfelder) has completed a Phase I Environmental Site Assessment of the proposed Wal-Mart Supercenter #5214 in Escondido, California (Site). The results of this assessment are as follows:

- The Site is an approximately 9-acre property with surface elevations varying from approximately 670 to 740 feet above mean sea level (amsl). Groundwater is present approximately 10 to 15 feet below ground surface (bgs). Two 48-inch San Diego County Water Authority (SDCWA) concrete aqueduct pipelines underlie the east side of the Site. The nearest body of water is the Escondido Creek, approximately ¼ mile north. The Site is not within the 100-year flood zone but approximately 85% of it is within the 500-year flood zone.
- The Site is presently occupied by three buildings; one residential and two commercial. The residence is located on the southwest corner of the Site at 1314 East Grand Avenue. According to the current resident, a septic tank is likely to be present behind the house though it is no longer in use. A single story commercial building at 1330 East Grand Avenue is located on the north side of the Site and is occupied by the Escondido Union School District (EUSD). A single story, multi-unit commercial building is located on the northeast area of the Site at 1330-B/1376/1378 East Grand Avenue. Current tenants at this building include Lovett's One Hour Cleaners, a laundromat, and the EUSD. Steep slopes with natural vegetation, landscaping, an asphalt concrete-paved parking lot and access roads also occupy the Site. Adjacent properties are primarily commercial and residential.
- Aerial photographs indicate the Site was used mostly for agriculture until 1963, when the land was developed for commercial use. The original on-site residence was constructed prior to 1946, based on aerial photos. In 1980, the City of Escondido Building Department documented unauthorized garden nursery commercial activities at the residence.
- Records for case number H11085, associated with Lovett's One Hour Cleaners, were reviewed at the County of San Diego Department of Environmental Health (DEH). A dry cleaning machine suspected of introducing perchloroethylene (PCE) to on-site soil and groundwater was removed from the facility in 1994 and later replaced with another dry cleaning machine under the new ownership in 1996. At least six environmental site investigations have been performed for Lovett's One Hour Cleaners since 1998. Reports

of these site assessments revealed the presence of PCE in soil, groundwater, and soil vapor. The most recent report indicates that groundwater in the vicinity has been impacted by PCE and two of its degradation by-products; tricholoethylene (TCE) and dichloroethylene (DCE).

- Approximately six solid waste disposal bins were observed behind the on-site buildings. No obvious signs of inappropriate disposal were observed in these areas.
- Five electrical transformers are located to the west of the multi-unit building. No obvious signs of leakage or staining were observed.
- Based on the age of the buildings present on the Site, it is likely that asbestos-containing building materials and lead-based paint may be present in all three on-site structures.
- The existing on-site impacts to soil and groundwater from a 1998 PCE release at Lovett's One Hour Cleaners represent a recognized environmental condition (REC) at the Site.
- City of Escondido building records indicate the presence of a former unauthorized garden nursery at the on-site residence. The possible use of pesticides, fungicides and/or fertilizers in association with the nursery represents a potential REC at the Site.
- There is a low likelihood that a REC exists at the Site as a result of a release of hazardous materials/waste or petroleum products from a known or interpreted historical off-site source.
- Kleinfelder recommends removal of the septic tank behind the residence in accordance with DEH guidelines.
- Kleinfelder recommends hazardous material building surveys, including assessments of asbestos-containing building materials and lead-based paints, for all three on-site buildings.
- Kleinfelder recommends continued monitoring, risk assessment and possibly remediation of PCE and its degradation by-products at the Site. These activities should be conducted in accordance with DEH guidance until the case is closed.
- Prior to any regrading at the Site, Kleinfelder recommends that four soil samples are collected and analyzed for pesticides, copper and arsenic (fungicides), and total nitrates (fertilizers) at the former garden nursery.

Kleinfelder's findings are discussed in greater detail in the following sections of this report. This report is subject to the limitations in Section 8. Any party other than the Client and its authorized representatives who would like to use this report shall notify Kleinfelder of such intended use by executing the "Application for Authorization to Use" contained in Appendix E of this document.

1.0 INTRODUCTION

1.1 PURPOSE

Kleinfelder understands that the purposes of this Environmental Site Assessment (ESA) are to enable the Client to satisfy one of the requirements for the innocent landholder defense to liability under the Comprehensive Environmental Response, Compensation, Liability Act (CERCLA) and to evaluate the potential for recognized environmental conditions[1] (REC) at the Site in advance of its purchase. Kleinfelder performed this ESA in accordance with the ASTM Standard Practice for Phase I Environmental Site Assessment Process E1527-00, Wal-Mart's *Phase I Environmental Site Assessment and Report Requirements*, dated January 2, 2001, and the scope, assumptions, and limitations of our authorized proposal, dated February 19, 2003 (revised April 14, 2003). Authorization to proceed with this project was given by Mr. Larry Thornburgh of Nasland Engineering on April 24, 2003.

The subject property of this report is located along the north side of East Grand Avenue between Ash Street and Harding Street in Escondido, California. It is an approximately 9.5-acre property as shown on San Diego County Assessor's Parcel Map 230, page 23, parcels 14, 15, 31, and 32. This limited property description is hereafter referred to as the "Site" or subject property (Figures 1 through 3). Currently, there are two commercial buildings and one residence at the Site. The addresses for the two commercial buildings are 1330 East Grand Avenue and 1330-B/1376/1378 East Grand Avenue. The address of the on-site residence is 1314 East Grand Avenue.

1.2 SCOPE OF WORK

The following sections describe this report and Kleinfelder's scope of work:

- Section 2, **Site Setting**, is a compilation of information concerning the Site's location, physical setting, and geologic and hydrogeologic conditions.
- Section 3, **Records Review**, is a compilation of Kleinfelder's review of databases available from Federal, State, and local regulatory agencies regarding hazardous substance use, storage, or disposal at the subject site, and for off-site facilities up to a

[1] *ASTM STANDARD E1527-00: A recognized environmental condition is defined as "the presence or likely presence of hazardous substances or petroleum products on a property under conditions that indicate a release, past release or a material threat of a release of any hazardous substance or petroleum products into structures on the property or into the ground, groundwater or surface water of the property. This term includes hazardous substances or petroleum products even under conditions in compliance with laws."*

one-mile radius from the Site. This Section includes interviews conducted by Kleinfelder with individuals knowledgeable about the Site.

- Section 4, **Site History**, summarizes the history of the Site and adjoining properties based on various sources which may include a review of aerial photographs, city or suburban directories, historical maps, and information provided to Kleinfelder by the Client, such as a chain-of-title, and preliminary title report.
- Section 5, **Business Environment Risk Considerations**, presents an assessment of issues outlined in Wal-Mart's *Phase I Environmental Site Assessment and Report Requirements*, dated January 2, 2001.
- Section 6, **Site Reconnaissance**, describes Kleinfelder's Site observations during the Site reconnaissance and observations of adjacent parcels.
- Section 7, **Findings, Conclusions, and Recommendations**, is a presentation of findings and conclusions regarding the information in Sections 2 through 6; and presents an opinion regarding the presence of environmental conditions of concern at the Site.
- Sections 8 and 9 present our **Limitations** and **References**, respectively.

Pertinent documentation regarding the subject Site is included in Appendices A, B, C, D, and E of this report.

1.3 RESUMES OF PROJECT PERSONNEL

The resumes of Kleinfelder personnel responsible for the described environmental services are provided in Appendix D.

2.0 SITE SETTING

The Site setting is presented to assess the significance of potential on- and off-site contaminant migration, if present. The Site location is shown on the Vicinity Map, Figure 1. Tables 1 through 3 provide the physical characteristics of the Site and bordering properties. A sketch of the on-site improvements noted on the date of the Site reconnaissance is shown on the Site Plan, Figure 2. A copy of the County of San Diego County Assessor's Parcel Map is included as Figure 3. Photographs of the Site and the surrounding properties are included in Figures 4 through 8.

The information presented in Table 1 describes the physical location of the subject property. This information was obtained from maps, public records, and interviews.

Table 1
Site Setting

LOCATION	North side of East Grand Avenue between Ash Street and Harding Street in Escondido, California
TOWNSHIP & RANGE	East-central area of Township 12 South, Range 2 West of the San Bernardino Baseline & Meridian
ASSESSOR'S PARCEL NUMBERS	230-230-1400, -1500, -3100, and -3200
LEGAL DESCRIPTION	Not provided by the Client
CURRENT USE	Commercial and residential
PROPOSED USE	Commercial

Table 2 presents information about the physical setting of the Site. This information was obtained from published maps.

Table 2
Physical Setting

USGS TOPOGRAPHIC QUADRANGLE	Valley Center Quadrangle, California- San Diego County 7.5-minute series, dated 1967 (photorevised in 1975)	Surface elevation varies from approximately 670 to 740 feet above mean sea level throughout the Site. The natural topography slopes dramatically towards the north on the southwest portion of the Site and gently towards the north on the remainder of the Site.
NEAREST SURFACE WATERS	The 2003 Thomas Guide, San Diego County, page 1130	Escondido Creek is located approximately ¼ mile north of the Site.
OIL AND GAS FIELDS	Munger Map, 1999, page W-72	The Site is not located within known oil fields. No completed wells are within a 1-mile radius of the Site.
FEMA FLOOD ZONE	County of San Diego Department of Public Works (www.sangis.org)	The Site is not located within the 100-year flood zone. However, the approximately 85% of the Site is within the 500-year flood zone. These flood zones are defined by the Federal Emergency Management Agency.

Table 2 (Continued)
Physical Setting

RADON	National Radon Database information listed in EDR-Radius Map with Geocheck Report, dated April 29, 2003.	The Site is located in a county with a predicted average radon concentration below 2.0 picoCuries per liter (pCi/l). The EPA has set a standard of 4.0 pCi/l as the concentration at which corrective action is recommended. Elevated levels of radon are not expected to be of concern on the Site. Kleinfelder does not recommend radon testing.

Information about the regional geology and hydrogeology is presented in Table 3. This information was obtained from published data and maps from public agencies.

Table 3
Regional Geology and Hydrogeology

REGIONAL GEOMORPHIC PROVINCE (Source: Geology of California, Norris & Webb 1990)	Peninsular Ranges Geomorphic Province of California.
LOCAL GEOLOGIC MAP (Source: Weber, F.H., Jr., 1963, "Geology and Mineral Resources of San Diego County, California," CDMG, County Report 3 and Kleinfelder, April 8, 2002, "Limited Preliminary Geotechnical Study, Proposed Wal-Mart Supercenter No. 93105, Escondido, California")	The Peninsular Range Province is characterized by northwest-trending mountain ranges separated by subparallel fault zones. The mountain ranges are underlain by basement rocks consisting of Jurassic metavolcanic and metasedimentary rocks and Cretaceous igneous rocks of the southern California batholith. Late Cretaceous, Tertiary, and Quaternary sediments flank the mountain ranges to the west and southwest. During a recent geotechnical investigation conducted at the Site, Kleinfelder encountered the following soil types: *Fill* – dark and reddish brown, moist, fine to medium-grained, clayey sand was encountered from the ground surface to approximately 1.5 feet below ground surface (bgs) in some areas; *Granitic Rock* – reddish and yellow-brown, weathered, decomposed, granitic rock of various degrees of strength was encountered from the ground surface to approximately 21 feet bgs in some areas.
DEPTH TO REGIONAL GROUNDWATER AND ANTICIPATED DIRECTION OF FLOW (Source: EDR- Radius Map with Geocheck, April 29, 2003 and Valley Center Quadrangle, California-San Diego County 7.5-minute series, dated 1967 (photo revised in 1975))	The depth to groundwater in the immediate vicinity is estimated at approximately 10 to 15 feet bgs or approximately 656 to 660 feet above mean sea level. The interpreted direction of groundwater flow is generally to the north, towards nearby Escondido Creek. Groundwater depth and groundwater flow direction may be influenced by local pumping, rainfall, and irrigation patterns.
BENEFICIAL USES OF REGIONAL GROUNDWATER (Source: Water Quality Control Plan for the San Diego Basin 9, 1998 and EDR-Radius Map with Geocheck Report, dated April 29, 2003)	The Site is located within the Escondido Hydrologic Area (904.62) of the Carlsbad Hydrologic Unit. There are existing municipal, agricultural, and industrial uses of groundwater in this hydrologic area.

3.0 RECORDS REVIEW

3.1 REGULATORY AGENCY DATABASE REVIEW

The purpose of the records review is to obtain and review records that could be used to evaluate recognized environmental conditions of potential concern in connection with the subject Site and surrounding properties.

Federal, state, and local regulatory agencies publish databases or "lists" of businesses and properties that handle hazardous materials or hazardous waste, or are the known location of a release of hazardous substances to soil and/or groundwater. These databases are available for review and/or purchase at the regulatory agencies, or the information may be obtained through a commercial database service. Kleinfelder contracted a commercial database service, Environmental Data Resources, Inc. (EDR), to review the regulatory agency lists for references to the Site and any listings within the appropriate ASTM minimum search distances to the Site. The EDR database search results for the Site property and for other nearby facilities is contained in the EDR Radius Map with Geo-Check Report included in Appendix A, Regulatory Agency Database Summary. The federal and state databases reviewed along with their standard ASTM search distances are summarized on Table 4. An explanation of the content of these databases is contained in the Executive Summary of the EDR report.

Table 4
Records Review-ASTM Search Distance

FEDERAL		STATE	
NPL	1-mile	Cal-Sites, BEP, AWP	1-mile
RCRA-CORRACTS TSD	1-mile	CORTESE	½-mile
CERCLIS	½-mile	LUST	½-mile
RCRA-non CORRACTS TSD	½-mile	SLIC	½-mile
RCRA-GEN	Site & bordering	SWIS (SWF/LF)	½-mile
ERNS	Site	UST	¼-mile

3.1.1 Subject Site

The Site is presently occupied by three buildings; one residence and two commercial buildings. The current residence is located on the southwest corner of the Site at 1314 East Grand Avenue. A single story commercial building at 1330 East Grand Avenue is located on the north side of the Site and is occupied by the Escondido Union School District (EUSD). A single story, multi-unit commercial building is located on the northeast area of the Site at 1330-B/1376/1378 East Grand

Avenue. Current tenants at this building include Lovett's One Hour Cleaners, a laundromat, and the EUSD.

The EUSD is registered on the HAZNET database (Appendix A), which tracks hazardous waste disposal activities. Chemicals associated with school laboratory activities and photo processing are listed for the facility.

Lovett's One Hour Cleaners is registered on multiple databases: RCRIS-SQG, FINDS, LUST, and San Diego County HMMD (Appendix A). These database records provide information related to the storage and disposal of perchloroethylene (PCE), administrative violations from San Diego County Department of Environmental Health (DEH) hazardous waste inspections, and a release of PCE discovered in 1998.

3.1.2 Off-Site Facilities

There are 16 documented unauthorized releases from USTs at nine off-site facilities within the ASTM radius of ½ mile. These facilities are shown in the Leaking Underground Storage Tank (LUST) Incident Report listing in the EDR report. As discussed in Section 3.2, the groundwater flow direction has been measured during recent site assessments and appears to flow north/northwest. Published groundwater depths, and topographic information indicate that the off-site releases have occurred at locations cross-gradient or downgradient from the Site. Six of these cases at five locations have been resolved to the satisfaction of the regulatory agency and closed as listed in Table 5.

Table 5
Off-Site Facilities With Closed Leaking UST Cases

FACILITY NAME	DISTANCE & DIRECTION FROM SITE	CHEMICAL RELEASED & MEDIA AFFECTED	RELATION TO SITE GROUNDWATER FLOW
Shell Service Station 1574 East Valley Parkway	¼ to ½ mile to the north-northeast	Release (most likely petroleum hydrocarbons) to soil only reported in 1987. Case closed in 1991.	Appears to be cross-gradient to the Site
Texaco Service Station 1602 East Valley Parkway	¼ to ½ mile to the north-northeast	Release (most likely petroleum hydrocarbons) to soil only reported in 1986. Case closed in 1986. Release (most likely petroleum hydrocarbons) to groundwater reported in 1992. Case closed in 1994.	Appears to be cross-gradient to the Site

Table 5 (Continued)
Off-Site Facilities With Closed Leaking UST Cases

FACILITY NAME	DISTANCE & DIRECTION FROM SITE	CHEMICAL RELEASED & MEDIA AFFECTED	RELATION TO SITE GROUNDWATER FLOW
Parkway Carwash 1300 East Valley Parkway	1/8 to ¼ mile to the northwest	Release (most likely petroleum hydrocarbons) to groundwater reported in 1986. Case closed in 1998.	Appears to be downgradient from the Site
Express Gas Service Station 1266 East Valley Parkway	1/8 to ¼ mile to the northwest	Release (most likely petroleum hydrocarbons) to groundwater reported in 1991. Case closed in 2002.	Appears to be downgradient from the Site
Sanesco Oil Company 1161 East Valley Parkway	1/8 to ¼ mile to the west-northwest	Release (most likely petroleum hydrocarbons) to groundwater reported in 1987. Case closed in 1987.	Appears to be downgradient from the Site

After reviewing the EDR report on the cases in Table 5, it does not appear that these cases represent a present or historical REC in connection with the Site due to case status and the interpreted direction of local groundwater flow. Ten LUST cases did not report closure or have an unknown status. These cases are summarized in Table 6.

Table 6
Off-Site Facilities With Unknown Status or Open Leaking UST Cases

FACILITY NAME	DISTANCE & DIRECTION FROM SITE	CHEMICAL RELEASED & MEDIA AFFECTED	RELATION TO SITE
Chevron Service Station 1575 East Valley Parkway	¼ to ½ mile to the north-northeast	Release (most likely petroleum hydrocarbons) to groundwater reported in 1998.	Appears to be cross-gradient to the Site
Shell Service Station 1574 East Valley Parkway	¼ to ½ mile to the north-northeast	Release (most likely petroleum hydrocarbons) to groundwater reported in 2000.	Appears to be cross-gradient to the Site
Express Gas Service Station 1266 East Valley Parkway	1/8 to ¼ mile to the northwest	Release (most likely petroleum hydrocarbons) to unknown media reported in 1990. Release (most likely petroleum hydrocarbons) to groundwater reported in 1991.	Appears to be downgradient from the Site
Mobil Service Station 1161 East Valley Parkway	1/8 to ¼ mile to the west-northwest	Release (most likely petroleum hydrocarbons) to soil only reported in 1987.	Appears to be downgradient from the Site
Circle K Service Station 1161 East Valley Parkway	1/8 to ¼ mile to the west-northwest	Release (most likely petroleum hydrocarbons) to groundwater reported in 1987.	Appears to be downgradient from the Site

Table 6 (Continued)
Off-Site Facility With Unknown Status or Open Leaking UST Cases

FACILITY NAME	DISTANCE & DIRECTION FROM SITE	CHEMICAL RELEASED & MEDIA AFFECTED	RELATION TO SITE
Sanesco 1161 East Valley Parkway	1/8 to ¼ mile to the west-northwest	Release (most likely petroleum hydrocarbons) to groundwater reported in 1988.	Appears to be downgradient from the Site
Home Federal Bank 1202 East Valley Parkway	1/8 to ¼ mile to the west-northwest	Release of unknown substance to groundwater reported in 1994.	Appears to be downgradient from the Site
Texaco Service Station 425 West Ash Street	1/8 to ¼ mile to the west-northwest	Release (most likely petroleum hydrocarbons) to groundwater reported in 1986.	Appears to be downgradient from the Site
Elite Auto Center 1158 East Washington Avenue	1/8 to ¼ mile to the northwest	Release (most likely petroleum hydrocarbons) to soil only reported in 1999.	Appears to be cross-gradient to the Site

The unknown status and open LUST cases presented in Table 6 do not appear to represent a present or historical REC to the Site because all facilities appear to be located cross-gradient or downgradient from the Site.

One additional UST and four historical USTs within the ASTM-defined radius of ¼ mile were also reported. There was no indication in the records reviewed that these USTs presented any REC at the Site.

There were other facilities listed in the database search results from other ASTM-specified databases. After reviewing the information provided in the EDR Report, it does not appear that any of these facilities represent a REC in connection with the Site.

3.1.3 Orphan Sites

Due to poor or inadequate address information, some sites could not be mapped by EDR and are listed in the orphan summary/unmapped site section of the EDR report. Because orphan sites have incomplete addresses, they are not practically reviewable data as defined by the ASTM standard. However, based upon a reconnaissance of the Site area on May 15, 2003, and Kleinfelder's knowledge of San Diego County, the orphan/unmapped sites do not appear to be within the regulatory agency database search distances specified by the ASTM standard.

3.2 DISCUSSION OF AGENCY RECORDS

Local regulatory agencies were contacted for reasonably ascertainable and practically reviewable information regarding RECs present at facilities in the area of the Site. A summary of information obtained is provided in Table 7.

Table 7
Agency Records Summary

	AGENCY	DATE	CONTACT NAME	PHONE	TYPE OF INFORMATION
City	Escondido Building Department	May 15, 2003	General Staff	(760) 839-4647	Building permit records
City & County	SanGIS, a joint powers agency for geographical information	May 7, 2003	Search of Internet page	www.sangis.org	Flood plain map information and APNs
County	County of San Diego Department of Environmental Health	May 7, 2003	Ms. Joyce Ellman	(619) 338-2268	Releases from leaking USTs & spills of hazardous materials
County	San Diego Air Pollution Control District	May 9, 2003	Ms. Rachel Overturf	(858) 650-4700	Public record review

Records were reviewed at the City of Escondido Building Department on May 15, 2003. Records indicate that the address of the multi-unit building at the Site was 1345-1355 Pennsylvania Avenue prior to 1991 when it was changed to 1370-1378 East Grand Avenue (Appendix C). Since 1991, the units have been redivided and currently the addresses are 1330-B, 1376, and 1378 East Grand Avenue. The building appears to have been constructed in 1965.

One record, a 1999 sign permit application, is on file for the main EUSD building at 1330 East Grand Avenue. No building records are available indicating the year of construction or a different previous address for this building. However, based on aerial photographs and a topographic map of the area, it is estimated that the building was constructed between 1963 and 1968.

Several records were available for the on-site residence at 1314 East Grand Avenue. City inspections to convert the house from residential use to commercial use were performed in 1966, 1970, and 1972. Interest to conduct high school classes at the house was expressed in correspondence and a permit application in 1972 and 1980, respectively. In 1980, an inspection was conducted in regard to conversion of the home into a commercial site. The inspection and subsequent warning letters to the property owner addressed illegal commercial activities already taking place at the residence. Plants, pottery, and other garden supplies were being sold from the residence. Based on documentation, the resident ultimately vacated the home in 1981 and retail

activity ceased. Additional records on file reflect home improvements such as gas and sewer modifications. The home acquired a sewer lateral in 1965. Prior to this, it is expected that a septic system was used. The current residence claims that an underground septic tank is still behind the house but not in use. No building records are available indicating the year of construction for this residence but building records were available from 1966. In addition, aerial photographs indicate the presence of a residence as far back as 1946, though the current residence may have been rebuilt and/or remodeled since that time.

The assessor's parcel numbers (230-230-1400, -1500, -3100, and -3200) for the Site were obtained from the Client and confirmed by searching the SanGIS Internet web page. A search for flood plain information conducted on the SanGIS Internet web page indicated the Site is not located within a 100-year flood plain as defined by the Federal Emergency Management Agency (FEMA). However, approximately 85% of the Site is within the 500-year flood plain.

Records for case number H11085, associated with Lovett's One Hour Cleaners, were reviewed at the DEH on May 7, 2003 (Appendix C). Files included annual DEH hazardous waste inspection documentation and a series of environmental site assessment reports. Hazardous waste inspection records spanned the years of 1990 to 2002. During this time, violations were noted for administrative negligence and improper storage of on-site hazardous waste. According to the files, prior to 1992, the address of the dry cleaning facility was 1355 East Pennsylvania Avenue and was known as One Hour Martinizing in 1990, Mr. Terry's One Hour Cleaners in 1991, and finally Lovett's One hour Cleaning from 1992 on. Lovett's One Hour Cleaning experienced a change of ownership in 1996. In addition, a dry cleaning machine suspected of introducing perchloroethylene (PCE) to on-site soil and groundwater, was removed from the facility in 1994 and later replaced with another dry cleaning machine that uses PCE under the new ownership in 1996.

At least six environmental site assessments have been performed for Lovett's One Hour Cleaners since 1998. Groundwater data in these reports indicate flow direction is to the north/northwest. Reports of these assessments revealed the presence of PCE in soil, groundwater, and soil vapor. The most recent report, dated April 24, 2001, indicates that groundwater in the vicinity has been impacted by PCE and two of its degradation by-products; trichloroethylene (TCE) and dichloroethylene (DCE). This report included a public health risk assessment associated with PCE soil vapor concentrations. The calculated health risk was considered insignificant. However, degradation by-products of PCE, in particular vinyl chloride, may pose a higher risk to human health. These degradation byproducts will increase in concentration as PCE naturally degrades, potentially rendering an increased human health risk. A work plan submitted to and

approved by the DEH in April 2003 indicates that groundwater monitoring will be continued at Lovett's One Hour Cleaners. It is Kleinfelder's opinion that this facility represents a REC at the Site.

DEH files associated with Lovett's One Hour Cleaners indicate that two 48-inch San Diego County Water Authority (SDCWA) concrete pipelines underlie the east side of the Site.

A search of records at the San Diego County Air Pollution Control District was conducted for the two on-site facilities listed in the EDR report. There are no records for the EUSD at 1330 East Grand Avenue. Records pertaining to a current operating permit and regulatory violations were available for Lovett's One Hour Cleaner (Appendix C). The current operating permit is designated for an on-site dry cleaning machine that uses PCE. Violations were issued on four occasions from 1992 to 2001. Violations included administrative negligence and lack of compliance regarding regular leak inspections and repairs of the dry cleaning machine.

4.0 SITE HISTORY

The history of the Site was researched to identify obvious uses of the Site from the present to first developed use, or back to 1940, whichever is earlier, from readily available resources. Table 8 summarizes the availability of information reviewed during this assessment.

Table 8
Historical Information Reviewed

	YEARS REVIEWED	AVAILABILITY
TOPOGRAPHIC MAP	1975	Kleinfelder Library
AERIAL PHOTOGRAPHS	1946, 1953, 1963, 1976, 1983, 1991, 1995	EDR-Aerial Photography Print Service and County of San Diego
SANBORN FIRE INSURANCE MAPS	None available	EDR - Sanborn Map Report
CITY DIRECTORY SEARCH	1921 through 2000	EDR-City Directory Abstract
INTERVIEWS	1985 through 2003	Meetings with Ms. Irene Clingman (EUSD) and Mr. Kevin Tahbaz (Lovett's One Hour Cleaners); Correspondence with Mr. Norman La Caze (Long-Term Property Lessee)

The Site history was established by utilizing public records, topographic maps, aerial photographs, and personal interviews. Kleinfelder interviewed three key Site personnel for this report.

4.1 HISTORICAL AERIAL PHOTOGRAPHY AND TOPOGRAPHIC MAPS

Historical aerial photographs and a topographic map were reviewed to evaluate past land use at the Site and in the surrounding area. A topographic map and photographs covering 49 years were available during the time frame of this report. Table 9 contains a list of the aerial photographs and the topographic map reviewed for this assessment. The summary of this review is as follows:

- In the 1946 and 1953 aerial photos, the Site appears as partially undeveloped agricultural land with residential structures at the southwest corner. Surrounding properties to the north, south, and west include agricultural fields and roadways; East Valley Parkway to the north, East Grand Avenue to the south, and Ash Street to the west. Partially undeveloped agricultural land is present to the east. Residential structures are present on properties to the south, west, and east.
- In the 1963 aerial photo, the Site appears as partially graded with residential structures at the southwest corner. Surrounding properties to the north appear as commercially

developed properties with no remaining agricultural use. Partially graded, partially commercially-developed properties along with some residential structures are present to the west, with no remaining agricultural use. Properties to the south and east appear similar to the 1953 aerial photo.

- In the 1968 (1975 photo revised) Valley Center Quadrangle topographic map, the Site and properties to the north and west appear to be commercially developed. Properties to the south and east appear to be mostly undeveloped with some residential use.
- In the 1976 aerial photo, a parking lot and commercial structures are present at the Site. Residential structures are present at the southwest corner of the Site. Properties to the north and west appear to be commercially developed. Some residential structures are present to the west, while properties to the south appear to be completely residential. A parking lot is present to the east.
- In the 1983 aerial photo, the Site and surrounding properties appear similar to the 1976 aerial photo.
- In the 1991 aerial photo, the Site and surrounding properties appear similar to the 1983 aerial photo.
- In the 1995 aerial photo, the Site and surrounding properties appear similar to the 1991 aerial photo.

Table 9
Photographs and Maps Reviewed

DATE	DESCRIPTION	SCALE	SOURCE
1946	Jack Ammann Aerial	1 in. = 655 ft.	EDR
1953	Park Aerial	1 in. = 833 ft.	EDR
1963	Cartwright Aerial	1 in. = 555 ft.	EDR
1968 (1975)	Valley Center Quadrangle, 7.5-Minute Series	1 in. = 2,000 ft.	Kleinfelder
1976	AMI Aerial	1 in. = 600 ft.	EDR
1983	CAS Aerial	1 in. = 2,000 ft.	County of San Diego
1991	AMI Aerial	1 in. = 600 ft.	EDR
1994	USGS Aerial	1 in. = 666 ft.	EDR

4.2 SANBORN FIRE INSURANCE MAPS

Sanborn Fire Insurance Maps provide historical land use information for some metropolitan and small-established towns. Kleinfelder contracted EDR-Sanborn, Inc. to conduct a search of the nation's largest and most complete collection of Sanborn maps. According to EDR, there are no Sanborn maps for the Site location (Appendix C).

4.3 HISTORICAL CITY DIRECTORY REVIEW

A search of historical city business directories can be useful to identify the names of businesses that have been located on the Site and adjacent parcels. Business directories including city, cross reference, and telephone directories were reviewed at five-year intervals for the years spanning 1921 through 2000 (Appendix C). The address for the on-site residence first appears in directories in 1955. The names listed for this address are all residents with the exception of ERA Construction in 1985. No environmental concerns associated with the former ERA Construction address were prompted during the Escondido Building Department review, DEH file review, or Site reconnaissance. The addresses for the Escondido Union Elementary School District and Lovett's One Hour Cleaners both first appear in directories in 1995.

4.4 INTERVIEWS

Interviews with key Site personnel are useful to furnish first-hand information of the Site history. An interview was conducted during the Site reconnaissance on May 15, 2003 with Ms. Irene Clingman, Risk Manager at the EUSD, and Mr. Kevin Tahbaz, owner Lovett's One Hour Cleaners. Mr. Norman La Caze, long-time Site lessee, was contacted and interviewed as well.

According to Ms. Clingman, the EUSD moved into the building at 1330 East Grand Avenue in 1991. Prior to that time, the building was part of the adjacent shopping center. Part of the building was subleased to United Cerebral Palsey until 2001, when the EUSD took over the entire building again. The building is used as an administrative office and has a small print shop. A small quantity of well-managed hazardous materials and wastes associated with the print shop are kept on-site. In approximately 1999, EUSD began occupying two vacant units (1372 and 1374 East Grand Avenue) in the adjacent building for their Purchasing and Nutrition Departments. These two units do not store any hazardous wastes or hazardous materials beyond conventional cleaning products that are available to the public.

Mr. Tahbaz has been the owner of Lovett's One Hour Cleaners at 1378 East Grand Avenue since 1994. He estimates that the building was constructed approximately 30 years ago and is unaware of any other use at his facility other than dry cleaning services. Mr. Tahbaz pointed out several groundwater monitoring wells surrounding his facility (Figure 2) that were installed subsequent to the discovery of a PCE release in 1998. Mr. Tahbaz was not able to provide many details regarding the groundwater monitoring activities because these activities are authorized and administered by the long-term property lessee, Mr. La Caze.

Mr. La Caze, who has 18 years of experience with the Site, is involved in monitoring activities at Lovett's One Hour Cleaners. This is the only environmental condition Mr. La Caze is aware of at the property.

4.5 CHAIN-OF-TITLE

The Client did not supply a Chain-of-Title report for Kleinfelder's review. Review of a Chain-of-Title report is considered optional under the ASTM standard.

4.6 SUMMARY OF SITE HISTORY

Aerial photographs indicate the Site was used mostly for agriculture until 1963, when the land was developed for commercial use. The EUSD, United Cerebral Palsey, a laundromat, and a dry cleaning facility have occupied the commercial buildings. It is estimated that the original on-site residence was constructed prior to 1946, based on aerial photos. In 1980, the City of Escondido Building Department documented garden nursery-related commercial activities at the residence.

A previous garden nursery at the residence represents a potential historical REC due to possible pesticide, fungicide and/or fertilizer application. Impacts to the soil and groundwater represent a REC at Lovett's One Hour Cleaners.

5.0 SITE RECONNAISSANCE

Two representatives from Kleinfelder, Ms. Melissa Valdovinos and Mr. Dan Eldredge conducted a Site reconnaissance on May 15, 2003 to assess and photograph Site conditions. A walking tour was conducted of the exterior property and interiors of the Site buildings, where hazardous materials and/or wastes are potentially stored or handled. Mr. Eldredge made an assessment of the approximate number of lead-based paint (LBP) and asbestos-containing materials (ACM) samples that would be required prior to any future demolition activities. The approximate Site boundaries and features discussed below are shown on Figure 2. A copy of the Assessor's Parcel Map is provided in Figure 3. Photographs taken on the day of the Site reconnaissance are presented on Figures 4 through 8. The Site conditions discussed below are limited to readily apparent environmental conditions observed.

The Site is an approximately 9-acre property presently occupied by a two commercial buildings and one residence. Tenants presently on the Site are EUSD, a laundromat, Lovett's One Hour Cleaners, and a family at the residence. Steep slopes with natural vegetation, landscaping, an asphalt concrete-paved parking lot and access roads also occupy the Site. Rainfall runoff is anticipated to move by sheet flow across the parking lot to existing stormdrain inlets in the parking lot area.

Approximately six solid waste disposal bins were observed behind the on-site buildings. No obvious signs of inappropriate disposal were observed in these areas.

Five electrical transformers are located to the west of the multi-unit building. No obvious signs of leakage or staining were observed.

The EUSD building at 1330 East Grand Avenue is used as an administrative office and has a small print shop. Chemicals stored in the building include conventional cleaning products that are available to the public (i.e. Simple Green, Ajax, etc.), water-based indoor paint, and chemicals associated with print shop projects. Occasional small disposal needs are handled by a disposal service, Safety Kleen. These additional EUSD units at 1372 and 1374 East Grand Avenue do not store any hazardous wastes or hazardous materials beyond conventional cleaning products that are available to the public. Interview information provided by Ms. Clingman, observations made throughout the main EUSD building and two smaller building units, and DEH records do not indicate any potential RECs at the EUSD sites.

Mr. Tahbaz of Lovett's One Hour Cleaners accompanied Ms. Valdovinos through his facility and pointed out several groundwater monitoring wells outside (Figure 2) that were installed subsequent to the discovery of a PCE release in 1998. Mr. Tahbaz explained that the release was caused by a dry cleaning machine that was installed and operated by the previous owner. The existing machine did not have any obvious signs of leakage. Currently, Lovett's One Hour Cleaners disposes approximately five gallons of PCE per month through Safety Kleen. The existing contaminant impacts to soil and groundwater at this facility indicate a REC at the Site.

Observations made outside the on-site residence, in addition to DEH file reviews and a brief conversation with the resident do not indicate a current REC. However, based on City of Escondido Building Department records, use of the property as a commercial nursery indicates a potential historical REC due to the possible presence of pesticides, fungicides, and/or fertilizers in the soil. Based on a brief conversation with the resident, a septic tank that is no longer in use is present behind the residence.

Site observations are further described in Table 10.

Table 10
Site Observations

GENERAL OBSERVATIONS	REMARKS	OBSERVED	NOT OBSERVED
Current use	Residence, dry cleaner, laundromat, and commercial office buildings with a small print shop.	X	
Past use			X
Structures	One one-story commercial office building, one one-story, multi-unit commercial building, and one one-story residence.	X	
Terrain	Generally slopes to the north	X	
Interior and exterior observations or environmental conditions that may involve the use, storage, disposal, or generation of hazardous substances or petroleum products.		**OBSERVED**	**NOT OBSERVED**
Hazardous chemical and petroleum products in connection with known use	Escondido Unified School District Approximately: seven gallons of water-based indoor paint, ten gallons of cleaning solvent, five gallons of developer, five gallons of fixer, and fifteen gallons of fountain solution Lovett's One Hour Cleaners Approximately five gallons of PCE	X	
Fill dirt from an unknown source.			X
Aboveground storage tanks (ASTs)			X

Table 10 (Continued)
Site Observations

Interior and exterior observations or environmental conditions that may involve the use, storage, disposal, or generation of hazardous substances or petroleum products.		OBSERVED	NOT OBSERVED
Underground storage tanks (USTs)			X
Odors			X
Pools of liquid			X
Drums			X
Hazardous chemical and petroleum products in connection with unknown use			X
Unidentified substance containers			X
Agricultural chemical storage or chemical mixing areas			X
Asbestos, lead, PCBs	Due to the estimated age of the on-site structures, it is highly likely that ACM and LBP are present at the Site. There were five electrical transformers observed on the Site. All appeared to be in good condition.	X	
Pits, Ponds, or Lagoons			X
Stained soil or pavement	Oil stains typical of parking lots	X	
Stressed vegetation			X
Hazardous Waste Storage	PCE storage at Lovett's One Hour Cleaners		X
Solid Waste	Six trash bins associated with two commercial buildings	X	
Waste Water			X
Process waste water			X
Wells	Three monitoring wells associated with site assessments at Lovett's One Hour Cleaners	X	
Dry wells			X
Surface water			X
Storm basins/catch basins			X
Storm drains	Surface water runoff is directed into stormwater drain inlets throughout parking lot	X	
Drains and sumps			X
Septic system	Resident indicated the presence of one septic tank		X
Loading and unloading areas		X	
Burned or buried debris			X

Kleinfelder conducted a brief drive-by survey of the surrounding properties to the Site on the same day as the Site reconnaissance. A summary of the observed surrounding properties is presented in Table 11.

Table 11
Surrounding Properties

North	Commercial Properties
East	Commercial Properties
South	Residential Properties
West	Commercial and Residential Properties

Some adjacent properties were referenced through database searches and regulatory agency record reviews. However, the activities at these facilities do not appear to pose an environmental threat to the Site.

6.0 BUSINESS ENVIRONMENT RISK CONSIDERATIONS

Business environment risk considerations were evaluated at the Site based on Wal-Mart's *Phase I Environmental Site Assessment and Report Requirements*, dated January 2, 2001. Assessments related to wetlands, cultural and historic resources, ecological resources, and endangered species were not relevant to the area, which has supported substantial commercial development for over ten years. Health and safety issues associated with industrial hygiene, and indoor air quality have also been omitted from the assessments as the existing buildings will be demolished and new buildings will be constructed at the Site. Health and safety issues associated with hazardous building materials, including asbestos-containing building materials and lead-based paints, are to be addressed in detail in hazardous building material surveys.

Ms. Sheryl Kendrick of San Diego Gas and Electric (SDG&E) was contacted regarding powerline voltage at the Site. According to Ms. Kendrick, due to heightened security following the terrorist attacks of September 11, 2001, this information is no longer available to the general public.

According to Mr. Warren Lamp of the Escondido Water Department, assessments of lead concentrations in drinking water are performed annually by the City of Escondido. Results from the most recent annual report indicate a lead concentration of 0 parts per billion (ppb).

As discussed in Section 2.2, lack of regulatory compliance only appears to be an issue at one facility at the Site; Lovett's One-Hour Cleaners. Documentation regarding non-compliance is available in Appendix C. A complete set of annual inspection records, site assessment reports, and other pertinent environmental information is available through the DEH Records Department.

7.0 FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

The following findings and conclusions are presented based on the research conducted during this assessment and the services described in the preceding sections.

7.1 FINDINGS

The Site is an approximately 9-acre property with surface elevations varying from approximately 670 to 740 feet above mean sea level (amsl). Groundwater is present approximately 10 to 15 feet below ground surface (bgs). Two 48-inch concrete pipelines of the San Jacinto-San Vicente Aqueduct underlie the east side of the Site. The nearest body of water is the Escondido Creek, approximately ¼ mile north. The Site is not within the 100-year flood zone but approximately 85% is within the 500-year flood zone.

The Site is presently occupied by three buildings; one residence and two commercial buildings. The current residence is located on the southwest corner of the Site at 1314 East Grand Avenue. According to the current resident, an underground septic tank is likely to be present behind the house though it is no longer in use. A single story commercial building at 1330 East Grand Avenue is located on the north side of the Site and is occupied by the Escondido Union School District (EUSD). A single story, multi-unit commercial building is located on the northeast area of the Site at 1330-B/1376/1378 East Grand Avenue. Current tenants at this building include Lovett's One Hour Cleaners, a laundromat, and the EUSD. Steep slopes with natural vegetation, landscaping, an asphalt concrete-paved parking lot and access roads also occupy the Site. Adjacent properties are primarily commercial and residential.

Aerial photographs indicate the Site was used mostly for agriculture until 1963, when the land was developed for commercial use. It is estimated that the original on-site residence was constructed prior to 1946, based on aerial photos. In 1980, the City of Escondido Building Department documented garden nursery-related commercial activities at the residence.

Records for case number H11085, associated with Lovett's One Hour Cleaners, were reviewed at the DEH. A dry cleaning machine suspected of introducing PCE to on-site soil and groundwater, was removed from the facility in 1994 and later replaced with another dry cleaning machine that also uses PCE under the new ownership in 1996. At least six environmental site assessments have been performed for Lovett's One Hour Cleaners since 1998. Reports of these site investigations revealed the presence of PCE in soil, groundwater, and soil vapor. The most

recent report indicates that groundwater in the vicinity has been impacted by PCE and two of its degradation by-products; TCE and DCE.

Approximately six solid waste disposal bins were observed behind the on-site buildings. No obvious signs of inappropriate disposal were observed in these areas.

Five electrical transformers are located to the west of the multi-unit building. No obvious signs of leakage or staining were observed.

7.2 CONCLUSIONS

Kleinfelder has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527 of 1314, 1330, 1330-B, 1376, and 1378 East Grand Avenue in Escondido, California, the subject property. Any exceptions to, or deletions from, this practice are described in Section 1.3 of this report. This assessment has revealed one definite and two potential RECs at the Site.

The existing on-site contaminant impacts to soil and groundwater from a 1998 PCE release at Lovett's One Hour Cleaners represent a recognized environmental condition (REC) at the Site.

Based on the age of the buildings present on the Site, it is likely that asbestos-containing building materials and lead-based paint may be present in all three on-site structures. The possible presence of these hazardous building materials represents a potential REC at the Site.

City of Escondido building records indicate the presence of a former unauthorized garden nursery at the on-site residence. The possible use of pesticides, fungicides, and/or fertilizers in association with the nursery represents a potential REC at the Site.

Based on a conversation with the current on-site resident, a septic tank may be present behind the house.

There is a low likelihood that a REC exists at the Site as a result of a release of hazardous materials/waste or petroleum products from a known or interpreted historical off-site source.

7.3 RECOMMENDATIONS

Kleinfelder recommends continued monitoring, risk assessment and possibly remediation of PCE and its degradation by-products at the Site. These activities should be conducted in accordance with DEH guidelines and recommendations until the case is closed.

Kleinfelder recommends hazardous material building surveys, including assessments of asbestos-containing building materials and lead-based paints, for all three on-site buildings.

Prior to any regrading at the Site, Kleinfelder recommends that four soil samples are collected and analyzed for pesticides, arsenic and copper (fungicides), and nitrates (fertilizers) at the former garden nursery.

Kleinfelder recommends removal of the septic tank behind the residence in accordance with DEH guidelines.

8.0 LIMITATIONS

Phase I ESAs are non-comprehensive by nature and are unlikely to identify all environmental problems or eliminate all risk. The attached report is a qualitative assessment. Kleinfelder offers a range of investigative and engineering services to suit the needs of our clients, including more quantitative investigations. Although risk can never be eliminated, more detailed and extensive investigations yield more information, which may help you understand and better manage your risks. Since such detailed services involve greater expense, we ask our clients to participate in identifying the level of service that will provide them with an acceptable level of risk. Please contact the signatories of this report if you would like to discuss this issue of risk further.

Kleinfelder performed this environmental assessment in general accordance with the guidelines set forth in the ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (Designation E1527-00), and Wal-Mart's *Phase I Environmental Site Assessment and Report Requirements*, dated January 2, 2001. No warranty, either expressed or implied is made. Environmental issues not specifically addressed in the report were beyond the scope of our work and not included in our evaluation. Statements made in this report are based on the results of the Site reconnaissance and the review of state and federal regulatory agency database records.

Other standards or documents referenced in any given standard cited in this report, or otherwise relied upon by the authors of this report, are only mentioned in the given standard; they are not incorporated into it or "included by reference", as that latter term is used relative to contracts or other matters of law.

Land use, site conditions (both on-site and off-site), and other factors will change over time. Since site activities and regulations beyond our control could change at any time after the completion of this report, our observations, findings, and opinions can be considered valid only as of the date of the Site visit. Also, conclusions and recommendations provided herein are solely based on information and data made available to Kleinfelder during the active period of performing the Site assessment. Additional information could become available after submittal of this final report, which may affect the conclusions or recommendations, provided at this time for which Kleinfelder will not be liable. An update to this report should be conducted after 180 days from the date of its issuance (ASTM Standard E1527-00, Section 4.6).

Any party other than the Client and its authorized representatives who would like to use this report shall notify Kleinfelder of such intended use by executing the "Application for Authorization to Use" contained in Appendix E of this document. Based on the intended use of the report, Kleinfelder may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the Client or anyone else will release Kleinfelder from any liability resulting from the use of this report by any unauthorized party.

9.0 REFERENCES

California Regional Water Quality Control Board, Water Quality Control Plan for the San Diego Basin (9), 1998.

EDR Sanborn, Inc., Sanborn Map Report, Proposed Wal-Mart #5214, East Grand Avenue/Harding Street, Escondido, CA; Inquiry Number 00967687.4S, April 29, 2003.

Environmental Data Resources, Inc., The EDR-Radius Map with GeoCheck, Proposed Wal-Mart #5214, East Grand Avenue/Harding Street, Escondido, CA; Inquiry Number 00967687.3r, April 29, 2003.

EDR - Aerial Photography Print Service, Proposed Wal-Mart #5214, East Grand Avenue/Harding Street, Escondido, CA; Inquiry Number 00967687-5, May 1, 2003.

EDR - City Directory Abstract, Proposed Wal-Mart #5214, East Grand Avenue/Harding Street, Escondido, CA; Inquiry Number 00967687-7, May 1, 2003.

Munger Map Book, California - Alaska Oil & Gas Fields, San Diego 1999.

Norris and Webb, Geology of California – 2nd Edition, Wiley & Sons, Inc. 1990.

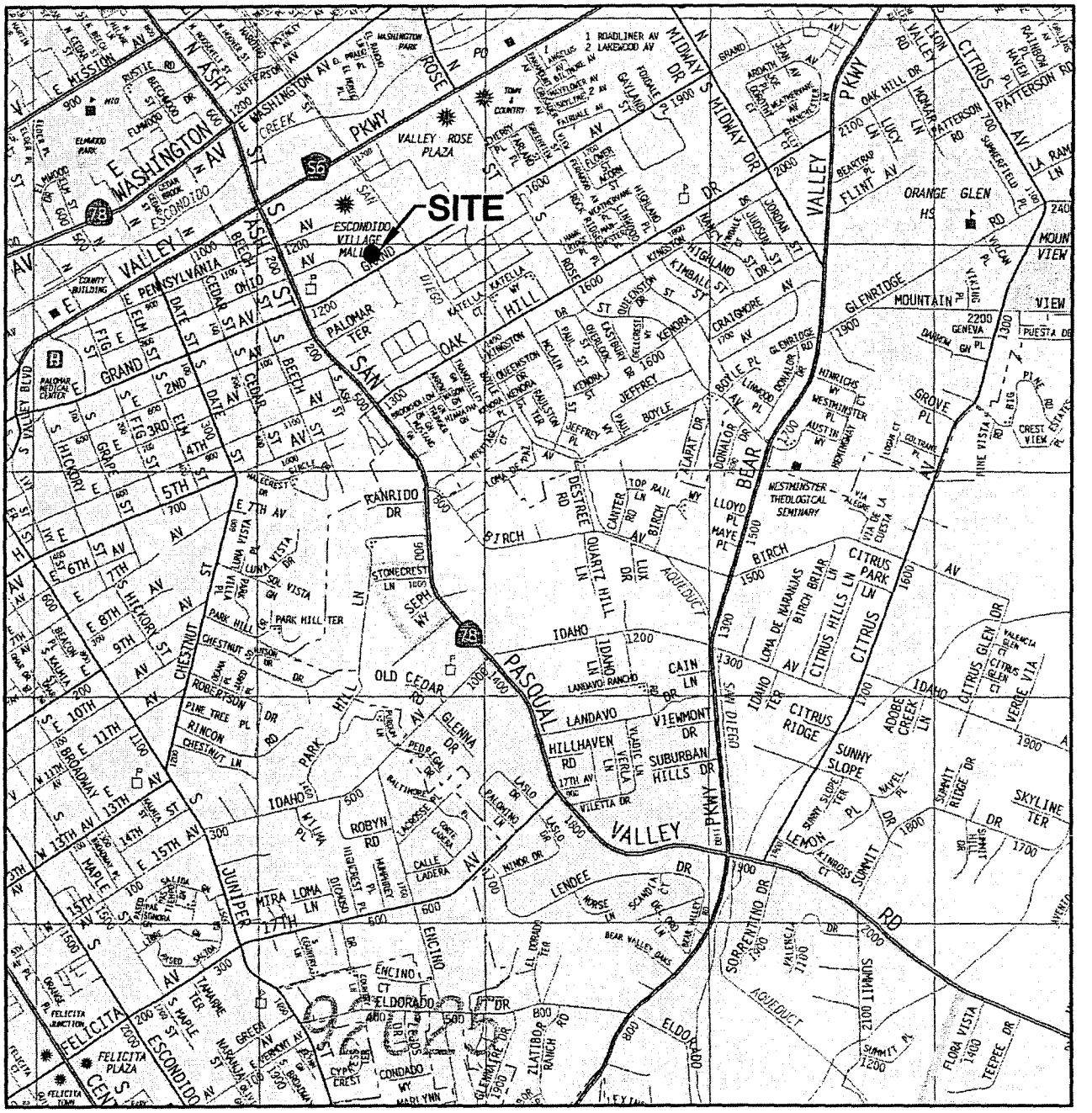
San Diego County Tax Assessor's Map Book 230, page 230.

The 2003 Thomas Guide, San Diego County, page 1130.

USGS Topographic Map, Valley Center Quadrangle, California- San Diego County 7.5-minute series, dated 1968 (photo revised in 1975).

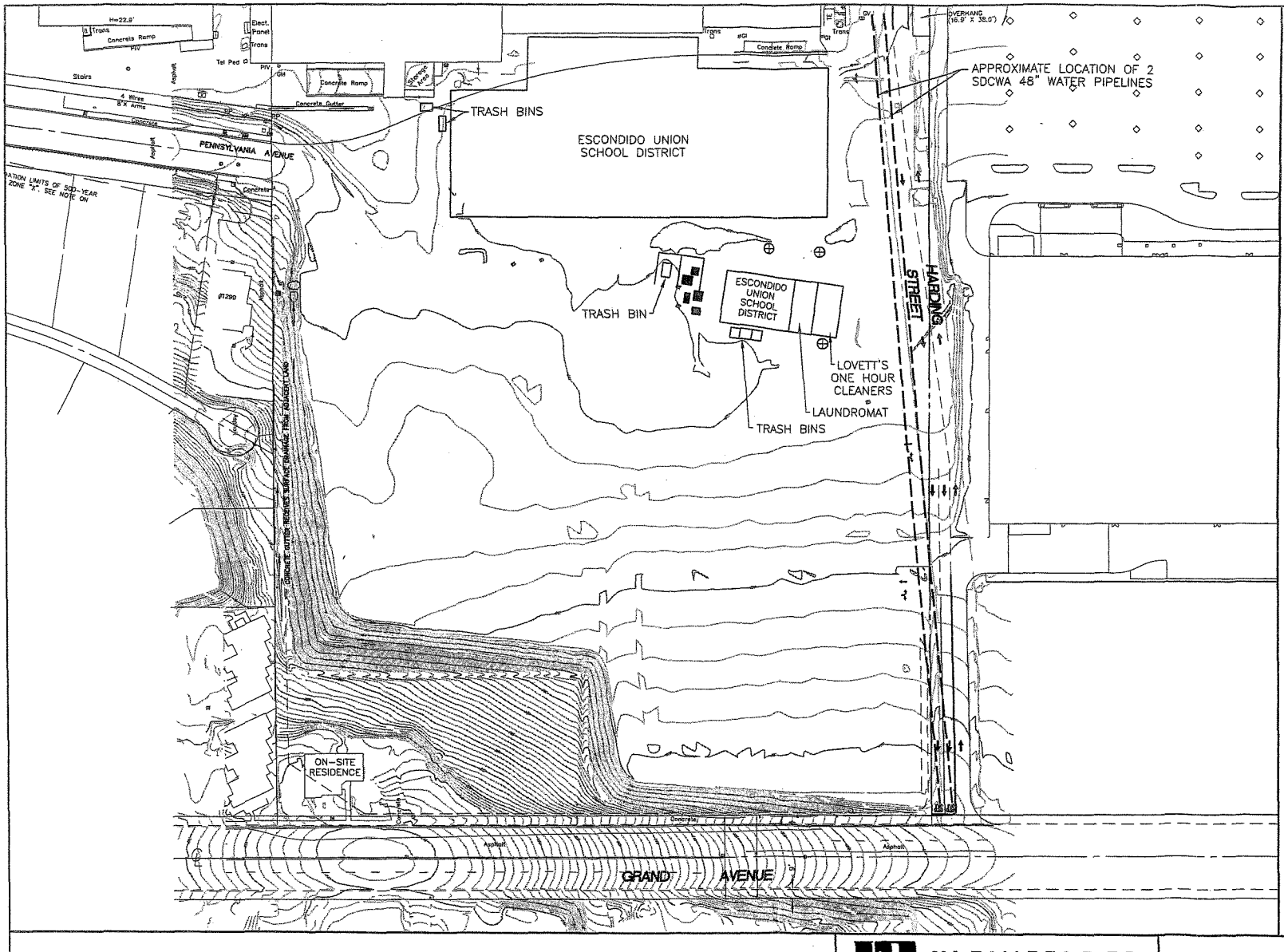
Weber, F.H., Jr., Geology and Mineral Resources of San Diego County, California, CDMG, County Report 3, 1963.

Kleinfelder, Limited Preliminary Geotechnical Study, Proposed Wal-Mart Supercenter No. 93105, Escondido, California, April 8, 2002.



KLEINFELDER 5015 SHOREHAM PLACE SAN DIEGO, CALIFORNIA 92122	VICINITY MAP PROPOSED WAL-MART SUPERCENTER ESCONDIDO, CALIFORNIA
CHECKED BY: MV	FN: 29714VIC
PROJECT NO. 29714	DATE: 05/2003

FIGURE
1



REFERENCE: PRELIMINARY SITE PLAN BY NASLAND ENGINEERING, 1/2003.

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5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

CHECKED BY: MV	FN: 29714SITE
PROJECT NO. 29714	DATE: 06/2003

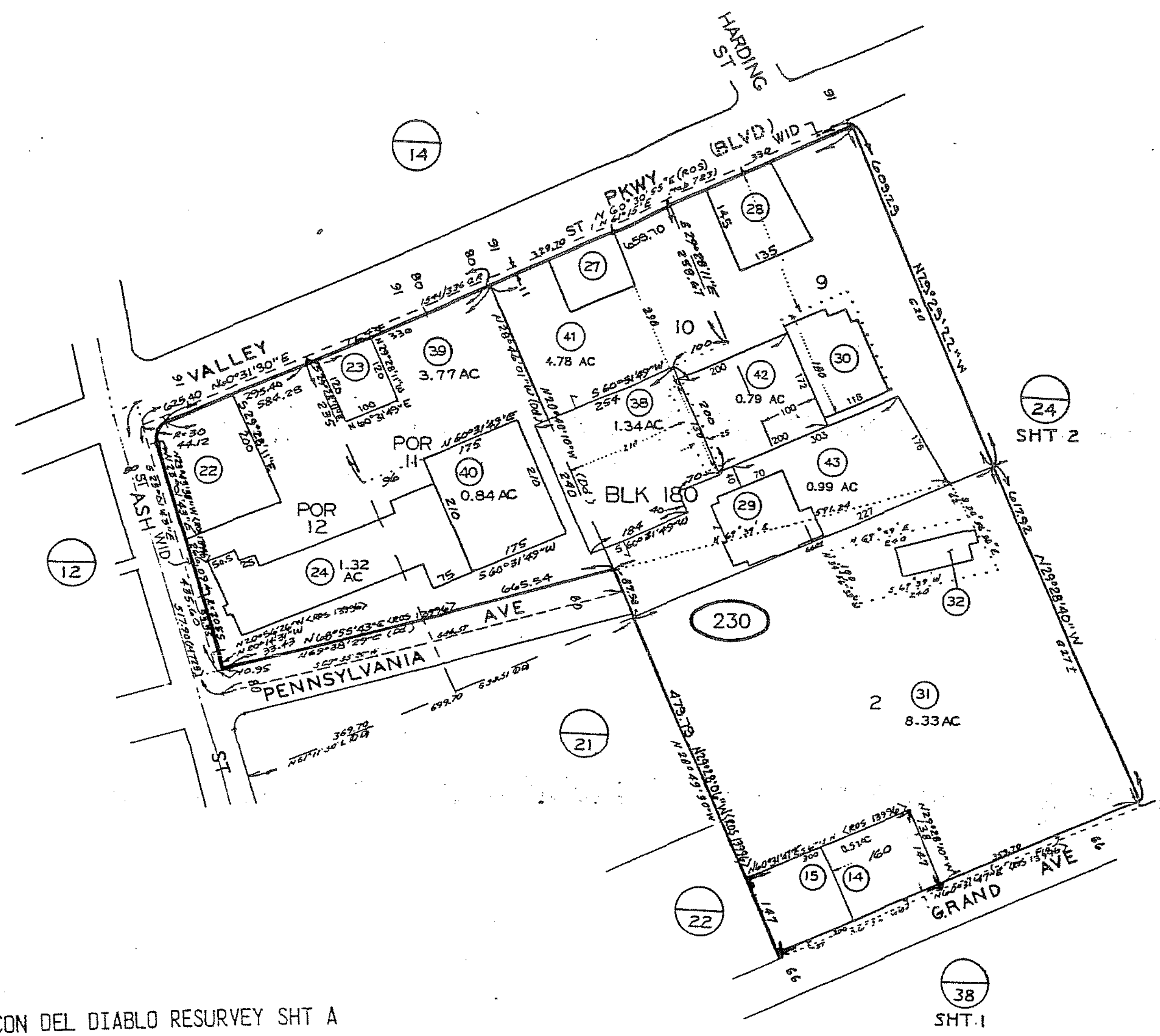
SITE MAP

PROPOSED WAL-MART SUPERCENTER
ESCONDIDO, CALIFORNIA

FIGURE
2

U4

230-23



230-23

1"=200'

2/8/00 MAS

CHANGES

BLK	OLD	NEW	YR	CUT	
230	16	17 & 18	69	5608	
	11	ST. WID. & 19	86	2041	CANC
	13 & SUB. IDS	ST. WIDE 20 & SUB IDS	87	1948	CANC
	12 & SUB IDS 20 & SUB IDS	21-25 & SUB. IDS.			
	9, 10, & 17-19	26-32	89	1958	
	21 & 22 IDS 25 & SIDS	33-36 & SID'S	98	2256	R.C.
	26, 33-36 & SUBS	37-40	93	1377	
	37	41-43	00	2025	

MAP 723(349) - RHO RINCON DEL DIABLO RESURVEY SHT A
ROS 10523, 13996

ELK 1-21-71

THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY. NO LIABILITY IS ASSUMED FOR THE ACCURACY OF THE DATA SHOWN. ASSESSOR'S PARCELS MAY NOT COMPLY WITH LOCAL SUBDIVISION OR BUILDING ORDINANCES.

SAN DIEGO COUNTY ASSESSOR'S MAP BK 230 PG 23

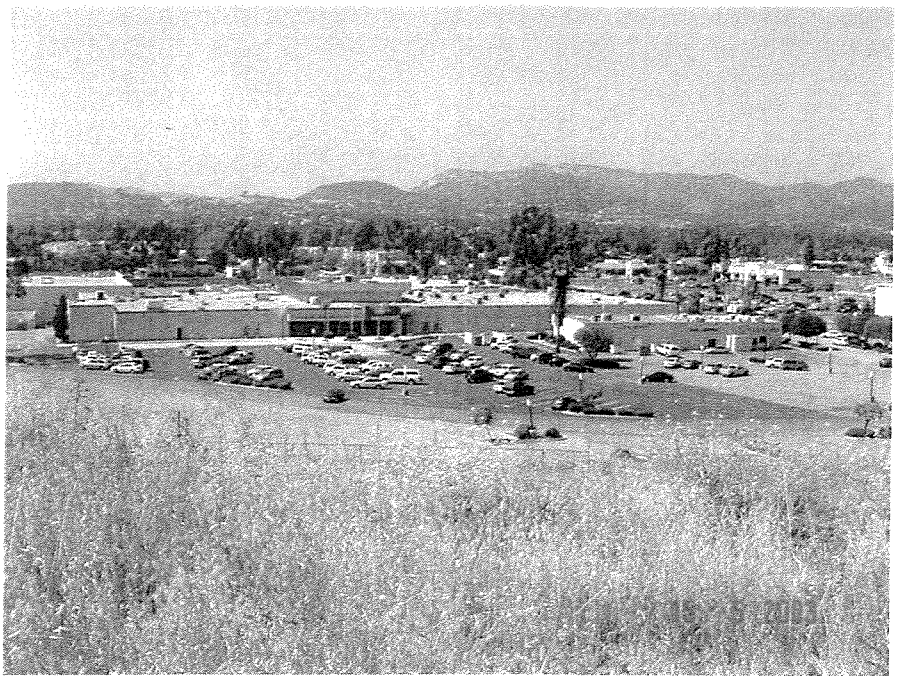
KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

CHECKED BY: MV	FN:
PROJECT NO. 29714	DATE: 05/2003

ASSESSOR'S PARCEL MAP

PROPOSED WAL-MART SUPERCENTER
ESCONDIDO, CALIFORNIA

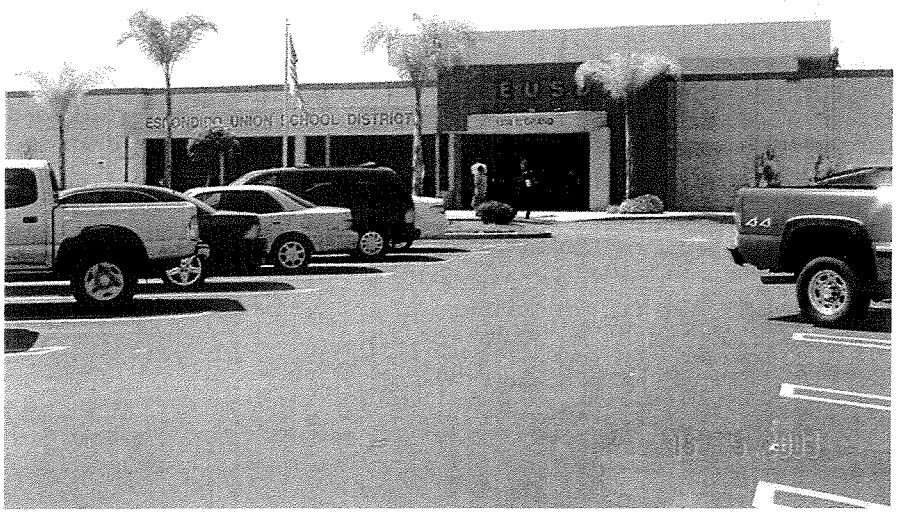
FIGURE
3



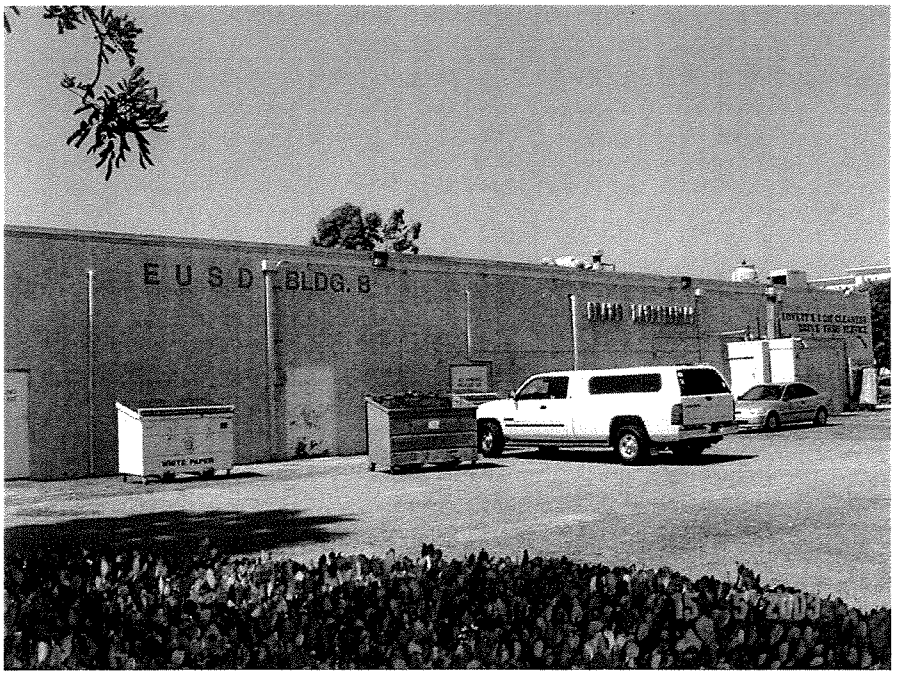
View of Site looking north; including two commercial buildings

On-site residence

KLEINFELDER 5015 SHOREHAM PLACE SAN DIEGO, CALIFORNIA		**SITE RECONNAISSANCE PHOTOGRAPHS** **Proposed Wal-Mart Supercenter** **Escondido, California**	FIGURE **4**
CHECKED BY: MV	FN: Esc WM		
PROJECT NO. 29714	DATE: 5/19/03		



Escondido Union School District building



Back of on-site multi-unit building

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA

CHECKED BY: MV	FN: Esc WM
PROJECT NO. 29714	DATE: 5/19/03

SITE RECONNAISSANCE PHOTOGRAPHS
Proposed Wal-Mart Supercenter
Escondido, California

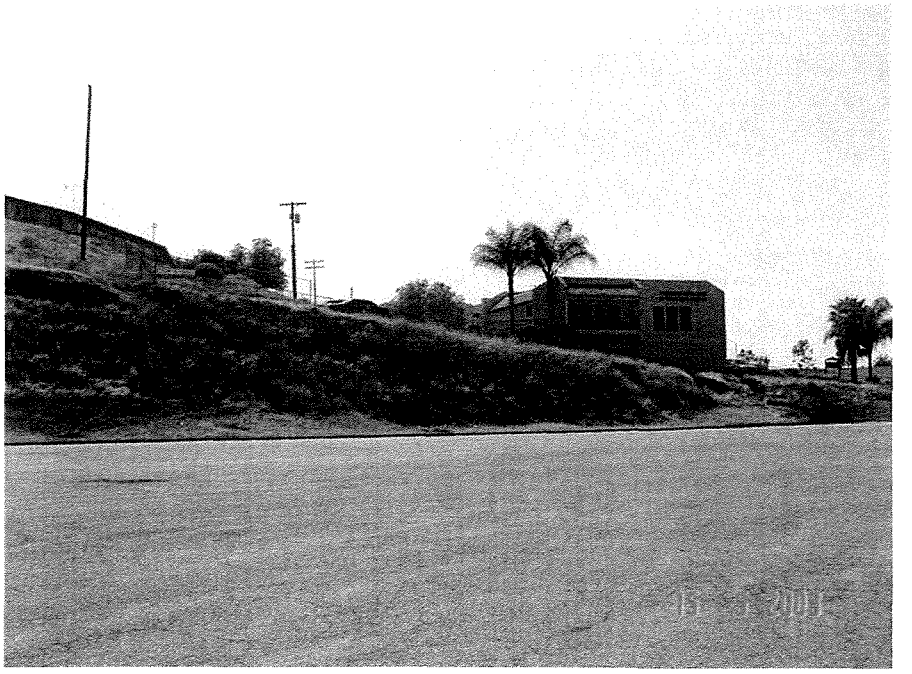
FIGURE
5

Lovett's One Hour Cleaners dry cleaning machine; no obvious signs of leaks or stains

Five on-site transformers; no obvious signs of leaks or stains

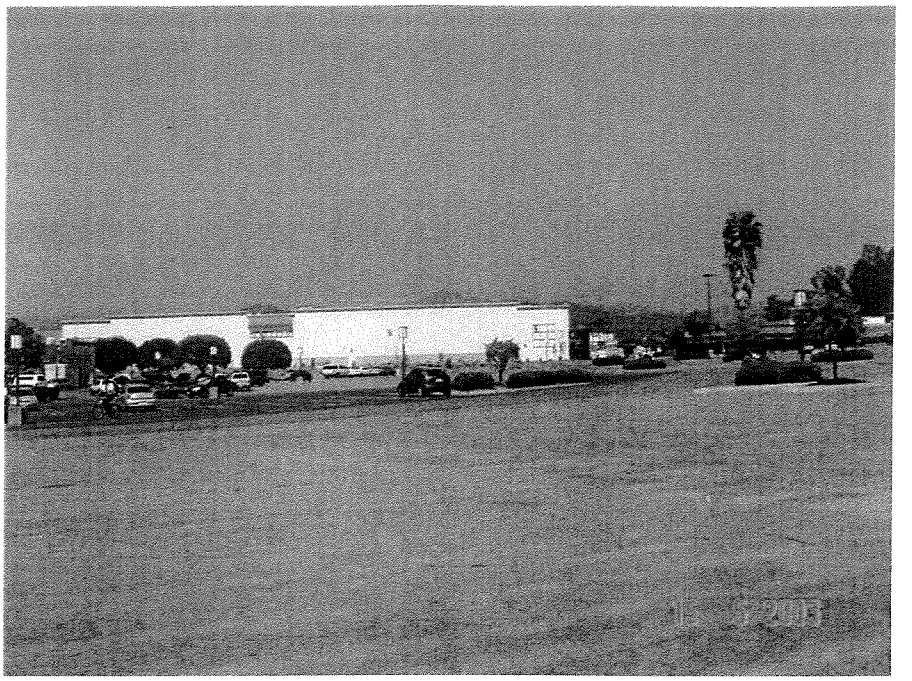
KLEINFELDER 5015 SHOREHAM PLACE SAN DIEGO, CALIFORNIA		**SITE RECONNAISSANCE PHOTOGRAPHS** **Proposed Wal-Mart Supercenter** **Escondido, California**	FIGURE **6**
CHECKED BY: MV	FN: Esc WM		
PROJECT NO. 29714	DATE: 5/19/03		

Steep slopes along the southwest area of the Site



View to the west of the Site

KLEINFELDER 5015 SHOREHAM PLACE SAN DIEGO, CALIFORNIA		**SITE RECONNAISSANCE PHOTOGRAPHS** **Proposed Wal-Mart Supercenter** **Escondido, California**	FIGURE **7**
CHECKED BY: MV	FN: Esc WM		
PROJECT NO. 29714	DATE: 5/19/03		



View to the east of the Site

Shopping center north of the Site

KLEINFELDER 5015 SHOREHAM PLACE SAN DIEGO, CALIFORNIA		**SITE RECONNAISSANCE PHOTOGRAPHS** **Proposed Wal-Mart Supercenter** **Escondido, California**	FIGURE **8**
CHECKED BY: MV	FN: Esc WM		
PROJECT NO. 29714	DATE: 5/19/03		

APPENDIX G

Phase I/II Environmental Site Assessment City of Escondido Green Mutual Building


SECOR

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INTERNATIONAL
INCORPORATED

www.secor.com
2655 Camino Del Rio North
Suite 302
San Diego, CA 92108
619-296-6195 TEL
619-296-6199 FAX

PHASE I AND II ENVIRONMENTAL SITE ASSESSMENT
City of Escondido Green Mutual Building
1201 East Washington Avenue
Escondido, California 92025
SECOR PN: 08OT.COEGM.00.0001

September 24, 2003

Prepared For:
City of Escondido-Public Works Engineering Division
Mr. Steve Hughes
201 North Broadway
Escondido, CA 92025

Submitted By:
SECOR International Incorporated
2655 Camino Del Rio North, Suite 302
San Diego, California 92108-1633

Prepared by:

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Staff Scientist

Reviewed by:

Frederic A. Allee
Chemical/Environmental Engineer

Peter J. Rubens, REA #2375
Senior Project Manager

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APPENDICES

1.0 PROJECT SUMMARY

SECOR International Incorporated (SECOR) conducted Phase I and II Environmental Site Assessments (ESA) of the property located at 1201 East Washington Avenue in Escondido, San Diego County, California (subject property). Historical research performed indicates that the subject property was vacant land until it was developed with a Quonset hut in approximately 1949. Smaller buildings were present to the southwest and southeast of the Quonset hut during the 1960s and 1980s. These buildings are no longer present at the subject property. The subject property was previously utilized for military surplus storage and sales, office space, storage and an equipment shop by the City of Escondido Public Works Department (COEPWD) from the late 1940s through mid 1960s; Murry RV Center and Murry Oldsmobile (1970s); and North County Food Bank (2000). According to the COEPWD, the subject property was utilized by the COEPWD and asbestos covered pipes were stored on the exterior ground surface in the storage yard located east of the Quonset hut. Additionally, the storage yard at one time had an outdoor equipment repair shop area where the pipes where made and repaired.

This ESA was performed at the request of, the user of this report, COEPWD. This ESA was conducted by Ms. Carolyn B. Partin, and reviewed by Mr. Frederic A. Allee and Mr. Peter J. Rubens. All are experienced professionals in the field of ESAs and related environmental assessments.

SECOR's assessment activities began on July 1, 2003. Mr. Steve Hughes, a representative of the subject property owner, provided access to the subject property and information regarding its current usage.

1.1 PHASE I ESA RECOMMENDATIONS

During the Phase I portion of the ESA, four recognized environmental conditions (RECs) of the subject property were discovered.

1.1.1 Recognized Environmental Conditions (RECs)

1) The former presence of three (1,200-gallon, 600-gallon, and 120-gallon capacity) underground storage tanks (USTs) at the subject property. Since records are not available regarding the UST system or its installation or removal, it is possible the subsurface components of the UST system may still be in place and/or (even if the components were removed) historical fueling operations may have resulted in potential hydrocarbon impact to surrounding soil.

SECOR recommended that a subsurface geophysical survey be performed in the areas where the UST system is believed to have been located at the subject property to determine if the USTs and piping are still present at the subject property and/or to identify the location of the former UST excavations.

In addition, SECOR recommended that a subsurface assessment (i.e., exploratory soil borings) be performed in the area of the former UST system to assess if hydrocarbon impact is present as a result of possible releases from the UST system.

2) The presence of hydraulic vehicle lifts and associated equipment in the south storage room of the building at the subject property. Based on the apparent age of the equipment and lack of maintenance records, the equipment may have potentially leaked resulting in subsurface impact. Based on the potential age of the lifts, polychlorinated biphenyls (PCBs) may be potentially present in the hydraulic fluid.

SECOR recommended that a subsurface assessment (i.e., exploratory soil borings) be performed to determine if the equipment has leaked and to verify the presence of any possible PCB containing oil impact. Soil samples should be analyzed for total recoverable petroleum hydrocarbons (TRPH; oil) and PCBs. Additionally, the lift equipment should be properly removed from the subject property prior to demolition and properly disposed.

3) The concrete patches observed in the southern storage room at the subject property above locations that were formerly utilized for vehicle maintenance pits. There are no records available and/or information on file regarding the closure of the pits. Maintenance equipment, oils, and other lubricating fluids may be present in the subsurface soils below and adjacent to the patches.

SECOR recommended that a limited subsurface assessment (i.e., exploratory soil borings) be performed in the area of the concrete patches to determine if subsurface impact is potentially present. Soil samples should be analyzed for TRPH.

4) A neighboring property, EZ Gas station (1158 East Washington Avenue) is an open Leaking Underground Storage Tank (LUST) site. According to information on file with the County of San Diego Department of Environmental Health (DEH) elevated concentrations of benzene, methyl tert-butyl ether (MTBE) and tetrachloroethene have been identified in the soil and groundwater at the site. The soil and groundwater contamination plume has not been defined and the source of the tetrachloroethene release has not been identified. Based on the information reviewed at the DEH, it is SECOR's opinion that the up-gradient EZ Gas station LUST site is a REC of the subject property.

SECOR recommended that a subsurface assessment (i.e., exploratory soil borings) be performed in the north and northwestern portion of the subject property. Soil and groundwater samples should be analyzed for benzene, MTBE and tetrachloroethene to determine if the subject property has been impacted by the unauthorized release associated with the EZ Gas station LUST site.

1.1.2 Potential RECs

Four potential RECs were discovered during the Phase I activities.

1) Two water supply wells were observed on the subject property. One well is located just northeast of the Quonset hut and the second is located in the southwest portion of the subject property near a tree. Based on interviews and visual observations, these wells are no longer in use. SECOR recommends that the wells be properly destroyed.

2) The presence of six pole-mounted transformers on the subject property. These transformers appeared to be old (1940s era) and are no longer in use. Based on their age, PCBs may potentially be present in the insulating fluids typically used in the

2) The presence of hydraulic vehicle lifts and associated equipment in the south storage room of the building at the subject property. Based on the apparent age of the equipment and lack of maintenance records, the equipment may have potentially leaked resulting in subsurface impact. Based on the potential age of the lifts, polychlorinated biphenyls (PCBs) may be potentially present in the hydraulic fluid.

SECOR recommended that a subsurface assessment (i.e., exploratory soil borings) be performed to determine if the equipment has leaked and to verify the presence of any possible PCB containing oil impact. Soil samples should be analyzed for total recoverable petroleum hydrocarbons (TRPH; oil) and PCBs. Additionally, the lift equipment should be properly removed from the subject property prior to demolition and properly disposed.

3) The concrete patches observed in the southern storage room at the subject property above locations that were formerly utilized for vehicle maintenance pits. There are no records available and/or information on file regarding the closure of the pits. Maintenance equipment, oils, and other lubricating fluids may be present in the subsurface soils below and adjacent to the patches.

SECOR recommended that a limited subsurface assessment (i.e., exploratory soil borings) be performed in the area of the concrete patches to determine if subsurface impact is potentially present. Soil samples should be analyzed for TRPH.

4) A neighboring property, EZ Gas station (1158 East Washington Avenue) is an open Leaking Underground Storage Tank (LUST) site. According to information on file with the County of San Diego Department of Environmental Health (DEH) elevated concentrations of benzene, methyl tert-butyl ether (MTBE) and tetrachloroethene have been identified in the soil and groundwater at the site. The soil and groundwater contamination plume has not been defined and the source of the tetrachloroethene release has not been identified. Based on the information reviewed at the DEH, it is SECOR's opinion that the up-gradient EZ Gas station LUST site is a REC of the subject property.

SECOR recommended that a subsurface assessment (i.e., exploratory soil borings) be performed in the north and northwestern portion of the subject property. Soil and groundwater samples should be analyzed for benzene, MTBE and tetrachloroethene to determine if the subject property has been impacted by the unauthorized release associated with the EZ Gas station LUST site.

1.1.2 Potential RECs

Four potential RECs were discovered during the Phase I activities.

1) Two water supply wells were observed on the subject property. One well is located just northeast of the Quonset hut and the second is located in the southwest portion of the subject property near a tree. Based on interviews and visual observations, these wells are no longer in use. SECOR recommends that the wells be properly destroyed.

2) The presence of six pole-mounted transformers on the subject property. These transformers appeared to be old (1940s era) and are no longer in use. Based on their age, PCBs may potentially be present in the insulating fluids typically used in the

transformers. At the time of the subject property visit for this Phase I ESA, it did not appear that the transformers were leaking. Based on interviews with the representative of the subject property owner, Mr. Steve Hughes, the transformers are owned and operated by the San Diego Gas & Electric (SDG&E). SECOR recommends that the subject property owner contact SDG&E to have the transformers removed.

3) The presence of two containers (approximately 15-20-gallon capacity) suspended from the north interior wall in the northeast portion of the Quonset hut. These containers were utilized for the storage of lubricating oils used in the machinery formerly located in the Quonset hut. SECOR was unable to access these containers to determine their contents. SECOR recommends that these containers be removed from the subject property and the contents (if any) be properly disposed of or recycled.

4) The former use of the eastern storage yard as an outdoor equipment repair area. This vicinity may have subsurface impact due to the former daily operations that occurred within it.

No other RECs or potential RECs were identified in connection with the subject property during the performance of the Phase I ESA.

1.1.3 Environmental Concerns

During the Phase I portion of the ESA, three additional environmental concerns were discovered:

1) Based on its date of construction, ACMs may be present in the Quonset hut at the subject property.

2) Based on its date of construction, LBP may be present in the Quonset hut at the subject property.

SECOR recommended that a comprehensive ACM and LBP survey be conducted prior to the demolition of the building.

3) There currently exists a blue metal cylinder and lid in the yard to the southeast of the Quonset hut building at the subject property. Since records are not available regarding the use (or, former use) or purpose of the blue cylinder and lid, it is possible this object may have been used to store fuel and/or lubricating fluids for the former eastern storage yard building. Also, historical records (i.e., permit application to install tanks) show a "new tank" in the general vicinity of the blue cylinder and lid object. Based on it's physical appearance it could not be confirmed if the cylinder is associated with a UST system or if it may be part of a subsurface water line.

SECOR recommended that the use (or, former use) of the blue metal cylinder and lid, observed in the yard to the southeast of the Quonset hut, be determined.

1.2 PHASE II ESA CONCLUSIONS

A Phase II ESA was performed to address the four RECs, four potential RECs and the environmental concerns identified in the Phase I portion of the project.

1.2.1 Recognized Environmental Conditions (REC)

Phase I REC #1

SECOR supervised the drilling of five (5) soil borings (SB-5 through SB-9) in the reported area of the former UST system to assess if hydrocarbon impact is potentially present as a result of historic usage of the UST system. No groundwater was encountered during the drilling activities. Soil samples were collected during the drilling activities. Selected soil samples were then submitted to a state-certified analytical laboratory for chemical testing (i.e., total petroleum hydrocarbons as gasoline and diesel [TPHg and TPHd] analyses). No TPHg or TPHd concentrations were detected in the selected soil samples analyzed from SB-5 above the laboratory detection limits ranging from 0.5 to 10 milligrams per kilogram (mg/kg). Based on the soil sample analytical results and field observations (photoionization detector [PID], visual and olfactory), no additional soil assessment is recommended in the area of the former UST system located on the subject property.

Additionally, a limited subsurface geophysical assessment was performed in the vicinity of the former UST system to verify the absence/presence of the buried UST system components. Although no metallic objects were detected during the geophysical survey, the results should be considered inconclusive due to cultural interference from nearby metallic objects, as well as non-metallic subsurface objects.

Phase I REC #2

SECOR supervised the drilling of four (4) soil borings (SB-11 through SB-14) in the area of the hydraulic vehicle lifts and associated equipment to determine if the equipment has potentially leaked and to verify the presence of possible PCB containing oil impact. No groundwater was encountered during the drilling activities. Soil samples were collected during the drilling activities. Selected soil samples were then submitted to a state-certified analytical laboratory for chemical testing (i.e., TRPH and PCB analyses). No TRPH or PCB concentrations were detected in the selected soil samples analyzed from SB-11 and SB-12 above the laboratory equipment detection limits ranging from 0.07 to 10 mg/kg. Based on the soil sample analytical results and field observations (PID, visual and olfactory), no additional soil assessment is recommended in the vicinity of the hydraulic vehicle lifts and associated equipment areas located on the subject property.

Phase I REC #3

SECOR supervised the drilling of five (5) soil borings (SB-15 through SB-19) in the area of the concrete patches inside the subject property Quonset hut to determine if any subsurface impact is present. No groundwater was encountered during the drilling activities. Soil samples were collected during the drilling activities. Selected soil samples were then submitted to a state-certified analytical laboratory for chemical testing (i.e., TRPH and PCB analyses). No TRPH or PCB concentrations were detected in the selected soil samples analyzed from SB-15, SB-17 and SB-19 above the laboratory equipment detection limits ranging from 0.07 to 10 mg/kg. Based on the soil sample analytical results and field observations (PID, visual and olfactory), no additional soil assessment is recommended in the vicinity of the concrete patch areas located on the subject property.

Phase I REC #4

SECOR supervised the drilling of one (1) soil boring (SB-10) in the northwestern portion of the subject property to determine if the subject property has been impacted by the unauthorized release associated with the EZ Gas station LUST site. Groundwater was encountered at approximately 13 to 14 feet below ground surface (bgs) during the drilling activities. Soil and groundwater grab samples were collected during the drilling activities. The groundwater grab sample only was submitted for chemical analysis (i.e., TPHg, benzene, toluene, ethylbenzene, and total xylenes [BTEX], MTBE and tertrachloroethene analyses). No TPHg, BTEX, MTBE and tetrachloroethene (a.k.a., PCE) concentrations were detected in the groundwater grab sample collected from SB-10 above laboratory detection limits ranging from 5.0 to 100 micrograms per Liter (µg/L). Based on the groundwater grab sample analytical results and field observations (PID, visual and olfactory), no additional soil and/or groundwater assessment is recommended in the vicinity of the northwestern portion of the subject property.

1.2.2 *Potential* RECs

There were no Phase II ESA activities performed regarding Potential RECs identified during the Phase I ESA.

1.2.3 Environmental Concerns

Three environmental concerns were found during the Phase I ESA activities. Listed below are the Phase II ESA activities, findings and conclusions that were performed in response to the Phase I ESA.

Phase I Environmental Concern #1

SECOR performed a Pre-Demolition Asbestos Survey of the building located at the subject property to determine if any ACMs were present.

According to the analytical results, the window putty, floor tiles and mastic, and hot water heater insulation were identified as ACMs in the Quonset hut at the subject property. The hot water heater insulation is considered Class I ACM material. The remaining materials are considered Class II ACM materials.

Phase I Environmental Concern #2

SECOR contracted H.M. Pitt Labs, Inc. to perform a Pre-Demolition LBP Survey of the Quonset hut located at the subject property. The analytical results showed significant levels of lead in the paint and adjacent soil samples collected.

Phase I Environmental Concern #3

In response to environmental concern #3, SECOR supervised the drilling of four (4) soil borings (SB-1 through SB-4) in the area of the blue cylinder and lid to assess if potential hydrocarbon impact is present as a result of possible releases from a suspect UST system. No groundwater was encountered during the drilling activities. Soil samples were collected during the drilling activities. Selected soil samples were then submitted to a state-certified analytical laboratory for chemical testing (i.e., TPHg and TPHd analyses). No TPHg or TPHd concentrations were

detected in the selected soil sample analyzed from SB-1 above the laboratory detection limits ranging from 0.5 to 10 mg/kg. Based on the soil sample analytical results and field observations (PID, visual and olfactory), no additional soil assessment is recommended in the vicinity of the blue cylinder and lid.

Additionally, a limited subsurface geophysical assessment was performed in the vicinity of the blue cylinder and lid (possible former UST system) to attempt to verify the purpose of the equipment. The assessment revealed an elongated metallic object in the subsurface adjacent to and west of the equipment. This object was noted to extend from the blue cylinder and lid to the Quonset hut. Based on its physical appearance, it could not be confirmed if the cylinder is associated with a UST system or if it may be part of a subsurface water line.

1.3 PHASE I AND II RECOMMENDATIONS

SECOR recommends that the following activities be performed in response to the findings of the Phase I and II ESA activities.

- The Pre-Demolition Survey performed by SECOR confirmed that ACMs were present in the window putty, floor tiles and mastic, and hot water heater insulation at the subject property. All of these ACMs were associated with the subject property Quonset hut. SECOR recommends that the ACMs be removed by a Certified Asbestos Abatement Contractor. This survey was prepared under the assumption that the building at the subject property will be demolished. However, if the building remains on the property, the identified ACMs may be left in place under an asbestos operations and maintenance (O&M) program.

- The Pre-Demolition Survey performed by H.M. Pitt Labs, Inc. (H.M.) confirmed significant levels of lead were present in the paint and soil samples collected. During demolition and redevelopment activities, contractors should possess all necessary training, certifications, and licenses pertaining to LBP abatement. The said contractor should follow all applicable federal, state, and local regulations (including D.H.S. regulations) pertaining to LBP removal. Additionally, H.M. suggests that a LBP professional create an abatement plan the contractors can use to protect the workers and environment from lead exposure.

- During demolition and redevelopment activities, contractors should pay special attention to the south-southeast vicinity of the Quonset hut exterior where the former UST systems were reportedly located. The limited geophysical and subsurface assessments were inconclusive in determining if the UST systems are still present.

- During demolition and redevelopment activities, contractors should pay special attention to the storage yard vicinity. This area is the former location of outdoor equipment storage and repair operations. During the limited geophysical survey, subsurface metallic objects were detected in various areas throughout the former storage yard. However, no surface soil staining, unusual odors, or stressed vegetation were observed in this area.

- During demolition and redevelopment activities, contractors should pay special attention to the concrete patches observed in the interior southern storage room. The concrete patches are reportedly abandoned vehicle maintenance pits. There were no records on file regarding the removal of the pit equipment. Therefore, SECOR was unable to confirm if the equipment is still present.

- The findings of the limited geophysical survey were inconclusive and the use of the blue metal cylinder and lid could not be confirmed. SECOR recommends that further assessment be made into the use of the cylinder by contacting all utility companies and possibly unwelding the lid from the base in order to view its interior. Additionally, certified contractors should pay special attention to this area during demolition and redevelopment activities.

- The two water supply wells should be properly destroyed.

- Approximately six pole-mounted transformers were observed on the subject property. The transformers appeared to be old (1940s era) and are no longer in use. Based on their age, PCBs may be present in the insulating fluids typically used in such transformers. The subject property owner should contact SDG&E to request the removal of the transformers.

- The containers possibly filled with oil that are suspended from the north interior wall in the northeast portion of the Quonset hut should be removed from the subject property and the contents (if any) be properly disposed of or recyled.

- The hydraulic vehicle lifts and associated equipment should be properly removed and disposed by a certified contractor.

- Due to the large quantity of storage materials (e.g., office equipment, etc.) located throughout the interior of the building, SECOR was unable to fully assess areas under and behind these materials. SECOR recommends that once the building is cleared of its contents, an additional site visit may be necessary.

2.0 PROJECT METHODOLOGY

The objective of this ESA was to perform appropriate inquiry into the past ownership and uses of the subject property consistent with good commercial or customary practice as outlined by the American Society of Testing and Materials (ASTM) in Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, Designation E1527-00. The purpose of the Phase I ESA work was to identify, to the extent feasible, RECs on the subject property or within the study area defined by the ASTM standard that potentially have and/or may cause an adverse environmental impact to the subject property.

The Phase I ESA was conducted in accordance with SECOR's proposal dated June 3, 2003. The scope of the proposal consisted of a visual reconnaissance of the subject property, interviews, review of a current Track Info Services, LLC Environmental First Search™ (EFS) Report and a review of the practically available pertinent records of local, state, and federal agencies. The conclusions presented in this report are professional opinions based on data described herein. These opinions are subject to the limitations described in Section 10.0.

In addition, SECOR performed a Phase II ESA at the subject property. The purpose of the Phase II ESA work was to address the RECs, potential RECs and environmental concerns identified during the Phase I activities. The Phase II ESA was conducted in accordance with SECOR's proposal dated June 3, 2003.

3.0 ENVIRONMENTAL ASSESSMENT FINDINGS

3.1 SITE LOCATION

The subject property address is located at 1201 East Washington Avenue, Escondido, San Diego County, California. No other historical addresses were found associated with the subject property. According to San Diego County Tax Assessor records, the Assessor's Parcel Number (APN) assigned to the subject property is 230-141-01-00. The subject property is located at the southeast corner of East Washington Avenue and Ash Street in Escondido, California. Figure 1 shows the location of the subject property.

3.2 SITE DESCRIPTION

The subject property consists of a rectangular-shaped parcel of land bounded by a barbed wire and chain link fence. A 6,750 square foot metal Quonset hut is located in the western portion of the subject property and concrete parking lots are located to the south and west of the building. The eastern portion of the subject property is mainly vacant undeveloped land. Scattered areas of shrubbery and vegetation exist along the perimeter of the subject property. Located to the southeast of the building is a City of Escondido Water Department compound that contains equipment associated with a recycled water supply line. Access to the subject property is via a driveway from Ash Street. Figure 2 is a not-to-scale site plan. Photographs of the subject property and vicinity are presented in Appendix A.

3.3 ADJACENT AND SURROUNDING LAND USE

The subject property is located in an area of Escondido that is characterized by mixed commercial and residential land uses. The subject property is bordered to the north by East Washington Avenue. Three residential homes are located to the northwest of the subject property. A car wash and a one-story apartment complex are located to the northeast of the subject property. A retirement complex is located directly east of the subject property and further east is Harding Street. The Escondido Creek/Flood Control Channel borders the subject property to the south and further south is a 99¢ Store, parking lot, and shopping center. The subject property is bordered to the west by Ash Street and further west is a shopping plaza with multiple buildings. Occupants of these buildings include businesses such as Round Table Pizza, a liquor store and bank. It should be noted that the EZ Gas Station (an open LUST case site) is located to the northwest of the subject property.

3.4 SITE OPERATION

As previously mentioned, the subject property is developed with a 6,750 square foot Quonset hut that is located in the western portion of the subject property. Currently, the subject property and building are utilized for the storage of miscellaneous office equipment materials by the City of Escondido (COE) and the Humane Society.

Demolition of the building is planned and the subject property is intended to be the future location of The Escondido School District offices.

3.5 HISTORY

SECOR reviewed aerial photographs, Polks and Haines reverse city telephone directories, records on file with the local building and fire departments, a U.S. Geological Survey (USGS) Topographical map, and conducted interviews to gather information regarding the historical development of the subject and adjacent properties.

It should be noted that historical aerial photographs provide evidence of the general type of activity on a property and land use changes can often be discerned from the type and layout of structures visible in the photographs. However, specific elements of a facility's operation normally cannot be determined from historical aerial photographs alone.

In addition, SECOR retained Track Info Services, LLC and their subcontractor Environmental Data Resources, Inc. (EDR) to provide copies of Sanborn historical fire insurance maps covering the subject and immediately adjacent properties. No historical maps relative to the subject property were found in the EDR collection.

No previous environmental studies for the subject property were reported to have been prepared or were otherwise provided to SECOR for review.

Outlined below is a summary table of the historical research findings:

Subject Property

Year	Prior Use	Sources
1928-early 1940s	Open, vacant land.	Aerial Photographs
Mid 1940s	The Quonset hut was observed and the subject property was utilized for military surplus.	Aerial photographs Interviews
Late 1940s-1960s	The subject property was purchased by the COEPWD to be utilized for offices, storage and equipment shop. A small building was observed to the southeast of the Quonset hut.	Interviews
1970s	The subject property was occupied by Murry RV Sales and Murry Oldsmobile for automotive sales.	Building Department Records City Directories
Late 1970s-1980s	The subject property was utilized for the storage of equipment by the COEPWD.	Interviews
1983	Two buildings were observed to the southwest of the Quonset hut and the yard to the east of the Quonset hut was utilized for storage.	Aerial Photographs
2000	The subject property was occupied by the North County Food Bank.	City Directories
2003	The subject property is utilized for the storage of equipment by the COEPWD and the Humane Society.	Interviews Current Subject Property Observations

Adjacent Properties

Direction	Year	Prior Use	Sources
Northwest	1928	Residential home.	Aerial Photographs
	1949, 1953, and 1967	Three small, square-shaped buildings.	Aerial Photographs
	1970, 1973, and 1978	Three square-shaped buildings occupied by Escondido Mutual Water.	Aerial Photographs City Directories
	1980, 1983	Three square-shaped buildings occupied by The COEPWD/Engineering Department, and Escondido Mutual Water.	Aerial Photographs City Directories
	1989	Two square-shaped buildings occupied by Escondido Canal Joint North Inland Recovery.	Aerial Photographs City Directories
Northeast	1928	Undeveloped vacant land.	Aerial Photographs
	1949, 1953	Three residential homes with driveways	Aerial Photographs
	1967	Unable to distinguish.	Aerial Photographs (Blurry)
	1970,1973, 1978, 1980, and 1983	Small square-shaped buildings.	Aerial Photographs
	1989	A rectangular-shaped building.	Aerial Photographs
East	1928-1983	Vacant land	Aerial Photographs
	1989	The Spring Retirement Center	Aerial photographs City Directories
South	1928-1959	Unchannalized creek and further south vacant land	Aerial Photographs
	1967, 1970, 1973, and 1978	Channalized creek and further south was a square-shaped building and a large rectangular-shaped building.	Aerial Photographs
	1983, 1989	The square-shaped building was no longer present.	Aerial Photographs
West	1928	Vacant land.	Aerial Photographs
	1949, 1953, 1967, and 1973	A rectangular-shaped building was located at the southeast corner of East Washington and Ash Street.	Aerial Photograph

Direction	Year	Prior Use	Sources
West	1978	A shopping center consisting of one square-shaped building and a rectangular-shaped building was located across Ash Street.	Aerial Photograph
	1983, 1989	A shopping center consisting of three square-shaped buildings and one rectangular-shaped building was located across Ash Street.	Aerial Photographs

3.5.1 Interviews

Mr. Steve Hughes, a representative of COE, the subject property owner representative, provided a tour of the subject property for the reconnaissance visit. Based on a brief discussion with Mr. Hughes, who replied to the best of his ability, SECOR learned the following:

- The Quonset hut located on the subject property was originally utilized for a military surplus store. In the 1940s the COE purchased the subject property and Quonset hut to be utilized by COE Public Water Department (COEPWD). The COEPWD utilized the subject property for office space, storage and an equipment shop. Additionally, a second building was located to the east of the current Quonset hut located on site. At that time the yard was utilized for an equipment shop and storage of water pipes.

- The COEPWD provides potable water and sewer service to the subject property. Electricity and natural gas are provided by San Diego Gas and Electric Company (SDG&E; Sempra Energy).

- Mr. Hughes believes that there were three USTs previously located at the subject property. Mr. Hughes was unaware of the exact location, size or if they were removed from the subject property.

- Mr. Hughes stated that there were also USTs located at the northeast adjacent property.

Mr. Hughes stated that he has not been made aware of any pending, threatened, or past:

- Litigation relevant to hazardous substances or petroleum products in, on, or from the subject property;

- Administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the subject property; or

- Notices from a governmental entity regarding violations of environmental laws or liability relating to hazardous substances or petroleum products.

Other information provided by Mr. Hughes is provided in appropriate sections of this report.

3.5.2 Title

A chain-of-title review was not required as part of the scope of services for this ESA. Based on San Diego County Tax Assessor records, The City of Escondido is the present owner of the subject property. The subject property has been assigned APN 230-141-01-00.

A copy of the Assessor's Parcel Map that includes the subject property and vicinity is provided in Appendix D.

3.5.3 Other Historical Sources

The U. S. Geological Survey (USGS) topographic quadrangle map for Valley Center, California published in 1968 and photo-revised in 1975 was reviewed by SECOR to identify past and present physiographic features such as streams, lakes, and subject property and vicinity development. Historical maps by other agencies and other historical resources were not reasonably accessible for review at the city or county offices, or the County of San Diego Main Library. Persons knowledgeable in researching historical information at these locations were unable to provide SECOR with alternate locations where additional information could be obtained.

SECOR's review of the USGS topographic map for the Valley Center California quadrangle indicated that the subject property was developed with a large building similar to the Quonset hut observed during the recent subject property visit. The north and east adjacent properties were mapped as developed urban land.

A copy of the portion of the USGS map that includes the subject property is included in Appendix E.

3.6 GENERAL SITE OBSERVATIONS

SECOR performed a reconnaissance of the subject property on July 1, 2003 and July 16, 2003. Weather conditions during the visits to the subject property were sunny with ambient daytime air temperatures in the 70 to 90 degrees Fahrenheit range. There were no weather related property access restrictions encountered during the reconnaissance visit.

A description of the subject property is provided in Section 3.2. Mr. Hughes a representative of the subject property owner accompanied SECOR during the reconnaissance of the subject property that initially consisted of a walk around the perimeter of the subject property (Photograph 1). This was followed by a tour through the interior of the Quonset hut.

The Quonset hut located on the western portion of the subject property is constructed of a wood frame with corrugated metal sheet roof and siding (Photograph 2). The floors are concrete. There are four offices located in the building. The offices are constructed of wallboard walls and ceilings with vinyl floor tiles covering the floors. The windows are wood frame with glass panes. There are five metal overhead roll-up doors located along the south wall of the Quonset hut.

The Quonset hut is divided into several areas: the north and south portions contain storage areas, a bathroom, and four offices. Two hydraulic lifts and two concrete patches were observed in the south storage area (Photograph 3). According to Mr. Hughes the concrete patches are associated with former subsurface vehicle maintenance pits. There was no information on file with the building department regarding the removal of equipment or abandonment of the pits. The former presence of the maintenance pits are a REC of the subject property.

Two suspect UST vent pipes were observed along the south exterior wall of the Quonset hut (Photograph 4). Additionally, a suspect fill port was observed approximately 100 feet southwest of the building.

A large yard (storage yard) is located east of the Quonset hut. This yard is primarily vacant with small quantities of vegetation observed throughout. Mr. Hughes stated that the storage yard was previously utilized for equipment storage and shop. Repairs to water pipe lines were conducted in this area. During the recent visit to the subject property, SECOR did not observe any staining or stressed vegetation in this area.

A fenced in equipment compound was located approximately 200 feet south of the Quonset hut (Photograph 5). Mr. Hughes stated that the equipment was part of a City of Escondido municipal recycled water supply line. This equipment does not represent a potential REC of the subject property.

Two water supply wells were observed on the subject property (Photographs 6 and 7).

A concrete remnant foundation is located approximately 100 feet to the southwest of the Quonset hut (Photograph 8). Based on review of aerial photographs a building was previously located in this area. There was no information on file with the Escondido Building or Fire Department regarding the demolition of this building.

A concrete structure of an unknown nature was observed in the far southeast corner of the subject property (Photograph 9). This concrete structure was approximately six feet in diameter with a large opening. This structure was free standing. It appeared to be associated with some kind of remnant clay piping that was previously utilized by the Escondido Municipal Water District. This equipment does not represent a potential REC of the subject property.

A concrete loading ramp was observed in the southwest corner of the subject property. Mr. Hughes stated that this ramp was previously utilized for unloading equipment from semi-truck trailers.

3.7 HEATING AND COOLING

A heating and cooling system was not observed at the subject property.

3.8 PHYSIOGRAPHIC FEATURES

3.8.1 Regional Topography

The elevation of the subject property is approximately 671.5 feet above mean sea level and the ground surface slopes gently to the southwest (Orthographic Map dated 1974). Escondido Creek borders the subject property to the south.

3.8.2 Regional Geology

The subject property is located in the Peninsular Ranges Geomorphic Province of Southern California. The bedrock in the region is comprised of granite, quartz monozonite, granodiorite, and quartz diorite of the Mesozoic Southern California Batholith. Surfical materials over the greater part of the region, and to depths of 40 to 100 feet, is composed of detrital materiel derived from igneous intrusions. Along Escondido Creek, quaternary alluvium deposits are present to a maximum depth of approximately 40 feet below grade surface (bgs). These deposits consist of sand, silty sand and clays (ERM, 1995).

3.8.3 Regional Hydrogeology

According to the California Regional Water Quality Control Board, San Diego Region (RWQCB) the subject property is located in the Escondido Hydrographic Subarea of the Carlsbad Hydrographic Unit. Groundwater in the area occurs within two types of aquifer material found in the Escondido Valley. The first is composed of granitic detrital material, and the second is composed of alluvial sand, gravel, and finer grained sediments associated with Escondido Creek. According to the RWQCB, the Escondido Hydrographic Subarea has existing beneficial use designations for municipal, agricultural and industrial supply.

Groundwater movement direction has not been delineated at the subject property; however, based on the local topography and nearby LUST sites, it is likely to be in a southerly direction.

3.9 DRUMS

No drums or drum storage was observed at the subject property.

3.10 ABOVEGROUND STORAGE TANKS (ASTS)

No evidence of ASTs was observed on the subject property.

3.11 UNDERGROUND STORAGE TANKS (USTS)

SECOR reviewed records on file with the Escondido Building Department. No information regarding USTs at the subject property was available. An Application for Permit to Install Tanks for Flammable Liquids, dated February 27, 1962, was on file with the Escondido Fire Department (Appendix C). The permit was for a 120-gallon UST to be installed approximately 94 feet southwest of the Quonset hut. The permit contained a sketch that indicated the location of the new tank to be installed and also identified two existing USTs. The existing USTs were shown just south of the Quonset hut. SECOR observed two suspect vent pipes along the southern exterior wall of the Quonset hut (Photograph 7). A large irregular-shaped concrete

patch was observed on the ground just south of the Quonset hut. Large quantities of building materials and remnant piping were observed near and atop the concrete patch at the time of the visit to the subject property for this Phase I ESA. SECOR was unable to visually inspect the entire area; however, in the visible areas, fill ports or fueling equipment were not observed. Mr. Hughes stated that trucks were previously fueled in this area; however, he was unaware if the USTs had ever been removed or the capacity the USTs associated with the former fuel islands.

SECOR visited the area where the 120-gallon UST was located on the permit sketch. SECOR observed a blue metal cylinder that descended into the ground in this area (Photograph 9). The metal cylinder was set into concrete. A metal lid was welded onto the end of the cylinder. Based on visual observations it could not be determined if the metal cylinder is from a UST or from a subsurface water line.

No other information was on file regarding the former UST systems with the Escondido Building or Fire Department, DEH, or in the EFS Report. It is SECOR's opinion that the former presence of the fueling system and the associated USTs are a REC of the subject property.

3.12 POLYCHLORINATED BIPHENYLS (PCBS)

Electrical transformers, hydraulic equipment, capacitors and similar equipment may contain polychlorinated biphenyls (PCBs) in hydraulic or dielectric insulating fluids within the unit. The federal Toxic Substances Control Act (TSCA) generally prohibited the domestic manufacture of PCBs after 1979; however, there is a potential for the dielectric fluid in electrical and hydraulic equipment manufactured prior to that date to contain PCBs.

Six pole-mounted transformers were observed at the subject property. Three were observed just south of the Quonset hut and the other three were observed to the southwest of the Quonset hut. The transformers were no longer in use and appeared to be extremely aged. Mr. Hughes stated that the transformers are owned by SDG&E. Based on visual observations of the surrounding ground it did not appear that the transformers were leaking. Based on the apparent age of the transformers it is likely that they contain PCBs and are a potential REC of the subject property.

Two hydraulic vehicle lifts were observed to be located in the south storage area. An above-ground hydraulic fluid tank was observed along the south interior wall. The hydraulic fluid product lines descended from the tank into the ground towards the lifts. There is no information on file with the City of Escondido or DEH regarding this equipment. Because the age of the equipment could not be determined the hydraulic fluids may contain PCBs. Based on the lack of information regarding the age of the lift equipment or maintenance records, it is SECOR's opinion that this equipment is a REC of the subject property.

3.13 HAZARDOUS MATERIALS

No current evidence of hazardous materials use or storage was observed, or reported to be occurring, at the subject property.

There were two approximately 20 gallon containers suspended from the north interior wall of the northeast portion of the Quonset hut. Mr. Hughes stated that to the best of his knowledge these were utilized for the storage of lubricating oils used in the machinery formerly located in the

building. SECOR was unable to access the insides of these containers to observe any contents.

3.14 HAZARDOUS WASTE

No evidence of hazardous waste storage, generation, or disposal was observed or reported to be occurring at the subject property.

3.15 SOLID (NON-HAZARDOUS) WASTE

An EDCO Disposal solid waste dumpster was observed on the subject property. No unusual staining, such as from improper disposal of paint or oil, was observed on the concrete pavement beneath the dumpster.

3.16 EXISTING GROUNDWATER ISSUES

No evidence of existing adverse groundwater conditions were reported or observed at the subject property. It should be noted, however, that a LUST site (EZ Gas Station) is located to the northwest of the subject property and has impacted the shallow groundwater in the area. Please see Section 4.6 for further information regarding the LUST case.

3.17 WATER, WASTEWATER, DRAINS AND STORMWATER

The City of Escondido Water Department (COEWD) has supplied potable water to the subject property since its initial development. The COEWD obtains most of its water from the San Diego County Water Authority (SDCWA) who obtains approximately 90 percent of its supply from imported sources, about one-half from the State Water Project and the other half from the Colorado River through San Diego Aqueduct Nos. 1 and 2. The remaining 10 percent of the supply is collected from regional surface water runoff. The COEWD stated in their 2002 Annual Water Quality Report that there are no water quality issues, such as lead, associated with the municipal water supply.

Sewage and other wastewater generated from the subject property discharges into the Escondido Public Works Department maintained sanitary sewer system.

There were two water supply wells observed at the subject property. One well is located in the southwest corner of the subject property and the second well is located just outside the northwest corner of the Quonset hut. Based on visual observations it appears that these wells are no longer in use. Mr. Hughes confirmed that to the best of his knowledge these wells are no longer in use.

3.18 ODORS, POOLS OF LIQUID, STAINS AND CORROSION

No evidence of pools of liquid, stains or corrosion was observed at the subject property.

3.19 PITS, PONDS, LAGOONS AND STRESSED VEGATATION

No evidence of pits, ponds, lagoons or stressed vegetation was observed at the subject property.

4.0 REGULATORY AGENCY LIST REVIEW

SECOR contracted with TRACK Info Services, LLC to provide an EFS Report to search and retrieve databases maintained by various local, state and federal environmental agencies. The purpose of the search was to identify reported listings for the subject property or other properties in the vicinity. Databases reviewed included local, federal and state lists of known or suspected contaminated sites, known handlers or generators of hazardous waste, known waste disposal facilities, and facilities with permitted underground storage tanks. The databases that were researched are briefly described below:

- Environmental Protection Agency (EPA): National Priorities List (NPL), Sites designated for Superfund clean-up by the EPA, May 8, 2003;
- EPA: Resource Conservation and Recovery Act (RCRA) Corrective Actions (CORRACTS), December 09, 2002;
- EPA: Comprehensive Environmental Response, Cleanup and Liability Information System (CERCLIS): Sites under review by the EPA, June 09, 2003;
- EPA: RCRA Permitted Treatment, Storage, Disposal Facilities (TSDF; RCRA-TSD) and TSDF subject to violations/enforcement corrective actions (RCRIS TSDC), December 09, 2002;
- California (State): (CAL CERCLIS): State Equivalent CERCLIS List (SCL)/ Cal Site (State Sites) April 30, 2003;
- State and San Diego (County): Leaking Underground Storage Tanks (LUST) listings: Sites with leaking underground storage tanks, December 11, 2002;
- State: Solid Waste Landfills/Waste Management Unit Database System (SWLF/WMUDS) including Toxic Pits Clean-Up Facilities): Sites permitted as solid waste landfills, incinerators, or transfer stations, August 04, 2003;
- State: Properties With Hazardous Waste (CORTESE): Sites on State index of properties with hazardous waste. CORTESE sites are listed individually as SCL, LUST and SWL sites;
- State/County: Underground Storage Tanks/Aboveground Storage Tanks (USTs/ASTs): Sites with registered underground or aboveground storage tanks June 25, 2003;
- EPA: Emergency Response Notification System (ERNS): Sites with previous hazardous materials spills, December 31, 2002;
- EPA: Large or Small Quantity Generators (RCRA LQG and SQG): Facilities that generate large or small quantities of hazardous waste, December 09, 2002;

- Local: County of San Diego Department of Environmental Health (DEH – HE17) PERMITS: listings of properties and facilities that handle hazardous materials; generate hazardous wastes and/or have had a release to the environment or other issue, June 03, 2003.

The complete EFS Report including maps showing the location of listed sites relative to the subject property are presented in Appendix B. The subject property was not included on any of the listings. The results of the listing review are summarized and discussed below.

4.1 NATIONAL PRIORITY LIST (NPL)

The National Priorities List (NPL) is a list of contaminated sites that have been assigned for cleanup under the Federal EPA Superfund program. Review of the NPL list identified no facilities within a 1-mile radius of the subject property.

4.2 RCRA CORRECTIVE ACTION LIST (CORRACTS)

The EPA maintains this database of the Resource Conservation and Recovery Act (RCRA) facilities, which are undergoing corrective action. A corrective action order is issued pursuant to RCRA Section 3008 (h) when there has been a release of a hazardous waste or constituents into the environment from a RCRA facility. No CORRACTS facilities were identified within a one-mile radius of the subject property.

4.3 EPA REVIEW LIST (CERCLIS)

The Comprehensive Environmental Response, Cleanup, and Liability Information System (CERCLIS) List is a historical data base list of contaminated sites which the EPA has or will evaluate to determine whether a particular site merits placement on the NPL. The review of the EPA CERCLIS list did not identify any facilities within a 1-mile radius of the subject property.

4.4 EPA RCRA PERMITTED TREATMENT, STORAGE, DISPOSAL FACILITIES (TSD)

The EPA's Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. This list identifies facilities that treat, store, or dispose (TSD) of hazardous waste. No TSD facilities were identified within a 1-mile radius of the subject property:

4.5 STATE CERCLIS LIST (SCL)/CAL SITES (STATE SITES)

The CalSites database contains information on properties (or sites) in California where hazardous substances have been released, or where the potential for such a release exists. These properties have been reviewed by the Department of Toxic Substances Control (DTSC) and are given a status as needing No Further Action (NFA) or are in various stages of review and remediation in order to determine if a problem exists at the site. DTSC provides an annual prioritization for SCL sites called the State Priority List (SPL). One site was identified within a 1-mile radius of the subject property:

- 500 East Valley Parkway – Redwood Town Court (No Action-For CalMortgage Only) Located approximately 0.73-mile southwest (down and cross-gradient) of the subject property;

Based on its distance from and/or relative location to the subject property, the above listed site fails to meet the criteria for a REC of the subject property.

4.6 LEAKING UNDERGROUND STORAGE TANK LIST (LUST)

The Cal-EPA and San Diego County DEH Leaking Underground Storage Tank (LUST) List is a list of facilities that are known to have had a release of petroleum hydrocarbons to soil and/or groundwater. 110 LUST sites were identified within a ½-mile radius. Of these the following four LUST sites were identified within a 1/8-mile radius of the subject property:

- 1158 East Washington Avenue - EZ Gas Elite Auto Center (Open Case-Aquifer Affected)
  Located approximately 0.06-mile northeast (up-gradient) from the subject property;

- 425 North Ash Street – Ash Texaco (Open Case-Soil and Groundwater Affected)
  Located approximately 0.15-mile southwest (down-gradient) from the subject property;

- 1266 East Valley Parkway - Express Gas Station #28-Firestone (Open Case-Aquifer Affected)
  Located approximately 0.15-mile southeast (down-gradient) from the subject property;

- 1300 East Valley Parkway - Escondido Car Wash (Closed Case)
  Located approximately 0.17-mile southeast (down-gradient) from the subject property;

- 1202 East Valley Parkway - Home Federal Bank (Texaco) (Open Case-Soil and Groundwater Affected)
  Located approximately 0.17-mile south (down-gradient) from the subject property; and

- 1161 East Valley Parkway - Circle K, Rollies Valley Mobil, SANESCO (Case Closed)
  Located approximately 0.19 southwest (down and cross-gradient) from the subject property.

The nearest LUST case is the 1158 East Washington Avenue, EZ Gas station located to the northeast (across Washington Avenue) from, the subject property. SECOR reviewed information on file with the DEH regarding this LUST release. The most recent information reviewed was a Phase II Site Assessment Proposal, written by EEI dated August 2, 2002. The proposal revealed that elevated concentrations of soil and groundwater contamination were found during UST equipment replacement activities. The proposal was to further investigate, and attempt to identify, the extent of the soil and groundwater contamination at the LUST site. Additionally, low levels of dissolved tetra-chloroethene (PCE; dry cleaning solvent) were found in the groundwater. Potential sources of the PCE were not identified in the DEH file.

Since the extent of the groundwater plume has not been defined, and the LUST site is located up-gradient, it is SECOR's opinion that it represents a REC of the subject property.

The remaining LUST sites are located south of the Escondido Creek, down-gradient from the subject property. Based on the distances and relative locations of these sites, it is unlikely that they have affected the subject property.

4.7 SOLID WASTE LANDFILLS (SWLF/WMUDS)

Permitted Solid Waste Landfills (SWLF) list and the Waste Management Unit Database System (WMUDS) tracks active and inactive landfills, incinerators and transfer stations. No SWLF/WMUDS were located within a ½-mile radius of the subject property.

4.8 UNDERGROUND AND ABOVEGROUND STORAGE TANK LIST (UST/AST)

The SWRCB maintains an inventory of registered USTs and ASTs. No facilities were listed as having registered ASTs. Four facilities with registered USTs were listed within a 1/8-mile radius of the subject property. The subject property is not listed as having any USTs. Two adjacent facilities were identified:

- 620 Ash Street - City of Escondido
  Located approximately 0.02-mile north (up-gradient) from the subject property; and
- 1158 East Washington Avenue - EZ Gas
  Located approximately 0.06-mile northeast (up –gradient) from the subject property.

The nearest registered UST site to the subject property is 620 Ash Street, the north adjacent property located across East Washington Avenue. There were three UST removed from this property. No LUST case is listed at this property. Based on the information provided by the EFS Report, it is SECOR's opinion that this property does not represent a REC of the subject property.

The EZ Gas Station is listed as an up-gradient LUST site and is a REC of the subject property.

4.9 EMERGENCY RESPONSE NOTIFICATION SYSTEM (ERNS)

The Emergency Response Notification System (ERNS) is a national database system that collects information on reported releases of oil and hazardous substances. This database includes information reported to the EPA, the U.S. Coast Guard, the National Response Center and the Department of Transportation. The subject and adjacent properties were not identified on the ERNS List. However, the intersection of Washington and Ash was listed because a 20-gallon container of hydro chlorine acid was found somewhere near the intersection and removed by the County of San Diego. The notes in the EFS Report revealed that the container was not leaking. Based on the information reviewed in the EFS it is SECOR's opinion that this incident does not represent a REC of the subject property.

4.10 RCRA LARGE AND SMALL QUANTITY GENERATORS (RCRA LQG AND SQG)

The EPA's RCRA Large and Small Quantity Generator List identifies and tracks hazardous waste from the point of generation to the point of disposal. Three facilities were located within a 1/8-mile radius of the subject property, however, the subject and adjacent properties were not identified on the RCRA Generators List.

4.11 COUNTY: DEPARTMENT OF ENVIRONMENTAL HEALTH (DEH) LIST (HE17) AND DOCUMENTED SPILLS LIST (SPILL)

Four properties and facilities are listed by DEH in their HE17 permitted facility database within a 1/8-mile radius of the subject property. The properties and facilities that operate under DEH permits that have suffered any known environmental releases were discussed in previous sections.

5.0 ENVIRONMENTAL CONCERNS

5.1 LEAD-BASED PAINT (LBP)

Based on the age of the Quonset hut (circa 1940s) it is likely the interior and exterior painted surfaces are covered with LBP. Refer to Section 7.0 for further information regarding lead based paint at the subject property.

5.2 ASBESTOS

Based on the age of the Quonset hut on the subject property (circa 1940s) ACMs are likely present.

Additionally, Mr. Hughes stated that large quantities of asbestos coated piping were stored throughout the east yard adjacent to the Quonset hut. Remnants of the piping from sawing were observed throughout the yard.

SECOR makes no warranty as to the possible existence or absence of inaccessible potential ACMs or their evaluation with respect to asbestos content. Specific discussions regarding potential health risks of ACMs at this property, evaluations of indoor air quality, and development of ACM abatement specifications, were not part of this project. Refer to Section 7.0 for further information regarding ACMs at the subject property.

5.3 AIR EMISSIONS

No sources of regulated air emissions or indoor air quality issues were reported or observed at the subject property.

5.4 RADON

Radon is a colorless, tasteless radioactive gas with a USEPA specified action level of 4.0 picoCuries per liter of air (pCi/L). Radon gas has a very short half-life of 3.8 days. The health risk potential of radon is associated with its rate of accumulation within confined areas, particularly confined areas near or in the ground, such as basements, where vapors can readily transfer to indoor air from the ground through foundation cracks or other pathways. Large, adequately ventilated rooms generally present limited risk for radon exposure.

According to regional radon information obtained from the USEPA, the subject property is located within a USEPA-designated Zone 3 for radon gas. Average radon concentrations within Zone 3 are reported to be less than 2 pCi/L, below USEPA-designated action levels for radon mitigation and/or control measures (USEPA 1993). Based on SECOR's review of available information and the location of the subject property it is unlikely that elevated radon levels are a potential environmental risk at the subject property.

5.5 DRY CLEANING OPERATIONS

No dry cleaning operations were observed at or near the subject property.

5.6 PESTICIDES

The historical research for this ESA does not indicate that the subject property was ever used as agricultural land. No documentation of commercial on-site use of agricultural chemicals (e.g., pesticides, insecticides, fertilizers or herbicides) was discovered during this ESA. SECOR did not identify any apparent agricultural chemical processing areas, such as crop dusting airfields, bulk mixing areas; or repacking, transfer, or agricultural chemical storage areas in the aerial photographs that were reviewed during this ESA. There was no evidence indicating that agricultural chemicals were improperly stored or used on the subject property. Based on the current commercial use of the subject property and the improvements completed over an estimated 45 percent or more of the subject property (grading, paved surfacing, and structural improvements), residual pesticides and other agricultural chemicals at the subject property, if any, are not anticipated to represent a potential environmental risk.

5.7 MOLD LIKE SUBSTANCES

Mold like substances were not observed in the areas of the Quonset hut to which SECOR was granted access. Areas of moisture accumulation were also not observed.

6.0 LIMITED SUBSURFACE EXPLORATION

On August 5, 2003, SECOR conducted a limited Phase II ESA at the subject property. The purpose of the limited Phase II ESA was to assess the potential presence/absence of petroleum hydrocarbon impact to soil and groundwater in various areas located on the subject property (Figure 3). During SECOR's Phase I ESA, it was determined that further assessment work would be prudent to establish baseline soil and groundwater conditions in various areas on the subject property. A summary of the Phase II ESA work and the analytical results is presented below.

6.1 SOIL SAMPLING

On August 5, 2003, SECOR personnel supervised the drilling and subsurface sampling of 19 soil borings SB-1 through SB-19 at the subject property. The boring locations were selected based on the preliminary results of SECOR's Phase I ESA. The borings were drilled to depths of approximately 10 to 15 feet bgs. Drilling operations were conducted by HP Labs (HP) of Solana Beach, California using a drill rig equipped with a 1½ -inch-diameter "direct-push" probe. Drilling operations were directed by qualified SECOR personnel working under the direct supervision of a State of California Registered Geologist.

During drilling, soil samples for analytical testing and logging purposes were collected at approximately 5-foot depth intervals using a direct-push sampler containing acetate sleeves for sample retention. The soil samples immediately were sealed with Teflon® film and capped to avoid possible loss of volatiles. The sample sleeves then were labeled and placed in a chilled cooler with ice for delivery to a state-certified analytical laboratory for chemical analysis. Remaining soil was classified visually in accordance with the Unified Soil Classification System (USCS). In addition, soil was monitored for volatile organic vapors by the headspace method using a photoionization detector (PID). Because no field evidence of hydrocarbon impact (i.e., stained soil, hydrocarbon odors, etc.) was observed during drilling, soil cuttings generated during the drilling activities were used to backfill the soil borings. Borehole logs are presented in Appendix E.

Upon penetrating the groundwater table at SB-10 (approximately 13 to 14 feet bgs), the borehole was then over-drilled to a depth of approximately 15 feet bgs to allow for the collection of a groundwater grab sample. SECOR personnel directed the driller to install a temporary well casing at the borehole. The temporary casing was constructed of 5 feet of new, factory threaded and slotted 1-inch diameter poly-vinyl chloride (PVC) screen, and 10 feet of 1-inch diameter PVC well casing. Groundwater was allowed to stabilize in the well prior to sampling. Groundwater was measured at a depth of approximately 14 feet bgs in the borehole. The groundwater sample was collected by lowering a disposable sample bailer into the temporary casing. The temporary casing was then removed, and the borehole was abandoned using hydrated bentonite chips and cement.

6.2 ANALYTICAL METHODS

Chemical testing of soil and groundwater grab samples was performed by SunStar Laboratories, Inc. (SunStar), a state-certified laboratory located in Tustin, California. Two of the seven soil samples (SB-1/10' and SB-5/10') were analyzed for total petroleum hydrocarbons as gasoline and diesel (TPHg and TPHd) using EPA Method 8015 (modified). Five of the seven

soil samples (SB-11/10', SB-12/10', SB-15/10', SB-17/10' and SB-19/10') were analyzed for total recoverable petroleum hydrocarbons (TRPH) using EPA Method 418.1; and for polychlorinated biphenyls (PCBs) using EPA Method 8082.

Groundwater grab samples were analyzed for TPHg using EPA Method 8015M; and for BTEX, MTBE and tetrachloroethene using EPA Method 8260. Soil and groundwater grab samples were selected for analysis based on depth of collection and field observations collected during this assessment work as well as the results of the Phase I ESA. A copy of the laboratory analytical report, laboratory quality assurance/quality control (QA/QC) data, and chain-of-custody documentation are presented in Appendix F.

6.3 SUMMARY OF LABORATORY ANALYTICAL

6.3.1 Soil

The results of laboratory analyses for the soil samples are summarized in Table 1. No g, TPHd, TRPH, and PCB concentrations were detected in the soil samples analyzed from SB-1, SB-5, SB-11, SB-12, SB-15, SB-17 and SB-19 above laboratory detection limits ranging from 0.5 to 0.07 milligrams per kilogram (mg/kg).

6.3.2 Groundwater Grab

The results of laboratory analyses for the groundwater grab sample is summarized in Table 2. No TPHg, BTEX, MTBE and tetrachloroethene (a.k.a., PCE) concentrations were detected in the groundwater grab sample collected from SB-10 above laboratory detection limits ranging from 5.0 to 100 micrograms per Liter (µg/L).

7.0 ASBESTOS AND LEAD SURVEY

7.1 ASBESTOS SURVEY

At the request and authorization of the City of Escondido, SECOR performed a Pre-Demolition Asbestos Survey of the Quonset hut. The objective of the survey was to identify, estimate quantities of, and assess the condition of the suspect asbestos containing materials (ACMs) at the subject property. The survey was conducted using the methods presented in the Federal Asbestos Hazard Emergency Response Act AHERA regulations (40CFR, Part 763) as a guideline for sampling suspect ACMs. The survey was conducted on July 16, 2003.

The following confirmed ACMs were identified during the survey and SECOR's recommendations are as follows:

- According to analytical results, window putty, floor tiles and mastic, and the hot water heater insulation were identified ACMs at the subject property. The hot water heater insulation is considered Class I ACM material. The remaining materials are considered Class II ACM materials. All ACMs would require removal prior to any renovation or demolition activities which would disturb them, in accordance with the NESHAPs and SCAQMD regulations. SECOR recommends ACM removal by a Certified Asbestos Abatement Contractor.

This survey was prepared under the assumption that the building at the subject property will be demolished. However, if the building remains on the property, the identified ACM materials may be in place under an asbestos operations and maintenance (O&M) program for management in-place.

A complete copy of the Pre-Demolition Asbestos Survey can be found in Appendix G.

7.2 LEAD PAINT SURVEY

SECOR contracted H.M. Pitt Labs, Inc. to conduct a Pre-Demolition Lead Paint Survey. The purpose of the survey was to identify any lead paint in the building located at the subject property. Shaun Cornish from H.M. Pitt Labs, Inc. conducted the survey on July 16, 2003.

Based on interpretations of the H.M. Pitt Labs report and laboratory results the following areas were found to contain lead based paint:

- The tan paint on the exterior corregated metal.
- The paint on the trim of the windows.
- The paint on the bracing inside the building.
- The paint on the interior and exterior of the roll-up doors.
- The paint located in the offices and bathroom of the building.
- The paint on the trim of the roll-up doors.

Additionally, lead was found in a composite soil sample collected along the western exterior wall of the building.

H.M. Pitt Labs, Inc. stated the following: The lab results showed significant levels of lead in the painted surfaces sampled. Based on the understanding that the metal portion of the building is going to be recycled, the following precautions must be collected:

- Demolition crew should have a minimum of 8 hr. Lead Hazard Awareness class.
- All delaminating paint (loose and flaking) should be stabilized before demolition.
- Area and personal air monitoring is necessary during paint film stabilization and demolition.
- Demolition following D.H.S. regulations (although this is not a D.H.S. regulated job) this includes but not limited to worker personal protective equipment (i.e. respirators with HEPA filters, disposable coveralls, gloves, boots and hard hats).
- All work must be done in a lead hazard zone of at least 50 feet or as far as practical. This hazard zone will be delineated by lead hazard tape and signs. The signs will be located at regular intervals, and at such a distance that personnel may read the signs and take necessary precautions required prior to entering the area. Signs shall conform to 29 CFR 1926.62 (m). The sign shall be at least 20" by 14" displaying the following legend in the lower panel.

WARNING
LEAD WORK AREA
POISON
NO EATING, DRINKING, OR SMOKING

H.M. Pitt Labs states that these are the mandatory minimum precautions. They strongly suggest that the building owner and/or their representative retain a lead based paint professional to draw up an abatement plan that the abatement and demolition contractor can use as a guideline to protect the workers, surrounding residential area and the environment from any unnecessary exposure to lead dust from debris generated from this project.

A complete copy of the H.M. Pitt Labs, Inc. summary and laboratory results can be found in Appendix G. SECOR makes no warranty or guarantee of the work performed and or information provided by H.M. Pitt Labs, Inc.

8.0 CONCLUSIONS AND RECOMMENDATIONS

8.1 PHASE I ESA RECOMMENDATIONS

During the Phase I portion of the ESA, four recognized environmental conditions (RECs) of the subject property were discovered.

8.1.1 Recognized Environmental Conditions (RECs)

1) The former presence of three (1,200-gallon, 600-gallon, and 120-gallon capacity) underground storage tanks (USTs) at the subject property. Since records are not available regarding the UST system or its installation or removal, it is possible the subsurface components of the UST system may still be in place and/or (even if the components were removed) historical fueling operations may have resulted in potential hydrocarbon impact to surrounding soil.

SECOR recommended that a subsurface geophysical survey be performed in the areas where the UST system is believed to have been located at the subject property to determine if the USTs and piping are still present at the subject property and/or to identify the location of the former UST excavations.

In addition, SECOR recommended that a subsurface assessment (i.e., exploratory soil borings) be performed in the area of the former UST system to assess if hydrocarbon impact is present as a result of possible releases from the UST system.

2) The presence of hydraulic vehicle lifts and associated equipment in the south storage room of the building at the subject property. Based on the apparent age of the equipment and lack of maintenance records, the equipment may have potentially leaked resulting in subsurface impact. Based on the potential age of the lifts, polychlorinated biphenyls (PCBs) may be potentially present in the hydraulic fluid.

SECOR recommended that a subsurface assessment (i.e., exploratory soil borings) be performed to determine if the equipment has leaked and to verify the presence of any possible PCB containing oil impact. Soil samples should be analyzed for total recoverable petroleum hydrocarbons (TRPH; oil) and PCBs. Additionally, the lift equipment should be properly removed from the subject property prior to demolition and properly disposed.

3) The concrete patches observed in the southern storage room at the subject property above locations that were formerly utilized for vehicle maintenance pits. There are no records available and/or information on file regarding the closure of the pits. Maintenance equipment, oils, and other lubricating fluids may be present in the subsurface soils below and adjacent to the patches.

SECOR recommended that a limited subsurface assessment (i.e., exploratory soil borings) be performed in the area of the concrete patches to determine if subsurface impact is potentially present. Soil samples should be analyzed for TRPH.

4) A neighboring property, EZ Gas station (1158 East Washington Avenue) is an open Leaking Underground Storage Tank (LUST) site. According to information on file with the County of San Diego Department of Environmental Health (DEH) elevated concentrations of benzene, methyl tert-butyl ether (MTBE) and tetrachloroethene have been identified in the soil and groundwater at the site. The soil and groundwater contamination plume has not been defined and the source of the tetrachloroethene release has not been identified. Based on the information reviewed at the DEH, it is SECOR's opinion that the up-gradient EZ Gas station LUST site is a REC of the subject property.

SECOR recommended that a subsurface assessment (i.e., exploratory soil borings) be performed in the north and northwestern portion of the subject property. Soil and groundwater samples should be analyzed for benzene, MTBE and tetrachloroethene to determine if the subject property has been impacted by the unauthorized release associated with the EZ Gas station LUST site.

8.1.2 Potential RECs

Four potential RECs were discovered during the Phase I activities.

1) Two water supply wells were observed on the subject property. One well is located just northeast of the Quonset hut and the second is located in the southwest portion of the subject property near a tree. Based on interviews and visual observations, these wells are no longer in use. SECOR recommends that the wells be properly destroyed.

2) The presence of six pole-mounted transformers on the subject property. These transformers appeared to be old (1940s era) and are no longer in use. Based on their age, PCBs may potentially be present in the insulating fluids typically used in the transformers. At the time of the subject property visit for this Phase I ESA, it did not appear that the transformers were leaking. Based on interviews with the representative of the subject property owner, Mr. Steve Hughes, the transformers are owned and operated by the San Diego Gas & Electric (SDG&E). SECOR recommends that the subject property owner contact SDG&E to have the transformers removed.

3) The presence of two containers (approximately 15-20-gallon capacity) suspended from the north interior wall in the northeast portion of the Quonset hut. These containers were utilized for the storage of lubricating oils used in the machinery formerly located in the Quonset hut. SECOR was unable to access these containers to determine their contents. SECOR recommends that these containers be removed from the subject property and the contents (if any) be properly disposed of or recycled.

4) The former use of the eastern storage yard as an outdoor equipment repair area. This vicinity may have subsurface impact due to the former daily operations that occurred within it.

No other RECs or potential RECs were identified in connection with the subject property during the performance of the Phase I ESA.

8.1.3 Environmental Concerns

During the Phase I portion of the ESA, three additional environmental concerns were discovered:

1) Based on its date of construction, ACMs may be present in the Quonset hut at the subject property.

2) Based on its date of construction, LBP may be present in the Quonset hut at the subject property.

SECOR recommended that a comprehensive ACM and LBP survey be conducted prior to the demolition of the building.

3) There currently exists a blue metal cylinder and lid in the yard to the southeast of the Quonset hut building at the subject property. Since records are not available regarding the use (or, former use) or purpose of the blue cylinder and lid, it is possible this object may have been used to store fuel and/or lubricating fluids for the former eastern storage yard building. Also, historical records (i.e., permit application to install tanks) show a "new tank" in the general vicinity of the blue cylinder and lid object. Based on it's physical appearance it could not be confirmed if the cylinder is associated with a UST system or if it may be part of a subsurface water line.

SECOR recommended that the use (or, former use) of the blue metal cylinder and lid, observed in the yard to the southeast of the Quonset hut, be determined.

8.2 PHASE II ESA CONCLUSIONS

A Phase II ESA was performed to address the four RECs, four potential RECs and the environmental concerns identified in the Phase I portion of the project.

8.2.1 Recognized Environmental Conditions (REC)

Phase I REC #1

SECOR supervised the drilling of five (5) soil borings (SB-5 through SB-9) in the reported area of the former UST system to assess if hydrocarbon impact is potentially present as a result of historic usage of the UST system. No groundwater was encountered during the drilling activities. Soil samples were collected during the drilling activities. Selected soil samples were then submitted to a state-certified analytical laboratory for chemical testing (i.e., TPHg and TPHd analyses). No TPHg or TPHd concentrations were detected in the selected soil samples analyzed from SB-5 above the laboratory detection limits ranging from 0.5 to 10 milligrams per kilogram (mg/kg). Based on the soil sample analytical results and field observations (PID, visual and olfactory), no additional soil assessment is recommended in the area of the former UST system located on the subject property.

Additionally, a limited subsurface geophysical assessment was performed in the vicinity of the former UST system to verify the absence/presence of the buried UST system components. Although no metallic objects were detected during the geophysical survey, the results should be

considered inconclusive due to cultural interference from nearby metallic objects, as well as non-metallic subsurface objects.

Phase I REC #2

SECOR supervised the drilling of four (4) soil borings (SB-11 through SB-14) in the area of the hydraulic vehicle lifts and associated equipment to determine if the equipment has potentially leaked and to verify the presence of possible PCB containing oil impact. No groundwater was encountered during the drilling activities. Soil samples were collected during the drilling activities. Selected soil samples were then submitted to a state-certified analytical laboratory for chemical testing (i.e., TRPH and PCB analyses). No TRPH or PCB concentrations were detected in the selected soil samples analyzed from SB-11 and SB-12 above the laboratory equipment detection limits ranging from 0.07 to 10 mg/kg. Based on the soil sample analytical results and field observations (PID, visual and olfactory), no additional soil assessment is recommended in the vicinity of the hydraulic vehicle lift and associated equipment areas located on the subject property.

Phase I REC #3

SECOR supervised the drilling of five (5) soil borings (SB-15 through SB-19) in the area of the concrete patches inside the subject property Quonset hut to determine if any subsurface impact is present. No groundwater was encountered during the drilling activities. Soil samples were collected during the drilling activities. Selected soil samples were then submitted to a state-certified analytical laboratory for chemical testing (i.e., TRPH and PCB analyses). No TRPH or PCB concentrations were detected in the selected soil samples analyzed from SB-15, SB-17 and SB-19 above the laboratory equipment detection limits ranging from 0.07 to 10 mg/kg. Based on the soil sample analytical results and field observations (PID, visual and olfactory), no additional soil assessment is recommended in the vicinity of the concrete patch areas located on the subject property.

Phase I REC #4

SECOR supervised the drilling of one (1) soil boring (SB-10) in the northwestern portion of the subject property to determine if the subject property has been impacted by the unauthorized release associated with the EZ Gas station LUST site. Groundwater was encountered at approximately 13 to 14 feet bgs during the drilling activities. Soil and groundwater grab samples were collected during the drilling activities. The groundwater grab sample only was submitted for chemical analysis (i.e., TPHg, BTEX, MTBE and tertrachloroethene analyses). No TPHg, BTEX, MTBE and tetrachloroethene (a.k.a., PCE) concentrations were detected in the groundwater grab sample collected from SB-10 above laboratory detection limits ranging from 5.0 to 100 micrograms per Liter (µg/L). Based on the groundwater grab sample analytical results and field observations (PID, visual and olfactory), no additional soil and/or groundwater assessment is recommended in the vicinity of the northwestern portion of the subject property.

8.2.2 Potential RECs

There were no Phase II ESA activities performed regarding Potential RECs identified during the Phase I ESA.

8.2.3 Environmental Concerns

Three environmental concerns were found during the Phase I ESA activities. Listed below are the Phase II ESA activities, findings and conclusions that were performed in response to the Phase I ESA.

Phase I Environmental Concern #1

SECOR performed a Pre-Demolition Asbestos Survey of the building located at the subject property to determine if any ACMs were present.

According to the analytical results, the window putty, floor tiles and mastic, and hot water heater insulation were identified as ACMs in the Quonset hut at the subject property. The hot water heater insulation is considered Class I ACM material. The remaining materials are considered Class II ACM materials.

Phase I Environmental Concern #2

SECOR contracted H.M. Pitt Labs, Inc. to perform a Pre-Demolition LBP Survey of the Quonset hut located at the subject property. The analytical results showed significant levels of lead in the paint and adjacent soil samples collected.

Phase I Environmental Concern #3

In response to environmental concern #3, SECOR supervised the drilling of four (4) soil borings (SB-1 through SB-4) in the area of the blue cylinder and lid to assess if potential hydrocarbon impact is present as a result of possible releases from a suspect UST system. No groundwater was encountered during the drilling activities. Soil samples were collected during the drilling activities. Selected soil samples were then submitted to a state-certified analytical laboratory for chemical testing (i.e., TPHg and TPHd analyses). No TPHg or TPHd concentrations were detected in the selected soil sample analyzed from SB-1 above the laboratory detection limits ranging from 0.5 to 10 mg/kg. Based on the soil sample analytical results and field observations (PID, visual and olfactory), no additional soil assessment is recommended in the vicinity of the blue cylinder and lid.

Additionally, a limited subsurface geophysical assessment was performed in the vicinity of the blue cylinder and lid (possible former UST system) to attempt to verify the purpose of the equipment. The assessment revealed an elongated metallic object in the subsurface adjacent to and west of the equipment. This object was noted to extend from the blue cylinder and lid to the Quonset hut. Based on its physical appearance, it could not be confirmed if the cylinder is associated with a UST system or if it may be part of a subsurface water line.

8.3 PHASE I AND II RECOMMENDATIONS

SECOR recommends that the following activities be performed in response to the findings of the Phase I and II ESA activities.

- The Pre-Demolition Survey performed by SECOR confirmed that ACMs were present in the window putty, floor tiles and mastic, and hot water heater insulation at the subject property. All of these ACMs were associated with the subject property Quonset hut. SECOR

recommends that the ACMs be removed by a Certified Asbestos Abatement Contractor. This survey was prepared under the assumption that the building at the subject property will be demolished. However, if the building remains on the property, the identified ACMs may be left in place under an asbestos operations and maintenance (O&M) program.

- The Pre-Demolition Survey performed by H.M. Pitt Labs, Inc. (H.M.) confirmed significant levels of lead were present in the paint and soil samples collected. During demolition and redevelopment activities, contractors should possess all necessary training, certifications, and licenses pertaining to LBP abatement. The said contractor should follow all applicable federal, state, and local regulations (including D.H.S. regulations) pertaining to LBP removal. Additionally, H.M. suggests that a LBP professional create an abatement plan the contractors can use to protect the workers and environment from lead exposure.

- During demolition and redevelopment activities, contractors should pay special attention to the south-southeast vicinity of the Quonset hut exterior where the former UST systems were reportedly located. The limited geophysical and subsurface assessments were inconclusive in determining if the UST systems are still present.

- During demolition and redevelopment activities, contractors should pay special attention to the storage yard vicinity. This area is the former location of outdoor equipment storage and repair operations. During the limited geophysical survey, subsurface metallic objects were detected in various areas throughout the former storage yard. However, no surface soil staining, unusual odors, or stressed vegetation were observed in this area.

- During demolition and redevelopment activities, contractors should pay special attention to the concrete patches observed in the interior southern storage room. The concrete patches are reportedly abandoned vehicle maintenance pits. There were no records on file regarding the removal of the pit equipment. Therefore, SECOR was unable to confirm if the equipment is still present.

- The findings of the limited geophysical survey were inconclusive and the use of the blue metal cylinder and lid could not be confirmed. SECOR recommends that further assessment be made into the use of the cylinder by contacting all utility companies and possibly unwelding the lid from the base in order to view its interior. Additionally, certified contractors should pay special attention to this area during demolition and redevelopment activities.

- The two water supply wells should be properly destroyed.

- Approximately six pole-mounted transformers were observed on the subject property. The transformers appeared to be old (1940s era) and are no longer in use. Based on their age, PCBs may be present in the insulating fluids typically used in such transformers. The subject property owner should contact SDG&E to request the removal of the transformers.

- The containers possibly filled with oil that are suspended from the north interior wall in the northeast portion of the Quonset hut should be removed from the subject property and the contents (if any) be properly disposed of or recyled.

- The hydraulic vehicle lifts and associated equipment should be properly removed and disposed by a certified contractor.

- Due to the large quantity of storage materials (e.g., office equipment, etc.) located throughout the interior of the building, SECOR was unable to fully assess areas under and behind these materials. SECOR recommends that once the building is cleared of its contents, an additional site visit may be necessary.

9.0 STATEMENT OF LIMITATIONS

The conclusions presented in this report are professional opinions based on data described in this report. These opinions have been arrived at in accordance with currently accepted hydrogeologic and engineering standards and practices applicable to this location, and are subject to the following inherent limitations:

9.1 PHASE I ESA LIMITATIONS

1. SECOR derived the data in this report primarily from visual inspections, examination of records in the public domain, and interviews with individuals having information about the site. The passage of time, manifestation of latent conditions, or occurrence of future events may require further study at the site, analysis of the data, and reevaluation of the findings, observations, and conclusions in the report.

2. The data reported and the findings, observations, and conclusions expressed in the report are limited by the scope of work. The scope of work was agreed to by the client.

3. No warranty or guarantee, whether express or implied, is made with respect to the data reported of findings, observations, and conclusions that are based solely upon site conditions in existence at the time of the investigation.

4. SECOR's Phase I ESA report present professional opinions and findings of a scientific and technical nature. The report(s) shall not be construed to offer legal opinion or representations as to the requirements of, nor compliance with, environmental laws, rules, regulations, or policies of federal, state, or local governmental agencies. Any use of the Phase I ESA report constitutes acceptance of the limits of SECOR's liability. SECOR's liability extends only to its client and not to any other parties who may obtain the Phase I ESA report.

5. The conclusions presented in this report are professional opinions based on data described in this report. They are intended only for the purpose, site location, and project indicated. This report is not a definitive study of contamination at the site and should not be interpreted as such. An evaluation of subsurface soil and groundwater conditions was not performed as part of this investigation. No sampling or chemical analyses of structural materials or other media was completed as part of this study unless explicitly stated.

6. This report is based, in part, on unverified information supplied to SECOR by third-party sources. While efforts have been made to substantiate this third-party information, SECOR cannot guarantee its completeness or accuracy.

9.2 PHASE II ESA LIMITATIONS

The findings and conclusions in this report have been prepared for the specific application to this project and have been developed in a manner consistent with that level of care and skill normally exercised by members of the environmental scientific profession currently practicing under similar conditions in the area at the time this investigation was performed. No warranty, express or implied, is made. This report is for the exclusive use of THE City of Escondido and its representatives.

A potential always remains for the presence of unknown, unidentified, or unforeseen subsurface contamination. Further evidence against such potential site contamination would require additional subsurface exploration and testing.

If new information is discovered during future site work (which may include excavations, boreholes, or other studies), SECOR should be requested to re-evaluate the conclusions of this report, and to provide amendments as required.

10.0 REFERENCES

ASTM Designation E 1527-00, 2000, Standard Practice for Environmental Site Assessments, Phase I Environmental Site Assessment Process, June.

California Department of Health Services (DHS) 1990, *California Statewide Radon Survey*, May.

California Department of Conservation (CDC), Division of Mines and Geology, 1975, *Geology of the San Diego Metropolitan Area, California*, Compilation by M.P. Kennedy, Bulletin 200.

City of Escondido Building Department.

City of San Diego Main Library, California Room, Haines and Polks City Directories. *SECOR* reviewed available Polks and Haines reverse city directories in the California Room at the City of San Diego Main Library for the years 1926, 1930, 1931, 1932, 1933, 1935, 1936, 1940, 1945, 1950, 1955, 1960, 1965, 1968, 1969, 1970, 1971, 1975, 1980, 1985, 1986, 1987, 1988, 1990, 1995, 2000, and 2002. Coverage for the subject property only from 1970 to 2003.

County of San Diego Department of Environmental Health, 2003, Work Plan Approval Letter for 1158 East Washington Avenue, Escondido California, January 8.

County of San Diego Operations Center, Ruffin Road Annex, Aerial Photograph Collection. The following photographs of the subject property and surrounding areas were examined:

1. Photograph 32BX-11 (2), Dated 1928; Approximate Scale 1:2,000
2. Photograph 8f-18, Dated 1945;
3. Photograph 10M-86, Dated 1953;
4. Photograph 263, Dated 1963; Approximate Scale 1:2,000;
5. Photograph 9-31, Dated 1970; Approximate Scale
6. Photograph 3-11, Dated 4-15-1974; Approximate Scale 1:2,000
7. Photograph 26B-3, Dated 9-8-1978; Approximate Scale
8. Photograph Dated November 26, 1983; Approximate Scale 1:2,000
9. Photograph Dated March 30, 1989; Approximate Scale 1:2,640
10. Aerial Foto-Map Book, Page 1129, Dated January 7, 1995; Approximate Scale 1:2,000

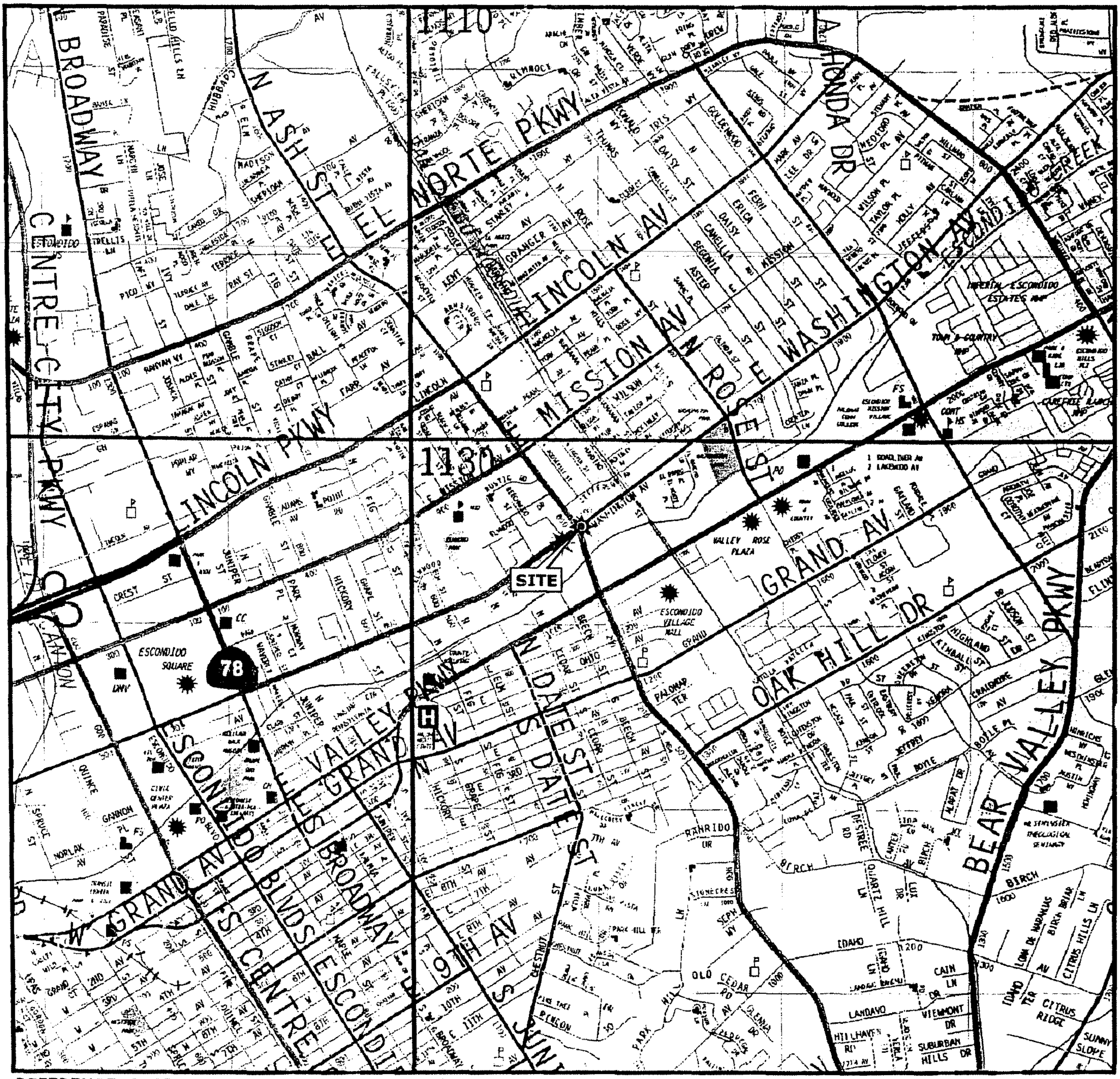
County of San Diego Tax Assessor's Office.

EEI, 2002, Phase II Site Assessment Proposal-Additional On-Site Assessment for 1158 East Washington Avenue, August 2.

United States Environmental Protection Agency (EPA), 1993, *USEPA Map of Radon Zones Throughout United States,* Document No. EPA-402-R-93-071.

United States Geologic Survey (USGS), 1967, 7.5 Minute Topographic Map of the Valley Center, San Diego County, California Quadrangle, Photorevised 1975.

FIGURES



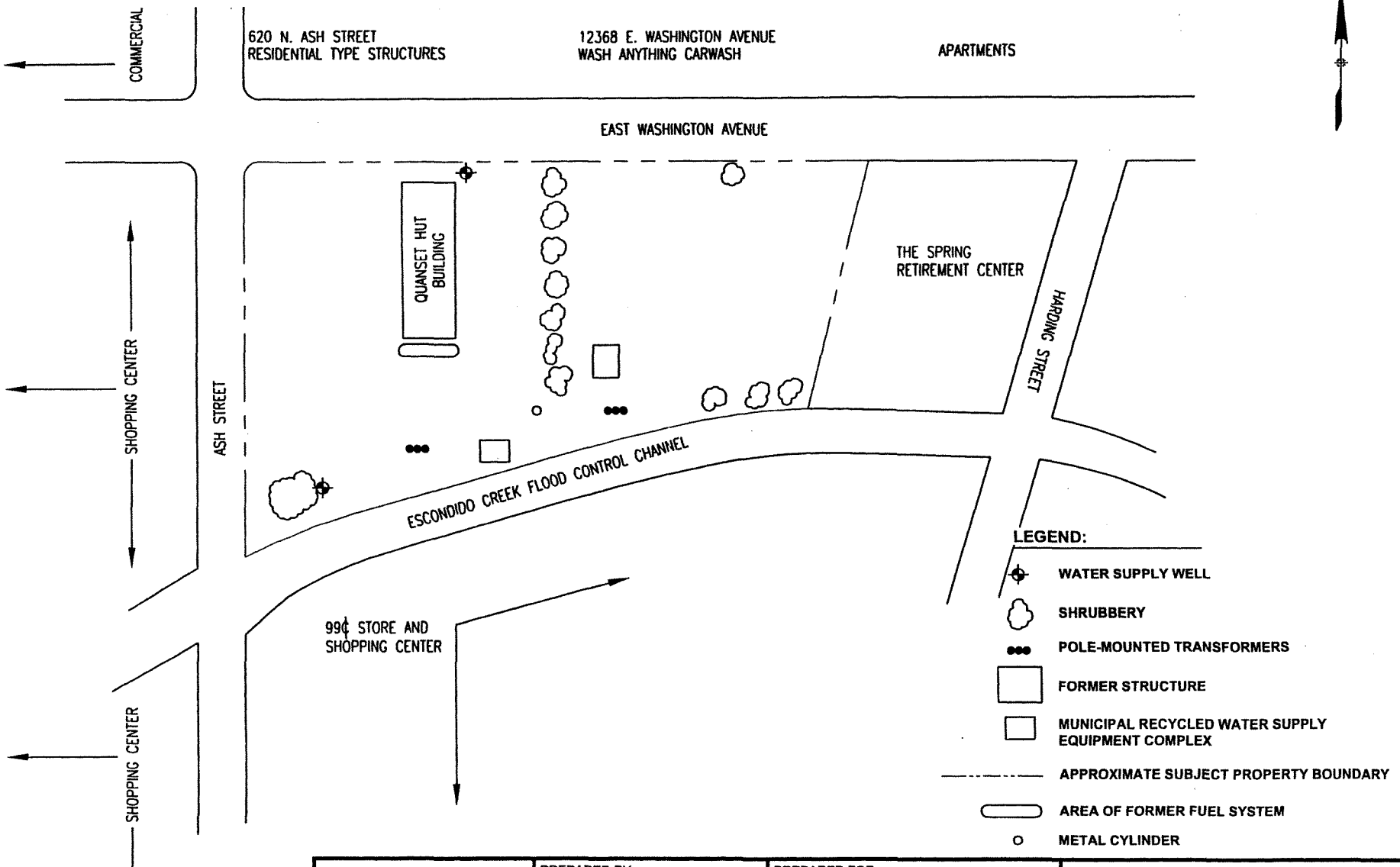
REFERENCE: 2003 THOMAS GUIDE CD-ROM, PAGE & GRID 1130 A1.

N

0 1320 2640

APPROXIMATE SCALE IN FEET

DRAWN BY: JEB CHECKED: APPROVED: DATE: 7/30/03 JOB No.: 08OT.COEGM.00 CAD FILE: COEGMSLOC	PREPARED BY: SECOR 2655 Camino del Rio North, Suite 302 San Diego, California	PREPARED FOR: CITY OF ESCONDIDO GREEN MUTUAL BUILDING 1201 EAST WASHINGTON AVENUE ESCONDIDO, CA	FIGURE 1 **SITE LOCATION MAP**



DRAWN BY:	JEB
CHECKED:	
APPROVED:	
DATE:	7/24/03
JOB No.:	08OT.COEGM.00
CAD FILE:	COEGMSP-03

PREPARED BY:

SECOR

2655 Camino del Rio North, Suite 302
San Diego, California

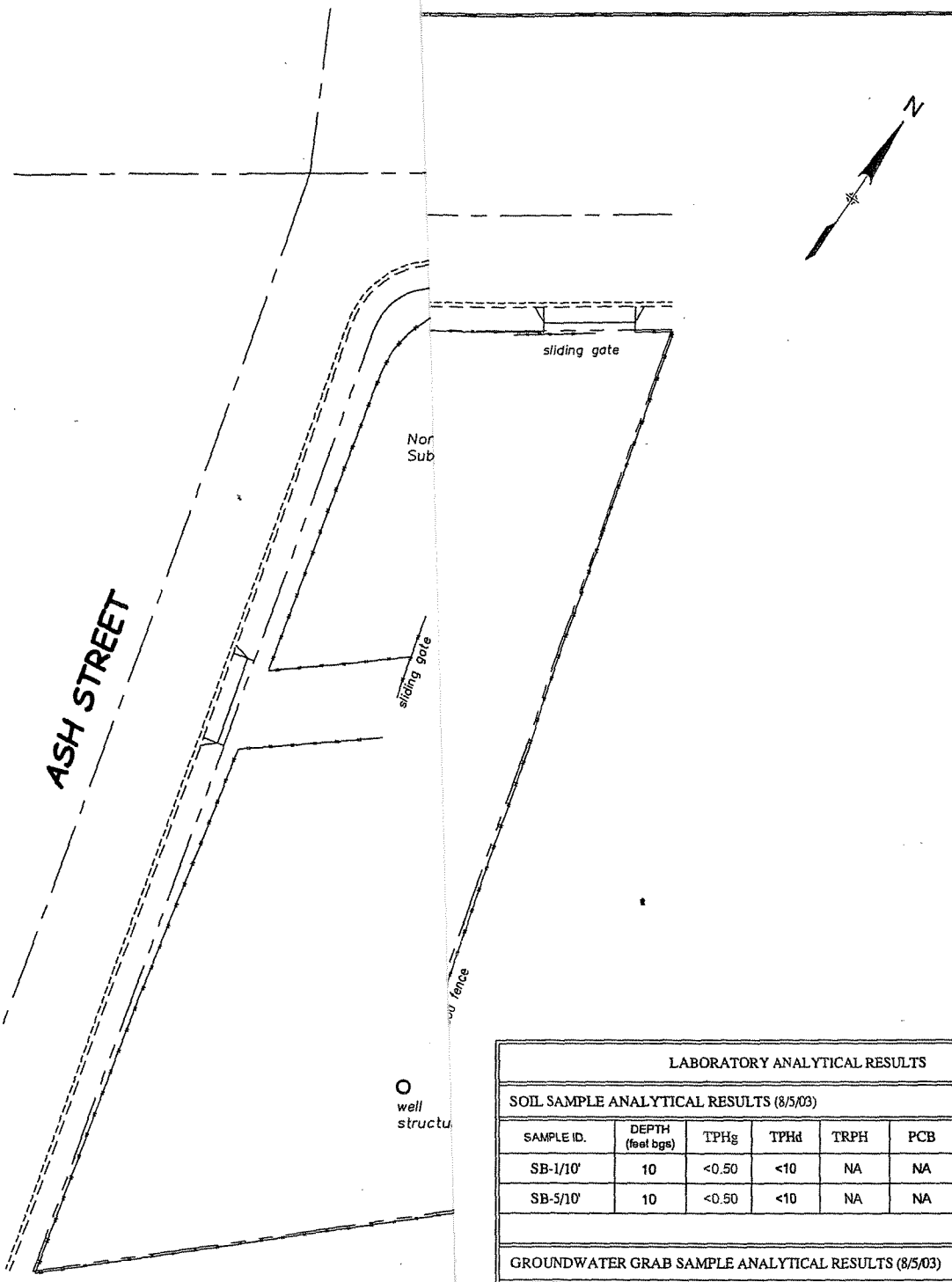
PREPARED FOR:

CITY OF ESCONDIDO
GREEN MUTUAL BUILDING
1201 EAST WASHINGTON AVENUE
ESCONDIDO, CALIFORNIA

FIGURE: 2

SITE PLAN AND ADJACENT PROPERTY MAP

K:\ALLPROJECTS2003DWGS\GENERAL 2003\GREEN MUTUAL BUILDING - CITY OF ESCONDIDO\COEGMSP-03.DWG MODIFIED BY LHUNTER ON AUG 11, 2003 - 8:10



LABORATORY ANALYTICAL RESULTS					
SOIL SAMPLE ANALYTICAL RESULTS (8/5/03)					
SAMPLE ID.	DEPTH (feet bgs)	TPHg	TPHd	TRPH	PCB
SB-1/10'	10	<0.50	<10	NA	NA
SB-5/10'	10	<0.50	<10	NA	NA
GROUNDWATER GRAB SAMPLE ANALYTICAL RESULTS (8/5/03)					
SAMPLE ID.	TPHg	B	MTBE	PCE	PCB
SB-10	<100	<5.0	<20	<5.0	NA

0 60 120

APPROXIMATE SCALE IN FEET

R:

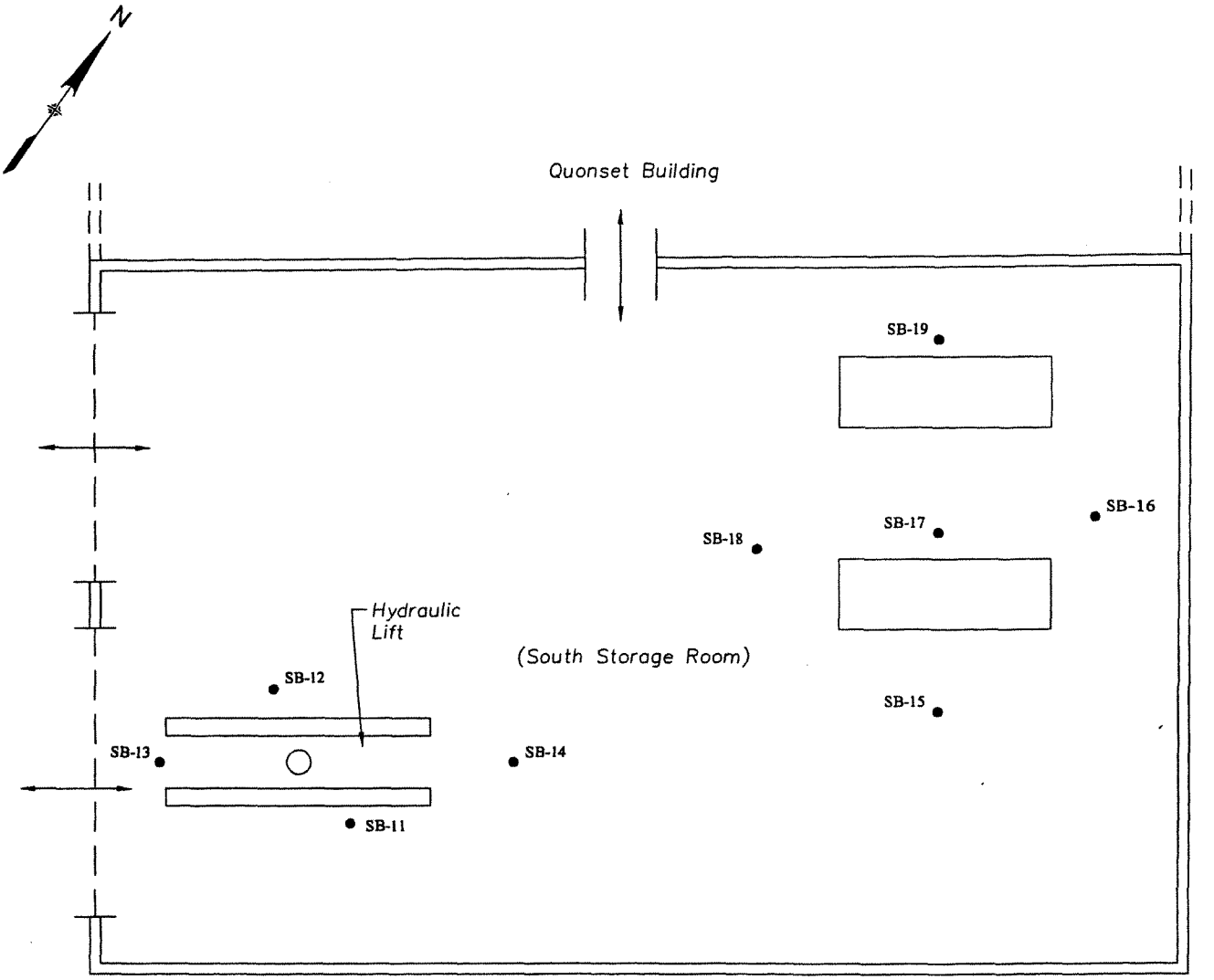
OF ESCONDIDO
MUTUAL BUILDING
st Washington Avenue
ondido, California

FIGURE 3

SITE PLAN WITH SOIL BORING LOCATIONS AND LABORATORY ANALYTICAL RESULTS (EXTERIOR ASSESSMENT)

N SEP 11, 2003 - 15:19

IECTS2003\DWGS\GENERAL 2003\ESCONDIDO GREEN MUTUAL\COEGMSOIL8-03.DWG MODIFIED BY F



LEGEND:

SB-1 ●	SOIL BORING LOCATION
TPHg	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
TPHd	TOTAL PETROLEUM HYDROCARBONS AS DIESEL
TRPH	TOTAL RECOVERABLE PETROLEUM HYDROCARBONS
B	BENZENE
MTBE	METHYL TERT-BUTYL ETHER
PCB	POLYCHLORINATED BIPHENYLS
<	BELOW LABORATORY REPORTING LIMIT INDICATED
NA	NOT ANALYZED

SOIL SAMPLE RESULTS REPORTED IN MILLIGRAMS PER KILOGRAM (mg/kg)

LABORATORY ANALYTICAL RESULTS

SOIL SAMPLE ANALYTICAL RESULTS (8/5/03)

SAMPLE ID.	DEPTH (feet bgs)	TPHg	TPHd	TRPH	PCB
SB-11/10'	10	NA	NA	<10	<0.07
SB-12/10'	10	NA	NA	<10	<0.07
SB-15/10'	10	NA	NA	<10	<0.07
SB-17/10'	10	NA	NA	<10	<0.07
SB-19/10'	10	NA	NA	<10	<0.07

0 10 20

APPROXIMATE SCALE IN FEET

DRAWN BY: RJO
CHECKED:
APPROVED:
DATE: 9/10/03
JOB No.: 08OT.COEGM.00
CAD FILE: SOSTORB8-03

PREPARED BY:

SECOR

2655 Camino del Rio North, Suite 302
San Diego, California

PREPARED FOR:

CITY OF ESCONDIDO
GREEN MUTUAL BUILDING
1201 East Washington Avenue
Escondido, California

FIGURE 4

SITE PLAN WITH SOIL BORING LOCATIONS AND LABORATORY ANALYTICAL RESULTS (INTERIOR ASSESSMENT)

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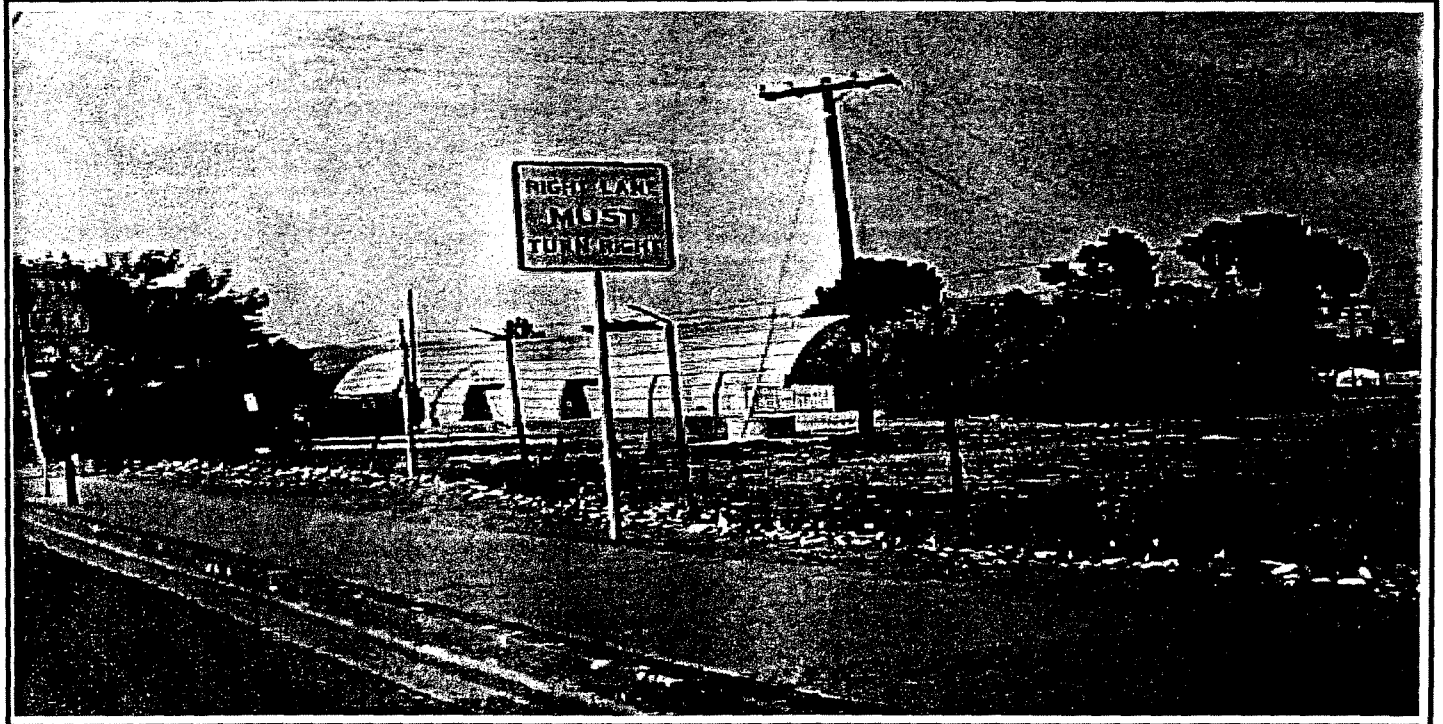
APPENDIX A

PHOTOGRAPHS OF THE SUBJECT PROPERTY

SECOR INTERNATIONAL INCORPORATED
PHOTOGRAPHIC RECORD

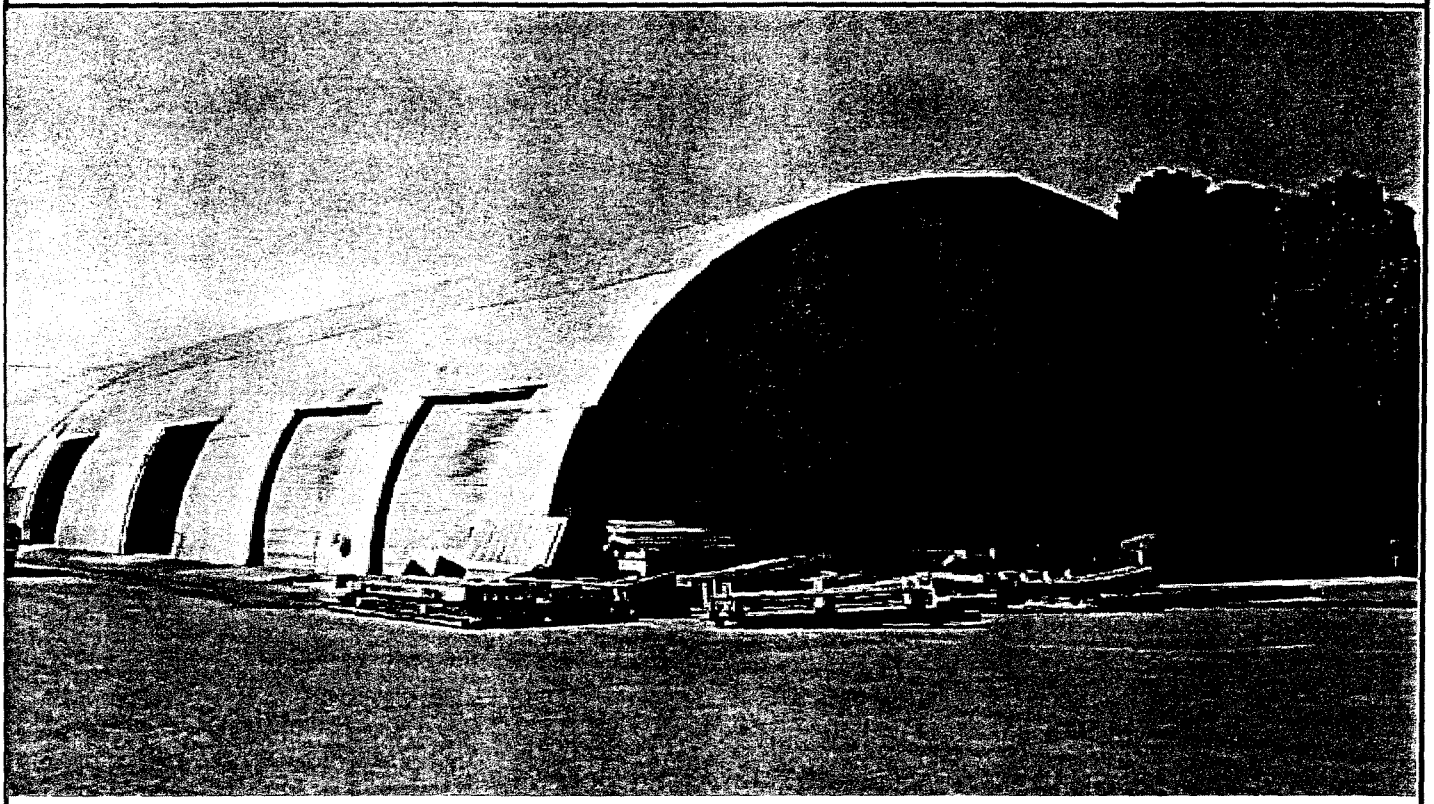
Client:	City of Escondido	**Job Number:**	08OT.COEGM.00
Site Name:	Green Mutual Building	**Location:**	1201 E. Washington Ave., Escondido
Photographer:	Carolyn B. Partin	**Date:**	July 2, 2003

Photograph No. 1



View of the subject property looking southwest across E. Washington Avenue.

Photograph No. 2

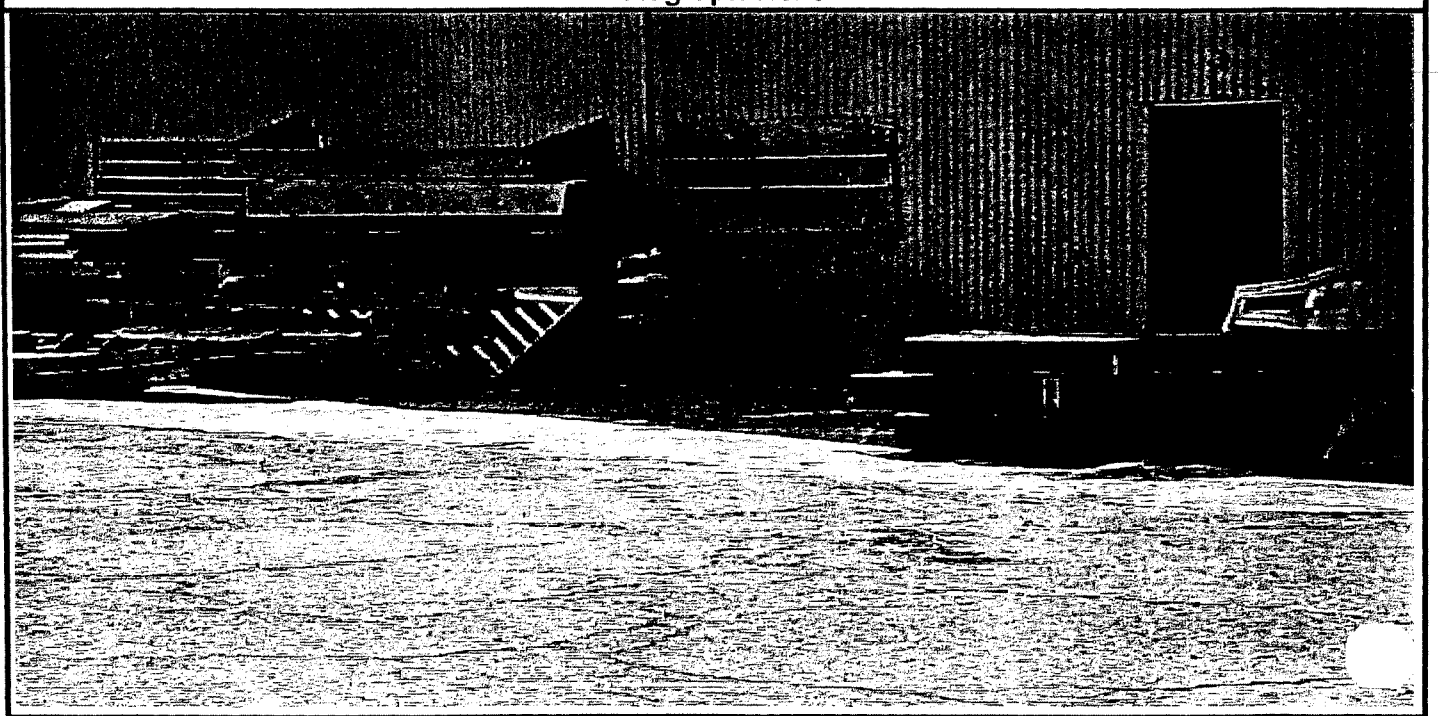


View of the western side of the Quonset building on the subject property.

SECOR INTERNATIONAL INCORPORATED
PHOTOGRAPHIC RECORD

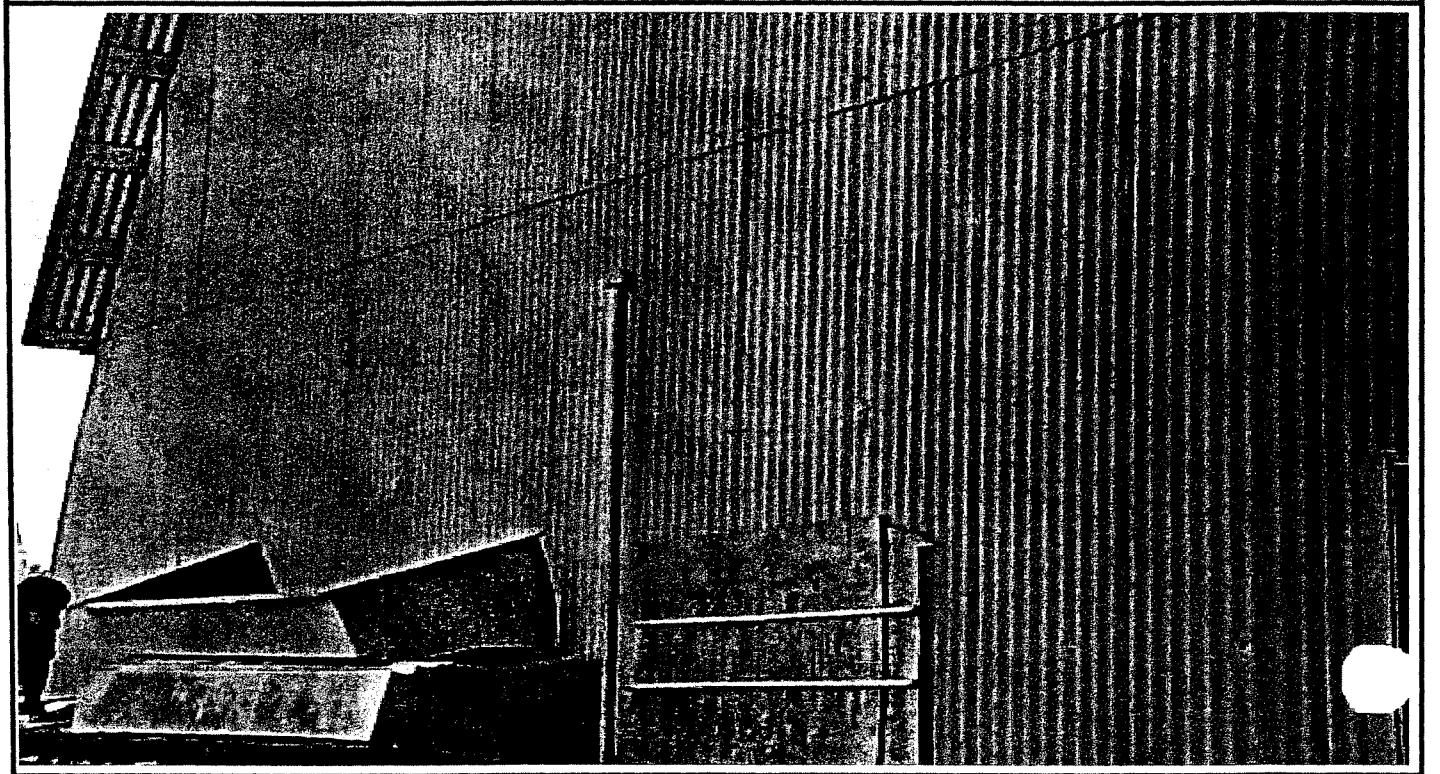
Client:	City of Escondido	**Job Number:**	08OT.COEGM.00
Site Name:	Green Mutual Building	**Location:**	1201 E. Washington Ave., Escondido
Photographer:	Carolyn B. Partin	**Date:**	July 2, 2003

Photograph No. 3



View of south storage area showing observed concrete patch.

Photograph No. 4

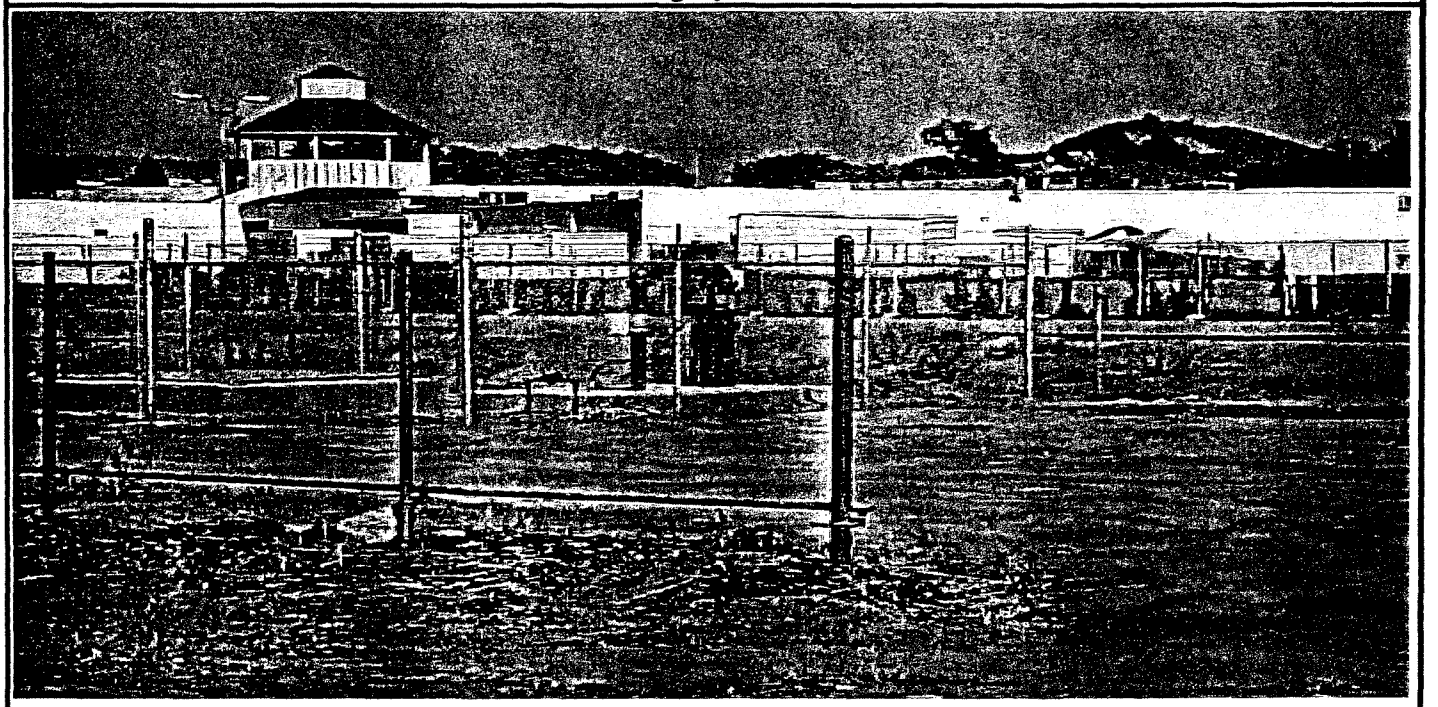


View of one of the suspect UST vent pipes observed on the south exterior wall of the building on the subject property.

SECOR INTERNATIONAL INCORPORATED
PHOTOGRAPHIC RECORD

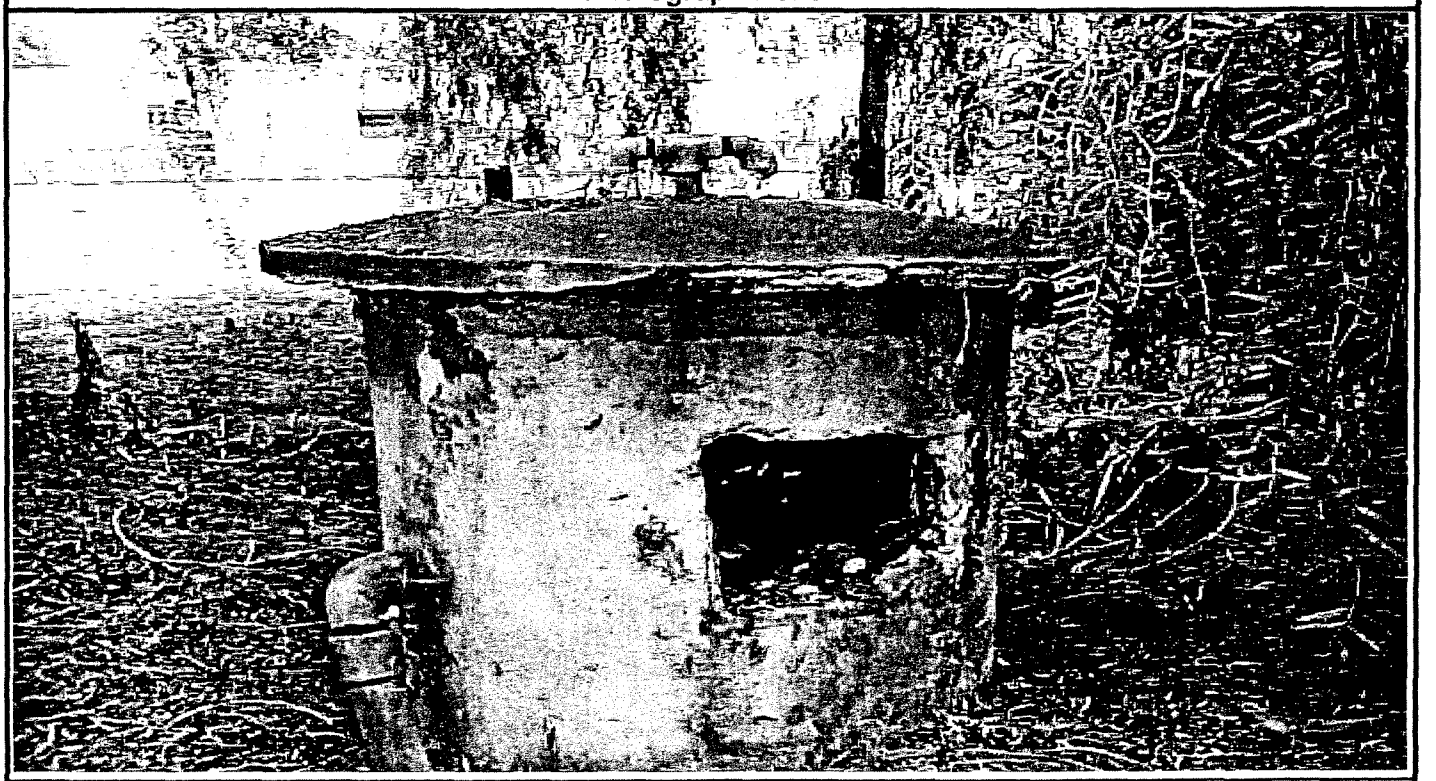
Client:	City of Escondido	**Job Number:**	08OT.COEGM.00
Site Name:	Green Mutual Building	**Location:**	1201 E. Washington Ave., Escondido
Photographer:	Carolyn B. Partin	**Date:**	July 2, 2003

Photograph No. 5



View of municipal recycled water equipment compound in southern portion of the subject property.

Photograph No. 6



View of water supply well located in the southwest corner of the subject property.

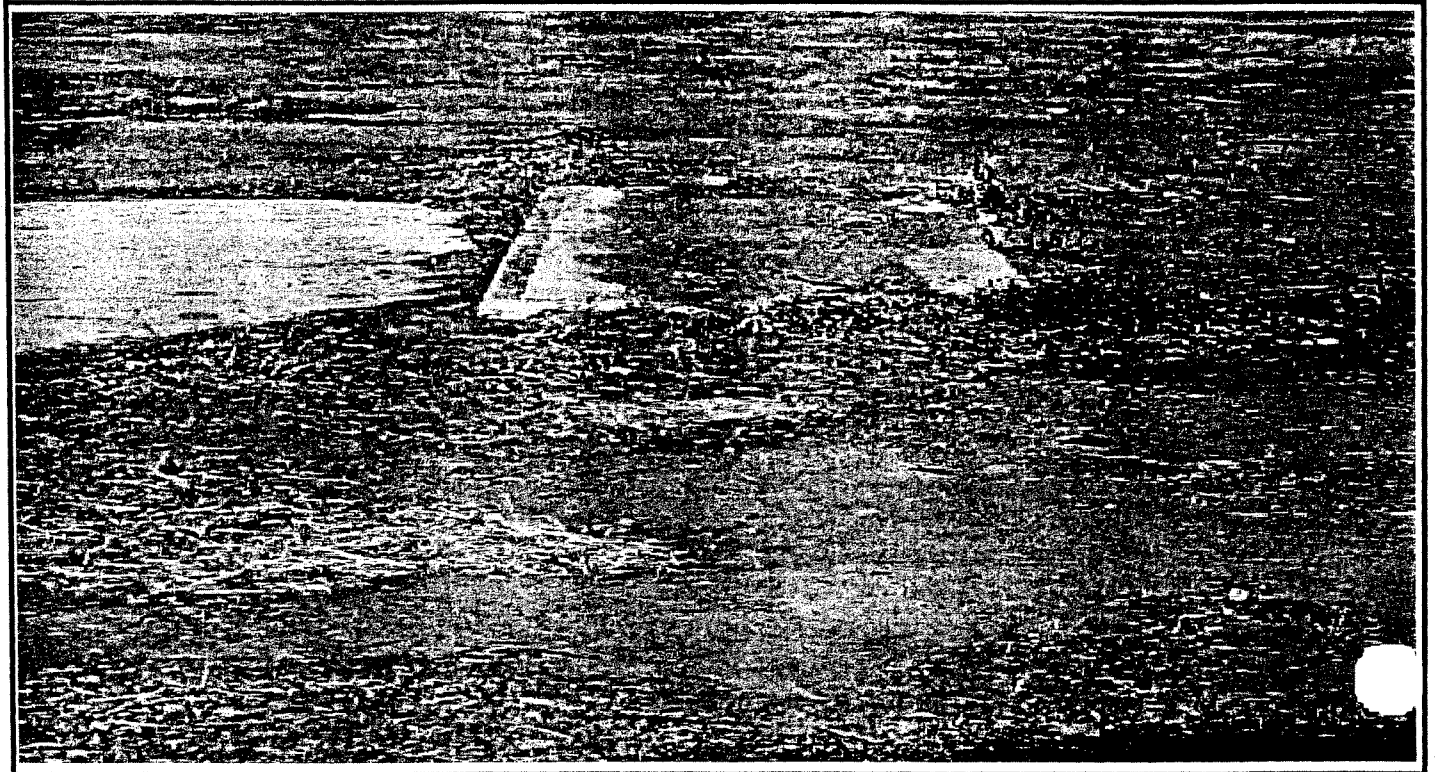
SECOR INTERNATIONAL INCORPORATED
PHOTOGRAPHIC RECORD

Client:	City of Escondido	**Job Number:**	08OT.COEGM.00
Site Name:	Green Mutual Building	**Location:**	1201 E. Washington Ave., Escondido
Photographer:	Carolyn B. Partin	**Date:**	July 2, 2003

Photograph No. 7

View of water supply well located just northeast of the Quonset building on the subject property.

Photograph No. 8

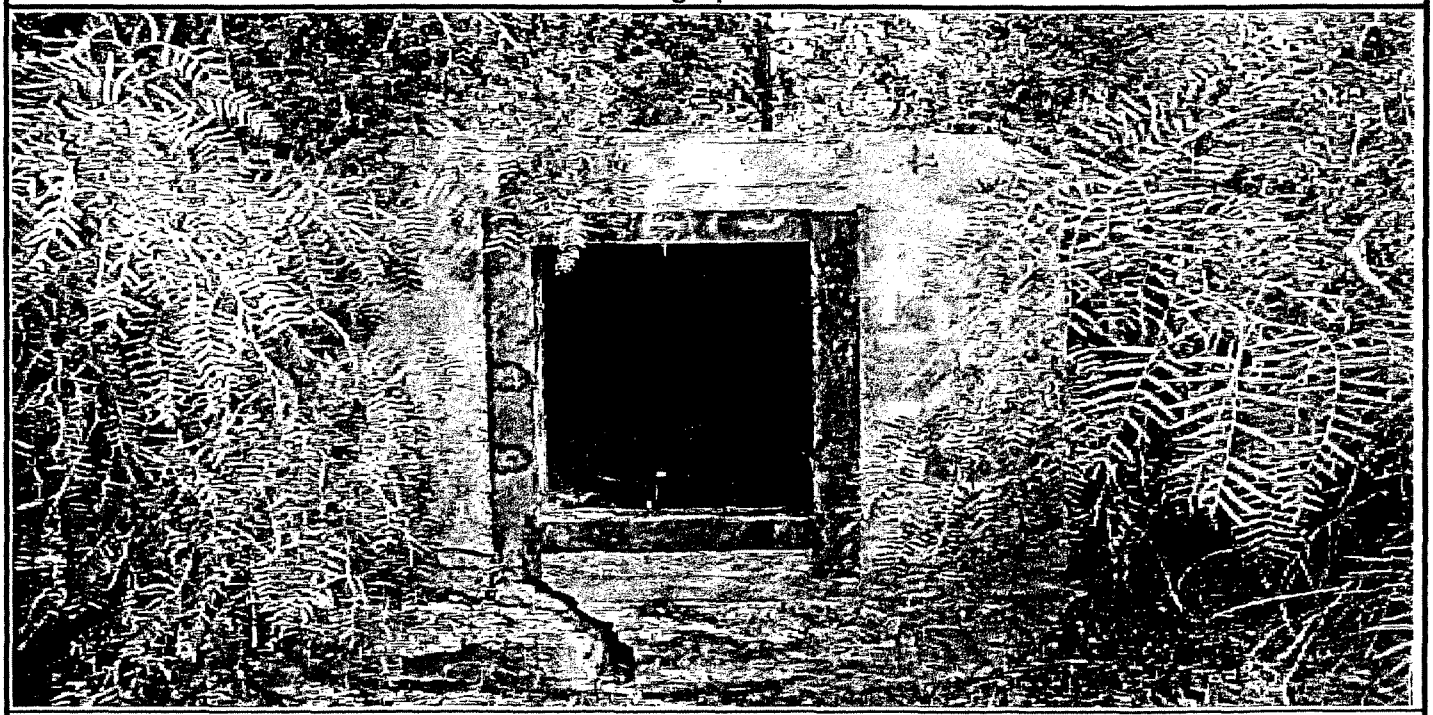


View of concrete remnant foundation located approximately 200 feet south of Quonset hut.

SECOR INTERNATIONAL INCORPORATED
PHOTOGRAPHIC RECORD

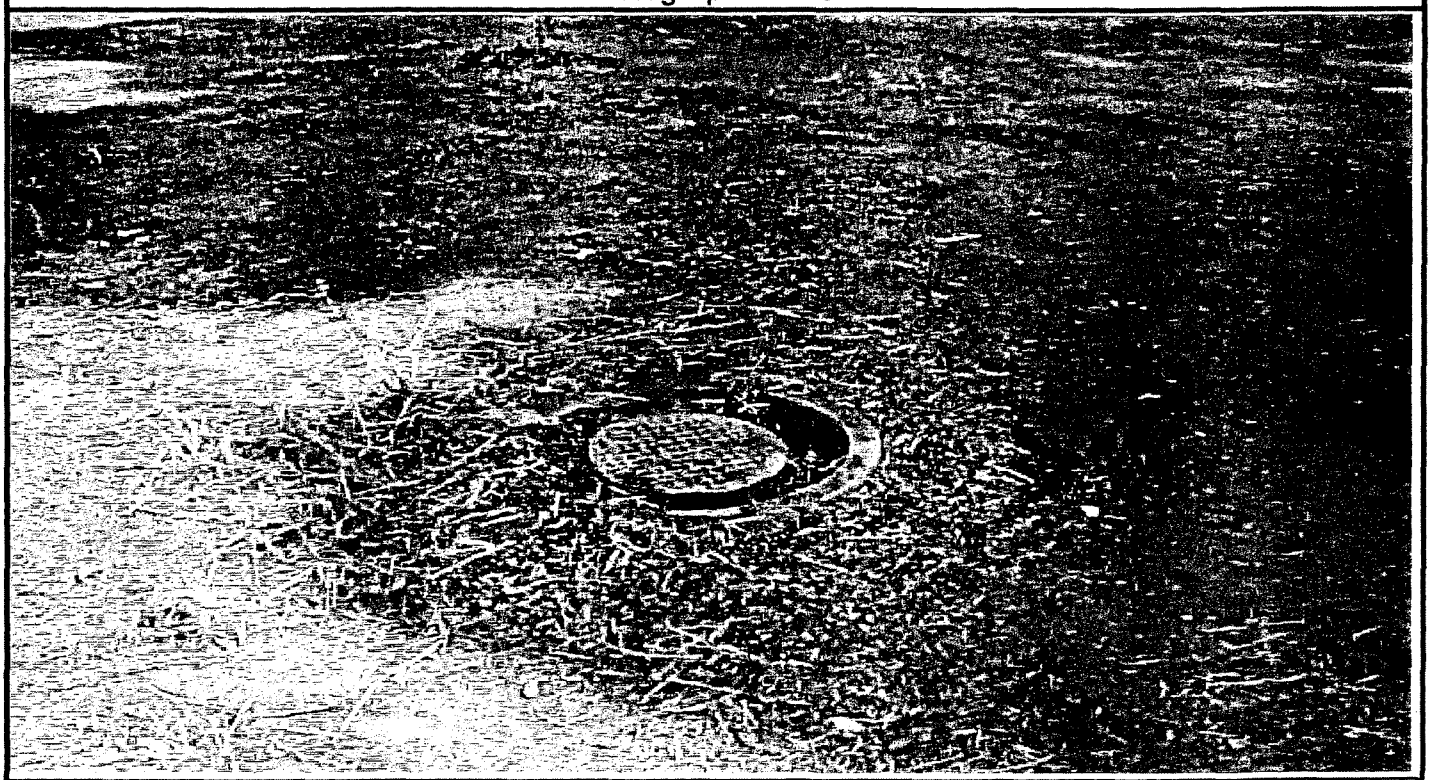
Client:	City of Escondido	**Job Number:**	08OT.COEGM.00
Site Name:	Green Mutual Building	**Location:**	1201 E. Washington Ave., Escondido
Photographer:	Carolyn B. Partin	**Date:**	July 2, 2003

Photograph No. 9



View of concrete structure with unknown purpose in southeast corner of the subject property.

Photograph No. 10



View of blue metal cover southeast of the building that might be for valving or a water UST.

APPENDIX B

ENVIRONMENTAL AGENCY DATABASE SEARCH REPORT

TRACK ➤ INFO SERVICES, LLC

Environmental FirstSearch™ Report

TARGET PROPERTY:

1201 EAST WASHINGTON AVE

ESCONDIDO CA 92027

Job Number: 08OT.VANTA

PREPARED FOR:

SECOR INTERNATIONAL, INC.

2655 CAMINO DEL RIO N, SUITE 302

SAN DIEGO, CA 92108

06-30-03

Tel: (323) 664-9981 *Fax: (323) 664-9982*

Environmental FirstSearch
Search Summary Report

Target Site: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

FirstSearch Summary

Database	Sel	Updated	Radius	Site	1/8	1/4	1/2	1/2>	ZIP	TOTALS
NPL	Y	05-08-03	1.00	0	0	0	0	0	0	0
CERCLIS	Y	06-09-03	0.50	0	0	0	0	-	0	0
NFRAP	Y	06-09-03	0.12	0	0	-	-	-	0	0
RCRA TSD	Y	12-09-02	0.50	0	0	0	0	-	0	0
RCRA COR	Y	12-09-02	1.00	0	0	0	0	0	0	0
RCRA GEN	Y	12-09-02	0.25	0	0	2	-	-	0	2
RCRA NLR	Y	12-09-02	0.12	0	0	-	-	-	0	0
ERNS	Y	12-31-02	0.12	0	1	-	-	-	0	1
State Sites	Y	04-30-03	1.00	0	0	0	0	1	1	2
Spills-1990	Y	01-15-02	0.12	0	0	-	-	-	0	0
SWL	Y	06-04-03	0.50	0	0	0	0	-	0	0
Permits	Y	06-03-03	0.12	0	4	-	-	-	1	5
Other	Y	04-30-03	0.12	0	0	-	-	-	0	0
REG UST/AST	Y	06-25-03	0.25	0	2	6	-	-	0	8
Leaking UST	Y	12-11-02	0.50	0	2	12	16	-	3	33
- TOTALS -				0	9	20	16	1	5	51

Notice of Disclaimer

Due to the limitations, constraints, inaccuracies and incompleteness of government information and computer mapping data currently available to TRACK Info Services, certain conventions have been utilized in preparing the locations of all federal, state and local agency sites residing in TRACK Info Services's databases. All EPA NPL and state landfill sites are depicted by a rectangle approximating their location and size. The boundaries of the rectangles represent the eastern and western most longitudes; the northern and southern most latitudes. As such, the mapped areas may exceed the actual areas and do not represent the actual boundaries of these properties. All other sites are depicted by a point representing their approximate address location and make no attempt to represent the actual areas of the associated property. Actual boundaries and locations of individual properties can be found in the files residing at the agency responsible for such information.

Waiver of Liability

Although TRACK Info Services uses its best efforts to research the actual location of each site, TRACK Info Services does not and can not warrant the accuracy of these sites with regard to exact location and size. All authorized users of TRACK Info Services's services proceeding are signifying an understanding of TRACK Info Services's searching and mapping conventions, and agree to waive any and all liability claims associated with search and map results showing incomplete and or inaccurate site locations.

Environmental FirstSearch
Site Information Report

Request Date:	06-30-03	**Search Type:**	COORD
Requestor Name:	Carolyn B Partin	**Job Number:**	08OT.VANTA
Standard:	ASTM		**Filtered Report**

TARGET ADDRESS: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

Demographics

Sites:	51	**Non-Geocoded:**	5	**Population:**	NA
Radon:	0.7 PCI/L				

Site Location

	Degrees (Decimal)	Degrees (Min/Sec)		UTMs
Longitude:	-117.067703	-117:4:4	**Easting:**	493684.836
Latitude:	33.133019	33:7:59	**Northing:**	3665844.05
			Zone:	11

Comment

Comment:

Additional Requests/Services

Adjacent ZIP Codes: 1 Mile(s)

ZIP Code	City Name	ST	Dist/Dir	Sel
92025	ESCONDIDO	CA	0.03 SW	Y
92026	ESCONDIDO	CA	0.28 NW	Y

Services:

	Requested?	Date
Sanborns	Yes	06-30-03
Aerial Photographs	No	
Topographical Maps	No	
City Directories	No	
Title Search	Yes	06-30-03
Municipal Reports	No	
Online Topos	No	

Environmental FirstSearch
Site Information Report

Request Date:	06-30-03	**Search Type:**	COORD
Requestor Name:	Carolyn B Partin	**Job Number:**	08OT.VANTA
Standard:	ASTM		**Filtered Report**

TARGET ADDRESS: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

Demographics

Sites:	51	**Non-Geocoded:**	5	**Population:**	NA
Radon:	0.7 PCI/L				

Site Location

	Degrees (Decimal)	Degrees (Min/Sec)		UTMs
Longitude:	-117.067703	-117:4:4	**Easting:**	493684.836
Latitude:	33.133019	33:7:59	**Northing:**	3665844.05
			Zone:	11

Comment

Comment:

Additional Requests/Services

Adjacent ZIP Codes: 1 Mile(s)

ZIP Code	City Name	ST	Dist/Dir	Sel
92025	ESCONDIDO	CA	0.03 SW	Y
92026	ESCONDIDO	CA	0.28 NW	Y

Services:

	Requested?	Date
Sanborns	Yes	06-30-03
Aerial Photographs	No	
Topographical Maps	No	
City Directories	No	
Title Search	Yes	06-30-03
Municipal Reports	No	
Online Topos	No	

Environmental FirstSearch
Sites Summary Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

TOTAL: 51 **GEOCODED:** 46 **NON GEOCODED:** 5 **SELECTED:** 0

ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
3	ERNS	UNKNOWN 292648/UNKNOWN (NRC)	WASHINGTON AND ASH ESCONDIDO CA 92027	0.03 NW	6
11	UST	CITY OF ESCONDIDO HE17H24701	620 ASH ST ESCONDIDO CA 92027	0.06 NW	16
6	PERMITS	CASALES AUTO REPAIR HE17H39049	1158 E WASHINGTON AV ESCONDIDO CA 92025	0.06 SW	10
12	UST	E Z GAS HE17H12754	1158 E WASHINGTON AV ESCONDIDO CA 92025	0.06 SW	10
7	PERMITS	E Z GAS HE17H12754	1158 E WASHINGTON AV ESCONDIDO CA 92025	0.06 SW	10
20	LUST	E Z GAS HE17H12754	1158 E WASHINGTON AV ESCONDIDO CA 92025	0.06 SW	10
21	LUST	ELITE AUTO CENTER T0607302620/PRELIM. SITE ASSES.	1158 E WASHINGTON AV ESCONDIDO CA 92025	0.06 SW	10
5	PERMITS	A-1 SMOG HE17H30839	1150 E WASHINGTON AV ESCONDIDO CA 92025	0.07 SW	8
8	PERMITS	JOHN RUZICH DDS HE17H50833	1131 E WASHINGTON AV ESCONDIDO CA 92025	0.09 SW	15
1	RCRAGN	MIDAS MUFFLER CAD982498834/SGN	433 N ASH STREET ESCONDIDO CA 92027	0.14 SE	3
9	UST	ASH TEXACO HE17H20271	425 N ASH ST ESCONDIDO CA 92027	0.15 SE	9
17	LUST	ASH TEXACO HE17H20271	425 N ASH ST ESCONDIDO CA 92027	0.15 SE	9
46	LUST	EXPRESS GAS T0608111510/CASE CLOSED	1266 E VALLEY PY ESCONDIDO CA 92027	0.15 SE	13
23	LUST	EXPRESS GAS-E VALLEY PKWY T0607300716/POST REMEDIAL ACTION	1266 E VALLEY PY ESCONDIDO CA 92027	0.15 SE	13
14	UST	EXPRESS GASOLINE #28 HE17H21396	1266 E VALLEY PY ESCONDIDO CA 92027	0.15 SE	13
25	LUST	EXPRESS GASOLINE #28 HE17H21396	1266 E VALLEY PY ESCONDIDO CA 92027-	0.15 SE	13
15	UST	FIRESTONE #4863 HE17H03286	1266 E VALLEY PY ESCONDIDO CA 92027	0.15 SE	13
39	LUST	TEXACO/N. ASH 425 T0607302837/REMEDIAL ACTION	425 N ASH ST ESCONDIDO CA 92027	0.15 SE	9
13	UST	ESCONDIDO CAR WASH HE17H03010	1300 E VALLEY PY ESCONDIDO CA 92027	0.17 SE	21
22	LUST	ESCONDIDO CAR WASH HE17H03010	1300 EAST VALLEY PY ESCONDIDO CA 92027	0.17 SE	21
27	LUST	HOME FEDERAL BANK HE17H34137	1202 EAST VALLEY PY ESCONDIDO CA 92027	0.17 SE	20

Environmental FirstSearch
Sites Summary Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

TOTAL: 51 **GEOCODED:** 46 **NON GEOCODED:** 5 **SELECTED:** 0

ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
31	LUST	PARKWAY CARWASH T0607302680/CASE CLOSED	1300 E VALLEY PY ESCONDIDO CA 92027	0.17 SE	21
2	RCRAGN	PAYLESS 4186 CA0001006824/SGN	1275 E VALLEY PKWY ESCONDIDO CA 92027	0.17 SE	4
40	LUST	TEXACO/VALLEY PK 1202(HOMEFED) T0607301684/REMEDIAL ACTION	1202 E VALLEY PY ESCONDIDO CA 92027	0.17 SE	20
10	UST	CIRCLE K STORE #8545 HE17H03480	1161 E VALLEY PY ESCONDIDO CA 92025	0.19 SW	11
19	LUST	CIRCLE K STORE #8545 HE17H03480	1161 EAST VALLEY PY ESCONDIDO CA 92025	0.19 SW	11
32	LUST	ROLLIES VALLEY MOBIL T0607302999/CASE CLOSED	1161 E VALLEY PY ESCONDIDO CA 92025	0.19 SW	11
33	LUST	SANESCO T0607301183/REMEDIAL ACTION	1161 E VALLEY PY ESCONDIDO CA 92025	0.19 SW	11
16	UST	UNOCAL SERV STATION #5722 HE17H13168	1333 E VALLEY PY ESCONDIDO CA 92027	0.21 SE	19
24	LUST	EXPRESS GASOLINE T0607302632/PRELIM. SITE ASSES.	1140 E MISSION AV ESCONDIDO CA 92025	0.30 NW	14
30	LUST	O&S EXPRESS HE17H12546	1140 E MISSION AV ESCONDIDO CA 92025	0.30 NW	14
26	LUST	FEDCO-AUTO SERVICE HE17H19873	1475 E VALLEY PY ESCONDIDO CA 92027-	0.33 SE	1
48	LUST	FORMER FEDCO INC. T0608106147/CASE CLOSED	1475 E VALLEY PY ESCONDIDO CA 92027	0.33 SE	1
28	LUST	LOVETT S 1 HOUR CLEANERS HE17H11085	1378 E GRAND AV ESCONDIDO CA 92027-	0.42 SE	2
29	LUST	LOVETT S DRY CLEANER T0608101408/REMEDIAL ACTION	1378 E GRAND AV ESCONDIDO CA 92027	0.42 SE	2
35	LUST	SHELL GAS STATION HE17H03184	1574 EAST VALLEY PY ESCONDIDO CA 92027	0.43 NE	5
36	LUST	SHELL SERVICE STATION T0607399080/PRELIM. SITE ASSES.	1574 E VALLEY PY ESCONDIDO CA 92027	0.43 NE	5
50	LUST	SHELL SERVICE STATION T0608189075/CASE CLOSED	1574 E VALLEY PY ESCONDIDO CA 92027	0.43 NE	5
42	LUST	VALLEY ROSE SHELL T0607302591/CASE CLOSED	1574 E VALLEY PY ESCONDIDO CA 92027	0.43 NE	5
18	LUST	CHEVRON #9-1131 T0607302369/PRELIM. SITE ASSES.	1575 E VALLEY PY ESCONDIDO CA 92027	0.44 NE	18
41	LUST	TIM TERRYS CHEVRON HE17H05733	1575 EAST VALLEY PY ESCONDIDO CA 92027	0.44 NE	18

Environmental FirstSearch
Sites Summary Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

TOTAL: 51 **GEOCODED:** 46 **NON GEOCODED:** 5 **SELECTED:** 0

ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
34	LUST	SHAH TEXACO HE17H05362	1602 EAST VALLEY PY ESCONDIDO CA 92027	0.47 NE	17
37	LUST	TEXACO/E VALLEY PY 1602 T0607301008/CASE CLOSED	1602 E VALLEY PY ESCONDIDO CA 92027	0.47 NE	17
38	LUST	TEXACO/E VALLEY PY 1602 T0607302839/CASE CLOSED	1602 E VALLEY PY ESCONDIDO CA 92027	0.47 NE	17
51	LUST	TEXACO/E VALLEY PY 1602 T0608191910/CASE CLOSED	1602 E VALLEY PY ESCONDIDO CA 92027	0.47 NE	17
4	STATE	REDWOOD TOWN COURT CAL37830001/NO ACTION - FOR CALM	500 EAST VALLEY PARKWAY ESCONDIDO CA 92025	0.73 SW	7

Environmental FirstSearch
Sites Summary Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

TAL: 51 **GEOCODED:** 46 **NON GEOCODED:** 5 **SELECTED:** 0

DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
PERMITS	DR RICKARDS CHIROPRACTIC INC HE17H02433	1111 E WASHINGTON AV ESCONDIDO CA 92025	NON GC	
LUST	ECONOMY CLEANERS T0608119076/CASE CLOSED	1718 E VALLEY PY ESCONDIDO CA 92027	NON GC	
LUST	EXXON / MOBIL OIL #18-G6P T0608187969/REMEDIAL ACTION	2004 E VALLEY PY ESCONDIDO CA 92027	NON GC	
LUST	ORANGE GLEN MARKET T0608194547/CASE CLOSED	2741 E VALLEY PY ESCONDIDO CA 92027	NON GC	
STATE	VALLEY HIGH SCHOOL (PROPOSED) CAL37010024/VOLUNTARY CLEANUP PR	WASHINGTON AVENUE & EAST VALLE ESCONDIDO CA 92027	NON GC	

Environmental FirstSearch

.12 Mile Radius

Non-ASTM Map: Permits

1201 EAST WASHINGTON AVE, ESCONDIDO CA 92027

Source: 1999 U.S. Census TIGER Files

Target Site (Latitude: 33.133019 Longitude: -117.067703) .....

Identified Site, Multiple Sites, Receptor .....

NPL, Solid Waste Landfill (SWL) or Hazardous Waste .....

National Historic Sites and Landmark Sites .....

Railroads .....

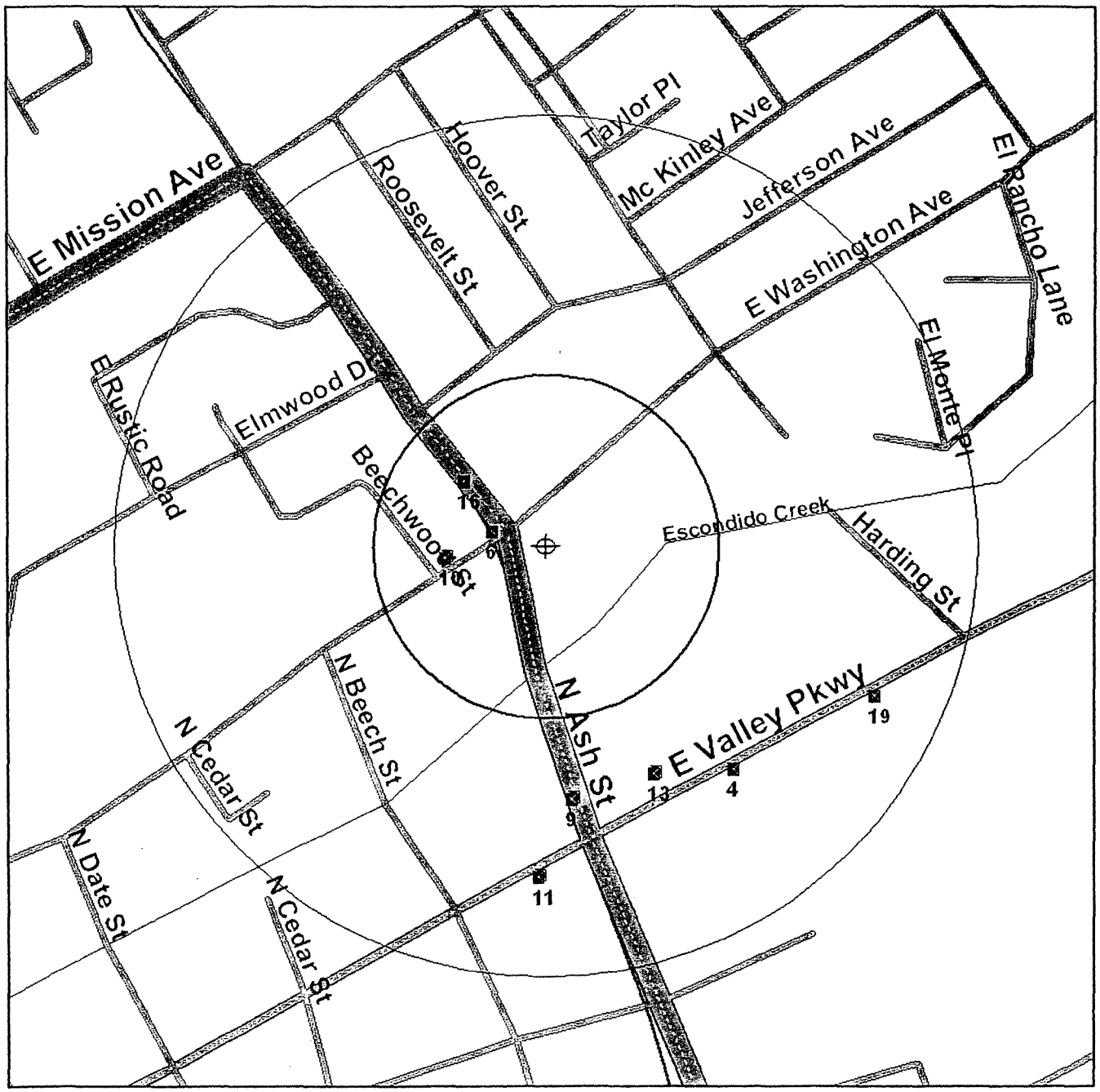
Black Rings Represent 1/4 Mile Radii; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.25 Mile Radius

ASTM Map: RCRAGEN, ERNS, UST

1201 EAST WASHINGTON AVE, ESCONDIDO CA 92027



Source: 1999 U.S. Census TIGER Files

Target Site (Latitude: 33.133019 Longitude: -117.067703) .....

Identified Site, Multiple Sites, Receptor .....

NPL, Solid Waste Landfill (SWL) or Hazardous Waste .....

Railroads .....

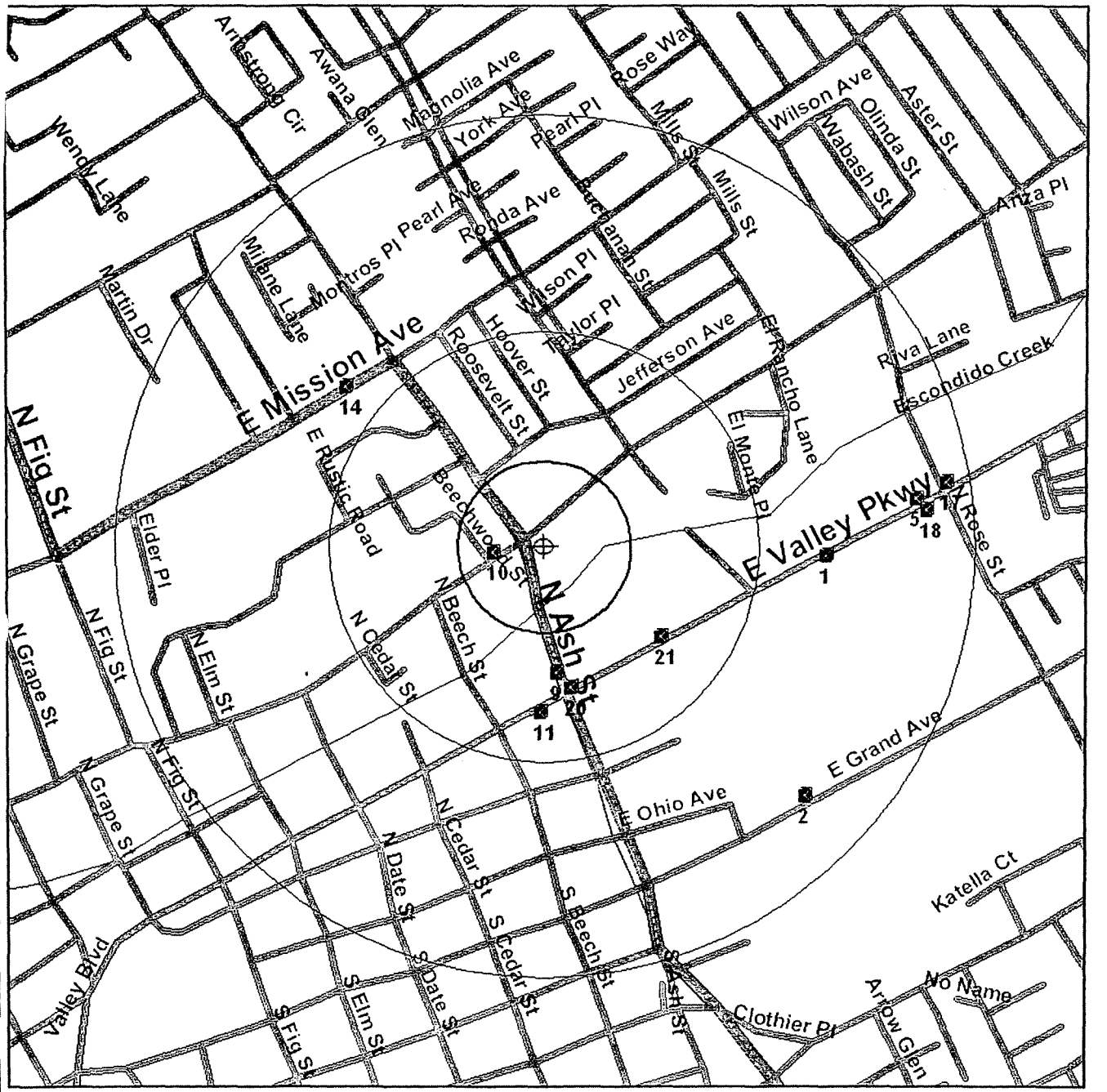
Black Rings Represent 1/4 Mile Radii; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.5 Mile Radius

ASTM Map: CERCLIS, RCRATSD, LUST, SWL

1201 EAST WASHINGTON AVE, ESCONDIDO CA 92027



e: 1999 U.S. Census TIGER Files

get Site (Latitude: 33.133019 Longitude: -117.067703) .....

atified Site, Multiple Sites, Receptor .....

, Solid Waste Landfill (SWL) or Hazardous Waste .....

roads .....

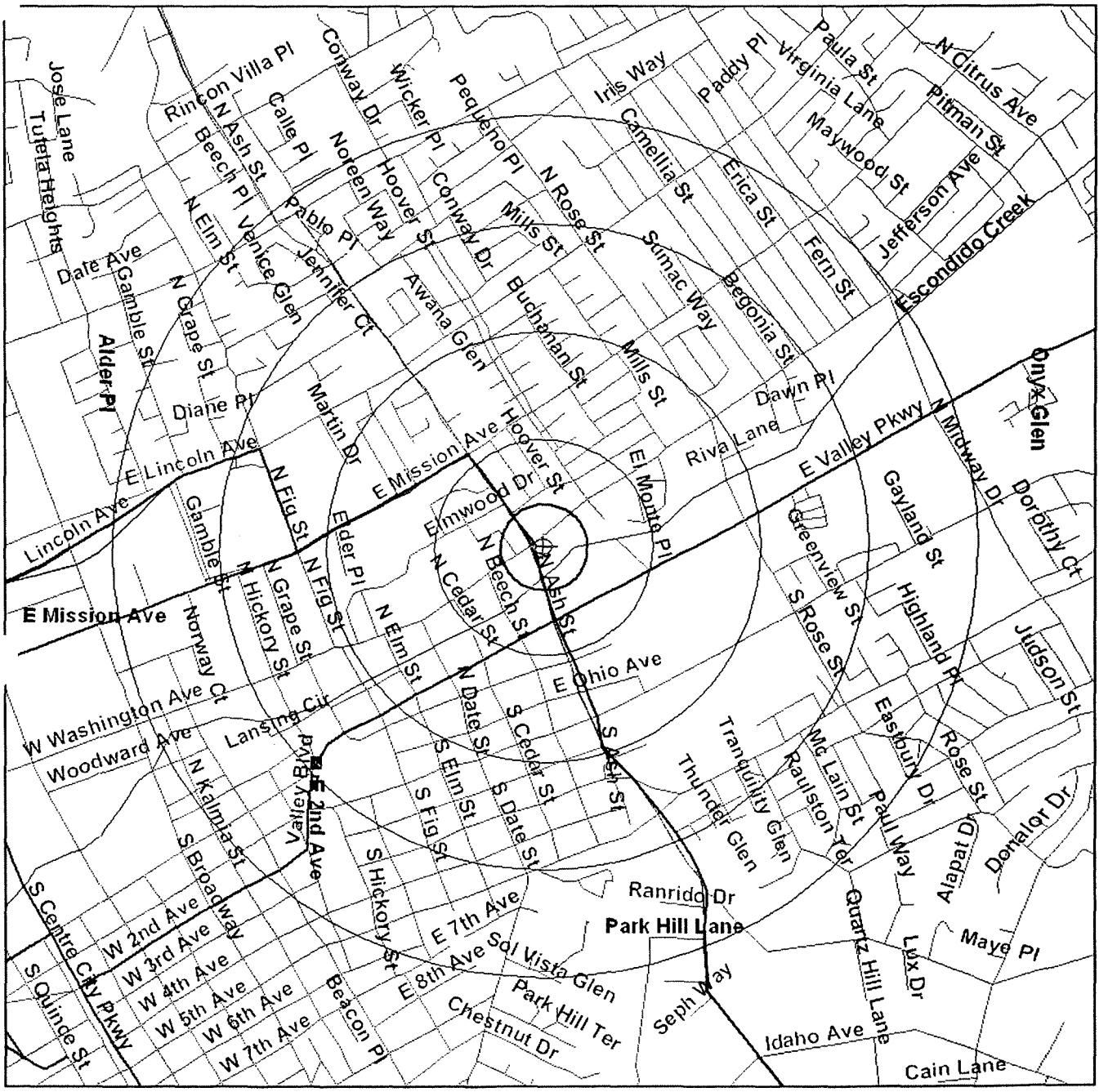
ick Rings Represent 1/4 Mile Radii; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

1 Mile Radius

ASTM Map: NPL, RCRACOR, STATE Sites

1201 EAST WASHINGTON AVE, ESCONDIDO CA 92027



ource: 1999 U.S. Census TIGER Files

Target Site (Latitude: 33.133019 Longitude: -117.067703) .....

fied Site, Multiple Sites, Receptor .....

Solid Waste Landfill (SWL) or Hazardous Waste .....

Railroads .....

Black Rings Represent 1/4 Mile Radii; Red Ring Represents 500 ft. Radius

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

EMERGENCY RESPONSE NOTIFICATION SITE

SEARCH ID: 3 **DIST/DIR:** 0.03 NW **MAP ID:** 6

NAME: UNKNOWN
ADDRESS: WASHINGTON AND ASH
ESCONDIDO CA 92027
SAN DIEGO
CONTACT:

REV: 10/30/92
ID1: 292648
ID2:
STATUS: UNKNOWN (NRC)
PHONE:

SPILL INFORMATION
DATE OF SPILL: 10/30/1992 **TIME OF SPILL:** 0950

PRODUCT RELEASED (1): HYDROCHLORINE ACID GAS
QUANTITY (1): 20
UNITS (1): OTH

PRODUCT RELEASED (2):
QUANTITY (2):
UNITS (2):

PRODUCT RELEASED (3):
QUANTITY (3):
UNITS (3):

MEDIUM/MEDIA AFFECTED

AIR:	NO	**GROUNDWATER:**	NO
LAND:	NO	**FIXED FACILITY:**	NO
WATER:	NO	**OTHER:**	NO

WATERBODY AFFECTED BY RELEASE:

SPILL INFORMATION
DATE OF SPILL: 10/30/1992 **TIME OF SPILL:** 0950

PRODUCT RELEASED (1): HYDROCHLORINE ACID GAS
QUANTITY (1): 20
UNITS (1): OTH

PRODUCT RELEASED (2):
QUANTITY (2):
UNITS (2):

PRODUCT RELEASED (3):
QUANTITY (3):
UNITS (3):

MEDIUM/MEDIA AFFECTED

AIR:	NO	**GROUNDWATER:**	NO
LAND:	NO	**FIXED FACILITY:**	NO
WATER:	NO	**OTHER:**	NO

WATERBODY AFFECTED BY RELEASE:

CAUSE OF RELEASE

DUMPING:	NO	**EQUIPMENT FAILURE:**	NO
NATURAL PHENOMENON:	NO	**OPERATOR ERROR:**	NO

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

EMERGENCY RESPONSE NOTIFICATION SITE

SEARCH ID: 3 **DIST/DIR:** 0.03 NW **MAP ID:** 6

NAME: UNKNOWN
ADDRESS: WASHINGTON AND ASH
ESCONDIDO CA 92027
SAN DIEGO
CONTACT:

REV: 10/30/92
ID1: 292648
ID2:
STATUS: UNKNOWN (NRC)
PHONE:

OTHER CAUSE: NO **TRANSP. ACCIDENT:** NO
UNKNOWN: NO

ACTIONS TAKEN: CO HEALTH DID REMOVAL
RELEASE DETECTION: QT= CU FT ABANDONED CONTAINER - NOT LEAKING
MISC. NOTES:

DISCHARGER INFORMATION
DISCHARGER ID: 292648 **DUN & BRADSTREET #:**
TYPE OF DISCHARGER: UNKNOWN
NAME OF DISCHARGER: UNKNOWN
ADDRESS:

CAUSE OF RELEASE
DUMPING: NO **EQUIPMENT FAILURE:** NO
NATURAL PHENOMENON: NO **OPERATOR ERROR:** NO
OTHER CAUSE: NO **TRANSP. ACCIDENT:** NO
UNKNOWN: NO

ACTIONS TAKEN: CO HEALTH DID REMOVAL
RELEASE DETECTION: QT= CU FT ABANDONED CONTAINER - NOT LEAKING
MISC. NOTES:

DISCHARGER INFORMATION
DISCHARGER ID: 292648 **DUN & BRADSTREET #:**
TYPE OF DISCHARGER: UNKNOWN
NAME OF DISCHARGER: UNKNOWN
ADDRESS:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 11 **DIST/DIR:** 0.06 NW **MAP ID:** 16

NAME:	CITY OF ESCONDIDO	**REV:**	02/06/03
ADDRESS:	620 ASH ST	**ID1:**	HE17H24701
	ESCONDIDO CA 92027	**ID2:**	
	SAN DIEGO	**STATUS:**	
CONTACT:	CITY OF ESCONDIDO	**PHONE:**	( ) -

TANK ID s

Permit Number:	*H24701*
Tank Number:	*T001*
Tank ID Number:	

TANK CHARACTERISTICS INFORMATION

Capacity:	*1000.00*
Manufacturer Code:	
Year Installed:	*1972*
Contents:	*REGULAR UNLEADED*
Tank Content Chemical Name:	
Tank Content CAS Number:	
Tank System Type:	*SINGLE WALL W/O SECNDRY CNTMNT*
Primary Tank Material:	*CARBON STEEL*
Tank Interior Lining or Coating:	*NO SECONDARY TANK MTRL INFO*
Tank Exterior Corrosion Protection:	*NO EXTERIOR CORR PROT INFO*
Overfill Device:	*NO OVERFILL INFORMATION*
Spill Buckets:	
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*

TANK TESTING & MONITORING INFORMATION

Below Grade Equipment:	
Is System 1998 Standards Certified (Y/N):	
Tank Monitor Device:	*NO TANK MONIT DEV INFO*
Automatic Tank Gauges:	*NO ATGS INFO AVAILABLE*
Tank Test Status:	*N/A*
Tank Test Date:	*12/01/87*

PIPING INFORMATION

Piping Corrosion Protection:	*NO PIPE PROTECTION INFO*
Pressure Pipe Loss Leak Detector Type:	*NO PPLLD BRAND INFO*
Pipe System Type:	*PIPE TYPE NOT AVAILABLE*
Pipe Construction:	*NO PIPE CONSTRUCTION INFO*
Pipe Primary Material:	*NO PRIMARY PIPE MATERIAL INFO*
Pipe Monitor Device:	*NO PIPE MONIT DEV INFO*

PIPING INFORMATION

Pipe Test Date:	*12/01/87*

REGULATORY INFORMATION

Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*CLOSED BY REMOVAL*

TANK ID s

Permit Number:	*H24701*

- Continued on next page -

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 11 **DIST/DIR:** 0.06 NW **MAP ID:** 16

NAME: CITY OF ESCONDIDO
ADDRESS: 620 ASH ST
ESCONDIDO CA 92027
SAN DIEGO
CONTACT: CITY OF ESCONDIDO

REV: 02/06/03
ID1: HE17H24701
ID2:
STATUS:
PHONE: ( ) -

Tank Number: *T002*
Tank ID Number:

TANK CHARACTERISTICS INFORMATION
Capacity: *1000.00*
Manufacturer Code:
Year Installed: *1972*
Contents: *DIESEL*
Tank Content Chemical Name:
Tank Content CAS Number:

Tank System Type: *SINGLE WALL W/O SECNDRY CNTMNT*
Primary Tank Material: *CARBON STEEL*
Tank Interior Lining or Coating: *NO SECONDARY TANK MTRL INFO*
Tank Exterior Corrosion Protection: *NO EXTERIOR CORR PROT INFO*
Overfill Device: *NO OVERFILL INFORMATION*
Spill Buckets:
Is Groundwater Greater Than 20 Feet (Y/N): *NO*

TANK TESTING & MONITORING INFORMATION
Below Grade Equipment:
Is System 1998 Standards Certified (Y/N):
Tank Monitor Device: *NO TANK MONIT DEV INFO*
Automatic Tank Gauges: *NO ATGS INFO AVAILABLE*
Tank Test Status: *N/A*
Tank Test Date: *12/01/87*

PIPING INFORMATION
Piping Corrosion Protection: *NO PIPE PROTECTION INFO*
Pressure Pipe Loss Leak Detector Type: *NO PPLLD BRAND INFO*
Pipe System Type: *PIPE TYPE NOT AVAILABLE*
Pipe Construction: *NO PIPE CONSTRUCTION INFO*
Pipe Primary Material: *NO PRIMARY PIPE MATERIAL INFO*
Pipe Monitor Device: *NO PIPE MONIT DEV INFO*
PIPING INFORMATION
Pipe Test Date: *12/01/87*

REGULATORY INFORMATION
Tank Exempt Indicator: *NO*
Hazard Category 1:
Regulatory Status Code Description: *CLOSED BY REMOVAL*

TANK ID s
Permit Number: *H24701*
Tank Number: *T003*
Tank ID Number:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 11 **DIST/DIR:** 0.06 NW **MAP ID:** 16

NAME: CITY OF ESCONDIDO
ADDRESS: 620 ASH ST
ESCONDIDO CA 92027
SAN DIEGO
CONTACT: CITY OF ESCONDIDO

REV: 02/06/03
ID1: HE17H24701
ID2:
STATUS:
PHONE: ( ) -

TANK CHARACTERISTICS INFORMATION

Capacity:	*550.00*
Manufacturer Code:	
Year Installed:	
Contents:	*WASTE OIL*
Tank Content Chemical Name:	
Tank Content CAS Number:	
Tank System Type:	*SINGLE WALL W/O SECNDRY CNTMNT*
Primary Tank Material:	*CARBON STEEL*
Tank Interior Lining or Coating:	*NO SECONDARY TANK MTRL INFO*
Tank Exterior Corrosion Protection:	*NO EXTERIOR CORR PROT INFO*
Overfill Device:	*NO OVERFILL INFORMATION*
Spill Buckets:	
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*

TANK TESTING & MONITORING INFORMATION

Below Grade Equipment:	
Is System 1998 Standards Certified (Y/N):	
Tank Monitor Device:	*NO TANK MONIT DEV INFO*
Automatic Tank Gauges:	*NO ATGS INFO AVAILABLE*
Tank Test Status:	*N/A*
Tank Test Date:	*12/01/87*

PIPING INFORMATION

Piping Corrosion Protection:	*NO PIPE PROTECTION INFO*
Pressure Pipe Loss Leak Detector Type:	*NO PPLLD BRAND INFO*
Pipe System Type:	*PIPE TYPE NOT AVAILABLE*
Pipe Construction:	*NO PIPE CONSTRUCTION INFO*
Pipe Primary Material:	*NO PRIMARY PIPE MATERIAL INFO*
Pipe Monitor Device:	*NO PIPE MONIT DEV INFO*

PIPING INFORMATION

Pipe Test Date:	*12/01/87*

REGULATORY INFORMATION

Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*CLOSED BY REMOVAL*

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

PERMITS SITE

EARCH ID: 6 **DIST/DIR:** 0.06 SW **MAP ID:** 10

AME:	CASALES AUTO REPAIR	**REV:**	02/06/03
DDRESS:	1158 E WASHINGTON AV	**ID1:**	HE17H39049
	ESCONDIDO CA 92025	**ID2:**	
	SAN DIEGO	**STATUS:**	
ONTACT:	MONICA CASALES	**PHONE:**	(760)745-6978

NDUSTRY / FACILITY INFORMATION NAMES

usiness Description & SIC Code: *Genl Auto/Cycle/Truck Rep*
as Station:
ire Department District:

ERMIT INFORMATION

ermit Number: *HE17H39049*
nactive / Active Facility Indicator:
nnual Expiration Date: *Mar 31*
tatus:
lap Code / Business Plan on File:
usiness Plan Acceptance Date: *01/20/2000*

GENERAL INSPECTION & VIOLATION INFORMATION

nspection Date: *11/29/1999 0:00:00*
einspection Date: *Jan 2001*
nspector Name: *WALSH*
otice of Violation Issued:
elinquent Flag:
ast Update: *5/20/01*
ast Delinquent Letter:

ROPERTY OWNER INFORMATION

roperty Owner Name:
roperty Owner Address:

WASTE STREAMS GENERATED BY BUSINESS

Vaste Name & Code: *HALOGENATED SOLVENTS (211)*
nspection Date: *11/29/99*
Vaste Quantity Present at Inspection: *165*
nnual Quantity: *110*
Measurement Unit: *GAL*
reatment Method: *RECYCLE*
torage Methold: *PLASTIC DRUMS,55 GALLONS*
Carcinogen Indicator:
Hauler: *GOLDEN STATE ENVIRONMENTA*
Vaste Description: *USED OIL*

WASTE STREAMS GENERATED BY BUSINESS

Vaste Name & Code: *USED OIL FILTERS (888)*
nspection Date: *11/29/99*
Vaste Quantity Present at Inspection: *300*
nnual Quantity: *300*
Measurement Unit: *LBS*
reatment Method: *FILTERS/METAL RECLAI*
torage Methold: *METAL DRUMS,30 GALLONS*
Carcinogen Indicator:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

PERMITS SITE

SEARCH ID: 6 **DIST/DIR:** 0.06 SW **MAP ID:** 10

NAME:	CASALES AUTO REPAIR	**REV:**	02/06/03
ADDRESS:	1158 E WASHINGTON AV	**ID1:**	HE17H39049
	ESCONDIDO CA 92025	**ID2:**	
	SAN DIEGO	**STATUS:**	
CONTACT:	MONICA CASALES	**PHONE:**	(760)745-6978

Hauler: *GOLDEN STATE ENVIRONMENTA*
Waste Description: *USED OIL FILTERS*

WASTE STREAMS GENERATED BY BUSINESS
Waste Name & Code: *HYDROCARBON SOLVENTS (213)*
Inspection Date: *11/29/99*
Waste Quantity Present at Inspection: *10*
Annual Quantity: *40*
Measurement Unit: *GAL*
Treatment Method: *RECYCLE*
Storage Methold: *PROCESSING EQUIPMENT*
Carcinogen Indicator:
Hauler: *SAFETY KLEEN*
Waste Description: *PARTS WASHER*

WASTE STREAMS GENERATED BY BUSINESS
Waste Name & Code: *ORGANIC LIQUIDS W/METALS (342)*
Inspection Date: *11/29/99*
Waste Quantity Present at Inspection: *110*
Annual Quantity: *55*
Measurement Unit: *GAL*
Treatment Method: *RECYCLE*
Storage Methold: *PLASTIC DRUMS,55 GALLONS*
Carcinogen Indicator:
Hauler: *UNREGISTERED HAZ WST HAUL*
Waste Description: *RECYCLED ANTIFREEZE*

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *11/29/99*
Violation Item Number: *V001*
Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *01*
Violation Definition: *HANDLER OF HAZARDOUS WASTE/MATERIAL HAS NOT OBTAINED A VALID SAN DIEGO COUNTY HEALTH PERMIT* *SDCC 68.905*

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *11/29/99*
Violation Item Number: *V002*
Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *01*
Violation Definition: *HAZARDOUS WASTE CONTAINERS ARE MISSING LABELS, ACCUMULATION DATE AND/OR ARE IMPROPERLY LABELED* *CCR 66262.34*

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *11/29/99*
Violation Item Number: *V003*

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

PERMITS SITE

SEARCH ID: 6 **DIST/DIR:** 0.06 SW **MAP ID:** 10

NAME:	CASALES AUTO REPAIR	**REV:**	02/06/03
ADDRESS:	1158 E WASHINGTON AV	**ID1:**	HE17H39049
	ESCONDIDO CA 92025	**ID2:**	
	SAN DIEGO	**STATUS:**	
CONTACT:	MONICA CASALES	**PHONE:**	(760)745-6978

Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *01*
Violation Definition: *OWNER/OPERATOR HAS NOT PREPARED A CONTINGENCY PLAN, OR MAINTAINED A COPY ON SITE, OR SUBMITTED A COPY TO THE HMMD. CCR 66265.51,.53*

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *11/29/99*
Violation Item Number: *V004*
Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *01*
Violation Definition: *USED OIL FILTERS NOT PROPERLY DRAINED, STORED, OR LABELED PRIOR TO TRANSPORT FOR THE PURPOSE OF METAL RECLAMATION. CCR 66266.130*

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 12 **DIST/DIR:** 0.06 SW **MAP ID:** 10

NAME: E Z GAS
ADDRESS: 1158 E WASHINGTON AV
ESCONDIDO CA 92025
SAN DIEGO
CONTACT: JONI-P-JAMO

REV: 02/06/03
ID1: HE17H12754
ID2:
STATUS:
PHONE: (760)233-1184

TANK ID s
Permit Number: *H12754*
Tank Number: *T001*
Tank ID Number: *NT0844-1*

TANK CHARACTERISTICS INFORMATION
Capacity: *10000.00*
Manufacturer Code:
Year Installed:
Contents: *REGULAR UNLEADED*
Tank Content Chemical Name:
Tank Content CAS Number:

Tank System Type: *SINGLE WALL W/CONTAINMENT*
Primary Tank Material: *CARBON STEEL*
Tank Interior Lining or Coating: *NONE*
Tank Exterior Corrosion Protection: *NONE*
Overfill Device: *NONE*
Spill Buckets: *2*
Is Groundwater Greater Than 20 Feet (Y/N): *NO*

TANK TESTING & MONITORING INFORMATION
Below Grade Equipment: *999999*
Is System 1998 Standards Certified (Y/N):
Tank Monitor Device: *NONE*
Automatic Tank Gauges: *NONE*
Tank Test Status: *TIGHT*
Tank Test Date: *04/17/95*

PIPING INFORMATION
Piping Corrosion Protection: *NONE*
Pressure Pipe Loss Leak Detector Type: *RED JACKET DLD, XLD, OR XLP*
Pipe System Type: *PRESSURIZED*
Pipe Construction: *SINGLE WALL*
Pipe Primary Material: *BARE STEEL*
Pipe Monitor Device: *NONE*
PIPING INFORMATION
Pipe Test Date: *01/01/01*

REGULATORY INFORMATION
Tank Exempt Indicator: *NO*
Hazard Category 1:
Regulatory Status Code Description: *CLOSED BY REMOVAL*

TANK ID s
Permit Number: *H12754*

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 12 **DIST/DIR:** 0.06 SW **MAP ID:** 10

NAME:	E Z GAS	**REV:**	02/06/03
ADDRESS:	1158 E WASHINGTON AV	**ID1:**	HE17H12754
	ESCONDIDO CA 92025	**ID2:**	
	SAN DIEGO	**STATUS:**	
CONTACT:	JONI-P-JAMO	**PHONE:**	(760)233-1184

Tank Number:	*T002*
Tank ID Number:	*10000*
TANK CHARACTERISTICS INFORMATION	
Capacity:	*10000.00*
Manufacturer Code:	
Year Installed:	
Contents:	*REGULAR UNLEADED*
Tank Content Chemical Name:	
Tank Content CAS Number:	
Tank System Type:	*SINGLE WALL W/O SECNDRY CNTMNT*
Primary Tank Material:	*CARBON STEEL W/FRP COATING*
Tank Interior Lining or Coating:	*NONE*
Tank Exterior Corrosion Protection:	*NONE*
Overfill Device:	*NONE*
Spill Buckets:	*2*
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*
TANK TESTING & MONITORING INFORMATION	
Below Grade Equipment:	*999999*
Is System 1998 Standards Certified (Y/N):	
Tank Monitor Device:	*NONE*
Automatic Tank Gauges:	*NONE*
Tank Test Status:	*TIGHT*
Tank Test Date:	*04/17/95*
PIPING INFORMATION	
Piping Corrosion Protection:	*NONE*
Pressure Pipe Loss Leak Detector Type:	*RED JACKET DLD, XLD, OR XLP*
Pipe System Type:	*PRESSURIZED*
Pipe Construction:	*SINGLE WALL*
Pipe Primary Material:	*BARE STEEL*
Pipe Monitor Device:	*NONE*
PIPING INFORMATION	
Pipe Test Date:	*01/01/01*
REGULATORY INFORMATION	
Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*CLOSED BY REMOVAL*
TANK ID s	
Permit Number:	*H12754*
Tank Number:	*T003*
Tank ID Number:	*NT0844-3*

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 12 **DIST/DIR:** 0.06 SW **MAP ID:** 10

NAME:	E Z GAS	**REV:**	02/06/03
ADDRESS:	1158 E WASHINGTON AV	**ID1:**	HE17H12754
	ESCONDIDO CA 92025	**ID2:**	
	SAN DIEGO	**STATUS:**	
CONTACT:	JONI-P-JAMO	**PHONE:**	(760)233-1184

TANK CHARACTERISTICS INFORMATION

Capacity:	*5000.00*
Manufacturer Code:	
Year Installed:	
Contents:	*REGULAR UNLEADED*
Tank Content Chemical Name:	
Tank Content CAS Number:	
Tank System Type:	*SINGLE WALL W/CONTAINMENT*
Primary Tank Material:	*CARBON STEEL*
Tank Interior Lining or Coating:	*NONE*
Tank Exterior Corrosion Protection:	*NONE*
Overfill Device:	*NONE*
Spill Buckets:	*2*
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*

TANK TESTING & MONITORING INFORMATION

Below Grade Equipment:	*999999*
Is System 1998 Standards Certified (Y/N):	
Tank Monitor Device:	*NONE*
Automatic Tank Gauges:	*NONE*
Tank Test Status:	*TIGHT*
Tank Test Date:	*04/17/95*

PIPING INFORMATION

Piping Corrosion Protection:	*NO PIPE PROTECTION INFO*
Pressure Pipe Loss Leak Detector Type:	*RED JACKET DLD, XLD, OR XLP*
Pipe System Type:	*PRESSURIZED*
Pipe Construction:	*SINGLE WALL*
Pipe Primary Material:	*BARE STEEL*
Pipe Monitor Device:	*NONE*

PIPING INFORMATION

Pipe Test Date:	*01/01/01*

REGULATORY INFORMATION

Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*CLOSED BY REMOVAL*

TANK ID s

Permit Number:	*H12754*
Tank Number:	*T005*
Tank ID Number:	*5*

TANK CHARACTERISTICS INFORMATION

Capacity:	*500.00*
Manufacturer Code:	

- Continued on next page -

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 12 **DIST/DIR:** 0.06 SW **MAP ID:** 10

NAME: E Z GAS
ADDRESS: 1158 E WASHINGTON AV
ESCONDIDO CA 92025
SAN DIEGO
CONTACT: JONI-P-JAMO

REV: 02/06/03
ID1: HE17H12754
ID2:
STATUS:
PHONE: (760)233-1184

Year Installed:
Contents: *WASTE OIL*
Tank Content Chemical Name:
Tank Content CAS Number:

Tank System Type: *SINGLE WALL W/O SECNDRY CNTMNT*
Primary Tank Material: *CARBON STEEL*
Tank Interior Lining or Coating: *NONE*
Tank Exterior Corrosion Protection: *NONE*
Overfill Device: *NONE*
Spill Buckets: *2*
Is Groundwater Greater Than 20 Feet (Y/N): *NO*

TANK TESTING & MONITORING INFORMATION
Below Grade Equipment: *999999*
Is System 1998 Standards Certified (Y/N):
Tank Monitor Device: *NONE*
Automatic Tank Gauges: *NONE*
Tank Test Status: *INVALID CODE*
Tank Test Date: *04/17/95*

PIPING INFORMATION
Piping Corrosion Protection: *UNKNOWN*
Pressure Pipe Loss Leak Detector Type: *NONE*
Pipe System Type: *GRAVITY*
Pipe Construction: *SINGLE WALL*
Pipe Primary Material: *BARE STEEL*
Pipe Monitor Device: *NONE*
PIPING INFORMATION
Pipe Test Date: *01/01/01*

REGULATORY INFORMATION
Tank Exempt Indicator: *NO*
Hazard Category 1:
Regulatory Status Code Description: *CLOSED BY REMOVAL*

TANK ID s
Permit Number: *H12754*
Tank Number: *T006*
Tank ID Number: *NT2174*

TANK CHARACTERISTICS INFORMATION
Capacity: *20000.00*
Manufacturer Code:
Year Installed:
Contents: *REGULAR UNLEADED*
Tank Content Chemical Name:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 12 **DIST/DIR:** 0.06 SW **MAP ID:** 10

NAME:	E Z GAS	**REV:**	02/06/03
ADDRESS:	1158 E WASHINGTON AV	**ID1:**	HE17H12754
	ESCONDIDO CA 92025	**ID2:**	
	SAN DIEGO	**STATUS:**	
CONTACT:	JONI-P-JAMO	**PHONE:**	(760)233-1184

Tank Content CAS Number:

Tank System Type:	*DOUBLE WALL*
Primary Tank Material:	*CARBON STEEL W/COMPOSITE*
Tank Interior Lining or Coating:	*NO SECONDARY TANK MTRL INFO*
Tank Exterior Corrosion Protection:	*NO EXTERIOR CORR PROT INFO*
Overfill Device:	*AUTO SHUTOFF+BALL FLOAT*
Spill Buckets:	*1*
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*

TANK TESTING & MONITORING INFORMATION

Below Grade Equipment:	*010829*
Is System 1998 Standards Certified (Y/N):	*YES*
Tank Monitor Device:	*OTHER - BLIND REMARK*
Automatic Tank Gauges:	*EBW AUTO STICK*
Tank Test Status:	*TIGHT*
Tank Test Date:	*06/05/99*

PIPING INFORMATION

Piping Corrosion Protection:	*NO PIPE PROTECTION INFO*
Pressure Pipe Loss Leak Detector Type:	*OTHER - BLIND REMARK*
Pipe System Type:	*PRESSURIZED*
Pipe Construction:	*DOUBLE WALL*
Pipe Primary Material:	*FIBERGLASS*
Pipe Monitor Device:	*OTHER - BLIND REMARK*

PIPING INFORMATION

Pipe Test Date:	*06/05/99*

REGULATORY INFORMATION

Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*PERMIT TO OPERATE*

TANK ID s

Permit Number:	*H12754*
Tank Number:	*T007*
Tank ID Number:	*NT2174*

TANK CHARACTERISTICS INFORMATION

Capacity:	*12000.00*
Manufacturer Code:	
Year Installed:	
Contents:	*SUPER UNLEADED*
Tank Content Chemical Name:	
Tank Content CAS Number:	

Tank System Type:	*DOUBLE WALL*

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TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 12 **DIST/DIR:** 0.06 SW **MAP ID:** 10

NAME:	E Z GAS	**REV:**	02/06/03
ADDRESS:	1158 E WASHINGTON AV	**ID1:**	HE17H12754
	ESCONDIDO CA 92025	**ID2:**	
	SAN DIEGO	**STATUS:**	
CONTACT:	JONI-P-JAMO	**PHONE:**	(760)233-1184

Primary Tank Material:	*CARBON STEEL W/COMPOSITE*
Tank Interior Lining or Coating:	*NO SECONDARY TANK MTRL INFO*
Tank Exterior Corrosion Protection:	*NO EXTERIOR CORR PROT INFO*
Overfill Device:	*AUTO SHUTOFF+BALL FLOAT*
Spill Buckets:	*1*
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*

TANK TESTING & MONITORING INFORMATION

Below Grade Equipment:	*010829*
Is System 1998 Standards Certified (Y/N):	*YES*
Tank Monitor Device:	*OTHER - BLIND REMARK*
Automatic Tank Gauges:	*EBW AUTO STICK*
Tank Test Status:	*TIGHT*
Tank Test Date:	*06/05/99*

PIPING INFORMATION

Piping Corrosion Protection:	*NO PIPE PROTECTION INFO*
Pressure Pipe Loss Leak Detector Type:	*OTHER - BLIND REMARK*
Pipe System Type:	*PRESSURIZED*
Pipe Construction:	*DOUBLE WALL*
Pipe Primary Material:	*FIBERGLASS*
Pipe Monitor Device:	*OTHER - BLIND REMARK*

PIPING INFORMATION

Pipe Test Date:	*06/05/99*

REGULATORY INFORMATION

Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*PERMIT TO OPERATE*

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

PERMITS SITE

SEARCH ID: 7 **DIST/DIR:** 0.06 SW **MAP ID:** 10

NAME:	E Z GAS	REV:	02/06/03
ADDRESS:	1158 E WASHINGTON AV	ID1:	HE17H12754
	ESCONDIDO CA 92025	ID2:	
	SAN DIEGO	STATUS:	
CONTACT:	JONI-P-JAMO	PHONE:	(760)233-1184

INDUSTRY / FACILITY INFORMATION NAMES

Business Description & SIC Code:	*Fuel-Dispense no repair*
Gas Station:	*1*
Fire Department District:	

PERMIT INFORMATION

Permit Number:	*HE17H12754*
Inactive / Active Facility Indicator:	
Annual Expiration Date:	*Sep 30*
Status:	*Permitted Establishment With Underground Tanks*
Map Code / Business Plan on File:	
Business Plan Acceptance Date:	*06/29/1999*

GENERAL INSPECTION & VIOLATION INFORMATION

Inspection Date:	*06/22/1999 0:00:00*
Reinspection Date:	*Aug 2000*
Inspector Name:	*WALSH*
Notice of Violation Issued:	
Delinquent Flag:	
Last Update:	*7/1/01*
Last Delinquent Letter:	

PROPERTY OWNER INFORMATION

Property Owner Name:	*MARC SHADDOW*
Property Owner Address:	*1158 E WASHINGTON ESCONDIDO, CA 92025*

WASTE STREAMS GENERATED BY BUSINESS

Waste Name & Code:	*ORGANIC SOLIDS WITH HALOGENS (351)*
Inspection Date:	*6/22/99*
Waste Quantity Present at Inspection:	*20*
Annual Quantity:	*40*
Measurement Unit:	*LBS*
Treatment Method:	*UNKNOWN*
Storage Methold:	*METAL DRUMS,30 GALLONS*
Carcinogen Indicator:	
Hauler:	*UNKNOWN HAZ WST HAULER*
Waste Description:	*USED GAS FILTERS*

VIOLATIONS AT TIME OF INSPECTION

Inspection Date:	*12/10/97*
Violation Item Number:	*V001*
Waste Code:	
Type of Violation:	*GENERAL VIOLATION*
Number of Occurances:	*01*
Violation Definition:	*TANK OWNER HAS FAILED TO CONDUCT AN ANNUAL INTEGRITY TEST AS REQUIRED.*
	HSC 25292, CCR 2643,2645

- Continued on next page -

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

PERMITS SITE

SEARCH ID: 7 **DIST/DIR:** 0.06 SW **MAP ID:** 10

NAME: E Z GAS
ADDRESS: 1158 E WASHINGTON AV
ESCONDIDO CA 92025
SAN DIEGO
CONTACT: JONI-P-JAMO

REV: 02/06/03
ID1: HE17H12754
ID2:
STATUS:
PHONE: (760)233-1184

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *12/10/97*
Violation Item Number: *V002*
Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *01*
Violation Definition: *MANUAL TANK GAUGING METHOD HAS NOT BEEN PROPERLY IMPLEMENTED. CCR 2645*

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *12/10/97*
Violation Item Number: *V003*
Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *01*
Violation Definition: *GAUGING STICK IS UNREADABLE, WARPED, AND/OR HAS INCORRECT MEASUREMENT INCREMENTS. CCR 2646(H)*

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *12/10/97*
Violation Item Number: *V004*
Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *01*
Violation Definition: *MONTHLY RECONCILIATION IS NOT BEING PERFORMED OR IS BEING PERFORMED IMPROPERLY. CCR 2646(I)*

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *12/10/97*
Violation Item Number: *V005*
Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *01*
Violation Definition: *OWNER/OPERATOR HAS NOT TESTED THE PRESSURIZED PRODUCT LINE LEAK DETECTION DEVICE ANNUALLY AS REQUIRED. HSC 25292(B) (4) (C)*

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *12/10/97*
Violation Item Number: *V006*
Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *01*
Violation Definition: *WRITTEN ROUTINE MONITORING PROCEDURE FOR THE UNDERGROUND STORAGE TANK SYSTEM HAS NOT BEEN PREPARED AND IMPLEMENTED. CCR2632(E)(1),2634(B)(2)*

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *12/10/97*
Violation Item Number: *V007*

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

PERMITS SITE

SEARCH ID: 7 **DIST/DIR:** 0.06 SW **MAP ID:** 10

NAME: E Z GAS
ADDRESS: 1158 E WASHINGTON AV
ESCONDIDO CA 92025
SAN DIEGO
CONTACT: JONI-P-JAMO

REV: 02/06/03
ID1: HE17H12754
ID2:
STATUS:
PHONE: (760)233-1184

Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *01*
Violation Definition: *WRITTEN ROUTINE MONITORING PROCEDURE FOR THE UNDERGROUND STORAGE TANK SYSTEM HAS NOT BEEN PREPARED AND IMPLEMENTED. CCR2632(E)(1),2634(B)(2)*

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *12/10/97*
Violation Item Number: *V008*
Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *01*
Violation Definition: *BUSINESS PLAN DOES NOT INCLUDE AN ADEQUATE EMPLOYEE TRAINING PROGRAM WITH EMERGENCY NOTIFICATION,MITIGATION&EVACUATION PROCEDURES.HSC25504(C)*

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *6/22/99*
Violation Item Number: *V001*
Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *01*
Violation Definition: *DOCUMENTATION SHOWING EVIDENCE OF FINANCIAL RESPONSIBILITY IS NOT AVAILABLE. HSC 25292.2*

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *8/19/96*
Violation Item Number: *V001*
Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *01*
Violation Definition: *HAZARDOUS MATERIALS HANDLER HAS NOT SUBMITTED A COMPLETED BUSINESS PLAN TO THE HMMD. HSC 25505(A),(B)*

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *8/19/96*
Violation Item Number: *V002*
Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *01*
Violation Definition: *DOCUMENTATION SHOWING EVIDENCE OF FINANCIAL RESPONSIBILITY IS NOT AVAILABLE. HSC 25292.2*

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 20 **DIST/DIR:** 0.06 SW **MAP ID:** 10

NAME:	E Z GAS	**REV:**	08/21/00
ADDRESS:	1158 E WASHINGTON AV	**ID1:**	HE17H12754
	ESCONDIDO CA 92025	**ID2:**	
	San Diego	**STATUS:**	
CONTACT:	HASAN F. IBRAHIM	**PHONE:**	(760)233-1184

Release Occurance Number:	*001*
Historical Name:	*ELITE AUTO CENTER*
Date Release Began:	*1/20/99*
Lead Agency:	*DEH*
Case Type:	*TANK, Release*
Case Status:	*OPEN*
Case Status Date:	*2/26/99*

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 21 **DIST/DIR:** 0.06 SW **MAP ID:** 10

NAME:	ELITE AUTO CENTER	REV:	12/11/02
ADDRESS:	1158 E WASHINGTON AV	ID1:	T0607302620
	ESCONDIDO CA 92025	ID2:	
	SAN DIEGO	STATUS:	PRELIM. SITE ASSES. UNDERWAY
CONTACT:		PHONE:	

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

Please note that some data previously provided by the State Water Resources Control Board in the LUSTIS database is not currently being provided by the agency in the most recent edition. Incidents that occurred dating after the year 2000 may not have much information. Field headers with blank information following after should be interpreted as unreported by the agency.

LEAD AGENCY: *LOCAL AGENCY*
REGIONAL BOARD: *09*
LOCAL CASE NUMBER: *H12754-001*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE NUMBER: *9UT3861*
CASE TYPE: *AQUIFER AFFECTED*
SUBSTANCE LEAKED: *REGULAR GASOLINE*
SUBSTANCE QUANTITY:
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *PRELIM. SITE ASSES. UNDERWAY*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency): *1 2*
DATE OF ENFORCEMENT (blank if not reported):

ENTER DATE (blank if not reported):
REVIEW DATE (blank if not reported):
DATE OF LEAK CONFIRMATION (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN (blank if not reported): *1/20/1999*
DATE POLLUTION CHARACTERIZATION PLAN BEGAN (blank if not reported):
DATE REMEDIATION PLAN WAS SUBMITTED (blank if not reported):
DATE REMEDIAL ACTION UNDERWAY (blank if not reported): *1/3/1965*
DATE POST REMEDIAL ACTION MONITORING BEGAN (blank if not reported):
DATE CLOSURE LETTER ISSUED (SITE CLOSED) (blank if not reported):
REPORT DATE (blank if not reported):

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION:
MTBE SOIL CONCENTRATION:
MTBE CNTS: *0*
MTBE FUEL: *1*
MTBE TESTED: *SITE NOT TESTED FOR MTBE. INCLUDES UNKNOWN AND NOT ANALYZED*
MTBE CLASS: *

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

PERMITS SITE

SEARCH ID: 5 **DIST/DIR:** 0.07 SW **MAP ID:** 8

NAME:	A-1 SMOG	**REV:**	02/06/03
ADDRESS:	1150 E WASHINGTON AV	**ID1:**	HE17H30839
	ESCONDIDO CA 92025	**ID2:**	CAL000200886
	SAN DIEGO	**STATUS:**	
CONTACT:	HO, DUNG-JOHNSON	**PHONE:**	(760)781-4161

INDUSTRY / FACILITY INFORMATION NAMES

Business Description & SIC Code: *Genl Auto/Cycle/Truck Rep*
Gas Station:
Fire Department District:

PERMIT INFORMATION

Permit Number: *HE17H30839*
Inactive / Active Facility Indicator:
Annual Expiration Date: *Jul 31*
Status:
Map Code / Business Plan on File:
Business Plan Acceptance Date:

GENERAL INSPECTION & VIOLATION INFORMATION

Inspection Date: *05/13/1999 0:00:00*
Reinspection Date: *Jul 2000*
Inspector Name: *WALSH*
Notice of Violation Issued:
Delinquent Flag:
Last Update: *5/27/01*
Last Delinquent Letter: *10/13/1998 0:00:00*

PROPERTY OWNER INFORMATION

Property Owner Name:
Property Owner Address:

WASTE STREAMS GENERATED BY BUSINESS

Waste Name & Code: *WASTE OIL & MIXED OIL (221)*
Inspection Date: *5/13/99*
Waste Quantity Present at Inspection: *220*
Annual Quantity: *400*
Measurement Unit: *GAL*
Treatment Method: *RECYCLE*
Storage Methold: *METAL DRUMS,55 GALLONS*
Carcinogen Indicator:
Hauler: *ASBURY ENVIR. SERVICES*
Waste Description: *USED OIL*

WASTE STREAMS GENERATED BY BUSINESS

Waste Name & Code: *HYDROCARBON SOLVENTS (213)*
Inspection Date: *5/13/99*
Waste Quantity Present at Inspection: *15*
Annual Quantity: *60*
Measurement Unit: *GAL*
Treatment Method: *RECYCLE*
Storage Methold: *PROCESSING EQUIPMENT*
Carcinogen Indicator:

- Continued on next page -

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

PERMITS SITE

SEARCH ID: 5 **DIST/DIR:** 0.07 SW **MAP ID:** 8

NAME:	A-1 SMOG	**REV:**	02/06/03
ADDRESS:	1150 E WASHINGTON AV	**ID1:**	HE17H30839
	ESCONDIDO CA 92025	**ID2:**	CAL000200886
	SAN DIEGO	**STATUS:**	
CONTACT:	HO, DUNG-JOHNSON	**PHONE:**	(760)781-4161

Hauler: *SAFETY-KLEEN*
Waste Description: *PARTS WASHER (2)*

WASTE STREAMS GENERATED BY BUSINESS
Waste Name & Code: *HALOGENATED SOLVENTS (211)*
Inspection Date: *5/13/99*
Waste Quantity Present at Inspection: *4*
Annual Quantity: *4*
Measurement Unit: *GAL*
Treatment Method: *UNKNOWN*
Storage Methold: *METAL DRUMS 0-5 GALLONS*
Carcinogen Indicator:
Hauler: *UNKNOWN HAZ WST HAULER*
Waste Description: *CARB DIP*

WASTE STREAMS GENERATED BY BUSINESS
Waste Name & Code: *USED OIL FILTERS (888)*
Inspection Date: *5/13/99*
Waste Quantity Present at Inspection: *300*
Annual Quantity: *600*
Measurement Unit: *LBS*
Treatment Method: *FILTERS/METAL RECLAI*
Storage Methold: *METAL DRUMS,55 GALLONS*
Carcinogen Indicator:
Hauler: *ASBURY ENVIR. SERVICES*
Waste Description: *OIL FILTERS*

WASTE STREAMS GENERATED BY BUSINESS
Waste Name & Code: *ORGANIC LIQUIDS W/METALS (342)*
Inspection Date: *5/13/99*
Waste Quantity Present at Inspection: *110*
Annual Quantity: *55*
Measurement Unit: *GAL*
Treatment Method: *RECYCLE*
Storage Methold: *PLASTIC DRUMS,55 GALLONS*
Carcinogen Indicator:
Hauler: *UNREGISTERED HAZ WST HAUL*
Waste Description: *RECYCLED ANTIFREEZE*

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *3/24/98*
Violation Item Number: *V001*
Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *01*
Violation Definition: *DISPOSAL OR CAUSING THE DISPOSAL OF HAZARDOUS WASTE TO AN UNAUTHORIZED POINT(GROUND, STORM DRAIN, SEWER SYSTEM, TRASH OR AIR) HSC 25189.5*

- Continued on next page -

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

PERMITS SITE

SEARCH ID: 5 **DIST/DIR:** 0.07 SW **MAP ID:** 8

NAME: A-1 SMOG
ADDRESS: 1150 E WASHINGTON AV
ESCONDIDO CA 92025
SAN DIEGO
CONTACT: HO, DUNG-JOHNSON

REV: 02/06/03
ID1: HE17H30839
ID2: CAL000200886
STATUS:
PHONE: (760)781-4161

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *3/24/98*
Violation Item Number: *V002*
Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *01*
Violation Definition: *HAZARDOUS WASTE CONTAINERS ARE MISSING LABELS, ACCUMULATION DATE AND/OR ARE IMPROPERLY LABELED CCR 66262.34*

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *3/24/98*
Violation Item Number: *V003*
Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *01*
Violation Definition: *HAZARDOUS WASTE CONTAINERS ARE NOT KEPT CLOSED WHILE IN STORAGE CCR 66265.173*

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *3/24/98*
Violation Item Number: *V004*
Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *01*
Violation Definition: *PERSONNEL TRAINING IS NOT ADEQUATE TO ENSURE COMPLIANCE WITH HAZARDOUS WASTES/MATERIALS REGULATIONS CCR 66265.16*

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *3/24/98*
Violation Item Number: *V005*
Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *01*
Violation Definition: *SPILL CONTROL EQUIPMENT IS NOT AVAILABLE AND/OR NOT MAINTAINED CCR 66265.32*

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *3/24/98*
Violation Item Number: *V006*
Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *01*
Violation Definition: *USED OIL FILTERS NOT PROPERLY DRAINED, STORED, OR LABELED PRIOR TO TRANSPORT FOR THE PURPOSE OF METAL RECLAMATION. CCR 66266.130*

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *3/24/98*
Violation Item Number: *V007*

- Continued on next page -

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

PERMITS SITE

SEARCH ID: 5 **DIST/DIR:** 0.07 SW **MAP ID:** 8

NAME:	A-1 SMOG	**REV:**	02/06/03
ADDRESS:	1150 E WASHINGTON AV	**ID1:**	HE17H30839
	ESCONDIDO CA 92025	**ID2:**	CAL000200886
	SAN DIEGO	**STATUS:**	
CONTACT:	HO, DUNG-JOHNSON	**PHONE:**	(760)781-4161

Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *01*
Violation Definition: *HAZARDOUS MATERIALS HANDLER HAS NOT ESTABLISHED/IMPLEMENTED A BUSINESS PLAN HSC 25503.5*

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *5/13/99*
Violation Item Number: *V001*
Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *01*
Violation Definition: *GENERATOR OF HAZARDOUS WASTE HAS NOT OBTAINED AN EPA IDENTIFICATION NUMBER CCR 66262.12*

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *5/13/99*
Violation Item Number: *V002*
Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *02*
Violation Definition: *PERSONNEL TRAINING IS NOT ADEQUATE TO ENSURE COMPLIANCE WITH HAZARDOUS WASTES/MATERIALS REGULATIONS CCR 66265.16*

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *5/13/99*
Violation Item Number: *V003*
Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *01*
Violation Definition: *OWNER/OPERATOR HAS NOT PREPARED A CONTINGENCY PLAN, OR MAINTAINED A COPY ON SITE, OR SUBMITTED A COPY TO THE HMMD. CCR 66265.51,.53*

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *5/13/99*
Violation Item Number: *V004*
Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *02*
Violation Definition: *USED OIL FILTERS NOT PROPERLY DRAINED, STORED, OR LABELED PRIOR TO TRANSPORT FOR THE PURPOSE OF METAL RECLAMATION. CCR 66266.130*

DISCLOSURE OF HAZARDOUS MATERIALS STORED AT ESTABLISHMENT
Chemical Name: *OIL, LUBRICATING: ATF, MOTOR OIL*
CAS#: *8002-05-09*
Annual Quantity: *500.00*
Quantity Stored at One Time: *110.00*
Measurement Unit: *GAL*

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

PERMITS SITE

SEARCH ID: 8 **DIST/DIR:** 0.09 SW **MAP ID:** 15

NAME: JOHN RUZICH DDS
ADDRESS: 1131 E WASHINGTON AV
ESCONDIDO CA 92025
SAN DIEGO
CONTACT: JOHN RUZICH DDS

REV: 02/06/03
ID1: HE17H50833
ID2:
STATUS:
PHONE: (858)746-2525

INDUSTRY / FACILITY INFORMATION NAMES
Business Description & SIC Code: *Small Qty Med Waste Gen 5719*
Gas Station:
Fire Department District:

PERMIT INFORMATION
Permit Number: *HE17H50833*
Inactive / Active Facility Indicator:
Annual Expiration Date: *Jan 31*
Status:
Map Code / Business Plan on File:
Business Plan Acceptance Date:

GENERAL INSPECTION & VIOLATION INFORMATION
Inspection Date: *09/17/1998 0:00:00*
Reinspection Date: *Sep 2001*
Inspector Name: *WALSH*
Notice of Violation Issued:
Delinquent Flag:
Last Update: *5/20/01*
Last Delinquent Letter:

PROPERTY OWNER INFORMATION
Property Owner Name:
Property Owner Address:

WASTE STREAMS GENERATED BY BUSINESS
Waste Name & Code: *INFECTIOUS WASTE, SHARPS (902)*
Inspection Date: *9/17/98*
Waste Quantity Present at Inspection: *4*
Annual Quantity: *12*
Measurement Unit: *LBS*
Treatment Method: *DISENFECTION/ENCAPSU*
Storage Methold: *FIBER/PLSTIC BOXES,CRTNS,CASES*
Carcinogen Indicator:
Hauler: *UNREGISTERED HAZ WST HAUL*
Waste Description: *SHARPS/ISOLYSER*

WASTE STREAMS GENERATED BY BUSINESS
Waste Name & Code: *PHOTOCHEM/PHOTOPROC WASTE (541)*
Inspection Date: *9/17/98*
Waste Quantity Present at Inspection: *2*
Annual Quantity: *2*
Measurement Unit: *GAL*
Treatment Method: *RECYCLE*
Storage Methold: *PLASTIC DRUMS 0-5 GALLONS*
Carcinogen Indicator:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

PERMITS SITE

EARCH ID: 8 **DIST/DIR:** 0.09 SW **MAP ID:** 15

AME: JOHN RUZICH DDS
DDRESS: 1131 E WASHINGTON AV
ESCONDIDO CA 92025
SAN DIEGO
ONTACT: JOHN RUZICH DDS

REV: 02/06/03
ID1: HE17H50833
ID2:
STATUS:
PHONE: (858)746-2525

uler: *UNKNOWN HAZ WST HAULER*
aste Description:

IOLATIONS AT TIME OF INSPECTION
pection Date: *6/22/92*
olation Item Number: *V001*
aste Code: *902*
pe of Violation: *INFECTIOUS WASTE, SHARPS*
mber of Occurances: *01*
olation Definition: *CONTAINERS STORING MEDICAL WASTE (BIOHAZARDOUS) ARE NOT OPERLY LABELED. (SDCC68.1205, HSC 25046; 56)*

IOLATIONS AT TIME OF INSPECTION
spection Date: *6/22/92*
olation Item Number: *V002*
aste Code:
pe of Violation: *GENERAL VIOLATION*
mber of Occurances: *01*
olation Definition: *A MED. WASTE MGMT. PLAN IS NOT MAINT. AND/OR UPDATED ANUALLY AS REQUIRED-(SDCC 68.1201 (H), 1206, HSC 25042; 52)*

VIOLATIONS AT TIME OF INSPECTION
spection Date: *9/7/95*
olation Item Number: *V001*
aste Code:
pe of Violation: *GENERAL VIOLATION*
mber of Occurances: *01*
olation Definition: *PERS. TRAINING IN THE HANDLING AND DISPOSAL OF MED. WST. IOHAZ) IS NOTADEQUATE OR PROP. DOCUMENTED. (SDCC 68.1201 (H); 1206, HSC25045; 42; 52)*

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

RCRA GENERATOR SITE

SEARCH ID: 1 **DIST/DIR:** 0.14 SE **MAP ID:** 3

NAME:	MIDAS MUFFLER	**REV:**	12/9/02
ADDRESS:	433 N ASH STREET	**ID1:**	CAD982498834
	ESCONDIDO CA 92027	**ID2:**	
	SAN DIEGO	**STATUS:**	SGN
CONTACT:		**PHONE:**	

SITE INFORMATION

UNIVERSE TYPE:

SQG - SMALL QUANTITY GENERATOR: GENERATES 100 - 1000 KG/MONTH OF HAZARDOUS WASTE

SIC INFORMATION:

7533 - SERVICES - AUTO EXHAUST SYSTEM REPAIR SHOPS

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 9 **DIST/DIR:** 0.15 SE **MAP ID:** 9

NAME:	ASH TEXACO	**REV:**	02/06/03
ADDRESS:	425 N ASH ST	**ID1:**	HE17H20271
	ESCONDIDO CA 92027	**ID2:**	CAD981376759
	SAN DIEGO	**STATUS:**	
CONTACT:	TEXACO REFINING & MARKETING	**PHONE:**	(619)415-9218

TANK ID s

Permit Number:	*H20271*
Tank Number:	*T001*
Tank ID Number:	*022*

TANK CHARACTERISTICS INFORMATION

Capacity:	*9940.00*
Manufacturer Code:	
Year Installed:	*1971*
Contents:	*REGULAR UNLEADED*
Tank Content Chemical Name:	
Tank Content CAS Number:	*12031*
Tank System Type:	*UNKNOWN*
Primary Tank Material:	*CARBON STEEL*
Tank Interior Lining or Coating:	*NO SECONDARY TANK MTRL INFO*
Tank Exterior Corrosion Protection:	*UNKNOWN*
Overfill Device:	*NO OVERFILL INFORMATION*
Spill Buckets:	*N*
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*

TANK TESTING & MONITORING INFORMATION

Below Grade Equipment:	
Is System 1998 Standards Certified (Y/N):	*NO*
Tank Monitor Device:	*NO TANK MONIT DEV INFO*
Automatic Tank Gauges:	*NO ATGS INFO AVAILABLE*
Tank Test Status:	*N/A*
Tank Test Date:	*08/11/86*

PIPING INFORMATION

Piping Corrosion Protection:	*UNKNOWN*
Pressure Pipe Loss Leak Detector Type:	*NO PPLLD BRAND INFO*
Pipe System Type:	*PIPE TYPE NOT AVAILABLE*
Pipe Construction:	*NO PIPE CONSTRUCTION INFO*
Pipe Primary Material:	*NO PRIMARY PIPE MATERIAL INFO*
Pipe Monitor Device:	*NO PIPE MONIT DEV INFO*

PIPING INFORMATION

Pipe Test Date:	*08/11/86*

REGULATORY INFORMATION

Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*CLOSED BY REMOVAL*

TANK ID s

Permit Number:	*H20271*

- Continued on next page -

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 9 **DIST/DIR:** 0.15 SE **MAP ID:** 9

NAME:	ASH TEXACO	**REV:**	02/06/03
ADDRESS:	425 N ASH ST	**ID1:**	HE17H20271
	ESCONDIDO CA 92027	**ID2:**	CAD981376759
	SAN DIEGO	**STATUS:**	
CONTACT:	TEXACO REFINING & MARKETING	**PHONE:**	(619)415-9218

Tank Number:	*T002*
Tank ID Number:	*023*
TANK CHARACTERISTICS INFORMATION	
Capacity:	*9940.00*
Manufacturer Code:	
Year Installed:	*1971*
Contents:	*LEADED*
Tank Content Chemical Name:	
Tank Content CAS Number:	*12032*
Tank System Type:	*UNKNOWN*
Primary Tank Material:	*CARBON STEEL*
Tank Interior Lining or Coating:	*NO SECONDARY TANK MTRL INFO*
Tank Exterior Corrosion Protection:	*UNKNOWN*
Overfill Device:	*NO OVERFILL INFORMATION*
Spill Buckets:	*N*
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*
TANK TESTING & MONITORING INFORMATION	
Below Grade Equipment:	
Is System 1998 Standards Certified (Y/N):	*NO*
Tank Monitor Device:	*NO TANK MONIT DEV INFO*
Automatic Tank Gauges:	*NO ATGS INFO AVAILABLE*
Tank Test Status:	*N/A*
Tank Test Date:	*08/11/86*
PIPING INFORMATION	
Piping Corrosion Protection:	*UNKNOWN*
Pressure Pipe Loss Leak Detector Type:	*NO PPLLD BRAND INFO*
Pipe System Type:	*PIPE TYPE NOT AVAILABLE*
Pipe Construction:	*NO PIPE CONSTRUCTION INFO*
Pipe Primary Material:	*NO PRIMARY PIPE MATERIAL INFO*
Pipe Monitor Device:	*NO PIPE MONIT DEV INFO*
PIPING INFORMATION	
Pipe Test Date:	*08/11/86*
REGULATORY INFORMATION	
Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*CLOSED BY REMOVAL*
TANK ID s	
Permit Number:	*H20271*
Tank Number:	*T003*
Tank ID Number:	*024*

- Continued on next page -

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 9 **DIST/DIR:** 0.15 SE **MAP ID:** 9

NAME: ASH TEXACO
ADDRESS: 425 N ASH ST
ESCONDIDO CA 92027
SAN DIEGO
CONTACT: TEXACO REFINING & MARKETING

REV: 02/06/03
ID1: HE17H20271
ID2: CAD981376759
STATUS:
PHONE: (619)415-9218

TANK CHARACTERISTICS INFORMATION

Capacity:	*9940.00*
Manufacturer Code:	
Year Installed:	
Contents:	*SUPER UNLEADED*
Tank Content Chemical Name:	
Tank Content CAS Number:	*12033*
Tank System Type:	*UNKNOWN*
Primary Tank Material:	*CARBON STEEL*
Tank Interior Lining or Coating:	*NO SECONDARY TANK MTRL INFO*
Tank Exterior Corrosion Protection:	*UNKNOWN*
Overfill Device:	*NO OVERFILL INFORMATION*
Spill Buckets:	*N*
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*

TANK TESTING & MONITORING INFORMATION

Below Grade Equipment:	
Is System 1998 Standards Certified (Y/N):	*NO*
Tank Monitor Device:	*NO TANK MONIT DEV INFO*
Automatic Tank Gauges:	*NO ATGS INFO AVAILABLE*
Tank Test Status:	*N/A*
Tank Test Date:	*08/11/86*

PIPING INFORMATION

Piping Corrosion Protection:	*UNKNOWN*
Pressure Pipe Loss Leak Detector Type:	*NO PPLLD BRAND INFO*
Pipe System Type:	*PIPE TYPE NOT AVAILABLE*
Pipe Construction:	*NO PIPE CONSTRUCTION INFO*
Pipe Primary Material:	*NO PRIMARY PIPE MATERIAL INFO*
Pipe Monitor Device:	*NO PIPE MONIT DEV INFO*

PIPING INFORMATION

Pipe Test Date:	*08/11/86*

REGULATORY INFORMATION

Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*CLOSED BY REMOVAL*

TANK ID s

Permit Number:	*H20271*
Tank Number:	*T004*
Tank ID Number:	*001*

TANK CHARACTERISTICS INFORMATION

Capacity:	*12000.00*
Manufacturer Code:	*0503*

- Continued on next page -

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 9 **DIST/DIR:** 0.15 SE **MAP ID:** 9

NAME:	ASH TEXACO	**REV:**	02/06/03
ADDRESS:	425 N ASH ST	**ID1:**	HE17H20271
	ESCONDIDO CA 92027	**ID2:**	CAD981376759
	SAN DIEGO	**STATUS:**	
CONTACT:	TEXACO REFINING & MARKETING	**PHONE:**	(619)415-9218

Year Installed: *1986*
Contents: *REGULAR UNLEADED*
Tank Content Chemical Name:
Tank Content CAS Number:

Tank System Type: *DOUBLE WALL*
Primary Tank Material: *FIBERGLASS*
Tank Interior Lining or Coating: *INVALID CODE*
Tank Exterior Corrosion Protection: *NO EXTERIOR CORR PROT INFO*
Overfill Device: *HIGH LEVEL ALARM+BALL FLOAT*
Spill Buckets: *N*
Is Groundwater Greater Than 20 Feet (Y/N): *NO*

TANK TESTING & MONITORING INFORMATION
Below Grade Equipment:
Is System 1998 Standards Certified (Y/N): *NO*
Tank Monitor Device: *INVALID CODE*
Automatic Tank Gauges: *INVALID CODE*
Tank Test Status: *NO STATUS*
Tank Test Date: *02/11/88*

PIPING INFORMATION
Piping Corrosion Protection: *NO PIPE PROTECTION INFO*
Pressure Pipe Loss Leak Detector Type: *RED JACKET DLD, XLD, OR XLP*
Pipe System Type: *PRESSURIZED*
Pipe Construction: *SINGLE WALL WITH LINER*
Pipe Primary Material: *FIBERGLASS*
Pipe Monitor Device: *NO PIPE MONIT DEV INFO*
PIPING INFORMATION
Pipe Test Date: *04/15/88*

REGULATORY INFORMATION
Tank Exempt Indicator: *NO*
Hazard Category 1:
Regulatory Status Code Description: *CLOSED BY REMOVAL*

TANK ID s
Permit Number: *H20271*
Tank Number: *T005*
Tank ID Number: *002*

TANK CHARACTERISTICS INFORMATION
Capacity: *10000.00*
Manufacturer Code: *0503*
Year Installed: *1986*
Contents: *REGULAR UNLEADED*
Tank Content Chemical Name:

- Continued on next page -

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 9 **DIST/DIR:** 0.15 SE **MAP ID:** 9

NAME:	ASH TEXACO	REV:	02/06/03
ADDRESS:	425 N ASH ST	ID1:	HE17H20271
	ESCONDIDO CA 92027	ID2:	CAD981376759
	SAN DIEGO	STATUS:	
CONTACT:	TEXACO REFINING & MARKETING	PHONE:	(619)415-9218

Tank Content CAS Number:

Tank System Type:	*DOUBLE WALL*
Primary Tank Material:	*FIBERGLASS*
Tank Interior Lining or Coating:	*INVALID CODE*
Tank Exterior Corrosion Protection:	*NO EXTERIOR CORR PROT INFO*
Overfill Device:	*HIGH LEVEL ALARM+BALL FLOAT*
Spill Buckets:	*N*
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*

TANK TESTING & MONITORING INFORMATION

Below Grade Equipment:	
Is System 1998 Standards Certified (Y/N):	*NO*
Tank Monitor Device:	*INVALID CODE*
Automatic Tank Gauges:	*INVALID CODE*
Tank Test Status:	*NO STATUS*
Tank Test Date:	*02/11/88*

PIPING INFORMATION

Piping Corrosion Protection:	*NO PIPE PROTECTION INFO*
Pressure Pipe Loss Leak Detector Type:	*RED JACKET DLD, XLD, OR XLP*
Pipe System Type:	*PRESSURIZED*
Pipe Construction:	*SINGLE WALL WITH LINER*
Pipe Primary Material:	*FIBERGLASS*
Pipe Monitor Device:	*NO PIPE MONIT DEV INFO*

PIPING INFORMATION

Pipe Test Date:	*04/14/88*

REGULATORY INFORMATION

Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*CLOSED BY REMOVAL*

TANK ID s

Permit Number:	*H20271*
Tank Number:	*T006*
Tank ID Number:	*003*

TANK CHARACTERISTICS INFORMATION

Capacity:	*10000.00*
Manufacturer Code:	*0503*
Year Installed:	*1986*
Contents:	*LEADED*
Tank Content Chemical Name:	
Tank Content CAS Number:	

Tank System Type:	*DOUBLE WALL*

- Continued on next page -

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 9 **DIST/DIR:** 0.15 SE **MAP ID:** 9

NAME:	ASH TEXACO	**REV:**	02/06/03
ADDRESS:	425 N ASH ST	**ID1:**	HE17H20271
	ESCONDIDO CA 92027	**ID2:**	CAD981376759
	SAN DIEGO	**STATUS:**	
CONTACT:	TEXACO REFINING & MARKETING	**PHONE:**	(619)415-9218

Primary Tank Material:	*FIBERGLASS*
Tank Interior Lining or Coating:	*INVALID CODE*
Tank Exterior Corrosion Protection:	*NO EXTERIOR CORR PROT INFO*
Overfill Device:	*HIGH LEVEL ALARM+BALL FLOAT*
Spill Buckets:	*N*
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*

TANK TESTING & MONITORING INFORMATION

Below Grade Equipment:	
Is System 1998 Standards Certified (Y/N):	*NO*
Tank Monitor Device:	*INVALID CODE*
Automatic Tank Gauges:	*INVALID CODE*
Tank Test Status:	*NO STATUS*
Tank Test Date:	*02/11/88*

PIPING INFORMATION

Piping Corrosion Protection:	*NO PIPE PROTECTION INFO*
Pressure Pipe Loss Leak Detector Type:	*RED JACKET DLD, XLD, OR XLP*
Pipe System Type:	*PRESSURIZED*
Pipe Construction:	*SINGLE WALL WITH LINER*
Pipe Primary Material:	*FIBERGLASS*
Pipe Monitor Device:	*NO PIPE MONIT DEV INFO*

PIPING INFORMATION

Pipe Test Date:	*04/15/88*

REGULATORY INFORMATION

Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*CLOSED BY REMOVAL*

TANK ID s

Permit Number:	*H20271*
Tank Number:	*T007*
Tank ID Number:	*004*

TANK CHARACTERISTICS INFORMATION

Capacity:	*10000.00*
Manufacturer Code:	*0503*
Year Installed:	*1986*
Contents:	*DIESEL*
Tank Content Chemical Name:	
Tank Content CAS Number:	

Tank System Type:	*DOUBLE WALL*
Primary Tank Material:	*FIBERGLASS*
Tank Interior Lining or Coating:	*INVALID CODE*
Tank Exterior Corrosion Protection:	*NO EXTERIOR CORR PROT INFO*

- Continued on next page -

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 9 **DIST/DIR:** 0.15 SE **MAP ID:** 9

NAME:	ASH TEXACO	**REV:**	02/06/03
ADDRESS:	425 N ASH ST	**ID1:**	HE17H20271
	ESCONDIDO CA 92027	**ID2:**	CAD981376759
	SAN DIEGO	**STATUS:**	
CONTACT:	TEXACO REFINING & MARKETING	**PHONE:**	(619)415-9218

Overfill Device:	*HIGH LEVEL ALARM+BALL FLOAT*
Spill Buckets:	*N*
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*

TANK TESTING & MONITORING INFORMATION

Below Grade Equipment:	
Is System 1998 Standards Certified (Y/N):	*NO*
Tank Monitor Device:	*INVALID CODE*
Automatic Tank Gauges:	*INVALID CODE*
Tank Test Status:	*NO STATUS*
Tank Test Date:	*02/11/88*

PIPING INFORMATION

Piping Corrosion Protection:	*NO PIPE PROTECTION INFO*
Pressure Pipe Loss Leak Detector Type:	*RED JACKET DLD, XLD, OR XLP*
Pipe System Type:	*PRESSURIZED*
Pipe Construction:	*SINGLE WALL WITH LINER*
Pipe Primary Material:	*FIBERGLASS*
Pipe Monitor Device:	*NO PIPE MONIT DEV INFO*

PIPING INFORMATION

Pipe Test Date:	*04/14/88*

REGULATORY INFORMATION

Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*CLOSED BY REMOVAL*

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 17 **DIST/DIR:** 0.15 SE **MAP ID:** 9

NAME:	ASH TEXACO	**REV:**	08/21/00
ADDRESS:	425 N ASH ST	**ID1:**	HE17H20271
	ESCONDIDO CA 92027	**ID2:**	CAD981376759
	San Diego	**STATUS:**	
CONTACT:	TEXACO REFINING & MARKETING	**PHONE:**	(619)415-9218

Release Occurance Number:	*001*
Historical Name:	*TEXACO/N. ASH 425*
Date Release Began:	*2/20/86*
Lead Agency:	*DEH*
Case Type:	*TANK, Release (W)*
Case Status:	*OPEN*
Case Status Date:	*3/30/87*

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 46 **DIST/DIR:** 0.15 SE **MAP ID:** 13

NAME: EXPRESS GAS
ADDRESS: 1266 E VALLEY PY
ESCONDIDO CA 92027
SAN DIEGO
CONTACT:

REV: 12/11/02
ID1: T0608111510
ID2:
STATUS: CASE CLOSED
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

Please note that some data previously provided by the State Water Resources Control Board in the LUSTIS database is not currently being provided by the agency in the most recent edition. Incidents that occurred dating after the year 2000 may not have much information. Field headers with blank information following after should be interpreted as unreported by the agency.

LEAD AGENCY: *LOCAL AGENCY*
REGIONAL BOARD: *09*
LOCAL CASE NUMBER: *H21396-001*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE NUMBER:
CASE TYPE: *FT*
SUBSTANCE LEAKED: *unk*
SUBSTANCE QUANTITY:
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *CASE CLOSED*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):

ENTER DATE (blank if not reported):
REVIEW DATE (blank if not reported):
DATE OF LEAK CONFIRMATION (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN (blank if not reported): *1/3/1965*
DATE POLLUTION CHARACTERIZATION PLAN BEGAN (blank if not reported):
DATE REMEDIATION PLAN WAS SUBMITTED (blank if not reported):
DATE REMEDIAL ACTION UNDERWAY (blank if not reported): *1/3/1965*
DATE POST REMEDIAL ACTION MONITORING BEGAN (blank if not reported):
DATE CLOSURE LETTER ISSUED (SITE CLOSED) (blank if not reported): *7/13/1990*
REPORT DATE (blank if not reported):

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION:
MTBE SOIL CONCENTRATION:
MTBE CNTS: *0*
MTBE FUEL: *0*
MTBE TESTED: *NOT REQUIRED TO BE TESTED*
MTBE CLASS: *

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 23 **DIST/DIR:** 0.15 SE **MAP ID:** 13

NAME: EXPRESS GAS-E VALLEY PKWY
ADDRESS: 1266 E VALLEY PY
ESCONDIDO CA 92027
SAN DIEGO
CONTACT:

REV: 12/11/02
ID1: T0607300716
ID2:
STATUS: POST REMEDIAL ACTION MONITORIN
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

Please note that some data previously provided by the State Water Resources Control Board in the LUSTIS database is not currently being provided by the agency in the most recent edition. Incidents that occurred dating after the year 2000 may not have much information. Field headers with blank information following after should be interpreted as unreported by the agency.

LEAD AGENCY: *LOCAL AGENCY*
REGIONAL BOARD: *09*
LOCAL CASE NUMBER: *H21396-002*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE NUMBER: *9UT1937*
CASE TYPE: *AQUIFER AFFECTED*
SUBSTANCE LEAKED: *REGULAR GASOLINE*
SUBSTANCE QUANTITY:
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *POST REMEDIAL ACTION MONITORING*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency): *1*
DATE OF ENFORCEMENT (blank if not reported):

ENTER DATE (blank if not reported):
REVIEW DATE (blank if not reported):
DATE OF LEAK CONFIRMATION (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN (blank if not reported): *2/1/1991*
DATE POLLUTION CHARACTERIZATION PLAN BEGAN (blank if not reported):
DATE REMEDIATION PLAN WAS SUBMITTED (blank if not reported):
DATE REMEDIAL ACTION UNDERWAY (blank if not reported): *1/3/1965*
DATE POST REMEDIAL ACTION MONITORING BEGAN (blank if not reported): *1/30/2002*
DATE CLOSURE LETTER ISSUED (SITE CLOSED) (blank if not reported):
REPORT DATE (blank if not reported):

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration): *1/1/1965*
MTBE GROUNDWATER CONCENTRATION: *EQUAL TO 920.00*
MTBE SOIL CONCENTRATION:
MTBE CNTS: *2*
MTBE FUEL: *1*
MTBE TESTED: *YES*
MTBE CLASS: *C*

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 14 **DIST/DIR:** 0.15 SE **MAP ID:** 13

NAME:	EXPRESS GASOLINE #28	**REV:**	02/06/03
ADDRESS:	1266 E VALLEY PY	**ID1:**	HE17H21396
	ESCONDIDO CA 92027	**ID2:**	
	SAN DIEGO	**STATUS:**	
CONTACT:	DIVERSIFIED DESERT PROPERTIES	**PHONE:**	(619)529-8420

TANK ID s

Permit Number:	*H21396*
Tank Number:	*T001*
Tank ID Number:	*2*

TANK CHARACTERISTICS INFORMATION

Capacity:	*12000.00*
Manufacturer Code:	
Year Installed:	
Contents:	*LEADED*
Tank Content Chemical Name:	
Tank Content CAS Number:	*12031*
Tank System Type:	*SINGLE WALL W/O SECNDRY CNTMNT*
Primary Tank Material:	*CARBON STEEL*
Tank Interior Lining or Coating:	*NO SECONDARY TANK MTRL INFO*
Tank Exterior Corrosion Protection:	*NONE*
Overfill Device:	*NO OVERFILL INFORMATION*
Spill Buckets:	*N*
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*

TANK TESTING & MONITORING INFORMATION

Below Grade Equipment:	
Is System 1998 Standards Certified (Y/N):	*NO*
Tank Monitor Device:	*NO TANK MONIT DEV INFO*
Automatic Tank Gauges:	*NO ATGS INFO AVAILABLE*
Tank Test Status:	*TIGHT*
Tank Test Date:	*12/12/89*

PIPING INFORMATION

Piping Corrosion Protection:	*INVALID CODE*
Pressure Pipe Loss Leak Detector Type:	*NO PPLLD BRAND INFO*
Pipe System Type:	*PIPE TYPE NOT AVAILABLE*
Pipe Construction:	*NO PIPE CONSTRUCTION INFO*
Pipe Primary Material:	*NO PRIMARY PIPE MATERIAL INFO*
Pipe Monitor Device:	*NO PIPE MONIT DEV INFO*

PIPING INFORMATION

Pipe Test Date:	*08/11/86*

REGULATORY INFORMATION

Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*CLOSED BY REMOVAL*

TANK ID s

Permit Number:	*H21396*

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TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 14 **DIST/DIR:** 0.15 SE **MAP ID:** 13

NAME:	EXPRESS GASOLINE #28	REV:	02/06/03
ADDRESS:	1266 E VALLEY PY	ID1:	HE17H21396
	ESCONDIDO CA 92027	ID2:	
	SAN DIEGO	STATUS:	
CONTACT:	DIVERSIFIED DESERT PROPERTIES	PHONE:	(619)529-8420

Tank Number:	*T002*
Tank ID Number:	*3*
TANK CHARACTERISTICS INFORMATION	
Capacity:	*10000.00*
Manufacturer Code:	
Year Installed:	
Contents:	*REGULAR UNLEADED*
Tank Content Chemical Name:	
Tank Content CAS Number:	*12032*
Tank System Type:	*SINGLE WALL W/O SECNDRY CNTMNT*
Primary Tank Material:	*CARBON STEEL*
Tank Interior Lining or Coating:	*NO SECONDARY TANK MTRL INFO*
Tank Exterior Corrosion Protection:	*NONE*
Overfill Device:	*NO OVERFILL INFORMATION*
Spill Buckets:	*N*
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*
TANK TESTING & MONITORING INFORMATION	
Below Grade Equipment:	
Is System 1998 Standards Certified (Y/N):	*NO*
Tank Monitor Device:	*NO TANK MONIT DEV INFO*
Automatic Tank Gauges:	*NO ATGS INFO AVAILABLE*
Tank Test Status:	*TIGHT*
Tank Test Date:	*12/12/89*
PIPING INFORMATION	
Piping Corrosion Protection:	*INVALID CODE*
Pressure Pipe Loss Leak Detector Type:	*NO PPLLD BRAND INFO*
Pipe System Type:	*PIPE TYPE NOT AVAILABLE*
Pipe Construction:	*NO PIPE CONSTRUCTION INFO*
Pipe Primary Material:	*NO PRIMARY PIPE MATERIAL INFO*
Pipe Monitor Device:	*NO PIPE MONIT DEV INFO*
PIPING INFORMATION	
Pipe Test Date:	*08/11/86*
REGULATORY INFORMATION	
Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*CLOSED BY REMOVAL*
TANK ID s	
Permit Number:	*H21396*
Tank Number:	*T003*
Tank ID Number:	*4*

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Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 14 **DIST/DIR:** 0.15 SE **MAP ID:** 13

NAME:	EXPRESS GASOLINE #28	REV:	02/06/03
ADDRESS:	1266 E VALLEY PY	ID1:	HE17H21396
	ESCONDIDO CA 92027	ID2:	
	SAN DIEGO	STATUS:	
CONTACT:	DIVERSIFIED DESERT PROPERTIES	PHONE:	(619)529-8420

TANK CHARACTERISTICS INFORMATION

Capacity:	*10000.00*
Manufacturer Code:	
Year Installed:	
Contents:	*REGULAR UNLEADED*
Tank Content Chemical Name:	
Tank Content CAS Number:	*12033*
Tank System Type:	*SINGLE WALL W/O SECNDRY CNTMNT*
Primary Tank Material:	*CARBON STEEL*
Tank Interior Lining or Coating:	*NO SECONDARY TANK MTRL INFO*
Tank Exterior Corrosion Protection:	*NONE*
Overfill Device:	*NO OVERFILL INFORMATION*
Spill Buckets:	*N*
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*

TANK TESTING & MONITORING INFORMATION

Below Grade Equipment:	
Is System 1998 Standards Certified (Y/N):	*NO*
Tank Monitor Device:	*NO TANK MONIT DEV INFO*
Automatic Tank Gauges:	*NO ATGS INFO AVAILABLE*
Tank Test Status:	*TIGHT*
Tank Test Date:	*12/12/89*

PIPING INFORMATION

Piping Corrosion Protection:	*INVALID CODE*
Pressure Pipe Loss Leak Detector Type:	*NO PPLLD BRAND INFO*
Pipe System Type:	*PIPE TYPE NOT AVAILABLE*
Pipe Construction:	*NO PIPE CONSTRUCTION INFO*
Pipe Primary Material:	*NO PRIMARY PIPE MATERIAL INFO*
Pipe Monitor Device:	*NO PIPE MONIT DEV INFO*

PIPING INFORMATION

Pipe Test Date:	*08/11/86*

REGULATORY INFORMATION

Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*CLOSED BY REMOVAL*

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 25 **DIST/DIR:** 0.15 SE **MAP ID:** 13

NAME:	EXPRESS GASOLINE #28	**REV:**	10/22/01
ADDRESS:	1266 E VALLEY PY	**ID1:**	HE17H21396
	ESCONDIDO CA 92027	**ID2:**	
	SAN DIEGO	**STATUS:**	
CONTACT:	DIVERSIFIED DESERT PROPERTIES	**PHONE:**	(619)529-8420

Release Occurance Number:	*002*
Historical Name:	*EXPRESS GAS-E VALLEY PKWY*
Date Release Began:	*4/4/91*
Lead Agency:	*DEH*
Case Type:	*TANK, Release (W)*
Case Status:	*OPEN*
Case Status Date:	*2/1/91*

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 15 **DIST/DIR:** 0.15 SE **MAP ID:** 13

NAME:	FIRESTONE #4863	**REV:**	02/06/03
ADDRESS:	1266 E VALLEY PY	**ID1:**	HE17H03286
	ESCONDIDO CA 92027	**ID2:**	CAD981999931
	SAN DIEGO	**STATUS:**	
CONTACT:	FIRESTONE TIRE	**PHONE:**	(619)489-1356

TANK ID s
Permit Number: *H03286*
Tank Number: *T001*
Tank ID Number: *1*

TANK CHARACTERISTICS INFORMATION
Capacity: *550.00*
Manufacturer Code:
Year Installed:
Contents: *WASTE OIL*
Tank Content Chemical Name:
Tank Content CAS Number: *12035*

Tank System Type: *UNKNOWN*
Primary Tank Material: *CARBON STEEL*
Tank Interior Lining or Coating: *NO SECONDARY TANK MTRL INFO*
Tank Exterior Corrosion Protection: *NONE*
Overfill Device: *NO OVERFILL INFORMATION*
Spill Buckets:
Is Groundwater Greater Than 20 Feet (Y/N): *NO*

TANK TESTING & MONITORING INFORMATION
Below Grade Equipment:
Is System 1998 Standards Certified (Y/N):
Tank Monitor Device: *NO TANK MONIT DEV INFO*
Automatic Tank Gauges: *NO ATGS INFO AVAILABLE*
Tank Test Status: *N/A*
Tank Test Date: *08/11/86*

PIPING INFORMATION
Piping Corrosion Protection: *INVALID CODE*
Pressure Pipe Loss Leak Detector Type: *NO PPLLD BRAND INFO*
Pipe System Type: *PIPE TYPE NOT AVAILABLE*
Pipe Construction: *NO PIPE CONSTRUCTION INFO*
Pipe Primary Material: *NO PRIMARY PIPE MATERIAL INFO*
Pipe Monitor Device: *NO PIPE MONIT DEV INFO*
PIPING INFORMATION
Pipe Test Date: *08/11/86*

REGULATORY INFORMATION
Tank Exempt Indicator: *NO*
Hazard Category 1:
Regulatory Status Code Description: *CLOSED BY REMOVAL*

TANK ID s
Permit Number: *H03286*

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 15 **DIST/DIR:** 0.15 SE **MAP ID:** 13

NAME:	FIRESTONE #4863	**REV:**	02/06/03
ADDRESS:	1266 E VALLEY PY	**ID1:**	HE17H03286
	ESCONDIDO CA 92027	**ID2:**	CAD981999931
	SAN DIEGO	**STATUS:**	
CONTACT:	FIRESTONE TIRE	**PHONE:**	(619)489-1356

Tank Number:	*T002*
Tank ID Number:	*002*
TANK CHARACTERISTICS INFORMATION	
Capacity:	*550.00*
Manufacturer Code:	*0203*
Year Installed:	*1986*
Contents:	*WASTE OIL*
Tank Content Chemical Name:	
Tank Content CAS Number:	
Tank System Type:	*DOUBLE WALL*
Primary Tank Material:	*FIBERGLASS*
Tank Interior Lining or Coating:	*INVALID CODE*
Tank Exterior Corrosion Protection:	*NO EXTERIOR CORR PROT INFO*
Overfill Device:	*BALL FLOAT*
Spill Buckets:	*2*
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*
TANK TESTING & MONITORING INFORMATION	
Below Grade Equipment:	
Is System 1998 Standards Certified (Y/N):	
Tank Monitor Device:	*PETROL MONITORING SYSTEM*
Automatic Tank Gauges:	*NO ATGS INFO AVAILABLE*
Tank Test Status:	*N/A*
Tank Test Date:	*12/01/87*
PIPING INFORMATION	
Piping Corrosion Protection:	*NO PIPE PROTECTION INFO*
Pressure Pipe Loss Leak Detector Type:	*NO PPLLD BRAND INFO*
Pipe System Type:	*GRAVITY*
Pipe Construction:	*DOUBLE WALL*
Pipe Primary Material:	*NO PRIMARY PIPE MATERIAL INFO*
Pipe Monitor Device:	*NO PIPE MONIT DEV INFO*
PIPING INFORMATION	
Pipe Test Date:	*12/01/87*
REGULATORY INFORMATION	
Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*CLOSED BY REMOVAL*

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 39 **DIST/DIR:** 0.15 SE **MAP ID:** 9

NAME: TEXACO/N. ASH 425
ADDRESS: 425 N ASH ST
ESCONDIDO CA 92027
SAN DIEGO
CONTACT:

REV: 12/11/02
ID1: T0607302837
ID2:
STATUS: REMEDIAL ACTION
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

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LEAD AGENCY: *LOCAL AGENCY*
REGIONAL BOARD: *09*
LOCAL CASE NUMBER: *H20271-001*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE NUMBER: *9UT546*
CASE TYPE: *AQUIFER AFFECTED*
SUBSTANCE LEAKED: *REGULAR GASOLINE*
SUBSTANCE QUANTITY:
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *REMEDIAL ACTION*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency): *1*
DATE OF ENFORCEMENT (blank if not reported):

ENTER DATE (blank if not reported):
REVIEW DATE (blank if not reported):
DATE OF LEAK CONFIRMATION (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN (blank if not reported): *3/28/1985*
DATE POLLUTION CHARACTERIZATION PLAN BEGAN (blank if not reported):
DATE REMEDIATION PLAN WAS SUBMITTED (blank if not reported):
DATE REMEDIAL ACTION UNDERWAY (blank if not reported): *2/18/1986*
DATE POST REMEDIAL ACTION MONITORING BEGAN (blank if not reported):
DATE CLOSURE LETTER ISSUED (SITE CLOSED) (blank if not reported):
REPORT DATE (blank if not reported):

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION:
MTBE SOIL CONCENTRATION:
MTBE CNTS: *0*
MTBE FUEL: *1*
MTBE TESTED: *SITE NOT TESTED FOR MTBE. INCLUDES UNKNOWN AND NOT ANALYZED*
MTBE CLASS: *

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 13 **DIST/DIR:** 0.17 SE **MAP ID:** 21

NAME: ESCONDIDO CAR WASH
ADDRESS: 1300 E VALLEY PY
ESCONDIDO CA 92027
SAN DIEGO
CONTACT: PHILLIP WEINER

REV: 02/06/03
ID1: HE17H03010
ID2:
STATUS:
PHONE: (619)743-1400

TANK ID s
Permit Number: *H03010*
Tank Number: *T001*
Tank ID Number: *1*

TANK CHARACTERISTICS INFORMATION
Capacity: *6000.00*
Manufacturer Code:
Year Installed:
Contents: *SUPER UNLEADED*
Tank Content Chemical Name:
Tank Content CAS Number: *12033*

Tank System Type: *SINGLE WALL W/O SECNDRY CNTMNT*
Primary Tank Material: *CARBON STEEL*
Tank Interior Lining or Coating: *NO SECONDARY TANK MTRL INFO*
Tank Exterior Corrosion Protection: *UNKNOWN*
Overfill Device: *NO OVERFILL INFORMATION*
Spill Buckets:
Is Groundwater Greater Than 20 Feet (Y/N): *NO*

TANK TESTING & MONITORING INFORMATION
Below Grade Equipment:
Is System 1998 Standards Certified (Y/N):
Tank Monitor Device: *NO TANK MONIT DEV INFO*
Automatic Tank Gauges: *NO ATGS INFO AVAILABLE*
Tank Test Status: *TIGHT*
Tank Test Date: *09/09/89*

PIPING INFORMATION
Piping Corrosion Protection: *UNKNOWN*
Pressure Pipe Loss Leak Detector Type: *RED JACKET DLD, XLD, OR XLP*
Pipe System Type: *PIPE TYPE NOT AVAILABLE*
Pipe Construction: *NO PIPE CONSTRUCTION INFO*
Pipe Primary Material: *NO PRIMARY PIPE MATERIAL INFO*
Pipe Monitor Device: *NO PIPE MONIT DEV INFO*
PIPING INFORMATION
Pipe Test Date: *08/11/86*

REGULATORY INFORMATION
Tank Exempt Indicator: *NO*
Hazard Category 1:
Regulatory Status Code Description: *CLOSED BY REMOVAL*

TANK ID s
Permit Number: *H03010*

- Continued on next page -

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 13 **DIST/DIR:** 0.17 SE **MAP ID:** 21

NAME:	ESCONDIDO CAR WASH	**REV:**	02/06/03
ADDRESS:	1300 E VALLEY PY	**ID1:**	HE17H03010
	ESCONDIDO CA 92027	**ID2:**	
	SAN DIEGO	**STATUS:**	
CONTACT:	PHILLIP WEINER	**PHONE:**	(619)743-1400

Tank Number: *T002*
Tank ID Number: *2*

TANK CHARACTERISTICS INFORMATION
Capacity: *4000.00*
Manufacturer Code:
Year Installed:
Contents: *DIESEL*
Tank Content Chemical Name:
Tank Content CAS Number: *12034*

Tank System Type: *SINGLE WALL W/O SECNDRY CNTMNT*
Primary Tank Material: *CARBON STEEL*
Tank Interior Lining or Coating: *NO SECONDARY TANK MTRL INFO*
Tank Exterior Corrosion Protection: *UNKNOWN*
Overfill Device: *NO OVERFILL INFORMATION*
Spill Buckets:
Is Groundwater Greater Than 20 Feet (Y/N): *NO*

TANK TESTING & MONITORING INFORMATION
Below Grade Equipment:
Is System 1998 Standards Certified (Y/N):
Tank Monitor Device: *NO TANK MONIT DEV INFO*
Automatic Tank Gauges: *NO ATGS INFO AVAILABLE*
Tank Test Status: *TIGHT*
Tank Test Date: *28/88/07*

PIPING INFORMATION
Piping Corrosion Protection: *UNKNOWN*
Pressure Pipe Loss Leak Detector Type: *RED JACKET DLD, XLD, OR XLP*
Pipe System Type: *PIPE TYPE NOT AVAILABLE*
Pipe Construction: *NO PIPE CONSTRUCTION INFO*
Pipe Primary Material: *NO PRIMARY PIPE MATERIAL INFO*
Pipe Monitor Device: *NO PIPE MONIT DEV INFO*
PIPING INFORMATION
Pipe Test Date: *08/11/86*

REGULATORY INFORMATION
Tank Exempt Indicator: *NO*
Hazard Category 1:
Regulatory Status Code Description: *CLOSED BY REMOVAL*

TANK ID s
Permit Number: *H03010*
Tank Number: *T003*
Tank ID Number: *3*

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Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 22 **DIST/DIR:** 0.17 SE **MAP ID:** 21

NAME:	ESCONDIDO CAR WASH	**REV:**	04/24/00
ADDRESS:	1300 EAST VALLEY PY	**ID1:**	HE17H03010
	ESCONDIDO CA 92027	**ID2:**	
	San Diego	**STATUS:**	
CONTACT:	PHILLIP WEINER	**PHONE:**	(619)743-1400

Release Occurance Number:	*001*
Historical Name:	*PARKWAY CARWASH*
Date Release Began:	*12/10/86*
Lead Agency:	*DEH*
Case Type:	*TANK, Release (W)*
Case Status:	*CLOSED*
Case Status Date:	*1/15/98*

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 27 **DIST/DIR:** 0.17 SE **MAP ID:** 20

NAME:	HOME FEDERAL BANK	**REV:**	04/24/00
ADDRESS:	1202 EAST VALLEY PY	**ID1:**	HE17H34137
	ESCONDIDO CA 92027	**ID2:**	
	San Diego	**STATUS:**	
CONTACT:	HOME FEDERAL BANK	**PHONE:**	( ) -

Release Occurance Number:	*001*
Historical Name:	*TEXACO/VALLEY PK 1202(HOMEFED)*
Date Release Began:	*9/20/94*
Lead Agency:	*DEH*
Case Type:	*TANK, Release (W)*
Case Status:	*OPEN*
Case Status Date:	*2/10/94*

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 31 **DIST/DIR:** 0.17 SE **MAP ID:** 21

NAME: PARKWAY CARWASH
ADDRESS: 1300 E VALLEY PY
ESCONDIDO CA 92027
SAN DIEGO
CONTACT:

REV: 12/11/02
ID1: T0607302680
ID2:
STATUS: CASE CLOSED
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

Please note that some data previously provided by the State Water Resources Control Board in the LUSTIS database is not currently being provided by the agency in the most recent edition. Incidents that occurred dating after the year 2000 may not have much information. Field headers with blank information following after should be interpreted as unreported by the agency.

LEAD AGENCY: *LOCAL AGENCY*
REGIONAL BOARD: *09*
LOCAL CASE NUMBER: *H03010-001*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE NUMBER: *9UT392*
CASE TYPE: *AQUIFER AFFECTED*
SUBSTANCE LEAKED: *UNLEADED GASOLINE*
SUBSTANCE QUANTITY:
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *CASE CLOSED*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency): *1*
DATE OF ENFORCEMENT (blank if not reported):

ENTER DATE (blank if not reported):
REVIEW DATE (blank if not reported):
DATE OF LEAK CONFIRMATION (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN (blank if not reported): *12/10/1986*
DATE POLLUTION CHARACTERIZATION PLAN BEGAN (blank if not reported):
DATE REMEDIATION PLAN WAS SUBMITTED (blank if not reported):
DATE REMEDIAL ACTION UNDERWAY (blank if not reported): *3/26/1992*
DATE POST REMEDIAL ACTION MONITORING BEGAN (blank if not reported):
DATE CLOSURE LETTER ISSUED (SITE CLOSED) (blank if not reported): *1/15/1998*
REPORT DATE (blank if not reported):

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration): *1/1/1965*
MTBE GROUNDWATER CONCENTRATION: *EQUAL TO 0.94*
MTBE SOIL CONCENTRATION:
MTBE CNTS: *2*
MTBE FUEL: *1*
MTBE TESTED: *YES*
MTBE CLASS:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

RCRA GENERATOR SITE

SEARCH ID: 2 **DIST/DIR:** 0.17 SE **MAP ID:** 4

NAME: PAYLESS 4186
ADDRESS: 1275 E VALLEY PKWY
ESCONDIDO CA 92027
SAN DIEGO
CONTACT:

REV: 12/9/02
ID1: CA0001006824
ID2:
STATUS: SGN
PHONE:

SITE INFORMATION

UNIVERSE TYPE:

SQG - SMALL QUANTITY GENERATOR: GENERATES 100 - 1000 KG/MONTH OF HAZARDOUS WASTE

SIC INFORMATION:

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 40 **DIST/DIR:** 0.17 SE **MAP ID:** 20

NAME:	TEXACO/VALLEY PK 1202(HOMEFED)	**REV:**	12/11/02
ADDRESS:	1202 E VALLEY PY	**ID1:**	T0607301684
	ESCONDIDO CA 92027	**ID2:**	
	SAN DIEGO	**STATUS:**	REMEDIAL ACTION
CONTACT:		**PHONE:**	

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

Please note that some data previously provided by the State Water Resources Control Board in the LUSTIS database is not currently being provided by the agency in the most recent edition. Incidents that occurred dating after the year 2000 may not have much information. Field headers with blank information following after should be interpreted as unreported by the agency.

LEAD AGENCY: *LOCAL AGENCY*
REGIONAL BOARD: *09*
LOCAL CASE NUMBER: *H34137-001*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE NUMBER: *9UT2919*
CASE TYPE: *AQUIFER AFFECTED*
SUBSTANCE LEAKED: *unk*
SUBSTANCE QUANTITY:
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *REMEDIAL ACTION*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency): *1*
DATE OF ENFORCEMENT (blank if not reported):

ENTER DATE (blank if not reported):
REVIEW DATE (blank if not reported):
DATE OF LEAK CONFIRMATION (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN (blank if not reported): *1/3/1965*
DATE POLLUTION CHARACTERIZATION PLAN BEGAN (blank if not reported):
DATE REMEDIATION PLAN WAS SUBMITTED (blank if not reported):
DATE REMEDIAL ACTION UNDERWAY (blank if not reported): *1/3/1965*
DATE POST REMEDIAL ACTION MONITORING BEGAN (blank if not reported):
DATE CLOSURE LETTER ISSUED (SITE CLOSED) (blank if not reported):
REPORT DATE (blank if not reported):

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration): *1/1/1965*
MTBE GROUNDWATER CONCENTRATION: *LESS THAN 0.00*
MTBE SOIL CONCENTRATION:
MTBE CNTS: *2*
MTBE FUEL: *0*
MTBE TESTED: *YES*
MTBE CLASS: *D*

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 10 **DIST/DIR:** 0.19 SW **MAP ID:** 11

NAME:	CIRCLE K STORE #8545	**REV:**	02/06/03
ADDRESS:	1161 E VALLEY PY	**ID1:**	HE17H03480
	ESCONDIDO CA 92025	**ID2:**	CAL000106285
	SAN DIEGO	**STATUS:**	
CONTACT:	CIRCLE K CORP	**PHONE:**	(760)747-2634

TANK ID s

Permit Number:	*H03480*
Tank Number:	*T001*
Tank ID Number:	*ONE*

TANK CHARACTERISTICS INFORMATION

Capacity:	*10000.00*
Manufacturer Code:	
Year Installed:	
Contents:	*REGULAR UNLEADED*
Tank Content Chemical Name:	
Tank Content CAS Number:	*12032*
Tank System Type:	*SINGLE WALL W/O SECNDRY CNTMNT*
Primary Tank Material:	*UNKNOWN*
Tank Interior Lining or Coating:	*NO SECONDARY TANK MTRL INFO*
Tank Exterior Corrosion Protection:	*INVALID CODE*
Overfill Device:	*NO OVERFILL INFORMATION*
Spill Buckets:	
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*

TANK TESTING & MONITORING INFORMATION

Below Grade Equipment:	
Is System 1998 Standards Certified (Y/N):	
Tank Monitor Device:	*NO TANK MONIT DEV INFO*
Automatic Tank Gauges:	*NO ATGS INFO AVAILABLE*
Tank Test Status:	*N/A*
Tank Test Date:	*08/11/86*

PIPING INFORMATION

Piping Corrosion Protection:	*INVALID CODE*
Pressure Pipe Loss Leak Detector Type:	*NO PPLLD BRAND INFO*
Pipe System Type:	*PRESSURIZED*
Pipe Construction:	*SINGLE WALL*
Pipe Primary Material:	*NO PRIMARY PIPE MATERIAL INFO*
Pipe Monitor Device:	*NO PIPE MONIT DEV INFO*

PIPING INFORMATION

Pipe Test Date:	*08/11/86*

REGULATORY INFORMATION

Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*CLOSED BY REMOVAL*

TANK ID s

Permit Number:	*H03480*

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TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 10 **DIST/DIR:** 0.19 SW **MAP ID:** 11

NAME:	CIRCLE K STORE #8545	**REV:**	02/06/03
ADDRESS:	1161 E VALLEY PY	**ID1:**	HE17H03480
	ESCONDIDO CA 92025	**ID2:**	CAL000106285
	SAN DIEGO	**STATUS:**	
CONTACT:	CIRCLE K CORP	**PHONE:**	(760)747-2634

Tank Number:	*T002*
Tank ID Number:	*TWO*
TANK CHARACTERISTICS INFORMATION	
Capacity:	*10000.00*
Manufacturer Code:	
Year Installed:	
Contents:	*REGULAR UNLEADED*
Tank Content Chemical Name:	
Tank Content CAS Number:	*12031*
Tank System Type:	*SINGLE WALL W/O SECNDRY CNTMNT*
Primary Tank Material:	*UNKNOWN*
Tank Interior Lining or Coating:	*NO SECONDARY TANK MTRL INFO*
Tank Exterior Corrosion Protection:	*INVALID CODE*
Overfill Device:	*NO OVERFILL INFORMATION*
Spill Buckets:	
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*
TANK TESTING & MONITORING INFORMATION	
Below Grade Equipment:	
Is System 1998 Standards Certified (Y/N):	
Tank Monitor Device:	*NO TANK MONIT DEV INFO*
Automatic Tank Gauges:	*NO ATGS INFO AVAILABLE*
Tank Test Status:	*N/A*
Tank Test Date:	*08/11/86*
PIPING INFORMATION	
Piping Corrosion Protection:	*INVALID CODE*
Pressure Pipe Loss Leak Detector Type:	*NO PPLLD BRAND INFO*
Pipe System Type:	*PRESSURIZED*
Pipe Construction:	*SINGLE WALL*
Pipe Primary Material:	*NO PRIMARY PIPE MATERIAL INFO*
Pipe Monitor Device:	*NO PIPE MONIT DEV INFO*
PIPING INFORMATION	
Pipe Test Date:	*08/11/86*
REGULATORY INFORMATION	
Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*CLOSED BY REMOVAL*
TANK ID s	
Permit Number:	*H03480*
Tank Number:	*T003*
Tank ID Number:	*THREE*

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TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 10 **DIST/DIR:** 0.19 SW **MAP ID:** 11

NAME: CIRCLE K STORE #8545
ADDRESS: 1161 E VALLEY PY
ESCONDIDO CA 92025
SAN DIEGO
CONTACT: CIRCLE K CORP

REV: 02/06/03
ID1: HE17H03480
ID2: CAL000106285
STATUS:
PHONE: (760)747-2634

TANK CHARACTERISTICS INFORMATION

Capacity:	*10000.00*
Manufacturer Code:	
Year Installed:	
Contents:	*REGULAR UNLEADED*
Tank Content Chemical Name:	
Tank Content CAS Number:	*12034*
Tank System Type:	*SINGLE WALL W/O SECNDRY CNTMNT*
Primary Tank Material:	*UNKNOWN*
Tank Interior Lining or Coating:	*NO SECONDARY TANK MTRL INFO*
Tank Exterior Corrosion Protection:	*INVALID CODE*
Overfill Device:	*NO OVERFILL INFORMATION*
Spill Buckets:	
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*

TANK TESTING & MONITORING INFORMATION

Below Grade Equipment:	
Is System 1998 Standards Certified (Y/N):	
Tank Monitor Device:	*NO TANK MONIT DEV INFO*
Automatic Tank Gauges:	*NO ATGS INFO AVAILABLE*
Tank Test Status:	*N/A*
Tank Test Date:	*08/11/86*

PIPING INFORMATION

Piping Corrosion Protection:	*INVALID CODE*
Pressure Pipe Loss Leak Detector Type:	*NO PPLLD BRAND INFO*
Pipe System Type:	*PRESSURIZED*
Pipe Construction:	*SINGLE WALL*
Pipe Primary Material:	*NO PRIMARY PIPE MATERIAL INFO*
Pipe Monitor Device:	*NO PIPE MONIT DEV INFO*

PIPING INFORMATION

Pipe Test Date:	*08/11/86*

REGULATORY INFORMATION

Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*CLOSED BY REMOVAL*

TANK ID s

Permit Number:	*H03480*
Tank Number:	*T004*
Tank ID Number:	*FOUR*

TANK CHARACTERISTICS INFORMATION

Capacity:	*280.00*
Manufacturer Code:	

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TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 10 **DIST/DIR:** 0.19 SW **MAP ID:** 11

NAME:	CIRCLE K STORE #8545	**REV:**	02/06/03
ADDRESS:	1161 E VALLEY PY	**ID1:**	HE17H03480
	ESCONDIDO CA 92025	**ID2:**	CAL000106285
	SAN DIEGO	**STATUS:**	
CONTACT:	CIRCLE K CORP	**PHONE:**	(760)747-2634

Year Installed:	
Contents:	*WASTE OIL*
Tank Content Chemical Name:	
Tank Content CAS Number:	*12035*
Tank System Type:	*SINGLE WALL W/O SECNDRY CNTMNT*
Primary Tank Material:	*UNKNOWN*
Tank Interior Lining or Coating:	*NO SECONDARY TANK MTRL INFO*
Tank Exterior Corrosion Protection:	*INVALID CODE*
Overfill Device:	*NO OVERFILL INFORMATION*
Spill Buckets:	
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*

TANK TESTING & MONITORING INFORMATION

Below Grade Equipment:	
Is System 1998 Standards Certified (Y/N):	
Tank Monitor Device:	*NO TANK MONIT DEV INFO*
Automatic Tank Gauges:	*NO ATGS INFO AVAILABLE*
Tank Test Status:	*N/A*
Tank Test Date:	*08/11/86*

PIPING INFORMATION

Piping Corrosion Protection:	*INVALID CODE*
Pressure Pipe Loss Leak Detector Type:	*NO PPLLD BRAND INFO*
Pipe System Type:	*PIPE TYPE NOT AVAILABLE*
Pipe Construction:	*NO PIPE CONSTRUCTION INFO*
Pipe Primary Material:	*NO PRIMARY PIPE MATERIAL INFO*
Pipe Monitor Device:	*NO PIPE MONIT DEV INFO*

PIPING INFORMATION

Pipe Test Date:	*08/11/86*

REGULATORY INFORMATION

Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*CLOSED BY REMOVAL*

TANK ID s

Permit Number:	*H03480*
Tank Number:	*T005*
Tank ID Number:	*5*

TANK CHARACTERISTICS INFORMATION

Capacity:	*10000.00*
Manufacturer Code:	*0503*
Year Installed:	*1988*
Contents:	*PLUS UNLEADED*
Tank Content Chemical Name:	*UNLEADED PLUS FUEL*

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Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 10 **DIST/DIR:** 0.19 SW **MAP ID:** 11

NAME:	CIRCLE K STORE #8545	**REV:**	02/06/03
ADDRESS:	1161 E VALLEY PY	**ID1:**	HE17H03480
	ESCONDIDO CA 92025	**ID2:**	CAL000106285
	SAN DIEGO	**STATUS:**	
CONTACT:	CIRCLE K CORP	**PHONE:**	(760)747-2634

Tank Content CAS Number:	*8006-61-9*
Tank System Type:	*DOUBLE WALL*
Primary Tank Material:	*FIBERGLASS*
Tank Interior Lining or Coating:	*N/A*
Tank Exterior Corrosion Protection:	*NOT APPLICABLE*
Overfill Device:	*AUTO SHUTOFF+BALL FLOAT*
Spill Buckets:	*1*
Is Groundwater Greater Than 20 Feet (Y/N):	*YES*

TANK TESTING & MONITORING INFORMATION

Below Grade Equipment:	*020122*
Is System 1998 Standards Certified (Y/N):	*YES*
Tank Monitor Device:	*VEEDER ROOT*
Automatic Tank Gauges:	*VEEDER RT TLS-250/250I/300/350*
Tank Test Status:	*TIGHT*
Tank Test Date:	*02/03/93*

PIPING INFORMATION

Piping Corrosion Protection:	*NONE*
Pressure Pipe Loss Leak Detector Type:	*RED JACKET DLD, XLD, OR XLP*
Pipe System Type:	*PRESSURIZED*
Pipe Construction:	*DOUBLE WALL*
Pipe Primary Material:	*FIBERGLASS*
Pipe Monitor Device:	*VEEDER ROOT*

PIPING INFORMATION

Pipe Test Date:	*01/01/01*

REGULATORY INFORMATION

Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*PERMIT TO OPERATE*

TANK ID s

Permit Number:	*H03480*
Tank Number:	*T006*
Tank ID Number:	*6*

TANK CHARACTERISTICS INFORMATION

Capacity:	*10000.00*
Manufacturer Code:	*0503*
Year Installed:	*1988*
Contents:	*REGULAR UNLEADED*
Tank Content Chemical Name:	*REGULAR UNLEADED*
Tank Content CAS Number:	*8006-61-9*
Tank System Type:	*DOUBLE WALL*

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TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 10 **DIST/DIR:** 0.19 SW **MAP ID:** 11

NAME: CIRCLE K STORE #8545
ADDRESS: 1161 E VALLEY PY
ESCONDIDO CA 92025
SAN DIEGO
CONTACT: CIRCLE K CORP

REV: 02/06/03
ID1: HE17H03480
ID2: CAL000106285
STATUS:
PHONE: (760)747-2634

Primary Tank Material:	*FIBERGLASS*
Tank Interior Lining or Coating:	*N/A*
Tank Exterior Corrosion Protection:	*NOT APPLICABLE*
Overfill Device:	*AUTO SHUTOFF+BALL FLOAT*
Spill Buckets:	*1*
Is Groundwater Greater Than 20 Feet (Y/N):	*YES*

TANK TESTING & MONITORING INFORMATION

Below Grade Equipment:	*020122*
Is System 1998 Standards Certified (Y/N):	*YES*
Tank Monitor Device:	*VEEDER ROOT*
Automatic Tank Gauges:	*VEEDER RT TLS-250/250I/300/350*
Tank Test Status:	*TIGHT*
Tank Test Date:	*02/03/93*

PIPING INFORMATION

Piping Corrosion Protection:	*NONE*
Pressure Pipe Loss Leak Detector Type:	*RED JACKET DLD, XLD, OR XLP*
Pipe System Type:	*PRESSURIZED*
Pipe Construction:	*DOUBLE WALL*
Pipe Primary Material:	*FIBERGLASS*
Pipe Monitor Device:	*VEEDER ROOT*

PIPING INFORMATION

Pipe Test Date:	*01/01/01*

REGULATORY INFORMATION

Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*PERMIT TO OPERATE*

TANK ID s

Permit Number:	*H03480*
Tank Number:	*T007*
Tank ID Number:	*7*

TANK CHARACTERISTICS INFORMATION

Capacity:	*10000.00*
Manufacturer Code:	*0204*
Year Installed:	*1988*
Contents:	*SUPER UNLEADED*
Tank Content Chemical Name:	*REGULAR UNLEADED*
Tank Content CAS Number:	*8006-61-9*
Tank System Type:	*DOUBLE WALL*
Primary Tank Material:	*FIBERGLASS*
Tank Interior Lining or Coating:	*N/A*
Tank Exterior Corrosion Protection:	*NOT APPLICABLE*

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 10 **DIST/DIR:** 0.19 SW **MAP ID:** 11

NAME:	CIRCLE K STORE #8545	**REV:**	02/06/03
ADDRESS:	1161 E VALLEY PY	**ID1:**	HE17H03480
	ESCONDIDO CA 92025	**ID2:**	CAL000106285
	SAN DIEGO	**STATUS:**	
CONTACT:	CIRCLE K CORP	**PHONE:**	(760)747-2634

Overfill Device: *AUTO SHUTOFF+BALL FLOAT*
Spill Buckets: *1*
Is Groundwater Greater Than 20 Feet (Y/N): *YES*

TANK TESTING & MONITORING INFORMATION
Below Grade Equipment: *020122*
Is System 1998 Standards Certified (Y/N): *YES*
Tank Monitor Device: *VEEDER ROOT*
Automatic Tank Gauges: *VEEDER RT TLS-250/250I/300/350*
Tank Test Status: *TIGHT*
Tank Test Date: *02/03/93*

PIPING INFORMATION
Piping Corrosion Protection: *NONE*
Pressure Pipe Loss Leak Detector Type: *VAPORLESS LD 2000*
Pipe System Type: *PRESSURIZED*
Pipe Construction: *DOUBLE WALL*
Pipe Primary Material: *FIBERGLASS*
Pipe Monitor Device: *VEEDER ROOT*
PIPING INFORMATION
Pipe Test Date: *01/01/01*

REGULATORY INFORMATION
Tank Exempt Indicator: *NO*
Hazard Category 1:
Regulatory Status Code Description: *PERMIT TO OPERATE*

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 19 **DIST/DIR:** 0.19 SW **MAP ID:** 11

NAME:	CIRCLE K STORE #8545	**REV:**	04/24/00
ADDRESS:	1161 EAST VALLEY PY	**ID1:**	HE17H03480
	ESCONDIDO CA 92025	**ID2:**	
	San Diego	**STATUS:**	
CONTACT:	CIRCLE K CORP	**PHONE:**	(760)747-2634

Release Occurance Number:	*001*
Historical Name:	*ROLLIES VALLEY MOBIL*
Date Release Began:	*5/13/87*
Lead Agency:	*DEH*
Case Type:	*TANK, Release*
Case Status:	*CLOSED*
Case Status Date:	*6/23/87*

Release Occurance Number:	*002*
Historical Name:	*SANESCO*
Date Release Began:	*3/8/88*
Lead Agency:	*DEH*
Case Type:	*TANK, Release (W)*
Case Status:	*OPEN*
Case Status Date:	*8/28/96*

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 32 **DIST/DIR:** 0.19 SW **MAP ID:** 11

NAME:	ROLLIES VALLEY MOBIL	**REV:**	12/11/02
ADDRESS:	1161 E VALLEY PY	**ID1:**	T0607302999
	ESCONDIDO CA 92025	**ID2:**	
	SAN DIEGO	**STATUS:**	CASE CLOSED
CONTACT:		**PHONE:**	

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

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LEAD AGENCY: *LOCAL AGENCY*
REGIONAL BOARD: *09*
LOCAL CASE NUMBER: *H03480-001*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE NUMBER: *9UT737*
CASE TYPE: *SOIL ONLY*
SUBSTANCE LEAKED: *WASTE OIL*
SUBSTANCE QUANTITY:
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *CASE CLOSED*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):

ENTER DATE (blank if not reported):
REVIEW DATE (blank if not reported):
DATE OF LEAK CONFIRMATION (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN (blank if not reported): *5/22/1987*
DATE POLLUTION CHARACTERIZATION PLAN BEGAN (blank if not reported):
DATE REMEDIATION PLAN WAS SUBMITTED (blank if not reported):
DATE REMEDIAL ACTION UNDERWAY (blank if not reported): *1/3/1965*
DATE POST REMEDIAL ACTION MONITORING BEGAN (blank if not reported):
DATE CLOSURE LETTER ISSUED (SITE CLOSED) (blank if not reported): *6/23/1987*
REPORT DATE (blank if not reported):

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION:
MTBE SOIL CONCENTRATION:
MTBE CNTS: *0*
MTBE FUEL: *0*
MTBE TESTED: *NOT REQUIRED TO BE TESTED*
MTBE CLASS: *

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 33 **DIST/DIR:** 0.19 SW **MAP ID:** 11

NAME: SANESCO
ADDRESS: 1161 E VALLEY PY
ESCONDIDO CA 92025
SAN DIEGO
CONTACT:

REV: 12/11/02
ID1: T0607301183
ID2:
STATUS: REMEDIAL ACTION
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

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LEAD AGENCY: *LOCAL AGENCY*
REGIONAL BOARD: *09*
LOCAL CASE NUMBER: *H03480-002*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE NUMBER: *9UT2419*
CASE TYPE: *AQUIFER AFFECTED*
SUBSTANCE LEAKED: *1203412032*
SUBSTANCE QUANTITY:
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *REMEDIAL ACTION*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency): *1*
DATE OF ENFORCEMENT (blank if not reported):

ENTER DATE (blank if not reported):
REVIEW DATE (blank if not reported):
DATE OF LEAK CONFIRMATION (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN (blank if not reported): *3/8/1988*
DATE POLLUTION CHARACTERIZATION PLAN BEGAN (blank if not reported):
DATE REMEDIATION PLAN WAS SUBMITTED (blank if not reported):
DATE REMEDIAL ACTION UNDERWAY (blank if not reported): *8/1/1998*
DATE POST REMEDIAL ACTION MONITORING BEGAN (blank if not reported):
DATE CLOSURE LETTER ISSUED (SITE CLOSED) (blank if not reported):
REPORT DATE (blank if not reported):

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration): *6/8/2001*
MTBE GROUNDWATER CONCENTRATION: *EQUAL TO 3600.00*
MTBE SOIL CONCENTRATION:
MTBE CNTS: *4*
MTBE FUEL: *0*
MTBE TESTED: *YES*
MTBE CLASS: *C*

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 16 **DIST/DIR:** 0.21 SE **MAP ID:** 19

NAME: UNOCAL SERV STATION #5722
ADDRESS: 1333 E VALLEY PY
ESCONDIDO CA 92027
SAN DIEGO
CONTACT: TOSCO, INC.

REV: 02/06/03
ID1: HE17H13168
ID2: CAL000010401
STATUS:
PHONE: (619)743-8220

TANK ID s
Permit Number: *H13168*
Tank Number: *T001*
Tank ID Number: *1*

TANK CHARACTERISTICS INFORMATION
Capacity: *12000.00*
Manufacturer Code: *0103*
Year Installed: *1985*
Contents: *REGULAR UNLEADED*
Tank Content Chemical Name: *UNLEADED*
Tank Content CAS Number: *8006-61-9*

Tank System Type: *DOUBLE WALL*
Primary Tank Material: *CARBON STEEL W/FRP COATING*
Tank Interior Lining or Coating: *INVALID CODE*
Tank Exterior Corrosion Protection: *NO EXTERIOR CORR PROT INFO*
Overfill Device: *NONE*
Spill Buckets: *2*
Is Groundwater Greater Than 20 Feet (Y/N): *NO*

TANK TESTING & MONITORING INFORMATION
Below Grade Equipment: *970516*
Is System 1998 Standards Certified (Y/N):
Tank Monitor Device: *RONAN*
Automatic Tank Gauges: *RONAN X-76 ETM*
Tank Test Status: *TIGHT*
Tank Test Date: *04/17/95*

PIPING INFORMATION
Piping Corrosion Protection: *FIBERGLASS PIPE*
Pressure Pipe Loss Leak Detector Type: *RED JACKET DLD, XLD, OR XLP*
Pipe System Type: *PRESSURIZED*
Pipe Construction: *SINGLE WALL*
Pipe Primary Material: *FIBERGLASS*
Pipe Monitor Device: *RED JACKET PPM4000 & RLM 9000*
PIPING INFORMATION
Pipe Test Date: *04/17/95*

REGULATORY INFORMATION
Tank Exempt Indicator: *NO*
Hazard Category 1:
Regulatory Status Code Description: *CLOSED BY REMOVAL*

TANK ID s
Permit Number: *H13168*

- Continued on next page -

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 16 **DIST/DIR:** 0.21 SE **MAP ID:** 19

NAME:	UNOCAL SERV STATION #5722	**REV:**	02/06/03
ADDRESS:	1333 E VALLEY PY	**ID1:**	HE17H13168
	ESCONDIDO CA 92027	**ID2:**	CAL000010401
	SAN DIEGO	**STATUS:**	
CONTACT:	TOSCO, INC.	**PHONE:**	(619)743-8220

Tank Number:	*T002*
Tank ID Number:	*2*
TANK CHARACTERISTICS INFORMATION	
Capacity:	*12000.00*
Manufacturer Code:	*0103*
Year Installed:	*1985*
Contents:	*SUPER UNLEADED*
Tank Content Chemical Name:	*PREMIUM UNLEADED*
Tank Content CAS Number:	*8006-61-9*
Tank System Type:	*DOUBLE WALL*
Primary Tank Material:	*CARBON STEEL W/FRP COATING*
Tank Interior Lining or Coating:	*INVALID CODE*
Tank Exterior Corrosion Protection:	*NO EXTERIOR CORR PROT INFO*
Overfill Device:	*NONE*
Spill Buckets:	*2*
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*
TANK TESTING & MONITORING INFORMATION	
Below Grade Equipment:	*970516*
Is System 1998 Standards Certified (Y/N):	
Tank Monitor Device:	*RONAN*
Automatic Tank Gauges:	*RONAN X-76 ETM*
Tank Test Status:	*TIGHT*
Tank Test Date:	*04/17/95*
PIPING INFORMATION	
Piping Corrosion Protection:	*FIBERGLASS PIPE*
Pressure Pipe Loss Leak Detector Type:	*RED JACKET DLD, XLD, OR XLP*
Pipe System Type:	*PRESSURIZED*
Pipe Construction:	*SINGLE WALL*
Pipe Primary Material:	*FIBERGLASS*
Pipe Monitor Device:	*RED JACKET PPM4000 & RLM 9000*
PIPING INFORMATION	
Pipe Test Date:	*04/17/95*
REGULATORY INFORMATION	
Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*CLOSED BY REMOVAL*
TANK ID s	
Permit Number:	*H13168*
Tank Number:	*T003*
Tank ID Number:	*3*

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Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 16 **DIST/DIR:** 0.21 SE **MAP ID:** 19

NAME:	UNOCAL SERV STATION #5722	REV:	02/06/03
ADDRESS:	1333 E VALLEY PY	ID1:	HE17H13168
	ESCONDIDO CA 92027	ID2:	CAL000010401
	SAN DIEGO	STATUS:	
CONTACT:	TOSCO, INC.	PHONE:	(619)743-8220

TANK CHARACTERISTICS INFORMATION

Capacity:	*10000.00*
Manufacturer Code:	*0103*
Year Installed:	*1985*
Contents:	*DIESEL*
Tank Content Chemical Name:	*DIESEL*
Tank Content CAS Number:	*684-76-346*
Tank System Type:	*DOUBLE WALL*
Primary Tank Material:	*CARBON STEEL W/FRP COATING*
Tank Interior Lining or Coating:	*INVALID CODE*
Tank Exterior Corrosion Protection:	*COATING (EXTERIOR) VINYL WRAP*
Overfill Device:	*NONE*
Spill Buckets:	*2*
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*

TANK TESTING & MONITORING INFORMATION

Below Grade Equipment:	*970516*
Is System 1998 Standards Certified (Y/N):	
Tank Monitor Device:	*RONAN*
Automatic Tank Gauges:	*RONAN X-76 ETM*
Tank Test Status:	*NO STATUS*
Tank Test Date:	*11/21/91*

PIPING INFORMATION

Piping Corrosion Protection:	*FIBERGLASS PIPE*
Pressure Pipe Loss Leak Detector Type:	*RED JACKET DLD, XLD, OR XLP*
Pipe System Type:	*PRESSURIZED*
Pipe Construction:	*SINGLE WALL*
Pipe Primary Material:	*FIBERGLASS*
Pipe Monitor Device:	*RED JACKET PPM4000 & RLM 9000*

PIPING INFORMATION

Pipe Test Date:	*12/01/87*

REGULATORY INFORMATION

Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*CLOSED BY REMOVAL*

TANK ID s

Permit Number:	*H13168*
Tank Number:	*T004*
Tank ID Number:	*4*

TANK CHARACTERISTICS INFORMATION

Capacity:	*500.00*
Manufacturer Code:	*0103*

- Continued on next page -

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 16 **DIST/DIR:** 0.21 SE **MAP ID:** 19

NAME:	UNOCAL SERV STATION #5722	**REV:**	02/06/03
ADDRESS:	1333 E VALLEY PY	**ID1:**	HE17H13168
	ESCONDIDO CA 92027	**ID2:**	CAL000010401
	SAN DIEGO	**STATUS:**	
CONTACT:	TOSCO, INC.	**PHONE:**	(619)743-8220

Year Installed:	*1985*
Contents:	*WASTE OIL*
Tank Content Chemical Name:	
Tank Content CAS Number:	
Tank System Type:	*DOUBLE WALL*
Primary Tank Material:	*CARBON STEEL W/COMPOSITE*
Tank Interior Lining or Coating:	*INVALID CODE*
Tank Exterior Corrosion Protection:	*NO EXTERIOR CORR PROT INFO*
Overfill Device:	*NONE*
Spill Buckets:	*2*
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*

TANK TESTING & MONITORING INFORMATION

Below Grade Equipment:	*970516*
Is System 1998 Standards Certified (Y/N):	
Tank Monitor Device:	*UNKNOWN*
Automatic Tank Gauges:	*NO ATGS INFO AVAILABLE*
Tank Test Status:	*N/A*
Tank Test Date:	*12/01/87*

PIPING INFORMATION

Piping Corrosion Protection:	*NO PIPE PROTECTION INFO*
Pressure Pipe Loss Leak Detector Type:	*NO PPLLD BRAND INFO*
Pipe System Type:	*GRAVITY*
Pipe Construction:	*DOUBLE WALL*
Pipe Primary Material:	*FIBERGLASS*
Pipe Monitor Device:	*UNKNOWN*

PIPING INFORMATION

Pipe Test Date:	*12/01/87*

REGULATORY INFORMATION

Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*CLOSED BY REMOVAL*

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 24 **DIST/DIR:** 0.30 NW **MAP ID:** 14

NAME: EXPRESS GASOLINE
ADDRESS: 1140 E MISSION AV
ESCONDIDO CA 92025
SAN DIEGO
CONTACT:

REV: 12/11/02
ID1: T0607302632
ID2:
STATUS: PRELIM. SITE ASSES. UNDERWAY
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

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LEAD AGENCY: *LOCAL AGENCY*
REGIONAL BOARD: *09*
LOCAL CASE NUMBER: *H12546-002*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE NUMBER: *9UT3872*
CASE TYPE: *AQUIFER AFFECTED*
SUBSTANCE LEAKED: *UNLEADED GASOLINE*
SUBSTANCE QUANTITY:
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *PRELIM. SITE ASSES. UNDERWAY*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):

ENTER DATE (blank if not reported):
REVIEW DATE (blank if not reported):
DATE OF LEAK CONFIRMATION (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN (blank if not reported): *4/4/2001*
DATE POLLUTION CHARACTERIZATION PLAN BEGAN (blank if not reported):
DATE REMEDIATION PLAN WAS SUBMITTED (blank if not reported):
DATE REMEDIAL ACTION UNDERWAY (blank if not reported): *1/3/1965*
DATE POST REMEDIAL ACTION MONITORING BEGAN (blank if not reported):
DATE CLOSURE LETTER ISSUED (SITE CLOSED) (blank if not reported):
REPORT DATE (blank if not reported):

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION:
MTBE SOIL CONCENTRATION:
MTBE CNTS: *0*
MTBE FUEL: *1*
MTBE TESTED: *SITE NOT TESTED FOR MTBE. INCLUDES UNKNOWN AND NOT ANALYZED*
MTBE CLASS: *

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 30 **DIST/DIR:** 0.30 NW **MAP ID:** 14

NAME:	O&S EXPRESS	**REV:**	08/21/00
ADDRESS:	1140 E MISSION AV	**ID1:**	HE17H12546
	ESCONDIDO CA 92025	**ID2:**	CAD000301531
	San Diego	**STATUS:**	
CONTACT:	ODEH RAHI	**PHONE:**	(858)745-3250

Release Occurance Number:	*001*
Historical Name:	*DEANS SERVICE & TIRE CENTER*
Date Release Began:	*8/5/86*
Lead Agency:	*DEH*
Case Type:	*TANK, Release*
Case Status:	*CLOSED*
Case Status Date:	*12/4/87*

Release Occurance Number:	*002*
Historical Name:	*EXPRESS GASOLINE*
Date Release Began:	*2/19/99*
Lead Agency:	*DEH*
Case Type:	*TANK, Release*
Case Status:	*OPEN*
Case Status Date:	*5/23/01*

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 26 **DIST/DIR:** 0.33 SE **MAP ID:** 1

NAME:	FEDCO-AUTO SERVICE	**REV:**	10/22/01
ADDRESS:	1475 E VALLEY PY	**ID1:**	HE17H19873
	ESCONDIDO CA 92027	**ID2:**	CAL000004615
	SAN DIEGO	**STATUS:**	
CONTACT:	FEDCO	**PHONE:**	(619)744-0100

Release Occurance Number:	*001*
Historical Name:	*FORMER FEDCO INC.*
Date Release Began:	*2/28/00*
Lead Agency:	*DEH*
Case Type:	*TANK, Release*
Case Status:	*CLOSED*
Case Status Date:	*4/12/00*

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 48 **DIST/DIR:** 0.33 SE **MAP ID:** 1

NAME: FORMER FEDCO INC.
ADDRESS: 1475 E VALLEY PY
ESCONDIDO CA 92027
SAN DIEGO
CONTACT:

REV: 12/11/02
ID1: T0608106147
ID2:
STATUS: CASE CLOSED
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

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LEAD AGENCY: *LOCAL AGENCY*
REGIONAL BOARD: *09*
LOCAL CASE NUMBER: *H19873-001*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE NUMBER:
CASE TYPE: *SOIL ONLY*
SUBSTANCE LEAKED: *TRANSMISSION FLUID*
SUBSTANCE QUANTITY:
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *CASE CLOSED*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):

ENTER DATE (blank if not reported):
REVIEW DATE (blank if not reported):
DATE OF LEAK CONFIRMATION (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN (blank if not reported): *7/28/1999*
DATE POLLUTION CHARACTERIZATION PLAN BEGAN (blank if not reported):
DATE REMEDIATION PLAN WAS SUBMITTED (blank if not reported):
DATE REMEDIAL ACTION UNDERWAY (blank if not reported): *12/29/1999*
DATE POST REMEDIAL ACTION MONITORING BEGAN (blank if not reported):
DATE CLOSURE LETTER ISSUED (SITE CLOSED) (blank if not reported): *4/12/2000*
REPORT DATE (blank if not reported):

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION:
MTBE SOIL CONCENTRATION:
MTBE CNTS: *0*
MTBE FUEL: *0*
MTBE TESTED: *NOT REQUIRED TO BE TESTED*
MTBE CLASS: *

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 28 **DIST/DIR:** 0.42 SE **MAP ID:** 2

NAME:	LOVETT S 1 HOUR CLEANERS	**REV:**	10/22/01
ADDRESS:	1378 E GRAND AV	**ID1:**	HE17H11085
	ESCONDIDO CA 92027	**ID2:**	CAD981625270
	SAN DIEGO	**STATUS:**	
CONTACT:	KHOSROU TAHBAZ	**PHONE:**	(858)746-3863

Release Occurance Number:	*001*
Historical Name:	*LOVETT S DRY CLEANER*
Date Release Began:	*10/15/98*
Lead Agency:	*DEH*
Case Type:	*TANK, Release*
Case Status:	*OPEN*
Case Status Date:	*10/15/98*

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 29 **DIST/DIR:** 0.42 SE **MAP ID:** 2

NAME: LOVETT S DRY CLEANER
ADDRESS: 1378 E GRAND AV
ESCONDIDO CA 92027
SAN DIEGO
CONTACT:

REV: 12/11/02
ID1: T0608101408
ID2:
STATUS: REMEDIAL ACTION
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

Please note that some data previously provided by the State Water Resources Control Board in the LUSTIS database is not currently being provided by the agency in the most recent edition. Incidents that occurred dating after the year 2000 may not have much information. Field headers with blank information following after should be interpreted as unreported by the agency.

LEAD AGENCY: *LOCAL AGENCY*
REGIONAL BOARD: *09*
LOCAL CASE NUMBER: *H11085-001*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE NUMBER:
CASE TYPE: *AQUIFER AFFECTED*
SUBSTANCE LEAKED: *CHLORINATED HYDROCARBONS*
SUBSTANCE QUANTITY:
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *REMEDIAL ACTION*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):

ENTER DATE (blank if not reported):
REVIEW DATE (blank if not reported):
DATE OF LEAK CONFIRMATION (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN (blank if not reported): *1/3/1965*
DATE POLLUTION CHARACTERIZATION PLAN BEGAN (blank if not reported):
DATE REMEDIATION PLAN WAS SUBMITTED (blank if not reported):
DATE REMEDIAL ACTION UNDERWAY (blank if not reported): *1/3/1965*
DATE POST REMEDIAL ACTION MONITORING BEGAN (blank if not reported):
DATE CLOSURE LETTER ISSUED (SITE CLOSED) (blank if not reported):
REPORT DATE (blank if not reported):

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION:
MTBE SOIL CONCENTRATION:
MTBE CNTS: *0*
MTBE FUEL: *0*
MTBE TESTED: *NOT REQUIRED TO BE TESTED*
MTBE CLASS: *

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 35 **DIST/DIR:** 0.43 NE **MAP ID:** 5

NAME:	SHELL GAS STATION	**REV:**	04/24/00
ADDRESS:	1574 EAST VALLEY PY	**ID1:**	HE17H03184
	ESCONDIDO CA 92027	**ID2:**	CAL000027012
	San Diego	**STATUS:**	
CONTACT:	EQUILON ENTERPRISES LLC	**PHONE:**	(619)745-4444

Release Occurance Number:	*001*
Historical Name:	*VALLEY ROSE SHELL*
Date Release Began:	*5/4/87*
Lead Agency:	*DEH*
Case Type:	*TANK, Release*
Case Status:	*CLOSED*
Case Status Date:	*4/10/91*

Release Occurance Number:	*003*
Historical Name:	*SHELL SERVICE STATION*
Date Release Began:	*4/10/00*
Lead Agency:	*DEH*
Case Type:	*TANK, Release*
Case Status:	*OPEN*
Case Status Date:	*4/10/00*

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 36 **DIST/DIR:** 0.43 NE **MAP ID:** 5

NAME: SHELL SERVICE STATION
ADDRESS: 1574 E VALLEY PY
ESCONDIDO CA 92027
SAN DIEGO
CONTACT:

REV: 12/11/02
ID1: T0607399080
ID2:
STATUS: PRELIM. SITE ASSES. UNDERWAY
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

Please note that some data previously provided by the State Water Resources Control Board in the LUSTIS database is not currently being provided by the agency in the most recent edition. Incidents that occurred dating after the year 2000 may not have much information. Field headers with blank information following after should be interpreted as unreported by the agency.

LEAD AGENCY: *LOCAL AGENCY*
REGIONAL BOARD: *09*
LOCAL CASE NUMBER: *H03184-003*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE NUMBER: *9UT4057*
CASE TYPE: *AQUIFER AFFECTED*
SUBSTANCE LEAKED: *UNLEADED GASOLINE*
SUBSTANCE QUANTITY:
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *PRELIM. SITE ASSES. UNDERWAY*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency): *1*
DATE OF ENFORCEMENT (blank if not reported):

ENTER DATE (blank if not reported):
REVIEW DATE (blank if not reported):
DATE OF LEAK CONFIRMATION (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN (blank if not reported): *5/16/2000*
DATE POLLUTION CHARACTERIZATION PLAN BEGAN (blank if not reported):
DATE REMEDIATION PLAN WAS SUBMITTED (blank if not reported):
DATE REMEDIAL ACTION UNDERWAY (blank if not reported): *1/3/1965*
DATE POST REMEDIAL ACTION MONITORING BEGAN (blank if not reported):
DATE CLOSURE LETTER ISSUED (SITE CLOSED) (blank if not reported):
REPORT DATE (blank if not reported):

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration): *1/1/1965*
MTBE GROUNDWATER CONCENTRATION: *EQUAL TO 840.00*
MTBE SOIL CONCENTRATION:
MTBE CNTS: *2*
MTBE FUEL: *1*
MTBE TESTED: *YES*
MTBE CLASS: *C*

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 50 **DIST/DIR:** 0.43 NE **MAP ID:** 5

NAME: SHELL SERVICE STATION
ADDRESS: 1574 E VALLEY PY
ESCONDIDO CA 92027
SAN DIEGO
CONTACT:

REV: 12/11/02
ID1: T0608189075
ID2:
STATUS: CASE CLOSED
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

Please note that some data previously provided by the State Water Resources Control Board in the LUSTIS database is not currently being provided by the agency in the most recent edition. Incidents that occurred dating after the year 2000 may not have much information. Field headers with blank information following after should be interpreted as unreported by the agency.

LEAD AGENCY: *LOCAL AGENCY*
REGIONAL BOARD: *09*
LOCAL CASE NUMBER: *H03184-002*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE NUMBER:
CASE TYPE: *SOIL ONLY*
SUBSTANCE LEAKED: *UNLEADED GASOLINE*
SUBSTANCE QUANTITY:
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *CASE CLOSED*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):

ENTER DATE (blank if not reported):
REVIEW DATE (blank if not reported):
DATE OF LEAK CONFIRMATION (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN (blank if not reported): *6/21/1999*
DATE POLLUTION CHARACTERIZATION PLAN BEGAN (blank if not reported):
DATE REMEDIATION PLAN WAS SUBMITTED (blank if not reported):
DATE REMEDIAL ACTION UNDERWAY (blank if not reported): *1/3/1965*
DATE POST REMEDIAL ACTION MONITORING BEGAN (blank if not reported):
DATE CLOSURE LETTER ISSUED (SITE CLOSED) (blank if not reported): *10/11/1999*
REPORT DATE (blank if not reported):

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration): *1/1/1965*
MTBE GROUNDWATER CONCENTRATION: *EQUAL TO 94.00*
MTBE SOIL CONCENTRATION: *LESS THAN 0.00*
MTBE CNTS: *4*
MTBE FUEL: *1*
MTBE TESTED: *YES*
MTBE CLASS:

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 42 **DIST/DIR:** 0.43 NE **MAP ID:** 5

NAME: VALLEY ROSE SHELL
ADDRESS: 1574 E VALLEY PY
ESCONDIDO CA 92027
SAN DIEGO
CONTACT:

REV: 12/11/02
ID1: T0607302591
ID2:
STATUS: CASE CLOSED
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

Please note that some data previously provided by the State Water Resources Control Board in the LUSTIS database is not currently being provided by the agency in the most recent edition. Incidents that occurred dating after the year 2000 may not have much information. Field headers with blank information following after should be interpreted as unreported by the agency.

LEAD AGENCY: *LOCAL AGENCY*
REGIONAL BOARD: *09*
LOCAL CASE NUMBER: *H03184-001*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE NUMBER: *9UT383*
CASE TYPE: *SOIL ONLY*
SUBSTANCE LEAKED: *REGULAR GASOLINE*
SUBSTANCE QUANTITY:
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *CASE CLOSED*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):

ENTER DATE (blank if not reported):
REVIEW DATE (blank if not reported):
DATE OF LEAK CONFIRMATION (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN (blank if not reported): *5/4/1987*
DATE POLLUTION CHARACTERIZATION PLAN BEGAN (blank if not reported):
DATE REMEDIATION PLAN WAS SUBMITTED (blank if not reported):
DATE REMEDIAL ACTION UNDERWAY (blank if not reported): *2/10/1987*
DATE POST REMEDIAL ACTION MONITORING BEGAN (blank if not reported):
DATE CLOSURE LETTER ISSUED (SITE CLOSED) (blank if not reported): *4/10/1991*
REPORT DATE (blank if not reported):

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION:
MTBE SOIL CONCENTRATION:
MTBE CNTS: *0*
MTBE FUEL: *1*
MTBE TESTED: *SITE NOT TESTED FOR MTBE. INCLUDES UNKNOWN AND NOT ANALYZED*
MTBE CLASS: *

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 18 **DIST/DIR:** 0.44 NE **MAP ID:** 18

NAME: CHEVRON #9-1131
ADDRESS: 1575 E VALLEY PY
ESCONDIDO CA 92027
SAN DIEGO
CONTACT:

REV: 12/11/02
ID1: T0607302369
ID2:
STATUS: PRELIM. SITE ASSES. UNDERWAY
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

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LEAD AGENCY: *LOCAL AGENCY*
REGIONAL BOARD: *09*
LOCAL CASE NUMBER: *H05733-001*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE NUMBER: *9UT3601*
CASE TYPE: *AQUIFER AFFECTED*
SUBSTANCE LEAKED: *UNLEADED GASOLINE*
SUBSTANCE QUANTITY:
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *PRELIM. SITE ASSES. UNDERWAY*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency): *1*
DATE OF ENFORCEMENT (blank if not reported):

ENTER DATE (blank if not reported):
REVIEW DATE (blank if not reported):
DATE OF LEAK CONFIRMATION (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN (blank if not reported): *12/2/1997*
DATE POLLUTION CHARACTERIZATION PLAN BEGAN (blank if not reported):
DATE REMEDIATION PLAN WAS SUBMITTED (blank if not reported):
DATE REMEDIAL ACTION UNDERWAY (blank if not reported): *1/3/1965*
DATE POST REMEDIAL ACTION MONITORING BEGAN (blank if not reported):
DATE CLOSURE LETTER ISSUED (SITE CLOSED) (blank if not reported):
REPORT DATE (blank if not reported):

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration): *1/1/1965*
MTBE GROUNDWATER CONCENTRATION: *EQUAL TO 170000.00*
MTBE SOIL CONCENTRATION:
MTBE CNTS: *2*
MTBE FUEL: *1*
MTBE TESTED: *YES*
MTBE CLASS: *B*

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 41 **DIST/DIR:** 0.44 NE **MAP ID:** 18

NAME:	TIM TERRYS CHEVRON	**REV:**	04/24/00
ADDRESS:	1575 EAST VALLEY PY	**ID1:**	HE17H05733
	ESCONDIDO CA 92027	**ID2:**	CAL000055111
	San Diego	**STATUS:**	
CONTACT:	TIM TERRY	**PHONE:**	(760)124-0290

Release Occurance Number:	*001*
Historical Name:	*CHEVRON #9-1131*
Date Release Began:	*12/11/97*
Lead Agency:	*DEH*
Case Type:	*TANK, Release (W)*
Case Status:	*OPEN*
Case Status Date:	*1/20/98*

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 34 **DIST/DIR:** 0.47 NE **MAP ID:** 17

NAME:	SHAH TEXACO	**REV:**	04/24/00
ADDRESS:	1602 EAST VALLEY PY	**ID1:**	HE17H05362
	ESCONDIDO CA 92027	**ID2:**	CAL000079686
	San Diego	**STATUS:**	
CONTACT:	SHAH TEXACO	**PHONE:**	(858)737-9930

Release Occurance Number:	*001*
Historical Name:	*TEXACO/E VALLEY PY 1602*
Date Release Began:	*4/10/86*
Lead Agency:	*DEH*
Case Type:	*TANK, Release*
Case Status:	*CLOSED*
Case Status Date:	*5/16/86*

Release Occurance Number:	*002*
Historical Name:	*TEXACO/E VALLEY PY 1602*
Date Release Began:	*12/1/91*
Lead Agency:	*DEH*
Case Type:	*TANK, Release (W)*
Case Status:	*CLOSED*
Case Status Date:	*3/4/94*

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 37 **DIST/DIR:** 0.47 NE **MAP ID:** 17

NAME: TEXACO/E VALLEY PY 1602
ADDRESS: 1602 E VALLEY PY
ESCONDIDO CA 92027
SAN DIEGO
CONTACT:

REV: 12/11/02
ID1: T0607301008
ID2:
STATUS: CASE CLOSED
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

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LEAD AGENCY: *LOCAL AGENCY*
REGIONAL BOARD: *09*
LOCAL CASE NUMBER: *H05362-002*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE NUMBER: *9UT2243*
CASE TYPE: *AQUIFER AFFECTED*
SUBSTANCE LEAKED: *WASTE OIL*
SUBSTANCE QUANTITY:
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *CASE CLOSED*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency): *1*
DATE OF ENFORCEMENT (blank if not reported):

ENTER DATE (blank if not reported):
REVIEW DATE (blank if not reported):
DATE OF LEAK CONFIRMATION (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN (blank if not reported): *5/21/1992*
DATE POLLUTION CHARACTERIZATION PLAN BEGAN (blank if not reported):
DATE REMEDIATION PLAN WAS SUBMITTED (blank if not reported):
DATE REMEDIAL ACTION UNDERWAY (blank if not reported): *5/21/1992*
DATE POST REMEDIAL ACTION MONITORING BEGAN (blank if not reported):
DATE CLOSURE LETTER ISSUED (SITE CLOSED) (blank if not reported): *3/4/1994*
REPORT DATE (blank if not reported):

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION:
MTBE SOIL CONCENTRATION:
MTBE CNTS: *0*
MTBE FUEL: *0*
MTBE TESTED: *NOT REQUIRED TO BE TESTED*
MTBE CLASS: *

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 38 **DIST/DIR:** 0.47 NE **MAP ID:** 17

NAME:	TEXACO/E VALLEY PY 1602	**REV:**	12/11/02
ADDRESS:	1602 E VALLEY PY	**ID1:**	T0607302839
	ESCONDIDO CA 92027	**ID2:**	
	SAN DIEGO	**STATUS:**	CASE CLOSED
CONTACT:		**PHONE:**	

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

Please note that some data previously provided by the State Water Resources Control Board in the LUSTIS database is not currently being provided by the agency in the most recent edition. Incidents that occurred dating after the year 2000 may not have much information. Field headers with blank information following after should be interpreted as unreported by the agency.

LEAD AGENCY: *LOCAL AGENCY*
REGIONAL BOARD: *09*
LOCAL CASE NUMBER: *H05362-001*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE NUMBER: *9UT550*
CASE TYPE: *SOIL ONLY*
SUBSTANCE LEAKED: *UNLEADED GASOLINE*
SUBSTANCE QUANTITY:
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *CASE CLOSED*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):

ENTER DATE (blank if not reported):
REVIEW DATE (blank if not reported):
DATE OF LEAK CONFIRMATION (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN (blank if not reported): *1/3/1965*
DATE POLLUTION CHARACTERIZATION PLAN BEGAN (blank if not reported):
DATE REMEDIATION PLAN WAS SUBMITTED (blank if not reported):
DATE REMEDIAL ACTION UNDERWAY (blank if not reported): *1/3/1965*
DATE POST REMEDIAL ACTION MONITORING BEGAN (blank if not reported):
DATE CLOSURE LETTER ISSUED (SITE CLOSED) (blank if not reported): *5/16/1986*
REPORT DATE (blank if not reported):

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION:
MTBE SOIL CONCENTRATION:
MTBE CNTS: *0*
MTBE FUEL: *1*
MTBE TESTED: *SITE NOT TESTED FOR MTBE. INCLUDES UNKNOWN AND NOT ANALYZED*
MTBE CLASS: *

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 51 **DIST/DIR:** 0.47 NE **MAP ID:** 17

NAME: TEXACO/E VALLEY PY 1602
ADDRESS: 1602 E VALLEY PY
ESCONDIDO CA 92027
SAN DIEGO
CONTACT:

REV: 12/11/02
ID1: T0608191910
ID2:
STATUS: CASE CLOSED
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

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LEAD AGENCY: *LOCAL AGENCY*
REGIONAL BOARD: *09*
LOCAL CASE NUMBER: *H05362-003*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE NUMBER:
CASE TYPE: *CP*
SUBSTANCE LEAKED: *unk*
SUBSTANCE QUANTITY:
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *CASE CLOSED*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):

ENTER DATE (blank if not reported):
REVIEW DATE (blank if not reported):
DATE OF LEAK CONFIRMATION (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN (blank if not reported): *1/3/1965*
DATE POLLUTION CHARACTERIZATION PLAN BEGAN (blank if not reported):
DATE REMEDIATION PLAN WAS SUBMITTED (blank if not reported):
DATE REMEDIAL ACTION UNDERWAY (blank if not reported): *1/3/1965*
DATE POST REMEDIAL ACTION MONITORING BEGAN (blank if not reported):
DATE CLOSURE LETTER ISSUED (SITE CLOSED) (blank if not reported): *1/20/1995*
REPORT DATE (blank if not reported):

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION:
MTBE SOIL CONCENTRATION:
MTBE CNTS: *0*
MTBE FUEL: *0*
MTBE TESTED: *NOT REQUIRED TO BE TESTED*
MTBE CLASS: *

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

STATE SITE

SEARCH ID: 4 **DIST/DIR:** 0.73 SW **MAP ID:** 7

NAME: REDWOOD TOWN COURT
ADDRESS: 500 EAST VALLEY PARKWAY
ESCONDIDO CA 92025
SAN DIEGO
CONTACT:

REV: 04/30/03
ID1: CAL37830001
ID2:
STATUS: NO ACTION - FOR CALMORTGAGE ON
PHONE:

OTHER SITE NAMES (blank below = not reported by agency)
REDWOOD TOWN COURT

GENERAL SITE INFORMATION
File Name (if different than site name):

Status:	*NO ACTION - FOR CALMORTGAGE ONLY*
AWP Site Type:	*CALMORTGAGE ONLY*
NPL Site:	
Fund:	
Status Date:	*05091997*
Lead:	*DEPT OF TOXIC SUBSTANCES CONTROL*
Staff:	*SKARINEN*
DTSC Region & RWQCB #:	*CYPRESS*
Branch:	*CALMORTGAGE*
RWQCB:	
Site Access:	
Groundwater Contamination:	
Number of Sources Contributing to Contamination at the Site:	*0*

OTHER AGENCY ID NUMBERS (blank below = not reported by agency)
ID SOURCE NAME, & VALUE: *CALSTARS CODE 400653*

BACKGROUND INFORMATION (blank below = not reported by agency)

INFORMATION ON SPECIAL PROGRAMS THE SITE IS ASSOCIATED WITH (blank below = not reported by agency)

PROJECTED ACTIVITIES (blank below = not reported by agency)

Activity:	*PHASE 1 - CALMORTGAGE AND SCHOOL SITE PROPERTIES*
Activity Status:	*NO ACTION - FOR CALMORTGAGE ONLY*
Completion Due Date:	
Revised Completion Due Date:	
Date Activity Actually Completed:	*05091997*
Yards of Solids Removed:	*0*
Yards of Solids Treated:	*0*
Gallons of Liquid Removed:	*0*
Gallons of Liquid Treated:	*0*

DTSC COMMENTS REGARDING THIS SITE (blank below = not reported by agency)
Comments Date:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

STATE SITE

SEARCH ID: 4 **DIST/DIR:** 0.73 SW **MAP ID:** 7

NAME:	REDWOOD TOWN COURT	**REV:**	04/30/03
ADDRESS:	500 EAST VALLEY PARKWAY	**ID1:**	CAL37830001
	ESCONDIDO CA 92025	**ID2:**	
	SAN DIEGO	**STATUS:**	NO ACTION - FOR CALMORTGAGE ON
CONTACT:		**PHONE:**	

: *Pursuant to the MOU, DTSC has reviewed a Phase I Environmental Assessment and other documents for the Redwood Town Court facility. The property, currently owned by Redwood Senior Services, is in the process of being purchased by Southern California Presbyterian Homes, Glendale, California. The subject property is an adult residential care facility. No change in use in proposed. A supplemental Phase I Report was prepared by DTSC and concluded that no action was needed for this property; there is no contamination on the property.*

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

PERMITS SITE

SEARCH ID: 44 **DIST/DIR:** NON GC **MAP ID:**

NAME:	DR RICKARDS CHIROPRACTIC INC	**REV:**	02/06/03
ADDRESS:	1111 E WASHINGTON AV	**ID1:**	HE17H02433
	ESCONDIDO CA 92025	**ID2:**	
	SAN DIEGO	**STATUS:**	
CONTACT:	RAYMOND RICKARDS	**PHONE:**	(760)745-1511

INDUSTRY / FACILITY INFORMATION NAMES
Business Description & SIC Code:
Gas Station:
Fire Department District:

PERMIT INFORMATION
Permit Number: *H02433*
Inactive / Active Facility Indicator:
Annual Expiration Date: *Nov 30*
Status:
Map Code / Business Plan on File:
Business Plan Acceptance Date:

GENERAL INSPECTION & VIOLATION INFORMATION
Inspection Date: *08/01/2001 0:00:00*
Reinspection Date: *Jan 2000*
Inspector Name: *CAMPBELL*
Notice of Violation Issued:
Delinquent Flag:
Last Update: *9/2/01*
Last Delinquent Letter:

PROPERTY OWNER INFORMATION
Property Owner Name:
Property Owner Address:

WASTE STREAMS GENERATED BY BUSINESS
Waste Name & Code: *PHOTOCHEM/PHOTOPROC WASTE (541)*
Inspection Date: *8/1/01*
Waste Quantity Present at Inspection: *5*
Annual Quantity: *60*
Measurement Unit: *GAL*
Treatment Method: *RECYCLE*
Storage Methold: *PLASTIC DRUMS 0-5 GALLONS*
Carcinogen Indicator:
Hauler: *UNREGISTERED HAZ WST HAUL*
Waste Description: *SOUTHWEST IMAGING*

VIOLATIONS AT TIME OF INSPECTION
Inspection Date: *8/1/01*
Violation Item Number: *V001*
Waste Code:
Type of Violation: *GENERAL VIOLATION*
Number of Occurances: *01*
Violation Definition: *HANDLER OF HAZARDOUS WASTE/MATERIAL HAS NOT OBTAINED A VALID SAN DIEGO COUNTY HEALTH PERMIT* *SDCC 68.905*

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 45 **DIST/DIR:** NON GC **MAP ID:**

NAME:	ECONOMY CLEANERS	**REV:**	12/11/02
ADDRESS:	1718 E VALLEY PY	**ID1:**	T0608119076
	ESCONDIDO CA 92027	**ID2:**	
	SAN DIEGO	**STATUS:**	CASE CLOSED
CONTACT:		**PHONE:**	

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

Please note that some data previously provided by the State Water Resources Control Board in the LUSTIS database is not currently being provided by the agency in the most recent edition. Incidents that occurred dating after the year 2000 may not have much information. Field headers with blank information following after should be interpreted as unreported by the agency.

LEAD AGENCY: *LOCAL AGENCY*
REGIONAL BOARD: *09*
LOCAL CASE NUMBER: *H10991-001*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE NUMBER:
CASE TYPE: *SOIL ONLY*
SUBSTANCE LEAKED: *CHLORINATED HYDROCARBONS*
SUBSTANCE QUANTITY:
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *CASE CLOSED*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):

ENTER DATE (blank if not reported):
REVIEW DATE (blank if not reported):
DATE OF LEAK CONFIRMATION (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN (blank if not reported): *1/3/1965*
DATE POLLUTION CHARACTERIZATION PLAN BEGAN (blank if not reported):
DATE REMEDIATION PLAN WAS SUBMITTED (blank if not reported):
DATE REMEDIAL ACTION UNDERWAY (blank if not reported): *1/3/1965*
DATE POST REMEDIAL ACTION MONITORING BEGAN (blank if not reported):
DATE CLOSURE LETTER ISSUED (SITE CLOSED) (blank if not reported): *3/22/1991*
REPORT DATE (blank if not reported):

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION:
MTBE SOIL CONCENTRATION:
MTBE CNTS: *0*
MTBE FUEL: *0*
MTBE TESTED: *NOT REQUIRED TO BE TESTED*
MTBE CLASS: *

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 47 **DIST/DIR:** NON GC **MAP ID:**

NAME: EXXON / MOBIL OIL #18-G6P
ADDRESS: 2004 E VALLEY PY
ESCONDIDO CA 92027
SAN DIEGO
CONTACT:

REV: 12/11/02
ID1: T0608187969
ID2:
STATUS: REMEDIAL ACTION
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

Please note that some data previously provided by the State Water Resources Control Board in the LUSTIS database is not currently being provided by the agency in the most recent edition. Incidents that occurred dating after the year 2000 may not have much information. Field headers with blank information following after should be interpreted as unreported by the agency.

LEAD AGENCY: *LOCAL AGENCY*
REGIONAL BOARD: *09*
LOCAL CASE NUMBER: *H05478-001*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE NUMBER:
CASE TYPE: *AQUIFER AFFECTED*
SUBSTANCE LEAKED: *UNLEADED GASOLINE*
SUBSTANCE QUANTITY:
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *REMEDIAL ACTION*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):

ENTER DATE (blank if not reported):
REVIEW DATE (blank if not reported):
DATE OF LEAK CONFIRMATION (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN (blank if not reported): *1/3/1965*
DATE POLLUTION CHARACTERIZATION PLAN BEGAN (blank if not reported):
DATE REMEDIATION PLAN WAS SUBMITTED (blank if not reported):
DATE REMEDIAL ACTION UNDERWAY (blank if not reported): *1/3/1965*
DATE POST REMEDIAL ACTION MONITORING BEGAN (blank if not reported):
DATE CLOSURE LETTER ISSUED (SITE CLOSED) (blank if not reported):
REPORT DATE (blank if not reported):

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration): *9/27/2001*
MTBE GROUNDWATER CONCENTRATION:
MTBE SOIL CONCENTRATION: *EQUAL TO 0.54*
MTBE CNTS: *2*
MTBE FUEL: *1*
MTBE TESTED: *YES*
MTBE CLASS: *

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 49 **DIST/DIR:** NON GC **MAP ID:**

NAME:	ORANGE GLEN MARKET	**REV:**	12/11/02
ADDRESS:	2741 E VALLEY PY	**ID1:**	T0608194547
	ESCONDIDO CA 92027	**ID2:**	
	SAN DIEGO	**STATUS:**	CASE CLOSED
CONTACT:		**PHONE:**	

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

Please note that some data previously provided by the State Water Resources Control Board in the LUSTIS database is not currently being provided by the agency in the most recent edition. Incidents that occurred dating after the year 2000 may not have much information. Field headers with blank information following after should be interpreted as unreported by the agency.

LEAD AGENCY: *LOCAL AGENCY*
REGIONAL BOARD: *09*
LOCAL CASE NUMBER: *H03118-001*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE NUMBER:
CASE TYPE: *FT*
SUBSTANCE LEAKED: *unk*
SUBSTANCE QUANTITY:
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *CASE CLOSED*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):

ENTER DATE (blank if not reported):
REVIEW DATE (blank if not reported):
DATE OF LEAK CONFIRMATION (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN (blank if not reported): *1/3/1965*
DATE POLLUTION CHARACTERIZATION PLAN BEGAN (blank if not reported):
DATE REMEDIATION PLAN WAS SUBMITTED (blank if not reported):
DATE REMEDIAL ACTION UNDERWAY (blank if not reported): *1/3/1965*
DATE POST REMEDIAL ACTION MONITORING BEGAN (blank if not reported):
DATE CLOSURE LETTER ISSUED (SITE CLOSED) (blank if not reported): *1/21/1988*
REPORT DATE (blank if not reported):

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION:
MTBE SOIL CONCENTRATION:
MTBE CNTS: *0*
MTBE FUEL: *0*
MTBE TESTED: *NOT REQUIRED TO BE TESTED*
MTBE CLASS: *

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

STATE SITE

SEARCH ID: 43 **DIST/DIR:** NON GC **MAP ID:**

NAME:	VALLEY HIGH SCHOOL (PROPOSED)	**REV:**	04/30/03
ADDRESS:	WASHINGTON AVENUE & EAST VALLEY PARKWAY	**ID1:**	CAL37010024
	ESCONDIDO CA 92027	**ID2:**	
	SAN DIEGO	**STATUS:**	VOLUNTARY CLEANUP PROGRAM
CONTACT:		**PHONE:**	

OTHER SITE NAMES (blank below = not reported by agency)
VALLEY HIGH SCHOOL (PROPOSED)

ESCONDIDO UNION HIGH SCHOOL DISTRICT

GENERAL SITE INFORMATION

File Name (if different than site name):	*VALLEY HIGH SCHOOL (PROPOSED)*
Status:	*VOLUNTARY CLEANUP PROGRAM*
AWP Site Type:	*PROPOSED SCHOOL SITE PROPERTY*
NPL Site:	
Fund:	
Status Date:	*11272001*
Lead:	*DEPT OF TOXIC SUBSTANCES CONTROL*
Staff:	*AORTEGA*
DTSC Region & RWQCB #:	*CYPRESS*
Branch:	*SCHOOL EVALUATION*
RWQCB:	
Site Access:	
Groundwater Contamination:	
Number of Sources Contributing to Contamination at the Site:	*0*

OTHER AGENCY ID NUMBERS (blank below = not reported by agency)

ID SOURCE NAME, & VALUE:	*CALSTARS CODE 404292-11*

BACKGROUND INFORMATION (blank below = not reported by agency)
The Site consists of approximately four acres of vacant land, surrounded by mixed residential and agricultural properties. The Site has been historically utilized for agricultural purposes, indicating the potential use of pesticides.

INFORMATION ON SPECIAL PROGRAMS THE SITE IS ASSOCIATED WITH (blank below = not reported by agency)

PROJECTED ACTIVITIES (blank below = not reported by agency)

Activity:	*I/SE, IORSE, FFA, FFSRA, VCA, EA*
Activity Status:	*VOLUNTARY CLEANUP PROGRAM*
Completion Due Date:	
Revised Completion Due Date:	
Date Activity Actually Completed:	*11272001*
Yards of Solids Removed:	*0*
Yards of Solids Treated:	*0*
Gallons of Liquid Removed:	*0*
Gallons of Liquid Treated:	*0*

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

STATE SITE

SEARCH ID: 43 **DIST/DIR:** NON GC **MAP ID:**

NAME:	VALLEY HIGH SCHOOL (PROPOSED)	**REV:**	04/30/03
ADDRESS:	WASHINGTON AVENUE & EAST VALLEY PARKWAY	**ID1:**	CAL37010024
	ESCONDIDO CA 92027	**ID2:**	
	SAN DIEGO	**STATUS:**	VOLUNTARY CLEANUP PROGRAM
CONTACT:		**PHONE:**	

DTSC COMMENTS REGARDING THIS SITE (blank below = not reported by agency)

Comments Date: *11272001*

: *DTSC entered into an Environmental Oversight Agreement (Docket No. HSA-A 01/02-060) with Escondido Union High School District to provide oversight for a Preliminary Endangerment Assessment for the proposed Valley High School Site.*

Environmental FirstSearch
Federal Databases and Sources

ASTM Databases:

CERCLIS: ***Comprehensive Environmental Response Compensation and Liability Information System.*** The EPA's database of current and potential Superfund sites currently or previously under investigation. Source: Environmental Protection Agency.

Updated quarterly.

CERCLIS-NFRAP (Archive): ***Comprehensive Environmental Response Compensation and Liability Information System Archived Sites.*** The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Updated quarterly.

ERNS: ***Emergency Response Notification System.*** The EPA's database of emergency response actions. Source: Environmental Protection Agency. Data since January, 2001, has been received from the National Response Center as the EPA no longer maintains this data.

Updated quarterly.

FINDS: ***The Facility Index System.*** The EPA's Index of identification numbers associated with a property or facility which the EPA has investigated or has been made aware of in conjunction with various regulatory programs. Each record indicates the EPA office that may have files on the site or facility. Source: Environmental Protection Agency.

Updated semi-annually.

NPL: ***National Priority List.*** The EPA's list of confirmed or proposed Superfund sites. Source: Environmental Protection Agency.

Updated quarterly.

RCRIS: ***Resource Conservation and Recovery Information System.*** The EPA's database of registered hazardous waste generators and treatment, storage and disposal facilities. Included are RAATS (RCRA Administrative Action Tracking System) and CMEL (Compliance Monitoring & Enforcement List). Source: Environmental Protection Agency.

RCRA TSD: ***Resource Conservation and Recovery Information System Treatment, Storage, and Disposal Facilities.*** The EPA's database of RCRIS sites which treat, store, dispose, or incinerate hazardous waste. This information is also reported in the standard RCRIS detailed data.

ASTM Databases (continued):

RCRA COR: ***Resource Conservation and Recovery Information System Corrective Action Sites.*** The EPA's database of RCRIS sites with reported corrective action. This information is also reported in the standard RCRIS detailed data.

RCRA GEN: ***Resource Conservation and Recovery Information System Large and Small Quantity Generators.*** The EPA's database of RCRIS sites that create more than 100kg of hazardous waste per month or meet other RCRA requirements. Included are RAATS (RCRA Administrative Action Tracking System) and CMEL (Compliance Monitoring & Enforcement List).

RCRA NLR: ***Resource Conservation and Recovery Information System sites No Longer Regulated.*** The EPA's database of RCRIS sites that create less than 100kg of hazardous waste per month or do not meet other RCRA requirements.

All RCRA databases are Updated quarterly

Environmental FirstSearch
Federal Databases and Sources

Non-ASTM Databases:

HMIRS: ***Hazardous Materials Incident Response System.*** This database contains information from the US Department of Transportation regarding materials, packaging, and a description of events for tracked incidents.

Updated quarterly.

NCDB: ***National Compliance Database.*** The National Compliance Data Base System (NCDB) tracks regional compliance and enforcement activity and manages the Pesticides and Toxic Substances Compliance and Enforcement program at a national level. The system tracks all compliance monitoring and enforcement activities from the time an inspector conducts and inspection until the time the inspector closes or the case settles the enforcement action. NCDB is the national repository of the 10 regional and Headquarters FIFRA/TSCA Tracking System (FTTS). Data collected in the regional FTTS is transferred to NCDB to support the need for monitoring national performance of regional programs.

Updated quarterly

NPDES: ***National Pollution Discharge Elimination System.*** The EPA's database of all permitted facilities receiving and discharging effluents. Source: Environmental Protection Agency.

Updated semi-annually.

NRDB: ***National Radon Database.*** The NRDB was created by the EPA to distribute information regarding the EPA/State Residential Radon Surveys and the National Residential Radon Survey. The data is presented by zipcode in Environmental FirstSearch Reports. Source: National Technical Information Service (NTIS)

Updated Periodically

Nuclear: The Nuclear Regulatory Commission's (NRC) list of permitted nuclear facilities.

Updated Periodically

PADS: PCB Activity Database System
The EPA's database PCB handlers (generators, transporters, storers and/or disposers) that are required to notify the EPA, the rules being similar to RCRA. This database indicates the type of handler and registration number. Also included is the PCB Transformer Registration Database.

Updated semi-annually.

Receptors: 1995 TIGER census listing of schools and hospitals that may house individuals deemed sensitive to environmental discharges due to their fragile immune systems.

Updated Periodically

Non-ASTM Databases (continued):

RELEASES: ***Air and Surface Water Releases***. A subset of the EPA's ERNS database which have impacted only air or surface water.

Updated semi-annually.

Soils: This database includes the State Soil Geographic (STATSGO) data for the conterminous United States. It contains information regarding soil characteristics such as water capacity, percent clay, organic material, permeability, thickness of layers, hydrological characteristics, quality of drainage, surface, slope, liquid limit, and the annual frequency of flooding. Source: United States Geographical Survey (USGS).

Updated quarterly

TRIS: ***Toxic Release Inventory System.*** The EPA's database of all facilities that have had or may be prone to toxic material releases. Source: Environmental Protection Agency.

Updated semi-annually.

ENVIRONMENTAL FIRST SEARCH
CALIFORNIA DATABASES (DB) AND SOURCES

CAL SITES: DB TYPE = ST (STATE SITES)
Source: The CAL EPA, Depart. Of Toxic Substances Control
Phone: (916) 323-3400

The CAL EPA Department of Toxic Substances Control (DTSC) maintains a database of information on properties (or sites) in California where hazardous substances have been released, or where the potential for such release exists. The types of properties in the CALSITES database are categorized as: Annual Work Plan, Backlogged Properties, Certified / De-listed Sites, No Further Action, Preliminary Endangerment Assessment in Progress, Preliminary Endangerment Assessment Required, Removal Action Required, Expedited Remedial Action Program, Voluntary Cleanup Program, Deed Restricted Properties, and Referred Properties. For more information on individual sites call the number listed above.

CORTESE: DB TYPE = ST (STATE SITES)
Source: The CAL EPA, Department of Toxic Substances Control
Phone: (916) 445-6532

Pursuant to Government Code Section 65962.5, the Hazardous Waste and Substances Sites List has been compiled by Cal/EPA, Hazardous Materials Data Management Program. The CAL EPA Dept. of Toxic Substances Control compiles information from subsets of the following databases to make up the CORTESE list:

1. The Dept. of Toxic Substances Control; contaminated or potentially contaminated hazardous waste sites listed in the CAL Sites database. Formerly known as ASPIS are included (CALSITES formerly known as ASPIS).
2. The California State Water Resources Control Board; listing of Leaking Underground Storage Tanks are included (LTANK)
3. The California Integrated Waste Management Board; Sanitary Landfills which have evidence of groundwater contamination or known migration of hazardous materials (formerly WB-LF, now AB 3750).

Note: Track Info Services collects each of the above data sets individually and lists them separately in the following First Search categories in order to provide more current and comprehensive information: CALSITES: SPL, LTANK: LUST, WB-LF: SWL

SWIS SOLID WASTE INFORMATION SYSTEM: DB TYPE = SW
(SOLID WASTE RELATED SITES)
Source: The Integrated Waste Management Board
Phone: (916) 255-2331

The California Integrated Waste Management Board maintains a database on solid waste facilities, operations, and disposal sites throughout the state of California. The types of facilities found in this database include landfills, transfer stations, material recovery facilities, composting sites, transformation facilities, waste tire sites, and closed disposal sites. For more information on individual sites call the number listed above.

Note: This database contains poor site location information for many sites in the First Search reports; therefore, it may not be possible to locate or plot some sites in First Search reports.

WMUDS: DB TYPE = SW (SOLID WASTE RELATED SITES)
Source: The State Water Resources Control Board
Phone: (916) 227-4365

The State Water Resources Control Board maintained the Waste Management Unit Database System (WMUDS). It is no longer updated. It tracked management units for several regulatory programs related to waste management and its potential impact on groundwater. Two of these programs (SWAT & TPCA) are no longer on-going regulatory programs as described below. Chapter 15 (SC15) is still an on-going regulatory program and information is updated periodically but not to the WMUDS database. The WMUDS System contains information from the following agency databases: Facility, Waste Management Unit (WMU), Waste Discharger System (WDS), SWAT, Chapter 15, TPCA, RCRA, Inspections, Violations, and Enforcement's.

Note: This database contains poor site location information for many sites in the First Search reports; therefore, it may not be possible to locate or plot some sites in First Search reports.

ORANGE COUNTY LANDFILLS: DB TYPE = SW (SOLID WASTE RELATED SITES)
Source: Orange County Health Dept.
Phone: (714) 834-3536

LUSTIS: DB TYPE = LU (LEAKING UNDERGROUND STORAGE TANKS)
Source: The State Water Resources Control Board
Phone: (916) 227-4416

The State Water Resources Control Board maintains a database of sites with confirmed or unconfirmed leaking underground storage tanks. Information for this database is collected from the states regional boards quarterly and integrated with this database.

SAN DIEGO COUNTY LEAKING TANKS: DB TYPE = LU
(LEAKING UNDERGROUND STORAGE TANKS)
Source: San Diego County Dept. of Environmental Health
Phone: (619) 338-2242

Maintains a database of sites with confirmed or unconfirmed leaking underground storage tanks within its HE17/58 database. For more information on a specific file call the HazMat Duty Specialist at phone number listed above.

SLIC REGIONS 1 - 9: DB TYPE = SP (SPILLS-90)
Source: The CAL EPA Regional Water Quality Control Boards 1 - 9

The California Regional Water Quality Control Boards maintain report of sites that have records of spills, leaks, investigation, and cleanups. For phone number listings of departments within each region visit their web sites at: http://www.swrcb.ca.gov/regions.html

SAN DIEGO COUNTY HE17 PERMITS: DB TYPE = PE (PERMITS)

Source: The San Diego County Depart. Of Environmental Health
Phone: (619) 338-2211

The HE17/58 database tracks establishments issued permits and the status of their permits in relation to compliance with federal, state, and local regulations that the County oversees. It tracks if a site is a hazardous waste generator, TSD, gas station, has underground tanks, violations, or unauthorized releases. For more information on a specific file call the HazMat Duty Specialist at the phone number listed above.

SAN BERNARDINO COUNTY HAZARDOUS MATERIALS PERMITS: DB TYPE = PE RMITS)
Source: San Bernardino County Fire Dept.
Phone:(909) 387-3080

Handlers and Generators Permit Information Maintained by the Hazardous Materials Div.

LA COUNTY SITE MITIGATION COMPLAINT CONTROL LOG: DB TYPE = OT
(OTHER UNIQUE DATABASES)
Source: The Los Angeles County Hazardous Materials Division
Phone: (323) 890-7806

The County of Los Angeles Public Health Investigation Compliant Control Log

ORANGE COUNTY INDUSTRIAL SITE CLEANUPS: DB TYPE = OT
(OTHER UNIQUE DATABASES)
Source: Orange County Environmental Health Agency
Phone:(714) 834-3536

AST ABOVEGROUND STORAGE TANKS: DB TYPE = US (UNDERGROUND STORAGE TANKS)
Source: The State Water Resources Control Board
Phone:(916) 227-4364

The Above Ground Petroleum Storage Act became State Law effective January 1, 1990. In general, the law requires owners or operators of AST's with petroleum products to file a storage statement and pay a fee by July 1, 1990 and every two years thereafter, take specific action to prevent spills, and in certain instances implement a groundwater monitoring program. This law does not apply to that portion of a tank facility associated with the production oil and regulated by the State Division of Oil and Gas of the Dept. of Conservation.

SWEEPS / FIDS STATE REGISTERED UNERGOROUND STORAGE TANKS: DB TYPE = US
Source: CAL EPA Dept of Toxic Substances Control
Phone:(916)227-4404

Until 1994 the State Water Resources Control Board maintained a database of registered underground storage tanks statewide referred to as the SWEEPS System. The SWEEPS UST information was integrated with the CAL EPA's Facility Index System database (FIDS) which is a master index of information from numerous California agency environmental databases. That was last updated in 1994. Track Info Services included the UST information from the FIDS database in its First Search reports for historical purposes to help its clients identify where tanks may possibly have existed. For more information on specific sites from individual paper files archived at the State Water Resources Control Board call the number listed above.

CUPA DATABASES & SOURCES
(DB TYPE = US (UNDERGROUND STORAGE TANKS)

DEFINITION OF A CUPA: A Certified Unified Program Agency (CUPA) is a local agency that has been certified by the CAL EPA to implement six state environmental programs within the local agency's jurisdiction. These can be a county, city, or JPA (Joint Powers Authority). This program was established under the amendments to the California Health and Safety Code made by SB 1082 in 1994.

A Participating Agency (PA) is a local agency that has been designated by the local CUPA to administer one or more Unified Programs within their jurisdiction on behalf of the CUPA. A Designated Agency (DA) is an agency that has not been certified by the CUPA but is the responsible local agency that would implement the six unified programs until they are certified.

Please Note: Track Info Services, LLC collects and maintains information regarding Underground Storage Tanks from majority of the CUPAS and Participating Agencies in the State of California. These agencies typically do not maintain nor release such information on a uniform or consistent schedule; therefor, currency of the data may vary. Please look at the details on a specific site with a UST record in the First Search Report to determine the actual currency date of the record as provided by the relevant agency. Numerous efforts are made on a regular basis to obtain updated records.

ALAMEDA COUNTY CUPA'S
* County of Alameda Department of Environmental Health
* Cities of Berkeley, Fremont, Hayward, Livermore / Pleasanton, Newark, Oakland, San Leandro, Union

ALPINE COUNTY CUPA
* Health Department (Only updated by agency annually)

AMADOR COUNTY CUPA
* County of Amador Environmental Health Department

BUTTE COUNTY CUPA
* County of Butte Environmental Health Division (Only updated by agency biannually)

CALAVERAS COUNTY CUPA
* County of Calaveras Environmental Health Department

COLUSA COUNTY CUPA
* Environmental Health Dept.

CONTRA COSTA COUNTY CUPA
* Hazardous Materials Program

DEL NORTE COUNTY CUPA (US)
* Department of Health and Social Services

EL DORADO COUNTY CUPA'S
* County of El Dorado Environmental Health - Solid Waste Div (Only updated by agency annually)
* County of El Dorado EMD Tahoe Division (Only updated by agency annually)

FRESNO COUNTY CUPA
* Haz. Mat and Solid Waste Programs

GLENN COUNTY CUPA
* Air Pollution Control District

HUMBOLDT COUNTY CUPA (US)
* Environmental Health Division

IMPERIAL COUNTY CUPA (US)
* Department of Planning and Building

INYO COUNTY CUPA (US)
* Environmental Health Department

KERN COUNTY CUPA (US)
* County of Kern Environmental Health Department
* City of Bakersfield Fire Department
KINGS COUNTY CUPA (US)
* Environmental Health Services
LAKE COUNTY CUPA (US)
* Division of Environmental Health
LASSEN COUNTY CUPA (US)
* Department of Agriculture
LOS ANGELES COUNTY CUPA'S (US)
* County of Los Angeles Fire Department
* County of Los Angeles Environmental Programs Division
* Cities of Burbank, El Segundo, Glendale, Long Beach/Signal Hill, Los Angeles,Pasadena, Santa Fe Springs, Santa Monica, Torrance, Vernon
MADERA COUNTY CUPA (US)
* Environmental Health Department
MARIN COUNTY CUPA (US)
* County of Marin Office of Waste Management
* City of San Rafael Fire Department
MARIPOSA COUNTY CUPA (US)
* Health Department
MENDOCINO COUNTY CUPA (US)
* Environmental Health Department
MERCED COUNTY CUPA (US)
* Division of Environmental Health
MODOC COUNTY CUPA (US)
* Department of Agriculture
MONO COUNTY CUPA (US)
* Health Department
MONTEREY COUNTY CUPA (US)
* Environmental Health Division
NAPA COUNTY CUPA (US)
* Hazardous Materials Section
NEVADA COUNTY CUPA (UST)
* Environmental Health Department
ORANGE COUNTY CUPA'S (US)
* County of Orange Environmental Health Department
* Cities of Anaheim, Fullerton, Orange, Santa Ana
* County of Orange Environmental Health Department
PLACER COUNTY CUPA (US)
* County of Placer Division of Environmental Health Field Office
* Tahoe City
* City of Roseville Roseville Fire Department
PLUMAS COUNTY CUPA (UST)
* Environmental Health Department
RIVERSIDE COUNTY CUPA (US)
* Environmental Health Department
SACRAMENTO COUNTY (US)
* County Environmental Mgmt Dept, Haz. Mat. Div.
SAN BENITO COUNTY CUPA (US)
* City of Hollister Environmental Service Department
SAN BERNARDINO COUNTY CUPA'S (US)
* County of San Bernardino Fire Department, Haz. Mat. Div.
* City of Hesperia Hesperia Fire Prevention Department
City of Victorville Victorville Fire Department
SAN DIEGO COUNTY CUPA (US)
* The San Diego County Dept. of Environmental Health HE 17/58
SAN FRANCISCO COUNTY CUPA (US)
* Department of Public Health
SAN JOAQUIN COUNTY CUPA (US)
* Environmental Health Division

SAN LUIS OBISPO COUNTY CUPA'S (US)
* County of San Luis Obispo Environmental Health Division
* City of San Luis Obispo City Fire Department
SAN MATEO COUNTY CUPA (US)
* Environmental Health Department
SANTA BARBARA COUNTY CUPA (US)
* Co Fire Dept Protective Services Div
SANTA CLARA COUNTY CUPA'S (US)
* County of Santa Clara Hazardous Materials Compliance Division
* Santa Clara Co Central Fire Prot. Dist. (Covers Campbell, Cupertino, Los Gatos, & Morgan Hill)
* Cities of Gilroy, Milpitas, Mountain View, Palo Alto, San Jose Fire, Santa Clara, Sunnyvale
SANTA CRUZ COUNTY CUPA (US)
* Environmental Health Department
SHASTA COUNTY CUPA (US)
* Environmental Health Department
SIERRA COUNTY CUPA (US)
* Health Department
SISKIYOU COUNTY CUPA (US)
* Environmental Health Department
SONOMA COUNTY CUPA'S (US)
* County of Sonoma Department Of Environmental Health
* Cities of Healdsburg / Sebastapol, Petaluma, Santa Rosa
STANINSLAUS COUNTY CUPA (US)
* Dept. of Env. Rsrcs. Haz. Mat. Div.
SUTTER COUNTY CUPA (US)
* Department of Agriculture
TEHAMA COUNTY CUPA (US)
* Department of Environmental Health
TRINITY COUNTY CUPA (US)
* Department of Health
TULARE COUNTY CUPA (US)
* Environmental Health Department
TUOLUMNE COUNTY CUPA (US)
* Environmental Health
VENTURA COUNTY CUPA'S (BWT UST'S & CERTIFIED UST'S)
* County of Ventura Environmental Health Division
* Cities of Oxnard, Ventura
YOLO COUNTY CUPA (US)
* Environmental Health Department
YUBA COUNTY CUPA (US)
* Yuba County of Emergency Services

Environmental FirstSearch
Street Name Report for Streets within .25 Mile(s) of Target Property

TARGET SITE: 1201 EAST WASHINGTON AVE
ESCONDIDO CA 92027

JOB: 08OT.VANTA

Street Name	Dist/Dir	Street Name	Dist/Dir
Beechwood St	0.06 SW		
Cedarbrook St	0.21 SW		
E Valley Pky	0.16 SE		
E Washington Ave	0.02 NW		
EAST Valley Pky	0.16 SE		
EAST Washington Ave	0.02 NW		
El Monte Pl	0.24 NE		
El Rancho Ln	0.20 NE		
Elmwood Dr	0.14 NW		
Harding St	0.15 NE		
Hoover St	0.14 NE		
Jefferson Ave	0.11 NW		
Mc Kinley Ave	0.19 NE		
N Ash St	0.02 NW		
N Beech St	0.14 SW		
N Cedar St	0.24 SW		
NORTH Ash St	0.02 NW		
NORTH Beech St	0.14 SW		
NORTH Cedar St	0.24 SW		
Roosevelt St	0.12 NW		
Rustic Rd	0.18 NW		
Taylor Pl	0.22 NE		

APPENDIX C

COPIES OF FIRE AND BUILDING DEPARTMENT RECORDS FOR THE SUBJECT PROPERTY

APPLICATION FOR PERMIT TO INSTALL
FOR FLAMMABLE LIQUIDS

To Chief of Escondido Fire Department: Date February 27, 1962

In connection with this application the following information is submitted:

Tanks to be installed at (no.) Ash and Washington (SE Corner) Streets

Number and capacity of new tanks One 120-Gallon

Number and capacity of existing tanks One 1200 Gal. and One 600 Gal.

Number and capacity of tanks to be replaced or discontinued None

Tanks manufactured by Noor Tank Manufacturing Co.

Pump or pressure system Pump

Dimensions of property on which tanks to be installed 330 x 627

Distance from tanks to nearest building will be 57 feet.

Installation to be made for Escondido Mutual Water Company

Installation to be made by Escondido Mutual Water Company

Address P. O. Box 1987, Escondido, California

Sketch on premises and tank locations (Use these symbols)

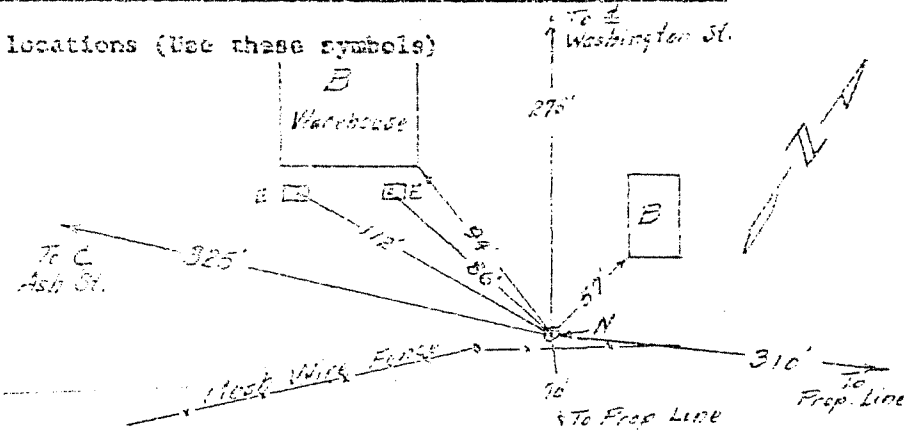
E existing tank

N new tank

ER existing tank to be removed

ED existing tank to be discontinued & filled

B building



ESCONDIDO MUTUAL WATER COMPANY
P. O. BOX 1987
ESCONDIDO, CALIFORNIA

Submitted by

Address

(To avoid delay in issuance of permit, this application should be submitted at least 48 hours before permit is desired.)

City of Escondido

[illegible] VALLEY BLVD., ESCONDIDO
CALIFORNIA [illegible]
(714) 745-[illegible]

OCCUPANCY PERMIT

DATE 6-27-72

BUILDING ADDRESS [illegible] AREA (SQ. FT.) [illegible]

BUILDING OWNER [illegible] PHONE NO. [illegible]

OWNER'S ADDRESS [illegible]

OCCUPANT FIRM NAME [illegible] PHONE NO. [illegible]

FIRM OWNER AUTHORIZED REP. [illegible]

FIRM'S FORMER ADDRESS [illegible]

PROPOSED USE [illegible] PREVIOUS USE [illegible]

MAJOR PRODUCT OR SERVICE [illegible]

NO. EMPLOYEES: [illegible] FULL TIME Yes PART TIME [illegible]

NO. OF EXISTING PARKING SPACES: [illegible]

ESTIMATED GROSS RECEIPTS (CALENDER YEAR REMAINING) [illegible]

[illegible]
PERMITTEE'S SIGNATURE

[illegible]
PERMITTEE'S ADDRESS PHONE NO.

CITY USE ONLY

COMPLIES WITH ALL CITY CODE REQUIREMENTS	YES*	NO*	INSPECTING OFFICIAL	DATE
BUILDING AND SAFETY	✓		[illegible]	3/5/73
FIRE PREVENTION				
PLANNING DEPT. LUC # [illegible] USE ZONE [illegible]				
HEALTH DEPT.				
FINANCE DEPT. (BUS. LIC.)	✓		[illegible]	[illegible]

*CORRECTIONS AND COMMENTS:

APPROVED FOR OCCUPANCY BY [illegible] DATE [illegible]

BUILDING DEPARTMENT

APPLICATION FOR ELECTRICAL PERMIT

BUILDING DEPARTMENT
180 Valley Boulevard
Escondido, Calif. 92025
(714) 745-2200
GENE ERVIN   DIRECTOR

BUILDING ADDRESS	1201 E. Washington
LOCALITY	Escondido
NEAREST CROSS ST.	
OWNER	Merco Leasing Corp.
MAIL ADDRESS	550 N. Broadway
CITY	Esc. TEL NO. 745-6541
CONTRACTOR	Bomber Electric Inc.
ADDRESS	635 W Grand Ave
CITY	Esc. TEL NO. 745-4161
STATE LICENSE NO.	195015 CITY LICENSE NO. 3708

I HEREBY ACKNOWLEDGE THAT I HAVE READ THIS APPLICATION AND STATE THAT THE ABOVE IS CORRECT AND AGREE TO COMPLY WITH ALL CITY ORDINANCES AND STATE LAWS REGULATING ELECTRICAL WIRING.

I HEREBY CERTIFY THAT I AM PROPERLY REGISTERED AND/OR LICENSED AS REQUIRED BY CITY OF ESCONDIDO AND STATE OF CALIFORNIA OR THAT I AM THE LEGAL OWNER OF, AND INTEND TO RESIDE IN, THE ABOVE DESCRIBED RESIDENTIAL PROPERTY.

SIGNATURE OF PERMITTEE [signature]

FOR APPLICANT TO FILL IN

		NO.	EACH $	FEE $
RECEPT 11				
LIGHT ___ TOTAL	FIRST 20	11	20	2 20
SWITCH ___ 11	OVER 20			
LIGHTING TOTAL	FIRST 20	17	20	3 40
FIXTURES 17	OVER 20			
RANGE___ OVEN___ WTR. HTR.___				
STA. COOK___ DISP.___ F.A.U.___				
SPACE HTR.___ AIR COND.___				
CLOTHES WASH.___ DISH WASH.___				
FAN___ OTHER___				
MOTORS, TRANSFORMER IND. HEATERS, ETC. SIZE & TYPE	RATING HP, KW, KVA, OVER TO			
	0 — 1			
	1 — 10			
	10 — 50			
	50 — 100			
	100 — 500			
SIGN, GAS TUBE, OR MARQUEE	SIGN AND ONE CIRCUIT			
	ADDITIONAL CIRCUITS			
SERVICE NOT OVER 600 VOLTS OR 200 AMP	200 AMP	1		1 —
SERVICE OVER 600 VOLTS OR 200 AMP				
TEMP. SERVICE, POLE & APPURTENANCES				
PERMIT FEE	(SUB TOTAL)			6 60
PERMIT ISSUING FEE				3 —
SUPPLEMENTARY PERMIT ISSUING FEE				
TOTAL FEE				9 60

	GROUP	ZONE	PROCESSED BY
		C-G	[initials]

NOTES:

APPROVALS	DATE	INSPECTOR'S SIGNATURE
TEMP. POWER POLE		
UNDERSLAB WORK	2/2/73	[initials]
ROUGH CONDUIT		
WIRING	2/20/73	[initials]
FIXTURES		
POWER AUTHORIZED	2/20/73	[initials]
UTILITY CO. NOTIFIED		
FINAL	2/20/73	[initials]

PERMIT VALIDATION 9.64
PERMIT NO. 3507
Date 1-26-73 Fee $9.60

INSPECTOR COPY

1

APPLICATION FOR PERMIT

BUILDING DEPARTMENT
100 Valley Boulevard
Escondido, Calif. 92025
(714) 745 2200
GENE ERVIN DIRECTOR

SEWER-SEWAGE DISPOSAL

BUILDING ADDRESS	1301 E WASHINGTON
NEAREST CROSS ST	ASH
OWNER	CITY OF ESC... BY MURRAY REC. CEN.
MAIL ADDRESS	1301 E WASHINGTON
CITY	ESC TEL NO

CONTRACTOR	VERN WILLIAMSON
ADDRESS	529 W WASHINGTON
CITY	ESC TEL NO 745-0792
STATE LICENSE NO	17762 CITY LICENSE NO 5739

NO	DESCRIPTION OF WORK	FEE	
1	HOUSE SEWER CONNECTING TO PUBLIC SEWER	$5.00	5 00
	ALTER REPAIR OR ABANDON HOUSE SEWER OR DISPOSAL SYSTEM	$1.50	
	HOUSE SEWER CONNECTING TO PRIVATE DISPOSAL SYSTEM	$5.00	
	CONNECT ADDITIONAL BLDG OR WORK TO HOUSE SEWER	$5.00	
	PERMIT	$	3 50
	TOTAL FEE		8 00

GROUP		PROCESSED BY
F-2	52	A

I HEREBY ACKNOWLEDGE THAT I HAVE READ THIS APPLICATION AND STATE THAT THE ABOVE IS CORRECT AND AGREE TO COMPLY WITH ALL CITY ORDINANCES AND STATE LAWS REGULATING PLUMBING AND SEWERS.
I HEREBY CERTIFY THAT I AM PROPERLY REGISTERED AND/OR LICENSED AS REQUIRED BY CITY OF ESCONDIDO AND STATE OF CALIFORNIA OR THAT I AM THE LEGAL OWNER OF, AND INTEND TO RESIDE IN, THE ABOVE DESCRIBED RESIDENTIAL PROPERTY.

SIGNATURE OF PERMITTEE [signature]

APPROVALS	DATE	INSPECTOR'S SIG
NEW HOUSE SEWER	1-27-76	[signature]
CONNECT ADDITIONAL BUILDING OR WORK		
ALTER, REPAIR SEWER OR SEWAGE DISPOSAL SYSTEM		
DISCONNECT PLUG AND ABANDON HOUSE SEWER		
BACKFILL SEPTIC TANKS, SEEP. PIT (S) CESSPOOLS		
FINAL		

INSPECTOR COPY

... WILLIAMSON

$3.00 sewer fee per Ord 75-24

VALIDATION 03544
PERMIT NO. 12065
Date 1-23-76 Fee $ 8.00

APPLICATION FOR BUILDING PERMIT

BUILDING DEPARTMENT
100 Valley Boulevard
Escondido, Calif. 92025
(714) 745-
GENE ERVIN DIRECTOR

FOR APPLICANT TO FILL IN (PRINT OR TYPE ONLY)

BUILDING ADDRESS	1301 E. WASHINGTON
LOT NO. / BLOCK	
TRACT	
SIZE OF LOT / NO. OF BLDGS NOW ON LOT	
USE OF EXISTING BLDG	
OWNER	Murphy R.V. TEL. NO.
ADDRESS	1301 E. WASHINGTON
CITY	ESCONDIDO
ARCHITECT OR ENGINEER	TEL. NO.
ADDRESS	
CONTRACTOR	COMET SIGNS TEL. NO. 7[illegible]
ADDRESS	353 S. QUINCE STATE LIC. NO. 283196
CITY	ESCONDIDO CITY LIC. NO. 7493
CONSTRUCTION LENDER NAME AND BRANCH	
ADDRESS	
SQ. FT. SIZE / NO. OF STORIES / NO. OF FAMILIES	NEW ☒ ADD ☐ ALTER ☐ REPAIR ☐ DEMOL. ☐ OCC INSPECT. ☐
Describe work	D/F GROUND SIGN
SIGNATURE OF APPLICANT	[signature]
VALUATION $	900.00
PC FEE $	PMT. FEE $ 9.00

I HEREBY ACKNOWLEDGE THAT I HAVE READ THIS APPLICATION AND STATE THAT THE ABOVE IS CORRECT AND AGREE TO COMPLY WITH ALL ORDINANCES AND LAWS REGULATING BUILDING CONSTRUCTION. I CERTIFY THAT IN DOING THE WORK AUTHORIZED HEREBY I WILL NOT EMPLOY ANY PERSON IN VIOLATION OF THE LABOR CODE OF THE STATE OF CALIFORNIA IN RELATING TO WORKMEN'S COMPENSATION INSURANCE.

SIGNATURE OF PERMITTEE [signature]

ADDRESS

BUILDING ADDRESS	1301 E. WASHINGTON AV
NEAREST CROSS ST	ASH
ASSESSOR MAP BOOK	✓ PAGE ✓ PARCEL ✓
GROUP	SIGN FIRE ZONE II TYPE CONST. IV REG. AGRNT ✓
STATISTICAL CLASSIFICATION CLASS NO.	8004 DWELL UNITS —
USE ZONE	CG SPECIAL CONDITIONS ✓ ✓
REQUIRED OFFSTREET PARKING SPACES	COVERED / UNCOVERED
APPLICATION ACCEPTED BY	PLANS CHECKED BY

APPROVALS	DATE	INSPECTOR'S SIGNATURE
FOUNDATION: LOCATION FORMS, MATERIALS	2/25/76	[signature]
FRAME, FIRE STOPS, BRACING, BOLTS		
LATH. INT.		
LATH. EXT.		
HOUSE NUMBER CORRECT AND POSTED		
FINAL	4/21/76	[signature]

PLAN CHECK VALIDATION
PLAN CHECK NO.
Date Fee $

PERMIT VALIDATION 04578
PERMIT NO. 12127
Date 1-29-76 Fee $ 9.00

INSPECTION COPY

APPLICATION FOR ELECTRICAL PERMIT

BUILDING DEPARTMENT
100 Valley Boulevard
Escondido, Calif. 92025
(714) 745 2200
GENE ERVIN DIRECTOR

FOR APPLICANT TO FILL IN		NO.	Each	FEE
RECEPT ____ LIGHT ___ TOTAL SWITCH ___ ____			$ .50	$
LIGHTING TOTAL FIXTURES ____			.50	
RANGE ____ WTR HTR ____ CLOTHES DRYER ____			1.00	
SPACE HTR ____ STA. COOK ____ OVEN ____ DISP ___ DISH WASH ___ FIX APP. LESS ½ H.P. ____ OTHER ____			.50	
Motors, Transformer Size & Type	RATING H.P. KW. KVA. OVER TO			
	0 - 1		1.00	
	1 - 3		1.50	
	3 - 8		2.00	
	8 - 15		2.50	
	15 - 50		3.00	
	50 - 100		5.00	
	OVER - 100		10.00	
SIGN. OUTS TOP OF MARQUEE				2.00
SERVICE NOT OVER 600 VOLTS/NOT OVER 200 AMP.			1.00	
SERVICE NOT OVER 600 VOLTS OVER 200 AMP.			2.00	
SERVICE OVER 600 VOLTS			5.00	
TEMP. SERVICE POLE & APPURTENANCES			3.00	
(SUB TOTAL)				
PERMIT ISSUING FEE			3.00	3.00
SUPPLEMENTARY PERMIT ISSUING FEE			1.00	
TOTAL FEE				5.00

BUILDING ADDRESS 1301 E. WASHINGTON
NEAREST CROSS ST. ASH
OWNER MARCO ENGINEER
MAIL ADDRESS 1301 E. WASHINGTON
CITY ESCO. PHONE
CONTRACTOR COMET SIGNS
ADDRESS 359 S. QUINCE
CITY ESC PHONE 745-094
STATE LICENSE NO 382716 CITY LICENSE NO 743

I HEREBY ACKNOWLEDGE THAT I HAVE READ THIS APPLICATION AND STATE THAT THE ABOVE IS CORRECT AND AGREE TO COMPLY WITH ALL CITY ORDINANCES AND STATE LAWS RELATING TO ELECTRICAL WIRING.

I HEREBY CERTIFY THAT I AM PROPERLY REGISTERED AND/OR LICENSED AS REQUIRED BY CITY OF ESCONDIDO AND STATE OF CALIFORNIA OR THAT I AM THE LEGAL OWNER OF, AND INTEND TO RESIDE IN, THE ABOVE DESCRIBED RESIDENTIAL PROPERTY.

SIGNATURE OF PERMITTEE Ray Burns

GROUP	ZONE	PROCESSED BY
SIGN	C	GAB

NOTES

APPROVALS	DATE	INSPECTOR'S SIGNATURE
TEMP. POWER POLE		
UNDERSLAB WORK		
ROUGH CONDUIT		
WIRING		
FIXTURES		
FINAL	4/21/76	[illegible]

PERMIT VALIDATION 04579
PERMIT NO. 12127
Date 1-27-76 Fee $ 5.00

APPLICATION FOR PLUMBING PERMIT

BUILDING DEPARTMENT
100 Valley Boulevard
Escondido, Calif. 92025
(714) 745 2200
GENE ERVIN DIRECTOR

BUILDING ADDRESS	1201 E WASHINGTON
NEAREST CROSS ST	ASH
OWNER	CITY OF ESCONDIDO
MAIL ADDRESS	1201 E WASHINGTON
CITY	ESC TEL NO
CONTRACTOR	HERB WILLIAMS
ADDRESS	538 W WASHINGTON
CITY	ESC TEL NO 745-3752
STATE LICENSE NO.	147762 CITY LICENSE NO 5139

GROUP	ZONE	PROCESSED BY
F-2	CG	AC

FOR APPLICANT TO FILL IN (Print or Type)

NUMBER	FIXTURE OR ITEM	EACH	FEE
	WATER CLOSET	1.50	
	BATH TUB	1.50	
	SHOWER	1.50	
	LAVATORY	1.50	
	SINK	1.50	
	FLOOR DRAIN	1.50	
	CLOTHES WASHER	1.50	
	URINAL	1.50	
	LAWN SPRINKLER SYSTEM	2.00	
	WATER HEATER	1.50	
	GAS SYSTEM OUTLETS	1.00	
	OUTLETS OVER 5 PER SYSTEM	.20	
	PUMP STATION		1 50
	PLUMBING PERMIT ISSUING FEE $		3 00
	TOTAL FEE		4 50

I HEREBY ACKNOWLEDGE THAT I HAVE READ THIS APPLICATION AND STATE THAT THE ABOVE IS CORRECT AND AGREE TO COMPLY WITH ALL CITY ORDINANCES AND STATE LAWS REGULATING PLUMBING.
I HEREBY CERTIFY THAT I AM PROPERLY REGISTERED AND/OR LICENSED AS REQUIRED BY CITY OF ESCONDIDO AND STATE OF CALIFORNIA OR THAT I AM THE LEGAL OWNER OF, AND INTEND TO RESIDE IN THE ABOVE DESCRIBED RESIDENTIAL PROPERTY.

SIGNATURE OF PERMITTEE Lemoel Cook

INSPECTION RECORD

APPROVALS	DATE	INSPECTOR'S SIG
UNDER SLAB WORK		
ROUGH PLUMBING		
GAS PIPING		
GAS VENT		
HOT WATER HEATER		
PLUMBING FIXTURES		
GAS TEST		
TUB & SHOWER		
FINAL	4/21/76	[illegible]

INSPECTION COPY

E. I. Williamson

PERMIT VALIDATION 03549
PERMIT NO. 12065
Date 1-23-76 Fee $ 4.50

APPLICATION FOR BUILDING PERMIT

BUILDING DEPARTMENT
100 Valley Boulevard
Escondido, Calif. 92025
(714) 745-2200
GENE ERVIN DIRECTOR

FOR APPLICANT TO FILL IN
(PRINT OR TYPE ONLY)

BUILDING ADDRESS 1201 E WASHINGTON

LOT NO — BLOCK

TRACT

SIZE OF LOT 375 X 340 — NO. OF BLDGS. NOW ON LOT 1

USE OF EXISTING BLDG. Service & Maintenance

OWNER City of Esc - Leased to

ADDRESS Murray's R.V. Center

CITY Escondido

ARCHITECT OR ENGINEER — TEL. NO.

ADDRESS

CONTRACTOR — TEL. NO.

ADDRESS — STATE LIC. NO.

CITY — CITY LIC. NO.

CONSTRUCTION LENDER NAME AND BRANCH

ADDRESS

SQ. FT. SIZE — NO. OF STORIES — NO. OF FAMILIES

NEW ☐ ADD ☐ ALTER ☐ REPAIR ☐ DEMOL. ☐ OCC. INSPECT ☐

Describe work: SIGN ATTACHED TO BUILDING.

SIGNATURE OF APPLICANT (signature)

VALUATION $

P.C. FEE $ — PMT. FEE $

I HEREBY ACKNOWLEDGE THAT I HAVE READ THIS APPLICATION AND STATE THAT THE ABOVE IS CORRECT AND AGREE TO COMPLY WITH ALL ORDINANCES AND LAWS REGULATING BUILDING CONSTRUCTION. I CERTIFY THAT IN DOING THE WORK AUTHORIZED HEREBY I WILL NOT EMPLOY ANY PERSON IN VIOLATION OF THE LABOR CODE OF THE STATE OF CALIFORNIA IN RELATING TO WORKMEN'S COMPENSATION INSURANCE.

SIGNATURE OF PERMITTEE

ADDRESS

BUILDING ADDRESS

NEAREST CROSS ST.

ASSESSOR MAP BOOK — PAGE — PARCEL

GROUP — FIRE ZONE — TYPE CONST — OCC. LOAD

STATISTICAL CLASSIFICATION

CLASS NO. — DWELL. UNITS

Use Zone — SPECIAL CONDITIONS

REQUIRED OFFSTREET PARKING SPACES

COVERED — UNCOVERED

APPLICATION ACCEPTED BY — PLANS CHECKED BY

REC. [illegible]

ADVISE [illegible]

SIGN REMOVED 8/16/74

APPROVALS	DATE	INSPECTOR'S SIGNATURE
FOUNDATION, LOCATION FORMS, MATERIALS		
FRAME, FIRE STOPS, BRACING, BOLTS		
LATH. INT.		
LATH. EXT.		
HOUSE NUMBER CORRECT AND POSTED		
FINAL		

INSPECTOR COPY

PLAN CHECK VALIDATION
PLAN CHECK NO.
Date — Fee $

PERMIT VALIDATION
PERMIT NO.
Date — Fee $

APPLICANT TO FILL IN INFORMATION WITHIN RED LINES AND DECLARATIONS. USE BLUE OR BLACK BALL POINT PEN.

CONTRACTOR

☐ I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

I hereby affirm under penalty of perjury that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5 Business and Professions Code). Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance also requires the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractor's License Law (Chapter 9 commencing with 7000 of Division 3 of the Business and Professions Code) or that he or she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by an applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500).

OWNER / BUILDER

☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professions Code: The Contractor's License law does not apply to an owner of property who builds or improves thereon and who does such work himself or herself through his or her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he or she did not build or improve for the purpose of sale).

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044 Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) license pursuant to the Contractor's Law).

☐ I am exempt under Sec. _____, B & P.C.

for this reason _____

WORKERS' COMPENSATION

I hereby affirm under penalty of perjury one of the following declarations:

☐ I have and will maintain a certificate of consent to self-insure for workers compensation, as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

☐ I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

Carrier _____

Policy Number _____

(This section need not be completed if the permit is for one hundred dollars ($100) or less).

☒ I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California, and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

WARNING: FAILURE TO SECURE WORKERS' COMPENSATION COVERAGE IS UNLAWFUL, AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS ($100,000), IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES.

LENDER

☐ I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civil Code).

Lender's Name _____

Lender's Address _____

Expiration. Every permit issued by the Building Official under the provisions of this Code shall expire by limitation and become null and void if the building or work authorized by such permit is not commenced within 180 days from the date of such permit, or if the building or work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 180 days.

BUILDING DEPARTMENT — APPLICATION & PERMIT

201 N. Broadway • Escondido, CA 92025-2798
(619) 741-4647

PLEASE PRINT CLEARLY • PRESS HARD

HAS THIS PROJECT BEEN SUBMITTED TO PLANNING DEPT. FOR PLOT PLAN REVIEW? YES NO

HAS THIS PROJECT BEEN SUBMITTED TO PLANNING DEPT. FOR DESIGN REVIEW? YES NO

VALUATION: $4000 | COMPUTER CODE: 3002 | # UNITS | PLAN CHECK NO.: 68748 | VALIDATION: JR

JOB ADDRESS: 1201 E WASHINGTON AVE. | FOR TENANT IMPROVEMENTS, INCLUDE TENANT BUSINESS NAME | BUILDING # | DATE OF APPLICATION: 3-9-98

FIREPLACE YES ☐ NO ☐ | TYPE CONST. | DATE: 3-9-98

BUILDING OWNER'S NAME: CITY OF ESCONDIDO | OWNER'S PHONE: (760) EXTN 4579

CONTRACTOR'S ESCONDIDO CITY BUSINESS LICENSE #: 142027 | CONTRACTOR CLASS: B | AIR COND YES ☐ NO ☐ | OCC. GROUP | PERMIT NO.: 69113

BUILDING OWNER'S MAILING ADDRESS: 201 N. BROADWAY

CONTRACTOR: LIVINGSTON CONST | STATE LICENSE #: B-356401 | FIRE SPR. YES ☐ NO ☐ | OCC. LOAD | VALIDATION: JR

CITY, STATE, ZIP CODE: ESCONDIDO CA

CONTRACTOR'S ADDRESS: 3960 W. POINT LOMA BLVD | CONTRACTOR'S PHONE: (619) 624 5764 | UBC 94 | NEC | DATE: 5-26-98

LOT: 8 | BLOCK: 179 | SUBDIVISION/TRACT # | ASSESSOR PARCEL NO.: 230-182-24

CITY, STATE, ZIP CODE: SAN DIEGO CA 92110 | UMC | UBSC | CODE ENFORCEMENT YES ☐ NO ☒

DESCRIPTION OF WORK: ADD 3 ROLLUP GARAGE DOORS & 3 ENTRY DOORS

DESIGNER: LIVINGSTON CONST | STATE LICENSE #: B-356401 | UPC | HISTORIC | CASE #

DESIGNER'S ADDRESS: 3960 W. POINT LOMA | DESIGNER'S PHONE: (619) 624 5764 | CONTACT PERSON: ROB BUQUET

CITY, STATE, ZIP CODE: SAN DIEGO CA 92110 | PHONE: x 4579

LAND AREA S.F.	BLDG. AREA S.F.	CARPORT/GARAGE S.F.	NO. UNITS	NO. STORIES	NO. BEDRMS.
		—			

D ☐ V ☐ O ☐

NEW ELECT. SERVICE _____ AMPS ☐ 1PH ☐ 3PH | ELECT. SERVICE UPGRADE _____ AMPS TO _____ AMPS

NEW WATER METER SIZE | WATER DISTRICT

QTY	ELECTRICAL PERMIT	AMOUNT
	SERVICE	
	CIRCUITS	
	TEMP POLE	
	SEE ATTACHED WORKSHEET	
	ISSUANCE FEE	
	TOTAL ELECTRICAL	

QTY	PLUMBING PERMIT	AMOUNT
	FIXTURES	
	BUILDING SEWER	
	WATER HEATER	
	GAS SYSTEM	
	SEE ATTACHED WORKSHEET	
	ISSUANCE FEE	
	TOTAL PLUMBING	

QTY	MOBILE HOME PERMIT	APPLICATION FEE / ISSUANCE FEE
	SET-UP	
	PORCH	
	AWNING/CARPORT	
	RAMADA, CABANA	
	TOTAL MOBILE HOME	

QTY	MECHANICAL PERMIT	AMOUNT
	FURNACE < 100,000 BTU	
	REFR. CONDENSER REMOTE	
	DUCT WORK ONLY	
	SEE ATTACHED WORKSHEET	
	ISSUANCE FEE	
	TOTAL MECHANICAL	

FEE SUMMARY

DAN PERKINS (619) 224-2812

PLAN CHECK	45.05
PLOT PLAN REVIEW	
BUILDING PERMIT	69.30
ELECTRICAL PERMIT	
PLUMBING PERMIT	
MECHANICAL PERMIT	
MOBILE HOME	
AIPP	
SMIP (Category 1)	
SMIP (Category 2)	.84
PUBLIC FACILITY FEE	
SEWER FEE	
WATER FEE	
WATER OFFSET FEE	
TRAFFIC FEE (Rt. of Way)	
TRAFFIC FEE (Const.)	
TRAFFIC FEE SURCHARGE	
PARK FEE	
MICROFILM FEE	2.00
CFP REIMBURSEMENT FEE	
DRAINAGE FACILITIES FEE	
TOTAL FEES PAYABLE TO: CITY OF ESCONDIDO	$ 72.14

I HAVE CAREFULLY EXAMINED THE COMPLETED "PERMIT APPLICATION" AND DO HEREBY CERTIFY UNDER PENALTY OF PERJURY THAT ALL INFORMATION HEREON INCLUDING THE DECLARATIONS ARE TRUE AND CORRECT AND I FURTHER CERTIFY AND AGREE IF A PERMIT IS ISSUED: TO COMPLY WITH ALL CITY, COUNTY AND STATE LAWS GOVERNING BUILDING CONSTRUCTION, WHETHER SPECIFIED HEREIN OR NOT AND DO HEREBY AUTHORIZE REPRESENTATIVES OF THIS CITY TO ENTER UPON THE ABOVE-MENTIONED PROPERTY FOR INSPECTION PURPOSES. I ALSO AGREE TO SAVE, INDEMNIFY AND KEEP HARMLESS THE CITY OF ESCONDIDO AGAINST ALL LIABILITIES, JUDGMENTS, COSTS AND EXPENSES WHICH MAY IN ANY WAY ACCRUE AGAINST SAID CITY IN CONSEQUENCE OF THE GRANTING OF THIS PERMIT. AN OSHA PERMIT IS REQUIRED FOR EXCAVATIONS OVER 5'0" DEEP AND DEMOLITION OR CONSTRUCTION OF STRUCTURES OVER 3 STORIES IN HEIGHT.

APPLICANT: BUILDING OWNER ☐ CONTRACTOR ☒ AGENT ☐ — APPLICANT'S SIGNATURE — (PRINT NAME) — DATE 5-26-98

INSPECTOR'S COPY

APPLICANT TO FILL IN INFORMATION WITHIN RED LINES AND DECLARATIONS. USE BLUE OR BLACK BALL POINT PEN.

BUILDING DIVISION
201 N. Broadway • Escondido, CA 92025-2798
(760) 839-4647

APPLICATION & PERMIT

PLEASE PRINT CLEARLY • PRESS HARD

HAS THIS PROJECT BEEN SUBMITTED TO PLANNING DEPT. FOR PLOT PLAN REVIEW? YES NO
HAS THIS PROJECT BEEN SUBMITTED TO PLANNING DEPT. FOR DESIGN REVIEW? YES NO

VALUATION | PLAN CHECK NO.
COMPUTER CODE 3002 | # UNITS | VALIDATION
FIREPLACE YES ☐ NO ☐ | TYPE CONST. | DATE
AIR COND YES ☐ NO ☐ | OCC. GROUP | PERMIT NO. 19055
FIRE SPR. YES ☐ NO ☐ | OCC. LOAD | VALIDATION KD
UBC ____ NEC 93 | DATE 5.19.98
UMC ____ UBSC ____ | CODE ENFORCEMENT YES ☐ NO ☐
UPC ____ | CASE #
D ☐ V ☐ O ☐

JOB ADDRESS: 1201 Washington
FOR TENANT IMPROVEMENTS, INCLUDE TENANT BUSINESS NAME | BUILDING # | DATE OF APPLICATION

BUILDING OWNER'S NAME: City of Escondido | OWNER'S PHONE
BUILDING OWNER'S MAILING ADDRESS: City of Escondido
CITY, STATE, ZIP CODE

CONTRACTOR'S ESCONDIDO CITY BUSINESS LICENSE #: 140998 | CONTRACTOR CLASS: C-10
CONTRACTOR BUSINESS NAME: Power Electric | STATE LICENSE #: 370167
CONTRACTOR'S ADDRESS: P.O. BOX 603 | CONTRACTOR'S PHONE: 760-727-0595
CITY, STATE, ZIP CODE: Vista, CA. 92085

LOT | BLOCK | SUBDIVISION/TRACT # | ASSESSOR PARCEL NO. 230-140-59

DESCRIPTION OF WORK: PUT IN OUTLETS FOR FREEZERS + tidy up Electrical Boxes

DESIGNER | STATE LICENSE #
DESIGNER'S ADDRESS | DESIGNER'S PHONE
CONTACT PERSON
CITY, STATE, ZIP CODE | PHONE/FAX

LAND AREA S.F.	BLDG. AREA S.F.	CARPORT/GARAGE S.F.	NO. UNITS	NO. STORIES	NO. BEDRMS.

NEW ELECT. SERVICE ____ AMPS. ☐ 1PH ☐ 3PH | ELECT. SERVICE UPGRADE ____ AMPS TO ____ AMPS
NEW WATER METER SIZE | WATER DISTRICT

QTY.	ELECTRICAL PERMIT	AMOUNT
	SERVICE	
4	CIRCUITS	18 —
	TEMP POLE	
	ISSUANCE FEE	30 —
	TOTAL ELECTRICAL	48 —

QTY.	PLUMBING PERMIT	AMOUNT
	FIXTURES	
	BUILDING SEWER	
	WATER HEATER	
	GAS SYSTEM	
	ISSUANCE FEE	
	TOTAL PLUMBING	

QTY.	MOBILE HOME PERMIT	APPLICATION FEE / ISSUANCE FEE
	SET-UP	
	PORCH	
	AWNING/CARPORT	
	RAMADA, CABANA	
	TOTAL MOBILE HOME	

QTY.	MECHANICAL PERMIT	AMOUNT
	HEAT UNIT	
	AC UNIT	
	DUCT WORK ONLY	
	ISSUANCE FEE	
	TOTAL MECHANICAL	

FEE SUMMARY

PLAN CHECK	
PLOT PLAN REVIEW	
BUILDING PERMIT	
ELECTRICAL PERMIT	48 —
PLUMBING PERMIT	
MECHANICAL PERMIT	
MOBILE HOME	
AIPP	
SMIP (Category 1)	
SMIP (Category 2)	
PUBLIC FACILITY FEE	
SEWER FEE	
WATER FEE	
TRAFFIC FEE (Rt. of Way)	
TRAFFIC FEE (Const.)	
TRAFFIC FEE SURCHARGE	
PARK FEE	
MICROFILM FEE	
CFP REIMBURSEMENT FEE	
DRAINAGE FACILITIES FEE	
TOTAL FEES PAYABLE TO: CITY OF ESCONDIDO	48 —

I HAVE CAREFULLY EXAMINED THE COMPLETED "PERMIT APPLICATION" AND DO HEREBY CERTIFY UNDER PENALTY OF PERJURY THAT ALL INFORMATION HEREON INCLUDING THE DECLARATIONS ARE TRUE AND CORRECT AND I FURTHER CERTIFY AND AGREE IF A PERMIT IS ISSUED: TO COMPLY WITH ALL CITY, COUNTY AND STATE LAWS GOVERNING BUILDING CONSTRUCTION, WHETHER SPECIFIED HEREIN OR NOT AND DO HEREBY AUTHORIZE REPRESENTATIVES OF THIS CITY TO ENTER UPON THE ABOVE-MENTIONED PROPERTY FOR INSPECTION PURPOSES. I ALSO AGREE TO SAVE, INDEMNIFY AND KEEP HARMLESS THE CITY OF ESCONDIDO AGAINST ALL LIABILITIES, JUDGMENTS, COSTS AND EXPENSES WHICH MAY IN ANY WAY ACCRUE AGAINST SAID CITY IN CONSEQUENCE OF THE GRANTING OF THIS PERMIT. AN OSHA PERMIT IS REQUIRED FOR EXCAVATIONS OVER 5'0" DEEP AND DEMOLITION OR CONSTRUCTION OF STRUCTURES OVER 3 STORIES IN HEIGHT.

APPLICANT: BUILDING OWNER ☐ CONTRACTOR ☒ AGENT ☐ _____ (APPLICANT'S SIGNATURE) Richard M Perez (PRINT NAME) DATE 5-12-98

CONTRACTOR

☐ I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

I hereby affirm under penalty of perjury that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5 Business and Professions Code): Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance also requires the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractor's License Law (Chapter 9 commencing with 7000 of Division 3 of the Business and Professions Code) or that he or she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by an applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500).

OWNER / BUILDER

☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professions Code: the Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or herself through his or her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he or she did not build or improve for the purpose of sale).

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044 Business and Professions Code: the Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) license pursuant to the Contractor's Law).

☐ I am exempt under Sec. _____, B & P. C. for this reason _____

DECLARATIONS

I hereby affirm under penalty of perjury one of the following declarations:

☐ I have and will maintain a certificate of consent to self-insure for workers compensation, as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

☐ I have and will maintain workers compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

Carrier _____

Policy Number _____

(This section need not be completed if the permit is for one hundred dollars ($100) or less).

I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California, and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

WORKERS' COMPENSATION

WARNING: FAILURE TO SECURE WORKERS' COMPENSATION COVERAGE IS UNLAWFUL, AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS ($100,000), IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706, OF THE LABOR CODE, INTEREST, AND ATTORNEYS FEES.

LENDER

☐ I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civil Code).
Lender's Name _____
Lender's Address _____

Expiration. Every permit issued by the Building Official under the provisions of this Code shall expire by limitation and become null and void if the building or work authorized by such permit is not commenced within 180 days from the date of such permit, or if the building or work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 180 days.

INSPECTOR'S COPY

APPLICANT TO FILL IN INFORMATION WITHIN RED LINES AND DECLARATIONS. USE BLUE OR BLACK BALL POINT PEN.

CONTRACTOR

X I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

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☐ I am exempt under Sec. _____, B & P. C.

for this reason _____

DECLARATIONS

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Carrier _____

Policy Number _____

(This section need not be completed if the permit is for one hundred dollars ($100) or less).

WORKERS' COMPENSATION

X I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California, and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with these provisions.

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LENDER

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Lender's Name _____

Lender's Address _____

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BUILDING DIVISION — APPLICATION & PERMIT

201 N. Broadway • Escondido, CA 92025-2798
(760) 839-4647

PLEASE PRINT CLEARLY • PRESS HARD

HAS THIS PROJECT BEEN SUBMITTED TO PLANNING DEPT. FOR PLOT PLAN REVIEW? YES NO

HAS THIS PROJECT BEEN SUBMITTED TO PLANNING DEPT. FOR DESIGN REVIEW? YES NO

JOB ADDRESS: 1201 E. Washington	FOR TENANT IMPROVEMENTS, INCLUDE TENANT BUSINESS NAME	BUILDING #	DATE OF APPLICATION
BUILDING OWNER'S NAME: City of Escondido	OWNER'S PHONE		
BUILDING OWNER'S MAILING ADDRESS: 201 N. Broadway			
CITY, STATE, ZIP CODE: Escondido, CA 92025-2798			
LOT / BLOCK / SUBDIVISION/TRACT # / ASSESSOR PARCEL NO.: 230-140-59			
DESCRIPTION OF WORK: TRAILER 100A CIRCUIT FOR			
LAND AREA S.F. / BLDG. AREA S.F. / CARPORT/GARAGE S.F. / NO. UNITS / NO. STORIES / NO. BEDRMS.			
NEW ELECT. SERVICE ____ AMPS. ☐ 1PH ☐ 3PH / ELECT. SERVICE UPGRADE ____ AMPS TO ____ AMPS			
NEW WATER METER SIZE / WATER DISTRICT			

CONTRACTOR'S ESCONDIDO CITY BUSINESS LICENSE #	CONTRACTOR CLASS
101775	C-10
CONTRACTOR BUSINESS NAME: Escondido Electric	STATE LICENSE #: 529325
CONTRACTOR'S ADDRESS: 533 Stanley Ave	CONTRACTOR'S PHONE: 489-9381
CITY, STATE, ZIP CODE: Escondido, CA 92026	
DESIGNER	STATE LICENSE #
DESIGNER'S ADDRESS	DESIGNER'S PHONE
CITY, STATE, ZIP CODE	CONTACT PERSON / PHONE/FAX

VALUATION			PLAN CHECK NO.
COMPUTER CODE	# UNITS		VALIDATION
FIREPLACE YES ☐ NO ☐	TYPE CONST.		DATE
AIR COND YES ☐ NO ☐	OCC. GROUP		PERMIT NO. 68826
FIRE SPR. YES ☐ NO ☐	OCC. LOAD		VALIDATION KB
UBC ____	NEC 93		DATE 4/14/98
UMC ____	UBSC ____		CODE ENFORCEMENT YES ☐ NO X
UPC ____			CASE #

D ☐ V ☐ X

City job

QTY.	ELECTRICAL PERMIT	AMOUNT
	SERVICE	
1	CIRCUITS	10.00
	TEMP POLE	
	ISSUANCE FEE	30.00
	TOTAL ELECTRICAL	40.00

QTY.	MOBILE HOME PERMIT	APPLICATION FEE / ISSUANCE FEE
	SET-UP	
	PORCH	
	AWNING/CARPORT	
	RAMADA, CABANA	
	TOTAL MOBILE HOME	

QTY.	PLUMBING PERMIT	AMOUNT
	FIXTURES	
	BUILDING SEWER	
	WATER HEATER	
	GAS SYSTEM	
	ISSUANCE FEE	
	TOTAL PLUMBING	

QTY.	MECHANICAL PERMIT	AMOUNT
	HEAT UNIT	
	AC UNIT	
	DUCT WORK ONLY	
	ISSUANCE FEE	
	TOTAL MECHANICAL	

FEE SUMMARY

PLAN CHECK	
PLOT PLAN REVIEW	
BUILDING PERMIT	0
ELECTRICAL PERMIT	40.00
PLUMBING PERMIT	NO FEE
MECHANICAL PERMIT	
MOBILE HOME	
AIPP	
SMIP (Category 1)	City
SMIP (Category 2)	
PUBLIC FACILITY FEE	5.00
SEWER FEE	
WATER FEE	
TRAFFIC FEE (Rt. of Way)	
TRAFFIC FEE (Const.)	
TRAFFIC FEE SURCHARGE	
PARK FEE	
MICROFILM FEE	
CFP REIMBURSEMENT FEE	
DRAINAGE FACILITIES FEE	
TOTAL FEES PAYABLE TO: CITY OF ESCONDIDO	45.00 0

I HAVE CAREFULLY EXAMINED THE COMPLETED "PERMIT APPLICATION" AND DO HEREBY CERTIFY UNDER PENALTY OF PERJURY THAT ALL INFORMATION HEREON INCLUDING THE DECLARATIONS ARE TRUE AND CORRECT AND I FURTHER CERTIFY AND AGREE IF A PERMIT IS ISSUED: TO COMPLY WITH ALL CITY, COUNTY AND STATE LAWS GOVERNING BUILDING CONSTRUCTION, WHETHER SPECIFIED HEREIN OR NOT AND DO HEREBY AUTHORIZE REPRESENTATIVES OF THIS CITY TO ENTER UPON THE ABOVE-MENTIONED PROPERTY FOR INSPECTION PURPOSES. I ALSO AGREE TO SAVE, INDEMNIFY AND KEEP HARMLESS THE CITY OF ESCONDIDO AGAINST ALL LIABILITIES, JUDGMENTS, COSTS AND EXPENSES WHICH MAY IN ANY WAY ACCRUE AGAINST SAID CITY IN CONSEQUENCE OF THE GRANTING OF THIS PERMIT. AN OSHA PERMIT IS REQUIRED FOR EXCAVATIONS OVER 5'0" DEEP AND DEMOLITION OR CONSTRUCTION OF STRUCTURES OVER 3 STORIES IN HEIGHT.

APPLICANT: BUILDING OWNER ☐ CONTRACTOR X AGENT ☐ Michael A. Escobedo (APPLICANT'S SIGNATURE) Michael A. Escobedo (PRINT NAME) DATE 4-14-98

INSPECTOR'S COPY

APPLICANT TO FILL IN INFORMATION WITHIN RED LINES AND DECLARATIONS. USE BLUE OR BLACK BALL POINT PEN.

☐ I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

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☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professions Code). The Contractor's License law does not apply to an owner of property who builds or improves thereon and who does such work himself or herself through his or her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he or she did not build or improve for the purpose of sale).

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☐ I am exempt under Sec. _____ B & P.C. for this reason _____

I hereby affirm under penalty of perjury one of the following declarations:

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☐ I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

Carrier _____

Policy Number _____

(This section need not be completed if the permit is for one hundred dollars ($100) or less).

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☐ I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civil Code).

Lender's Name _____

Lender's Address _____

...tion. Every permit issued by the Building Official under the ...ions of this Code shall expire by limitation and become null and ...e the building or work authorized by such permit is not commenced ...180 days from the date of such permit, or if the building or work ...ized by such permit is suspended or abandoned at any time after ...rk is commenced for a period of 180 days.

BUILDING DEPARTMENT — APPLICATION & PERMIT

201 N. Broadway • Escondido, CA 92025-2798
(619) 741-4647

PLEASE PRINT CLEARLY • PRESS HARD

HAS THIS PROJECT BEEN SUBMITTED TO PLANNING DEPT. FOR PLOT PLAN REVIEW? YES (5) NO

HAS THIS PROJECT BEEN SUBMITTED TO PLANNING DEPT. FOR DESIGN REVIEW? YES (8) NO

VALUATION $ 27,360

PLAN CHECK NO. CBA29

COMPUTER CODE 2002 # UNITS 1

VALIDATION R

JOB ADDRESS 201 E. Washington Ave

FOR TENANT IMPROVEMENTS, INCLUDE TENANT BUSINESS NAME | BUILDING # | DATE OF APPLICATION

FIRE/PLACE YES ☐ NO ☑ | TYPE CONST. VN | DATE 2-3-98

BUILDING OWNER'S NAME City of Escondido | OWNER'S PHONE 432-4568

CONTRACTOR'S ESCONDIDO CITY BUSINESS LICENSE # | CONTRACTOR CLASS

AIR COND YES ☑ NO ☐ | OCC. GROUP B | PERMIT NO. 16506

BUILDING OWNER'S MAILING ADDRESS 201 N. Broadway Escondido

CONTRACTOR | STATE LICENSE #

FIRE SPR. YES ☐ NO ☑ | OCC. LOAD B | VALIDATION

CITY, STATE, ZIP CODE attn: Ron Gerow

CONTRACTOR'S ADDRESS | CONTRACTOR'S PHONE

UBC 94 | NEC 93 | DATE 2-25-98

LOT 8 | BLOCK 179 | SUBDIVISION/TRACT # Map 723 | ASSESSOR PARCEL NO. 230-140-59

CITY, STATE, ZIP CODE

UMC | UBSC

DESCRIPTION OF WORK

Temporary office trailer at old City carpyard

DESIGNER | STATE LICENSE #

UPC 94 | CODE ENFORCEMENT

DESIGNER'S ADDRESS | DESIGNER'S PHONE

CONTACT PERSON Ron Gerow | YES ☐ NO ☑ CASE #

CITY, STATE, ZIP CODE

PHONE X 4568

LAND AREA	BLDG. AREA	CARPORT/GARAGE	NO. UNITS	NO. STORIES	NO. BEDRMS.
4.5 acres	480 S.F.	NA S.F.	1	1	0

NEW ELECT. SERVICE	ELECT. SERVICE UPGRADE	NEW WATER METER SIZE	WATER DISTRICT
AMPS ☐ 1PH ☐ 3PH: NO	AMPS TO NO AMPS	NO	ESC.

NO FEES / City Project

QTY	ELECTRICAL PERMIT	AMOUNT
	SERVICE	
	CIRCUITS	
	TEMP POLE	
1	Remodel	10.-
	SEE ATTACHED WORKSHEET	
	ISSUANCE FEE	30.-
	TOTAL ELECTRICAL	40.-

QTY	PLUMBING PERMIT	AMOUNT
	FIXTURES	
1	BUILDING SEWER	12.-
	WATER HEATER	
	GAS SYSTEM	
1	WATER ALTER	10.-
	SEE ATTACHED WORKSHEET	
	ISSUANCE FEE	30.-
	TOTAL PLUMBING	52.-

QTY	MOBILE HOME PERMIT	APPLICATION FEE / ISSUANCE FEE
	SET-UP	
	PORCH	
	AWNING/CARPORT	
	RAMADA, CABANA	
	TOTAL MOBILE HOME	

QTY	MECHANICAL PERMIT	AMOUNT
	FURNACE < 100,000 BTU	
	REFR. CONDENSER REMOTE	
	DUCT WORK ONLY	
	SEE ATTACHED WORKSHEET	
	ISSUANCE FEE	
	TOTAL MECHANICAL	

FEE SUMMARY

PLAN CHECK	229.95
PLOT PLAN REVIEW	
BUILDING PERMIT	358.95
ELECTRICAL PERMIT	50.00
PLUMBING PERMIT	52.-
MECHANICAL PERMIT	
MOBILE HOME	
AIPP	
SMIP (Category 5)	
SMIP (Category 2)	5.75
PUBLIC FACILITY FEE	
SEWER FEE	
WATER FEE	
WATER OFFSET FEE	
TRAFFIC FEE (RL of Way)	
TRAFFIC FEE (Const.)	
TRAFFIC FEE SURCHARGE	
PARK FEE	
MICROFILM FEE	4.00
CFP REIMBURSEMENT FEE	
DRAINAGE FACILITIES FEE	451.90
TOTAL FEES PAYABLE TO: CITY OF ESCONDIDO	

I HAVE CAREFULLY EXAMINED THE COMPLETED "PERMIT APPLICATION" AND DO HEREBY CERTIFY UNDER PENALTY OF PERJURY THAT ALL INFORMATION HEREON INCLUDING THE DECLARATIONS ARE TRUE AND CORRECT AND I FURTHER CERTIFY AND AGREE IF A PERMIT IS ISSUED: TO COMPLY WITH ALL CITY, COUNTY AND STATE LAWS GOVERNING BUILDING CONSTRUCTION, WHETHER SPECIFIED HEREIN OR NOT AND DO HEREBY AUTHORIZE REPRESENTATIVES OF THIS CITY TO ENTER UPON THE ABOVE-MENTIONED PROPERTY FOR INSPECTION PURPOSES. I ALSO AGREE TO SAVE, INDEMNIFY AND KEEP HARMLESS THE CITY OF ESCONDIDO AGAINST ALL LIABILITIES, JUDGMENTS, COSTS AND EXPENSES WHICH MAY IN ANY WAY ACCRUE AGAINST SAID CITY IN CONSEQUENCE OF THE GRANTING OF THIS PERMIT. AN OSHA PERMIT IS REQUIRED FOR EXCAVATIONS OVER 5'0" DEEP AND DEMOLITION OR CONSTRUCTION OF STRUCTURES OVER 3 STORIES IN HEIGHT.

APPLICANT: BUILDING OWNER ☑ CONTRACTOR ☐ AGENT ☐ CITY OF ESCONDIDO by Ron Gerow (APPLICANT'S SIGNATURE) Ron Gerow (PRINT NAME) DATE 2-25-98

INSPECTOR'S COPY

Temp. Office Trailer

JOB ADDRESS 1201 E. Washington Ave. OWNER

LOT: TRACT:

FIELD INSPECTION RECORD

BUILDING	INSPECTOR	DATE
SETBACKS		
FOUNDATION		
PIERS		
SLAB		
MASONRY		
ROOF SHEATHING		
FRAME EXT.		
FRAME		
EXT. LATH.		
DRYWALL / INT. LATH.		
SUSPENDED CEILING		
POOL STEEL		
HYDRO. VALVE (POOL)		
FINAL BUILDING	BB	5/7/98

PLUMBING	INSPECTOR	DATE
UNDERGRD. PLBG.		
UNDERSLAB PLBG.		
HOUSE SEWER		
WATER SERVICE		
PRESSURE REGULATOR		
LAWN SPRINKLERS		
ROUGH PLBG. (TOP OUT)		
WATER HEATER		
GAS (HOUSE)		
GAS (YARD)		
TEMP. TESTING (GAS)		
GAS (POOL)		
GAS (AIR TEST)		
GAS (LEAK REPAIR)		
FINAL PLUMBING		

ELECTRICAL	INSPECTOR	DATE
UNDERGRD. ELECT.		
UNDERSLAB ELECT.		
TEMP. POLE		
U.S.P.S.		
TEMP. TESTING (ELECT.)		
ROUGH ELECT.		
SUS. CEIL ELECT.		
GROUND PROVIDED?		
SUPPLEMENT GROUND		
FIRE / SMOKE DETECTORS		
POOL BONDING		
POOL ROUGH ELECT.		
POOL FINAL		
G.F.I. INSTALLED		
FINAL ELECTRICAL		

MECHANICAL	INSPECTOR	DATE
HEATING_____ A/C_____ VENT_____		
FURNACES GRAVITY_____ F.A._____		
UNIT HEATERS		
DUCTS		
CHIMNEYS / VENTS		
CONDENSATE PIPING		
FIRE DAMPERS		
SMOKE DETECTORS		
EVAPORATIVE COOLERS		
VENTILATION FANS		
CHILLERS / BOILERS		
COMMERCIAL EQUIPT GREASE HOODS		
OTHER		
FINAL MECHANICAL		

INSPECTOR'S REMARKS		

FIELD NOTES

APPENDIX D

SANBORN FIRE INSURANCE MAP REQUEST RESPONSE
ASSESSOR'S PARCEL MAP THAT INCLUDES THE SUBJECT PROPERTY
PORTION OF USGS MAP THAT INCLUDES THE SUBJECT PROPERTY
PUBLIC WORKS DEPARTMENT MAP OF THE SUBJECT PROPERTY

Environmental Data Resources, Inc.

"Linking Technology with Tradition"

Sanborn® Map Report

Ship to: Carolyn B. Partin
Secor International, Inc.
2655 Camino Del Rio N.
San Diego, CA 92108

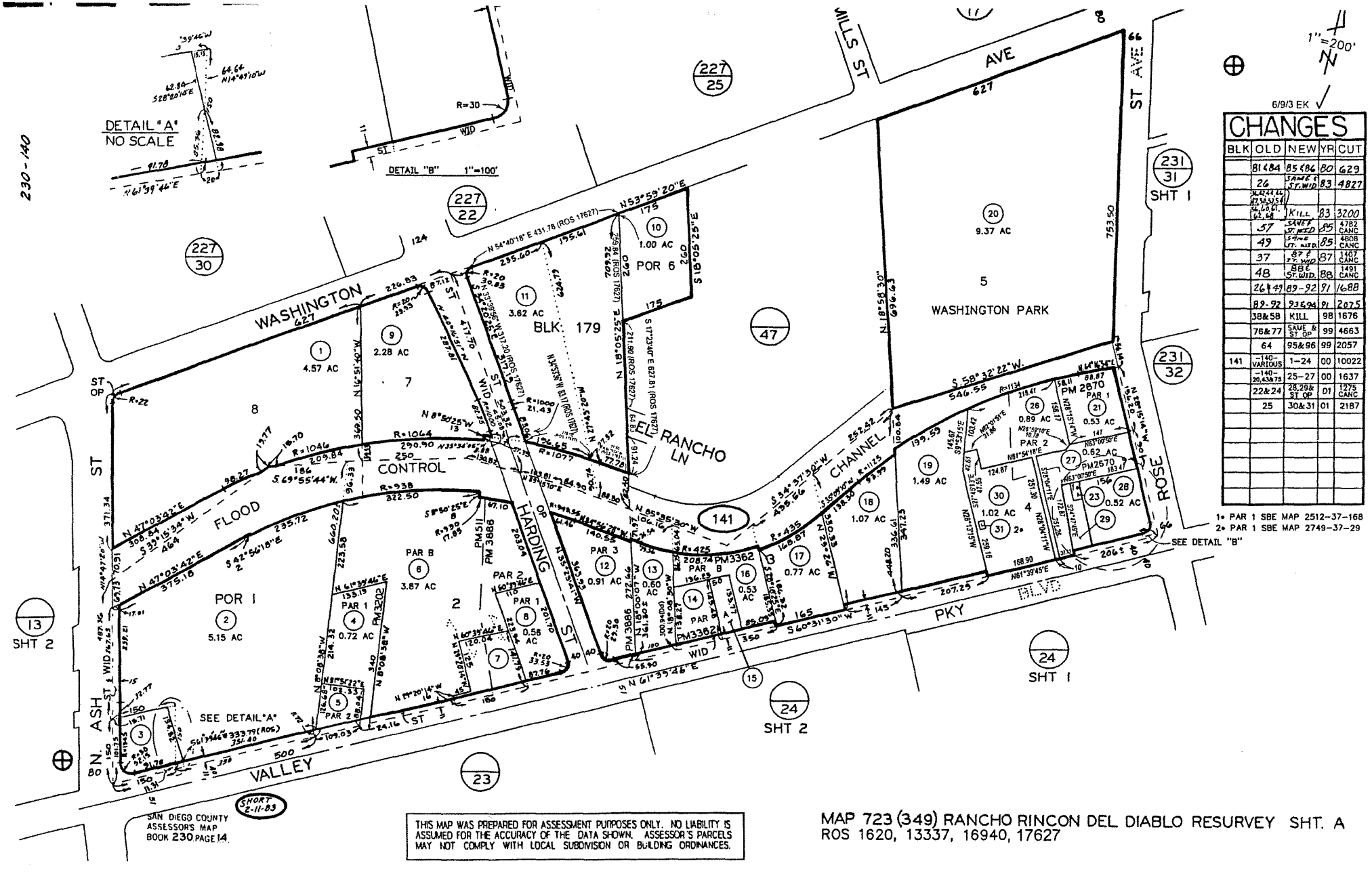
Order Date: 7/1/2003 **Completion Date:** 7/3/2003
Inquiry #: 1005819.1S
P.O. #: -
Site Name: City of Escondido
Address: 1201 E. Washington Avenue
City/State: Escondido, CA 92027
Cross Streets: Ash and Washington

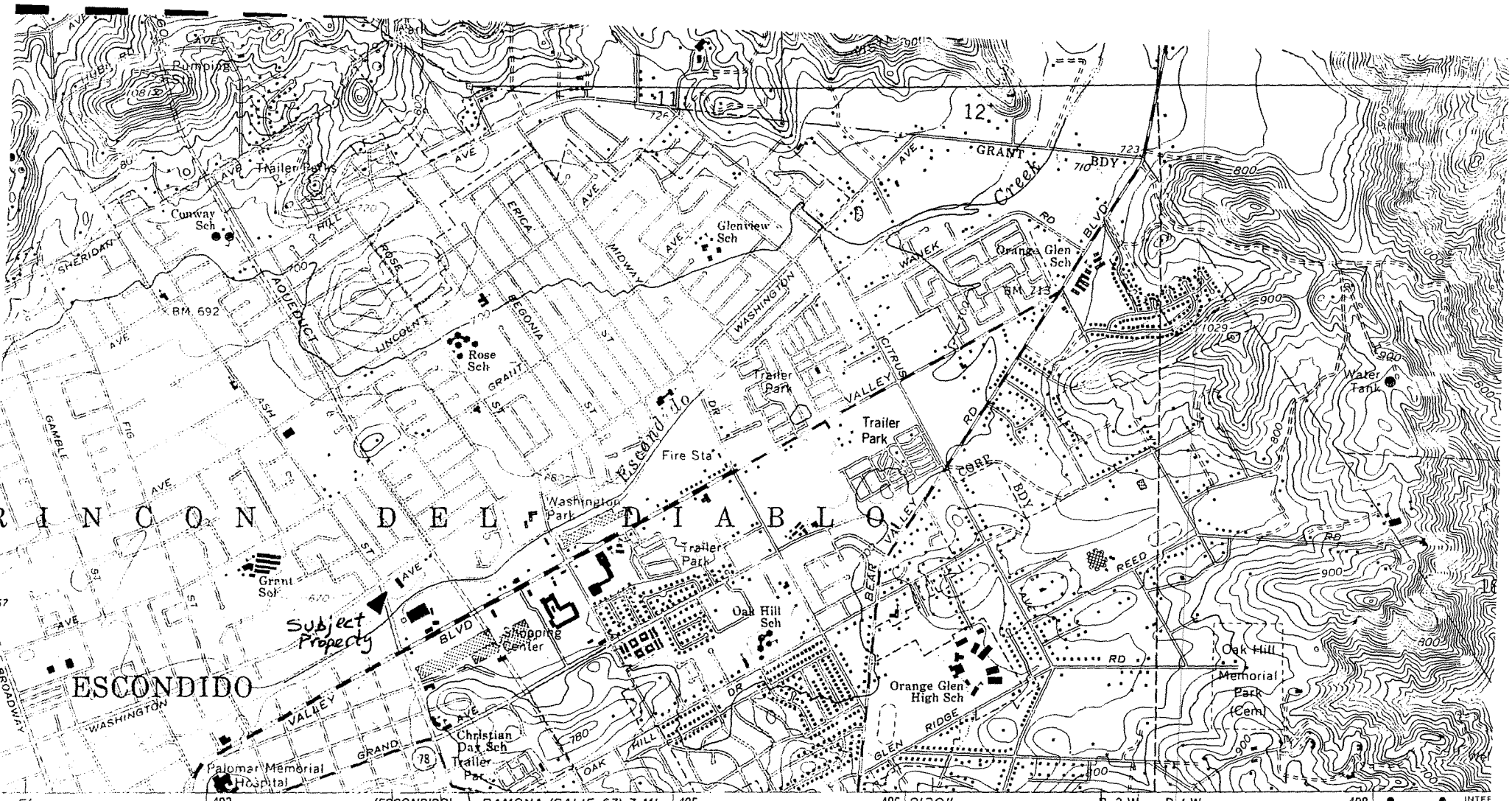
Customer Project:
1012696EDR 781-320-3720

This document reports that the largest and most complete collection of Sanborn fire insurance maps has been reviewed based on client-supplied information, and fire insurance maps depicting the target property at the specified address were not identified.

NO COVERAGE

NOTE: The reseller MUST deliver this report in its entirety to its client.


DETAIL "A"
NO SCALE
DETAIL "B" 1"=100'
1"=200'
6/9/3 EK
CHANGES
BLK | OLD | NEW | YR | CUT
81&84 | 85&86 | 80 | 629
26 | SAME & ST. WID | 83 | 4827
Kill | 83 | 3200
ST | SAME ST. WID | 85 | 4783 CANC
49 | SAME ST. WID. | 85 | 4808 CANC
37 | 87 & ST. WID | 87 | 1407 CANC
48 | 88 & ST. WID. | 88 | 1491 CANC
26&49 | 89-92 | 91 | 1688
89-92 | 93&94 | 91 | 2075
38&58 | KILL | 98 | 1676
76&77 | SAME & ST. OP | 99 | 4663
64 | 95&96 | 99 | 2057
141 | -140- VARIOUS | 1-24 | 00 | 10022
-140- 20,43&78 | 25-27 | 00 | 1637
22&24 | 28,29& ST. OP | 01 | 1275 CANC
25 | 30&31 | 01 | 2187
1• PAR 1 SBE MAP 2512-37-168
2• PAR 1 SBE MAP 2749-37-29
WASHINGTON
MILLS ST
ST AVE
ROSE
FLOOD CONTROL CHANNEL
HARDING ST
EL RANCHO LN
ASH ST
VALLEY
PKY
WASHINGTON PARK
BLK 179
POR 1
POR 6
SEE DETAIL "A"
SEE DETAIL "B"
SHORT 2-11-83
SAN DIEGO COUNTY ASSESSOR'S MAP BOOK 230 PAGE 14
THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY. NO LIABILITY IS ASSUMED FOR THE ACCURACY OF THE DATA SHOWN. ASSESSOR'S PARCELS MAY NOT COMPLY WITH LOCAL SUBDIVISION OR BUILDING ORDINANCES.
MAP 723 (349) RANCHO RINCON DEL DIABLO RESURVEY SHT. A
ROS 1620, 13337, 16940, 17627



SCALE 1:24000

1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 KILOMETER

CONTOUR INTERVAL 20 FEET
DOTTED LINES REPRESENT 10-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

Heavy-duty

Medium-du

CALIF

QUADRANGLE LOCATION

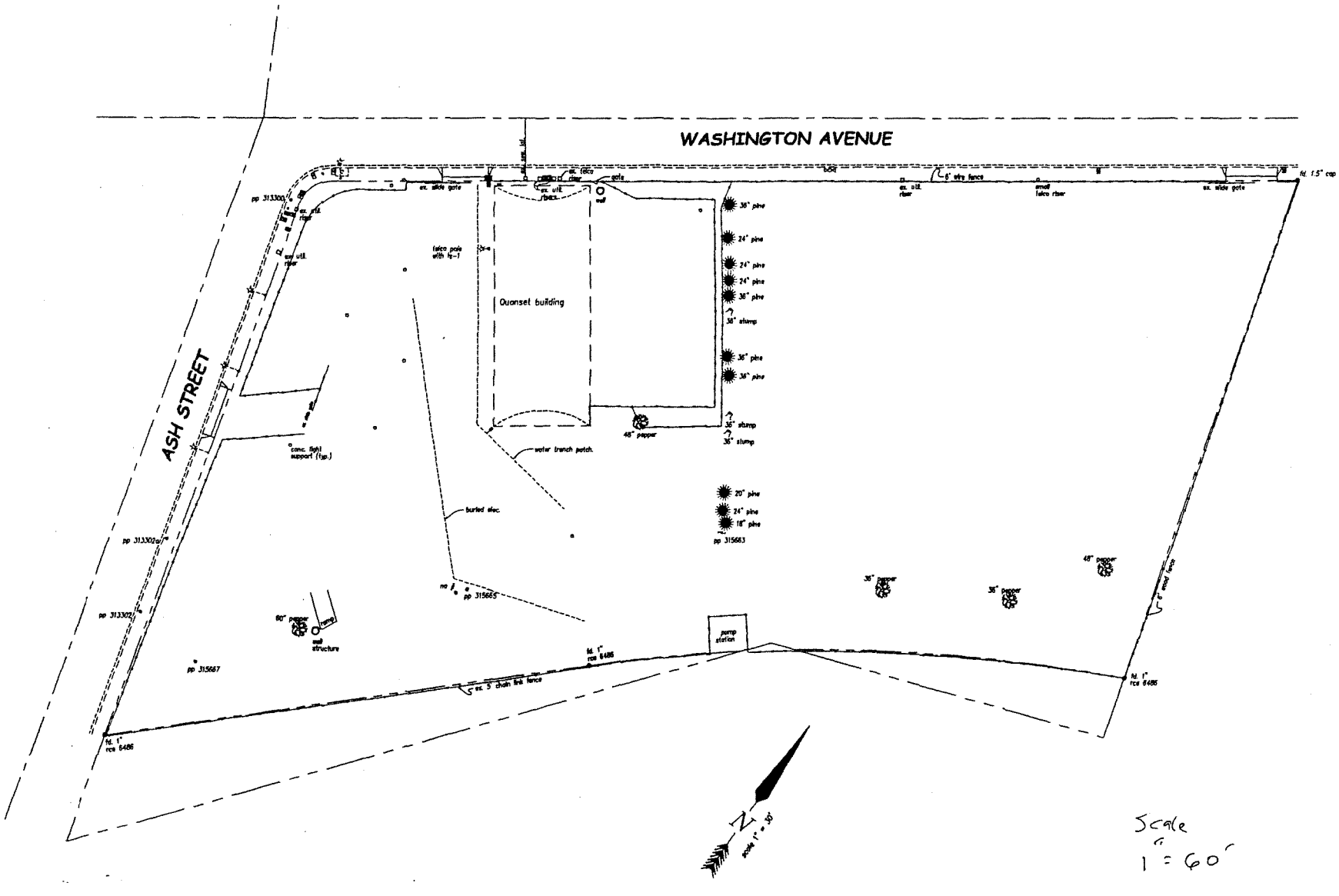
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS

FOR E BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092

A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON R EST

Revisions shown in purple compiled from aerial photographs taken 1975. This information not field checked

Purple tint indicates extension of urban areas



CONSTRUCTION RECORD	REFERENCES	Date	By	REVISIONS	App'd	Date	BENCH MARK

SCALE	Office
Horizontal AS NOTED	Filmed
Vertical	Traffic

Designed By	Drawn By	Checked By
	J.S.Z.	S.E.H.

Plans Prepared Under Supervision Of

Date

R.C.E. No.

Submitted _____ Approved _____

By _____ By _____

Deputy Director Of Public Works — City Engineer/Asst. Dir. Public Works

CITY OF ESCONDIDO DEPT. OF PUBLIC WORKS

PLANS OF: **ASH STREET CORPORATION YARD**

Drawing N

Sheet 1 o

APPENDIX E

BOREHOLE LOGS AND LEGEND

SECOR

BOREHOLE LOG

Number: SB-10

Client: City of Escondido

Job No: 08OT.COEGM.00

Sheet: 1 of 1

Location: City of Escondido-Green Mutual Building, 1201 East Washington Avenue, Escondido, California

Drilling Company/Driller: HP Labs/ Dave

SECOR Rep: J. DeGeorge

Approved by:

Date Started: 8/5/03

Date Finished: 8/5/03

Drill Rig/Sampling Method: Truck Mounted (direct push) / Acetate Sleeves

Borehole Dia.: 1 1/2"

Casing Dia:. 1 1/2"

Surface Elevation: --

SAMPLE LOG			BOREHOLE LOG					WELL LOG
Sample Number	OVA/PID (ppm)	Lab Results TPHg(ppm)	Density Blows/ft	Depth in Feet	USCS Symbol	Graphic Log	Geologic Description (Soil Type, Color, grain, minor soil component, moisture, density, odor, etc.)	Well Design
				0			Covered by: Asphalt Base (3")	
				1	SM		Silty SAND, dark yellowish brown (10YR 3/4), very fine to medium-grained sand, some silt, trace gravel, moist, medium dense, no hydrocarbon (HC) odor.	
				2				
				3				
				4				
SB-10/5'	0	NA	--	5				
				6				
				7				
				8				
				9				
SB-10/10'	0	NA	--	10				
				1				
				2				
				3	SP		Poorly graded sand, dark yellowish brown (10YR 3/6), very fine to medium-grained sand, trace silt, moist to wet, medium dense, no HC odor.	
				4		▽		
SB-10/15'	0	NA	--	15				
				6			TOTAL DEPTH DRILLED = 15' BGS	
				7			Borehole backfilled with bentonite chips from 15 feet bgs to 3 feet bgs, and capped with concrete from 3 feet bgs to ground surface.	
				8				
				9				
				20				
				1				
				2				
				3				
				4				
				25				
				6				
				7				
				8				
				9				
				30				

K:\ALLPROJECTS2003DWGS\GENERAL 2003\ESCONDIDO GREEN MUTUAL\COEGMSB-10.DWG MODIFIED BY ROSSJ ON SEP 11, 2003 - 15:11

DEFINITION OF TERMS

PRIMARY DIVISIONS			GRAPHIC SYMBOL	GROUP SYMBOL	SECONDARY DIVISIONS
COARSE GRAINED SOILS — More Than Half Of Material Is Larger Than No. 200 Sieve Size	GRAVELS — More Than Half Of Coarse Fraction Is Larger than No. 4 Sieve	Clean Gravels (Less Than 5% Fines)		GW	Well graded gravels, gravel sand mixtures, little or no fines.
				GP	Poorly graded gravels or gravel-sand mixtures, little or no fines.
		Gravel With Fines		GM	Silty gravels, gravel-sand-clay mixtures, non-plastic fines.
				GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines.
	SANDS — More Than Half Of Coarse Fraction Is Smaller Than No. 4 Sieve	Clean Sands (Less Than 5% Fines)		SW	Well graded sands or gravelly sands, little or no fines.
				SP	Poorly graded sands or gravelly sands, little or no fines.
		Sands With Fines		SM	Silty sands, sand-silt mixtures, plastic fines.
				SC	Clayey sands, sand-clay mixtures, plastic fines.
FINE GRAINED SOILS — More Than Half Of Material Is Smaller Than No. 200 Sieve Size	SILTS AND CLAYS — Liquid Limit Is Less Than 50%			ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
				CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
				OL	Organic silts and organic silty clays of low plasticity.
	SILTS AND CLAYS — Liquid Limit Is Greater Than 50%			MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
				CH	Inorganic clays of high plasticity, fat clays.
				OH	Organic clays of medium to high plasticity, organic silts.
HIGHLY ORGANIC SOILS				Pt	Peat and other highly organic soils

SECOR

BOREHOLE/WELL LOG LEGEND

GRAIN SIZES

U.S. Standard Series Sieve				Clear Square Sieve Openings			
200	40	10	4	3/4"	3"	12"	
SILT and CLAYS	SAND			GRAVEL		COBBLES	BOULDERS
	Fine	Medium	Coarse	Fine	Coarse		

RELATIVE DENSITY

Sand and Gravels	Blows/Foot†
Very Loose	0 - 4
Loose	4-10
Medium Dense	10-30
Dense	30-50
Very Dense	Over 50

CONSISTENCY

Silt and Clays	Strength ‡	Blows/Foot†
Very Loose	0 - 1/4	0 - 2
Soft	1/4 - 1/2	2 - 4
Firm	1/2 - 1	2 - 4
Stiff	1 - 2	8 - 16
Very Stiff	2 - 4	16 - 32
Hard	Over 4	Over 32

† Number of blows of 140 pound hammer falling 30 inches to drive a 2 inch O.D. (1-3/8 inch I.D.) split Spoon (ASTM D-1586).

‡ Unconfined compressive strength in tons/sq.ft. as determined by laboratory testing or approximated by the standard penetration test (AST D-1586), pocket penetrometer, torvane, or visual observation.

Graphic Log Symbols

Free Product

Ground Water (Static)

Ground Water (First Encountered)

Well Design Symbol

< > Centralizer

Abbreviations Used

ags	Above Ground Surface
msl	Mean Sea Level
A/C	Asphalt/Concrete
Bent	Bentonite
bgs	Below Ground Surface
dia	Diameter
'	Feet
FP	Free Product
GW	Groundwater
HC	Hydrocarbon
"	Inches
med	Medium
mod	Moderate
NR	Not Recorded
ppm	Parts Per Million

Abbreviations Used

Asphalt

Concrete

Concrete Slurry

Bentonite

Bentonite Grout

Sand

Screened Interval

SECOR
INTERNATIONAL INCORPORATED
2655 CAMINO DEL RIO N., SUITE 302
SAN DIEGO, CA. 92108

BOREHOLE/WELL LOG LEGEND

APPENDIX F

PHASE II LABORATORY REPORT AND CHAIN-OF-CUSTODY DOCUMENTATION

SunStar Laboratories, Inc.

\ugust 2003

se DeGeorge
:or
)5 Camino Del Rio North #320
ı Diego, CA 92108
: City of Escondido (Green Mutual)

:losed are the results of analyses for samples received by the laboratory on 08/06/03 15:15. If you have any stions concerning this report, please feel free to contact me.

:erely,

Chris Hollandsworth

ris Hollandsworth
emist

3002 Dow Avenue, Suite 212, Tustin, CA 92780 Phone (714) 505-4010 Fax (714) 505-4028

Secor	Project: City of Escondido (Green Mutual)	
2655 Camino Del Rio North #320	Project Number: 080T.COEGM.00	**Reported:**
San Diego CA, 92108	Project Manager: Jesse DeGeorge	08/14/03 15:57

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-1/10'	A308008-02	Soil	08/05/03 09:12	08/06/03 15:15
SB-5/10'	A308008-11	Soil	08/05/03 10:34	08/06/03 15:15
SB-11/10'	A308008-23	Soil	08/05/03 13:16	08/06/03 15:15
SB-12/10'	A308008-25	Soil	08/05/03 13:37	08/06/03 15:15
SB-15/10'	A308008-31	Soil	08/05/03 14:24	08/06/03 15:15
SB-17/10'	A308008-35	Soil	08/05/03 15:00	08/06/03 15:15
SB-19/10'	A308008-39	Soil	08/05/03 15:30	08/06/03 15:15

Secor	Project: City of Escondido (Green Mutual)	
2655 Camino Del Rio North #320	Project Number: 080T.COEGM.00	**Reported:**
San Diego CA, 92108	Project Manager: Jesse DeGeorge	08/14/03 15:57

SB-1/10'
A308008-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
SunStar Laboratories, Inc.									
Extractable Petroleum Hydrocarbons by 8015									
Diesel Range Hydrocarbons	ND	10	mg/kg	1	3080701	08/07/03	08/08/03	EPA 8015m	
Purgeable Petroleum Hydrocarbons by 8015									
Gasoline Range Hydrocarbons	ND	0.50	mg/kg	1	3080709	08/07/03	08/08/03	EPA 8015m	
Surrogate: 4-Bromofluorobenzene		*95.2 %*	*65-135*		"	"	"	"	

SunStar Laboratories Inc

The results in this report apply to the samples analyzed in accordance with the chain c custody document. This analytical report must be reproduced in its entirety.

Chris Hollandsworth

Chris Hollandsworth, Chemist

Secor	Project: City of Escondido (Green Mutual)	
2655 Camino Del Rio North #320	Project Number: 080T.COEGM.00	**Reported:**
San Diego CA, 92108	Project Manager: Jesse DeGeorge	08/14/03 15:57

SB-5/10'
A308008-11 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Not
SunStar Laboratories, Inc.									
xtractable Petroleum Hydrocarbons by 8015									
iesel Range Hydrocarbons	ND	10	mg/kg	1	3080701	08/07/03	08/08/03	EPA 8015m	
urgeable Petroleum Hydrocarbons by 8015									
asoline Range Hydrocarbons	ND	0.50	mg/kg	1	3080709	08/07/03	08/08/03	EPA 8015m	
urrogate: 4-Bromofluorobenzene		*68.4 %*		*65-135*		"	"	"	

SunStar Laboratories Inc

The results in this report apply to the samples analyzed in accordance with the chain o custody document. This analytical report must be reproduced in its entirety.

Chris Hollandsworth

Chris Hollandsworth, Chemist

Secor	Project: City of Escondido (Green Mutual)	
2655 Camino Del Rio North #320	Project Number: 080T.COEGM.00	**Reported:**
San Diego CA, 92108	Project Manager: Jesse DeGeorge	08/14/03 15:57

SB-11/10'
A308008-23 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
olychlorinated Biphenyls by EPA Method 8082									
CB-1016	ND	10	ug/kg	1	3081104	08/11/03	08/13/03	EPA 8082	
CB-1221	ND	10	"	"	"	"	"	"	
CB-1232	ND	10	"	"	"	"	"	"	
CB-1242	ND	10	"	"	"	"	"	"	
CB-1248	ND	10	"	"	"	"	"	"	
CB-1254	ND	10	"	"	"	"	"	"	
CB-1260	ND	10	"	"	"	"	"	"	
ırrogate: Tetrachloro-meta-xylene		*64.4 %*	*35-140*		"	"	"	"	
'onventional Chemistry Parameters by APHA/EPA Methods									
RPH	ND	10	mg/kg	1	3080708	08/07/03	08/12/03	EPA 418.1	

Secor	Project: City of Escondido (Green Mutual)	
2655 Camino Del Rio North #320	Project Number: 080T.COEGM.00	**Reported:**
San Diego CA, 92108	Project Manager: Jesse DeGeorge	08/14/03 15:57

SB-12/10'
A308008-25 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
SunStar Laboratories, Inc.									
'olychlorinated Biphenyls by EPA Method 8082									
CB-1016	ND	10	ug/kg	1	3081104	08/11/03	08/13/03	EPA 8082	
CB-1221	ND	10	"	"	"	"	"	"	
CB-1232	ND	10	"	"	"	"	"	"	
CB-1242	ND	10	"	"	"	"	"	"	
CB-1248	ND	10	"	"	"	"	"	"	
CB-1254	ND	10	"	"	"	"	"	"	
CB-1260	ND	10	"	"	"	"	"	"	
urrogate: Tetrachloro-meta-xylene		*72.2 %*		*35-140*		"	"	"	
Conventional Chemistry Parameters by APHA/EPA Methods									
TRPH	ND	10	mg/kg	1	3080708	08/07/03	08/12/03	EPA 418.1	

SunStar Laboratories Inc

The results in this report apply to the samples analyzed in accordance with the chain o custody document. This analytical report must be reproduced in its entirety.

Chris Hollandsworth

Chris Hollandsworth, Chemist

Secor	Project: City of Escondido (Green Mutual)	
2655 Camino Del Rio North #320	Project Number: 080T.COEGM.00	**Reported:**
San Diego CA, 92108	Project Manager: Jesse DeGeorge	08/14/03 15:57

SB-15/10'
A308008-31 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
'olychlorinated Biphenyls by EPA Method 8082									
'CB-1016	ND	10	ug/kg	1	3081104	08/11/03	08/13/03	EPA 8082	
'CB-1221	ND	10	"	"	"	"	"	"	
'CB-1232	ND	10	"	"	"	"	"	"	
'CB-1242	ND	10	"	"	"	"	"	"	
'CB-1248	ND	10	"	"	"	"	"	"	
'CB-1254	ND	10	"	"	"	"	"	"	
'CB-1260	ND	10	"	"	"	"	"	"	
urrogate: Tetrachloro-meta-xylene		*81.3 %*	*35-140*		"	"	"	"	
Conventional Chemistry Parameters by APHA/EPA Methods									
'RPH	ND	10	mg/kg	1	3080708	08/07/03	08/12/03	EPA 418.1	

Secor	Project: City of Escondido (Green Mutual)	
2655 Camino Del Rio North #320	Project Number: 080T.COEGM.00	**Reported:**
San Diego CA, 92108	Project Manager: Jesse DeGeorge	08/14/03 15:57

SB-17/10'
A308008-35 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	3081104	08/11/03	08/13/03	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*88.3 %*	*35-140*		"	"	"	"	
Conventional Chemistry Parameters by APHA/EPA Methods									
TRPH	ND	10	mg/kg	1	3080708	08/07/03	08/12/03	EPA 418.1	

SunStar Laboratories Inc

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Chris Hollenbeck

Chris Hollenbeck, Chemist

ecor	Project: City of Escondido (Green Mutual)	
655 Camino Del Rio North #320	Project Number: 080T.COEGM.00	**Reported:**
an Diego CA, 92108	Project Manager: Jesse DeGeorge	08/14/03 15:57

SB-19/10'
A308008-39 (Soil)

nalyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
olychlorinated Biphenyls by EPA Method 8082									
CB-1016	ND	10	ug/kg	1	3081104	08/11/03	08/13/03	EPA 8082	
CB-1221	ND	10	"	"	"	"	"	"	
CB-1232	ND	10	"	"	"	"	"	"	
CB-1242	ND	10	"	"	"	"	"	"	
CB-1248	ND	10	"	"	"	"	"	"	
CB-1254	ND	10	"	"	"	"	"	"	
CB-1260	ND	10	"	"	"	"	"	"	
rrogate: Tetrachloro-meta-xylene		*79.7 %*	*35-140*		"	"	"	"	
onventional Chemistry Parameters by APHA/EPA Methods									
RPH	ND	10	mg/kg	1	3080708	08/07/03	08/12/03	EPA 418.1	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Chris Hollandsworth

cor	Project: City of Escondido (Green Mutual)	
55 Camino Del Rio North #320	Project Number: 080T.COEGM.00	**Reported:**
n Diego CA, 92108	Project Manager: Jesse DeGeorge	08/14/03 15:57

Extractable Petroleum Hydrocarbons by 8015 - Quality Control

SunStar Laboratories, Inc.

ılyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
:ch 3080701 - EPA 3550B Soil										
nk (3080701-BLK1)				Prepared & Analyzed: 08/07/03						
:el Range Hydrocarbons	ND	10	mg/kg							
S (3080701-BS1)				Prepared: 08/07/03 Analyzed: 08/08/03						
:el Range Hydrocarbons	540	10	mg/kg	500		108	75-125			
trix Spike (3080701-MS1)	**Source: T300853-02**			Prepared: 08/07/03 Analyzed: 08/08/03						
:el Range Hydrocarbons	560	10	mg/kg	500	ND	112	75-125			
trix Spike Dup (3080701-MSD1)	**Source: T300853-02**			Prepared: 08/07/03 Analyzed: 08/08/03						
:el Range Hydrocarbons	540	10	mg/kg	500	ND	108	75-125	3.64	20	

nStar Laboratories Inc

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Chris Hollandsworth

is Hollandsworth, Chemist

Polychlorinated Biphenyls by EPA Method 8082 - Quality Control

SunStar Laboratories, Inc.

nalyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
atch 3081104 - EPA 3550B GCMS Soil										
ank (3081104-BLK1)				Prepared: 08/11/03 Analyzed: 08/13/03						
:B-1016	ND	10	ug/kg							
:B-1221	ND	10	"							
:B-1232	ND	10	"							
:B-1242	ND	10	"							
:B-1248	ND	10	"							
:B-1254	ND	10	"							
:B-1260	ND	10	"							
rrogate: Tetrachloro-meta-xylene	*80.2*		"	*100*		*80.2*	*35-140*			
:S (3081104-BS1)				Prepared: 08/11/03 Analyzed: 08/13/03						
:B-1016	300	10	ug/kg	500		60.0	40-120			
:B-1260	296	10	"	500		59.2	40-120			
rrogate: Tetrachloro-meta-xylene	*80.9*		"	*100*		*80.9*	*35-140*			
atrix Spike (3081104-MS1)	**Source: A308008-23**			Prepared: 08/11/03 Analyzed: 08/13/03						
:B-1016	324	10	ug/kg	500	ND	64.8	40-120			
:B-1260	306	10	"	500	ND	61.2	40-120			
rrogate: Tetrachloro-meta-xylene	*88.9*		"	*100*		*88.9*	*35-140*			
atrix Spike Dup (3081104-MSD1)	**Source: A308008-23**			Prepared: 08/11/03 Analyzed: 08/13/03						
:B-1016	272	10	ug/kg	500	ND	54.4	40-120	17.4	30	
:B-1260	287	10	"	500	ND	57.4	40-120	6.41	30	
rrogate: Tetrachloro-meta-xylene	*65.7*		"	*100*		*65.7*	*35-140*			

ecor
655 Camino Del Rio North #320
an Diego CA, 92108

Project: City of Escondido (Green Mutual)
Project Number: 080T.COEGM.00
Project Manager: Jesse DeGeorge

Reported:
08/14/03 15:57

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

SunStar Laboratories, Inc.

ıalyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
ıtch 3080708 - 418.1 / 5520C&F Mod.										
ank (3080708-BLK1)				Prepared: 08/07/03 Analyzed: 08/12/03						
PH	ND	10	mg/kg							
:S (3080708-BS1)				Prepared: 08/07/03 Analyzed: 08/12/03						
PH	130	10	mg/kg	131		99.2	75-125			
atrix Spike (3080708-MS1)		**Source: T300855-02**		Prepared: 08/07/03 Analyzed: 08/12/03						
PH	130	10	mg/kg	131	ND	99.2	75-125			
atrix Spike Dup (3080708-MSD1)		**Source: T300855-02**		Prepared: 08/07/03 Analyzed: 08/12/03						
PH	130	10	mg/kg	131	ND	99.2	75-125	0.00	20	

The results in this report apply to the samples analyzed in accordance with the chain c custody document. This analytical report must be reproduced in its entirety.

Chris Hollenbeck

Purgeable Petroleum Hydrocarbons by 8015 - Quality Control

SunStar Laboratories, Inc.

ıalyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
ıtch 3080709 - EPA 5030 Soil GC										
ank (3080709-BLK1)				Prepared: 08/07/03 Analyzed: 08/08/03						
soline Range Hydrocarbons	ND	0.50	mg/kg							
rrogate: 4-Bromofluorobenzene	*0.0858*		*"*	*0.125*		*68.6*	*65-135*			
:S (3080709-BS1)				Prepared: 08/07/03 Analyzed: 08/08/03						
soline Range Hydrocarbons	13.5	0.50	mg/kg	13.8		97.8	75-125			
rrogate: 4-Bromofluorobenzene	*0.106*		*"*	*0.125*		*84.8*	*65-135*			
atrix Spike (3080709-MS1)		**Source: A308008-11**		Prepared: 08/07/03 Analyzed: 08/08/03						
soline Range Hydrocarbons	13.7	0.50	mg/kg	13.8	ND	99.3	65-135			
rrogate: 4-Bromofluorobenzene	*0.0970*		*"*	*0.125*		*77.6*	*65-135*			
atrix Spike Dup (3080709-MSD1)		**Source: A308008-11**		Prepared: 08/07/03 Analyzed: 08/08/03						
soline Range Hydrocarbons	13.4	0.50	mg/kg	13.8	ND	97.1	65-135	2.21	20	
rrogate: 4-Bromofluorobenzene	*0.107*		*"*	*0.125*		*85.6*	*65-135*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Chris Hollandsworth

Secor	Project: City of Escondido (Green Mutual)	
2655 Camino Del Rio North #320	Project Number: 080T.COEGM.00	**Reported:**
San Diego CA, 92108	Project Manager: Jesse DeGeorge	08/14/03 15:57

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Chris Hollenbeck

Chris Hollenbeck, Chemist

Chain-of Custody Number:

SECOR Chain-of Custody Record

Field Office: San Diego
Address: 2655 Camino del Rio N, #302
San Diego CA 92108

☐ Additional documents are attached, and are a part of this Record.
Job Name: City of Escondido (Grant)
Location: 1201 East Washington Ave.
Escondido, CA

Project # 080T.COEGM.001 Task # 0002
Project Manager J. McGeorge
Laboratory Sunstar
Turnaround Time Normal

Sampler's Name Josh McGeorge
Sampler's Signature

Analysis Request

Sample ID	Date	Time	Matrix	HCID	TPHg/BTEXMTBE-G 8015 (modified)/8020	TPHd/MTBE-D 8015 (modified)	TCLP TPH 418.1/TRPH 418.1	Aromatic Volatiles 602/8020	Volatile Organics 624/8240 (GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GC/MS)	Pesticides/PCBs 608/8080	Total Lead 7421	Priority Pollutant Metals (13)	TCLP Metals			Comments/ Instructions	Number of Containers
✓ SB-1/5'	8/5/03	0900	SOIL															HOLD	1
✓ SB-1/10'		0912			X	X													
✓ SB-2/5'		0925																	
✓ SB-2/10'		0931																HOLD	
✓ SB-3/5'		0945																	
✓ SB-3/10'		0950																	
✓ SB-4/5'		1004																	
✓ SB-4/8'		1012																	
✓ SB-4/13'		1018																	
✓ SB-5/5'		1028																	

Special Instructions/Comments:

Relinquished by: Sampler	Received by:	Sample Receipt	
Sign	Sign	Total no. of containers:	10
Print Josh McGeorge	Print CHRIS HOLMES WORK	Chain of custody seals:	
Company SECOR	Company SUNSTAR	Rec'd in good condition/cold:	YES
Time 1515 Date 8/6/03	Time 1515 Date 8/6/03	Conforms to record:	
Relinquished by:	Received by:	Client:	
Sign	Sign		
Print	Print	Client Contact:	
Company	Company		
Time Date	Time Date	Client Phone:	

SECOR CUSTREC Rev. 2/99

Date: 8/6/03 Page 1 of 4

Chain-of Custody Number:

SECOR Chain-of Custody Record

Field Office: San Diego

Address: STAM

☐ Additional documents are attached, and are a part of this Record

Job Name: City of Escondido (Groundwater)

Location:

Project # 0807.COEGM.00 Task # 0002

Project Manager Jesse DeGeorge

Laboratory SunStar

Turnaround Time Normal

Sampler's Name J. DeGeorge

Sampler's Signature

Analysis Request

Sample ID	Date	Time	Matrix	HCID	TPHg/~~BTEX/MTBH-G~~ 8015 (modified)/8020	TPHd/~~MTBH-D~~ 8015 (modified)	TPH 418.1/WTPH 418.1	Aromatic Volatiles 602/8020	Volatile Organics 624/8240 (GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GC/MS)	Pesticides/PCBs 608/8080	Total Lead 7421	Priority Pollutant Metals (13)	TCLP Metals	Comments/ Instructions	Number of Containers
SE-5/10'	8/5/03	1034	SOIL		X	X											1
SB-6/5'		1051															
SB-6/10'		1058															
SB-7/5'		1104															
SB-7/10'		1110														HOLD	
SB-8/5'		1115															
SB-8/10'		1122															
SB-9/5'		1128															
SB-9/10'		1134															
SB-10/5'		1201															

Special Instructions/Comments:

Relinquished by: Sampler
Sign
Print Jesse DeGeorge
Company SECOR
Time 1515 Date 8/06/03

Received by:
Sign
Print Chris Hollandsworth
Company SUNSTAR
Time 1515 Date 8/06/03

Sample Receipt
Total no. of containers: 10
Chain of custody seals:
Rec'd in good condition/cold: YES
Conforms to record:

Relinquished by:
Sign
Print
Company
Time Date

Received by:
Sign
Print
Company
Time Date

Client:
Client Contact:
Client Phone:

SECOR CUSTREC Rev. 2

Date: 8/6/03 Page 2 of 4

Chain-of Custody Number:

SECOR Chain-of Custody Record

Field Office: San Diego

Address:

☐ Additional documents are attached, and are a part of this Record.

Job Name: City of Escondido (Owen Mutual)

Location:

Project # 0BOT. COEBM. 00. Task # 0002

Project Manager Jesse DeGeorge

Laboratory SunStar

Turnaround Time Normal

Sampler's Name Jesse DeGeorge

Sampler's Signature

Analysis Request

Sample ID	Date	Time	Matrix	HCID	TPHg/BTEX/WTPH-G 8015 (modified)/8020	TPHd/WTPH-D 8015 (modified)	~~TPH 418.1/WTPH 418.1~~ TRPH 418.1	Aromatic Volatiles 602/8020	Volatile Organics 624/8240 (GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GC/MS)	Pesticides/PCBs 608/8080	Total Lead 7421	Priority Pollutant Metals (13)	TCLP Metals			Comments/ Instructions	Number of Containers
✓ SB-10/10'	8/5/03	1207	SOIL															HOLD	1
✓ SB-11/5'	↓	1308	↓															HOLD	↓
✓ SB-11/10'	↓	1316	↓				X					X							↓
✓ SB-12/5'	↓	1328	↓															HOLD	↓
✓ SB-12/10'	↓	1337	↓				X					X							↓
✓ SB-13/5'	↓	1342	↓															HOLD	↓
✓ SB-13/10'	↓	1354	↓															HOLD	↓
✓ SB-14/5'	↓	1402	↓															HOLD	↓
✓ SB-14/10'	↓	1408	↓															HOLD	↓
✓ SB-15/5'	↓	1417	↓															HOLD	↓

Special Instructions/Comments:

Relinquished by: Samples	Received by:
Sign	Sign
Print Jesse DeGeorge	Print Chris Hollandsworth
Company SECOR	Company SunStar
Time 1515 Date 8/06/03	Time 1515 Date 8/06/03

Relinquished by:	Received by:
Sign	Sign
Print	Print
Company	Company
Time Date	Time Date

Sample Receipt

Total no. of containers: 10

Chain of custody seals:

Rec'd in good condition/cold: yes

Conforms to record:

Client:

Client Contact:

Client Phone:

SECOR CUSTREC Rev. 2/99

Date: 8/6/03 Page 3 of 4

Chain of Custody Number:

SECOR Chain-of Custody Record

Field Office: San Diego

Address: SAME

☐ Additional documents are attached, and are a part of this Record

Job Name: City of Escondido (Green Meadows)

Location:

Project # 080T.COEBM.00.0002 Task #

Project Manager J. T. George

Laboratory Sunstar

Turnaround Time Normal

Sampler's Name J. T. George

Sampler's Signature [signature]

Analysis Request

Sample ID	Date	Time	Matrix	HCID	TPHg/BTEX/WTPH-G 8015 (modified)/8020	TPHd/WTPH-D 8015 (modified)	~~TPH 418.1/WTPH 418.1~~ TRPH 418.1	Aromatic Volatiles 602/8020	Volatile Organics 624/8240 (GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GC/MS)	~~Pesticides~~/PCBs 608/8080	Total Lead 7421	Priority Pollutant Metals (13)	TCLP Metals			Comments/ Instructions	Number of Containers
SB-15/10'	8/5/03	1424	SOIL				X					X							1
SB-16/5'	↓	1431	↓															HOLD	↓
SB-16/10'	↓	1436	↓															HOLD	↓
SB-17/5'	↓	1450	↓															HOLD	↓
SB-17/10'	↓	1500	↓				X					X							↓
SB-18/5'	↓	1507	↓															HOLD	↓
SB-18/10'	↓	1514	↓															HOLD	↓
SB-19/5'	↓	1522	↓															HOLD	↓
SB-19/10'	↓	1530	↓				X					X							↓

Special Instructions/Comments:

Relinquished by: Sampler	Received by:
Sign [signature]	Sign [signature]
Print Jesse George	Print Chris Hollandsworth
Company SECOR	Company Sunstar
Time 1515 Date 8/06/03	Time 1515 Date 8/06/03

Relinquished by:	Received by:
Sign	Sign
Print	Print
Company	Company
Time Date	Time Date

Sample Receipt

Total no. of containers: 9

Chain of custody seals:

Rec'd in good condition/cold: Yes

Conforms to record:

Client:

Client Contact:

Client Phone:

SECOR CUSTREC Rev. 2/

Date: 8/6/03 Page 4 of 4

SunStar Laboratories, Inc.

14 August 2003

Jesse DeGeorge
Secor
2655 Camino Del Rio North #320
San Diego, CA 92108

RE: City of Escondido (Green Mutual)

Enclosed are the results of analyses for samples received by the laboratory on 08/06/03 15:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Chris Hollandsworth

Chris Hollandsworth
Chemist

3002 Dow Avenue, Suite 212, Tustin, CA 92780 Phone (714) 505-4010 Fax (714) 505-4028

Secor	Project: City of Escondido (Green Mutual)	
2655 Camino Del Rio North #320	Project Number: 080T.COEGM.00	**Reported:**
San Diego CA, 92108	Project Manager: Jesse DeGeorge	08/14/03 13:15

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-10	A308007-01	Water	08/05/03 12:18	08/06/03 15:15

SunStar Laboratories Inc

The results in this report apply to the samples analyzed in accordance with the chain o custody document. This analytical report must be reproduced in its entirety.

Chris Hollandsworth, Chemist

ecor	Project: City of Escondido (Green Mutual)	
655 Camino Del Rio North #320	Project Number: 080T.COEGM.00	**Reported:**
an Diego CA, 92108	Project Manager: Jesse DeGeorge	08/18/03 14:02

SB-10
A308007-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
olatile Organic Compounds by EPA Method 8260B									
asoline Range Hydrocarbons	ND	100	ug/l	1	3080803	08/08/03	08/09/03	EPA 8260B/8015 m	
Methyl tert-butyl ether	ND	20	"	"	"	"	"	"	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Toluene-d8		*100 %*		*86-115*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*95.0 %*		*86-115*	"	"	"	"	
Surrogate: Dibromofluoromethane		*110 %*		*86-118*	"	"	"	"	
ichloroethene	ND	5.0	"	"	"	"	"	EPA 8260B	

SunStar Laboratories Inc

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Chris Hollandsworth

Chris Hollandsworth, Chemist

Secor	Project: City of Escondido (Green Mutual)	
1655 Camino Del Rio North #320	Project Number: 080T.COEGM.00	**Reported:**
San Diego CA, 92108	Project Manager: Jesse DeGeorge	08/14/03 13:15

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3080803 - EPA 5030 Water MS										
Blank (3080803-BLK1)				Prepared: 08/08/03 Analyzed: 08/09/03						
Gasoline Range Hydrocarbons	ND	100	ug/l							
Methyl tert-butyl ether	ND	20	"							
Benzene	ND	5.0	"							
Toluene	ND	5.0	"							
Ethylbenzene	ND	5.0	"							
m,p-Xylene	ND	5.0	"							
o-Xylene	ND	5.0	"							
Tetrachloroethene	ND	5.0	"							
Trichloroethene	ND	5.0	"							
Surrogate: Toluene-d8	*40.3*		"	*40.0*		*101*	*86-115*			
Surrogate: 4-Bromofluorobenzene	*37.2*		"	*40.0*		*93.0*	*86-115*			
Surrogate: Dibromofluoromethane	*43.5*		"	*40.0*		*109*	*86-118*			
LCS (3080803-BS1)				Prepared: 08/08/03 Analyzed: 08/12/03						
Benzene	86.5	5.0	ug/l	100		86.5	75-125			
Toluene	82.4	5.0	"	100		82.4	75-125			
Trichloroethene	90.4	5.0	"	100		90.4	75-125			
Surrogate: Toluene-d8	*40.3*		"	*40.0*		*101*	*86-115*			
Surrogate: 4-Bromofluorobenzene	*39.2*		"	*40.0*		*98.0*	*86-115*			
Surrogate: Dibromofluoromethane	*41.2*		"	*40.0*		*103*	*86-118*			
Matrix Spike (3080803-MS1)		**Source: T300860-01**		Prepared: 08/08/03 Analyzed: 08/12/03						
Benzene	90.0	5.0	ug/l	100	ND	90.0	75-125			
Toluene	86.0	5.0	"	100	ND	86.0	75-125			
Trichloroethene	93.1	5.0	"	100	ND	93.1	75-125			
Surrogate: Toluene-d8	*40.5*		"	*40.0*		*101*	*86-115*			
Surrogate: 4-Bromofluorobenzene	*39.4*		"	*40.0*		*98.5*	*86-115*			
Surrogate: Dibromofluoromethane	*41.2*		"	*40.0*		*103*	*86-118*			

Chris Hollandsworth

Secor	Project: City of Escondido (Green Mutual)	
2655 Camino Del Rio North #320	Project Number: 080T.COEGM.00	**Reported:**
San Diego CA, 92108	Project Manager: Jesse DeGeorge	08/14/03 13:15

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3080803 - EPA 5030 Water MS										
Matrix Spike Dup (3080803-MSD1)	**Source: T300860-01**			Prepared: 08/08/03 Analyzed: 08/12/03						
Benzene	23.9	5.0	ug/l	100	ND	23.9	75-125	116	20	QM-07
Toluene	24.3	5.0	"	100	ND	24.3	75-125	112	20	QM-07
Trichloroethene	23.2	5.0	"	100	ND	23.2	75-125	120	20	QM-07
Surrogate: Toluene-d8	*40.0*		"	*40.0*		*100*	*86-115*			
Surrogate: 4-Bromofluorobenzene	*38.7*		"	*40.0*		*96.8*	*86-115*			
Surrogate: Dibromofluoromethane	*42.7*		"	*40.0*		*107*	*86-118*			

SunStar Laboratories Inc

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Chris Hollandsworth, Chemist

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Chain-of Custody Number:

SECOR Chain-of Custody Record

Field Office: San Diego
Address: 2655 Camino del Rio N., #302
San Diego, CA 92108

☐ Additional documents are attached, and are a part of this Record.
Job Name: City of Escondido / Grocery Outlet
Location: 1016 East Washington Ave - Escondido, CA

Project # 08OT.COEGM.00.0002 Task #
Project Manager Jesse DeGeorge
Laboratory Sunstar
Turnaround Time Normal

Sampler's Name Jesse DeGeorge
Sampler's Signature [signature]

Sample ID	Date	Time	Matrix	HCID	TPHg/BTEX/WTPH-G 8015 (modified)/8020	TPHd/WTPH-D 8015 (modified)	TPH 418.1/WTPH 418.1	Aromatic Volatiles 602/8020	Volatile Organics 624/8240 (GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GC/MS)	Pesticides/PCBs 608/8080	Total Lead 7421	Priority Pollutant Metals (13)	TCLP Metals	TPHg/BTEX/MTBE 8260B	Tetrachloroethene	Comments/ Instructions	Number of Containers
SB-10	8/5/03	1218	H2O													X	X		1

Special Instructions/Comments:

Relinquished by: Sampler	Received by:
Sign [signature]	Sign [signature]
Print Jesse DeGeorge	Print Chris Hollingsworth
Company SECOR	Company Sunstar
Time 1515 Date 8/06/03	Time 1515 Date 8/06/03

Relinquished by:	Received by:
Sign	Sign
Print	Print
Company	Company
Time Date	Time Date

Sample Receipt
Total no. of containers: 1
Chain of custody seals:
Rec'd in good condition/cold: Yes
Conforms to record:

Client:
Client Contact:
Client Phone:

SECOR CUSTREC Rev. 2/99

Date: 8/6/03 Page 1 of 1

APPENDIX G

PRE-DEMOLITION ASBESTOS SURVEY
PRE-DEMOLITION LEAD BASED PAINT SURVEY

SECOR

SECOR
INTERNATIONAL
INCORPORATED

www.secor.com
2655 Camino Del Rio North
Suite 302
San Diego, CA 92108
619-296-6195 TEL
619-296-6199 FAX

August 27, 2003 SECOR Job No. 08OT.COEGM.00.0002

Mr. Steve Hughes
City of Escondido-PWD-Engineering
201 North Broadway
Escondido, California 92125

RE: PRE-DEMOLITION ASBESTOS SURVEY
City of Escondido Green Mutual Building
1201 East Washington Avenue
Escondido, California

Dear Mr. Hughes:

At the request and authorization of the City of Escondido, SECOR International Incorporated (SECOR) has completed a Pre-Demolition Asbestos Survey of one, 6,750 square foot metal Quonset hut building located at 1201 East Washington Avenue (the Subject property). This Survey was conducted in accordance with the scope of work provided in SECOR's cost proposal dated June 9, 2003. The objective of the survey was to identify, estimate quantities of, and assess the condition of suspect asbestos containing materials (ACMs) at the Subject property. The survey was conducted using the methods presented in the Federal Asbestos Hazard Emergency Response Act AHERA regulations (40 CFR, Part 763) as a guideline for sampling suspect ACMs.

A brief discussion of the investigation findings is presented in the following executive summary.

EXECUTIVE SUMMARY

The Subject property consisted of a metal Quonset hut building reportedly constructed during the 1940's. The building is situated on the west side of the property. A vacant storage yard is located to the east and parking areas are located further west and south.

The building is a wood-framed structure built on a concrete foundation. The building has corrugated metal sheeting and roof, with single pained wood-framed windows. A heating and cooling system was not present in the building. No overhead ducting, insulation or wall insulation was observed. The building interior is sub-divided into two storage rooms, four offices and a bathroom.

At the time of SECOR's inspection, the building was unoccupied however, the building was utilized for the storage of office equipment and machinery such as desks, file cabinets and copy machines. SECOR's Subject property inspector was unescorted.

The assessment was performed on July 16, 2003, and consisted of inspection and sampling of accessible building materials in the interior, exterior, and roof for potential ACMs. Bulk samples of suspect ACMs were collected using destructive techniques, when necessary, in selected representative locations (further described in Sections 3-4).

The following confirmed ACMs identified during the survey and SECOR's recommendations are as follows:

- According to analytical results window putty, floor tiles and mastic, and the hot water heater insulation were identified ACMs at the Subject property. The hot water heater insulation is considered Class I ACM material. The remaining materials are considered Class II ACM materials. All ACMs would require removal prior to any renovation or demolition activities which would disturb them, in accordance with the NESHAPs and SCAQMD regulations. SECOR recommends ACM removal by a Certified Asbestos Abatement Contractor.

- This survey was prepared under the assumption that the building at the Subject property will be demolished. However, if the building remains on the property, the identified ACM materials may be in place under an asbestos operations and maintenance (O&M) program for management in-place.

It has been a pleasure to provide environmental consulting services for you on this project and we look forward to working with you in the future. Should there be any questions regarding the information provided within the accompanying report, please do not hesitate to contact the undersigned at (619) 296-6195.

Respectfully submitted,

SECOR International Incorporated

Carolyn B. Partin
Staff Scientist

Tammy Lapp REA 06825
Certified Asbestos Consultant #91-2969

Peter Rubens, REA
Project Manager

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PRE-DEMOLITION ASBESTOS SURVEY REPORT
City of Escondido Green Mutual Building
1201 East Washington Avenue
Escondido, California 92025
SECOR Job No. 08OT.COEGM.00.0002

August 27, 2003

Prepared For:
City of Escondido-Public Works Engineering Division
Mr. Steve Hughes
201 North Broadway
Escondido, CA 92025

Submitted By:
SECOR International Incorporated
2655 Camino Del Rio North, Suite 302
San Diego, California 92108-1633

Prepared by:

Ms. Carolyn B. Partin
Staff Scientist

Reviewed by:

Ms. Tammy Lapp, REA #06825
Certified Asbestos Consultant #91-2969

Mr. Peter Rubens, REA #2375
Project Manager

PRE-DEMOLITION ASBESTOS SURVEY REPORT
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Mr. Peter Rubens, REA #2375
Project Manager

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FIGURES

APPENDICES

1.0 INTRODUCTION

The City of Escondido retained SECOR to conduct a Pre-Demolition Asbestos Survey and Report for the City of Escondido Green Mutual Water Building located at 1201 East Washington Avenue, California 92125 (Subject property). The Subject property is situated on the southeast corner of East Washington Avenue and North Ash Street. A 6,750 square foot metal Quonset hut building is located in the western portion of the subject property and concrete parking lots are located to the south and west of the building. The eastern portion of the subject property is vacant undeveloped land. 9Detailed building description is provided in the following Section 2.0.

The assessment was performed on July 16, 2003, and consisted of inspection and sampling of accessible building materials in the interior, exterior, and roof for potential ACMs. Bulk samples of suspect ACMs were collected using destructive techniques, when necessary, in selected representative locations (further described in Sections 3-4). The visual inspection, bulk sampling, and survey documentation was performed by Ms. Carolyn B. Partin, accredited by the EPA as an Asbestos Inspector, Certification No.: 1002ABCA3001 and AHERA Project Designer Certification No.: 103DR10989. The report was reviewed by Ms. Tammy Lapp an accredited by the EPA as an Asbestos Inspector/Management Planner, Certification No: EPA 501PD8757 and by Cal-OSHA as a Certified Asbestos Consultant, #91-2969.

The objectives of the assessment were to identify, estimate quantities of, and assess the condition/friability and Class of ACMs observed at the Subject property. These objectives were met by completing the following tasks:

- Perform a visual inspection and destructive sampling for asbestos following Asbestos Hazard Emergency Response Act (AHERA) sampling protocol as a guideline to identify sources of friable and non-friable ACMs.

- Ensure the technical quality of all work by using AHERA-accredited Inspectors and Management Planners, Certified Consultants, and a proven Quality Assurance/Quality Control (QA/QC) Program.

- Consolidate the findings into a report format.

2.0 BUILDING DESCRIPTION

The Subject property consisted of 6,750 square foot metal Quonset hut building reportedly constructed during the 1940's. The building is a wood-framed structure built on a concrete foundation. The building has corrugated metal sheet siding and roof, and wood single pained windows. No overhead ducting or wall insulation was observed.

The interior is subdivided into seven areas. There are two large open storage rooms (north and south storage rooms); a bathroom; and offices 1 through 4. Office 1 (approximately 100 square feet), Office 2 (approximately 250 square feet), Office 3 (approximately 300 square feet), Office 4 (approximately 600 square feet).

Storage Rooms –wood frame with paneled corrugated metal walls, corrugated metal paneled ceilings, and concrete floors.

Bathroom –Cement/plaster walls, wall board ceilings, and concrete floors

Office 1 – Wall board walls and ceilings, concrete floors.

Office 2- Wall board walls and ceilings, 9"x9" vinyl floor tiles atop concrete.

Office 3- Wall board walls and ceilings, 12"x12" vinyl floor tiles atop concrete.

Office 4-Wall board walls and ceilings, 9"x9" vinyl floor tiles atop concrete.

Since no building plans were available for review, building square footage estimates were based on SECOR's rough measurements during the Subject property visit.

3.0 METHODOLOGIES

3.1 VISUAL INSPECTION

The building was visually surveyed for asbestos-containing materials using the methods presented in the Federal AHERA regulations (40 CFR, Part 763) as a guideline. The principles presented under the EPA Asbestos Hazard Emergency Response Act (AHERA) are generally accepted as the industry standard for ACM surveys. Potential ACMs were also physically assessed for friability, condition, and disturbance factors.

In conducting the survey, SECOR attempted to access hidden materials such as pipe insulation however; SECOR makes no warranty as to the possible existence or absence of such materials or to their evaluation in respect to asbestos content. Additionally, the electrical wiring was insulated however, sampling of this material was not sampled because it could not be confirmed that the electrical system has been turned off. It is a widely accepted practice, and SECOR's recommendation, to collect additional bulk samples during any abatement activities when hidden suspect ACMs are discovered.

3.2 BULK SAMPLING FOR ASBESTOS

Bulk samples were collected of homogeneous materials from identified functional spaces suspected of containing ACM. A homogeneous material is defined as a surfacing material, thermal system insulation, or miscellaneous material that is uniform in use, age, color, and texture. Examples of homogeneous materials include:

- Wall board walls and ceiling
- 9" X 9" floor tile of identical size, color, and pattern
- 12" X 12" floor tile of identical size, color and pattern
- Window putty on windows similar in age, shape and color
- Similar insulation in color, shape and size

A functional space is defined as any spatially distinct unit within a building that contains identifiable populations of building occupants. Examples of functional spaces include:

- Storage rooms and offices

Bulk samples are collected to determine if there is any asbestos in a material. The sample result will identify the percentage of each type of asbestos detected. AHERA sampling guidelines were followed to determine the number of samples that were collected of each homogeneous area, as identified in the following table.

AHERA Sample Criteria

Type of Material	EPA Required Number of Samples
Surfacing:	
< 1000 square feet	3
1000 – 5000 square feet	5
> 5000 square feet	7
Thermal System Insulation	3 samples per homogeneous material
Miscellaneous Materials	Discretion of the Building Inspector

A sample approximately one-half square inch in size was collected of each suspect ACM. The sample was collected by removing the material using a chisel or other sharp instrument to cut a representative piece away. Zip lock plastic bags were used to contain the samples of suspect material and quickly sealed to prevent the escape of the material or the introduction of contamination from outside sources. A unique sample number was assigned to each sample.

3.3 BULK SAMPLE ANALYSIS FOR ASBESTOS

Environmental Management Consultant (EMC) Analytical Laboratories of Phoenix, Arizona, analyzed select samples. EMC Analytical laboratories are accredited under the National Institute of Standards and Technology's National Voluntary Laboratory Accreditation Program (NVLAP), and the State of Arizona and California Department of Health Services Environmental Laboratory Accreditation Program (ELAP) for the analysis of asbestos in bulk building material samples.

All samples were analyzed using Polarized Light Microscopy (PLM) techniques in accordance with methodology approved by the EPA. According to the EPA, ACM is defined as material containing more than one percent asbestos. According to Cal-OSHA, ACBM is identified as 0.1 percent asbestos. The lower limit of reliable detection for asbestos using the PLM method is approximately 1% by volume. However, the PLM technique can identify Cal-OSHA ACBMs. Although PLM methodology cannot quantify the exact percentage of asbestos detected less than 1 percent, if a sample had *any* quantity of asbestos, the laboratory, using PLM techniques, would be identified these materials as "Trace" amounts of asbestos (< 1 percent). Only materials containing no fibers at all are identified as "None Detected".

Since Cal-OSHA defines ACMs as those materials having an asbestos content greater than one-tenth of one percent (>0.1 percent), TEM or Point Count may be used to ascertain if the amount of asbestos is less than 1 percent but greater than 0.1 percent. This procedure could be conducted on "Trace" samples detected during the preparation of the Pre-Demolition Asbestos Survey. Any confirmed ACM materials must be removed and disposed of in accordance with applicable regulations (further discussed in Section 5.0).

4.0 DISCUSSIONS

4.1 BACKGROUND

Asbestos is a common term for a group of naturally occurring mineral fibers. Due to its durability and insulating quality, it was used in a wide variety of building products including structural fireproofing, pipe and duct insulation, plasters, roofing, floor tile, and vinyl floor sheeting. Adverse health effects have been associated with the inhalation of airborne asbestos fibers by asbestos industry workers. The asbestos fibers that are tightly bound in building materials do not represent an exposure hazard unless disturbed in such a way that releases airborne fibers (i.e., cutting, drilling, or sanding). By June of 1978, the U.S. EPA had effectively banned the use of asbestos in spray application products such as structural fireproofing and acoustic ceilings, pipe-lagging, joint compounds, and spackles. Asbestos is still used in the manufacture of non-friable products such as roofing materials.

4.2 CURRENT REGULATIONS

The following is a summary of current state and federal regulations which contain requirements related to the performance of building surveys for asbestos and lead-based paint. These summaries are not intended to be all inclusive and do not contain every aspect of the regulations discussed. Regulations pertaining to the removal and disposal of ACMs are not included.

4.2.1 EPA National Emission Standard for Hazardous Air Pollutants (NESHAPs), 40 CFR Part 61

Under the NESHAPs regulation, no visible emissions are allowed during building demolition or renovation activities which involve regulated asbestos-containing materials (RACMs). For this reason, all buildings must be surveyed for ACMs prior to demolition or renovation. The EPA and/or the local Air Quality Management District (AQMD) which implements EPA actions must be notified prior to any building demolition even if no ACMs are present. RACM is defined as any material with an asbestos content of greater than one percent and is friable or; Category I non-friable ACM that has or will become friable; or Category II non-friable ACM that may become or will become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation.

According to NESHAP, ACM is material containing more than one percent asbestos as determined using the methods specified in Appendix A, Subpart E, 40 CFR Part 763, Section 1, PLM. The NESHAP classifies ACM as friable or non-friable. Friable ACM is ACM that contains more than one percent asbestos and when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

Non-friable ACM also contains more than one percent asbestos and is further classified as either Category I ACM or Category II ACM. The materials are distinguished by their potential to release fibers when damaged. Category II ACMs are much more likely to release fibers when damaged. Category I ACM includes asbestos-containing gaskets; packings, resilient floor coverings and mastics, and asphalt roofing products. Asphalt roofing products are those products which contain asbestos and include built-up roofing, asphalt-containing single ply membrane systems, asphalt shingles, asphalt-containing underlayment felts, asphalt-containing roof coatings and mastics, and asphalt-containing base flashings. Category II ACM includes all

other non-friable ACM; for example: asbestos cement shingles, asbestos cement tiles, and transite boards or panels.

4.2.2 County of San Diego Air Pollution Control District (APCD) Rule 361.145 – Standard For Demolition and Renovations

In accordance with the EPA's NESHAPs regulation and the SDAPCD), (Federal and local regulations) all facilities planned for renovation or demolition must be surveyed for regulated ACMs (RACMs) prior to the planned renovation or demolition. Subsequent removal of identified ACMs is also required. Removal involves, to the greatest extent practical, the complete removal, disposal, and replacement, if necessary, of the asbestos-containing building material (ACBM). Removal usually also requires encapsulation of the remaining structure to lock down residual fibers which may exist. Removal of ACM is required prior to renovation and/or demolition activities. Additional rules apply for the demolition/renovation activities and the contractor should review and follow all rules applicable.

The EPA and AQMD require removal of all ACMs prior to demolition or renovation. ACMs include friable ACMs, Class I ACMs which have or will become friable or that has been subjected to sanding, drilling, grinding, cutting, or abrading; and Class II ACMs that may become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation. However, if the Class II non-friable ACMs are not subjected to sanding, drilling, grinding, cutting, or abrading, they may be left in place during the demolition activities and disposed of in any landfill which will accept this type of non-hazardous waste

4.2.3 Asbestos Hazard Emergency Response Act (AHERA), 40 CFR Part 763, Subpart E

AHERA requires performance of asbestos surveys and the development of Asbestos Management Plans for all of the nation's primary and secondary schools. The procedures mandated under AHERA are considered the industry standard and are applied to all surveys performed by SECOR.

4.2.4 OSHA Occupational Safety and Health Administration 29 CFR 1910.001

Per OSHA standards 1926.1101, ACMs are defined as any materials with an asbestos content greater than one-tenth of one percent (>0.1%) and are further classified as Class I, Class II Class III or Class IV ACM. The materials are distinguished by their potential to release fibers when damaged. OSHA prescribes specific engineering controls and work practices for each Class of ACM.

- **Class I** This Class refers to ACMs identified as Thermal System Insulation (TSI) or surfacing (sprayed-on or troweled-on) materials.
- **Class II** This Class refers to ACMs identified that are not Thermal System Insulation (TSI) or surfacing materials.
- **Class III** This Class refers to repair and maintenance operations of all identified ACMs.
- **Class IV** This Class refers to incidental contact with identified ACMs such as custodial staff.

4.2.5 California Health and Safety Code 25915 (former Connelly Bill)

The California Health and Safety Code 25915 (former Connelly Bill) requires all building owners in the State of California to provide written notification to employees, tenants, and contractors of the presence and location of asbestos-containing construction materials (ACCMs) within their buildings. Some exclusions to the notification rule for restricted access areas are allowed. All documentation related to asbestos surveys (and air monitoring) must be made available to employees, tenants, or contractors for review.

The California Health and Safety Code also require that a seller with any knowledge of ACMs on a property disclose such information or knowledge to other parties involved in a real estate transaction.

5.0 ASBESTOS ASSESSMENT RESULTS

5.1 ASBESTOS SURVEY

This section presents the results of the asbestos survey and sampling. Estimated quantities of the ACMs are also provided. If renovation or demolition activities are considerations, an asbestos abatement contractor should confirm these quantities during a pre-bid job walk prior to bidding abatement. These estimates should not be used for bidding purposes. Results of the survey with sample numbers are presented in the following Table. A Subject property map, analytical laboratory reports and chain-of-custody records are included in the Appendix section of this report.

5.2 BULK SAMPLING RESULTS

SECOR conducted an inspection of the accessible portions of the interior and exterior of the building, including the roof, to determine whether suspect asbestos-containing materials (ACMs) were present. As part of the asbestos survey, representative bulk material samples were collected of suspect ACM containing materials (following AHERA guidelines). Non-suspect building materials that were not collected and analyzed include corrugated metal paneled walls and ceilings, concrete foundation, and wood, glass and metal materials.

SECOR submitted collected building material samples to Environmental Management Consultant (EMC) Analytical Laboratories of Phoenix, Arizona. EMC is accredited under the National Institute of Standards and Technology's National Voluntary Laboratory Accreditation Program (NVLAP), and the States of Arizona and California Department of Health Services Environmental Laboratory Accreditation Program (ELAP) for the analysis of asbestos in bulk building material samples.

All samples were analyzed using Polarized Light Microscopy (PLM) techniques in accordance with methodology approved by the EPA. According to the EPA, ACM is defined as material containing more than one percent asbestos. According to Cal-OSHA, ACBM is identified as 0.1 percent asbestos. The lower limit of reliable detection for asbestos using the PLM method is approximately 1% by volume. However, the PLM technique can identify Cal-OSHA ACBMs. Although PLM methodology cannot quantify the exact percentage of asbestos detected less than 1 percent, if a sample had *any* quantity of asbestos, the laboratory, using PLM techniques, would be identified these materials as "Trace" amounts of asbestos (< 1 percent). Only materials containing no fibers at all are identified as "None Detected".

Asbestos sample locations and laboratory results are present in the following Table.

BUILDING MATERIALS SAMPLED

Sample ID #	Type of Material Location	Percent Asbestos ND = None Detected	Approximate Quantity (if ACM)	Condition of Material (if ACM)
W-1A	Window putty from exterior windows 1 and 2	10%	80 linear feet total	Poor to fair
W-1B	Window putty from exterior windows 1 and 2	8%	See above	See above
O-1A	Miscellaneous insulating material from exterior overheard doors	ND		

Sample ID #	Type of Material Location	Percent Asbestos ND = None Detected	Approximate Quantity (if ACM)	Condition of Material (if ACM)
O-1B	Miscellaneous insulating material from exterior overheard doors	ND		
F3-1A	12"X12" white with grey streaks vinyl floor tile and mastic from Office 3	Floor tile -10% Mastic-12%	Total 300 square feet	Fair
F3-1B	12"X12" white with grey streaks vinyl floor tile and mastic from Office 3	Floor tile-10% Mastic-12%	See above (F3-1A)	See above (F3-1A)
F2-1A	9"X9" light brown with grey streaks vinyl floor tile and mastic from Office 4	Floor tile-15% Mastic-10%	1620 Square feet	Fair
F2-1B	9"X9" light brown with grey streaks vinyl floor tile and mastic from Office 4	Floor tile-15% Mastic-10%	See above (F2-1A)	See above (F2-1A)
WB-1A	Wall board sampled from Office 2	ND		
WB-1B	Wall board sampled from Office 3	ND		
F2-2A	9"x9" white with tan streaks vinyl floor tile and mastic from office 2	Floor tile-10% Mastic-2%	150 Square feet	Fair
F2-2B	9"x9" white with tan streaks vinyl floor tile and mastic from office 2	Floor tile-10% Mastic-2%	See Above (F2-2A)	See Above (F2-2A)
I-1A	Insulating material on the water heater	35%	200 linear feet	Fair
I-1B	Insulating material on the water heater	35%	See Above (I-1A)	See Above (I-1A)
I-1C	Insulating material on the water heater	35%	See Above (I-1A)	See Above (I-1A)
WB-2A	Cement/plaster like material on bathroom walls and ceiling.	ND		
WB-2B	Cement/plaster like material on the bathroom walls and ceiling.	ND		
WB-2C	Cement/plaster like material on the bathroom walls and ceiling.	ND		
O-2A	Debris found in the exterior storage yard.	ND		

5.3 ASBESTOS RECOMENDATIONS

According to analytical results, all vinyl floor tile and mastic contain asbestos, the window putty on the windows contains asbestos, and the insulation on the water heater located above the bathroom contains asbestos. The insulation on the hot water heater is considered Class I ACM materials. The remaining materials are considered Class II ACM materials. All ACMs would require removal prior to any renovation or demolition activities which would disturb them, in accordance with the NESHAPs and SDAPCD regulations.

Typically, *engineering controls for Class I and Class II ACM work/demolition include:*

- Vacuum cleaners equipped with HEPA filters to collect all debris and dust containing ACM and PACM.

- Wet methods, or wetting agents, to control employee exposures during asbestos handling, mixing, removal, cutting, application, and cleanup, except where contractors demonstrate that the use of wet methods is infeasible due to for example, the creation of electrical hazards, or equipment malfunction.

- Prompt clean up and disposal of wastes and debris contaminated with asbestos in leak-tight containers except in roofing operations.

- All Class I and Class II work shall be supervised by a competent person.

- For all indoor jobs where the contractor has not produced a negative exposure assessment, or where changed conditions indicate there may be exposure above the Permissible Exposure Limit (PEL), or where the contractor does not remove the ACM in a substantially intact state, the contractor shall use one of the following methods to ensure that airborne asbestos does not migrate from the regulated are:

- Critical barriers shall be placed over all openings to regulate area; or
- The contractor shall use another barrier or isolation method, which prevents the migration of airborne asbestos from the regulated area, as verified by perimeter area monitoring or clearance monitoring.
- Impermeable drop cloths shall be placed on surfaces beneath all removal activity.

Asbestos work shall also be performed by complying with the work practices and controls designated for each type of asbestos work to be performed as set out in the asbestos standard. Where more than one control method may be used for a type of asbestos work, the contractor may choose one or a combination of designated control methods.

5.4 NON-ASBESTOS CONTAINING MATERIALS

Suspect ACM materials sampled during this survey that, based upon laboratory results, do not contain asbestos include the following:

- Wall board on the walls and ceilings of Offices 1, 2, 3 and 4.
- Cement/plaster like material on the bathroom walls and ceiling.
- The debris found in the yard.

- In addition to the above tested materials, building materials observed at the subject property that are not considered "suspect" ACMS (and therefore not tested) include: Wood beams
- Wooden walls
- Concrete floors
- Any materials constructed of glass, plastic or wood
- Corrugated metal exterior walls and rood

Note: laboratory results for non-ACM materials are included in Appendix C

6.0 CLOSURE

The conclusions and recommendations contained in this report/assessment are based upon professional opinions with regard to the subject matter. These opinions have been arrived at in accordance with currently accepted engineering standards and practices applicable to this location and are subject to the following inherent limitations:

- The data and findings presented in this report are valid as of the dates when the investigations were performed. The passage of time, manifestation of latent conditions or occurrence of future events may require further exploration at the subject property, analysis of the data, and reevaluation of the findings, observations, and conclusions expressed in the report.

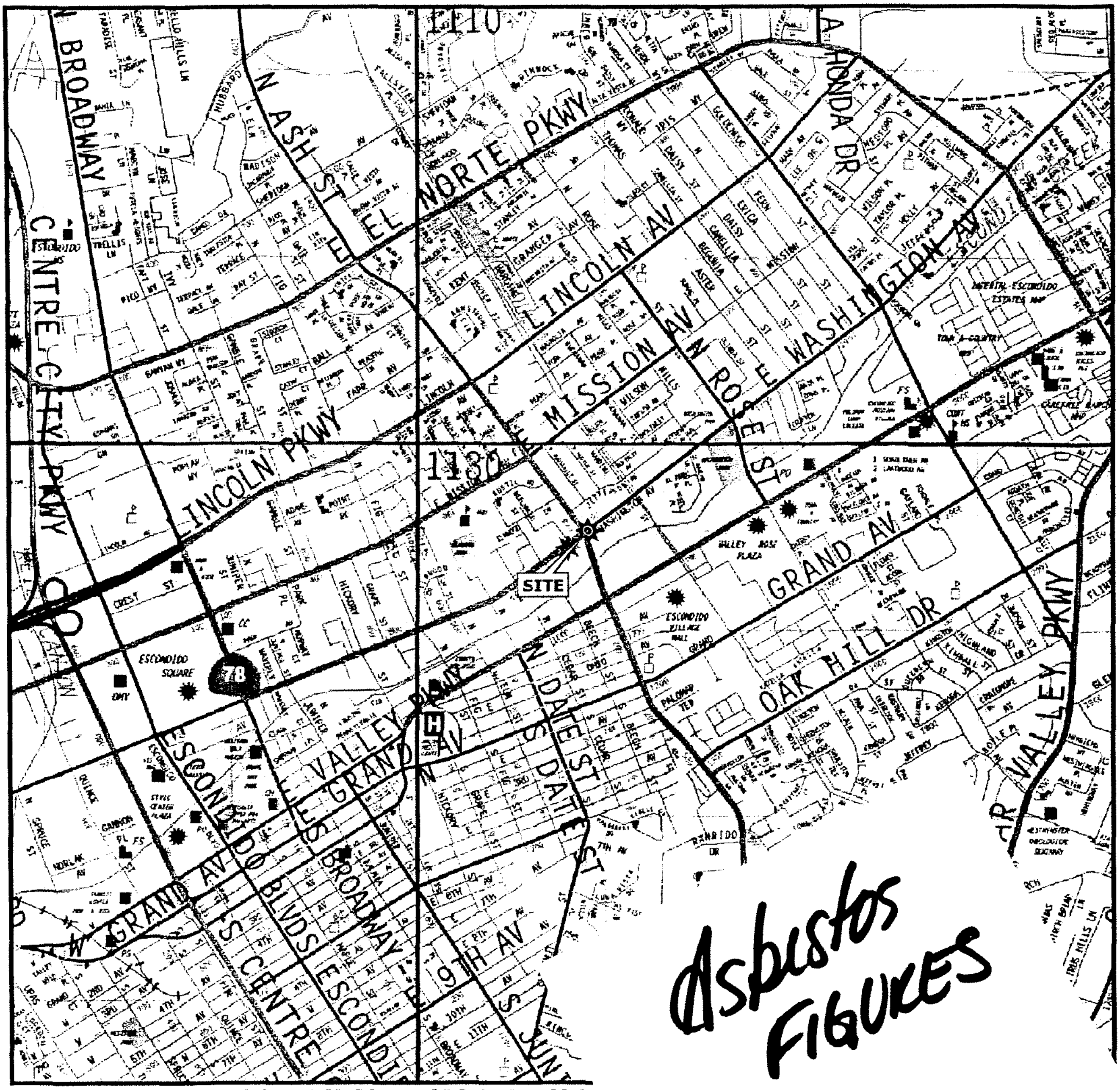
- The data reported and the findings, observations, and conclusions expressed in the report are limited by the Scope of Work.

- Unless otherwise stated in the report, because of the limitations stated above, the findings observations, and conclusions expressed by SECOR in this report are not, and should not be, considered an opinion concerning the compliance of any past or present owner or operator of the subject property with any federal, state or local law or regulation.

- SECOR's Report presents professional opinions and findings of a scientific and technical nature. While attempts were made to relate the data and findings to applicable environmental laws and regulations, the report shall not be construed to offer legal opinion as to the requirements of, nor compliance with, environmental laws, rules, regulations or policies of federal, state or local governmental agencies. Any use of the report constitutes acceptance of the limits of SECOR's liability. Issues raised by the report should be reviewed by appropriate legal counsel.

- This report is based, in part, on unverified information supplied to SECOR by third-party sources. While efforts have been made to substantiate this third-party information, SECOR cannot guarantee its completeness or accuracy.

FIGURES

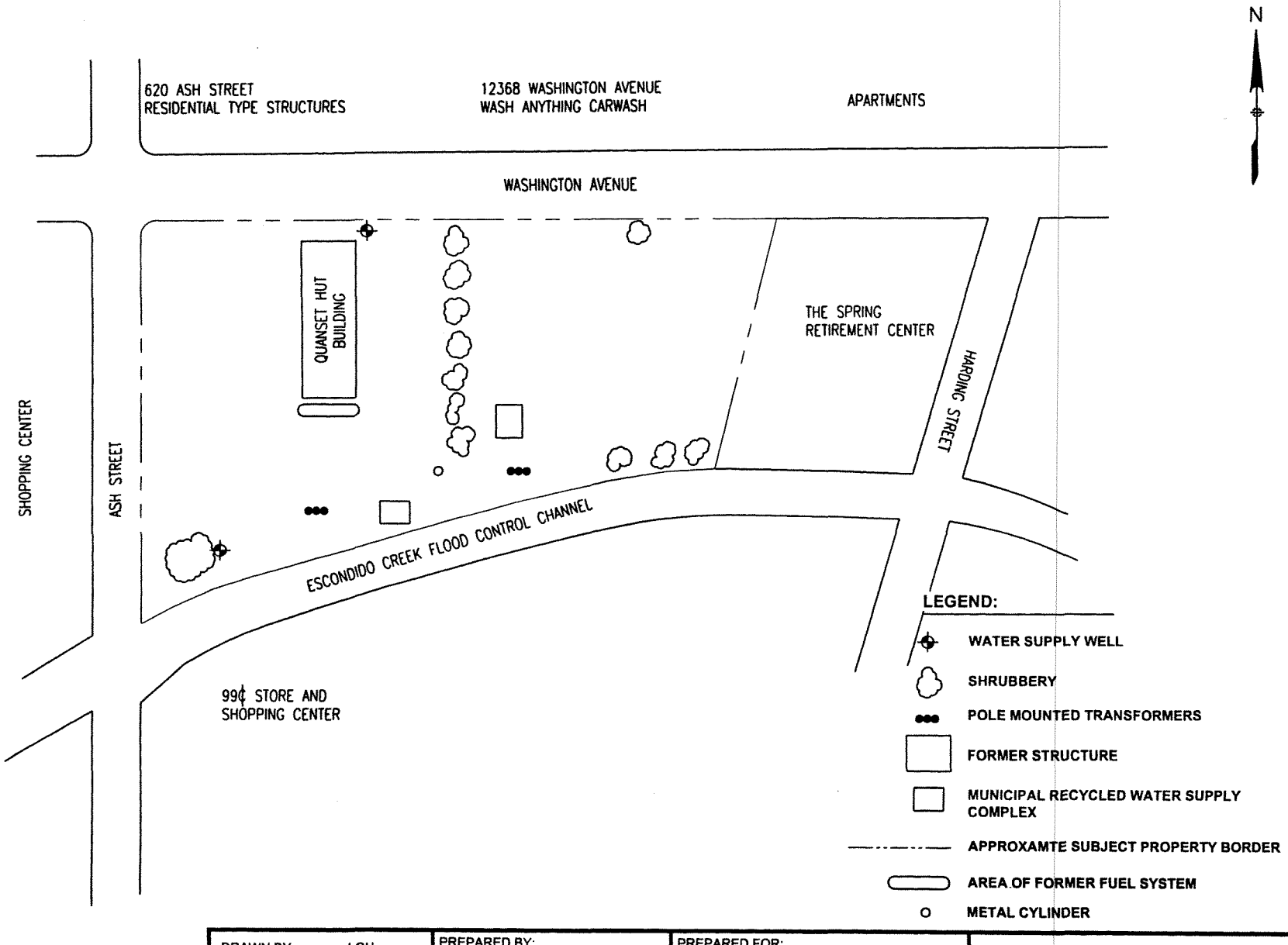


REFERENCE: 2003 THOMAS GUIDE CD-ROM, PAGE & GRID 1130 A1.

Asbestos FIGURES

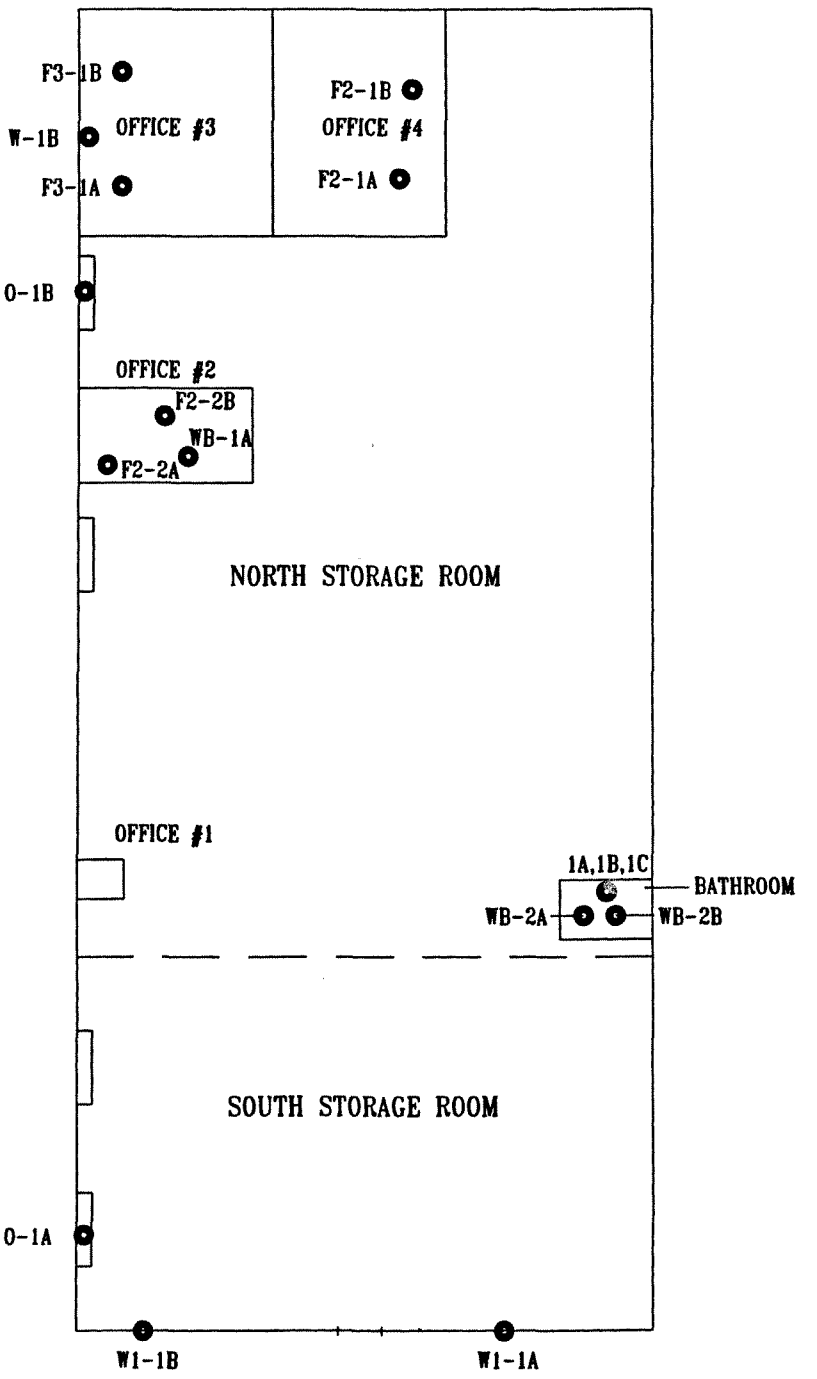
320 2640
OXIMATE SCALE IN FEET

DRAWN BY: JEB CHECKED: APPROVED: DATE: 7/30/03 JOB No.: 08OT.COEGM.00 CAD FILE: COEGMSLOC	PREPARED BY: SECOR 2655 Camino del Rio North, Suite 302 San Diego, California	PREPARED FOR: CITY OF ESCONDIDO GREEN MUTUAL BUILDING 1201 EAST WASHINGTON AVENUE ESCONDIDO, CA	FIGURE 1 **SITE LOCATION MAP**



DRAWN BY: LGH CHECKED: APPROVED: DATE: 8/5/03 JOB No.: 08OT.COEGM.00 CAD FILE: COEGMBUILDLO-03	PREPARED BY: SECOR 2655 Camino del Rio N e 302 San Diego, Cali	PREPARED FOR: **CITY OF ESCONDIDO** **GREEN MUTUAL BUILDING** **1201 EAST WASHINGTON AVENUE** ESCONDIDO, CALIFORNIA	FIGURE: 2 **SITE MAP AND SAMPLE LOCATIONS**

K:\ALLPROJECTS2003DWGS\GENERAL 2003\GREEN MUTUAL BUILDING - CITY OF ESCONDIDO\COEGMBUILDLO-03.DWG MODIFIED BY LHUNTER ON AUG 05, 2003 - 15:12



LEGEND:

- SAMPLE LOCATION
- OVERHEAD DOORS

0 10 20

APPROXIMATE SCALE IN FEET

DRAWN BY:	LGH
CHECKED:	
APPROVED:	
DATE:	8/5/03
JOB No.:	08OT.COEGM.00.0002
CAD FILE:	COEGMBUILDLO-03

PREPARED BY:

SECOR

2655 Camino del Rio North, Suite 302
San Diego, California

PREPARED FOR:

CITY OF ESCONDIDO
GREEN MUTAL BUILDING
1201 EAST WASHINGTON AVENUE
ESCONDIDO, CALIFORNIA 92025

FIGURE: 3

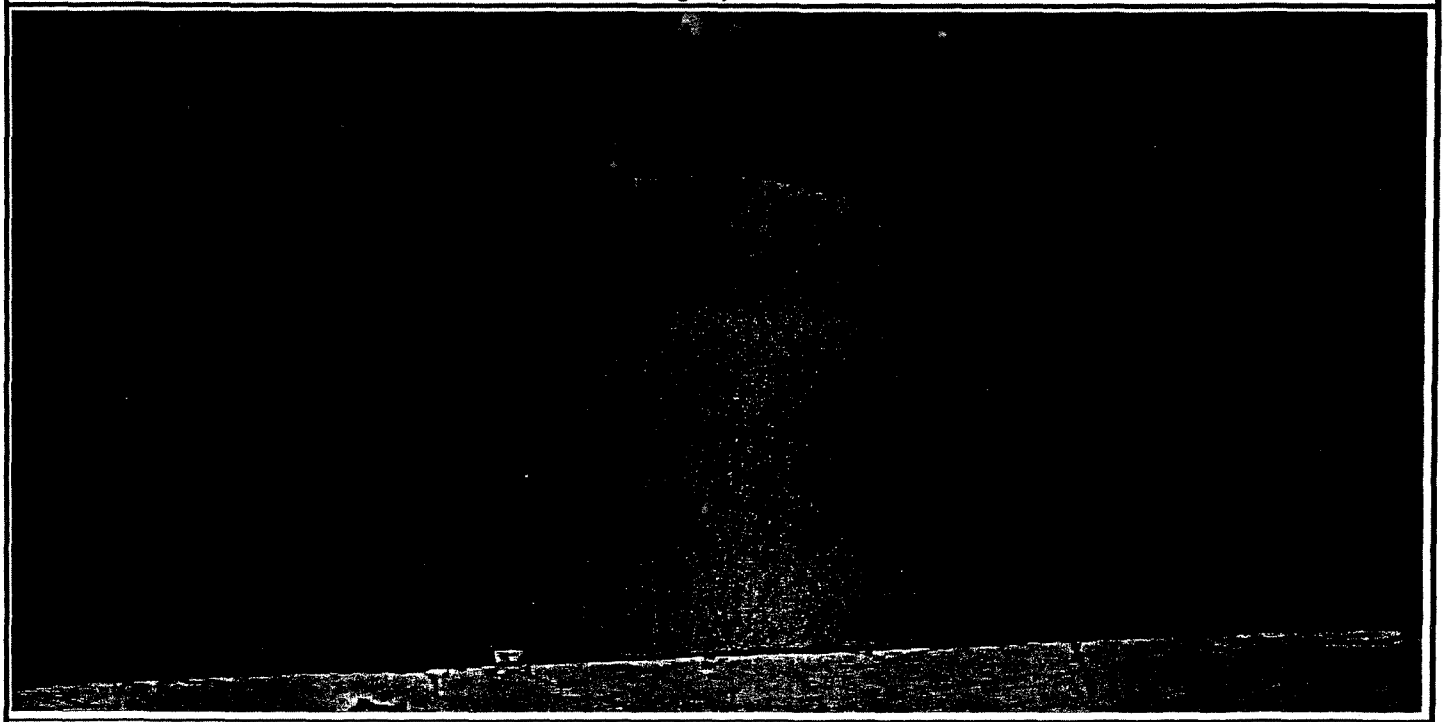
BUILDING DETAILS AND SAMPLE LOCATIONS

APPENDIX A

SUBJECT PROPERTY PHOTOGRAPHS

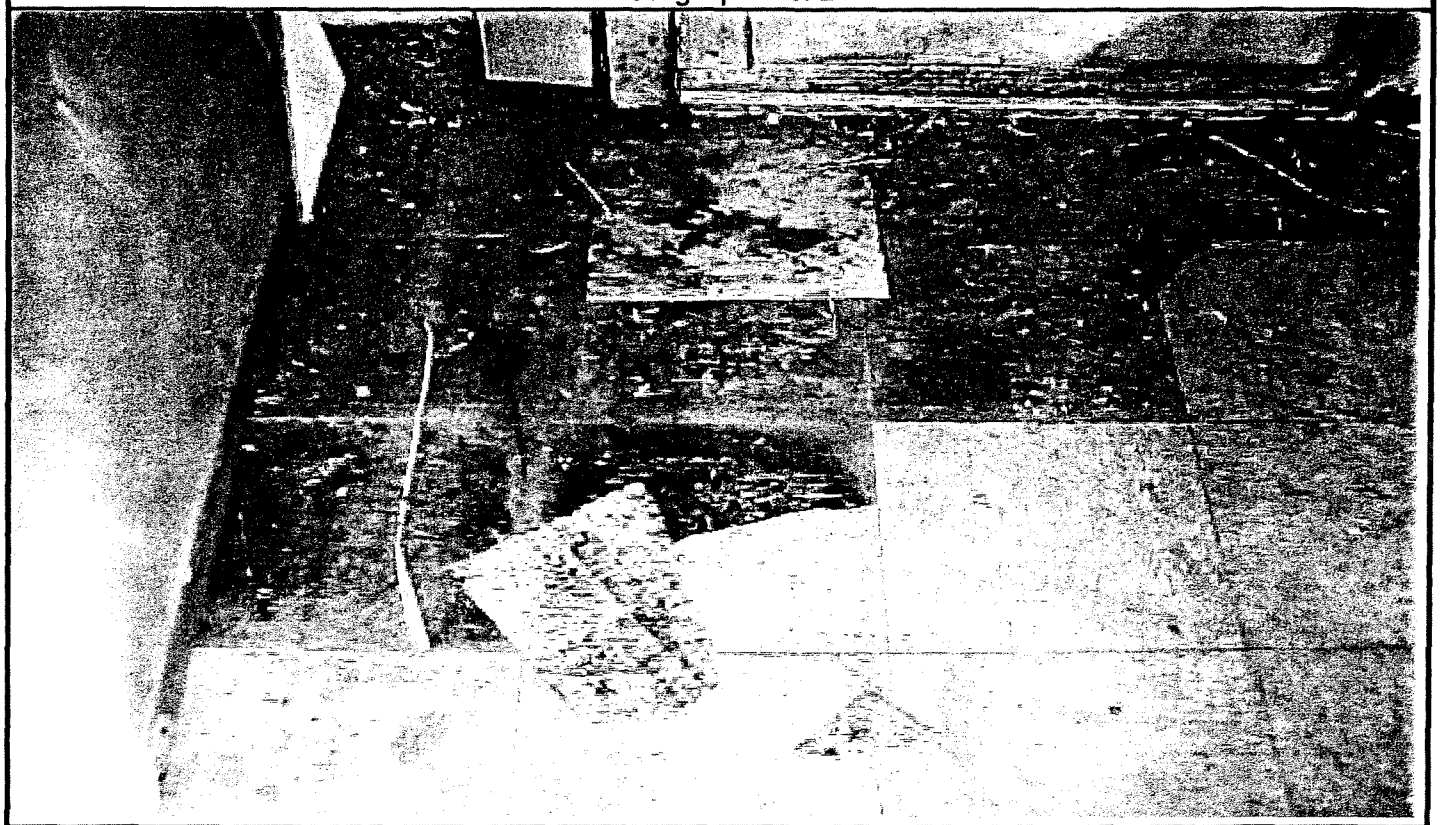
SECOR INTERNATIONAL INCORPORATED PHOTOGRAPHIC RECORD			
Client:	City of Escondido	**Job Number:**	08OT.COEGM.00.0002
Site Name:	Green Mutual Building	**Location:**	1201 E. Washington Ave., Escondido
Photographer:	Carolyn B. Partin	**Date:**	July 2, 2003

Photograph No. 1



View of insulated water heater located atop the bathrooms

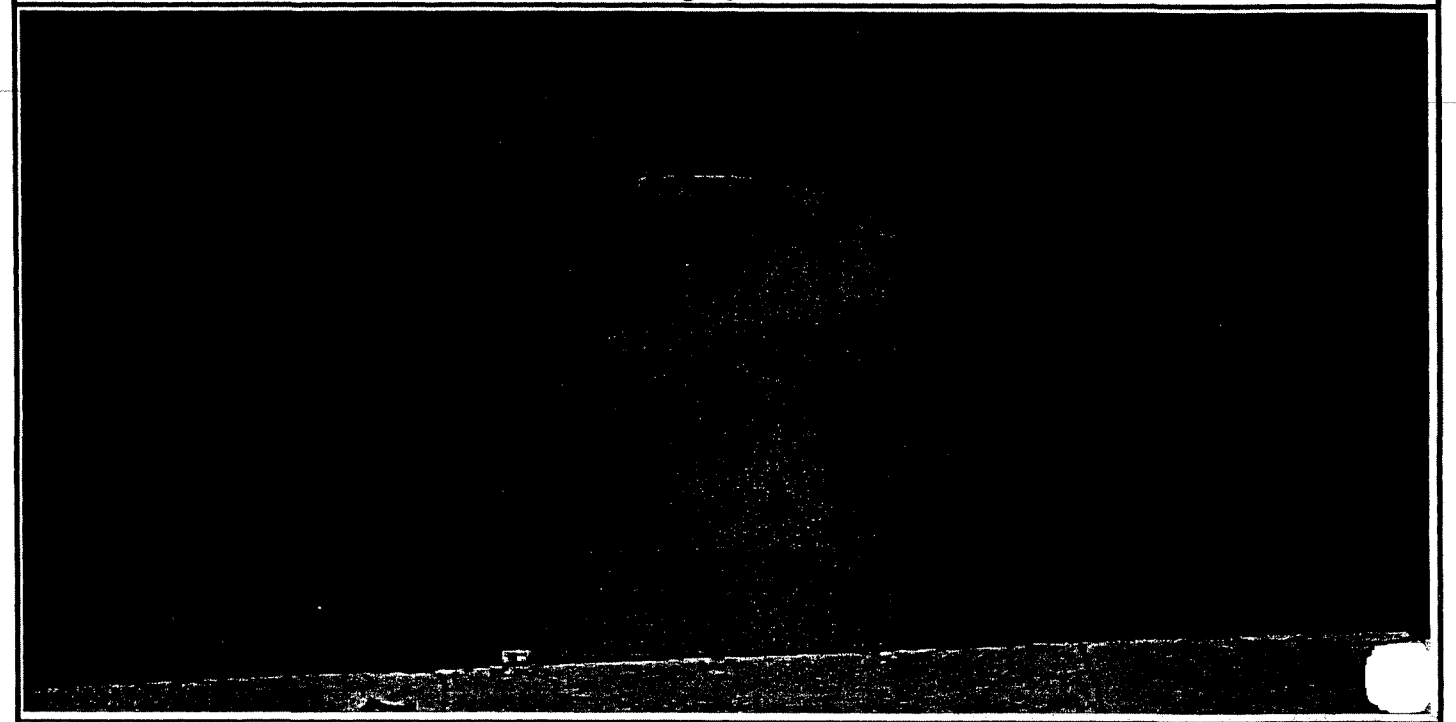
Photograph No. 2



View of 12"x12" floor tile located in Office 3.

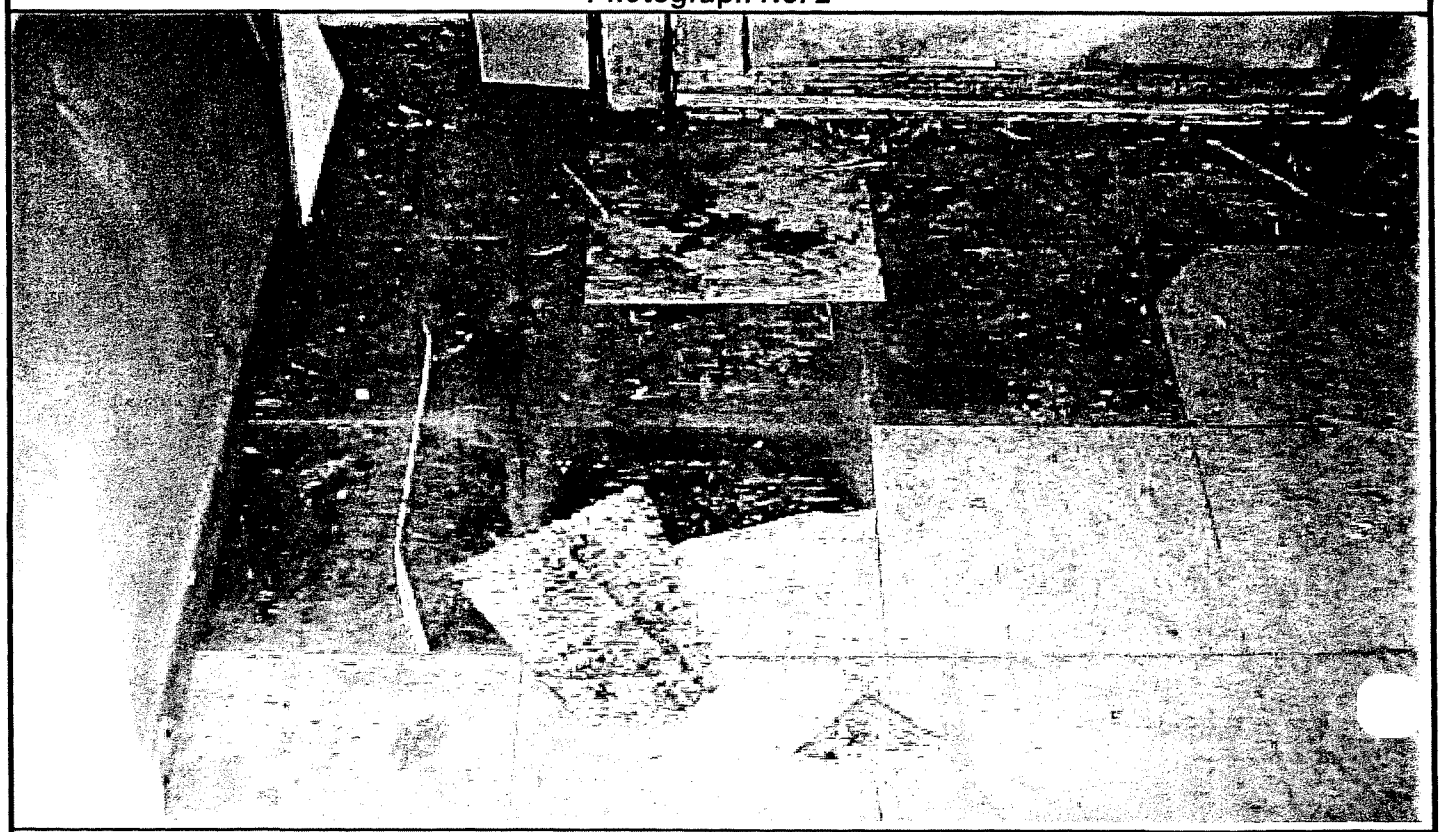
SECOR INTERNATIONAL INCORPORATED PHOTOGRAPHIC RECORD			
Client:	City of Escondido	**Job Number:**	08OT.COEGM.00.0002
Site Name:	Green Mutual Building	**Location:**	1201 E. Washington Ave., Escondido
Photographer:	Carolyn B. Partin	**Date:**	July 2, 2003

Photograph No. 1



View of insulated water heater located atop the bathrooms

Photograph No. 2



View of 12"x12" floor tile located in Office 3.

APPENDIX B

CHAIN OF CUSTODY

EMC Laboratories
9830 S. 51ST St., Ste B-109
Phoenix, AZ 85044
(800) 362-3373 Fax (480) 893-1726

TAT: 15188 3-5 days
Rec'd: JUL 22 PM

OMPANY NAME: SECOR
2855 CAMINO DEL RIO NORTH #302
SAN DIEGO, CA 92108

BILL TO: (If Different Location)
SECOR
7/25/03

ONTACT: Carolyn B Parkin
hone/Fax: (619) 296-6195 / (619) 296-6199
mail: cparkin@secor.com
ow Accepting: VISA – MASTERCARD

Price Quoted: $______ / Sample $______ / Layers

OMPLETE ITEMS 1-4: (Failure to complete any items may cause a delay in processing or analyzing your samples)

. TURNAROUND TIME: [4hr rush] [8hr rush] [1-Day] [2-Day] [3-Day] [5-Day] [6-10 Day]

***Prior confirmation of turnaround time is required
***Additional charges for rush analysis (please call marketing department for pricing details)
***Laboratory analysis may be subject to delay if credit terms are not met

. TYPE OF ANALYSIS: [Bulk-PLM] [Air-PCM] [Lead] [Point Count] [Fungi: AOC, W-C, Bulk, Swab, Tape]

. DISPOSAL INSTRUCTIONS: [Dispose of samples at EMC] / [Return samples to me at my expense]

(If you do not indicate preference, EMC will dispose of samples 60 days from analysis.)

4. Project Name: [redacted] 080T.COEGM.00.[redacted].002

P.O. Number: [redacted] Project Number: 080T.COEGM.00.002

EMC SAMPLE #	CLIENT SAMPLE #	DATE & TIME SAMPLED	LOCATION/MATERIAL TYPE	Samples Accepted Yes / No	AIR SAMPLE INFO / COMMENTS On	Off	Flow Rate
1	W-1A	7/16	Window putty (south side) window 1	Y N			
2	W-1B	7/16	Window putty (window #255	Y N			
3	D-1A	7/16	Misc. Material D#1	Y N			
4	D-1B	7/16	D#2	Y N			
5	F3-1A	7/16	[redacted] 12x12 floor tile & black mastic	Y N			
6	F3-1B	7/16		Y N			
7	F2-1A	"	9x9 floor tile & black mastic	Y N			
8	F2-1B	"	" "	Y N			
9	WB-1A		fibrous wallboard	Y N			
10	WB-1B		" "	Y N			
11	F2-2A			Y N			
12	F2-2B			Y N			
13	I-1A		Insulation on hot water heater	Y N			
14	1B		" "	Y N			
15	1C		" "	Y N			

SPECIAL INSTRUCTIONS:

Sample Collector: (Print) Carolyn B. Parkin (Signature) Carolyn B Parkin

Relinquished by: CBP Date/Time: 7/21/03 Received by: Diana Federico Date/Time: 7/22/03

Relinquished by: Diana Federico Date/Time: 7/22/03 1345 Received by: [signature] Date/Time: 7/22/03

Relinquished by: ______ Date/Time ______ Received by: ______ Date/Time ______

* In the event of any dispute between the above parties for these services or otherwise, parties agree that jurisdiction and venue will be Phoenix, Arizona and prevailing party will be entitled to attorney's fees and court costs.

EMC Laboratories
9830 S. 51ST St., Ste B-109
Phoenix, AZ 85044
(800) 362-3373 Fax (480) 893-1726

TAT: 13188
Rec'd:

PANY NAME: SECOR
2655 CAMINO DEL RIO NORTH #302
SAN DIEGO, CA 92108
:ONTACT: Carolyn B. Parton
'hone/Fax: (619) 296-6195 / (619) 296-6199
mail: cparton@secor.com

BILL TO: Same (If Different Location)

low Accepting: VISA – MASTERCARD
Price Quoted: $_____ / Sample $_____ / Layers

:OMPLETE ITEMS 1-4: (Failure to complete any items may cause a delay in processing or analyzing your samples)

. TURNAROUND TIME: [4hr rush] [8hr rush] [1-Day] [2-Day] [3-Day] [5-Day] [6-10 Day]
***Prior confirmation of turnaround time is required
***Additional charges for rush analysis (please call marketing department for pricing details)
***Laboratory analysis may be subject to delay if credit terms are not met

. TYPE OF ANALYSIS: [Bulk-PLM] [Air-PCM] [Lead] [Point Count] [Fungi: AOC, W-C, Bulk, Swab, Tape]

. DISPOSAL INSTRUCTIONS: [Dispose of samples at EMC] [Return samples to me at my expense]
(If you do not indicate preference, EMC will dispose of samples 60 days from analysis.)

4. Project Name: @ CBOT. COEGM.00.002
P.O. Number: _____ Project Number: CBOT. COEGM.00.002

EMC SAMPLE #	CLIENT SAMPLE #	DATE & TIME SAMPLED	LOCATION/MATERIAL TYPE	Samples Accepted Yes / No	AIR SAMPLE INFO / COMMENTS ON	OFF	FLOW RATE
16	WB-2A ✓		Cement WB in bth	Y N			
17	2B ✓			Y N			
18	2C ✓			Y N			
19	D-2A [redacted]		debris	Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			

ECIAL INSTRUCTIONS:

nple Collector: (Print) Carolyn B. Parton (Signature) [signature]

linquished by: CBP Date/Time: 7/21/03 Received by: Diana Federico Date/Time: 7/22/03

nquished by: Diana Federico Date/Time: 7/22/03 Received by: _____ Date/Time: 7/23/03

inquished by: _____ Date/Time _____ Received by: _____ Date/Time: _____

n the event of any dispute between the above parties for these services or otherwise, parties agree that jurisdiction and venue will be in nix, Arizona and prevailing party will be entitled to attorney's fees and court costs.

APPENDIX C

LABORATORY DATA

EMC LABS, INC.

9830 S. 51st Street, Suite B109, Phoenix, AZ 85044
Phone: 800-362-3373 or 480-940-5294 - Fax: (480) 893-1726

Laboratory Report
0013188

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	SECOR	Job# / P.O. #:	
Address:	2655 CAMINO DEL RIO NORTH SUITE 302 SAN DIEGO CA 92108	Date Received:	07/22/2003
		Date Analyzed:	07/29/2003
Collected:	07/16/2003	Date Reported:	07/29/2003
Project Name/	08OT.COEGM.00.002	EPA Method:	EPA 600/M4-82-020
Address:		Submitted By:	CAROLYN B. PARTIN
		Collected By:	Customer

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)		Non-Asbestos Constituents	
0013188-006 F3-1B		LAYER# 1 12x12 Floor Tile, White	Yes	Chrysotile	10%	Carbonates Quartz Binder/Filler	90%
		LAYER# 2 Mastic, Black	Yes	Chrysotile	12%	Carbonates Gypsum Binder/Filler	88%
0013188-007 F2-1A		LAYER# 1 9x9 Floor Tile, Green	Yes	Chrysotile	15%	Carbonates Quartz Binder/Filler	85%
		LAYER# 2 Mastic, Black	Yes	Chrysotile	10%	Carbonates Gypsum Binder/Filler	90%
0013188-008 F2-1B		LAYER# 1 9x9 Floor Tile, Green	Yes	Chrysotile	15%	Carbonates Quartz Binder/Filler	85%
		LAYER# 2 Mastic, Black	Yes	Chrysotile	10%	Carbonates Gypsum Binder/Filler	90%
0013188-009 WB-1A		Fibrous Wallboard, Brown/Green	No			Cellulose Fiber Gypsum Binder/Filler	90% 10%
0013188-010 WB-1B		Fibrous Wallboard, Brown/Green	No			Cellulose Fiber Gypsum Binder/Filler	90% 10%

EMC LABS, INC.

9830 S. 51st Street, Suite B109, Phoenix, AZ 85044
Phone: 800-362-3373 or 480-940-5294 - Fax: (480) 893-1726

Laboratory Report
0013188

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	SECOR	Job# / P.O. #:	
Address:	2655 CAMINO DEL RIO NORTH SUITE 302	Date Received:	07/22/2003
	SAN DIEGO CA 92108	Date Analyzed:	07/29/2003
Collected:	07/16/2003	Date Reported:	07/29/2003
Project Name/	08OT.COEGM.00.002	EPA Method:	EPA 600/M4-82-020
Address:		Submitted By:	CAROLYN B. PARTIN
		Collected By:	Customer

Lab ID / Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)		Non-Asbestos Constituents	
0013188-011 F2-2A		LAYER# 1 Floor Tile, Tan	Yes	Chrysotile	10%	Non-Fibrous Tremolite	2%
						Carbonates	
						Quartz	
						Binder/Filler	88%
		LAYER# 2 Mastic, Black Note: Difficult to separate adjacent layers	Yes	Chrysotile	2%	Cellulose Fiber	5%
						Gypsum	
						Quartz	
						Binder/Filler	93%
0013188-012 F2-2B		LAYER# 1 Floor Tile, Tan	Yes	Chrysotile	10%	Non-Fibrous Tremolite	2%
						Carbonates	
						Quartz	
						Binder/Filler	88%
		LAYER# 2 Mastic, Black Note: Difficult to separate adjacent layers	Yes	Chrysotile	2%	Cellulose Fiber	5%
						Gypsum	
						Quartz	
						Binder/Filler	93%
0013188-013 I-1A	ON HOT WATER HEATER	Insulation, Lt. Gray	Yes	Chrysotile	35%	Cellulose Fiber	60%
						Gypsum	
						Quartz	
						Binder/Filler	5%
0013188-014 I-1B	ON HOT WATER HEATER	Insulation, Lt. Gray	Yes	Chrysotile	35%	Cellulose Fiber	60%
						Gypsum	
						Quartz	
						Binder/Filler	5%
0013188-015 I-1C	ON HOT WATER HEATER	Insulation, Lt. Gray	Yes	Chrysotile	35%	Cellulose Fiber	50%
						Gypsum	
						Quartz	
						Binder/Filler	15%

EMC LABS, INC.

9830 S. 51st Street, Suite B109, Phoenix, AZ 85044
Phone: 800-362-3373 or 480-940-5294 - Fax: (480) 893-1726

Laboratory Report
0013188

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	SECOR	Job# / P.O. #:	
Address:	2655 CAMINO DEL RIO NORTH SUITE 302 SAN DIEGO CA 92108	Date Received:	07/22/2003
		Date Analyzed:	07/29/2003
Collected:	07/16/2003	Date Reported:	07/29/2003
Project Name/	08OT.COEGM.00.002	EPA Method:	EPA 600/M4-82-020
Address:		Submitted By:	CAROLYN B. PARTIN
		Collected By:	Customer

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0013188-016 WB-2A	IN BATH	Cementitious WB, Gray/White	No		*Cellulose Fiber* Gypsum Quartz *Carbonates* Binder/Filler	<1% 99%
0013188-017 WB-2B	IN BATH	Cementitious WB, Gray/White	No		Cellulose Fiber Gypsum Quartz Carbonates Binder/Filler	<1% 99%
0013188-018 WB-2C	IN BATH	Cementitious WB, Gray/White	No		Cellulose Fiber Gypsum Quartz Carbonates Binder/Filler	<1% 99%
0013188-019 O-2A	DEBRIS	Debris, Brown	No		Cellulose Fiber Carbonates Gypsum Quartz Mica Binder/Filler	1% 99%

Analyst - Kurt Kettler

Signatory - Lab Director - Kurt Kettler

EMC LABS, INC.

9830 S. 51st Street, Suite B109, Phoenix, AZ 85044
Phone: 800-362-3373 or 480-940-5294 - Fax: (480) 893-1726

Laboratory Report
0013188

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	SECOR	Job# / P.O. #:	
Address:	2655 CAMINO DEL RIO NORTH SUITE 302	Date Received:	07/22/2003
	SAN DIEGO CA 92108	Date Analyzed:	07/29/2003
Collected:	07/16/2003	Date Reported:	07/29/2003
Project Name/	08OT.COEGM.00.002	EPA Method:	EPA 600/M4-82-020
Address:		Submitted By:	CAROLYN B. PARTIN
		Collected By:	Customer

Lab ID / Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type	(%)	Non-Asbestos Constituents	
0013188-001 W-1A	WINDOW 1 SOUTH SIDE	Window Putty, Beige	Yes	Chrysotile	10%	Carbonates Quartz Binder/Filler	90%
0013188-002 W-1B	WINDOW 2 SOUTH SIDE	Window Putty, Beige	Yes	Chrysotile	8%	Carbonates Quartz Binder/Filler	92%
0013188-003 O-1A	D #1	Misc. Material, Black, Brown	No			Cellulose Fiber Gypsum Quartz Mica Binder/Filler	2% 98%
0013188-004 O-1B	D #2	Misc. Material, Black, Brown	No			Cellulose Fiber Gypsum Quartz Mica Binder/Filler	2% 98%
0013188-005 F3-1A		LAYER# 1 12x12 Floor Tile, White	Yes	Chrysotile	10%	Carbonates Quartz Binder/Filler	 90%
		LAYER# 2 Mastic, Black	Yes	Chrysotile	12%	Carbonates Gypsum Binder/Filler	 88%

2434 SOUTHPORT WAY, SUITE L
NATIONAL CITY, CA 91950
PHONE (619)-474-8548
FAX (619)-474-6128
E-MAIL lpitt@hmpittlabs.com

H. M. Pitt Labs, Inc.

August 7, 2003

Carolyn Partin, Staff Scientist
Secor International Inc.
2655 Camino Del Rio North
San Diego, CA 92108

Re: Lead Paint at
1201 East Washington
Escondido CA

Dear Carolyn:

Thank you for allowing us to assist you on this project.

On July 16 2003, I, Shaun Cornish a D.H.S. Certified Building Inspector using D.H.S. and E.P.A. standard protocol for testing of lead based paint performed a lead paint survey at the facility at, 1201 East Washington in Escondido CA.

The lab results showed significant levels of lead in the paint (see attached).

It is my understanding that the building owner would like to recycle the metal portion of this building. With the high levels of lead on this structure, I have outlined below precautions that must be taken.

1) Demolition crew should have at a minimum of 8 Hr. Lead Hazard Awareness class.
2) All delaminating paint (loose and flaking) should be stabilized before demolition.
3) Area and personal air monitoring is necessary during paint film stabilization and demolition.
4) Demolition following D.H.S. regulations (although this is not a D.H.S. regulated job) this includes but not limited to worker personal protective equipment (i.e. respirators with HEPA filters, disposable coveralls, gloves, boots and hard hats).
5) All work must be done in a lead hazard zone of at least 50 feet or as far as practical. This hazard zone will be delineated by lead hazard tape and signs. The signs will be located at regular intervals, and at such a distance that personnel may read the signs and take necessary precautions required prior to entering the area. Signs shall conform to 29 CFR 1926.62 (m). The sign shall be at least 20" by 14" displaying the following legend in the lower panel.

WARNING
LEAD WORK AREA
POISON
NO EATING, DRINKING, OR SMOKING

With the high levels of lead in the paint on this structure this is the mandatory minimum. H.M. Pitt Labs Inc. strongly suggests that the building owner and/or there representative retain a lead based paint professional to draw up an abatement plan that the abatement and demolition contractor can use as a guideline to protect the workers, surrounding residential area and the environment from any unnecessary exposure to lead dust and debris generated from this project.

H. M. Pitt Labs can provide a written lead abatement plan three hundred and fifty dollar ($350.00). This plan will include all necessary rules, regulations and procedures to accomplish this project in a safe and responsible manner.

H. M. Pitt Labs can also provide air monitoring for lead at three hundred dollar ($300.00) a day. This includes daily call out between the hours of 7:00 am and 5:00pm and up to 10 air samples per day.

Please feel free to call me at 619-474-8548 if you have any questions.

Sincerely,

Shaun Cornish,
D.H.S. Inspector-assessor,
D.H.S Project monitor
E.P.A. Risk assessor

H.M. Pitt Labs, Inc.

2434 Southport Way · Suite L · National City, CA 91950

Tel: 619-474-8548 · Fax: 619-474-6128

Lab Number: 47732-29077

Company:

SECOR
2655 Camino Del Rio North, Suite 302
San Diego, Ca 92108

Date Entered: 07/15/2003
Analyzed By: Cris Rocamora
Customer PO / Claim#:
Contract Number:

Job Site: 1201 East Washington, Escondido, Ca

Date Sampled	Who Sampled
07/16/2003	S. Cornish

Lab Notes: Start 1430 - Stop 1600
TTLC - Lead

GENERAL ANALYSIS

Analysis Number: **47732-1**
Customer Number: 01
Location: Paint Chips - Ceiling Office
Analysis: TTLC - Bulk Lead
Results: **770 mg/kg**
Comments: Reporting Limit = 35 mg/kg

Analysis Number: **47732-2**
Customer Number: 02
Location: Blue Paint Chips - Office Paint West Side
Analysis: TTLC - Bulk Lead
Results: **430 mg/kg**
Comments: Reporting Limit = 35 mg/kg

Analysis Number: **47732-3**
Customer Number: 03
Location: Brown Paint Chips - Trim North Rollup Door
Analysis: TTLC - Bulk Lead
Results: **20,400 mg/kg**
Comments: Reporting Limit = 1600 mg/kg; Elevated Reporting Limit due to High Sample Dilution

APPROVED BY: Leland S. Pitt Dated: 07/21/2003

LELAND S. PITT, CIH

H.M. Pitt Labs, Inc.

2434 Southport Way · Suite L · National City, CA 91950 Tel: 619-474-8548 · Fax: 619-474-6128

Lab Number: 47732-29077

Company:

SECOR
2655 Camino Del Rio North, Suite 302
San Diego, Ca 92108

Date Entered: 07/15/2003
Analyzed By: Cris Rocamora
Customer PO / Claim#:
Contract Number:

Job Site: 1201 East Washington, Escondido, Ca

Date Sampled	Who Sampled
07/16/2003	S. Cornish

Lab Notes: Start 1430 - Stop 1600
TTLC - Lead

GENERAL ANALYSIS

Analysis Number: **47732-4**
Customer Number: 04
Location: Tin (Corrugated) Skin West Side of Bldg 'B'
Analysis: TTLC - Bulk Lead
Results: **12,200 mg/kg**
Comments: Reporting Limit = 700 mg/kg; Elevated Reporting Limit due to High Sample Dilution

Analysis Number: **47732-5**
Customer Number: 05
Location: Paint Chips - Window Trim South Side
Analysis: TTLC - Bulk Lead
Results: **26,400 mg/kg**
Comments: Reporting Limit = 1600 mg/kg; Elevated Reporting Limit due to High Sample Dilution

Analysis Number: **47732-6**
Customer Number: 06
Location: Paint Chips - Bracing Inside Wall East Side
Analysis: TTLC - Bulk Lead
Results: **500 mg/kg**
Comments: Reporting Limit = 35 mg/kg

APPROVED BY: Leland S. Pitt Dated: 07/21/2003

LELAND S. PITT, CIH

H.M. Pitt Labs, Inc.

2434 Southport Way · Suite L · National City, CA 91950

Tel: 619-474-8548 · Fax: 619-474-6128

Lab Number: 47732-29077

Company:

SECOR
2655 Camino Del Rio North, Suite 302
San Diego, Ca 92108

Date Entered: 07/15/2003
Analyzed By: Cris Rocamora
Customer PO / Claim#:
Contract Number:

Job Site: 1201 East Washington, Escondido, Ca

Date Sampled	Who Sampled
07/16/2003	S. Cornish

Lab Notes: Start 1430 - Stop 1600
TTLC - Lead

GENERAL ANALYSIS

Analysis Number: **47732-7**
Customer Number: 07
Location: Paint Chips - Bay #4 Outside Rollup Door
Analysis: TTLC - Bulk Lead
Results: **8,900 mg/kg**
Comments: Reporting Limit = 700 mg/kg; Elevated Reporting Limit due to High Sample Dilution

Analysis Number: **47732-8**
Customer Number: 08
Location: Paint Chips - Bay #4 Inside Rollup Door
Analysis: TTLC - Bulk Lead
Results: **3,000 mg/kg**
Comments: Reporting Limit = 160 mg/kg; Elevated Reporting Limit due to High Sample Dilution

Analysis Number: **47732-9**
Customer Number: 09
Location: Soil Sample - West Side Composite
Analysis: TTLC - Bulk Lead
Results: **440 mg/kg**
Comments: Reporting Limit = 20 mg/kg

APPROVED BY: Leland S. Pitt Dated: 07/21/2003

LELAND S. PITT, CIH

APPENDIX H

Geotechnical Investigation

KLEINFELDER
An employee owned company

May 7, 2003
Project No. 13406

Mr. Lawrence Thornburgh
Nasland Engineering
4740 Ruffner Street
San Diego, California 92111

Subject: **Geotechnical Investigation**

Project: **Wal-Mart Supercenter No. 93105**
Plaza Shopping Center
Escondido, California

Dear Mr. Thornburgh:

Kleinfelder is pleased to submit our geotechnical investigation report for the proposed Wal-Mart Supercenter to be located in the southwest corner of the existing Escondido Village shopping center in Escondido, California. The enclosed report presents our final design-level geotechnical investigation of the proposed project. Studies already completed for this project include our Phase-1 preliminary study, dated April 8, 2002, and two preliminary soil design memoranda completed in January 2003.

Provided the recommendations presented in this report are followed, our professional opinion is that the proposed Wal-Mart Supercenter can be developed using conventional shallow foundations and slab-on-grade construction. Vertical cut slopes, expected to be on the order of 20 to 60 feet along the south and west sides of the site, may be supported by a combination of soil nail retaining walls and sloped excavations above the wall. Recommendations provided herein are contingent on the provisions outlined in the Additional Services and Limitations sections of this report. The client should become familiar with these provisions in order to assess further involvement by Kleinfelder and other potential impacts to the proposed project.

We appreciate the opportunity of providing our services for this project. If you have questions regarding this report, or if we may be of further assistance, please contact the undersigned at (858) 320-2000, or John Mancini, Kleinfelder's Senior Client Service Manager for Wal-Mart at (801) 466-6769.

Respectfully submitted,

KLEINFELDER, INC.

Kevin R. Wells, EIT
Staff Engineer

Rick E. Larson, GE 2027
Senior Engineer

REGISTERED PROFESSIONAL ENGINEER
RICK E. LARSON
No. 2027
Exp. 12/31/05
GEOTECHNICAL
STATE OF CALIFORNIA

KRW:REL:sp

TABLE OF CONTENTS

Section **Page**

1.0 INTRODUCTION

1.1 GENERAL

This report presents the results of our design-level (Phase-2) geotechnical investigation for the proposed Wal-Mart retail store located in the East Valley Parkway commercial corridor of Escondido, California. The site location is shown on the Vicinity Map, Figure 1.

This report includes our recommendations related to the geotechnical aspects of project design and construction. Conclusions and recommendations presented in this report are based on the subsurface conditions encountered at our explorations and the provisions and requirements outlined in the Additional Services and Limitations sections of this report. Recommendations presented herein should not be extrapolated to other areas or used for other projects without our prior review.

1.2 SITE DESCRIPTION

The site is located in the southwest portion of the existing Escondido Village shopping center and adjacently located private and undeveloped property located along the north side of Grand Avenue in Escondido, California. The portion of the site located in the existing shopping center is currently improved with asphalt concrete paving; two single story commercial buildings, measuring approximately 7,200 and 65,000 square feet, respectively; and various underground utilities, including two 54-inch water pipelines near the east property line. The remainder of the site is located within the existing rock mass located in the southwest corner of the site. The property layout is shown on the site plan, Figure 2.

The existing rock mass is characterized by the partially developed, elevated terrace and bordering 1H:1V cut-slopes. The surface of the rock mass above the slopes is positively inclined toward the southwest. Maximum vertical relief from the top of the rock mass to the existing lower parking lot is approximately 65 feet. A private residential property is located at the top of the rock mass in the most southwest corner of the site.

The west side of the site is bordered by existing 2-story residential structures (town-homes) that are located approximately 7 feet outside the west property line; some of the back patios of these structures may be located on the property line. The south side of the site is bordered by Grand Avenue. The north and east sides of the site are bordered by existing commercial and retail buildings.

1.3 PROPOSED CONSTRUCTION

The project includes the construction of a new 144,000 square foot retail superstore that will be partially cut into the existing rock mass located in the southwestern corner of the site. To make room for the building, the rock mass will be removed from a summit elevation of 740 down to a finished pad elevation of approximately 675, generally matching the grades of the existing parking lot. The resulting 65-foot deep (maximum) excavation will be supported by a continuous 20- to 50-foot high retaining wall that will be constructed along Grand Avenue (approximately 35 feet north of the existing curb) and continue just inside the western property line (see Figure 2). The balance of excavation above the wall will be sloped back from the top of the wall to the existing grades along Grand Avenue and western property line. The proposed slopes above the wall will have a maximum height of approximately 20 feet. The project will also include asphalt and concrete paving, associated landscaping and hardscape areas, underground utilities, and a loading dock.

The building will be supported with conventional shallow spread footings and concrete slab-on-grade. Maximum anticipated wall and column loads (dead-plus-live) will be approximately of 4 kips per linear foot (klf) and 150 kips, respectively. Concrete slabs-on-grade will be designed to support a maximum live load of 125 pounds per square foot (psf) with maximum concentrated loads of 5 kips.

Cross sections showing existing improvements, slope configurations, and the proposed retaining wall location are presented in Figures 3 through 5. In the event these structure locations are inconsistent with the final design criteria, Kleinfelder should be advised so that we may update this report as applicable.

1.4 PURPOSE AND SCOPE OF SERVICES

The purpose of our site investigation was to explore and evaluate the subsurface conditions for the site in two phases. The first phase of our investigation was completed in April 2002 and consisted of a limited boring program, geologic review of the existing cut-slopes, and preliminary evaluation of the rippability and hardness of the site rock. This second phase investigation consisted of additional field exploration and preparation of this design-level report. This design-level report includes the following:

- Discussion of regional geology and site seismicity, including the proximity of the site to known active or potentially active faults;

- Discussion of our additional field exploration that included five seismic line traverses, twenty additional borings to depths between 5 and 20 feet, six air percussion soundings to depths between 70 and 83 feet, and two rock cores to depths of approximately 70 feet;
- Discussion of subsurface conditions, including groundwater conditions, encountered during our field investigation;
- Discussion of our geotechnical laboratory testing;
- Discussion of rock excavation conditions and rippability characteristics of the site rock; including blasting, line blasting, splitting, and chemical cracking methods of rock excavation;
- Recommendations related to the geotechnical aspects of:
  - Site preparation and engineered fill;
  - Temporary excavations, shoring and trench backfill;
  - Foundation bearing values and construction, including anticipated total and differential settlements;
  - Uniform Building Code (UBC) seismic site coefficients for use in structural analysis;
  - Concrete slabs supported-on-grade;
  - Soil nail retaining wall design parameters;
  - Global stability of rock slope excavations;
  - Earth retaining wall parameters, including loading dock walls; and
  - Standard-duty and heavy-duty asphalt-concrete and portland cement concrete pavements.
- A discussion of the corrosion potential of the near-surface soils encountered during our field exploration; and
- Appendices summarizing the field investigation and laboratory testing programs.

1.5 DESIGN CRITERIA

Foundation design recommendations and estimated settlements contained in this report are based on the building structural load data presented in Wal-Mart's Geotechnical Investigation Specifications and Report Requirements. These requirements indicate that the estimated typical interior column load is 65 kips, with occasional severe live loads of 150 kips. The estimated

typical exterior column load is 50 kips. Concrete masonry gravity loads are expected to range between 1.5 to 2 kips per lineal foot for non-load bearing walls, and 4 kips per lineal foot for load bearing walls. The uniform slab live load is 125 psf, with maximum concentrated loads of 5 kips.

Wal-Mart has specific design criteria for maximum allowable total and differential settlement. Maximum allowable total movement is 1 inch. Differential settlements are to be limited to L/900 for masonry walls and L/500 for tilt-up concrete panel walls, where L is the distance between wall control joints in feet. The typical control joint spacing is 40 feet. Differential settlements for interior slabs are to be limited L/500, where L is the horizontal distance in feet between any two columns. Values of L/900 and L/500 for L equal to 40 feet are approximately 0.5 inches and 1.0 inch, respectively.

1.6 REPORT SUMMARIES

In accordance with the Wal-Mart Geotechnical Investigation Specifications and Report Requirements, we have provided the Geotechnical Investigation Fact Sheet, Foundation Design Criteria, and Foundation Subsurface Preparation in Appendix E. These summaries are provided for quick reference use only and should not be used without reviewing this entire geotechnical report during design or construction.

1.7 PREVIOUS GEOTECHNICAL STUDIES

To assist in preparing this design-level geotechnical report, we have reviewed and included the applicable findings of our first phase April 2002 study and our previous geotechnical investigation of the northeasterly adjacent commercial property. This report of the adjacent commercial property was prepared in August 2000, and is entitled, "Final Geotechnical Engineering Report, Proposed Home Depot Store, East Valley Parkway, Escondido, California."

2.0 INVESTIGATIVE METHODS

2.1 FIELD EXPLORATION

Our second phase field exploration consisted of air percussion soundings, hollow stem auger borings, rock core borings, and seismic traverse data. These field exploration methods are described in the following paragraphs.

2.1.1 Air-Track Percussion Borings

Six air-track percussion borings were completed in the terrace atop the rock mass located in the southwest corner of the site. The locations of the air-track borings are presented in Figure 2. The soundings were completed to depths of approximately 70 to 83 feet below the existing ground surface using an Ingersol Rand LM-600 crawler-type rig equipped with a 4.5-inch diameter carbide bit. A Kleinfelder staff engineer maintained a log of time vs. penetration (in seconds per foot) during the sounding excavation for later comparison to typical penetration rates and rock rippability estimates. Penetration soundings for each of the six track drills are presented in Appendix A. The second phase hollow stem auger borings are presented as borings 5 through 24.

2.1.2 Additional Hollow Stem Auger Borings

Twenty (20) additional hollow stem auger borings were drilled to supplement the four hollow stem auger borings from our preliminary study. The additional borings were drilled to depths of approximately 5 to 20 feet below the existing ground surface in the lower parking lot at the locations indicated on Figure 2. The borings were advanced using a CME 75-drill rig with 8-inch diameter hollow-stem augers. Logs of the materials encountered in the borings were maintained by a staff engineer from our firm, and drive samples were obtained for visual observation, classification, and laboratory testing. The subsurface materials were collected by driving an approximate 2.5-inch inside-diameter sampler into the soils using a 140-pound, down-hole hammer falling approximately 30 inches. The number of blows required to advance the sampler the last 12 inches of an 18-inch drive into undisturbed subsurface materials is noted on the boring logs. Logs of our borings are presented in Appendix A. Hollow stem auger borings completed during our preliminary study are included in Appendix A as Borings 1 through 4.

2.1.3 Rock Core Borings

Two rock cores were completed toward the summit of the rock mass near the proposed wall alignment at the locations shown in Figure 2. The rock cores were completed to depths of approximately 70 feet below the existing ground surface. Prior to retrieving rock core samples, hollow stem augers were advanced through highly weathered rock zones to depths of 50 feet in Core 1 and 30 feet in Core 2. Below these depths, rock cores were advanced in 5-foot runs using an HQ, triple tube, wireline rock core sampling system. Rock cores were retrieved and logged by our staff engineer for rock classification, strength, weathering, jointing, and rock quality designation (RQD). The rock samples retrieved from each core run were sealed and transported to our San Diego office for laboratory testing. Logs of our rock cores are presented in Appendix A as borings C1 and C2.

2.1.4 Seismic Refraction Traverses

Five seismic refraction traverses were completed in the upper terrace and bottom of the lower cut-slopes located in the southwest corner of the site at the locations presented in Figure 2. The seismic traverses were completed by Subsurface Surveys of San Diego using a Bison 9024, 24-channel seismograph system. Seismic refraction is a geophysical method of subsurface evaluation that records the time required for seismic waves to travel from an energy source (usually a hammer blow) to points arranged along a traverse line at the ground surface. A geophone is placed at each point along the traverse and records the arrival time of the seismic wave at that location. The field data is analyzed and arranged in an array of seismic wave velocities to indicate the approximate depths to underlying strata and general subsurface conditions. The interpretation of the seismic data is addressed in the report by Subsurface Surveys that is included in Appendix C.

2.2 LABORATORY TESTING

The geotechnical laboratory program included tests for in-place moisture content and dry unit weight; sieve analysis; R-value; maximum dry unit weight and optimum moisture content (modified proctor method); corrosivity; expansion potential; direct shear; and unconfined compressive strength. Descriptions of the geotechnical laboratory test procedures and test results are contained in Appendix B.

3.0 GEOLOGY

3.1 GEOLOGIC SETTING

The site is located within the Peninsular Range geomorphic province of California. This province is characterized by mountainous terrain on the east composed mostly of Mesozoic igneous and metamorphic rocks and relatively low-lying coastal terraces to the west underlain by late Cretaceous, Tertiary, and Quaternary age sedimentary rocks deposited within an ancient embayment feature. Most of the coastal region of the County of San Diego is underlain by these sedimentary rocks. The subject site is located east of the coastal sedimentary strip within the granitic foothill region area of the Peninsular Range.

The igneous rocks are composed of variety of intrusives that typically are of granodiorite to quartz diorite composition. These rocks intruded as plutons into host beds of marine sediments, volcanics, and volcaniclastics rocks. The heat and pressure of the intruding plutons altered (metamorphosed) the texture and composition of the host rock causing the formation of low to medium grade metamorphic rocks, resulting in the formation of an igneous/metamorphic basement complex.

The sedimentary rocks of the coastal strip were deposited at a later time on top of the igneous/metamorphic basement. The Cretaceous system of rocks consists primarily of marine sandstones, siltstones, and conglomerates which outcrop in regions well north of the site. The Tertiary system of rocks (primarily Eocene) are much thicker than the Cretaceous system and are thought to have been deposited within a marine embayment up to 15 miles wide which stretched from north San Diego County to Mexico. The Eocene and later age rocks dominate the majority of the surface outcropping rocks in San Diego County.

Sometime after the bulk of the sedimentary rocks were deposited the land surface was uplifted and the ground surface was dissected by a system of low-lying drainage features that were subsequently filled with alluvium.

3.2 FAULTING AND SEISMICITY

Southern California is dominated by a major tectonic structure known as the San Andreas fault. The San Andreas fault trends along a roughly northwest/southeast alignment and is located approximately 61 miles northeast of the site. This fault delineates the boundary between two global tectonic plates known as the North American Plate and the Pacific Plate. The Pacific Plate occupies the area west of the San Andreas fault, which includes the Escondido region.

The San Andreas fault is actually the largest fault structure contained within a system of numerous subsidiary faults bracketing a broad region, extending westward from the main fault branch in the Imperial Valley to well off-shore of the coast. Two of the closest active subsidiary faults east of Escondido include the Elsinore and San Jacinto faults. Three major active faults west of Escondido (off-shore) are the Rose Canyon fault, the Newport-Inglewood fault, and the Coronado Banks fault.

Historically, the west county region of San Diego County has been considered an area of relatively low seismic activity in comparison to other metropolitan areas of Southern California. This consideration was due to a lack of significant recorded seismic events in this region, including the Rose Canyon fault, which was long considered to be only a potentially active fault. However, trenching studies conducted in the 1980's within the Rose Canyon drainage east of La Jolla revealed splay fault features offsetting recent soil units showing that the Rose Canyon fault is actually active. Additional evidence of the active status of the Rose Canyon fault is its close alignment with the active Newport-Inglewood fault to the north and the San Miguel and Vallecitos faults to the south in Baja, California. Both the Newport-Inglewood and San Miguel faults recorded notable seismic events earlier this century. In 1933 for instance, the Newport-Inglewood fault was the source for the Long Beach Earthquake.

Table 1 is a tabulated form of the active faults within our 62-mile search radius. An active fault is defined by the California Geologic Survey as one which has exhibited "surface displacement within Holocene time". The table also lists several aspect of these faults including: minimum distance between the site and the fault; maximum credible and probable fault magnitudes; associated maximum credible and probable horizontal peak site accelerations (g); and modified mercalli site intensity (MM). The maximum credible and probable peak acceleration values are based on the attenuation relationship of Campbell and Bozorgnia[1]. A maximum probable event is considered to be the most probable seismic event on a fault within a 100 year period. A maximum credible event is considered the maximum magnitude capable for a fault given its specific size, configuration and tectonic framework.

Review of the table shows that the Julian segment of the Elsinore fault (15 miles east of the site) would impart the greatest seismic acceleration to the site. A maximum credible event of 7.1M could result in up to 0.211g at the site. A maximum probable event of 6.4M could result in up to 0.125g at the site.

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[2] *1994, Near-Source Attenuation of Peak Horizontal Acceleration from Worldwide Accelerograms Recorded from 1957 to 1993, Proceedings of Fifth U.S. National Conference On Earthquake Engineering, Vol. III, Earthquake Engineering Research Institute, pp. 283-292.*

TABLE 1
Active and Faults in the Vicinity of Project Site

Fault Name	Approximate Distance from the site (miles)	Maximum Credible Event		Maximum Probable Event	
		Maximum Credible Magnitude (Richter)	Peak Horizontal Ground Acceleration (g)	Maximum Credible Magnitude (Richter)	Peak Horizontal Ground Acceleration (g)
San Andreas	61	7.40	0.053	7.30	0.049
Julian (Elsinore)	15	7.10	0.211	6.40	0.125
Temecula (Elsinore)	17	6.80	0.150	6.30	0.101
Glen Ivy (Elsinore)	39	6.80	0.056	6.30	0.036
Whittier	60	6.80	0.032	5.90	0.014
Chino-Central Ave	56	6.70	0.031	5.50	0.012
Newport-Inglewood-Offshore	21	6.90	0.127	5.80	0.050
Palos Verde	52	7.10	0.050	6.20	0.023
Rose Canyon	17	6.90	0.163	5.70	0.060
Earthquake Valley	28	6.50	0.065	5.70	0.032
Coronado Banks	32	7.40	0.119	6.30	0.047
Newport-Inglewood (LA Basin)	60	6.90	0.035	5.60	0.011

It should be noted that the above values are based on theoretical equations, and although these equations are state-of-the-art, actual values of acceleration from a seismic event could vary for the site. This potential for variation is due to unknown factors such as directional seismic focusing effects from both subsurface and surface structures.

In addition to the faults listed, recent research indicates that "blind faults" (faults that apparently have not broken the surface and display little or no surface expression) may underlie the San Diego Embayment and adjacent areas. A fault of this type may have been responsible for the Whittier Narrows earthquake of 1987 and the Northridge earthquake of 1994.

3.3 LIQUEFACTION

The term liquefaction describes a phenomenon in which loose, saturated, granular soil deposits lose shear strength and mobilize as a result of increased pore water pressure induced by strong ground shaking during an earthquake. Structures founded on or above potentially liquefiable soil may experience settling (both total and differential) and loss of foundation support. The factors known to influence liquefaction potential include soil type, grain size, relative density, confining pressure, depth to groundwater, and the intensity and duration of ground shaking. Soils most susceptible to liquefaction are saturated, loose sandy soils, and some silts.

The building footprint and majority of the outlying parking lot is underlain by either very dense granitic rock or medium dense to dense residual soil, fill, slope wash, or alluvium. Therefore, the potential for liquefaction should not impact the design or construction of the project.

4.0 SITE CONDITIONS

The findings and results of our field investigation and laboratory testing are summarized in the following subsections.

Discussions of the test borings and laboratory testing programs are presented in Appendices A and B, respectively, of this report. Detailed descriptions of the subsurface conditions encountered during our test borings are presented in Appendix A. Information from the seismic traverses is presented in Appendix C.

4.1 SURFACE CONDITIONS

The portion of the site located within the existing shopping plaza is improved with asphalt concrete paving; two single-story commercial buildings measuring approximately 7,200 and 65,000 square feet, respectively; and various underground utilities, including two 54-inch water pipelines near the eastern property line. The existing parking lot is relatively flat with drainage to the northeast. The remainder of the site characterized by the existing 20- to 65-foot high rock mass located in the southwest corner of the site. The terrace atop the rock mass is grass covered and generally slopes downward from the southwest to the northeast. A private residential building and driveway are located toward the most southwest corner of the rock mass. Although we did not encounter a septic tank or septic line in our field exploration, a below-grade septic system may be located on the north side of the existing residence.

The pavements in the lower parking lot vary from 1 to 4 inches thick and are generally underlain by 6 to 12 inches of clayey to silty sand soils (base). The pavements throughout the existing parking lot are moderately to highly distressed.

4.2 SUBSURFACE CONDITIONS

4.2.1 General

Geologic conditions vary across the site from a southwest to northeast direction. Variably weathered rock covers the southwestern half of the site as identified by the existing rock mass and portions of the existing parking lot nearest the existing cut-slopes. Shallow fills and alluvial soils dominate the most northern and northeastern parts of the site. Between the weathered rock mass and the north and northeasterly fill/alluvial soils lies a transitional zone of shallow fills, residual soils (completely weathered rock), and sporadic slope wash soil deposits. This transitional zone follows the pre-graded interface between the original hillside and outlying

alluvial valley to the northeast (the original hillside was cut back to its current location to allow construction of the southwest part of the existing parking lot). This transitional zone crosses under the northeast corner of the building footprint.

4.2.2 Southwest Rock Mass

The subsurface conditions at the rock mass consists of thinly developed residual soils overlying variably weathered granodiorite rock. The residual soils consist of medium dense to dense clayey sands that are approximately 3 to 6 feet thick. The residual soils are underlain by various thicknesses of weak to moderately weak, and moderately strong to strong rock. Weak and moderately weak rock was encountered below the residual soils to depths that ranged between 40 and 70 feet below the top of the rock mass overlying the southeast retaining wall alignment. The generally more resistant, moderately strong to strong rock was encountered at depths below 40 feet from the top of the rock mass, generally below El. 700. The transition from weak to moderately strong rock is expected to vary considerably across the site and at the retaining wall alignment. Based on our field data, the depth of the more resistant rock tends to deepen toward the outer portion of the rock mass, thus paralleling the topography of the native hillside that generally descends to the northeast.

Corestones (less-weathered, exposed or buried boulders) between 3 and 5 feet in diameter were observed at the face of the existing cut-slopes. Also, a stockpile of large boulders was observed above the cut-slopes beyond the western property line. It is therefore probable that similar non-weathered hard rock zones or corestones may exist in the more weathered portions of the rock mass and beneath the building footprint (when excavated).

4.2.3 Building Pad Area

The southwest quadrant of the proposed building pad will be cut into the existing rock mass located in the southwest corner of the site. The remainder of the building will be supported by the existing parking lot subgrades surrounding the rock mass.

Once the rock mass is leveled to an approximate elevation of 675, the proposed building pad will generally be underlain by variably weathered granodiorite rock, except where a transitional wedge of undocumented fill and residual soil underlie the northeast corner of the building footprint. The rock at the building pad level will likely consist of weak to strong rock. The more resistant, moderately strong to strong rock is anticipated in the southwest portion of the building pad (near the core of the removed rock mass). The transitional wedge of soil in the northeast

corner consists of up to 5 feet of medium dense clayey sand fill underlain by approximately 7 feet of dense clayey sand residual soil. The residual soils are underlain by granodiorite bedrock.

4.2.4 Lower Parking Lot

The southwestern part of the parking lot near the existing cut-slopes is underlain by weathered granodiorite. About halfway toward the northeast corner of the site the subgrades transition to shallow fills and alluvium. The fills in the parking lot are 1 to 4 feet thick and consist of medium dense silty to clayey sands. Alluvium is located outward from the proposed building footprint and deepens toward the north and northeast parts of the site. The alluvium consists of medium dense silty and clayey sand deposits that overlie weathered bedrock.

4.3 ROCK CHARACTERIZATION

Characterization of rock masses is useful for rock-engineering purposes and is typically comprised of several rock properties such as rock type, degree of weathering, condition and spacing of discontinuities, and uniaxial compressive strength. Two commonly used rock classification system are the Rock Quality Designation (Deer 1964) and the Rock Mass Rating (Bieniawski 1989).

4.3.1 Rock Quality Designation

Rock Quality Designation (RQD) is defined as the ratio, in percent, of the total length of intact core pieces measuring 4 inches or longer to the length of the core run. RQD is indirectly associated with weathering, degree of fracturing, and strength. Deere (1964) proposed the following relationships between RQD and the engineering quality of the rock:

RQD (PERCENT)	ROCK QUALITY
< 25	Very Poor
25 < 50	Poor
50 < 75	Fair
75 < 90	Good
90 < 100	Excellent

Field measurements of RQD and laboratory tests of compressive strengths from our two rock cores are summarized below in Table 2. In general, the RQD measured in our rock core runs varied from very poor to fair for the total depths explored. Field measurements of RQD are also presented in Appendix A.

TABLE 2
Summary of RQD and Compressive Strength

Depth of Run (ft)	RQD (Compressive Strength, psi)	
	Rock Core 1	Rock Core 2
25-30	--	12
30-35	--	0
35-40	--	61
40-45	--	29
45-50	--	57 (2,100 psi)
50-55	42 (950 psi)	60
55-60	12 (500 psi)	58 (7,600 psi)
60-65	42	67
65-70	50 (1,050 psi)	73 (8,500 psi)

4.3.2 Rock Mass Rating

The Geomechanics classification, or Rock Mass Rating System (RMR), by Bieniawski (1989) is based on the sum of six rock mass properties and may be applied for design of rock slopes and rock foundations. The RMR rates the overall rock mass based on uniaxial compressive strength, RQD, groundwater conditions, and condition and spacing of discontinuities. Based on our assessment, the RMR is 43, which means the rock mass is composed of fair quality rock as a whole, and classifies as Class III rock. A summary table presenting the tabulated rock mass properties for computation of RMR is presented in Appendix D.

4.3.3 Compressive Strength

Strength of the weathered rock mass, estimated from field review of site conditions and uniaxial compressive strength tests, indicates that the rock is mostly weak to moderately weak, with increasing occurrence of moderately strong to strong rock in the deeper rock mass. Uniaxial compressive strengths for the rock mass range from 500 psi to about 8,500 psi. Compression strength test results are presented Table 2 of Section 4.3.1 and in the Logs of Borings in Appendix A.

4.3.4 Discontinuities

Condition of discontinuities (fractures, joints, etc.) is significant in the evaluation of excavation conditions, kinematic analysis and slope stability, and rock strength factors. In general, discontinuities at the site were closely spaced (2- to 8-inch), moderately weathered, and slightly rough throughout the explored depths of our rock cores. Most discontinuities were somewhat dipping between 20 and 40 degrees, with frequent steep joints inclined at 45 degree or more.

Based on out strike and dip field measurements from our April 2002 preliminary study, a population of discontinuities was found to dip out of the existing north-facing slope at +/- 60 degrees.

4.4 GROUNDWATER

Groundwater was encountered in several of our test borings in the lower parking lot. The groundwater level ranged in our deeper borings (those greater than 10 feet deep) from 12 to 18 feet below the present pavement surface in the lower parking lot. It should be noted that groundwater elevations within the project area will likely vary depending on seasonal rainfall, irrigation practices, land use, and/or runoff conditions that may not have been present or apparent at the time of our field investigation. Therefore, water level observations at the time of our field investigation may vary from those encountered during the construction phase of the project.

4.5 EXPANSIVE SOILS

Low expansive soils were encountered within thinly developed residual soils located within the upper terrace area and the clayey surficial soils located in the northeasterly part of the lower parking lot. A representative sample of these selected soils were tested for expansion index (EI) in accordance with Section 18-2 of the Uniform Building Code (UBC) and found to have a low expansion potential (EI = 30). Soils derived from the on-site weathered granitics were less expansive and were found to have a very low expansion potential (EI = 10).

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on our previous experience with other geotechnical studies in the project vicinity and the findings of our field investigation and laboratory testing for this project, the following paragraphs present our conclusions and recommendations for your consideration.

5.1 GENERAL

From our local experience and the data collected during this investigation, it is our professional opinion the site is suitable from a geotechnical standpoint for the proposed construction, provided the recommendations contained herein are incorporated into the project design. The proposed Wal-Mart building may be designed using a conventional shallow strip and isolated spread footing foundation system. Due to the transition from moderately strong rock to residual soil across the building pad, we recommend that the rock/soil in the building pad be undercut 5 feet and replaced as engineered fill. The slabs and footings will then be supported on engineered fill. Subgrade preparation, fill placement, and grading should be performed in accordance with following sections of this report.

5.2 SITE PREPARATION

All site preparation and earthwork operations should be performed in accordance with applicable codes. Site preparation and grading should conform to the recommendations contained in the main text of this report and in the suggested guidelines included in Appendix F.

5.2.1 Demolition

We anticipate the existing buildings, walkways, and pavements will be demolished and removed from the site. In the existing building areas, we anticipate the depth of removal and recompaction will be on the order of 3 feet below existing grades around the buildings. Existing grades refer to the upper pavement/slab surface elevations at the various exploration points. The actual depth of removal should be evaluated by the geotechnical engineer in the field at the time of construction.

We anticipate that removal of planter areas, light standards, and utilities in the existing pavement and parking areas will likely disrupt the near surface soils to depths greater than 12 inches. Excavations for the removal of these existing structures (including overly wet and saturated soils in existing planter areas) should be dished shaped to allow for access of the compaction

compaction operations, and observe that the recommendations contained herein are met. As a minimum, field density control testing (compaction tests) should be performed within the scarified compacted zone and every fill lift thereafter. Recommended compaction control test frequencies are provided in Appendix F.

If possible, the contractor should schedule earthwork operations accordingly to avoid prolonged exposure of open excavations and uncovered pad and pavement subgrades during periods of wet weather. In the event that wet weather grading (including demolition and removal of existing asphalt and concrete covering) cannot be avoided, the contractor should perform only the amount of excavation that can be safely completed during that working day. In addition, open excavations, soil stockpiles, and newly prepared pads should be adequately protected from direct rainfall and runoff once these items are complete. Storm water control measures should be provided by the contractor and constructed in accordance with current state and local codes. Areas that have become overly saturated should be reviewed by the geotechnical engineer prior to any mitigation or re-grading by the contractor.

5.3 EXCAVATION CONDITIONS

We anticipate the existing rock mass in the southwest corner of the site will be removed from a summit elevation of approximately 740 down to an approximate elevation of 675. The excavated materials are likely to range from residual soils and generally rippable weak rock, to marginal and non-rippable medium strong rock in the deeper mass. Correlations between seismic traverse data, air-percussion drilling rates, and rock core logs as they pertain to rippability of the site rock are discussed in the following sections. Cross-sections illustrating likely rock excavation conditions are shown as Figures 3 through 5.

5.3.1 Seismic Traverse Data

Seismic traverse data for the bedrock at the site is summarized below in Table 3. The data generally indicates there are three to four moderately irregular velocity layers. Each layer represents a separate degree of rock weathering. The layers tend to descend toward the outer portion of the rock mass, indicating that more resistant rock becomes deeper to the north and to the east. Although data prepared by the Caterpillar Tractor Company for a D-9 tractor with a No. 9 Series D hydraulic ripper indicates that weathered rock materials should be capable of being ripped to depths with seismic velocities of about 7,000 feet per second (fps), local San Diego experience indicates that material with this velocity is generally very difficult (if not impractical) to rip. Contractors often elect to blast in this higher velocity material. Velocities between 4,500

and 5,500 fps are usually found to be marginally rippable, although difficulty should be anticipated. Rocks exhibiting velocities as low as 4,000 fps are sometimes very hard on equipment; some contractors have blasted rock with these velocities. A plot of each seismic traverse is shown in Appendix C.

TABLE 3
Summary of Seismic Survey Data

Seismic Traverse	Traverse Location	Velocity (Ft/Sec)				Depth* to Velocity Layer (ft)		
		V_1	V_2	V_3	V_4	D_1	D_2	D_3
Line 1	Lower Parking Lot Toe of East Side Rock Mass	1420	3459	7376	--	2 to 8	11 to 23	--
Line 2	Lower Parking Lot Toe of North Side Rock Mass	1546	4092	8629	--	3 to 28	3 to 23	--
Line 3	Top of Rock Mass North Edge	1346	2571	4076	7987	2 to 8	6 to 27	41 to 71
Line 4	Top of Rock Mass South Edge	1306	2505	3822	7682	2 to 8	8 to 22	44 to 60
Line 5	Top of West Cut Slope	1299	3047	5062	--	5 to 8	30 to 43	--

V_1 = Velocity in feet per second of first layer of materials
V_2 = Second layer velocity
V_3 = Third layer velocity
V_4 = Third layer velocity
D_1 = Depth in feet to base of first layer
D_2 = Depth in feet to base of second layer
D_3 = Depth in feet to base of third layer
*Depths indicate the maximum and minimum range of depths from existing ground surface to velocity layer.

5.3.2 Air-Percussion Drilling Data

The results of out air-percussion drilling are shown on the air-percussion logs (Appendix A). These logs present a classification with depth of the underlying soil/rock stratum into several strength categories including soft/medium (generally rippable), medium/hard (probable non-rippable), hard (probable blast), and very hard (blast). The results generally correlate with the results of our seismic traverses shown above. Based on our experience, excavations into the soft (and to some degree medium hard) rock can likely be accomplished with heavy-duty construction equipment, such as a D-9 tractor/dozer equipped with a single shank hydraulic ripper. These conditions assume that the equipment is in good operating condition and the operator is experienced in rock excavation and ripping techniques. The excavation of the hard and very hard rock will likely require blasting and/or extensive hydraulic splitting.

5.3.3 Rock Excavation

Excavation characteristics of the rock mass vary according to degree of weathering, fracturing, depth of cut, and method of excavation. Planes of weakness (jointing, fracturing, etc.) are generally closely spaced within the overall rock mass, which will tend make ripping easier.

Based on our analysis of the field data, the rock mass is generally rippable in the upper 40 feet at the southern retaining wall alignment (from approximate depths of El 740 to El 700). However, non-rippable boulders and outcrops are likely to be encountered in the rippable portions of the rock mass, with an increasing occurrence of non-rippable outcrops with depth. Medium-strong to strong, marginal to non-rippable rock was encountered at various depths between 40 and 75 feet below existing terrace grades near the wall alignment (or between depths of El 740 and El 675). Blasting will likely be required to shatter and remove marginal to non-rippable rock materials.

Conventional heavy earthmoving equipment in good condition should be able to excavate the onsite weathered bedrock where the average seismic velocity is less than 4,500 ft/s, except where less weathered rock outcrops and boulders are exposed during grading. Isolated non-rippable rock outcrops or boulders will likely require jack hammering, presplitting (with hydraulic splitters or chemical splitting agents), impact rock-breaking, or other appropriate rock excavation techniques. Explosives will likely be required where generally marginal to non-rippable, less weathered, bedrock cannot be excavated effectively with impact procedures or hydraulic splitting/chemical expansion methods of hard rock removal.

Excavations for utilities into the site rock are likely to be difficult for lighter grading equipment such as backhoe-excavators or trenchers. Excavations into the more competent site rock may require heavy ripping, pneumatic rock breaking, and/or blasting. Where possible, utilities should be grouped together and their trench footprint excavated (pre-blasted or ripped) during rough grading to reduce the impact of several trenches within the bedrock.

5.3.4 Blasting

Blasting will likely be required to remove hard, non-rippable rock zones identified at the site. Blasting design and sequencing should take into account the following site factors:

- The site is adjacent to existing commercial property, residential buildings, and congested city streets; therefore, rock throw and vibration will need to be controlled at this site. Blasting should be performed with low-velocity blasting methods with the existing overburden of residual soil and weak rock left in-place.

- We understand that permanent soil nail retaining walls (on the order of 20 to 50 feet in height) will be constructed simultaneous with the rock excavation. Soil nails are dependent on the bond strength between the soil (or rock) mass and grout backfill, and may be sensitive to ground motions induced by blasting and heavy pneumatic hammering. Given this limitation, we recommend the entire soil-rock mass be blasted as a single lift that extends the entire depth of the planned excavation. Blasting or heavy impact hammering should not be allowed once the first row of soil nails are installed. *Note: rock excavations deeper than 30 to 40 feet are typically completed in two or more blast/excavation lift sequences. Special blasting design and sequencing may be required to blast the lower rock with the weak rock overburden left in-place.*
- The blast sequence should consider the depth of any overexcavation requirements in the building pad and/or deep utility excavations. The contractor should be aware that the building pad will be overexcavated and replaced with engineered fill to a depth of 5 feet below pad grade.
- The contractor may consider blasting the generally more rippable rock in the upper zone to help break up any boulders or outcrops that may exist.
- Due to the presence of neighboring buildings and utilities that are likely to be highly sensitive to ground vibrations, the contractor should be required to provide a pre-blast survey of the surrounding structures and a vibration monitoring program to ensure that vibrations are within tolerances of local blasting codes.

5.3.5 Line Drilling and Split (Trim) Blasting

Line drilling should be performed at the perimeter of the excavation to minimize overbreak and provide a relatively smooth rock face for nail head installation (where soil nails are installed). The purpose of the line drilling is to form a weak plane in the rock, which is then split during a blasting sequence. Line drilling typically consists of closely spaced small diameter borings (each about 3 or 4 inches in diameter) with a center-to-center distance of approximately 3 feet. The borings are not loaded or charged during the blast sequence. A secondary purpose for line drilling is to separate the rock mass from the adjacent subgrades and reduce the transmission of ground motions into adjacent properties or structures. All blasting on this project should be performed by a qualified blasting contractor in accordance with local codes.

5.4 TEMPORARY UTILITY TRENCH EXCAVATIONS

5.4.1 General

All temporary utility trench excavations should comply with applicable local, state, and federal safety regulations including the current OSHA Excavation and Trench Safety Standards. Construction site safety generally is the sole responsibility of the contractor, who should also be solely responsible for the means, methods, and sequencing of construction operations. We are providing this information on temporary excavations as a service to our client. Under no circumstances should this information be interpreted that Kleinfelder is assuming responsibility for construction site safety or the contractor's activities; such responsibility is not being implied and should not be inferred.

5.4.2 Excavations and Slopes

The contractor should be aware that slope height, slope inclination, or excavation depths should in no case exceed those specified in local, state, and/or federal safety regulations (e.g., OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926, or successor regulations). For preliminary estimating purposes, temporary trench excavation into undisturbed crystalline rock can be considered as stable rock according to OSHA guidelines. Trench excavations into disturbed, fractured rock, or soil should be considered as Type C conditions. The contractor's competent person should evaluate the field construction excavations on a daily basis as required by OSHA guidelines.

5.4.3 Construction Considerations

Heavy construction equipment, building materials, excavated soil, and vehicular traffic should be kept a minimum distance of 1/2 the slope height away from the top of any excavation. Where the stability of adjoining buildings, walls, or other structures is endangered by excavation operations, support systems such as shoring, bracing, or underpinning may be required to provide structural stability and protect personnel working within the excavation. All shoring, bracing, or underpinning should be designed by a professional engineer registered in the State of California.

Excavations adjacent to existing building foundations should taper away from the foundation to prevent undermining. To reduce this risk, no excavations should extend below a 1:1 (horizontal: vertical) plane projected 9 inches above the bottom outside (nearest) edge of the footing.

During wet weather, earthen berms or other methods should be used to prevent runoff water from entering all excavations. All runoff water and/or groundwater encountered within excavations should be collected and disposed outside the construction limits.

5.5 PERMANENT SLOPES

Permanent cut slopes up to 20 feet in height are planned above the retaining wall along the south and west sides of the site. The slopes will be cut into the upper residual soils and underlying weathered rock. Residual soils within the upper 5 feet should be graded no steeper than 2H:1V. After the initial drop in elevation of 5 feet, the slope should then transition to a cut slope no steeper that 1H:1V to the top of the wall. Due to the potential for out of slope, wedge-type failures, excavations into the existing weathered rock should not be inclined steeper than 1H:1V.

Where new fill slopes are planned above the new retaining wall, the fill slope should not be steeper than 2H:1V for the entire height of the fill. Benches should be cut into the backcut as fill soils are being placed. Each bench should be inclined slightly into the slope and have a minimum width of 2 feet. Care should be taken by the contractor to provide mechanical compaction as close to the outer edge of the slope surface as practical.

5.5.1 Slope Protection and Maintenance

Site runoff should not be permitted to flow over the tops of slopes. Positive drainage should be established away from the top of slopes. This may be accomplished by using brow ditches placed at the top and bottom of cut slopes to direct surface runoff away from the slope face and top of wall where drainage devices are not otherwise available.

The on-site soils and weathered rock are likely to be susceptible to erosion; therefore, the project plans and specifications should contain design features and construction requirements to mitigate erosion of on-site soils during and after construction. Slopes constructed with inclination of 2H:1V or greater should be appropriately planted with protective ground cover. However, steeper slopes with fresh cut (weathered granitic) surfaces are likely incapable of sustaining vegetative ground cover. We recommend that a qualified landscape architect review the surficial slope conditions and provide appropriate vegetative ground cover measures. Where steep slopes and/or surfaces that are deemed too rocky for successful planting, consideration should be given to protecting the slopes with a shotcrete or cellular confinement system.

5.5.2 Construction Considerations

Remedial grading may be required to repair some of the soil erosion features observed at the top of the existing slopes along the west and south sides of the property. The most obvious erosion features have occurred along the north edge of the existing sidewalk along Grand Avenue, east of Section C-C' (Figure 2). Also, minor surficial slumping was observed in the existing slopes along the west edge of the property. In our opinion, these features are not related to deep-seated instability and are more likely a result of unmitigated surface drainage and soil erosion. Where these features are encountered, we recommend the eroded soils be removed and replaced as engineered fill in the upper 3 feet along a strip measuring at least 5 feet into the face of the slope (the 5 feet would be measured laterally from the top of the slope). Expansive or overly moist soils removed from the excavation should not be re-used as fill.

5.6 ENGINEERED FILL

5.6.1 Materials

In general, onsite sandy soils with an expansion index of less than 30 can be used as fill to finish subgrade elevation for the upper 4 feet of finished subgrade in the building and concrete flatwork areas. The fill placed in the upper 2 feet of building pads and flatwork areas should have an expansion index of 20 or less. The weak to moderately weak, decomposed bedrock is expected to break down during the excavation process to produce clayey and silty sand fill that is anticipated to exhibit an expansion index of less than 30. However, the residual soils removed from the surface of the rock mass and existing clayey soils in the lower parking may be too expansive for re-use as engineered fill in the upper 4 feet of the building and flatwork areas.

The quality of fill that will be produced from the marginally and non-rippable rock will be dependent on the degree of blasting or hydraulic fracturing required. In general, blasted rock (or shot rock) should be reduced to less than 3-inch maximum particle size if it is to be used as on-site fill. The contractor should selectively grade and stockpile soils that are suitable for fill placement during the excavation of the rock mass.

All import fill soils should be free of organic or other deleterious debris, be granular in nature, be essentially non-expansive (expansion index less than 20) and be less than 3 inches in maximum dimension. In general, well-graded mixtures of gravel, sand, non-plastic silt, and small quantities of cobbles, rock fragments, and/or clay are acceptable for use as engineered fill. Specific requirements for import fill, as well as applicable test procedures for material suitability, are provided on Table 4.

TABLE 4
Import Fill Requirements

Gradation		Test Procedures	
Sieve Size	**Percent Passing**	**ASTM[2]**	**Caltrans[3]**
3 inch	100	C 136	202
3/4 inch	70-100	C 136	202
No. 4	50-100	C 136	202
No. 40	30-100	C 136	---
No. 50	30-100	---	202
No. 200	15-40	C 136	202
Plasticity			
Liquid Limit	**Plasticity Index**		
<30	<12	D 4318	204
Organic Content			
Less than 3%	---	D 2974	---
Expansion Potential (UBC 18-2)			
Less than 20	---	D 4829	---
Maximum Dry Density			
More than 105 pcf	---	D 1557	---

All imported engineered fill should be sampled and tested by the project Geotechnical Engineer prior to being transported to the site.

5.6.2 Compaction Criteria

All fill soils, either native or imported, required to bring the site to final grade should be compacted as engineered fill. Engineered fill should be uniformly moisture-conditioned to within 1 percent below to 2 percent above the optimum moisture content, placed in horizontal lifts less than 8 inches in loose thickness, and compacted to at least 95 percent relative compaction as per ASTM D 1557. Additional fill lifts should not be placed if soil conditions are not stable or if the previous lift did not meet the required dry density and moisture content. Disking and/or blending may be required to uniformly moisture-condition soils used for engineered fill. The upper 12 inches of subgrade soils in pavement areas should be uniformly moisture conditioned to 1 percent below to 2 percent above the optimum moisture content and compacted to at least 95 percent relative compaction as per ASTM D 1557.

[2] *American Society for Testing and Materials Standards (latest edition)*
[3] *State of California, Department of Transportation, Standard Test Methods (latest edition)*

5.7 TRENCH BACKFILL

5.7.1 Materials

Pipe zone backfill (i.e., material beneath and within one foot of the top of pipe) should consist of imported soil less than one inch in maximum dimension. Trench zone backfill (i.e., material placed between the pipe zone backfill and finished subgrade) may consist of native soil or imported fill, except that soil should have an expansion index of less than 30 within 4 feet of finished subgrade within building lines and an expansion index of less than 20 within 2 feet of finished subgrade within the building lines.

If imported material is used for pipe or trench zone backfill, we recommend it consist of fine-grained sand. In general, coarse-grained sand and/or gravel should not be used for pipe or trench zone backfill to mitigate the potential for soil migration into the relatively large void spaces present in this type of material and to reduce the impact of water seepage along trenches.

5.7.2 Compaction Criteria

All trench backfill should be placed and compacted in accordance with recommendations provided above for engineered fill. Mechanical compaction is recommended; ponding or jetting should be avoided, especially in areas supporting structural loads or beneath concrete slabs supported-on-grade, pavements, or other improvements.

5.8 DRAINAGE AND LANDSCAPING

The ground surface should slope away from building pad and pavement areas toward appropriate drop inlets or other surface drainage devices. Adjacent exterior grades should be sloped at two percent or more for a distance of at least 5 feet away from structures. Subgrade soils in pavement areas should be sloped a minimum of one percent and drainage gradients maintained to carry all surface water to collection facilities and off the site. These grades should be maintained for the life of the project.

5.9 SEISMIC SITE COEFFICIENT

Since the site is located in the seismically active Southern California region, we recommend that, as a minimum, the proposed development be designed in accordance with the requirements of the latest (2001) edition of the California Building Code (CBC) for Seismic Zone 4. Since the site will be located on shallow, dense fill over moderately weak to moderately strong granitic rock, a

soil profile factor of S_b may be used in design. Near source seismic coefficients for acceleration and velocity, N_a=1.0 and N_v=1.2 (UBC Tables 16-S and 16-T), should be used in design.

5.10 SPREAD FOUNDATIONS

5.10.1 Allowable Bearing Pressures

The proposed structures may be supported on shallow, reinforced concrete, spread footings founded entirely on engineered fill (refer to Section 5.2 for subgrade preparation recommendations). Continuous and isolated spread footings should have minimum widths of 18 and 24 inches, respectively, and be embedded at least 18 inches into the engineered fill. Footings so established may be designed using an allowable bearing pressure of 3,500 pounds per square foot (psf) for dead plus sustained live loading. The allowable bearing pressures provided above are net values; therefore, the weight of the foundation (which extends below grade) may be neglected when computing dead loads. The allowable bearing pressure may be increased by 1/3 for short-term loading due to wind or seismic forces.

Footings may experience an overall loss in bearing capacity or an increased potential to settle where located in close proximity to existing or future utility trenches. Furthermore, stresses imposed by the footings on the utility lines may cause cracking, collapse and/or a loss of serviceability. To reduce this risk, no excavations should extend below a 1:1 plane projected 9 inches above the bottom of the outside edge of the footing.

5.10.2 Estimated Settlements

Total settlement of an individual foundation will vary depending on the plan dimensions of the foundation and the actual load supported. Based on anticipated foundation dimensions and loads, we estimate maximum total foundation settlements from structural loads should be less than ¾ inch; differential foundation settlements for bay spacings on the order of 40 feet should not exceed ½ inch. Settlement is expected to be primarily elastic, with a majority occurring during or shortly after initial application of structural loads.

5.10.3 Lateral Resistance

Resistance to lateral loads (including those due to wind or seismic forces) may be provided by frictional resistance between the bottom of concrete foundations and the underlying soil, and by passive soil pressure against the sides of the foundations. A coefficient of friction of 0.30 may be used between cast-in-place concrete foundations and the underlying soil. Passive pressure

available in engineered fill or undisturbed native soil may be taken as equivalent to the pressure exerted by a fluid weighing 250 pounds per cubic foot (pcf), except that the upper 12 inches of soil should be neglected for passive resistance.

The passive resistance of the subgrade soils will diminish or be non-existent if trench sidewalls slough, cave, or are overwidened during or following excavations. If this condition is encountered, the Geotechnical Engineer should be notified to review the condition and provide remedial recommendations, if warranted.

5.10.4 Construction/Design Considerations

Prior to placing reinforcing steel or concrete, footing excavations should be cleaned of all debris, loose or soft soil, and water. All footing excavations should be observed by the project Geotechnical Engineer just prior to placing reinforcing steel and concrete to observe the recommendations contained herein are implemented during construction.

The structural engineer should evaluate footing configurations and reinforcement requirements to account for loading, shrinkage and temperature stresses. We recommend that continuous footings be reinforced at least with two No. 4 reinforcement bars, one top and one bottom, to provide structural continuity and help in spanning local subgrade irregularities.

5.11 LIGHT POLE AND PYLON SIGNS

For support of light poles and pylon signs, drilled piers may be used in lieu of spread foundations. The drilled piers should be straight-shaft, constructed of cast-in-place concrete, and supported through end bearing and skin friction. An allowable soil bearing pressure of 3,500 psf (with a 1/3 allowable increase for seismic or wind loads) may be used to support vertical sign or light poles. Resistance to uplift loads should be provided through the weight of the pier, and skin friction between the soil and the pier. For uplift resistance, a frictional value of 300 psf may be used. The pier should extend a minimum of 10 feet below the ground surface for the pylon sign, and a minimum of 6 feet for the light poles, and have a minimum diameter of 24 inches. Difficult excavation conditions should be anticipated where drilled piers extend into the granitic bedrock (refer to Figure 2 and the boring logs adjacent to the proposed drilled pier locations).

Resistance to lateral loads can be provided by the resistance between the soil and the pier, and by the bending stiffness of the pier itself. Lateral resistance may be evaluated using the "Tower Formula" give in Section 1806.8 of the California Building Code, 2001 edition. For this method, we recommend a lateral soil bearing pressure of 200 pounds per square foot per foot of

embedment be used for parameters of S_1 and S_3 to establish required embedment depth. The 100 percent increase allowed by the code for isolated towers (which are not adversely affected by a 1/2 inch horizontal deflection at the ground surface due to short-term lateral loads) may be used.

The structural adequacy of the pier should be evaluated by the Structural Engineer.

5.12 INTERIOR CONCRETE SLABS SUPPORTED-ON-GRADE

Intrusion of subgrade moisture through the slab can influence interior building conditions and performance that may result from future water sources such as plumbing leaks, irrigations systems and/or surface drainage conditions. These post-construction conditions should be addressed separately by qualified specialists with local knowledge of slab moisture protection systems, flooring design and other components that may be influenced by moisture intrusion. Our study addresses present subgrade conditions for support of slabs only and does not evaluate future potential conditions unless specifically stated otherwise.

5.12.1 Aggregate Subbase

In order to provide enhanced subgrade support, we recommend the compacted subgrade be overlain with a minimum 4-inch thickness of compacted crushed rock. If this layer is desired to also serve as a capillary break, there should be less than 5 percent by weight passing the No. 4 sieve size. In general, Caltrans Class 2 aggregate base or similar materials should not be used as an aggregate subbase beneath the floor slab where a vapor retarder is used.

5.12.2 Vapor Retarder

Since there is not a shallow groundwater table that would definitely necessitate a vapor retarder, and since a vapor retarder is not required by local code, the client may delete the vapor retarder at their discretion. However, some clients prefer to retain a vapor retarder as added moisture vapor movement protection.

Subsurface moisture and moisture vapor naturally migrate upward through the soil and, where the soil is covered by a building or pavement, this subsurface moisture will collect. To reduce the impact of this subsurface moisture and the potential impact of future introduced moisture (such as landscape irrigation or precipitation) the current industry standard is to place a vapor retarder on the compacted crushed rock layer. This membrane typically consists of visquene or polyvinyl plastic sheeting at least 10 mil in thickness. It should be noted that although vapor

retarder systems are currently the industry standard, this system may not be completely effective in preventing floor slab moisture problems. These systems typically will not necessarily assure that floor slab moisture transmission rates will meet floor covering manufacturer standards or assure that indoor humidity levels will be low enough to inhibit mold growth. The design and construction of such systems are totally dependent on the proposed use and design of the proposed building, and all elements of building design and function should be considered in the slab-on-grade floor design. Building design and construction may have a greater role in perceived moisture problems since sealed buildings/rooms or inadequate ventilation may produce excessive moisture in a building and affect indoor air quality.

Various factors such as surface grades, adjacent planters, the quality of slab concrete, and the permeability of the on-site soils affect slab moisture and can control future performance. In many cases, floor moisture problems are the result of either improper curing of floor slabs or improper application of flooring adhesives. We recommend contacting a flooring consultant experienced in the area of concrete slab-on-grade floors for specific recommendations regarding your proposed flooring applications.

5.12.3 Construction/Design Considerations

Floor slabs in both the main building and garden center areas should be designed as interior concrete slabs-on-grade. Floor slabs should have a minimum nominal thickness of 6 inches (a thinner section of 4 inches may be used in office areas subject to foot traffic only). Floor slabs should be reinforced with at least 6"x6"/10x10 welded wire mesh or preferably No. 4 reinforcement bars at 24 inches on-center each way within the middle-third of the floor slabs. Thicker floor slabs with increased reinforcement should be designed wherever large rack loads, vehicular traffic, heavy concentrated loads, heavy equipment, or machinery are anticipated. An average modulus of subgrade reaction of 150 pounds per cubic inch is recommended for design on sandy soils. Based on this criteria, angular distortion of floor slab settlement should be L/500 or less between column locations, where L is the horizontal distance between columns.

Concrete should not be placed if sand or gravel has been allowed to become wet (due to precipitation or excessive moistening) or if standing water is present. Excessive water beneath interior floor slabs could result in significant vapor transmission through the slab, adversely affecting moisture-sensitive floor coverings.

Special precautions must be taken during the placement and curing of all concrete slabs. Excessive slump (high water-cement ratio) of the concrete an/or improper curing procedures

used during either hot or cold weather conditions could lead to excessive shrinkage, cracking or curling of the slabs. High water-cement ratio and/or improper curing also greatly increase the water vapor permeability of concrete. We recommend that all concrete placement and curing operations be performed in accordance with the American Concrete Institute (ACI) Manual.

- It is emphasized that we are not floor moisture proofing experts. We make no guarantee nor provide any assurance that use of the capillary break/vapor retarder system will reduce concrete slab-on-grade floor moisture penetration to any specific rate or level, particularly those required by floor covering manufacturers. The builder and designers should consider all available measures for slab moisture protection.
- That exterior grading has an impact on the potential moisture beneath floor slabs and that references should be made to following the recommendations in the "Drainage Section" of the report.

5.13 WALKWAYS AND SIDEWALKS

Flatwork and exterior concrete overlying existing fills that are expansive should be supported on at least 18 inches of recompacted, low expansive, engineered fill. Where flatwork and sidewalks are supported directly on the weathered rock (decomposed granitic) surface, the exposed subgrade should be scarified to a depth of 12 inches, properly moisture conditioned, and recompacted to at least 95 percent relative compaction. The concrete slabs for walkways and sidewalks should have a nominal thickness of 4 inches.

5.14 RETAINING WALLS

5.14.1 Conventional Earth Retaining Walls

Conventional retaining walls should be designed to resist the earth pressure exerted by the retained, compacted backfill plus any additional lateral force that will be applied to the wall due to surface loads placed at or near the wall.

Masonry and poured-in-place concrete retaining walls may be supported on shallow continuous foundations placed on either engineered fill or undisturbed weathered rock. Cantilever type retaining walls supporting soil/rock masses on the south and west sides of the site may be supported directly on weathered rock. In cases were existing fills or alluvium underlie the retaining wall foundations, the fills and/or alluvium should be overexcavated by 2 feet and replaced as engineered fill. Where cut/fill transitions are encountered, the footing should be

5.14.1.3 Wall Drainage

The above-recommended values do not include lateral pressures due to hydrostatic water pressures generated by infiltrating surface water that may accumulate behind the walls. Therefore, wall backfill materials should be free draining and provisions should be made to collect and remove excess water that may accumulate behind earth retaining structures.

Wall drainage may be provided by free-draining gravel surrounded by non-woven synthetic filter fabric or by prefabricated, synthetic drain panels. In either case, drainage should be collected by perforated pipes and directed to a sump, storm drain, weep hole(s), or other suitable location for disposal. We recommend that drainage gravel consist of durable stone having 100 percent passing the 1-inch sieve and zero percent passing the No. 4 sieve. Synthetic filter fabric should have an equivalent opening size (EOS), U.S. Standard Sieve, of between 40 and 70, a permeability of at least 0.02 centimeters per second, a minimum flow rate of 50 gallons per minute per square foot of fabric, and a minimum puncture strength of 50 pounds.

5.14.1.4 Backfill Placement

All backfill should be placed and compacted in accordance with recommendations provided above for engineered fill. During grading and backfilling adjacent to any walls, heavy equipment should not be allowed to operate within a lateral distance of 5 feet from the wall, or within a lateral distance equal to the wall height, whichever is greater, to avoid overstressing of the wall. Within this zone, only hand-operated equipment ("whackers", vibratory plates or pneumatic compactors) should be used to compact backfill soils.

5.14.2 Soil Nail Retaining Walls

Soils nails may be used to provide lateral restraint of permanent vertical excavations greater than 20 feet. The basic concept of soil nailing is to reinforce the retained ground mass by drilling, installing, and grouting several closely spaced steel reinforcing bars laterally into the soil mass. Construction is performed from the top down in nominal 5-foot lifts. Permanent facings for soil-nail walls include cast-in-place concrete, reinforced shotcrete, or pre-cast concrete panels.

Soil nail walls should be designed in accordance with the FHWA Manual for Design & Construction Monitoring of Soil Nail Walls (FHWA-SA-96-069, 1996). The FHWA guidelines are based on a slip-surface limit equilibrium design method. Analyses of wall stability should consider, at the minimum, internal shear of the soil nail reinforced soil/rock mass, overturning or toppling, shear failure outside the reinforced ground mass, and bearing capacity failure. Computer

programs such as SNAILZ (Caltrans) are applicable to the FHWA slip-surface method and may be used for overall wall analysis.

5.14.2.1 Design Soil Parameters

Since the retained groundmass is likely to consist of weak and moderately weak rock, the strength parameters presented herein represent a "strong soil" case. These parameters are based on our kinematic analysis of the rock mass and correlations to our calculated RMR, Class III rock (Bieniawski, 1989). The ground conditions in the reinforced zone and above the wall should be considered as a soil type with the following ultimate values:

Soil Unit Weight (pcf)	Cohesion (psf)	Adhesion (psi)	Friction (degrees)
167	3,900	33	45

5.14.2.2 Surcharge and Overturning Loads

We recommend surcharge loads on all excavation support systems be defined based on all loads, including soil surcharge, traffic surcharge, existing structures and construction material storage. The actual design values used should be provided to the general contractor.

5.14.2.3 Stability of Factors of Safety

Design analyses of wall stability should consider, at the minimum, internal shear of the soil nail reinforced soil mass, overturning or toppling, shear failure outside the reinforced soil mass, and bearing capacity failure. We recommend the following minimum Factors of Safety:

Value	Minimum Factor of Safety
Nail Adhesion	2.00
Internal Soil Shear	1.50
Overall Stability	1.50
Base Failure	1.50
Steel Tension	1.67

5.14.2.4 Deformation Criteria

We recommend the design be accompanied by estimates of the expected vertical and horizontal deformation of the completed system. These estimates form a basis for comparison during construction.

5.14.2.5 Wall Geometry Considerations

The wall configuration will be dependant on the degree of slope above the wall and proximity of the crest of the slope to existing buildings, sidewalks, and property lines. Based on our review of the preliminary site plan, we understand this degree of slope is less than what is shown on the preliminary site plan, which shows the slope above the wall to be 3/4H:1V or less (see Figure 2). Understanding that the wall configuration (namely, the wall height) may change due to the slopes being cut back to between inclinations of 1H:1V to 2H:1V above the wall, we have provided Cross Sections[4] A-A', B-B', and C-C' (Figures 3 thought 5) near critical points in the wall to better illustrate the likely slope configurations, excavation conditions, and wall heights.

5.14.2.6 Verification of Design Values

We recommend at least 5 percent of the production nails be proof tested by loading to 130 percent of design soil adhesion value to verify construction techniques. In addition, a minimum of two soil nails for each soil unit should be performance tested to 200 percent of the design soil adhesion value to verify the factor of safety on soil adhesion. Additional guidelines for installation and monitoring described in Appendix G.

5.14.2.7 Corrosion Protection

Long-term performance of permanent soil nail walls will require adequate protection from corrosive environments. Corrosion protection measures should consider both protection of the soil nail bar and nail head assembly. Since the soil nails will be permanent and ground conditions at the site are identified as "aggressive", we recommend that a multiple corrosion protection system be used in accordance with FHWA guidelines. Bars should be factory encapsulated and centered inside corrugated PVC or HDPE sheathing and the annular space between bar and sheathing filled with cement grout. The nominal sheathing wall thickness should be at least 40 mils. During installation, centralizers should be placed along the bar at a center-to center distance not exceeding 8-feet, with the lowest centralizer spaced not more than 1-foot from the bottom of the hole.

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[4] *The cross sections only show approximate locations of existing retaining walls, buildings, and sidewalks that are near to the proposed retaining wall. Actual location of property lines, existing buildings, foundations, and City easements should be surveyed and verified prior to final design. We anticipate that the location of these items will significantly influence the wall configuration, especially along the west property line where existing residential building are very near (if not directly over) the west property line.*

Since the face of the wall is exposed to the outside environment, the head of the bar is likely to be more susceptible to corrosion where the bar connects to the base plate and bearing nut at the face of the excavation. Therefore, we recommend the bearing assembly be embedded into the permanent concrete (or shotcrete) facing in accordance with FHWA guidelines. The bearing assembly should have minimum concrete cover of 3 inches. In addition, the encapsulated protection around the bar should extend into the shotcrete portion of the facing by at least 4 inches.

5.14.2.8 Soil Nail Wall Drainage

The above-recommended values do not include lateral pressures due to hydrostatic water pressures generated by infiltrating surface water that may accumulate behind the walls. Geocomposite strip drains should be placed at the face of the soil nail wall to prevent hydrostatic buildup. Geocomposite drain strips should be 12-inches wide and placed between nail columns (typically spaced at a 5-foot center-to-center distance). Drainage should be collected by perforated pipes and directed to weep holes at the bottom of the wall facing.

5.14.2.9 Construction Considerations

- Open rock joints were not readily observed in our rock core borings. However, open joints may occasionally be encounter during the installation and grouting of the soil nails. The contractor should anticipate some excessive loss of grout where open joints are encountered during the nail installation.
- We recommend the back of the excavation be line drilled (split) to minimize overbreak of the rock face and provide a relatively flat surface for the bearing plate assembly. However, the contractor should anticipate some overbreak of the rock face due to isolated wedge failures where rock joints are steeply dipped into the excavation. Additional shotcrete (overshot) may be necessary where these isolated failures occur. On a whole, the existing rock is relatively stable and is anticipated to stand unsupported without excessive slumping during the excavation of each stage of the installation process.

5.15 STABILITY OF GRADED SLOPES ABOVE SOIL NAIL WALL

We have completed an evaluation of global stability of the proposed slope between the property line and the back of the proposed soil nail wall. Our evaluation assumed the general wall and slope configuration presented in the site plan along Section A-A' (Figure 3) and the ground parameters presented in the text of this report. Our calculations indicate the slope above the wall

has a factor of safety of 9.0 for the non-seismic condition and a factor of safety of 7.0 for the seismic condition using a horizontal earthquake coefficient of 0.2. Since the slope above the wall has a factor of safety in excess of 1.5, we consider the slope in that region to be relatively stable and should not be subject to surficial or gross instability. These calculated factors of safety assume that the lower portions of the slope have been adequately supported by the lower retaining wall at all times (that is, the lower wall portion will be either soil nailed or braced as the removal of the ground on the building side of the wall takes place). Our calculations also assume that the lower wall will be properly drained so that any surface water cannot accumulate behind the wall or within the slope.

5.16 PAVEMENTS - ASPHALT CONCRETE

5.16.1 Recommended Sections

The existing pavements are moderately to highly distressed and are to be replaced by new pavements. Performance of new pavements will depend on the stability of the near surface soils directly supporting the asphaltic concrete and aggregate base layers. Based on our review of the preliminary site plan, the new parking will be constructed at or near existing grades and supported by the in-place soils. Given this, we anticipate that two subgrade support cases are likely to be encountered at the site:

- Case 1 - pavements will be supported on scarified and recompacted soils derived from the underlying weather rock (and/or mixed with the aggregate base soils underlying the existing pavements). These conditions are likely to occur in the southwest portion of the parking lot.
- Case 2 - pavements will be supported on scarified and recompacted clayey fill and residual soils that exist in the northeast portion of the parking lot.

The approximate transition between these two support cases is presented in Figure 2. Pavements placed on "Kg" correspond to Case 1; pavements placed on "Fill/Qal" correspond to Case 2.

Pavement sections presented in the table below are based on laboratory tests results for R-value and current Caltrans design procedures. Traffic indexes of 6.9 and 7.9 were calculated and used for the design of standard duty and heavy-duty pavements, respectively. Changes in the traffic indexes will affect the corresponding pavement section.

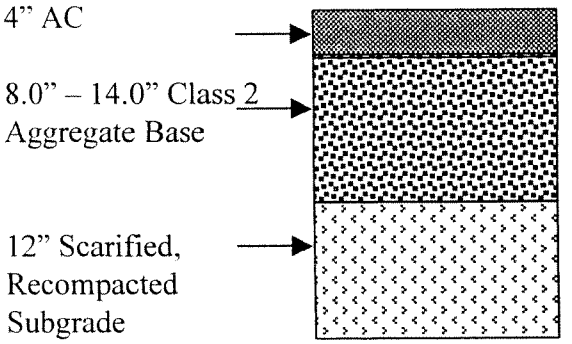
TABLE 5
Recommended Asphalt-Concrete Pavement Sections

Pavement Description	ESAL*	Calculated Traffic Index	Asphalt Concrete (inches)	Class 2 Aggregate Base (inches)	
				Case 1	Case 2
Standard Duty	109,500	6.9	4.0	8	14.0
Heavy Duty	335,800	7.9	5.0	9	16.0

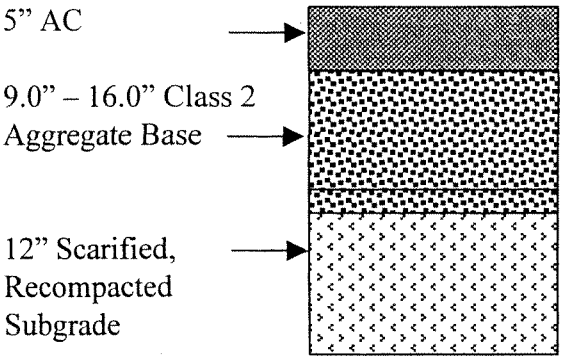
* Equivalent Single Axle Load (ESAL) design values were obtained from Wal-Mart's Geotechnical Investigation Specifications and Report Requirements for standard and heavy-duty pavements (Supercenter store type). ESAL's were converted to traffic index by current Caltrans design procedures.

Flexible Pavement Recommendations

Standard Duty



Heavy Duty



Pavement sections provided above are contingent on the following recommendations being implemented during construction.

- Where Case 1 pavements are constructed in the lower parking lot, the upper 12 inches of subgrades should consist of in-place scarified soil/rock or approved granular import material. The upper 12 inches of in-place scarified soil/rock or approved granular import material should meet or exceed a minimum R-value of 35.
- Immediately before aggregate base materials are placed, the exposed subgrade should be scarified to a depth of 12 inches, uniformly moisture conditioned to 1 within percent below to 3 percent above the optimum moisture content, and compacted to at least 95 percent relative compaction as per ASTM D 1557
- Subgrade soils should be in a stable, non-pumping condition at the time aggregate base materials are placed and compacted.

- Aggregate base materials should be compacted to at least 95 percent relative compaction as per ASTM D 1557.
- Adequate drainage (both surface and subsurface) should be provided such that the subgrade soils and aggregate base materials are not allowed to become wet.
- Aggregate base materials should meet current Caltrans specifications for Class 2 aggregate base.
- Asphalt paving materials and placement methods should meet current Caltrans specifications for asphalt concrete.

5.16.2 Unstable Subgrade

In the event unstable (pumping) subgrades are encountered within planned pavement areas, we recommend a heavy, rubber-tired vehicle (typically a loaded water truck) be used to test the load/deflection characteristics of the finished subgrade materials. We recommend this vehicle have a minimum rear axle load (at the time of testing) of 16,000 pounds with tires inflated to at least 65 pounds per square inch pressure. If the tested surface shows a visible deflection extending more than 3 inches from the wheel track at the time of loading, or a visible crack remains after loading, corrective measures should be implemented. Such measures could include disking to aerate, chemical treatment, replacement with drier material, or other methods. We recommend Kleinfelder be retained to assist in developing which method (or methods) would be applicable for this project.

5.16.3 Variations in Subgrade Materials

Pavement sections provided above are based on the soil conditions encountered during our field investigation, our assumptions regarding final site grades, and limited laboratory testing. In the event actual pavement subgrade materials are significantly different than those tested for this study, we recommend representative subgrade samples be obtained and additional R-value tests performed. Should the results of these tests indicate a significant difference, the design pavement sections provided above may need to be revised.

5.17 PAVEMENTS - PORTLAND CEMENT CONCRETE

The use of rigid concrete pavement is favored where trash pick-up or truck traffic necessitates short radius maneuvering and/or heavy metal bin movement on rollers. Portland cement concrete pavement sections presented in the table below are based on AASHTO Guide of Pavement Structures, 1993 edition and the assumptions listed below. These assumptions should

be reviewed by the project Owner, Architect, and/or Civil Engineer to evaluate their suitability for this project. Changes in the assumptions will affect the corresponding pavement section.

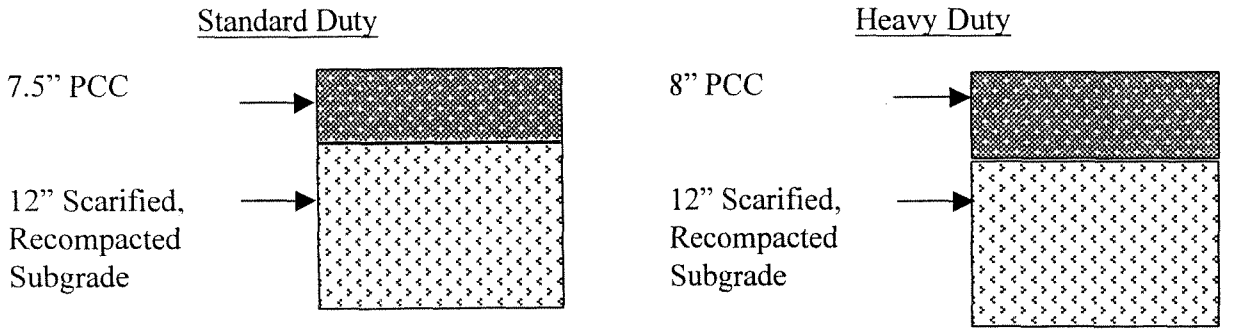
- Modulus of subgrade reaction = 100 psi/in
- Modulus of rupture of concrete = 550 psi
- 20-year design life

TABLE 6
Recommended Concrete Pavement Sections

Pavement Description	ESAL*	Calculated Traffic Index	Portland Cement Concrete (inches)
Standard Duty	109,500	6.9	7.5
Heavy Duty	335,800	7.9	8

* Equivalent Single Axle Load (ESAL) design values were obtained from Wal-Mart's Geotechnical Investigation Specifications and Report Requirements for standard and heavy-duty pavements (Supercenter store type). ESAL's were converted to traffic index by current Caltrans design procedures.

Rigid Pavement Recommendations



The standard duty concrete pavement should be used for the front sidewalk, garden center entrance pad, and other areas with light pick-up or auto usage. Heavy duty concrete pavement should be used for the truck dock and other areas with heavy truck loads.

Portland cement concrete pavement sections provided above are contingent on the following recommendations being implemented during construction.

- Immediately prior to pavement construction, the exposed subgrade should be scarified to a depth of 12 inches, uniformly moisture conditioned to within 1 percent below to 2 percent above the optimum moisture content, and compacted to at least 95 percent relative compaction as per ASTM D 1557.

- Adequate drainage (both surface and subsurface) should be provided such that the subgrade soils are not allowed to become wet.
- Concrete pavement should have a minimum 28-day compressive strength of 4,000 psi. Concrete slumps should be from three to four inches. The concrete should be properly cured in accordance with PCA recommended procedures and vehicular traffic should not be allowed for three days (automobile traffic) or seven days (truck traffic).
- To help offset plastic shrinkage, concrete pavement may be reinforced with at least No. 3 bars, 24 inches on-center, each way or 6x6-W2.0xW2.0 wire mesh (located 1/3 of the slab thickness from the top of the slab).
- Construction joint spacing should not exceed 12 feet.
- Thickened edges should be used along outside edges of concrete pavements. Edge thickness should be at least 2 inches greater than the concrete pavement thickness and taper to the actual concrete pavement thickness 36 inches inward from the edge. Integral curbs may be used in lieu of thickened edges.
- Over finishing of concrete pavements should be avoided. Typically, a broom or burlap drag finish should be used.

5.18 PRELIMINARY SOIL SCREENING

Analytical testing of selected soil and rock samples was performed to assess the potential for adverse reactivity with concrete and corrosivity with steel. Soluble sulfate and chloride tests were performed representative samples soils and rock samples to evaluate potential sulfate attack against portland cement concrete. Resistivity tests were performed on soil and rock samples to evaluate possible corrosion activity. Generally, the lower the minimum electrical resistivity of the soil or rock, the more likely that galvanic currents may occur and corrosion result.

Soluble sulfate and chloride contents of soil samples from Boring 7 were 290 ppm and 30 ppm, respectively. Therefore, the potential for sulfate and/or chloride attack appears to be negligible and conventional Type II cements may be used within the building pad. A resistivity value of 2,207 ohm-cm resulted from the same sample. Therefore, the site contains soils that appear to have a high corrosion potential where metal will be in contact with native soils.

Soluble sulfate and chloride contents of excavated rock samples from Boring 6 were 300 ppm and 30 ppm, respectively. A resistivity value was 4,542 ohm-cm resulted from the same rock

sample. Base on current FHWA corrosion protection guidelines for soil nail walls, aggressive ground conditions exist at the site.

For more specific recommendations regarding corrosion protection, a corrosion specialist should be consulted. The chemical test results are included in Appendix B.

6.0 ADDITIONAL SERVICES

6.1 PLANS AND SPECIFICATIONS REVIEW

We recommend the project geotechnical engineer conduct a general review of final plans and specifications to evaluate that our earthwork and foundation recommendations have been properly interpreted and implemented during design. In the event Kleinfelder is not retained to perform this recommended review, we will assume no responsibility for misinterpretation of our recommendations. This service can be performed on a time-and-expense basis in accordance with our standard fee schedule.

6.2 CONSTRUCTION OBSERVATION AND TESTING

We recommend that all earthwork during construction be monitored by a representative from the project geotechnical engineer, including site preparation, placement of all engineered fill and trench backfill, construction of slab and roadway subgrades, and all foundation excavations. The purpose of these services would be to provide the project geotechnical engineer the opportunity to observe the soil conditions encountered during construction, evaluate the applicability of the recommendations presented in this report to the soil conditions encountered, and recommend appropriate changes in design or construction procedures if conditions differ from those described herein.

7.0 LIMITATIONS

Recommendations contained in this preliminary report are based on our field observations and subsurface explorations, limited laboratory tests, and our present knowledge of the proposed construction. It is possible that soil conditions could vary between or beyond the points explored. If soil conditions are encountered during construction which differ from those described herein, we should be notified immediately in order that a review may be made and any supplemental recommendations provided. If the scope of the proposed construction, including the proposed loads or structural locations, changes from that described in this report, our recommendations should also be reviewed.

Kleinfelder is not a corrosion engineer. Specific recommendations for corrosion protection should be obtained from a corrosion specialist.

We have prepared this report in substantial accordance with the generally accepted geotechnical engineering practice as it exists in the site area at the time of our study. No warranty is expressed or implied. The recommendations provided in this report are based on the assumption that an adequate program of tests and observations will be conducted by Kleinfelder during the construction phase in order to evaluate compliance with our recommendations.

This report may be used only by the client and only for the purposes stated, within a reasonable time from its issuance. Land use, site conditions (both on site and off site) or other factors may change over time, and additional work may be required with the passage of time. Any party other than the client who wishes to use this report shall notify Kleinfelder of such intended use. Based on the intended use of the report, Kleinfelder may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or anyone else will release Kleinfelder from any liability resulting from the use of this report by any unauthorized party.

Our evaluation of subsurface conditions at the site has considered subgrade soil and groundwater conditions present at the time of our investigation. The influence(s) of post-construction changes to these conditions such as introduction of water into the subsurface will likely influence future performance of the proposed project. Whereas our scope of services addresses present groundwater conditions, future irrigation, broken water pipelines, etc. may adversely influence the project and should be addressed and mitigated, as needed, by specialized slab and flooring system designers having local knowledge.

8.0 REFERENCES

California Division of Mines and Geology, Special Publication 42, 1988, "Fault Rupture Hazard Zones in California."

City of San Diego Seismic Safety Study and Geologic Hazards Map, 1995 edition.

Kleinfelder, August 30, 2000, "Geotechnical Investigation Report for Proposed Home Depot Store, East Valley Parkway, Escondido, California," Kleinfelder Project No. 51-00407X-001.

Kleinfelder, April 1999, "Geotechnical Investigation for Proposed Walgreen Pharmacy at Rose Street and Valley Parkway, Escondido, California", Kleinfelder Project No. 51-517900.001.

Design Manual 7.01 and 7.02, (1986), Naval Facilities Engineering Command.

Occupational Safety and Health Standards - Excavations, Final Pub. 1989.

Uniform Building Code, International Conference of Building Officials, 1997 edition.

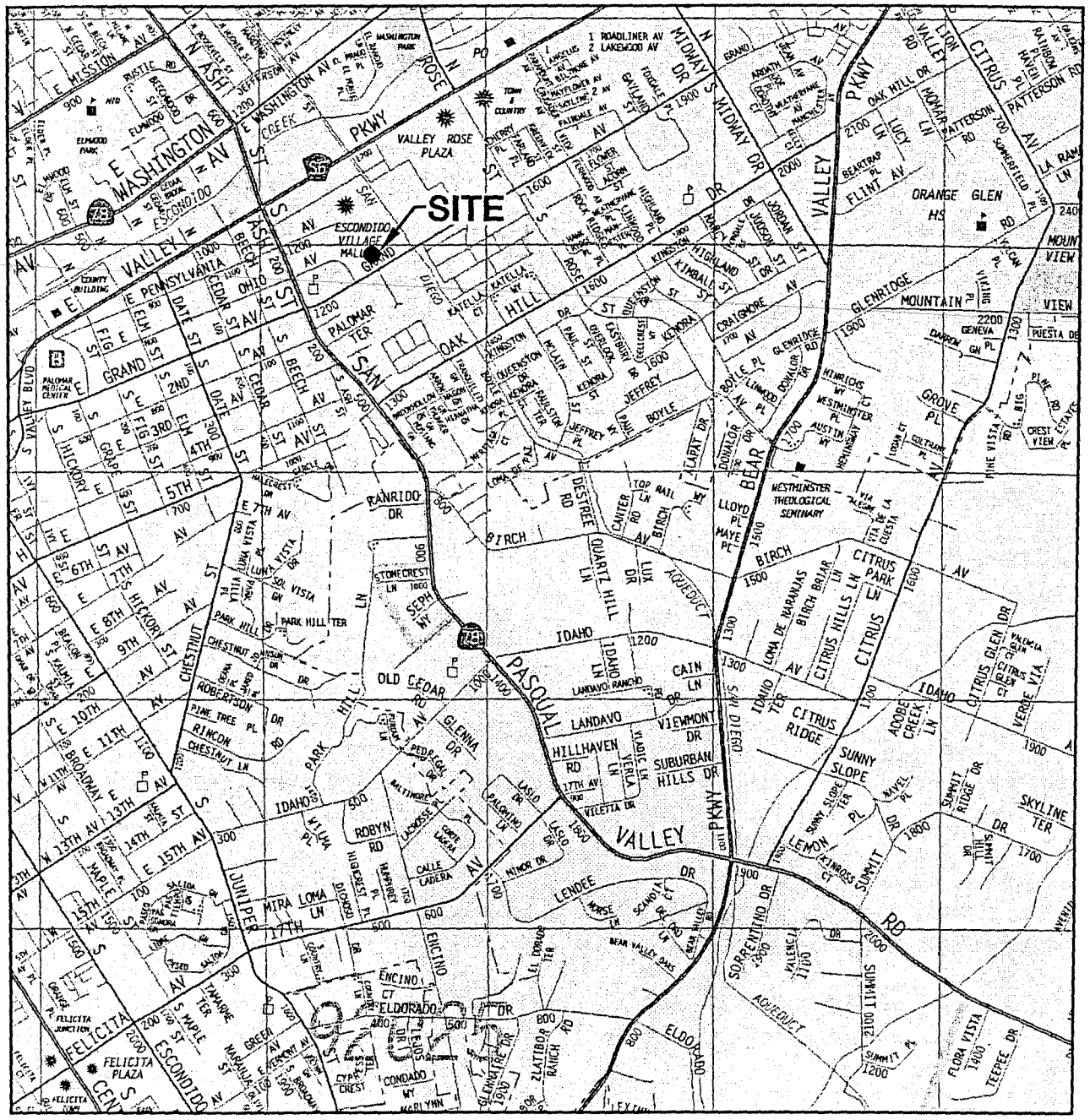
Design Manual 7.01 and 7.02, (1986), Naval Facilities Engineering Command.

Jennings, Charles W., 1985, "An Exploratory Text to Accompany the 1:7,500,000 Scale Fault and Geologic Maps of California," California Division of Mines and Geology, Bulletin 201.

Franklin, John A. and Dussealt, Maurice B., Rock Engineering, McGraw-Hill, 1989.

Bowles, Joseph E., Foundation Analysis and Design, Fifth Edition, McGraw-Hill, 1996.

Manual for Design & Construction Monitoring of Soil Nail Walls, Federal Highway Administration, FHWA-SA-96-069, 1996



KLEINFELDER

5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

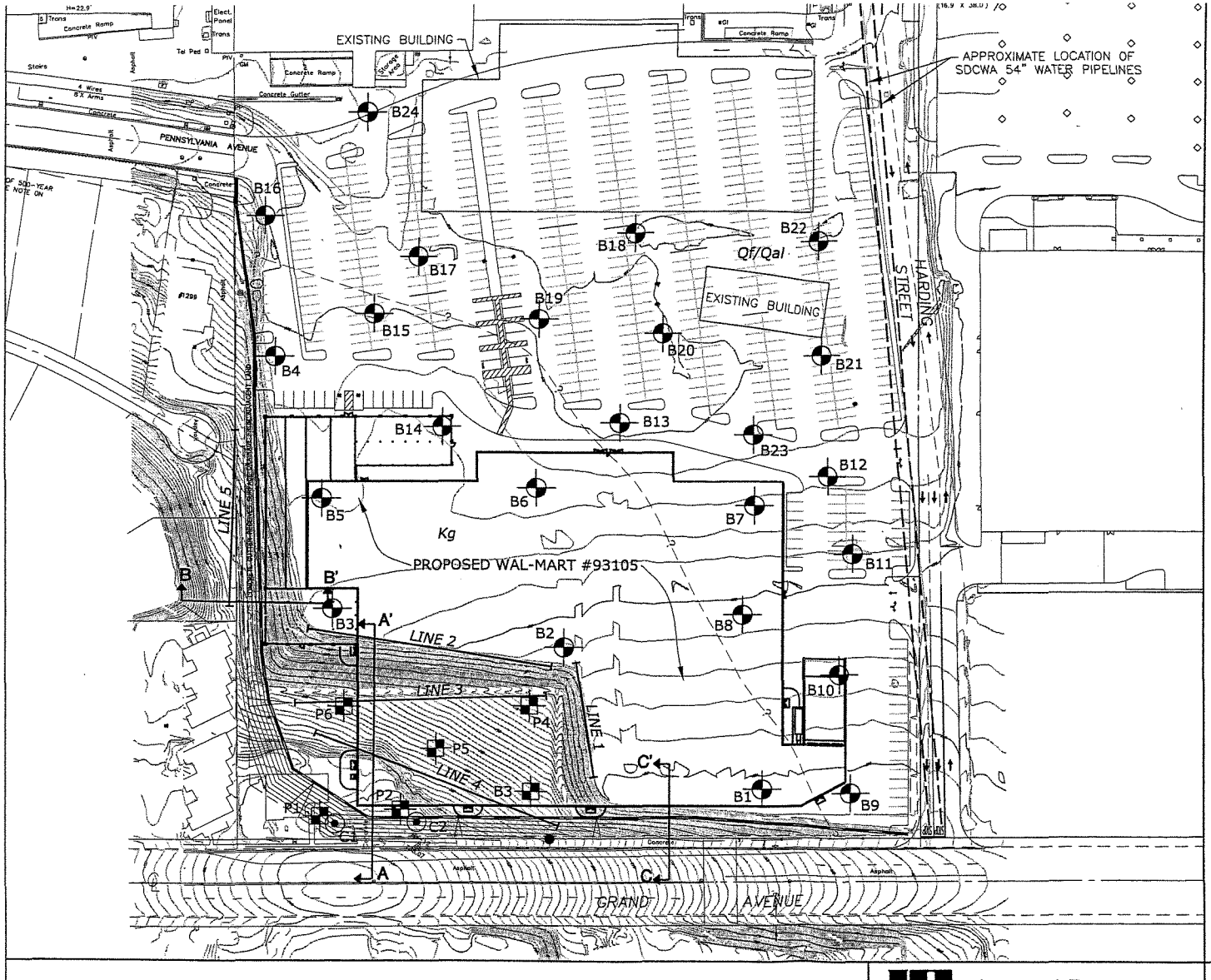
CHECKED BY: KW	FN: 13406VIC
PROJECT NO. 13406	DATE: 05/2003

VICINITY MAP

WALMART SUPERCENTER No. 93105
PLAZA SHOPPING CENTER
ESCONDIDO, CALIFORNIA

FIGURE

1



LEGEND:

- B1 — APPROXIMATE BORING LOCATION (BORINGS 1–4 COMPLETED MARCH 2002)
- P1 — APPROXIMATE AIR–TRACK (PERCUSSION) LOCATION
- C1 — APPROXIMATE ROCK CORE/BORING LOCATION
- A — A' — CROSS–SECTION LINE
- LINE 1 — APPROXIMATE SEISMIC LINE LOCATION
- PROPOSED RETAINING WALL LOCATION
- APPROXIMATE CONTACT BETWEEN Kg and Qf/Qal
- *Kg* — GRANITIC BEDROCK
- *Qf/Qal* — UNDIFFERENTIATED RECENT FILL, ALLUVIUM, AND SLOPE WASH

N

0 100 200

APPROXIMATE GRAPHIC SCALE (FEET)

REFERENCE: PRELIMINARY SITE PLAN BY NASLAND ENGINEERING, 1/2003.

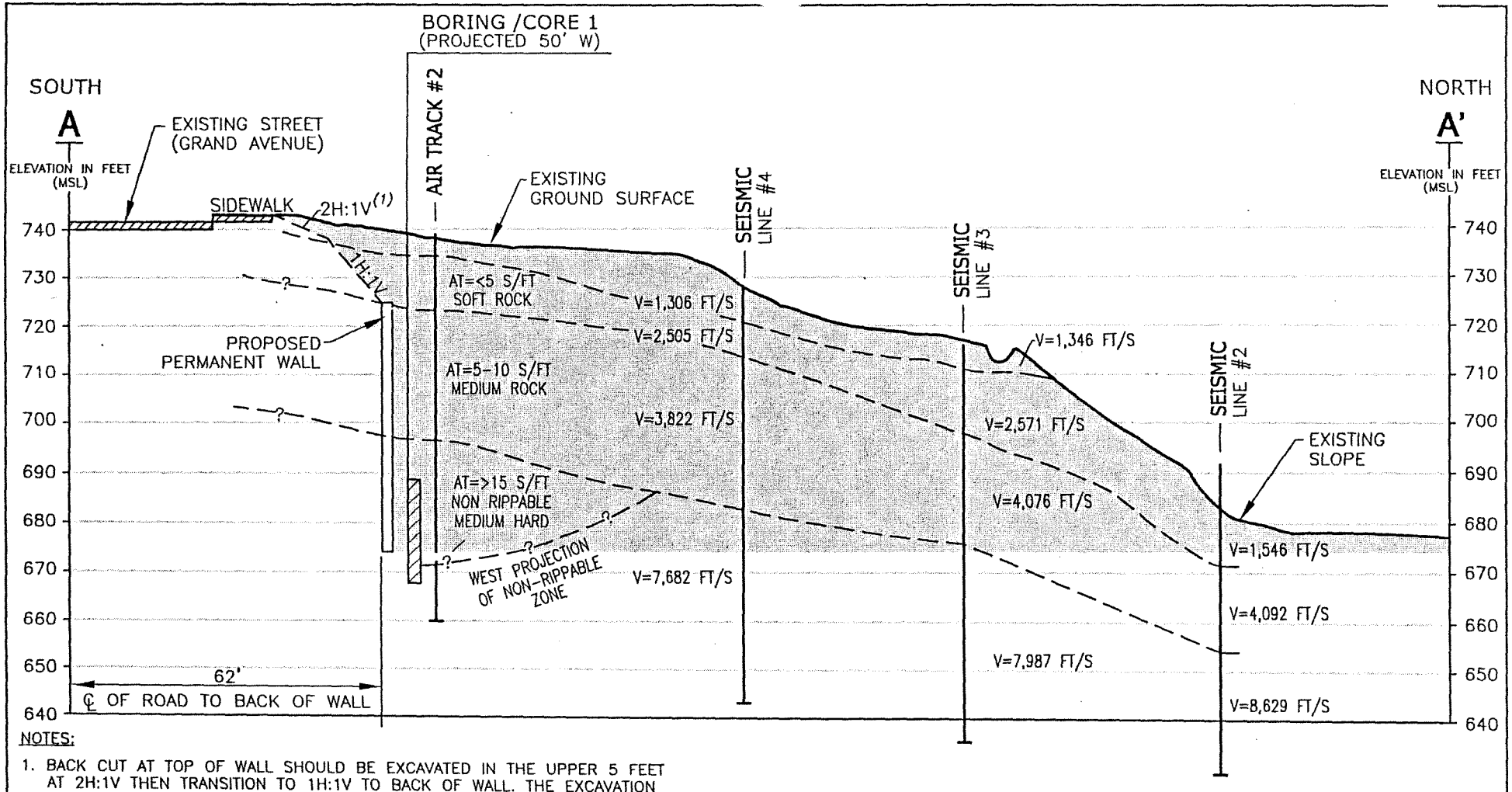
KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

CHECKED BY: KW	FN: 13406SITE
PROJECT NO. 13406	DATE: 05/2003

SITE PLAN

PROPOSED WAL-MART #93105
ESCONDIDO VILLAGE SHOPPING CENTER
ESCONDIDO, CALIFORNIA

FIGURE
2



NOTES:

1. BACK CUT AT TOP OF WALL SHOULD BE EXCAVATED IN THE UPPER 5 FEET AT 2H:1V THEN TRANSITION TO 1H:1V TO BACK OF WALL. THE EXCAVATION SHOULD NOT START WITHIN 5 FEET OF EXISTING FOUNDATIONS OR BEYOND PROPERTY LINE. PROPERTY LINE NOT INDICATED ON DRAWING.
2. ESTIMATES OF ROCK STRENGTH ARE BASED ON SEISMIC LINE, AIR-TRACK (AT) BORINGS, AND ROCK CORE DATA. SEISMIC VELOCITIES (V) WITHIN THE ROCK MASS ARE SHOWN ABOVE, AND WERE EVALUATED FROM THE CORRESPONDING SEISMIC LINE.
3. CROSS-SECTION BASED ON TOPOGRAPHIC AND PRELIMINARY SITE MAPS PROVIDED BY NASLAND ENGINEERING.

LEGEND:

ANTICIPATED EXTENT OF ROCK MASS TO BE REMOVED

0 30 60

APPROXIMATE GRAPHIC SCALE (FEET)

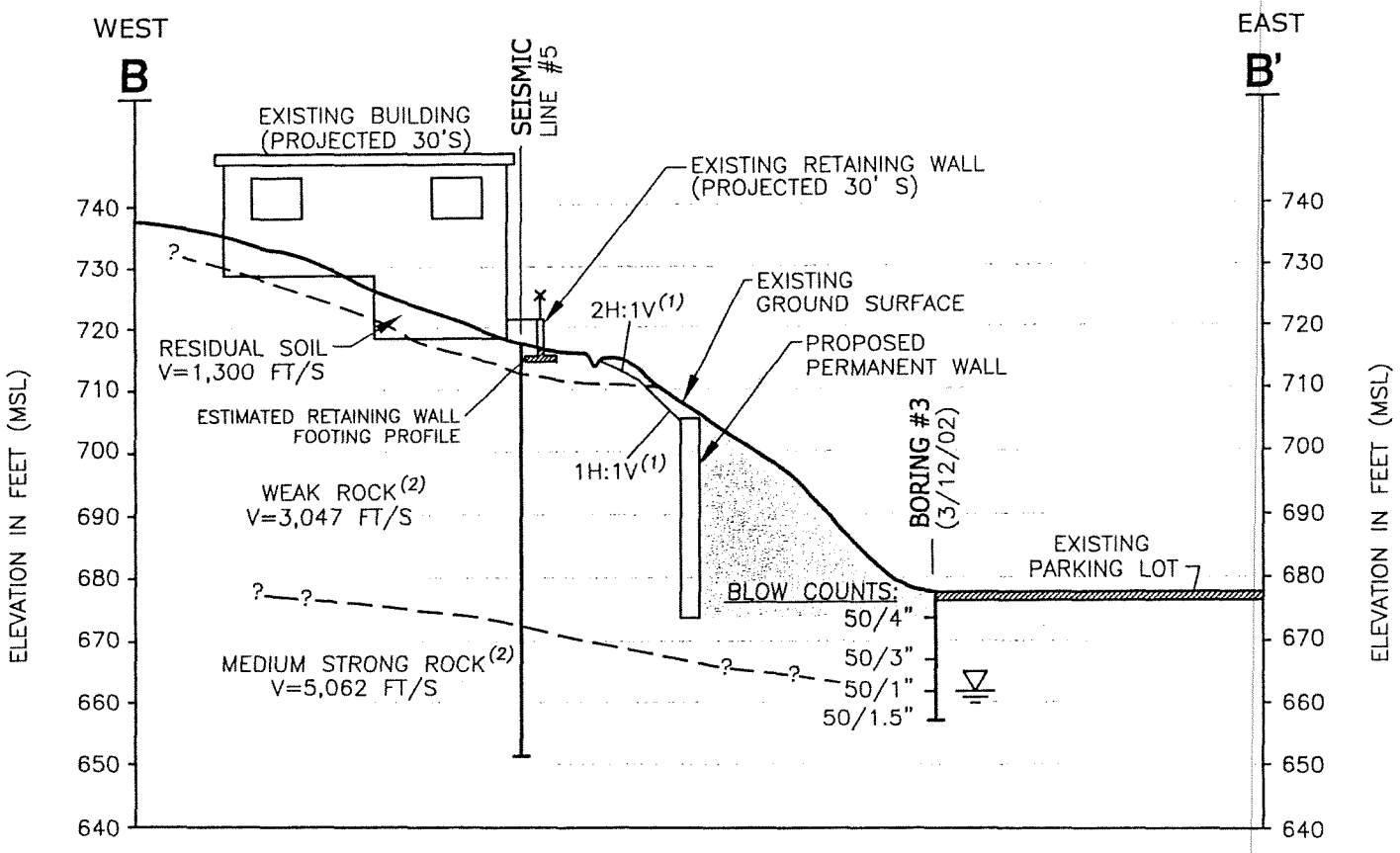
KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

CHECKED BY: KW	FN: 13406XSECT_A-B
PROJECT NO. 13406	DATE: 04/2003

CROSS SECTION A-A'

PROPOSED WAL-MART #93105
ESCONDIDO VILLAGE SHOPPING CENTER
ESCONDIDO, CALIFORNIA

FIGURE
3



NOTES:

1. BACK CUT AT TOP OF WALL SHOULD BE EXCAVATED IN THE UPPER 5 FEET AT 2H:1V THEN TRANSITION TO 1H:1V TO BACK OF WALL. THE EXCAVATION SHOULD NOT START WITHIN 5 FEET OF EXISTING FOUNDATIONS OR BEYOND PROPERTY LINE. PROPERTY LINE NOT INDICATED ON DRAWING.
2. ESTIMATES OF ROCK STRENGTH ARE BASED ON SEISMIC LINE, AIR-TRACK BORINGS, AND ROCK CORE DATA. SEISMIC VELOCITIES (V) WITHIN THE ROCK MASS ARE SHOWN ABOVE, AND WERE EVALUATED FROM THE CORRESPONDING SEISMIC LINE.
3. CROSS-SECTION BASED ON TOPOGRAPHIC AND PRELIMINARY SITE MAPS PROVIDED BY NASLAND ENGINEERING.

LEGEND:

ANTICIPATED EXTENT OF ROCK MASS TO BE REMOVED

APPROXIMATE GROUNDWATER ELEVATION

0 30 60

APPROXIMATE GRAPHIC SCALE (FEET)

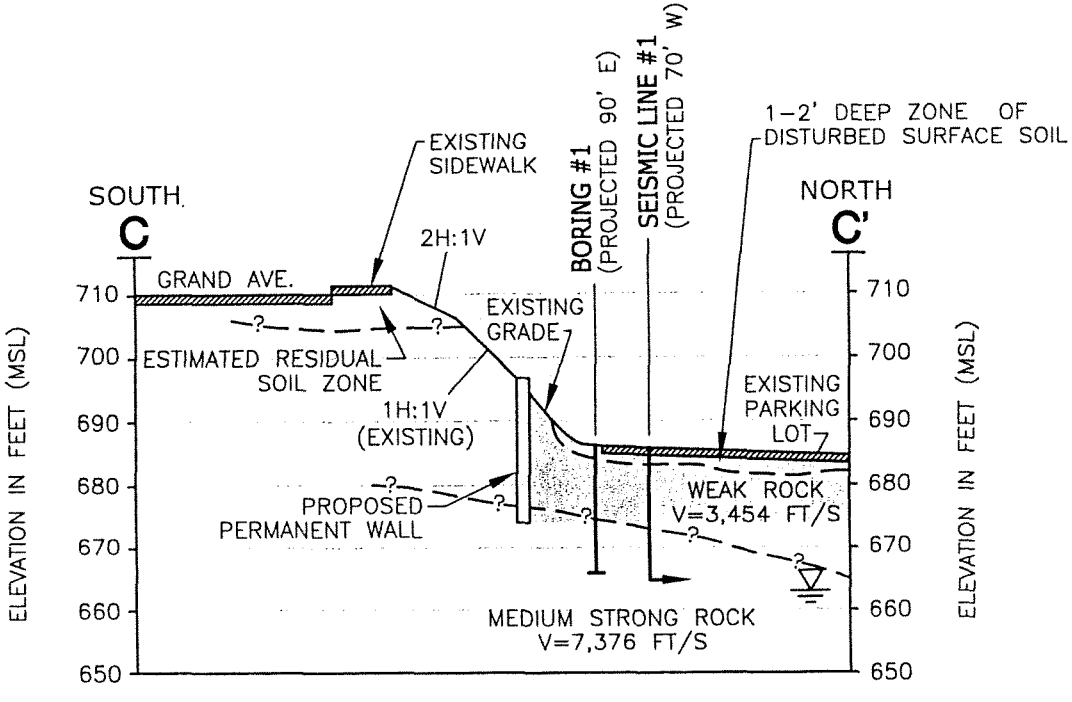
KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

CHECKED BY: KW	FN: 13406XSECT_A-B
PROJECT NO. 13406	DATE: 0/ 03

CROSS SECTION B-B'

PROPOSED WAL-MART #93105
ESCONDIDO VILLAGE SHOPPING CENTER
ESCONDIDO, CALIFORNIA

FIGURE
4



NOTES:

1. EXISTING GRADES GENERALLY MATCH REQUIRED BACKCUT OF 2H:1V IN TOP 5 FEET, AND 1H:1V FOR BACKCUT BELOW 5 FEET TO TOP OF WALL.
2. CROSS-SECTION BASED ON TOPOGRAPHIC AND PRELIMINARY SITE MAPS PROVIDED BY NASLAND ENGINEERING.
3. WALL HEIGHT SHOWN MATCHES THE PROPOSED WALL HEIGHT (TW=697, BW=674) INDICATED ON PRELIMINARY PLANS PROVIDED BY NASLAND ENGINEERING.
4. ESTIMATED GROUNWATER ELEVATION (664 FT) BASED ON GROUNDWATER LEVEL ENCOUNTERED IN BORING #2 ON 3/12/02.

LEGEND:

ANTICIPATED EXTENT OF ROCK MASS TO BE REMOVED

APPROXIMATE GROUNDWATER ELEVATION

0 30 60

APPROXIMATE GRAPHIC SCALE (FEET)

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

CHECKED BY: KW	FN: 13406XSECTS
PROJECT NO. 13406	DATE: 04/2003

CROSS SECTION C-C'

PROPOSED WAL-MART #93105
ESCONDIDO VILLAGE SHOPPING CENTER
ESCONDIDO, CALIFORNIA

FIGURE

5

APPENDIX I

Water Quality Report and Drainage Study

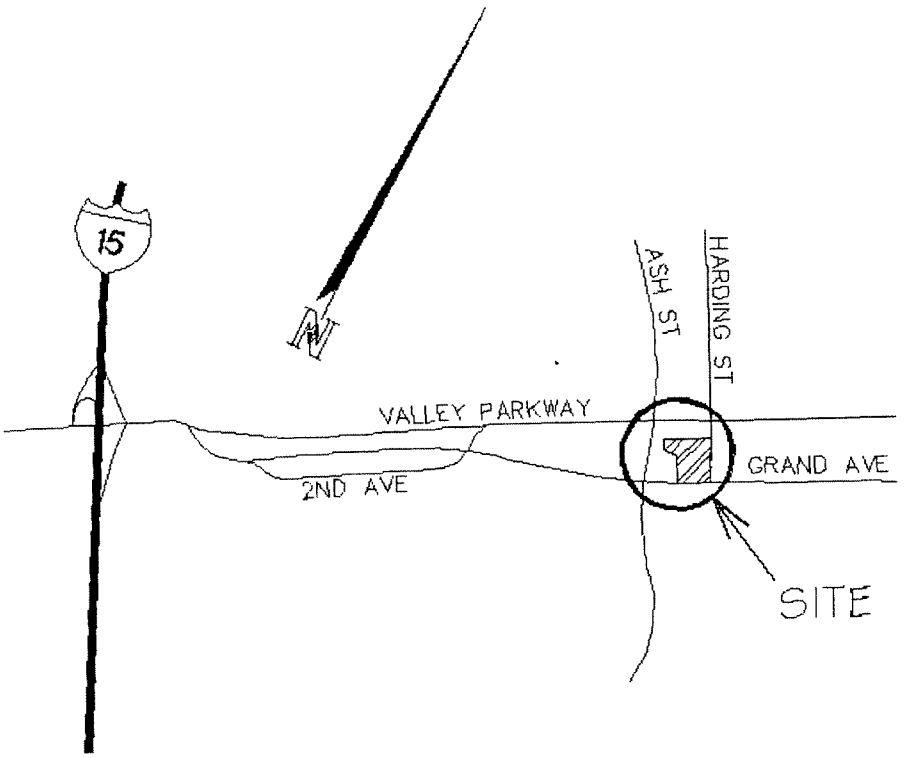
WATER QUALITY TECHNICAL REPORT & DRAINAGE STUDY

FOR

Wal-Mart # 5214
1330 East Grand Ave
Escondido, CA

Prepared by:
Nasland Engineering
4740 Ruffner Street
San Diego, Ca 92111

1.0 VICINITY MAP:



2.0 PROJECT DESCRIPTION:

This project is located on lots 2, 9, and 10 in Block 180 of Rancho Rincon Del Diablo map No. 723 in the city of Escondido of map No. 723. The property is bounded on the south by Grand Avenue and on the west by multi family homes. The Wal-Mart building will be located in the southwest corner of the lot. Currently the lot is used for parking for an existing school administration building located northwest of the lot. This building will be removed and the lot will be paved for future parking.

The storm water runoff from the site currently surface flows along Harding ave and will continue to do so after construction is complete. Erosion Control Measures will be employed as necessary throughout the course of construction and specific Construction Best Management Practices (BMP's) shall be the responsibility of the contractor.

3.0 SITE MAP:

Please Refer to attached Site Maps Figures A & B.

3.1 Drainage

The overall impact to the local drainage basins by this project is that the discharge from the site will be increased from 30.49 cfs to 36.77 cfs. Please refer to attached copy of the Hydrology Study submitted for approval with the Grading Plans for Wal-Mart #5214 for specific drainage information.

3.2 Private Storm Drain Systems

All on site private storm drain information will be found on the improvement plans and grading plans at the City of Escondido.

3.3 Existing Storm Water Controls

Currently, storm water is removed from the property by existing storm drain inlets and flows into an existing 36" RCP line that transfers the drainage to the public storm drain system at East Valley Parkway. The property is located approximately 2 miles from the Escondido Creek. This creek is the nearest body of water to the site.

3.4 Location of Impervious Areas

Please refer to the attached site plans for all impervious areas such as pavement, buildings, and covered areas.

3.5 Location of Building and Activity Areas

All locations of waste containment areas are noted on the site map figure B. Refer to the attached plan for locations.

3.6 Areas of Potential Soil Erosion

Areas of soil erosion may occur along the slope located along the south east side of the property adjacent to Grand Ave and along the west property line. Please refer to the attached site plan for exact location.

4.0 POLLUTANTS AND CONDITIONS OF CONCERN:

4.1 Watershed Information

The watershed management areas as define by Table 2 of the San Diego County Water Quality Manual

Watershed Management Area: Carlsbad WMA
Hydrologic Unit: Carlsbad Hydrologic Unit (904.00)
Basin #: 904.60
Major Stream: Escondido Creek HA
Major Coastal Waters Downstream: San Elijo Lagoon
Pollutant Stressors: Bacterial Indicators
Extent of Impairment: 0.44 miles

4.2 Impaired Downstream Water Bodies Downstream of the Project

The nearest impaired downstream body of water is the San Elijo Lagoon, as stated in Section 303(d) of the San Diego Regional Body Control Board Manual. The extent of impairment of the San Elijo Lagoon is 0.44 miles. The proposed site is approximately 30 miles from the San Elijo Lagoon. It is unlikely that the proposed project will further impact the San Elijo Lagoon.

4.3 Potential Erosion to Downstream Creeks and Channels

Because we anticipate minimizing erosion, erosion will not affect any downstream creeks and channels.

4.4 POLLUTANTS FROM THE PROJECT AREA

The pollutants from the project site as identified in the City of San Diego Standard Urban Stormwater Mitigation Plan Table 1 (pg 12, October 2003) are as follows:

Project Category	*General Pollutants*
Commercial Development greater than 100,000 ft^2	Potential - Sediments - Nutrients - Organic Compounds - Oxygen Demanding Substances - Bacteria& Viruses - Pesticides Anticipated - Trash & Debris - Oil & Grease
Parking Lots	Potential - Sediment - Nutrients - Oxygen Demanding Substances - Pesticides Anticipated - Heavy Metals - Trash & Debris - Oil & Grease

5.0 Types of BMPs:

Site Design *BMPs*

5.1 Reduce Impervious Surface

Because this project is the re-development of an existing commercial area into a newer commercial area the site already has a pre-determined area of impervious surfaces. We are required to maintain a minimum width of sidewalk, parking areas, and roof areas. This means that no space can be used to create potential grass buffer zones. The proposed building and parking area will be constructed property line to property line, as required

by code and regulations and therefore, no reduction of impervious surfaces will be possible.

5.2 Conserve Natural Areas

Because this project is the re-development of an existing developed area and bounded by a shopping center, the site is not currently a natural area. Since the existing site does not have any existing natural areas, there are no natural resources or areas to conserve and use as buffer zones.

5.3 Minimize Directly Connected Areas

Because this project is the re-development of an existing developed area the site is not currently a natural area. However, the previous drainage pattern will be utilized. This means that no further impaction to the local drainage area will be experienced. For further information on the drainage pattern, please refer to the attached Hydrology Study for the project site.

5.4 Project Slopes and Channels

Existing slopes exist on the south end of project adjacent to Grand Ave. and on the west property line. There are no channels in or near the site. The slopes will be planted to control peak storm water runoff discharge rates and velocities to maintain downstream erosion.

Source Control BMPs

5.5 Inlet Stenciling and Signage

A storm water conveyance system will be used on site to collect storm drainage. Storm water will be collected and treated before entering the public storm drain system off site. Stenciling will be used on public storm drain inlets.

5.6 Material Storage

We anticipate that there will be no hazardous materials stored outside the building. Therefore, best management practice is not necessary.

5.7 Trash Storage

This site utilizes an enclosed trash compactor for storage; the probability of storm water run-off coming into direct contact with trash is minimal. Any potential pollutants that could migrate to the storm water collection points inside the parking areas will be collected by the proposed filtration systems discussed later in this report.

5.8 Efficient Irrigation

Because this project is the re-development of an existing developed area into a newer commercial area the proposed landscape is designed as a way to break up the visual lines of the parking areas and building. The irrigation system has been designed such that a minimum amount of water is needed. Therefore, the potential for contamination to due excess irrigation water and exiting the site is at an extreme minimum.

Structural Treatment BMPs – Basis for Selection

5.9 Basis for Selection

Because this project is the re-development of an existing developed area into a newer commercial area, the existing conditions dictate that the best solution is a filtration system. The selected system will need to address all of the targeted pollutants of concern in the highest manner possible as defined in the The Standard Urban Stormwater Mitigation Plan. Our potential pollutants of concern are isolated and described in this report. The most effective Enhanced Treatment Control Best Management Treatment will be to utilize a CDS filtration system.

5.10 Design Criteria

The design criteria for our proposed Enhanced Treatment Control Best Management Practice is that the potential pollutants of concern need to be filtered and settled out before storm water run-off is discharged into the local storm water system. We will be utilizing a CDS Technologies filtration device. These devices are an effective treatment technology that use non-blocking, mechanical screening processes to remove potential pollutants of concern from storm water before it can contaminate local water sources. The CDS Technologies drawings are included at the end of this report for your reference.

5.11 FLOW BASED ANALYSIS

The Standard Urban Stormwater Mitigation Plan states that the flow that must be treated is the 85% percentile flow. This is calculated by the following equation:

$Q = CIA$

C = coefficient of run-off = 0.80
I = intensity = 0.2 in/hr
A = area (acres)

We have one confluence point and therefore:

$Q_A = CIA$
$Q_A = 0.80 \times 0.2_{(in/hr)} \times 10.79_{(ac)}$
$Q_A = 1.73\ ft^3/sec$

Per the Hydrology Study, the comparison of flows is as follows:

CDS Unit Calculation

Basin	$Area_{(ac)}$	c	$I_{(in/hr)}$	$Q_{85\%}$	$Q_{(cfs)}$
1	3.02	0.80	0.20	0.48	10.29
2	0.35	0.80	0.20	0.06	1.19
3	0.64	0.80	0.20	0.10	2.18
4	0.13	0.80	0.20	0.02	0.44
5	0.49	0.80	0.20	0.08	1.67
6	0.1	0.80	0.20	0.02	0.34
7	0.1	0.80	0.20	0.02	0.34
8	0.08	0.80	0.20	0.01	0.27
9	0.52	0.80	0.20	0.08	1.77
10	1.35	0.80	0.20	0.22	4.60
11	2.15	0.80	0.20	0.34	7.33
12	1.86	0.80	0.20	0.30	6.34

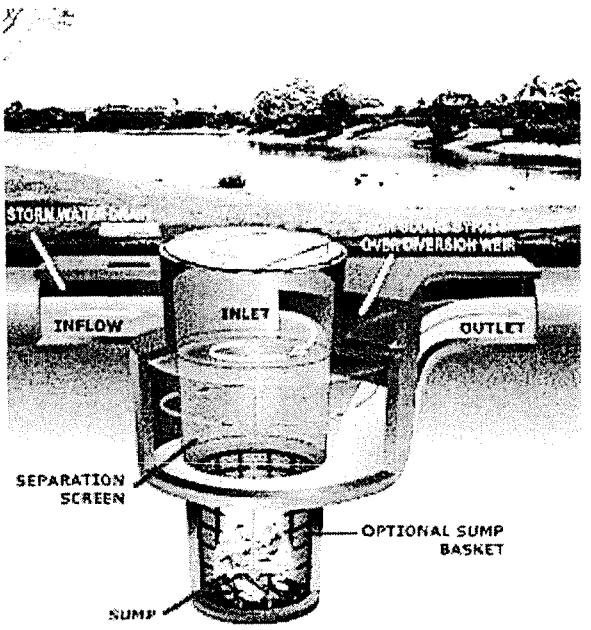
Total Area: $10.79_{(ac)}$ Total $Q_{85\%}$: $1.73_{(cfs)}$

1.73 cfs to be treated.

5.12 Pollutant Removal Information

The Enhanced Treatment Control Best Management Practice that we are recommending is mechanical filtration and separation. We recommend using one CDS Technologies model PMSU20_25 (or approved equal). The CDS system utilizes several techniques to prevent potential pollutants of concern from reaching the existing storm drain system. Incoming Stormwater is diverted into the unit's pollutant separation chamber. The water then passes through a fine-mesh cylindrical screen and flows downstream, while solids are kept in continuous motion by the swirling flow of the water. Heavier solids settle into a catchment sump. This sump is periodically emptied by a vacuum truck. To prevent solids from blocking the screen, the flow of the water is balanced so that the force of the flow around the chamber is greater than the centrifugal force pushing pollutants outward toward the screen. In addition to allowing trash &

debris to settle out, the system also utilizes a conventional oil baffle to control oil, grease, and heavy metals from reaching the storm drain system. With the addition of sorbent materials, the system can capture efficiency of up to 90%. This system captures and retains 100% of floatable and other materials greater than the screen opening. A diagram of a typical CDS Technologies system is provided here.



5.13 Literature References

Technical information pertaining to the selected structure treatment best management practice was obtained from the CDS Technologies website. This website is http://www.cdstech.com. In addition, CDS Technologies drawings are attached at the end of this report.

6.0 Maintenance:

6.1 Maintenance Schedule

Maintenance is a major part of any successful Enhanced Treatment Control Best Management Practice. The system that we are recommending is no exception. The manufacture recommends that the system be cleaned at regular intervals and their system has a few maintenance alternatives. This system can be serviced by a vacuum truck or by utilizing a sump basket. The unit should also be drained and inspected at standard intervals to insure that the internal components are still properly intact so that the system can be used efficiently and continuously. In addition, floatable materials should be removed and the sump cleaned when the surface is above 85% full. At least once a year the unit is to be drained completely and the screens should be inspected. It shall be the responsibility of the owner to execute a maintenance agreement to meet these minimum maintenance guidelines.

6.2 Maintenance Cost

The manufacturer specifies for that the mentioned unit has an approximate annual maintenance cost of around $1,200. Compared to the approximately $26,000 cost for installation of the catch-basin inserts with annual maintenance costs of around $8,000. CDS units with a cost of $20,000 would eventually pay for themselves in less than three years.

6.3 Qualifications of Maintenance Personnel

The owner of the property will be responsible for assigning qualified maintenance personnel to periodically inspect and clean out the CDS unit. During the rainy season the unit will be inspected and cleaned after each significant storm. During the dry season, the unit will need to be inspected quarterly and cleaned if necessary. The qualified personnel will need to use a "Vactor Truck" or equivalent type of vacuum for maintenance. The maintenance will easily and efficiently vacuum up any floating trash and collected solids from the CDS unit, ensuring that the system continues to operate as designed.

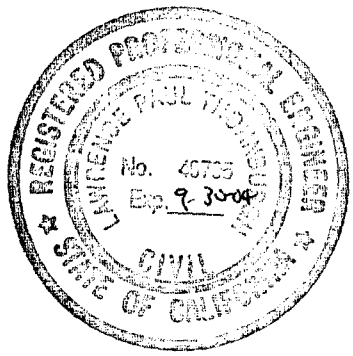
Conclusion

The most effective means of treating the targeted pollutants of concern for this project is to use an Enhanced Treatment Control Best Management Practice as detailed in this report.
This filtration device is the best option from Table 3, Enhanced Treatment Control Best Management Practices in the County of San Diego Standard Urban Stormwater Mitigation Plan.
Since this project is the redevelopment of commercial property into more commercial property, no other Best Management Practices come close to treating the potential pollutants of concern like the detailed CDS unit.

Engineer of Work

The Engineer of Work is Larry P. Thornburgh with Nasland Engineering.

Lawrence Thornburgh
RCE 49795
Expires 9/30/2004



DRAINAGE STUDY

Existing Conditions:

The existing drainage pattern flows generally from the South (Grand Ave) to the North, see Figure A. Rainfall in the main parking area is currently collected by three grated inlets and routed out of the property to an existing 36" RCP storm drain. The 36" RCP flows north along Harding ave and is transferred to the public storm drain system along East Valley Parkway.

Proposed Conditions:

The proposed conditions will leave the drainage patterns relatively unchanged, see figure B. Rainwater will still flow generally from the south (Grand Ave) to the north. The Wal-Mart building will drain to five roof drains that will connect to the proposed stormdrain system.

The proposed design will increase the current amount of stormwater discharge compared to existing conditions. The proposed flows from the site are Q_{Total} = 36.77 cfs, an increase of 6.28 cfs from existing conditions. At the offsite discharge point a CDS stormwater unit will be installed to remove any pollutants from stormwater runoff.

According to the Escondido Master Drainage Plan, Basin E-201 dated June 13, 1994, a 12" PVC pipe is connected to the existing 42" RCP. The proposed stormdrain system 36.77 cfs combined with this existing 12" pvc 12.07 pvc will increase the total cfs flow to the existing 42" RCP to 48.84 cfs. (see attached calculations). Based on the pipe sizing Land Development Desktop pipe calculator, the 42" RCP is adequate to take this increase in flow.

On-Site Erosion control and Best Management Practices will be employed as required throughout the course of construction.

HYDROLOGY

Methodology:

The 50-year storm runoffs were calculated using the Rational Formula Method. As is required by the City of Escondido Stormwater Guidelines. The following data was used for runoff calculations:

Intensity	4.26 In/Hr
Coefficient of runoff (existing)	see pipe calculations
Coefficient of runoff (proposed)	0.80
Development type	Commercial
Area of drainage Basin	Varies Acres

The peak flow rate formula (Q = CIA) was used to calculate the runoffs.

Q = The peak flow rate in cubic feet per second.
C = The runoff coefficient expressed as that percentage of rainfall which becomes surface runoff.
I = The average rainfall intensity in inches per hour for a storm duration equal to the time of concentration of the contributing drainage area.
A = The drainage area in acres tributary to the design point.

The runoff coefficient C was found from table 3-1 in the San Diego County Hydrology Manual. The soils group map (attached) was used to determine the appropriate soil group for the site. The Intensity (I) for each basin was determined from Table 3-2 in the San Diego County Hydrology Manual. (an example is attached). The times of concentration Tc for each basin were calculated from table 3-4 (attached).

Summary of Proposed runoff: (see drainage map, Figure B)

Q_A = 13.02 c.f.s.

Q_B = 23.75 c.f.s.

Q_C = 36.77 c.f.s.

Q_A, Q_B, and Q_C Total 36.77 c.f.s. and will flow into the existing 42" RCP existing storm drain.

Note:
See attached Exhibit, charts, and graphs used for hydrologic calculations.

Summary of Proposed Drainage Features: (See Figure B)

For pipe sizing Land Development Desktop pipe calculator was used for circular flow.

Pipe #	Pipe Diameter	Type
Pipe 1	18"	Private PVC SDR-35
Pipe 2	18"	Private PVC SDR-35
Pipe 3	18"	Private PVC SDR-35
Pipe 4	6"	Private PVC SDR-35
Pipe 5	18"	Private PVC SDR-35
Pipe 6	24"	Private PVC SDR-35
Pipe 7	36"	RCP
Pipe 8	8"	Private PVC SDR-35

Pipe 9	12"	Private PVC SDR-35
Pipe 10	12"	Private PVC SDR-35
Pipe 11	15"	Private PVC SDR-35
Pipe 12	18"	Private PVC SDR-35
Pipe 13	24"	RCP
Pipe 14	24"	Private PVC SDR-35

PIPE CALCULATIONS

Existing Conditions Calculations

Basin	Area
1	1.52
2	1.58
3	1.07
4	3.43
5	3.19
Total Area	10.79

Basin 1

Soils Group:	B
Land Use:	General Comm.
Runoff Coeff:	0.80
Area (ac):	1.52
Intensity (in/hr):	3.76
Flow Rate (cfs):	4.57

Basin 2

Soils Group:	B
Land Use:	General Comm.
Runoff Coeff:	0.58
Area (ac):	1.58
Intensity (in/hr):	4.20
Flow Rate (cfs):	3.85

Basin 3

Soils Group:	B
Land Use:	General Comm.
Runoff Coeff:	0.32
Area (ac):	1.07
Intensity (in/hr):	3.53
Flow Rate (cfs):	1.21

Total Q: 30.49

Basin 4

Soils Group:	B
Land Use:	General Comm.
Runoff Coeff:	0.73
Area (ac):	3.43
Intensity (in/hr):	4.13
Flow Rate (cfs):	10.34

Basin 5

Soils Group:	B
Land Use:	General Comm.
Runoff Coeff:	0.80
Area (ac):	3.19
Intensity (in/hr):	4.12
Flow Rate (cfs):	10.51

posed Conditions Calculations

Basin	Area	n	I	Q
1	3.02	0.80	4.26	10.29
2	0.35	0.80	4.26	1.19
3	0.64	0.80	4.26	2.18
4	0.13	0.80	4.26	0.44
5	0.49	0.80	4.26	1.67
6	0.10	0.80	4.26	0.34
7	0.10	0.80	4.26	0.34
8	0.08	0.80	4.26	0.27
9	0.52	0.80	4.26	1.77
10	1.35	0.80	4.26	4.60
11	2.15	0.80	4.26	7.33
12	1.86	0.80	4.26	6.34

Total Area: 10.79 Total Q: 36.77

pe Calculations for System A

Pipe 1	DRAIN BASIN 1	10.29	1%	Use 18" Pipe
Pipe 2	DRAIN BASIN 6 + PIPE 1	10.63	1%	Use 18" Pipe
Pipe 3	DRAIN BASIN 7 + PIPE 2	10.97	1%	Use 18" Pipe
Pipe 4	DRAIN BASIN 8	0.27	1%	Use 6" Pipe
Pipe 5	DRAIN PIPE 3 + PIPE 4	11.25	1%	Use 18" Pipe
Pipe 6	DRAIN BASIN 9 + PIPE 5	13.02	1%	Use 24" Pipe
	Total Q_A:	13.02		

Pipe Calculations for System B

Pipe 8	DRAIN BASIN 2	1.19	1%	Use 8" Pipe
Pipe 9	DRAIN BASIN 4 + BASIN 5 + PIPE 8	3.31	1%	Use 12" Pipe
Pipe 10	DRAINS BASIN 3	2.18	1%	Use 12" Pipe
Pipe 11	PIPE 9 + PIPE 10	5.49	1%	Use 15" Pipe
Pipe 12	DRAINS BASIN 10 + PIPE 11	10.09	1%	Use 18" Pipe
Pipe 13	DRAINS BASIN 11 + PIPE 12	17.41	1%	Use 24" Pipe
Pipe 14	DRAINS BASIN 12 + PIPE 13	23.75	1%	Use 24" Pipe
	Total Q_B:	23.75		

Pipe Calculations for System C

Pipe 7	DRAINS PIPE SYSTEMS A AND B	36.77	1%	Use 36" Pipe
	Total Q_{Total}:	36.77		

Calculation Connection to Existing 42" RCP

Existing 48" RCP	DRAINS PROPOSED PIPE SYSTEM A & B + EXISTING 12" PVC PIPE @ 12.07 cfs	48.84	
	Total Q ex & pro:	48.84	

CDS Unit Calculation

Basin	Area	n	I	Q
1	3.02	0.80	0.20	0.48
2	0.35	0.80	0.20	0.06
3	0.64	0.80	0.20	0.10
4	0.13	0.80	0.20	0.02
5	0.49	0.80	0.20	0.08
6	0.1	0.80	0.20	0.02
7	0.1	0.80	0.20	0.02
8	0.08	0.80	0.20	0.01
9	0.52	0.80	0.20	0.08
10	1.35	0.80	0.20	0.22
11	2.15	0.80	0.20	0.34
12	1.86	0.80	0.20	0.30
Total Area:	10.79		Total Q:	1.73

PIPE 1

Manning Pipe Calculator

Given Input Data:

Shape	Circular
Solving for	Depth of Flow
Diameter	18.0000 in
Flowrate	10.2900 cfs
Slope	0.0100 ft/ft
Manning's n	0.0130

Computed Results:

Depth	14.4321 in
Area	1.7671 ft2
Wetted Area	1.5187 ft2
Wetted Perimeter	39.9377 in
Perimeter	56.5487 in
Velocity	6.7753 fps
Hydraulic Radius	5.4760 in
Percent Full	80.1782 %
Full flow Flowrate	10.5043 cfs
Full flow velocity	5.9442 fps

PIPE 2

Manning Pipe Calculator

Given Input Data:

Shape	Circular
Solving for	Depth of Flow
Diameter	18.0000 in
Flowrate	10.6300 cfs
Slope	0.0100 ft/ft
Manning's n	0.0130

Computed Results:

Depth	14.9561 in
Area	1.7671 ft2
Wetted Area	1.5695 ft2
Wetted Perimeter	41.2921 in
Perimeter	56.5487 in
Velocity	6.7731 fps
Hydraulic Radius	5.4732 in
Percent Full	83.0897 %
Full flow Flowrate	10.5043 cfs
Full flow velocity	5.9442 fps

PIPE 3

Manning Pipe Calculator

Given Input Data:

Shape	Circular
Solving for	Depth of Flow
Diameter	18.0000 in
Flowrate	10.9700 cfs
Slope	0.0100 ft/ft
Manning's n	0.0130

Computed Results:

Depth	15.5961 in
Area	1.7671 ft2
Wetted Area	1.6267 ft2
Wetted Perimeter	43.0807 in
Perimeter	56.5487 in
Velocity	6.7435 fps
Hydraulic Radius	5.4375 in
Percent Full	86.6450 %
Full flow Flowrate	10.5043 cfs
Full flow velocity	5.9442 fps

PIPE 4

Manning Pipe Calculator

Given Input Data:

Shape	Circular
Solving for	Depth of Flow
Diameter	6.0000 in
Flowrate	0.2700 cfs
Slope	0.0100 ft/ft
Manning's n	0.0130

Computed Results:

Depth	2.9333 in
Area	0.1963 ft2
Wetted Area	0.0954 ft2
Wetted Perimeter	9.2914 in
Perimeter	18.8496 in
Velocity	2.8303 fps
Hydraulic Radius	1.4785 in
Percent Full	48.8887 %
Full flow Flowrate	0.5611 cfs
Full flow velocity	2.8577 fps

PIPE 5

Manning Pipe Calculator

Given Input Data:

Shape	Circular
Solving for	Depth of Flow
Diameter	18.0000 in
Flowrate	11.2500 cfs
Slope	0.0100 ft/ft
Manning's n	0.0130

Computed Results:

Depth	16.4239 in
Area	1.7671 ft2
Wetted Area	1.6915 ft2
Wetted Perimeter	45.7341 in
Perimeter	56.5487 in
Velocity	6.6509 fps
Hydraulic Radius	5.3259 in
Percent Full	91.2440 %
Full flow Flowrate	10.5043 cfs
Full flow velocity	5.9442 fps

PIPE 6

Manning Pipe Calculator

Given Input Data:

Shape	Circular
Solving for	Depth of Flow
Diameter	24.0000 in
Flowrate	13.0200 cfs
Slope	0.0100 ft/ft
Manning's n	0.0130

Computed Results:

Depth	13.0584 in
Area	3.1416 ft2
Wetted Area	1.7470 ft2
Wetted Perimeter	39.8186 in
Perimeter	75.3982 in
Velocity	7.4529 fps
Hydraulic Radius	6.3177 in
Percent Full	54.4098 %
Full flow Flowrate	22.6224 cfs
Full flow velocity	7.2009 fps

PIPE 7

Manning Pipe Calculator

Given Input Data:

Shape	Circular
Solving for	Depth of Flow
Diameter	36.0000 in
Flowrate	36.7700 cfs
Slope	0.0100 ft/ft
Manning's n	0.0130

Computed Results:

Depth	19.0803 in
Area	7.0686 ft2
Wetted Area	3.8042 ft2
Wetted Perimeter	58.7107 in
Perimeter	113.0973 in
Velocity	9.6656 fps
Hydraulic Radius	9.3306 in
Percent Full	53.0010 %
Full flow Flowrate	66.6984 cfs
Full flow velocity	9.4359 fps

PIPE 8

Manning Pipe Calculator

Given Input Data:

Shape ..... Circular
Solving for ..... Depth of Flow
Diameter ..... 8.0000 in
Flowrate ..... 1.1900 cfs
Slope ..... 0.0100 ft/ft
Manning's n 0.0130

Computed Results:

Depth ..... 6.4493 in
Area 0.3491 ft2
Wetted Area 0.3015 ft2
Wetted Perimeter ..... 17.8384 in
Perimeter ..... 25.1327 in
Velocity ..... 3.9463 fps
Hydraulic Radius ..... 2.4342 in
Percent Full ..... 80.6165 %
Full flow Flowrate ..... 1.2084 cfs
Full flow velocity ..... 3.4618 fps

PIPE 9

Manning Pipe Calculator

Given Input Data:

Shape	Circular
Solving for	Depth of Flow
Diameter	12.0000 in
Flowrate	3.3100 cfs
Slope	0.0100 ft/ft
Manning's n	0.0130

Computed Results:

Depth	9.1482 in
Area	0.7854 ft2
Wetted Area	0.6425 ft2
Wetted Perimeter	25.4779 in
Perimeter	37.6991 in
Velocity	5.1521 fps
Hydraulic Radius	3.6311 in
Percent Full	76.2351 %
Full flow Flowrate	3.5628 cfs
Full flow velocity	4.5363 fps

PIPE 10

Manning Pipe Calculator

Given Input Data:

Shape	Circular
Solving for	Depth of Flow
Diameter	12.0000 in
Flowrate	2.1800 cfs
Slope	0.0100 ft/ft
Manning's n	0.0130

Computed Results:

Depth	6.7820 in
Area	0.7854 ft2
Wetted Area	0.4577 ft2
Wetted Perimeter	20.4180 in
Perimeter	37.6991 in
Velocity	4.7632 fps
Hydraulic Radius	3.2278 in
Percent Full	56.5165 %
Full flow Flowrate	3.5628 cfs
Full flow velocity	4.5363 fps

PIPE 11

Manning Pipe Calculator

Given Input Data:

Shape	Circular
Solving for	Depth of Flow
Diameter	15.0000 in
Flowrate	5.4900 cfs
Slope	0.0100 ft/ft
Manning's n	0.0130

Computed Results:

Depth	10.6220 in
Area	1.2272 ft2
Wetted Area	0.9292 ft2
Wetted Perimeter	30.0020 in
Perimeter	47.1239 in
Velocity	5.9086 fps
Hydraulic Radius	4.4596 in
Percent Full	70.8135 %
Full flow Flowrate	6.4598 cfs
Full flow velocity	5.2639 fps

PIPE 12

Manning Pipe Calculator

Given Input Data:

Shape	Circular
Solving for	Depth of Flow
Diameter	18.0000 in
Flowrate	10.0900 cfs
Slope	0.0100 ft/ft
Manning's n	0.0130

Computed Results:

Depth	14.1530 in
Area	1.7671 ft2
Wetted Area	1.4905 ft2
Wetted Perimeter	39.2475 in
Perimeter	56.5487 in
Velocity	6.7694 fps
Hydraulic Radius	5.4688 in
Percent Full	78.6279 %
Full flow Flowrate	10.5043 cfs
Full flow velocity	5.9442 fps

PIPE 13

Manning Pipe Calculator

Given Input Data:

Shape	Circular
Solving for	Depth of Flow
Diameter	24.0000 in
Flowrate	17.4100 cfs
Slope	0.0100 ft/ft
Manning's n	0.0130

Computed Results:

Depth	15.7911 in
Area	3.1416 ft2
Wetted Area	2.1920 ft2
Wetted Perimeter	45.4135 in
Perimeter	75.3982 in
Velocity	7.9426 fps
Hydraulic Radius	6.9505 in
Percent Full	65.7963 %
Full flow Flowrate	22.6224 cfs
Full flow velocity	7.2009 fps

PIPE 14

Manning Pipe Calculator

Given Input Data:

Shape ..... Circular
Solving for ..... Depth of Flow
Diameter ..... 24.0000 in
Flowrate ..... 23.7500 cfs
Slope ..... 0.0100 ft/ft
Manning's n 0.0130

Computed Results:

Depth ..... 20.9704 in
Area 3.1416 ft2
Wetted Area 2.9117 ft2
Wetted Perimeter ..... 57.9633 in
Perimeter ..... 75.3982 in
Velocity ..... 8.1568 fps
Hydraulic Radius ..... 7.2335 in
Percent Full ..... 87.3766 %
Full flow Flowrate ..... 22.6224 cfs
Full flow velocity ..... 7.2009 fps

Calculation Connection to Existing 42" RCP

Manning Pipe Calculator

Given Input Data:

Shape	Circular
Solving for	Depth of Flow
Diameter	42.0000 in
Flowrate	48.8400 cfs
Slope	0.0100 ft/ft
Manning's n	0.0130

Computed Results:

Depth	20.6389 in
Area	9.6211 ft2
Wetted Area	4.7053 ft2
Wetted Perimeter	65.2513 in
Perimeter	131.9469 in
Velocity	10.3799 fps
Hydraulic Radius	10.3838 in
Percent Full	49.1403 %
Full flow Flowrate	100.6098 cfs
Full flow velocity	10.4572 fps

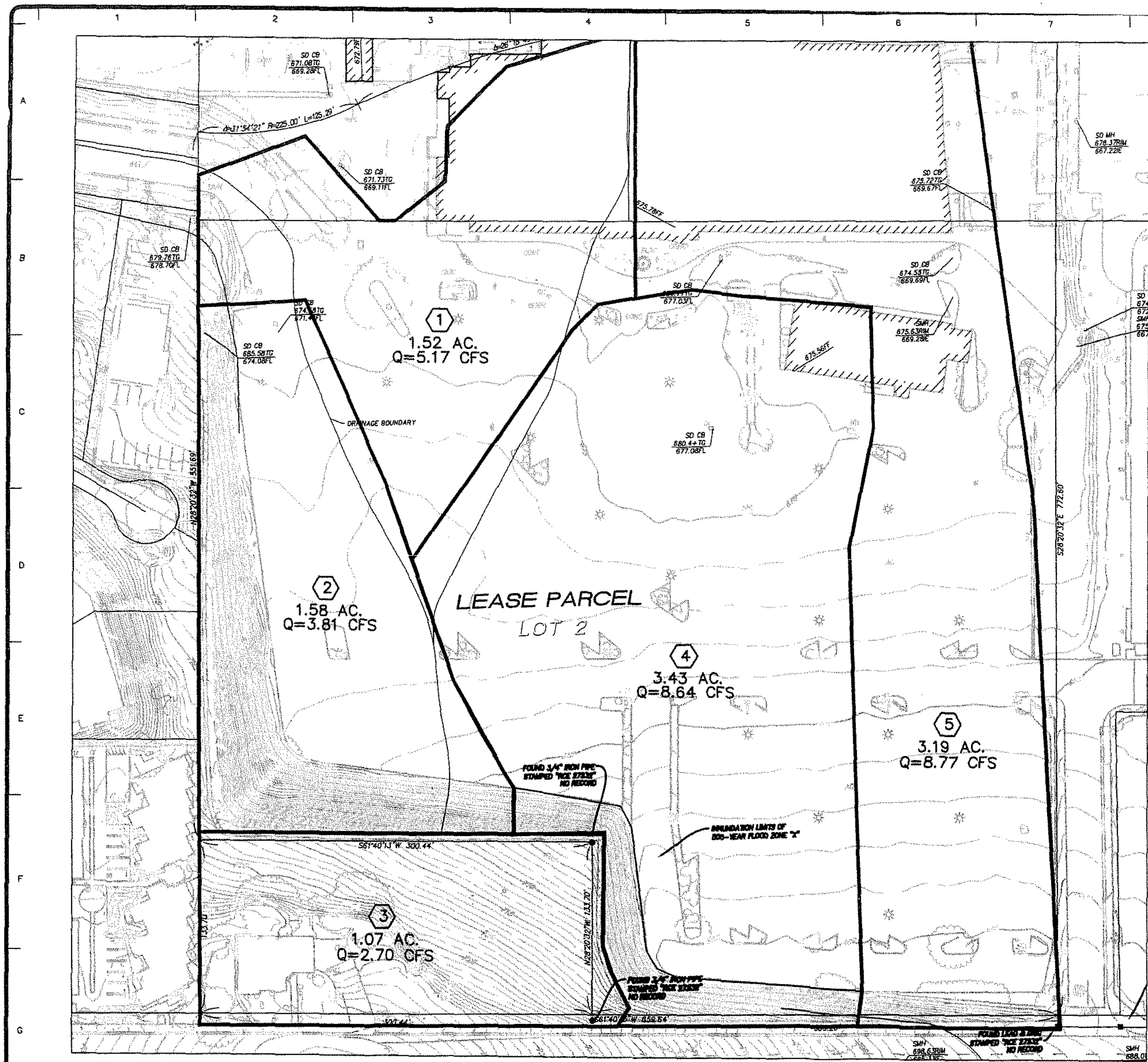


FIGURE A
HYDROLOGY MAP
EXISTING CONDITIONS

NASLAND ENGINEERING

REVISIONS	BY

DRAWN
CHECKED
LARRY P. THORNBURGH
DATE
04/28/03
SCALE
AS SHOWN
JOB No.
100-120.1

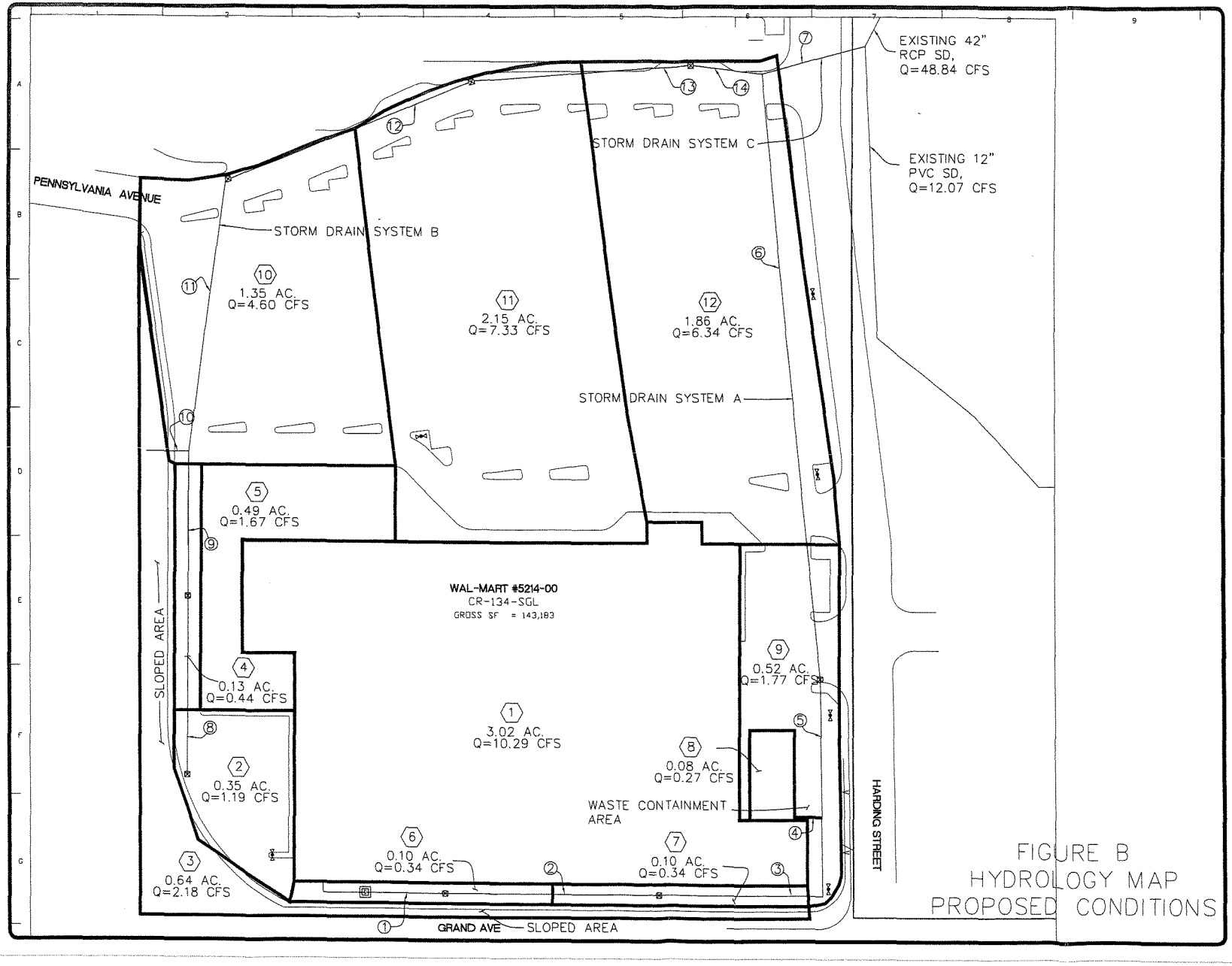


FIGURE B
HYDROLOGY MAP
PROPOSED CONDITIONS

REVISIONS BY

NASLAND ENGINEERING

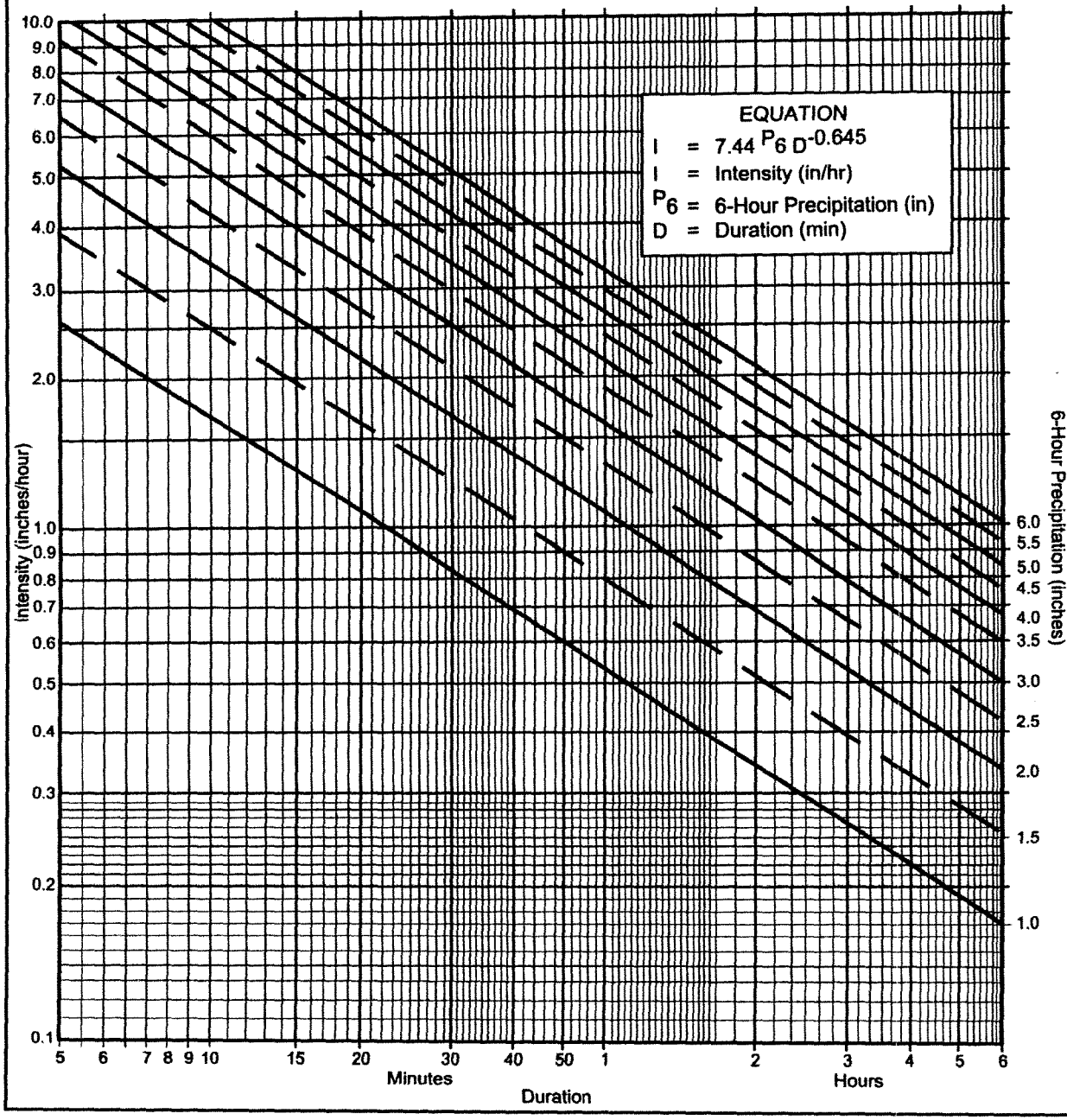
DRAWN: AC/PR
CHECKED: LARRY P. THORNBURGH
DATE: 03/01/04
SCALE: AS SHOWN
JOB No.: 100-120.1

Table 3-1
RUNOFF COEFFICIENTS FOR URBAN AREAS

Land Use		Runoff Coefficient "C"				
			Soil Type			
NRCS Elements	County Elements	% IMPER.	A	B	C	D
Undisturbed Natural Terrain (Natural)	Permanent Open Space	0*	0.20	0.25	0.30	0.35
Low Density Residential (LDR)	Residential, 1.0 DU/A or less	10	0.27	0.32	0.36	0.41
Low Density Residential (LDR)	Residential, 2.0 DU/A or less	20	0.34	0.38	0.42	0.46
Low Density Residential (LDR)	Residential, 2.9 DU/A or less	25	0.38	0.41	0.45	0.49
Medium Density Residential (MDR)	Residential, 4.3 DU/A or less	30	0.41	0.45	0.48	0.52
Medium Density Residential (MDR)	Residential, 7.3 DU/A or less	40	0.48	0.51	0.54	0.57
Medium Density Residential (MDR)	Residential, 10.9 DU/A or less	45	0.52	0.54	0.57	0.60
Medium Density Residential (MDR)	Residential, 14.5 DU/A or less	50	0.55	0.58	0.60	0.63
High Density Residential (HDR)	Residential, 24.0 DU/A or less	65	0.66	0.67	0.69	0.71
High Density Residential (HDR)	Residential, 43.0 DU/A or less	80	0.76	0.77	0.78	0.79
Commercial/Industrial (N. Com)	Neighborhood Commercial	80	0.76	0.77	0.78	0.79
Commercial/Industrial (G. Com)	General Commercial	85	0.80	0.80	0.81	0.82
Commercial/Industrial (O.P. Com)	Office Professional/Commercial	90	0.83	0.84	0.84	0.85
Commercial/Industrial (Limited I.)	Limited Industrial	90	0.83	0.84	0.84	0.85
Commercial/Industrial (General I.)	General Industrial	95	0.87	0.87	0.87	0.87

*The values associated with 0% impervious may be used for direct calculation of the runoff coefficient as described in Section 3.1.2 (representing the pervious runoff coefficient, Cp, for the soil type), or for areas that will remain undisturbed in perpetuity. Justification must be given that the area will remain natural forever (e.g., the area is located in Cleveland National Forest).
DU/A = dwelling units per acre
NRCS = National Resources Conservation Service

PROPOSED



Directions for Application:

(1) From precipitation maps determine 6 hr and 24 hr amounts for the selected frequency. These maps are included in the County Hydrology Manual (10, 50, and 100 yr maps included in the Design and Procedure Manual).

(2) Adjust 6 hr precipitation (if necessary) so that it is within the range of 45% to 65% of the 24 hr precipitation (not applicaple to Desert).

(3) Plot 6 hr precipitation on the right side of the chart.

(4) Draw a line through the point parallel to the plotted lines.

(5) This line is the intensity-duration curve for the location being analyzed.

Application Form:

(a) Selected frequency 50 year

(b) P_6 = 2.9 in., P_{24} = 6.2, $\frac{P_6}{P_{24}}$ = 46 %(2)

(c) Adjusted P_6(2) = 2.9 in.

(d) t_x = 12.36 min.

(e) I = 4.85 in./hr.

Note: This chart replaces the Intensity-Duration-Frequency curves used since 1965.

P6	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
Duration	I	I	I	I	I	I	I	I	I	I	I
5	2.63	3.95	5.27	6.59	7.90	9.22	10.54	11.86	13.17	14.49	15.81
7	2.12	3.18	4.24	5.30	6.36	7.42	8.48	9.54	10.60	11.66	12.72
10	1.68	2.53	3.37	4.21	5.05	5.90	6.74	7.58	8.42	9.27	10.11
15	1.30	1.95	2.59	3.24	3.89	4.54	5.19	5.84	6.49	7.13	7.78
20	1.08	1.62	2.15	2.69	3.23	3.77	4.31	4.85	5.39	5.93	6.46
25	0.93	1.40	1.87	2.33	2.80	3.27	3.73	4.20	4.67	5.13	5.60
30	0.83	1.24	1.66	2.07	2.49	2.90	3.32	3.73	4.15	4.56	4.98
40	0.69	1.03	1.38	1.72	2.07	2.41	2.76	3.10	3.45	3.79	4.13
50	0.60	0.90	1.19	1.49	1.79	2.09	2.39	2.69	2.98	3.28	3.58
60	0.53	0.80	1.06	1.33	1.59	1.86	2.12	2.39	2.65	2.92	3.18
90	0.41	0.61	0.82	1.02	1.23	1.43	1.63	1.84	2.04	2.25	2.45
120	0.34	0.51	0.68	0.85	1.02	1.19	1.36	1.53	1.70	1.87	2.04
150	0.29	0.44	0.59	0.73	0.88	1.03	1.18	1.32	1.47	1.62	1.76
180	0.26	0.39	0.52	0.65	0.78	0.91	1.04	1.18	1.31	1.44	1.57
240	0.22	0.33	0.43	0.54	0.65	0.76	0.87	0.98	1.08	1.19	1.30
300	0.19	0.28	0.38	0.47	0.56	0.66	0.75	0.85	0.94	1.03	1.13
360	0.17	0.25	0.33	0.42	0.50	0.58	0.67	0.75	0.84	0.92	1.00

Intensity-Duration Design Chart - Template

FIGURE 3-1

County of San Diego Hydrology Manual

Soil Hydrologic Groups

Legend

Soil Groups

- Group A
- Group B
- Group C
- Group D
- Undetermined
- Data Unavailable

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W E
S

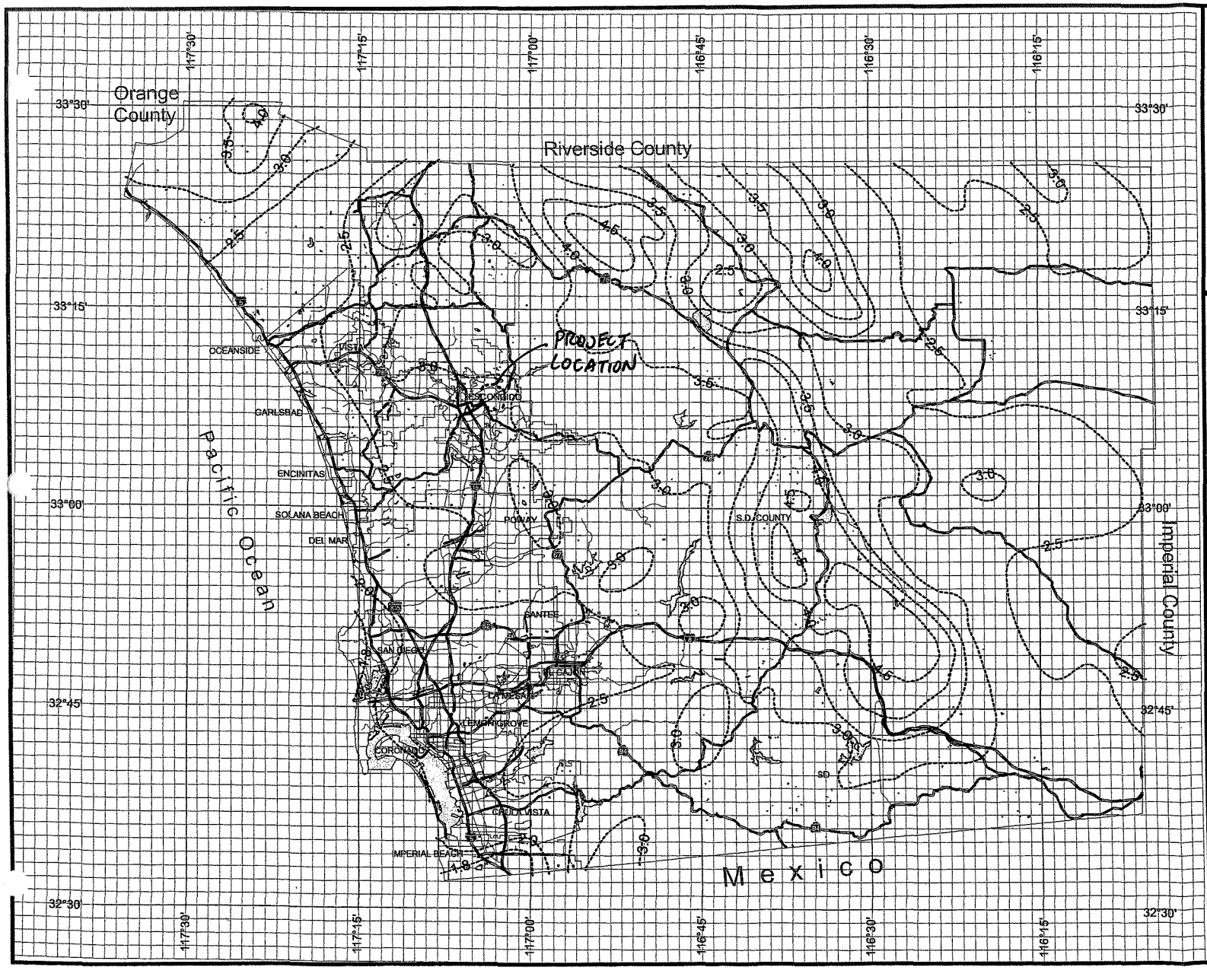
3 0 3 Miles

County of San Diego Hydrology Manual

Rainfall Isopluvials

50 Year Rainfall Event - 6 Hours

--------- Isopluvial (inches)



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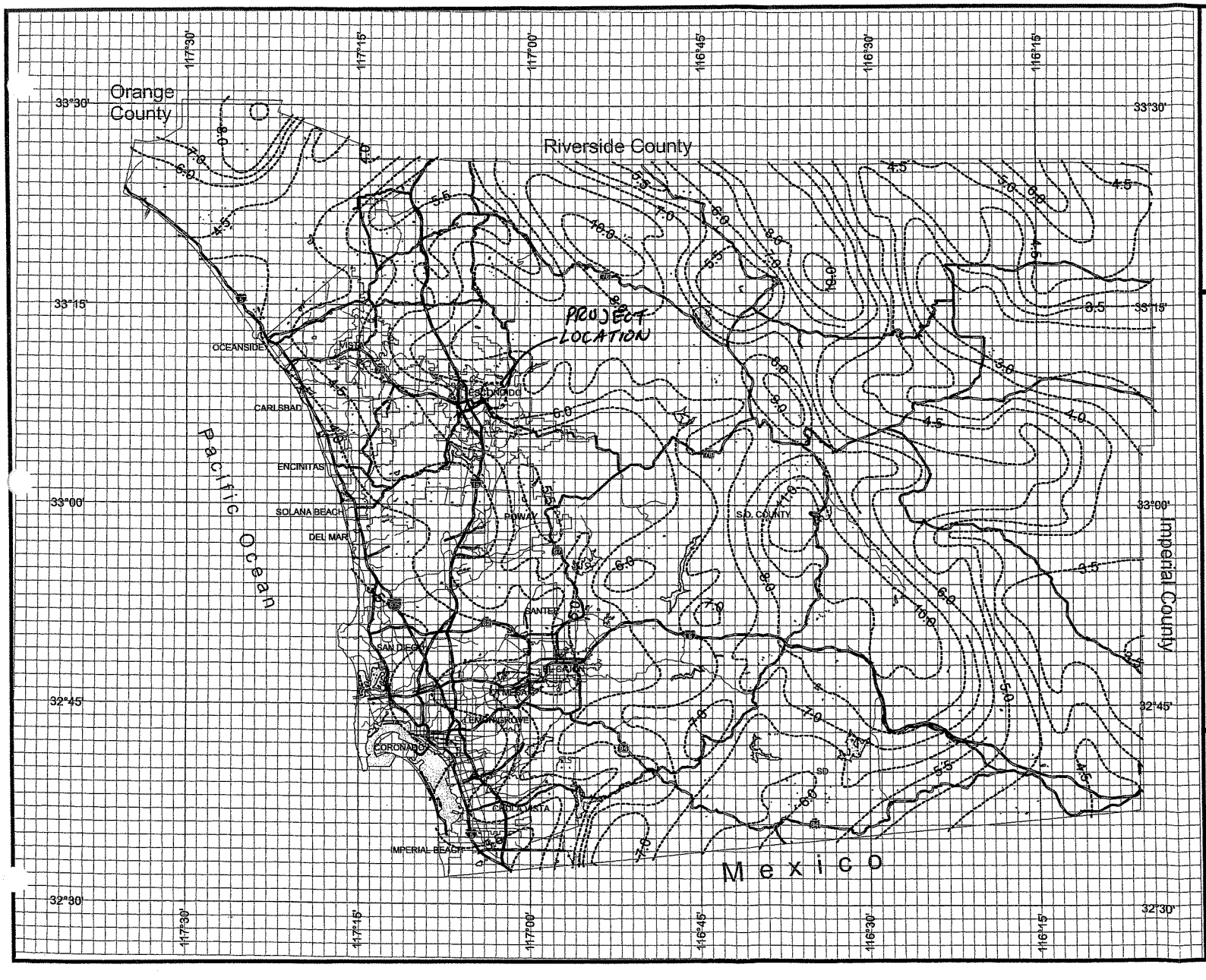
County of San Diego Hydrology Manual

Rainfall Isopluvials

50 Year Rainfall Event - 24 Hours

Isopluvial (inches)



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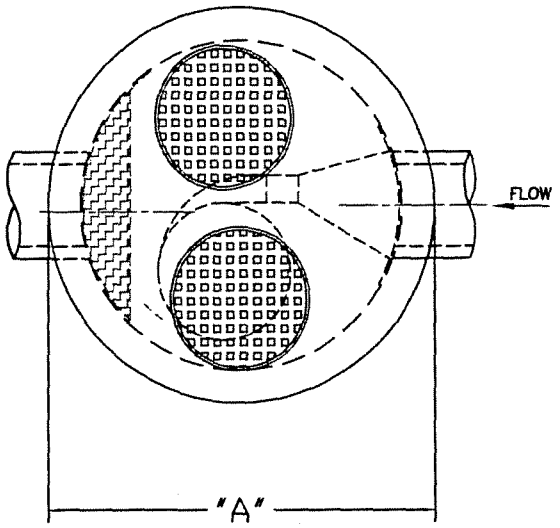
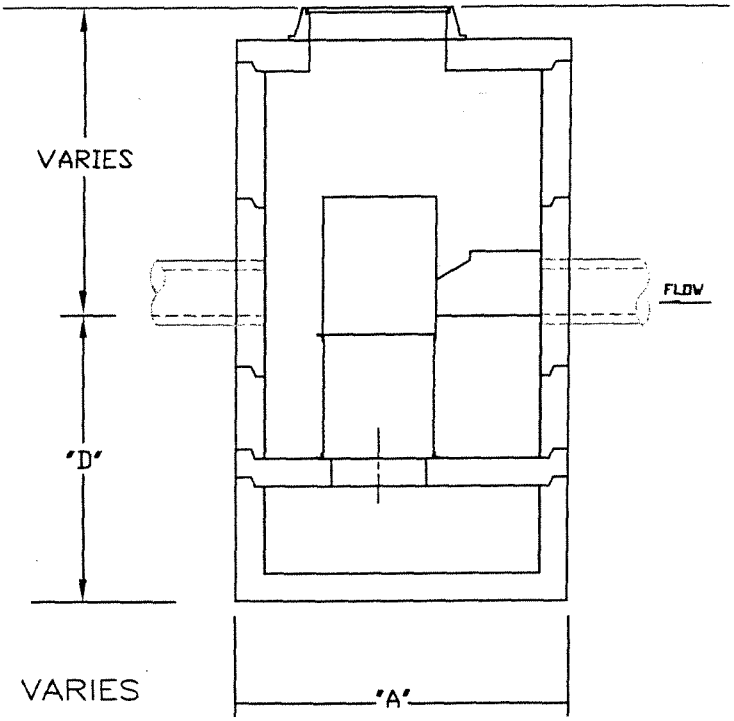
PRECAST MANHOLE MODELS

PROCESSES FLOWS 0.75 TO 6.5 CFS





A = FOOT PRINT DIAMETER

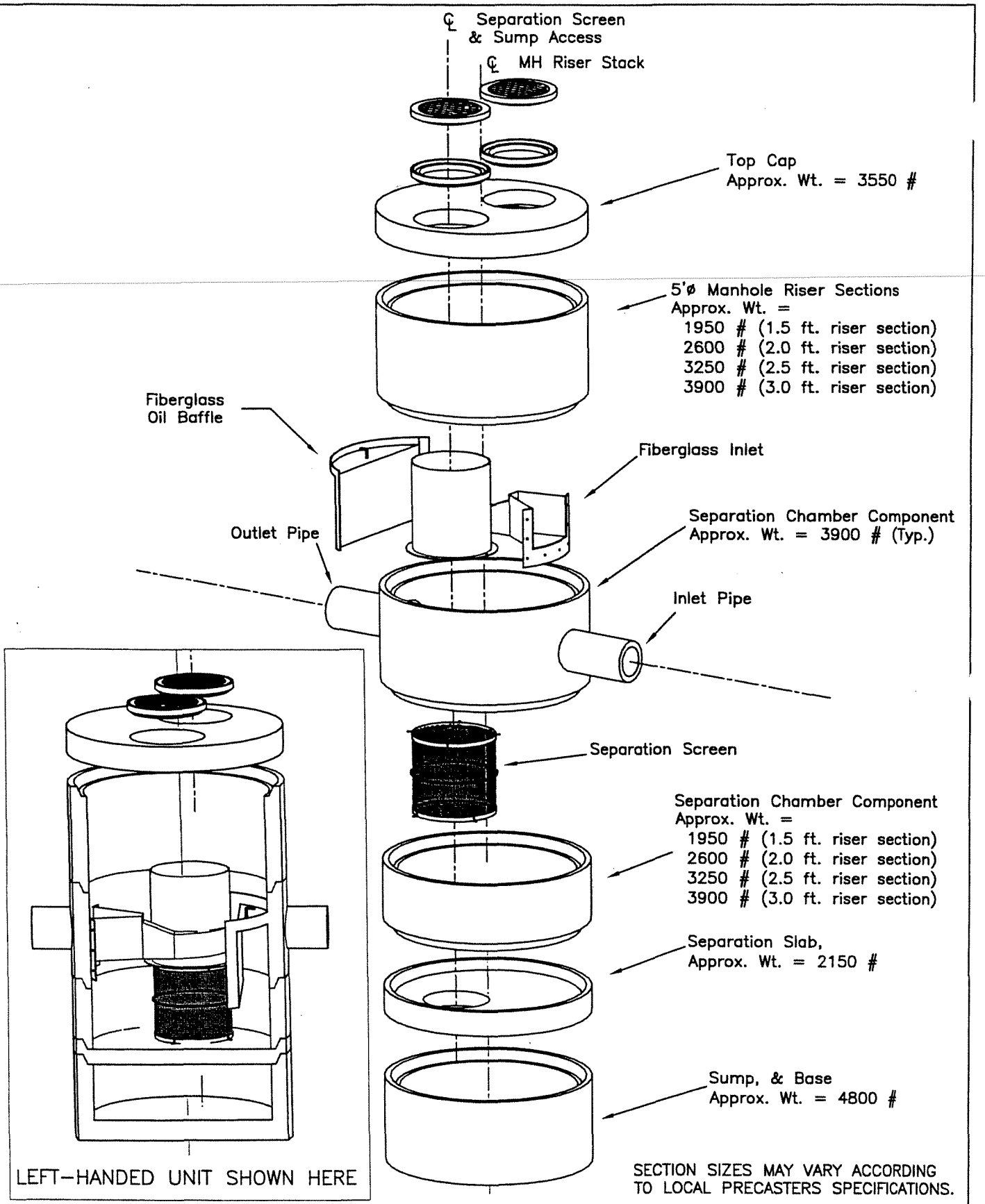
D = DEPTH BELOW PIPE INVERT, VARIES

PRECAST MODEL NUMBER	**TREATMENT DESIGN FLOW RATE			***DESIGN HEAD LOSS @ DESIGN TREATMENT FLOW RATE		SCREEN DIA./HT.	DEPTH BELOW PIPE INVERT "D"	FOOT PRINT DIAMETER "A"
	cfs	MGD	m^3/sec	ft.	m	ft.	ft.	ft.
PMIU20_15	0.7	0.49	0.021	0.45	0.11	2/1.5	4.2	4.8
PMSU20_15_4	0.7	0.49	0.021	0.35	0.11	2/1.5	3.5 – 4	4.8
PMSU20_15	0.7	0.49	0.021	0.35	0.11	2/1.5	5.1	6.0
PMSU20_20	1.20	0.78	0.034	0.48	0.15	2/2.0	5.7	6.0
PMSU20_25	1.68	1.10	0.048	0.62	0.19	2/2.5	6.0	6.0
PMSU30_20	2.0	1.29	0.056	0.65	0.20	3/2.0	6.2	7.2
PMSU30_30	3.0	1.94	0.085	0.70	0.21	3/2.8	7.2	7.2
PMSU40_30	4.5	3.0	0.13	0.85	0.26	4/3.0	8.6	9.5
PMSU40_40	6.0	3.9	0.17	0.88	0.27	4/4.0	9.6	9.5

*Standard screen opening is 4700 microns (.185 in.). Screens also available in 2400 microns (.095 in.).

**This is the minimum flow that will receive treatment before bypass is allowed. These precast manhole units are capable of by passing the Q25 year event. CDS Engineers are readily available to provide hydraulic consultations on all applications.

***The headloss during a bypass event is a function of the velocity head. The typical coefficient of headloss "K_{CDS}" ranges from 1.3 to 2.5 $H_{CDS} = K_{CDS}\left(V^2/2_g\right) \Rightarrow \left[\frac{1.3}{2.5}\right] V^2/2_g$



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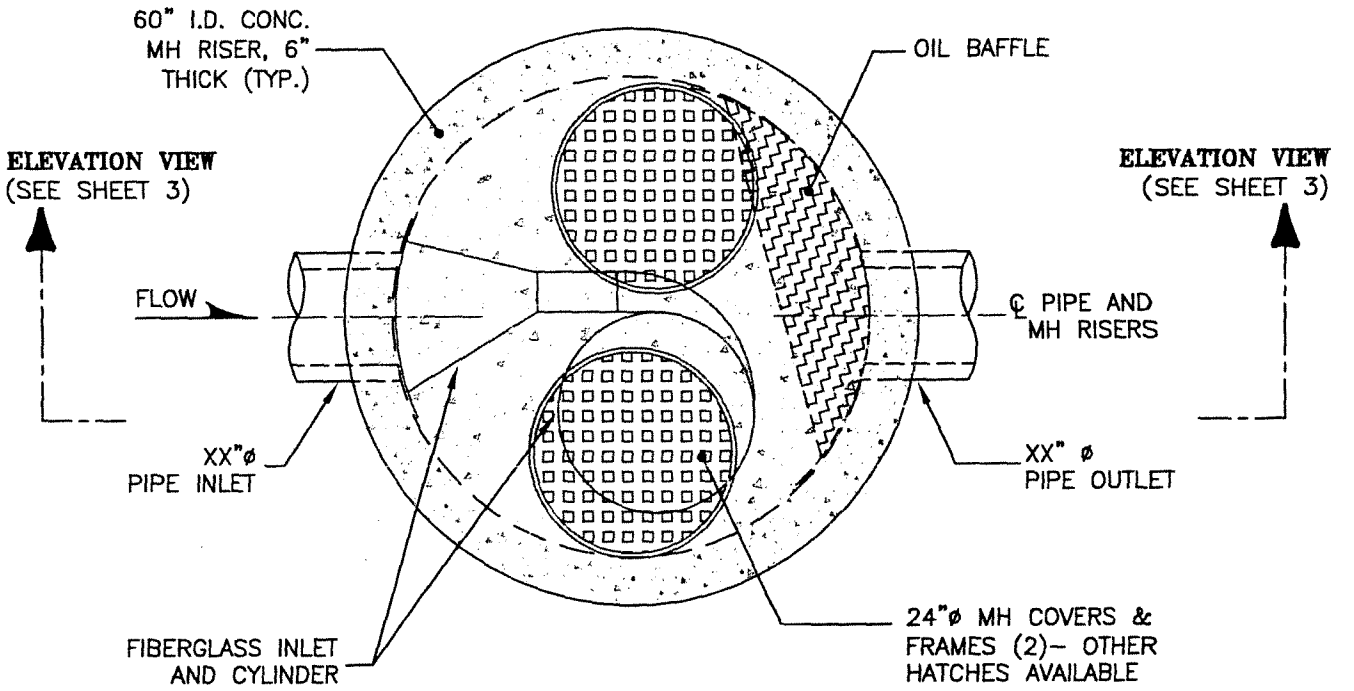
CDS MODEL PMSU20 TYPICAL ASSEMBLY

DATE 01/10/02	SCALE N.T.S.
DRAWN J.S.F.	SHEET 1
APPROV. R. HOWARD	

TYPICAL / GENERIC INSTALLATION

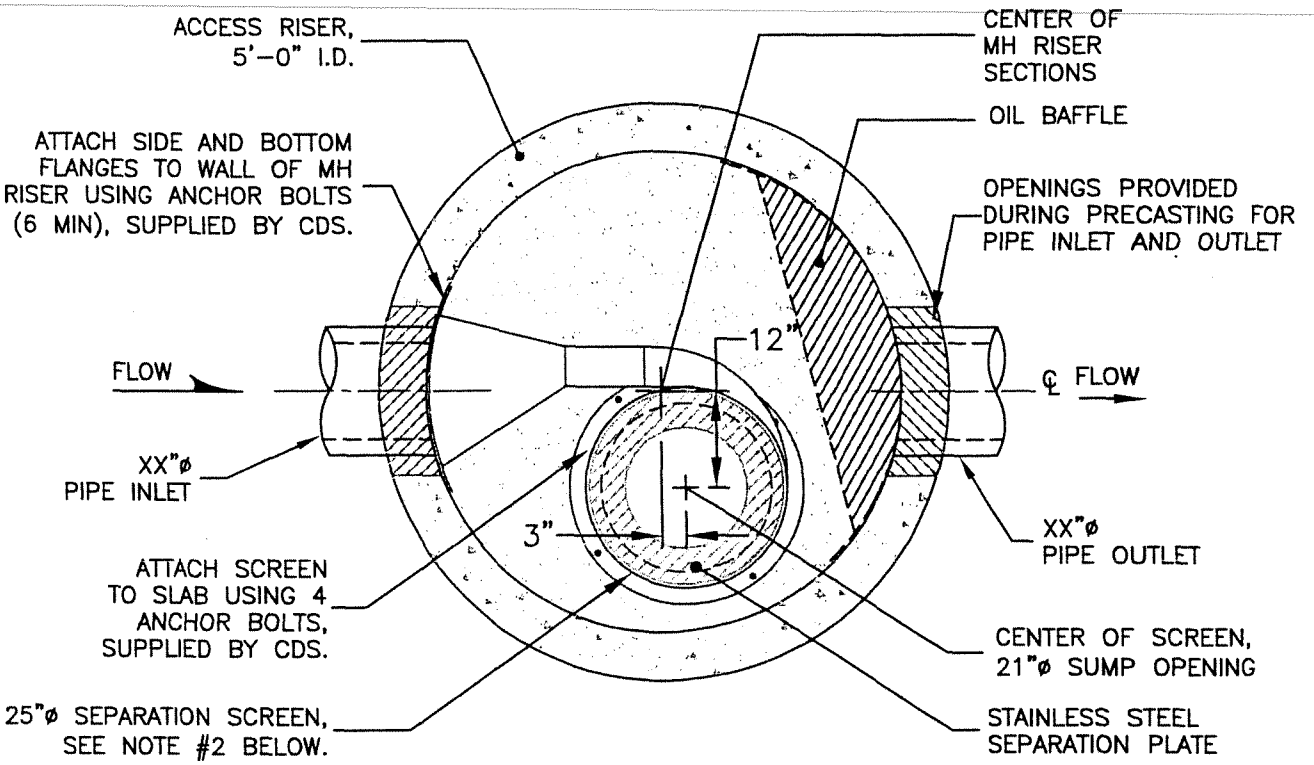


NOTE:
THE INTERNAL COMPONENTS ARE SHOWN IN THE RIGHT–HAND CONFIGURATION–THESE COMPONENTS MAY BE FURNISHED IN THE MIRROR IMAGE TO THAT SHOWN (LEFT–HAND CONFIGURATION)

CDS MODEL PMSU20_25
1.6 CFS CAPACITY
STORM WATER TREATMENT UNIT

CDS™ TECHNOLOGIES PATENTED	PROJECT NAME CITY, STATE	DATE 12/3/01	SCALE 1"=2'
		DRAWN J.S.F.	SHEET 2
		APPROV. R. HOWARD	

TYPICAL / GENERIC INSTALLATION



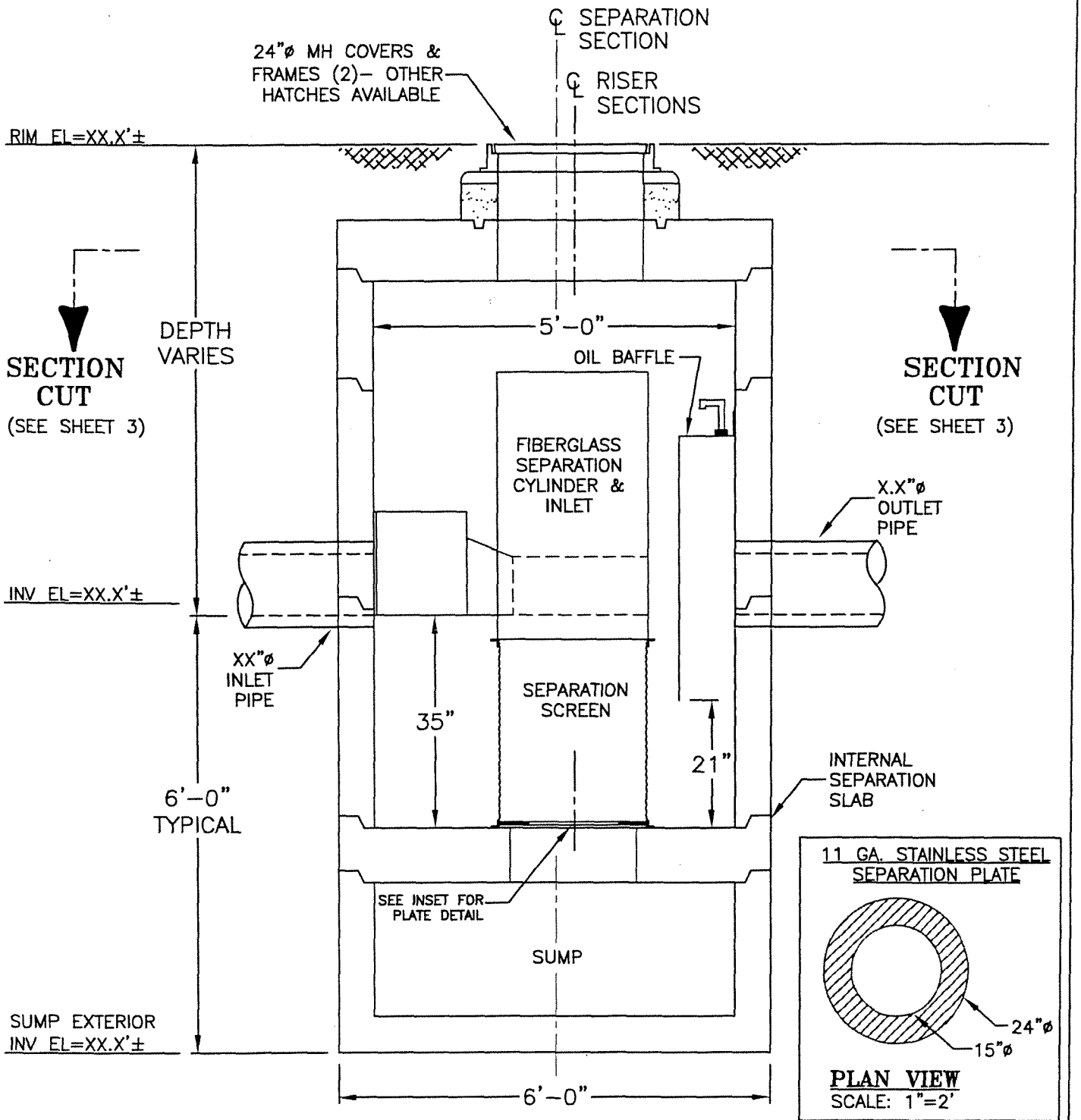
NOTES:

1. THE INTERNAL COMPONENTS ARE SHOWN IN THE RIGHT-HAND CONFIGURATION-THESE COMPONENTS MAY BE FURNISHED IN THE MIRROR IMAGE TO THAT SHOWN (LEFT-HAND CONFIGURATION).
2. FOR PROPER INSTALLATION, GREEN FLANGE ON SCREEN FACES UP FOR RIGHT-HAND INSTALLATIONS; WHEN INSTALLED IN MIRROR IMAGE TO THAT SHOWN, (LEFT-HAND ORIENTATION) RED FLANGE FACES UP.

CDS MODEL PMSU20_25
1.6 CFS CAPACITY
STORM WATER TREATMENT UNIT

CDS™ TECHNOLOGIES PATENTED	PROJECT NAME CITY, STATE	DATE 12/3/01	SCALE 1"=2'
		DRAWN J.S.F.	SHEET 3
		APPROV. R. HOWARD	

TYPICAL / GENERIC INSTALLATION

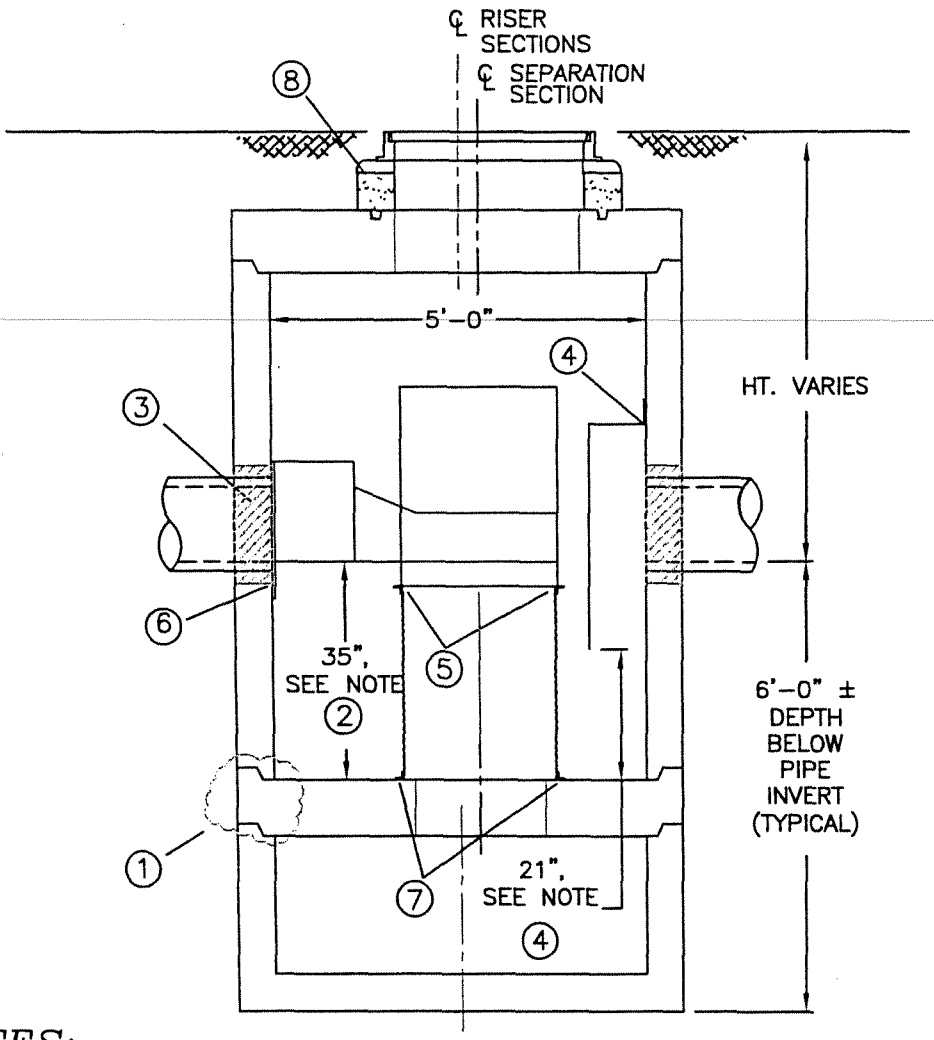


CDS MODEL PMSU20_25
1.6 CFS CAPACITY
STORM WATER TREATMENT UNIT

CDS™ TECHNOLOGIES
PATENTED

PROJECT NAME
CITY, STATE

DATE 12/3/01	SCALE 1"=2'
DRAWN J.S.F.	SHEET 4
APPROV. R. HOWARD	



CONSTRUCTION NOTES:

1. APPLY BUTYL MASTIC TO SEAL RISER JOINTS–APPLY LOAD TO MH SECTIONS TO COMPRESS SEALANT IF NECESSARY.
2. IF SEPARATION SLAB IS NON–INTEGRAL TO THE SEPARATION SECTION OF THE UNIT, SET AND VERIFY TOP ELEVATION BEFORE PLACING MORE PRECAST COMPONENTS OR BACKFILLING. ENSURE 35" FROM TOP OF SEPARATION SLAB TO PIPE INVERT.
3. GROUT PIPE CONNECTIONS TO SEAL JOINT.
4. SET BOTTOM OF OIL BAFFLE 21" ABOVE SEPARATION SLAB FLOOR; DRILL AND INSERT A MINIMUM OF TEN (10) 3/8" x 3 3/4" SS EXPANSION BOLTS @ 12" O.C. EQUALLY SPACED TO SECURE FIBERGLASS OIL BAFFLE FLANGE TO RISER WALL–(HARDWARE SUPPLIED BY CDS TECHNOLOGIES).
5. FASTEN FIBERGLASS CYLINDER/INLET TO SCREEN ASSEMBLY USING FOUR (4) SETS OF ½" x 1 ½" SS HEX HEAD BOLTS W/ NUTS AND WASHERS–(HARDWARE SUPPLIED BY CDS TECHNOLOGIES). IN THE LEFT–HANDED CONFIGURATION THE "RED" COLORED FLANGE ON THE SCREEN CYLINDER SHALL FACE UP. IN THE RIGHT–HANDED CONFIGURATION, THE "GREEN" COLORED FLANGE SHALL FACE UP.
6. CENTER SCREEN ASSEMBLY OVER SUMP OPENING AND POSITION FIBERGLASS INLET AGAINST RISER WALL; DRILL AND INSERT A MINIMUM OF SIX (6) ⅜" x 3 ¾" SS EXPANSION BOLTS EQUALLY SPACED TO SECURE FIBERGLASS INLET FLANGE TO RISER WALL–(HARDWARE SUPPLIED BY CDS TECHNOLOGIES).
7. VERIFY THAT SCREEN ASSEMBLY IS CENTERED OVER SUMP ACCESS HOLE AND ADJUST IF NECESSARY; FASTEN SCREEN TO SEPARATION SLAB USING FOUR (4) ⅜" x 3 ¾" SS EXPANSION BOLTS–(HARDWARE SUPPLIED BY CDS TECHNOLOGIES).
8. BLOCK AND GROUT SEAL TO MATCH GRADE AS REQUIRED.

CDS™ TECHNOLOGIES
PATENTED

PMSU20_25 CONSTRUCTION NOTES

DATE 12/3/01	SCALE N.T.S.
DRAWN J.S.F.	SHEET 5
APPROV. R. HOWARD	

Performance Specifications
Continuous Deflective Separation
Storm Water Treatment Unit

The Contractor shall install a precast storm water treatment unit (STWU) in accordance with the notes and details shown on the Drawings and in conformance with these Specifications. The precast storm water treatment units shall be continuous deflective separators (CDS®) unit.

The CDS® unit shall be non-mechanical and gravity driven, requiring no external power requirements. The CDS® unit shall come equipped with a stainless steel expanded metal screen having a screen opening of 4700 microns (4.7 mm or 0.185 inches). The separation screen shall be self-cleaning and non-blocking for all flows diverted to it, even when flows within the pipe exceed the CDS® unit's design treatment flow capacity. For this condition, some storm flow bypasses the unit over the diversion weir.

Solids Removal Performance Requirements

The CDS unit shall be capable of removing suspended and fine solids and shall capture 100% of the floatables and 100% of all particles equal to or greater than 4.7 millimeter (mm) for all flow conditions up to unit's design treatment flow capacity, regardless of the particle's specific gravity. The CDS® unit shall capture 100% of all neutrally buoyant material greater than 4.7 mm for all flow conditions up to its design treatment flow capacity. There shall be no flow conditions up to the design treatment flow capacity of the CDS® unit in which a flow path through the CDS® unit can be identified that allows the passage of a 4.7-mm or larger neutrally buoyant object. The CDS® unit shall permanently retain all captured material for all flow conditions of the storm drains to include flood conditions. The CDS® unit shall not allow materials that have been captured within the unit to be flushed through or out of the unit during any flow condition to include flood and/or tidal influences.

The CDS® unit shall capture 95% of 2350-micron size sand particles (one half the screen opening size), 90% of 1551-micron size sand particles (one third the size of the screen opening) and 50% of 940-micron size sand particles (one fifth the size of the screen opening). There shall be no attenuation of these removal efficiencies or blocking of the screen face as the flow rate increases up to treatment flow capacity of the CDS® unit. The following table lists these required removal efficiencies for a CDS® unit equipped with 4700-micron size screen:

Table 1
MEDIUM/FINE SAND SEDIMENT REMOVAL
(Indirect Screening – 4700-Micron Screen)
Particle Removal Efficiency*

Particle Size as percentage of screen opening (%)	Screening Removal Efficiency	Standard Screen Openings	
		4700 Micron (0.185-inches)	
		Microns	Inches
100	100%	4700	0.185
50	95%	2350	0.093
33	90%	1551	0.061
20	50%	940	0.037

Particle Specific Gravity = 2.65

Solids Removal Performance Requirements: [For CDS® units equipped with a 2400-micron (0.095 inches) screen]

The CDS unit shall be capable of removing suspended and fine solids and shall capture 100% of the floatables and 100% of all particles greater than 2.4 millimeter for all flow conditions up to its design treatment flow capacity, regardless of the particle's specific gravity. The CDS unit shall capture 100% of all neutrally buoyant material greater than 2.4 millimeters (mm) for all flow conditions up its design treatment flow capacity. There shall be no flow conditions up to the minimum treatment flow capacity in which a flow path through the CDS unit can be identified that allows the passage of a 2.4-millimeter or larger neutrally buoyant object. The CDS unit shall permanently retain all captured material for all flow conditions of the storm drain to include flood conditions. The CDS unit shall not allow materials that have been captured within the unit to be flushed through and/or out of the unit during any flow condition.

The CDS unit shall capture 98% of 600-micron size sand particles (one fourth the screen opening size), 80% of 425-micron size sand particles (one twelfth the size of the screen opening) and 42% of 300-micron size sand particles (one twelfth the size of the screen opening). There shall be no blocking of the screen face as the flow rate increases up to the treatment flow capacity. The following table lists these required removal efficiencies for a CDS unit equipped with a 2400-micron size screen:

Table 2
MEDIUM/FINE SEDIMENT REMOVAL
(Indirect Screening – 2400-Micron Screen)
Particle Removal Efficiency*

Particle Size (µm)	Particle Removal Efficiency (%) CDS flow rate	
	28% Capacity (8 l/s)	60.7% Capacity (17 l/s)
>2400	100	100
2400 – 850	100	100
850 – 600	100	100
600 – 425	100	98
425 – 300	96	80
300 – 150	76	42
150 - 75	42	12

*Particle SG = 2.65

Manufacturers Performance Certificate

The manufacturer of the CDS® unit shall submit details and shop drawings of sufficient detail for the Engineer to confirm that no available flow paths exist that would allow the passage of an object greater than 4.7 mm *[2.4 mm if a 2400 micron screen is specified]*. Additionally, the manufacturer shall submit a "Manufacturers Performance Certificate" certifying that the CDS® unit shall achieve the specified removal efficiencies listed in these specifications. This Manufacturer's Performance Certification of removal efficiencies shall clearly and unequivocally state that the listed removal efficiency shall be achieved throughout the entire treatment flow processed by the CDS® unit with no attenuation of removal efficiency as the flow increase up to the minimum treatment flow capacity specified above.

Oil and Grease Removal Performance

The CDS® unit is equipped with a conventional oil baffle to capture and retain oil and grease and Total Petroleum Hydrocarbons (TPH) pollutants as they are transported through the storm drain system during dry weather (gross spills) and wet weather flows. The conventional oil baffle within a unit assures satisfactory oil and grease removal from typical urban storm water runoff.

The CDS® unit shall also be capable of receiving and retaining the addition of Oil Sorbents within their separation chambers. The addition of the oil sorbents can ensure the permanent removal of 80% to 90% of the free oil and grease from the storm water runoff. The addition of sorbents enables increased oil and grease capture efficiencies beyond that obtainable by a conventional oil baffle systems. Sorbent material shall be added in accordance with the **"OIL SORBENTS SPECIFICATION"**, Appendix D, CDS® Technical Manual.

Warranty

The manufacturer of the CDS® unit shall guarantee the filtration unit free from defects in materials and workmanship for a period one year following installation. Equipment supplied by the manufacturer shall be installed and used only in the particular application for which it was specifically designed.

PRECAST MANHOLE "INLINE"
Continuous Deflective Separation Unit
Product Specifications

(Note: The following specifications are applicable for the CDS Model PMIU20_15, PMSU20_15, PMSU20_15_4, PMSU20_20, PMSU20_25, PMSU30_20, PMSU30_30, PMSU40_30, & PMSU40_40 units)

The Contractor shall install a precast stormwater filtration treatment unit in accordance with the notes and details shown on the Drawings and in conformance with these Specifications. The precast stormwater filtration treatment unit shall be a continuous deflective separator (CDS®) unit, model PMIU or PMSU as manufactured by CDS Technologies, Inc., 16360 Monterey Road, Suite 250, Morgan Hill, CA 95037. CDS Technologies® may be reached by telephone at (888) 535-7559.

Storm Water Filtration Treatment Unit Design

Hydraulic Treatment Capacity and Separation Screen Design:
The CDS storm water filtration treatment unit shall have a minimum treatment flow capacity as indicated below. This treatment capacity shall be achieved without any flow bypassing the overflow weir of the treatment unit.

MINIMUM TREATMENT FLOW CAPACITIES

	PMIU	PMSU						
CDS UNITS:	20_15	20_15_4 & 20_15	20_20	20_25	30_20	30_30	40_30	40_40
TREATMENT FLOW, CFS (GPM)	0.7 (314)	0.7 (314)	1.1 (493)	1.6 (673)	2.2 (987)	3.0 (1,346)	4.5 (2,020)	6.0 (2,693)

Storm Water Filtration Treatment Unit Structure and Design:
If required, the structure shall be designed to withstand H20 traffic and earth loadings to be experienced during the life of the installation.

The storm water filtration treatment units shall be furnished with the following *minimum* sump capacities for the storage of sediments, organic solids, and other settleable trash and debris.

MINIMUM SUMP STORAGE CAPACITIES

	PMIU	PMSU							
CDS UNIT:	20_15	20_15_4	20_15	20_20	20_25	30_20	30_30	40_30	40_40
MINIMUM SUMP VOLUME CU YDS:	0.7	0.7	1.1	1.1	1.1	2.1	2.1	5.5	5.5

Oil and Grease Removal

Unless otherwise specified, all PMSU units will be equipped with a conventional oil baffle to capture and retain oil and grease and Total Petroleum Hydrocarbons (TPH) pollutants as they are transported through the storm drain system during dry weather (gross spills) and wet weather flows. The conventional oil baffle within a unit assures satisfactory oil and grease removal from typical urban storm water runoff. Additionally, the storm water filtration unit shall have the following gross oil storage capacities:

MINIMUM OIL STORAGE CAPACITIES

	PMIU	PMSU							
CDS UNIT:	20_15	20_15_4	20_15	20_20	20_25	30_20	30_30	40_30	40_40
MIN. OIL STORAGE VOLUME, WITH BAFFLE, GALS:	104	72	120	140	150	180	270	480	605

The CDS® PMSU water filtration treatment units shall also be capable of receiving and retaining the addition of Oil Sorbents within their separation chambers. The addition of the oil sorbents can ensure the permanent removal of 80% to 90% of the free oil and grease from the storm water runoff. The addition of sorbents enables increased oil and grease capture efficiencies beyond that obtainable by conventional oil baffle systems. Sorbent material shall be added in accordance with the **"USE OF OIL SORBENTS"** specifications provided by CDS Technologies.

Materials Design for CDS® Unit Manufacture

Concrete:
Storm water filtration treatment units shall be structurally designed and manufactured from materials per ASTM C478 – 88a "Standard Specification for Precast Reinforced Concrete Manhole Sections". Concrete shall adhere to ASTM specifications C33, C39, andC150.
Reinforcement shall consist of wire and/or deformed and plain billet-steel Bars conforming to ASTM Designation A82, A185, A496 A497 or A615.

Fiberglass:
Fiberglass components (inlet riser and oil baffle) for the PMSU model series shall be per national Bureau of Standards PS-15. The components shall be laid up of 3-ounce (oz) chop mat, 24-oz bi-directional woven fabric per MIL-C-19663 and general-purpose polyester resin per MIL-M-43248.
3/16 inch laminated lay up schedule for fiberglass unit shall be achieved by these minimum manufacturing procedures: clean, wax and mask separation unit mold, apply one skin over mold with 3 oz chop mat, cure skin for 1.5 hours, apply second and third layers composed of 3 oz chop mat plus 24 oz woven fabric each, cure 24 hours before de-molding.

Hardware:
The separation screen shall be fabricated from stainless steel conforming to ASTM Designation A316L. Support structure shall be fabricated from stainless steel conforming to ASTM Designation. Fasteners used to install the screen shall be A316 stainless steel.
The access cover for the unit shall be designed to withstand 150 pounds per square foot pedestrian loading, or designed for direct traffic loading if so noted on the Drawings, and shall provide an access hatch of the dimensions shown on the Drawings. The cover may be fabricated from either aluminum or steel depending on application.
If the access cover is to be fabricated of cast iron, all materials shall conform to ASTM Designation 48-30.
If the access cover is to be fabricated of aluminum, aluminum welding and stainless steel bolts shall be used for assembly.
If the access cover is to be fabricated of steel, the assembly shall be hot dipped galvanized in accordance with ASTM designations A123 & A525. Galvanizing shall be performed after fabrication. Nuts, bolts & washers shall be galvanized in conformance with ASTM Designation A153.

Product Specifications
PRECAST - PSW "OFFLINE"
Continuous Deflective Separation Unit

(Note: The following specifications are applicable for the PSW30_30, PSW50_42, PSW50_50 & PSW70_70 units.)

The Contractor shall install a precast continuous deflective separator (CDS®) unit in accordance with the notes and details shown on the Drawings and in conformance with these Specifications. The precast CDS® unit shall be a storm water filtration treatment unit as manufactured by CDS Technologies, Inc., 16360 South Monterey Road, Suite 250, Morgan Hill, CA 95037. CDS Technologies® may be reached by telephone (888) 535-7559.

Storm Water Filtration Treatment Unit Design
Hydraulic Treatment Capacity and Separation Screen Design:

Minimum Treatment Flow Capacity: The CDS® unit shall have a minimum treatment flow capacity as follows:

Precast Model Number	Flow Capacity	
	Cubic Feet per Second (cfs)	Gallons per Minute (gpm)
PSW30_30	3	1,344
PSW50_42	9	4,032
PSW50_50	11	4,928
PSW70_70	26	11,648

Storm Water Filtration Treatment Unit Structure and Design:
If required, the structure shall be designed to withstand H20 traffic and earth loadings to be experienced during the life of the installation. The materials and structural design of the stormwater filtration treatment unit shall be per ASTM C857 "Recommended Practice for Minimum Structural Design Loading for Underground Precast Concrete Utility Structures" and ASTM C858 "Specification for Underground Precast Utility Structures".

The CDS® unit shall be furnished with sump as shown on the drawings for the storage of sediments, organic solids, and other settable trash and debris. CDS® models shall be furnished with a sump that has a minimum volume of cubic yards for storage of sediments, organic solids, and other settable trash and debris as follows:

Precast Model Number	Minimum Storage Volume (cubic yards)
PSW30_30	1.4
PSW50_42	1.9
PSW50_50	1.9
PSW70_70	3.9

Oil and Grease Removal

Unless otherwise specified all PSWC units will be equipped with a conventional oil baffle to capture and retain oil and grease and Total Petroleum Hydrocarbons (TPH) pollutants as they are transported through the storm drain system during dry weather (gross spills) and wet weather flows. The conventional oil baffle within a unit assures satisfactory oil and grease removal from typical urban storm water runoff. Additionally, the storm water filtration unit shall have the following gross oil storage capacities:

Precast Model Number	MINIMUM OIL STORAGE CAPACITY WITH BAFFLE (GALLONS)
PSW30_30	115
PSW50_42	359
PSW50_50	408
PSW70_70	1,030

The CDS® PSWC water filtration treatment units shall also be capable of receiving and retaining the addition of Oil Sorbents within their separation chambers. The addition of the oil sorbents can ensure the permanent removal of 80% to 90% of the free oil and grease from the storm water runoff. The addition of sorbents enables increased oil and grease capture efficiencies beyond that obtainable by conventional oil baffle systems. Sorbent material shall be added in accordance with the **"USE OF OIL SORBENTS"** specifications provided by CDS Technologies.

Materials Design for CDS® Unit Manufacture

Concrete:

Storm water filtration treatment units shall be manufactured from concrete and have a 28 day compressive strength of not less than 5,000 pounds per square inch (psi), using either Type I or Type 3 portland cement. Aggregates shall conform to ASTM Designation C33, except the requirement for gradation shall not apply.

Reinforcement shall consist of wire conforming to ASTM Designation A82 or ASTM Designation A496 or wire fabric conforming to ASTM A185 or A497 or of deformed bars of Grade 60 steel conforming to ASTM Designation A615.

The sump and access riser for the unit may be manufactured from storm drain pipes conforming to ASTM Designation C76 Class III Reinforced Concrete Pipe.

Hardware:

The separation screen shall be fabricated from stainless steel conforming to ASTM Designation A316L. Support structure shall be fabricated from stainless steel conforming to ASTM Designation A316. Fasteners used to install the support structure and screen shall be stainless steel, 316.

Ultra high molecular weight (UHMW) or High Density Poly (HDPE) blocks may be fastened to the support structure and embedded into the concrete structure to facilitate screen installation.

The access cover for the unit shall be designed to withstand 150 pounds per square foot pedestrian loading, or designed for direct traffic loading if so noted on the Drawings, and shall provide an access hatch of the dimensions shown on the Drawings. The cover may be fabricated from either aluminum or steel. Covers shall be manufactured by US Foundry, or equal.

If the access cover is to be fabricated of aluminum, aluminum welding and stainless steel bolts shall be used for assembly.

If the access cover is to be fabricated of steel, the assembly shall be hot dipped galvanized in accordance with ASTM designations A123 & A525. Galvanizing shall be performed after fabrication. Nuts, bolts & washers shall be galvanized in conformance with ASTM Designation A153.

Product Specifications
PRECAST - PSWC "OFFLINE"
Continuous Deflective Separation Unit

(Note: The following specifications are applicable for the PSWC30_30, PSWC40_40, PSWC56_40, PSWC56_53, PSWC56_68 & PSWC56_78 units.)

The Contractor shall install a precast continuous deflective separator (CDS®) unit in accordance with the notes and details shown on the Drawings and in conformance with these Specifications. The precast CDS® unit shall be a storm water filtration treatment unit as manufactured by CDS Technologies, Inc., 16360 Monterey Road, Suite 250, Morgan Hill, CA 95037. CDS Technologies® may be reached by telephone (888) 535-7559.

Storm Water Filtration Treatment Unit Design
Hydraulic Treatment Capacity and Separation Screen Design:

Minimum Treatment Flow Capacity: The CDS® unit shall have a minimum treatment flow capacity as follows:

Precast Model Number	Flow Capacity	
	Cubic Feet Per Second (cfs)	Gallons Per Minute (gpm)
PSWC30_30	3	1,344
PSWC40_40	6	2,688
PSWC56_40	9	4,035
PSWC56_53	14	6,272
PSWC56_68	19	8,512
PSWC56_78	25	11,220

Storm Water Filtration Treatment Unit Structure and Design:
If required, the structure shall be designed to withstand H20 traffic and earth loadings to be experienced during the life of the installation. The materials and structural design of the stormwater filtration treatment unit shall be per ASTM C857 "Recommended Practice for Minimum Structural Design Loading for Underground Precast Concrete Utility Structures" and ASTM C858 "Specification for Underground Precast Utility Structures".

The CDS® unit shall be furnished with sump as shown on the drawings for the storage of sediments, organic solids, and other settable trash and debris. CDS® models shall be furnished with a sump that has a minimum volume of cubic yards for storage of sediments, organic solids, and other settleable trash and debris as follows:

Precast Model Number	Minimum Volume (Cubic Yards)
PSWC30_30	1.4
PSWC40_40	1.9
PSWC56_40	1.9
PSWC56_53	1.9
PSWC56_68	1.9
PSWC56_78	1.9

Oil and Grease Removal

Unless otherwise specified all PSWC units will be equipped with a conventional oil baffle to capture and retain oil and grease and Total Petroleum Hydrocarbons (TPH) pollutants as they are transported through the storm drain system during dry weather (gross spills) and wet weather flows. The conventional oil baffle within a unit assures satisfactory oil and grease removal from typical urban storm water runoff. Additionally, the storm water filtration unit shall have the following gross oil storage capacities:

Precast Model Number	MINIMUM OIL STORAGE CAPACITY WITH BAFFLE (GALLONS)
PSWC30_30	315
PSWC40_40	242
PSWC56_40	568
PSWC56_53	723
PSWC56_68	900
PSWC56_78	1,020

The CDS® PSWC water filtration treatment units shall also be capable of receiving and retaining the addition of Oil Sorbents within their separation chambers. The addition of the oil sorbents can ensure the permanent removal of 80% to 90% of the free oil and grease from the storm water runoff. The addition of sorbents enables increased oil and grease capture efficiencies beyond that obtainable by conventional oil baffle systems. Sorbent material shall be added in accordance with the **"USE OF OIL SORBENTS"** specifications provided by CDS Technologies.

Materials Design for CDS® Unit Manufacture

Concrete:

Storm water filtration treatment units shall be structurally designed and manufactured from materials per ASTM C478 – 88a "Standard Specification for Precast Reinforced Concrete Manhole Sections". Concrete shall adhere to ASTM specifications C33, C39, andC150.

Reinforcement shall consist of wire conforming to ASTM Designation A82 or ASTM Designation A496 or wire fabric conforming to ASTM A185 or A497 or of deformed bars of Grade 60 steel conforming to ASTM Designation A615.

The sump and access riser for the unit may be manufactured from storm drain pipes conforming to ASTM Designation C76 Class III Reinforced Concrete Pipe.

Fiberglass: (For these components only: riser, inlet, outlet & oil baffle)

CDS® components manufactured from fiberglass shall be per national Bureau of Standards PS-15. The unit shall be coated with isophalic polyester gelcoat and hand laid up of 4 layers 2 oz. mat and 24 oz. bi-directional woven fabric using polyester 1 to 1 isophalic resin for excellent chemical resistance and toughness.

3/8 inch laminated lay up schedule for fiberglass unit shall be achieved by these minimum manufacturing procedures. Clean and wax the molds. Apply polyester isophalic gelcoat to the mold, this provides blister resistance. Allow to dry. Then using isophalic polyester resin to wet the individual layers of mat and the 24 oz. bi-directional woven fabric, hand lay up the 4 layers of 2 oz. mat and fabric on the mold.

Cure 8 to 16 hrs. until completely dry before demolding. The parts are then cleaned and smoothed, if needed, of any rough edges and to provide a clean product.

Hardware:

The separation screen shall be fabricated from stainless steel conforming to ASTM Designation A316L. Support structure shall be fabricated from stainless steel conforming to ASTM Designation A316. Fasteners used to install the support structure and screen shall be stainless steel 316.

Ultra high molecular weight (UHMW) or High Density Poly (HDPE) blocks may be fastened to the support structure and embedded into the concrete structure to facilitate screen installation.

The access cover for the unit shall be designed to withstand 150 pounds per square foot pedestrian loading, or designed for direct traffic loading if so noted on the Drawings, and shall provide an access hatch of the dimensions shown on the Drawings. The cover may be fabricated from either aluminum or steel. Access covers shall be manufactured by U.S. Foundry (U.S.F. Fabrications), or equal.

If the access cover is to be fabricated of aluminum, aluminum welding and stainless steel bolts shall be used for assembly.

If the access cover is to be fabricated of steel, the assembly shall be hot dipped galvanized in accordance with ASTM designations A123 & A525. Galvanizing shall be performed after fabrication. Nuts, bolts & washers shall be galvanized in conformance with ASTM Designation A153.

PRECAST STORMWATER FILTRATION TREATMENT

Continuous Deflective Separation Stormwater Treatment Unit

Installation Specifications

(Note: The following specifications are applicable for the CDS Model PMIU20_15 unit)

The CDS® precast components will be delivered to the project site via a flatbed transport. The Contractor shall provide equipment at the site that has adequate capacity to unload the precast components. The heaviest component (separation chamber with integral base slab) that will be delivered weighs approximately 4,400 pounds (varies with precast manufacturer).

The installation sequence requires the sump to be installed first. The second component is the separation chamber that comes with internal CDS components fully installed, followed by the separation chamber cover if it has been removed to facilitate the installation.

General Finishing Requirements

The precast components are delivered with lifting points cast into the various pieces. Where cavities were created for lifting, said cavities shall be mortar packed and finished to conform to the surface that would have otherwise existed had not the lifting point been cast. Where rebar or fabricated cable loops have been used to provide for lifting, those that project above the normal finish surface shall be cut flush with the normal finished surface.

All work throughout the installation shall be done to a professional standard normally expected for the class of work being performed.

Excavation, Dewatering and Shoring

The Contractor shall excavate, dewater and shore in accordance with the applicable project specifications for "Excavation and Backfill", "Dewatering and Shoring", as provided by the Engineer to ensure a safe working environment.

Sump Installation

Subgrade shall be established as shown on the Drawings. The subgrade material shall be composed to withstand a design loading of 2,000 pounds per square foot (psf). It is recommended that the hole be over-excavated a minimum of 6" and backfilled with aggregate base and compacted to 90% to make subgrade.

The sump shall be placed on the compacted base, elevation confirmed, plumbed and aligned to ensure that the balance of the unit will be properly aligned and situated as assembly of the rest of the precast pieces proceed.

Separation Chamber Installation

Note: Once placed, the separation chamber and sump must be water tight, holding a minimum static water elevation equal to that of the pipe invert.

Prior to placement of the separation chamber, the Contractor shall place a layer of mastic rope (delivered with the CDS Unit) on the mating joint of the sump section. When necessary, grout any exterior manhole joints to ensure a water-tight seal of the manhole that extends below pipe invert. The separation chamber shall be set with the proper orientation to the storm drain outlet and inlet to ensure their correct connections.

Pipe Connections

Following the installation of the separation chamber, the contractor shall connect the outlet pipe into the separation chamber block out and shall grout it into its proper alignment and elevation. The contractor shall also extend the inlet pipe into the Separation chamber and will grout-pack the void space between the pipe and the manhole wall, and will also seal the pipe into the fiberglass structure

Manhole Top Cap Installation

Upon installation of the separation chamber, the 48" diameter separation chamber will be covered with a manhole top cap and manhole access cover, drainage grate with frame, or similar.

Backfill

Upon completion of the CDS® unit installation, the excavation shall be backfilled with an aggregate base material, pea gravel, or controlled density cement backfill. The aggregate base material shall be compacted to 90% compaction when tested by ASTM Designation A1557, except as noted below.

If the unit is installed in a travel way, the upper two feet of backfill shall be aggregate base compacted to 95%.

PRECAST STORM WATER FILTRATION TREATMENT

Continuous Deflective Separation Storm water Treatment Unit

Installation Specifications

(Note: The following specifications are applicable for the CDS Models PMSU20_15, PMSU20_20, PMSU20_25, PMSU30_20, PMSU30_30, PMSU40_30 & PMSU40_40 units)

Small Tools Recommended For A Successful Installation

- Builders Level and Rod
- Combination rotary drill and hammer drill (two are desirable so bit changing between the wood bit and masonry bit isn't necessary
- 3/8" diameter masonry bit that will drill a hole at least 3" deep
- ½" diameter wood bit for drilling fiberglass
- Hammer
- 9/16" deep socket ratchet drive for tightening nuts on 3/8" concrete anchors
- ¾" wrench and 3/4" socket for tightening the ½" diameter bolts and nuts used to connect the screen to the fiberglass riser
- ¾" mastic to fill gaps that may exist between the fiberglass flanges and the concrete wall (maximum that could be needed- 10')
- Small generator (1500 watt)
- 50' extension cord with splitter to operate both drills
- A Skill saw with a wood cutting and masonry cutting blade
- Two 2 x 4 lumber sections long enough to hold the oil baffle to the correct height while it is fastened to the manhole wall with the concrete anchors (see following table.
- **ALL REQUIRED FASTENERS WILL BE DELIVERED WITH THE CDS SEPARATION SCREEN**

PMSU UNIT	20_15	20_20	20_25	30_20	30_30	40_30	40_40
2 X 4 LENGTH	14"	18"	22"	18"	24"	24"	32"

The CDS® precast components will be delivered to the project site via a flatbed transport. The Contractor shall provide equipment at the site that has adequate capacity to unload the precast components. The Contractor may either determine the unit weights for components or contact CDS Technologies® for unit weights.

The installation sequence proceeds as follows: Sump installation; separation slab; 5', 6', or 8' diameter starter section; 5', 6' or 8' diameter section with blockouts (to receive the storm drain into the unit and connect to storm drain outlet); riser sections as required to come to sub-grade level; internal components consisting of the oil baffle (installed first), followed by CDS screen and fiberglass inlet; top slab; lastly, finished grade is achieved

using grade rings (if necessary) and the manhole frame(s) and cover(s) or other hatch system as applicable.

General Finishing Requirements

The precast components are delivered with lifting points cast into the various pieces. Where cavities were created for lifting, said cavities shall be mortar packed and finished to conform to the surface that would have otherwise existed had not the lifting point been cast. Where rebar or fabricated cable loops have been used to provide for lifting, those that project above the normal finish surface shall be cut flush with the normal finished surface. Rebar or fabricated cable loops used to provide for lifting that project above the normal finish surface shall be cut flush with the normal finished surface.

All work throughout the installation shall be done to a professional standard normally expected for the class of work being performed. **The PMSU unit shall be installed using Butyl Mastic, rubber gaskets and/or grout to seal joints of the precast manhole structure to ensure that unit is water tight, holding water up to the flow line invert of the inlet and outlet pipes.**

Excavation, Dewatering and Shoring

The Contractor shall excavate, dewater and shore in accordance with the applicable project specifications for "Excavation and Backfill", "Dewatering and Shoring", as provided by the Engineer to ensure a safe working environment.

Sump Installation

Subgrade shall be established as shown on the Drawings. The subgrade material shall be composed to withstand a design loading of 2,000 pounds per square foot (psf). It is recommended that the hole be over-excavated a minimum of six (6") inches and backfilled with aggregate base and compacted to 90% to make subgrade.

The sump shall be placed on the compacted base, elevation confirmed, plumbed and aligned to ensure that the balance of the unit will be properly aligned and situated as assembly of the rest of the precast pieces proceed.

Note: The correct vertical distance between the top of the separation slab and pipe invert must exist in order to ensure proper installation of the separation screen and fiberglass inlet. The Contractor may wish to "dry stack" the sump and separation slab first to determine any discrepancy between the actual height of these two components and the nominal height as indicated on the drawings. The following table lists the required distances based upon CDS model.

PMSU UNIT	20_15	20_20	20_25	30_20	30_30	40_30	40_40
VERTICAL DISTANCE	24"	31"	35"	31"	42.5"	42.5"	55"

Separation Slab Installation

Prior to placement of the separation slab, the Contractor shall place a minimum of one layer of 3/4 inch X 1 ½ inch mastic rope (delivered with the CDS Unit) on the tongue joint of the sump section. The separation slab shall be set with the proper orientation to the storm drain to ensure correct alignment of the separation screen and fiberglass inlet.

IMPORTANT: FOR INSTALLATION OF THE PMSU20 UNITS, THE SEPARATION SLAB MUST BE ORIENTED TO ENSURE THAT THE CENTERPOINT OF THE SUMP OPENING HAS AN OFFSET DISTANCE OF 12 INCHES TO THE RIGHT (OR 12 INCHES TO THE LEFT FOR LEFT-HAND ORIENTED UNITS) OF PIPE CENTERLINE AND 3 INCHES DOWNSTREAM OF THE RISER CENTERPOINT (LOOKING DOWNSTREAM).

IMPORTANT: FOR THE INSTALLATION OF PMSU30 UNITS, THE CENTERPOINT OF THE SUMP OPENING HAS AN OFFSET DISTANCE OF 12 INCHES TO THE RIGHT (OR LEFT FOR LEFT-HAND ORIENTED UNITS) AND PERPENDICULAR TO THE PIPE CENTERLINE (LOOKING DOWNSTREAM). REFER TO THE CONSTRUCTION DRAWINGS TO SEE THE PROPER ORIENTATION OF THE SLAB.

IMPORTANT: FOR INSTALLATION OF THE PMSU40 UNITS, THE SEPARATION SLAB MUST BE ORIENTED TO ENSURE THAT THE CENTERPOINT OF THE SUMP OPENING HAS AN OFFSET DISTANCE OF 14 INCHES TO THE RIGHT (OR 14 INCHES TO THE LEFT FOR LEFT-HAND ORIENTED UNITS) OF PIPE CENTERLINE AND 8 INCHES DOWNSTREAM OF THE RISER CENTERPOINT (LOOKING DOWNSTREAM).

Access Riser Installation

Prior to placement of the barrel sections, the Contractor shall place a layer of mastic rope on the tongue joint of the separation slab and each barrel section in the manner described previously. Subsequent placements of the barrel sections are performed in the manner previously described.

At this point, the Contractor may elect to backfill in accordance with the following specification, or the Contractor may elect to continue with the installation of the oil baffle, separation screen, fiberglass inlet followed by the top cap, as the Contractor deems appropriate **(Note: Installation of the internal components (fiberglass oil baffle if required, screen assembly and fiberglass inlet) must precede installation of top cap).**

The backfill material around the base and separation slabs and the barrel sections shall be placed and compacted achieving a minimum compaction of 90% when tested by ASTM Designation A1557. Backfill material may be a "minimal compaction effort" material such as 3/8" pea gravel or clean fill sand. The Contractor may use native material if approved by the Engineer if said material provides an allowable bearing pressure of 2,000 pounds per square foot. Said native material shall be compacted to a minimum relative density of 90% when tested by ASTM Designation A1557.

Oil Baffle, Separation Screen/Fiberglass Inlet Installation

Prior to the installation of the oil baffle, screen and inlet, a well-distributed load applied to the manhole stack may be required to compress the mastic joints in order to minimize subsequent settling from damaging the separation screen or fiberglass inlet.

The Installation (Oil Baffle, Separation Screen/Fiberglass):

Step 1: Install the oil baffle. The oil baffle needs to be placed over the outlet pipe and held up from the floor, as shown on the drawings, while it is fastened with the concrete anchors. The 2- 2 X 4's cut to the required length, (see table, page 1 or D17, are ideal for this vertical support. Fill any gaps between the oil baffle flange and the access riser wall with an appropriate sealant material, if necessary.

Step 2: Assemble the separation screen and fiberglass inlet riser components. If the PMSU unit is specified as a **"RIGHT-HAND"** orientation, place the screen so that the **GREEN FLANGE IS UP**. If the unit is specified as a **"LEFT-HAND"** orientation, place the screen so the **RED FLANGE IS UP**. After setting the screen for its proper orientation, set the fiberglass inlet on top of the separation screen and bolt together before lowering the assembled unit into the manhole. This requires installing four ½ inch diameter x 1 ½ inch long bolts with locknuts and washers (locknuts may be substituted using standard nuts with lock washers).

Step 3: Lower the assembly into the manhole and position fiberglass inlet to ensure that the inlet pipe is reasonably centered in the fiberglass inlet that the flange of the fiberglass inlet is flush with the wall of the manhole riser. In addition, verify that the screen is approximately centered properly over the opening in the separation slab. Make final adjustments to the positioning of the screen/inlet assembly if necessary.

Step 4: Drill ½ inch diameter holes through the fiberglass flange of the inlet with the wood bit, followed by match drilling the manhole wall with the 3/8 inch masonry bit to a depth of at least 3 inches. Attach the flange to the riser wall with concrete anchor bolts (supplied by CDS Technologies). . Fill any gaps between the inlet flange and the access riser wall with an appropriate sealant material, if necessary.

Step 5: Drill 3/8" holes into the separation slab at the location of the existing holes through the stainless steel angle that is resting on the floor to attach the screen to the separation slab with the provided concrete anchor bolts.

A stainless steel donut made from 11 ga. Metal 24 in diameter with a 15 inch diameter hole is provided with the PMSU20 units. The donut is to be placed on top of the separation slab to reduce the hole into the sump to 15 inch in diameter. This should be placed after the screen has been anchored to the floor.

This completes the internal components installation.

Manhole Top Cap Installation

Upon installation of the barrel sections and internal components (fiberglass oil baffle, screen assembly and fiberglass inlet), the concrete manhole cap is installed. Mastic sealant is placed on the tongue and groove joint as described previously. **The top cap is oriented in a fashion similar to that of the separation slab with the clear opening centered over the separation cylinder, screen, and sump opening unless indicated otherwise on the construction drawings.** Use grout and manhole rings as necessary to match grade and install the provided manhole frame and cover (or other hatch system) as shown on the drawings.

Backfill

Upon completion of the CDS® unit installation, the excavation shall be backfilled with an aggregate base material, pea gravel, or controlled density cement backfill. The aggregate base material shall be compacted to 90% compaction when tested by ASTM Designation A1557, except as noted below.

If the unit is installed in a travel way, the upper two feet of backfill shall be aggregate base compacted to 95%.

PRECAST STORM WATER FILTRATION TREATMENT

Continuous Deflective Separation Unit

Installation Specifications

(Note: The following specifications are applicable for the PSW30_30, PSW50_42, PSW50_50 & PSW70_70 units)

The precast components of the stormwater filtration treatment unit shall be delivered to the project site via a flatbed transport. The unit shall be delivered to the project site with the screen installed. The Contractor shall provide equipment at the site that has adequate capacity to unload the precast components.

PSW30_30

The heaviest component (separation chamber) that will be delivered weighs 7,480 pounds. It will be delivered with four "lifting eye" pick points. Lifting clutches, eyelets or pins will be provided by CDS. The lifting harness used for lifting the separation chamber shall provide cabling for the four-point pick up, with each leg of cable being at least 16 feet long (supplied by Contractor).

PSW50_42, PSW50_50

Equipment provided by the Contractor shall include a lifting harness capable of supporting the heaviest component delivered (separation chamber). The separation chamber of the PSW50_42 will weigh 20,000 pounds. The separation chamber of the PSW50_50 will weigh 22,500 pounds. Each separation chamber will be delivered with four "lifting eye" pick points. Lifting clutches, eyelets or pins will be provided by CDS. The lifting harness used for lifting the separation chamber shall provide cabling for each of the four pick points, with each leg of cable being at least 16 feet long.

PSW70_70

The heaviest component (separation chamber) that will be delivered weighs as much as 48,000 pounds. It will be delivered with four "lifting eye" pick points. Lifting clutches, eyelets or pins will be provided by CDS. The Contractor shall provide the lifting harness used for lifting the separation chamber. This lifting harness assembly shall provide cabling for the four pick points, with each leg of cable being at least 16 feet long.

The installation sequence requires the sump to be installed first, followed by the separation chamber, inlet/outlet riser, access riser, top cap and traffic bearing slab, if shown on the drawings with the appropriate traffic or pedestrian cover to be placed in accordance with the manufacturer's specifications. **The PSW unit shall be installed using Butyl Mastic, rubber gaskets and/or grout to seal joints of the precast manhole structure to ensure that unit is water tight, holding water up to the flow line invert of the inlet and outlet pipes.**

Excavation, Dewatering and Shoring

The Contractor shall excavate, dewater and shore in conformance with the applicable specification articles of the project specifications for "Excavation and Backfill", "Dewatering and "Shoring", as provided by the Engineer to ensure a safe working environment.

Sump Installation

Sub grade shall be established as shown on the Drawings. The subgrade material shall be composed to withstand a design loading of 2,000 pounds per square foot (psf), or shall be over excavated as directed by the Engineer and backfilled with stabilization material to form the base, compacted to 95% relative compaction when tested in accordance with ASTM Designation A1557.

The sump shall be set on the compacted base, elevation confirmed (may be .04 foot below theoretical grade), plumbed and aligned to ensure that the balance of the unit will be properly aligned and situated as installation of the rest of the precast unit proceed. The backfill material around the sump shall be placed and compacted in accordance with the backfill provisions of these Specifications achieving a minimum compaction of 90% when tested by ASTM Designation A1557. Backfill may be native material if capable of providing a design bearing pressure of 2,000 psf and approved by the Engineer. **Backfill shall be carried to ½ inch above the seating ring of the sump joint and leveled to ensure bearing of the separation chamber on the backfill.**

Separation Chamber Installation

Prior to setting the separation chamber, the Contractor shall place two layers of ¾ inch X 1½ inch mastic rope on the sump-seating ring. The mastic rope will be delivered with the CDS® unit. The mastic rope layers shall be applied such that the mastic will be ¾ inches X 3 inches, with the butting ends of each layer ring of mastic being offset and overlapped to ensure a watertight seal.

The separation chamber shall be placed on top of the sump, exercising care to ensure that the mastic rope ring is not unseated. Again, the goal is to ensure a watertight seal between the sump and separation chamber.

The separation chamber shall be set with the proper orientation to the storm drain to ensure correct alignment of the inlet/outlet unit to follow.

Inlet/Outlet Installation

The lifting "eye" bolts shall be removed from the top of the separation chamber before the inlet/outlet component is placed on top of the chamber. The holes of these "eyelet" bolts shall be backfilled with a fluid grout mix. Also, cut off and grout over any exposed rebar lifting loops sticking up from the top slab of the separation chamber prior to placing the inlet/outlet component.

Prior to placement of the inlet/outlet section, the Contractor shall place two layers of mastic rope on top of the separation chamber, locating the mastic ropes to ensure the bottom inlet/outlet section seats on top of it. The mastic will be placed such that it is ¾ inches high X 3 inches wide and bonds to the concrete surfaces as it is compressed under the weight of the inlet/outlet section.

The inlet/outlet section shall be placed to its proper orientation. The interior joint of the separation chamber and inlet/outlet shall be grout sealed. The flow path from the inlet into the separation chamber shall be a smooth transition to the tangent of the 3', 5' or 7' ID separation chamber. Any protruding portions of the tongue and groove joint shall be chipped and/or grinded smooth and any recesses shall be grout filled.

At this point, the Contractor may elect to backfill in accordance with the above Specifications to the subgrade of the weir box, or the Contractor may elect to continue stacking access riser sections, as the Contractor deems appropriate.

Access Riser(s) Installation

Prior to installation of the required riser section(s), a Press-Seal Gasket Corporation TYPE 4G rubber gasket will be placed around the tongue of the joint and lubricated and tension in the gasket equalized around the joint to ensure proper seating of the subsequent joint. The gasket will be furnished as a part of the stormwater filtration treatment unit. If the joint is not formed to accommodate the rubber gasket, then mastic will be used to seal the joint

The above installation specification completes the installation of the separation unit. The weir box can be placed at this point to facilitate the connection of the storm drain to the separation unit.

Weir Box Installation

The weir box may either be furnished by the contractor as a precast structure, or may be cast in place. In either event, a portion of the storm drain must be removed and disposed of off site at a location provided by the Contractor.

If the Contractor elects to furnish a precast weir box, said box shall be constructed to the nominal dimensions shown on the Drawings with blockouts provided as shown thereon to facilitate connection to the separation unit and drain pipe. The weir box shall be placed on subgrade that has been graded to ensure proper vertical and horizontal alignment of the box relative to the storm drain invert and separation inlet/outlet. Dowels into the inlet/outlet structure and the ends of the weir box shall be set as shown on the Drawings and proper forms will be set and aligned to facilitate pouring the required connection collars and diversion weir that deflects water from the storm drain to the separation unit.

Should the Contractor elect to construct the weir box as a cast in place structure, Contractor shall set dowels as shown in the inlet/outlet structure drawing detail. Casting formwork for the weir box shall ensure that the dowels and box reinforcing steel structurally connect the weir box to the inlet/outlet riser as shown in the Drawings. The storm drain piping shall be extended into the formed end walls and encased in concrete.

Man Way Installation

A man way is required to provide inspection/maintenance access into the weir box. The man way access shall be constructed as shown on the Drawings and shall be covered with a suitable manhole frame and cover of the dimensions shown.

Backfill

On completion of the weir box including the inspection/maintenance access into the weir box and completion of the separation access riser shaft, the excavation shall be backfilled with an aggregate base material or controlled density cement backfill suitable to the Engineer. An Aggregate base material shall be compacted to 90% compaction when tested by ASTM Designation A1557, except as noted below.

Traffic Bearing Slab Installation

When a traffic bearing slab is called for over the separation unit, traffic bearing slab shall be set (if a precast structure), or cast in place on an aggregate base material at least 12 inches thick that is compacted to 95% relative compaction when tested by ASTM Designation A1557. Contractor shall construct the traffic slab with a 1½-inch thick styrofoam spacer between the slab and the separation access riser shaft, as shown on the Drawings. This spacing ensures that traffic loads are passed to the surrounding soil and kept from directly bearing on or creating lateral friction transfer to the access riser shaft.

Asphalt Installation

Any asphalt or concrete pavement, curb, gutter or other structures, including utilities, that were removed to accommodate construction shall be replaced or relocated in a condition equal to or better than that removed, all to the satisfaction of the Engineer.

PRECAST STORM WATER CONCENTIC (PSWC)

Continuous Deflective Separation Unit

Installation Specifications

(Note: The following specifications are applicable for the CDS Model PSWC30_30, PSWC40_40, PSWC56_40, PSWC56_53, PSWC56_68 & PSWC56_78 units)

Small Tools Recommended For A Successful Installation

- Builders Level and Rod
- Combination rotary drill and hammer drill (two are desirable so bit changing between the wood bit and masonry bit isn't necessary
- 3/8" diameter masonry bit that will drill a hole at least 3" deep
- 1/2" diameter wood bit for drilling fiberglass
- Hammer
- 9/16" deep socket ratchet drive for tightening nuts on 3/8" concrete anchors
- 3/4" wrench and 3/4" socket for tightening the 1/2" diameter bolts and nuts used to connect the screen to the fiberglass riser
- 3/4" mastic to fill gaps that may exist between the fiberglass flanges and the concrete wall (maximum that would be needed- 10')
- Small generator (1500 watt)
- 50' extension cord with splitter to operate both drills simultaneously
- A rotary saw with a wood cutting and masonry cutting blade
- Two 2 x 4's long enough to hold the oil baffle to the correct height while it is fastened to the manhole wall with the concrete anchors
- **ALL REQUIRED FASTENERS WILL BE DELIVERED WITH THE CDS SEPARATION SCREEN**

General Finishing Requirements

The precast components are delivered with lifting points cast into the various pieces. Where cavities were created for lifting, said cavities shall be mortar packed and finished to conform to the surface that would have otherwise existed had not the lifting point been cast. Where rebar or fabricated cable loops have been used to provide for lifting, those that project above the normal finish surface shall be cut flush with the normal finished surface.

All work throughout the installation shall be done to a professional standard normally expected for the class of work being performed. **The PSWC unit shall be installed using Butyl Mastic, rubber gaskets and/or grout to seal joints of the precast manhole structure to ensure that unit is water tight, holding water up to the flow line invert of the inlet and outlet pipes.**

Product Installation

The Contractor shall install the storm water pollution control device and diversion weir box, diversion weir and frames and covers in accordance with the general following guidelines.

Contractor shall set up traffic control in accordance with the traffic control plan previously submitted and approved by the Engineer. Asphalt shall be removed to the extent determined as required by Contractor. All asphalt cutting shall be done to a neat line to facilitate a neat asphalt patch that shall be placed at the end of the equipment installation.

Contractor may elect to remove the storm drain to the extent necessary to accommodate the new diversion weir box, or may elect to do it later in the construction sequence.

Excavation shall be carried out as required to accommodate the equipment. Contractor shall provide shoring as required to ensure a stable excavation. The depth of excavation required for the installation of the storm water treatment unit is as follows:

CDS Model No.:	Depth below Pipeline Invert:
PSWC30_30	8'-2"± below pipeline invert
PSWC40_40	9'-7"± below pipeline invert
PSWC56_40	9'-7"± below pipeline invert
PSWC56_53	10'-11"± below pipeline invert
PSWC56_68	12'-6"± below pipeline invert
PSWC56_78	13'-6"± below pipeline invert

On achieving subgrade for the excavation, the Engineer will determine suitability of the subgrade to support the structure that will be installed. On acceptance of the subgrade condition, Contractor shall backfill the excavation with 6" of Class 2 aggregate base and shall compact said aggregate base to 95% relative compaction. The aggregate base shall be within .04' of theoretical grade. The grade may be low by .04', but may not be above the theoretical grade.

Sump Base Slab Installation

Subgrade shall be established as shown on the Drawings. The subgrade material shall be composed to withstand a design loading of 2,000 pounds per square foot (psf). It is recommended that the hole be over-excavated by a minimum of 6" and backfilled with aggregate base and compacted to 90% to make subgrade. **Backfill shall be carried to ½ inch above the seating ring of the sump joint and leveled to ensure bearing of the separation chamber on the backfill.**

The sump base slab shall be placed on the compacted base, elevation confirmed, plumbed and aligned to ensure that the remaining precast components will be properly situated as assembly proceeds.

Note: The correct vertical distance between the top of the separation slab and pipe invert must exist in order to ensure proper installation of the separation screen and fiberglass inlet. The Contractor may wish to "dry stack" the sump and separation slab first to determine any discrepancy between the actual height

of these two components and the nominal height as indicated on the drawings. The following table lists the required distances based upon CDS model.

PSWC UNIT	30_30	40_40	56_40	56_53	56_68	56_78
VERTICAL DISTANCE	42.5"	55"	55"	71"	89"	100"

Sump Riser Installation

Prior to setting the sump riser section, Contractor shall place a layer of 3/4 inch X 3 inch mastic rope (delivered with the CDS Unit) on top of the tongue of the base slab joint. A two or three-foot barrel-section as indicated on the Drawings shall be placed on top of the base slab exercising care to ensure that the mastic sealant is not unseated. The goal is to ensure a watertight seal between the sump riser and base slab.

Separation Slab Installation

Prior to placement of the separation slab, the Contractor shall place a layer of mastic rope on the tongue joint of the sump riser in the manner described previously. The separation slab shall be set with the proper orientation to the storm drain to ensure correct alignment of the separation screen and fiberglass inlet.

IMPORTANT: THE SEPARATION SUMP SLAB MUST BE ORIENTED TO ENSURE THAT THE CENTERPOINT OF THE OPENING HAS AN OFFSET DISTANCE OF EIGHT (8) INCHES UPSTREAM FROM THE CENTER OF THE SLAB UNLESS INDICATED OTHERWISE IN THE DRAWINGS. REFER TO THE DRAWINGS TO SEE THE PROPER ORIENTATION OF THE SEPARATION SLAB.

Fiberglass Oil Baffle, Inlet/Outlet and Screen Installation

At this point, the Contractor shall connect the fiberglass oil baffle if one is required. Prior to fastening the baffle to the riser wall, the fiberglass inlet, outlet and screen assembly shall be pre-positioned to determine the correct location of the oil baffle. At this time, the positions of the screen bolt-down tabs may be marked to aid the fastening of the screen to the separation slab. The oil baffle shall placed above the separation slab as indicated on the drawings and fastened to the manhole riser wall using the supplied anchor bolts placed no greater than 12" on center. It is recommended that the contractor use two by fours cut to the correct height, as show in the following table, to hold the oil baffle at the correct height above the separation slab while fastening the oil baffle to the wall.

PSWC UNIT	30_30	40_40	56_40	56_53	56_68	56_78
2 X 4 LENGTH	24"	32"	37"	45"	58"	70"

Once the oil baffle is installed, the pre-positioned inlet-riser components shall be fastened to the separation screen as detailed on the Drawings and the entire fiberglass assembly fastened to the top of the separation slab. If the PSWC unit is specified as a **"RIGHT-HAND"** orientation, place the screen so that the **GREEN FLANGE IS UP**. If the unit is specified as a **"LEFT-HAND"** orientation, place the screen so that the **RED FLANGE IS UP**. Care shall be taken to ensure proper orientation of the fiberglass inlet and outlet for connection to the weir box in work to follow.

When the proper orientation and location has been achieved, Contractor shall enter into the circular screen area and fasten the bottom of the screen to the separation slab by placing concrete expansion anchors through each of the tab ears that protrude from the bottom of the screen. Contractor shall float a layer of epoxy cement over the tabs and studs to eliminate a protrusion for materials to hang up on during the rotating operation of the device.

Diversion Box, Fiberglass Outlet, and Access Riser Installation

Contractor may elect to backfill and remove shoring around the precast stack at this point before proceeding with additional structure placement. Backfill shall be placed and compacted in conformance with local requirements, and shall be compacted to a relative density of 90%. Contractor may use native material if the Engineer determines it to be suitable for backfill, or Contractor may elect to backfill with a self-compacting material such as pea gravel. Backfill shall be carried to 6" below the outside invert of the inlet channel.

Contractor shall place the fiberglass outlet as indicated on the drawings. Contractor shall hold both the fiberglass inlet and outlet to proper grade. Contractor shall install the precast diversion weir box to the line and grade shown on the project plans after removal of the interfering portions of the existing drainage pipe (if not previously removed). Said pipe shall be cut to a neat line for removal. The precast weir box shall be placed on a minimum of 6" of Class 2 aggregate compacted to 95% relative compaction. Contractor shall set forms inside the precast riser section as required to allow concrete to be placed around the fiberglass inlet and outlet to seal them to the precast diversion weir box structure and to the CDS riser structure.

The Contractor shall place dowels, reinforcing steel and concrete for the required diversion weir as detailed on the Drawings ensuring that accurate alignment is maintained. Additionally, dowels, reinforcing steel and concrete shall be placed to seal the drainage pipe to the weir box structure at each end of structure as detailed on the project plans. A secondary pour of concrete shall be placed over the invert of the precast weir box on the upstream side of the diversion weir to match the pipeline invert providing a smooth transition to the storm water treatment unit's inlet.

Once the installation of the precast diversion weir box is completed, the necessary access riser sections and access hatches shall be installed to match final grade. The Contractor shall complete backfilling the excavation in conformance to the backfilling procedure specified above. The structural section of the street shall be replaced to the limits required. The thickness of base and asphalt paving required for the structural section shall, at a minimum, match the existing pavement structural section.

Contractor shall clean up the construction site, removing all equipment, traffic control devices, materials, rubbish and any deleterious materials all as may be necessary to return the project site the condition that existed prior to project commencement.

OIL SORBENT SPECIFICATIONS
Oil Sorbent Material For Use With CDS Units
Material, Application and Replacement Specifications

Oil & Grease Removal From Stormwater Runoff

Material

If sorbent material is to be added to the CDS unit, it shall be Rubberizer® filter media 2 to 4 Mesh for 4700 micron screens, 4 to 8 Mesh for 2400 micron screens or Oars® Particulate for Filtration, HPT4100 or equal. Rubberizer® 8 to 4 Mesh and 2 to 4 Mesh is supplied by Haz-Mat Response Technologies, Inc., 4626 Santa Fe Street, San Diego, CA 92109, (800) 542-3036. Oars® Particulate for Filtration, HPT4100 is supplied by AbTech Industries, 4110 N. Scottsdale Rd., Suite 235, Scottsdale, AZ 85251, (602) 874-4000.

Oil Sorbent material may also be furnished in boom configurations. The oil sorbent material shall be Rubberizer (2.25-inch diameter boom), OARS (2-inch diameter Smart Sponge Line Skimmer Series), or equal.

Application

Place sorbent material within the CDS unit's separation chamber. Initial application of sorbent shall be a minimum of ¼ inch thick layer across the entire area of the separation chamber. The annual application of sorbent shall be a minimum of four (4) pounds per acre of impervious surface subject to oil and grease runoff. This four (4) pound /acre application is proposed for runoff from surfaces subject to typical oil and grease concentrations of 5 milligrams per liter (mg/l). Higher rates of sorbent application will be required where oil and grease concentrations exceed 5 mg/l.

If booms are the preferred configuration for applying the oil sorbent material, booms shall be linked together across the area of the separation chamber per the recommendation of CDS.

Sorbent Inspection and Replacement

Sorbent may be used until it is saturated with oil and grease. Visual indications of saturated or near saturated sorbent material include: sorbent appears dark and becomes less buoyant when heavily saturated with oil, grease and debris. Heavily saturated sorbent appears to be coated with oil, grease and particulates.

Disposal

Used sorbent material may be categorized as hazardous waste in some states; consult local and state requirements.

Consult with CDS Technologies for additional information on efficiencies of sorbent material, estimating annual sorbent needs, replacement frequency or maintenance needs.

CDS TECHNOLOGIES

APPENDIX J

Air Quality Technical Report (RECON)

AIR QUALITY REPORT
FOR THE
WAL-MART/ESCONDIDO UNION SCHOOL DISTRICT
PROJECT
CITY OF ESCONDIDO, CALIFORNIA

Prepared for

CITY OF ESCONDIDO
201 N. BROADWAY
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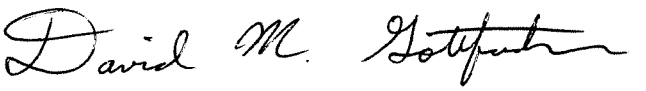
Prepared by



DAVID M. GOTTFREDSON
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RECON

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Summary

This report evaluates potential local and regional air quality impacts associated with the proposed Wal-Mart/Escondido Union School District project. The project proposes the removal of existing structures and subsequent development of two separate sites (a large-scale retail facility on 11.11 acres and a school administration office complex on 4.57 acres) within the city of Escondido.

The proposed project is located within the San Diego Air Basin (SDAB), one of 15 air basins that geographically divide the state of California. The SDAB is currently classified as attainment for all federal criteria air pollutants with the exception of the eight-hour ozone standard. The SDAB is a state non-attainment area for both particulate matter less than 10 microns (PM_{10}) and 1-hour ozone.

Results from the air quality assessment for the proposed project sites indicate that there are no significant impacts associated with the project's construction or operation with respect to criteria air pollutant emissions.

Although no significant air quality impacts are anticipated during the construction phase of the project, this report identifies standard construction measures that shall be implemented during construction to reduce potential nuisances resulting from construction emissions and to ensure compliance with applicable rules and regulations.

The demolition of existing structures on both the retail facility and school administration office complex sites could result in the release of asbestos, lead-based paint, or other toxic substances. Mitigation measures are specified that will ensure that impacts due to toxic air emissions will be less than significant.

Introduction and Project Description

The purpose of this report is to assess potential short- and long-term local and regional air quality impacts resulting from implementation of the proposed Wal-Mart/Escondido Union School District project. The analysis considers air emissions to the air basin from implementation of the project.

Air pollution affects all southern Californians. Effects can include the following:

- Increased respiratory infection
- Increased discomfort
- Missed days from work and school
- Increased mortality

Polluted air also damages agriculture and our natural environment.

The analysis of impacts is based on state and federal ambient air quality standards and is assessed in accordance with the guidelines, policies, and standards established by the City of Escondido and the San Diego Air Pollution Control District (APCD). Project compatibility with the adopted air quality plan for the area is also assessed. Measures are recommended, as required, to reduce potentially significant impacts.

Finally, a list of dust and equipment exhaust emissions control measures is included in this report. These measures are required during project construction to reduce potential nuisances resulting from construction emissions and to ensure compliance with applicable rules and regulations.

The proposed project sites are in the city of Escondido. The Wal-Mart retail facility is proposed for 11.11 acres located at 1330 East Grand Avenue within a portion of the Escondido Village Mall shopping center. The Escondido Union School District (EUSD) administration offices are proposed on a 4.57-acre site located at 1201 East Washington Avenue and occupying the southeast corner of the intersection of East Washington Avenue and Ash Street/State Route 78 (SR-78). Figure 1 shows the regional location of the project sites. Figure 2 shows an aerial photograph of the project sites and vicinity.

Figure 3 shows the project site plan for the Wal-Mart facility. The Wal-Mart project site is currently occupied by a single-family residence in the southern portion of the site, and two office/retail buildings consisting of the existing 61,500-square-foot administrative office building occupied by the Escondido Union School District and a 7,245-square-foot ancillary building used by the EUSD for storage and by a neighborhood retail use. The Wal-Mart site is surrounded by commercial uses on the north and east, commercial and residential uses to the west, and residential uses to the south.

Figure 4 shows the conceptual site plan for the EUSD administration complex. The proposed EUSD project site is currently occupied by a 1940s era half-round building and several ancillary features (see Figure 2). The half-round building is used for storage. Commercial uses to the west and south, commercial and residential uses to the north, and residential uses to the east bound the EUSD project site. The Escondido Creek Flood Control Channel also runs along the southern project boundary.

The proposed Wal-Mart project would develop a 143,183-gross-square-foot building with an outdoor seasonal garden center, outdoor display and sales areas, loading dock, retaining wall, parking, and landscaping on the 11.11 acre parcel (see Figure 3). The project would require demolition and removal of a single-family residence in the southern portion of the site and removal of two office/retail buildings consisting of the existing 61,500-square-foot administrative office building occupied by the EUSD and a 7,245-

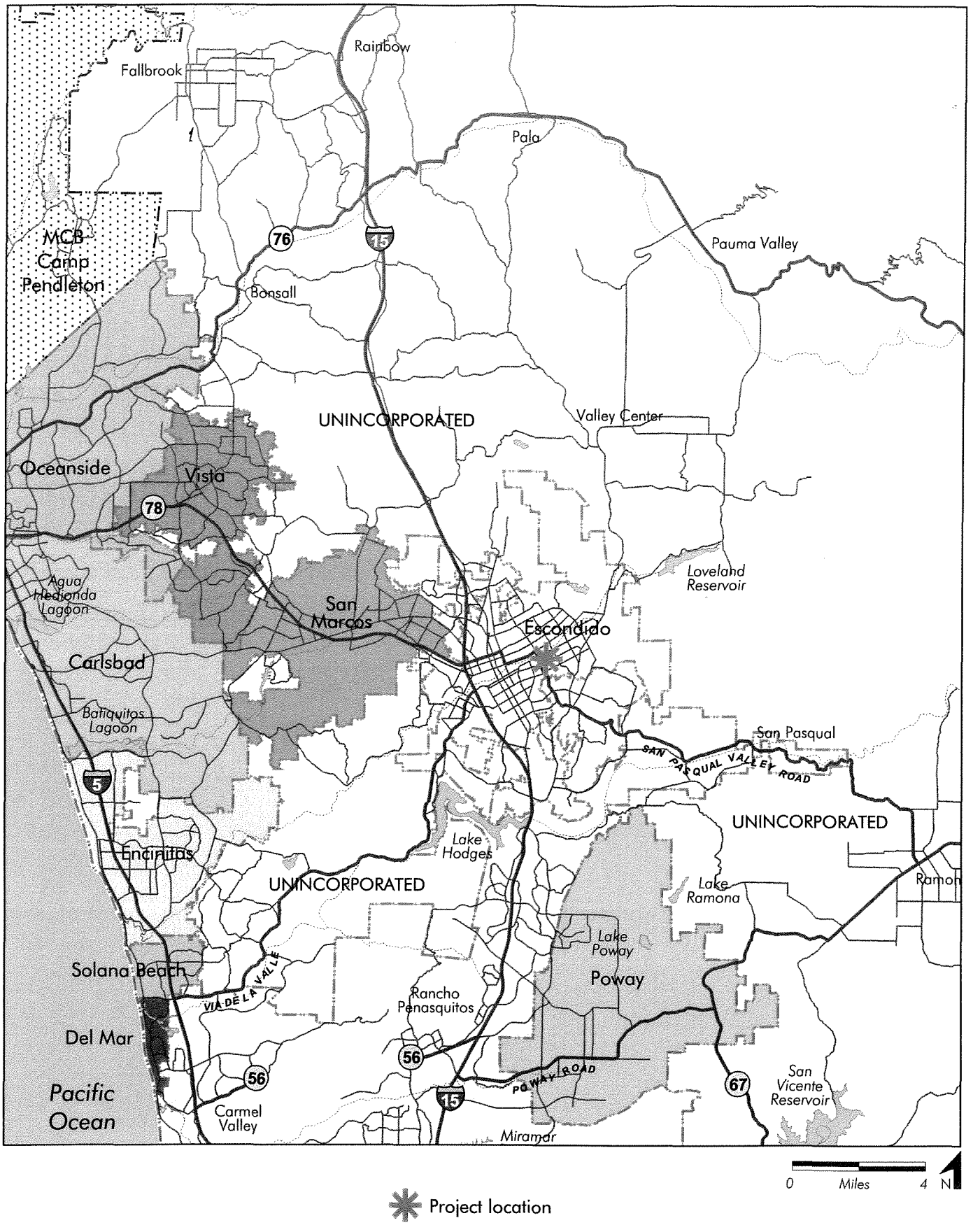

FIGURE 1
Regional Location

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FIGURE 2
Aerial Photograph of Project

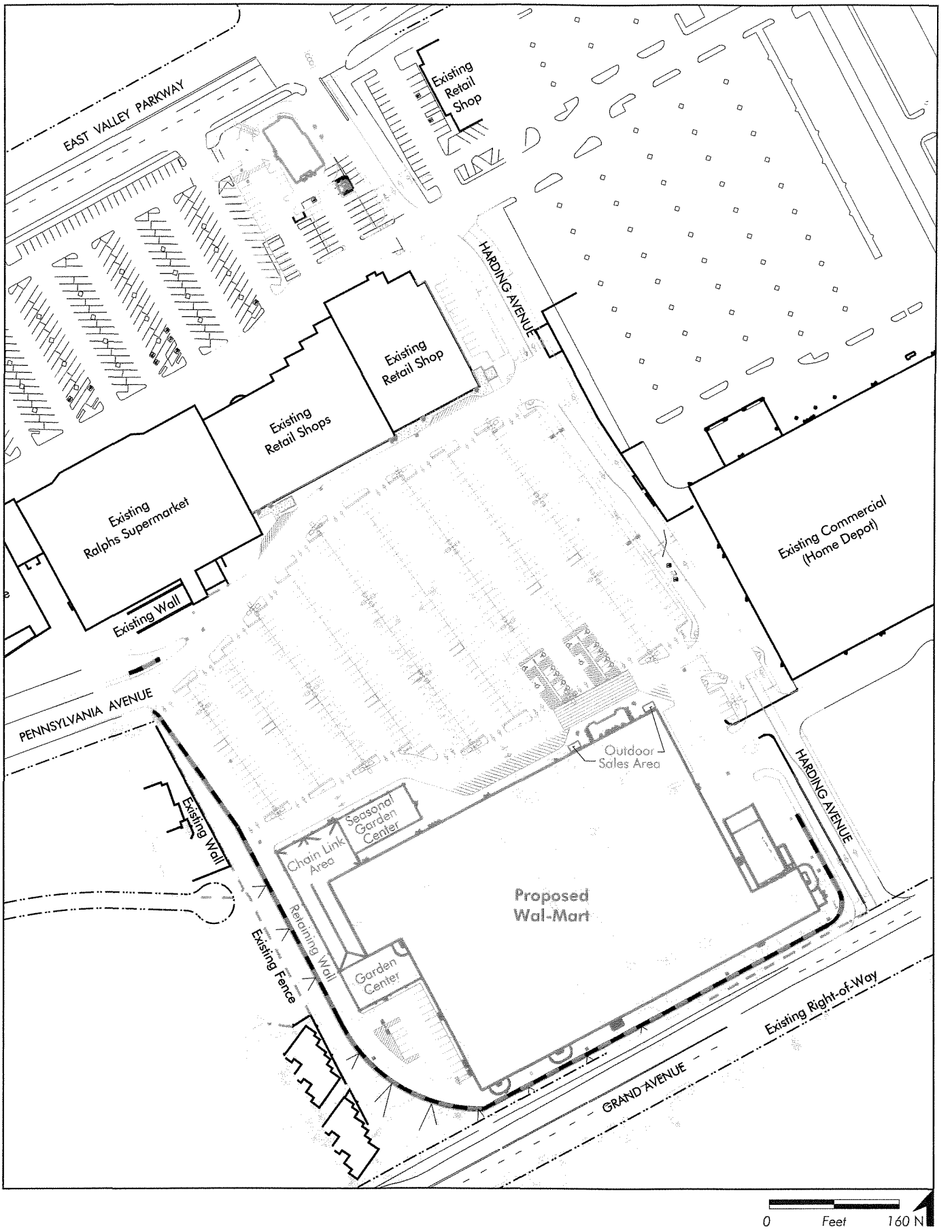

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FIGURE 3
Proposed Site Plan - Wal-Mart

Map Source: R2C, Ruhnau, Ruhnau and Clarke, Architects and Planners, preliminary design November 17, 2003, revised January 28, 2004

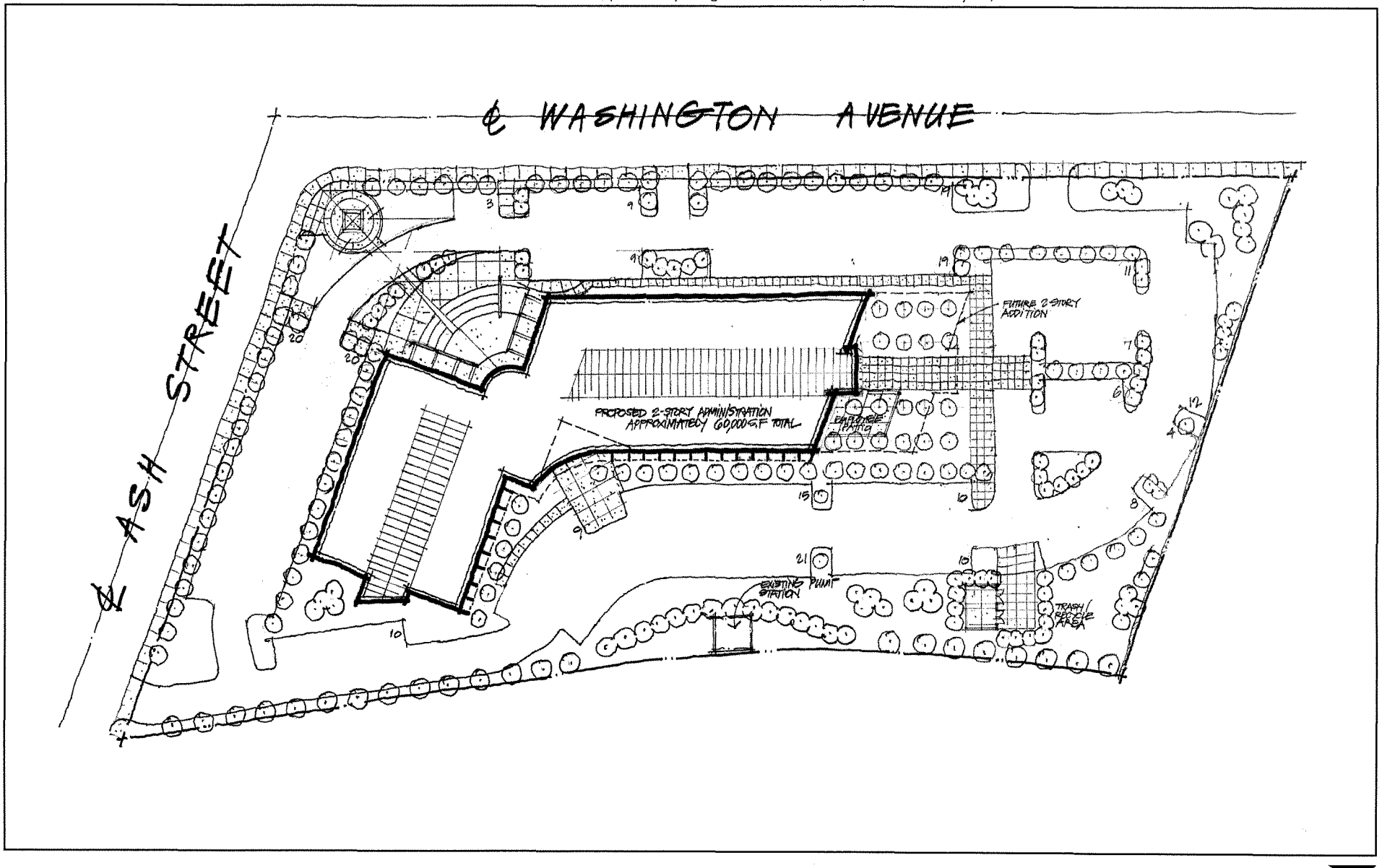

FIGURE 4

Proposed Conceptual Site Plan - EUSD Administration Building

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square-foot ancillary building used by the EUSD for storage and by a neighborhood retail use. In addition, site preparation calls for the removal of a portion of the existing slope in the southern and western portions of the site. A total of 80,000 cubic yards of cut and 17,000 cubic yards of fill are required for the project with 63,000 cubic yards remaining for export.

The proposed EUSD building would provide office and meeting space for ongoing EUSD activities within a two-story building of approximately 60,000-gross-square-feet with a loading dock and landscaping on a 4.57-acre site (see Figure 4). The EUSD requires parking for approximately 220 cars, which would allow for on-site employee parking (expected to be at the rear of the site) and visitor parking. The site is relatively flat and very little grading would be required during site preparation. The project would also require demolition and removal of a 1940s era half-round wood and metal shop/warehouse currently owned by the City of Escondido. The structure is still used for storage.

Regulatory Framework

Currently about half of the smog-forming emissions are produced by cars, trucks, and other motor vehicles (San Diego County 2004). In addition to these sources, other mobile sources include construction equipment, trains, and airplanes. Emission standards for mobile sources are established by state and federal agencies such as the California Air Resources Board (CARB) and the U.S. Environmental Protection Agency (EPA). Reducing mobile source emissions requires the technological improvement of existing mobile sources and the examination of future mobile sources such as those associated with new or modification projects. Due to the state's low emission vehicle requirements it is anticipated that by 2010 the percentage of air pollution contributed by motor vehicles will be down to 42 percent. The regulatory framework described below details the federal and state agencies that are in charge of monitoring and controlling mobile source air pollutants and what measures are currently being taken to achieve and maintain healthful air quality in the SDAB.

The state of California is divided geographically into 15 air basins for the purpose of managing the air resources of the State on a regional basis. Areas within each air basin are considered to share the same air masses and, therefore, are expected to have similar ambient air quality. If an air basin is not in either federal or state attainment for a particular pollutant, the basin is classified as moderate, serious, severe, or extreme (there is also a marginal classification for federal non-attainment areas).

A. Federal Regulations

The federal Clean Air Act (CAA) was enacted in 1970 and amended in 1977 and 1990 [42 U.S.C. 7506(c)] for the purposes of protecting and enhancing the quality of the nation's air resources to benefit public health, welfare, and productivity.

In 1971, in order to achieve the purposes of Section 109 of the CAA, the EPA developed primary and secondary national ambient air quality standards (NAAQS). Six pollutants of primary concern were designated: ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, lead, and suspended particulates (PM_{10}). The primary NAAQS must "protect the public health with an adequate margin of safety" and the secondary standards must "protect the public welfare from known or anticipated adverse effects (aesthetics, crops, architecture, etc.)" (Federal Clean Air Act 1990:Section 109). The primary standards were established, with a margin of safety, considering long-term exposure for the most sensitive groups in the general population (i.e., children, senior citizens, and people with breathing difficulties). The current state and federal ambient air quality standards are shown in Table 1.

If an air basin is not in federal attainment for a particular pollutant, the basin is classified as marginal, moderate, serious, severe, or extreme. The SDAB was formally designated a federal attainment area for the one-hour ozone standard on July 28, 2003. With the attainment of the federal ozone standard, the SDAB was in attainment of all federal criteria pollutants and is currently operating under a maintenance plan for ozone.

In 1997, the EPA promulgated a new eight-hour ozone standard of eight parts per hundred million (pphm) to replace the existing one-hour standard of 12 pphm. For areas in attainment of the one-hour standard, the eight-hour standard replaced the one-hour standard. However, the existing one-hour standard continued to apply in each non-attainment area until attainment of the one-hour standard was achieved. After attainment of the one-hour standard, the standard is revoked, leaving only the eight-hour standard (County of San Diego 1999).

Until recently, the EPA had been unable to implement and enforce the eight-hour ozone standard established in 1997 as a result of several legal challenges culminating with the U.S. Supreme Court. With the suspension of the enforcement ability of the eight-hour standard, the EPA felt that those areas where the one-hour standard had been revoked were no longer protected by any federal ozone standard. Consequently, on July 5, 2000, the EPA reinstated the one-hour ozone standard for all areas where the one-hour standard had been revoked, thereby ensuring that the entire nation was covered by the original one-hour ozone standard.

TABLE 1
AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards[1]		Federal Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)	1 Hour	0.09 ppm (180 $\mu g/m^3$)	Ultraviolet Photometry	0.12 ppm (235 $\mu g/m^3$)[8]	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	–		0.08 ppm (157 $\mu g/m^3$)		
Respirable Particulate Matter (PM_{10})	24 Hour	50 $\mu g/m^3$	Gravimetric or Beta Attenuation	150 $\mu g/m^3$	Same as Primary Standard	Inertial Separation and Gravimetic Analysis
	Annual Arithmetic Mean	20 $\mu g/m^3$		50 $\mu g/m^3$		
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	No Separate State Standard		65 $\mu g/m^3$	Same as Primary Standard	Inertial Separation and Gravimetic Analysis
	Annual Arithmetic Mean	12 $\mu g/m^3$	Gravimetric or Beta Attenuation	15 $\mu g/m^3$		
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m^3)	Non-dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m^3)	None	Non-dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		–	–	–
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	–	Gas Phase Chemilumine-scence	0.053 ppm (100 $\mu g/m^3$)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.25 ppm (470 $\mu g/m^3$)		–		
Lead	30 days average	1.5 $\mu g/m^3$	AIHL Method 54 (12/74) Atomic Absorption	–	–	High Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 $\mu g/m^3$	Same as Primary Standard	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	–	Fluorescence	0.030 ppm (80 $\mu g/m^3$)	–	Pararosoaniline
	24 Hour	0.04 ppm (105 $\mu g/m^3$)		0.14 ppm (365 $\mu g/m^3$)	–	
	3 Hour	–		–	0.5 ppm (1300 $\mu g/m^3$)	
	1 Hour	0.25 ppm (665 $\mu g/m^3$)		–	–	
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer–visibility of 10 miles or more (0.07–30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		No Federal Standards		
Sulfates	24 Hour	25 $\mu g/m^3$	Ion Chromatography	No Federal Standards		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 $\mu g/m^3$)	Ultraviolet Fluorescence	No Federal Standards		
Vinyl Chloride[9]	24 Hour	0.01 ppm (26 $\mu g/m^3$)	Gas Chromatography	No Federal Standards		

See also footnotes on next page.

TABLE 1
AMBIENT AIR QUALITY STANDARDS
(continued)

ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter.

[1]California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter–PM_{10}, $PM_{2.5}$, and visibility reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standrads in Section 70200 of Title 17 of the California Code of Regulations.

[2]National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when 99 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.

[3]Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25° C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25° C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[4]Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

[5]National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

[6]National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[7]Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.

[8]New federal 8-hour ozone and fine particulate matter standards were promulgated by U.S. EPA on July 18, 1997. Contact U.S. EPA for further clarification and current federal policies.

[9]The ARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

The Supreme Court issued its opinion on February 27, 2001 upholding the new ozone standard. However, the Court said the EPA must reconsider its implementation plan for moving from the one-hour standard to the revised standard. The Court instructed the EPA to develop an implementation plan (including a timetable) consistent with the Court's opinion. While the case was pending before the Supreme Court, the ozone and fine particle standards remained in effect as a legal matter, because the D.C. Circuit Court had not vacated the standards.

Consequently, although enforcement of the standard had been delayed by the litigation, the EPA directed air districts to begin collecting eight-hour ozone data to be used in determining the attainment status of the districts relative to the new standard. The resolution of litigation regarding the new eight-hour ozone standard has allowed the EPA to move forward with implementation of the standard.

The EPA requested States to provide designation recommendations to the Regional Administrator by July 15, 2003. CARB supplied monitoring data for the years 2000 through 2002 to the EPA on July 15, 2003. The EPA reviewed the designation recommendations and on April 30, 2004 listed the final designations in the Federal Register (EPA 2004a). These designations are to become effective June 15, 2004.

That portion of the SDAB containing the project sites has been designated a "basic" non-attainment area for the eight-hour ozone standard under Subpart 1 of Part D of the Clean Air Act (EPA 2004a). Using the discretion provided by Section 172(a)(1) of the CAA, the EPA has chosen not to classify the basin (e.g., moderate, serious, etc.). For areas subject to Subpart 1, consistent with Section 172(a)(2)(A) of the CAA, the period of attainment will be no more than five years from the effective date of designation (EPA 2004b). Consequently, the SDAB must demonstrate attainment by June 15, 2009. If warranted, the EPA may grant an extension of the attainment date to no more than 10 years after designation (June 15, 2014).

A new federal fine particles standard was also established in 1997, targeting $PM_{2.5}$ or inhalable particles that are 2.5 microns or less in diameter. Despite the new $PM_{2.5}$ standard, the existing federal standard for particles that are 10 microns or less in diameter (PM_{10}) has been retained. Federal regulations required $PM_{2.5}$ monitoring to begin on January 1, 1999 (County of San Diego 1999). Monitoring data is currently being collected at five monitoring sites in the SDAB.

A list of recommended designations was due to the EPA by February 15, 2004. The CARB supplied monitoring data for the years 2000 through 2002 to the EPA on February 11, 2004. It has been initially recommended that the SDAB be classified as a nonattainment area for $PM_{2.5}$. The EPA must issue final $PM_{2.5}$ designations for all areas by December 2004. Attainment of the $PM_{2.5}$ standards must be achieved five years after the designation date (a five year extension is possible with adequate demonstration).

B. State Regulations

The EPA allows states the option to develop different (stricter) standards. The state of California generally has set more stringent limits on the six criteria pollutants (see Table 1). The California Clean Air Act (CCAA), also known as the Sher Bill or Assembly Bill (AB) 2595, was signed into law on September 30, 1988 and became effective on January 1, 1989. The CCAA requires that districts implement regulations to reduce emissions from mobile sources through the adoption and enforcement of transportation control measures. As a state serious ozone non-attainment area, San Diego is subject to various requirements including (County of San Diego 1998):

- Five percent annual reduction in hydrocarbons and oxides of nitrogen emissions from 1987 until standards are attained. If this reduction cannot be obtained, all feasible measures must be implemented.

- Air quality permitting program requiring: (1) Best Available Control Technology (BACT) on new and modified equipment that emits 10 or more pounds per day of non-attainment pollutants or precursors, and (2) emission offsets for all increases in emissions of non-attainment pollutants or precursors at sources with emissions of non-attainment pollutants or precursors of 15 or more tons per year.

C. Toxic Air Contaminants

1. Diesel Particulate Matter

The public's exposure to toxic air contaminants (TACs) is a significant public health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health (AB 1807: Health and Safety Code Sections 39650-39674). The Legislature established a two-step process to address the potential health effects from TACs. The first step is the risk assessment (or identification) phase. The second step is the risk management (or control) phase of the process.

Diesel-exhaust particulate matter emissions have since been established as TACs. Diesel emissions occurring during construction and those associated with the operations associated with the proposed Wal-Mart/EUSD project pose a potential hazard to residents and visitors in the immediate area. In order to address the diesel emissions concern in all of the state of California, CARB has adopted regulations that reduce diesel-exhaust particulate matter emissions, nitrogen oxides (NOx), and sulfur oxides (SOx). They include:

- a requirement for low sulfur/low aromatic diesel fuel that reduces particulate matter, NOx, and SOx emissions (October 1993);

- emission standards that restrict the amount of particulate matter emitted by new diesel cars, trucks, urban buses, and heavy-duty trucks (phased-in from 1982 through 1996);

- emission standards for NOx emissions from diesel cars, trucks, and urban buses (phased in from 1984 through 2004);

- the roadside testing of heavy-duty on-road vehicles for excessive particulate matter emissions (1991) and a requirement for fleet inspection and maintenance of heavy-duty vehicles (June and July 1998); and

- emission standards that restrict the amount of particulate matter and NOx that can be emitted from many 1995 and newer diesel-utility engines.

The airborne toxic control measure development process described above will determine whether additional regulations and control of diesel-exhaust emissions are required.

2. Asbestos Containing Materials

Demolition and renovation activities where asbestos is present are highly regulated under the CAA. State, local, and EPA regional offices must be notified of such activities and special processing, handling, and disposal methods for all asbestos-containing materials must be employed in order to contain emissions.

The CAA requires the EPA to develop and enforce regulations to protect the general public from exposure to airborne contaminants that are known to be hazardous to human health. In accordance with Section 112 of the CAA, EPA established National Emissions Standards for Hazardous Air Pollutants (NESHAP) to protect the public. Asbestos was one of the first hazardous air pollutants regulated under Section 112. On March 31, 1971, EPA identified asbestos as a hazardous pollutant, and on April 6, 1973, EPA first promulgated the Asbestos NESHAP in 40 CFR Part 61.

In 1990, EPA promulgated a revised NESHAP regulation. The Asbestos NESHAP regulations protect the public by minimizing the release of asbestos fibers during activities involving the processing, handling, and disposal of asbestos-containing material. Accordingly, the Asbestos NESHAP specifies work practices to be followed during demolitions and renovations of all structures, installations, and buildings. In addition, the regulations require the owner of the building and/or the contractor to notify applicable state and local agencies and/or EPA Regional Offices before all demolitions or before renovations of buildings that contain a certain threshold amount of asbestos.

The Asbestos NESHAP relating to demolitions or renovations is a work practice standard and consequently does not place specific numerical emission limitations for asbestos fibers on asbestos demolitions and removals. Instead, it requires specific actions be taken to control emissions.

Asbestos NESHAP regulations must be followed for demolitions of facilities with at least 260 linear feet of regulated asbestos-containing materials (RACM) on pipes, 160 square feet of regulated RACM on other facility components, or at least 35 cubic feet of facility components where the amount of RACM previously removed from pipes and other facility components could not be measured before stripping.

However, the appropriate regulatory agency must be notified prior to all demolitions, even if no asbestos is present at the site, and all demolitions and renovations are "subject" to the Asbestos NESHAP insofar as owners and operators must determine if and how much asbestos is present at the site.

Under Section 112 of the CAA, Congress gave EPA the responsibility for enforcing regulations relating to asbestos renovations and demolitions. The CAA allows EPA to delegate this authority to state and local agencies. Even after EPA delegates responsibility to a state or local agency, EPA retains the authority to oversee agency performance and to enforce NESHAP regulations as appropriate.

In the SDAB, authority to regulate the Asbestos NESHAP has been delegated to the San Diego APCD. Demolition and renovation operations involving the presence of RACM are covered by Regulation XI, Subpart M Rule 361.145. This rule specifies the notification requirements as well as procedures for asbestos emission control. Additionally, the Occupational Safety and Health Administration (OSHA) has developed safety and health regulations for construction in 40 CFR Part 1926; 40 CFR 1926.1101 specifically addresses asbestos.

3. Lead-Based Paint

Human exposure to lead has been determined to be an adverse health risk by EPA and OSHA. Lead-based paint is defined as paint that contains a total lead content of more than 600 parts per million (ppm). Special handling is required for materials containing lead-based paints. Site preparation, demolition, removal, and cleanup activities must comply will all applicable federal and state regulations pertaining to the handling and disposal of lead-based paints.

D. State Implementation Plan

The State Implementation Plan (SIP) is the document that sets forth the state's strategies for achieving the air quality standards. The San Diego APCD is responsible for preparing

and implementing the portion of the SIP applicable to the SDAB. The San Diego APCD adopts rules, regulations, and programs to attain state and federal air quality standards, and appropriates money (including permit fees) to achieve these objectives.

E. The California Environmental Quality Act

Section 15125(d) of the California Environmental Quality Act (CEQA) Guidelines requires discussion of any inconsistencies between the proposed project and applicable general plans and regional plans, including the applicable air quality attainment or maintenance plan (or SIP). The SIP for the SDAB is the Regional Air Quality Strategy (RAQS) discussed below.

F. San Diego Air Pollution Control District

The San Diego APCD is the agency that regulates air quality in the SDAB. The San Diego APCD prepared the 1991/1992 Regional Air Quality Strategy (RAQS) in response to the requirements set forth in AB-2595. The draft was adopted, with amendments, on June 30, 1992 (County of San Diego 1992). Attached, as part of the RAQS, are the transportation control measures (TCM) for the air quality plan prepared by the San Diego Association of Governments (SANDAG) in accordance with AB-2595 and adopted by SANDAG on March 27, 1992, as Resolution Number 92–49 and Addendum. The required triennial updates of the RAQS and corresponding TCM were adopted in 1995, 1998, and 2001. The RAQS and TCM plan set forth the steps needed to accomplish attainment of state and federal ambient air quality standards.

The San Diego APCD has also established a set of rules and regulations initially adopted on January 1, 1969, and periodically reviewed and updated. The rules and regulations define requirements regarding stationary sources of air pollutants and fugitive dust. These rules and regulations are available for review on the agency's website (www.sdapcd.co.san-diego.ca.us).

The San Diego APCD is the primary agency that handles industrial odor and dust complaints. As a part of their nuisance complaint program, the San Diego APCD responds to citizen complaints concerning air pollution problems, such as smoke, odors, and dust from permitted and unpermitted operations. State and local regulations prohibit air pollution discharges which may cause injury, detriment, nuisance, or annoyance to any considerable number of persons, or the public, or which cause or have the tendency to cause injury or damage to business or property. These regulations, which are referred to as the public nuisance laws, do not apply to odors from agricultural operations in the growing of crops, or raising of fowl or animals, or to composting facilities (County of San Diego 2002a).

G. City of Escondido

Section 33-924 of the City's Municipal Code, "Coordination of CEQA, Quality-of-Life Standards, and Growth Management Provisions" provides quality-of-life thresholds related to air quality for projects proposed within the city of Escondido. Per section 33-924(a)(1)(G)(ii):

> Although the above standards constitute the threshold for preparing an environmental impact report, findings regarding the significance shall be based on the results of the EIR.

Consequently, in accordance with City planning guidance if the air emission thresholds provided in Section 33-924(a)(1)(G)(i) are anticipated to be exceeded, then a more detailed analysis of potential air quality impacts is required (Petrek, per. com. 2004). However, simply exceeding these thresholds does not constitute a significant air quality impact. Significance of potential air quality impacts is based on additional project specific analysis.

Additionally, the City of Escondido General Plan Community Open Space and Conservation Element includes policies for assessing Air Quality impacts. These policies are generally consistent with those identified in Appendix G of the 2000 CEQA Guidelines. In combination, these policies and guidelines provide guidance as to what would be considered significant under CEQA.

Environmental Setting

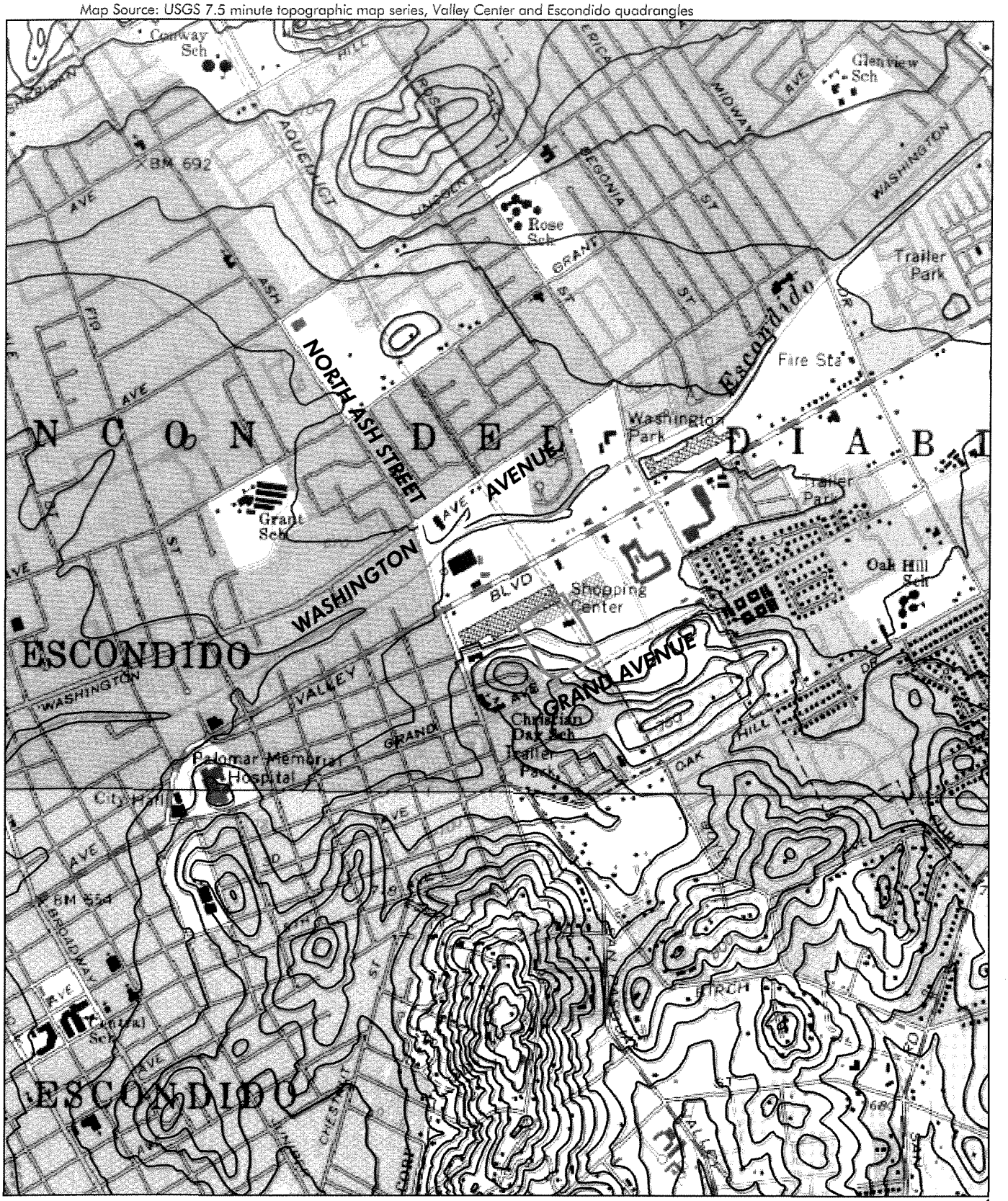
A. Geographic Setting

The proposed Wal-Mart/EUSD project is located in the city of Escondido within the SDAB, approximately 15 miles east of the Pacific Ocean. The eastern portion of the SDAB is ringed by mountains to the north, east, and south. These mountains tend to restrict airflow and concentrate pollutants in the valleys and low-lying areas below. Figure 5 shows the existing topography of the project sites.

B. Climate

Air quality is a function of both the rate and location of pollutant emissions and how meteorological conditions and topographic features influence these pollutants. Atmospheric conditions such as wind speed and direction and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants, and consequently affect air quality.

Map Source: USGS 7.5 minute topographic map series, Valley Center and Escondido quadrangles



Wal-Mart site

EUSD administration site

20-foot interval topographic contour

FIGURE 5
Existing Topography of the Project Sites

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The climate of coastal southern California, including the city of Escondido, is determined largely by high pressure that is almost always present off the west coast of North America. High-pressure systems are characterized by an upper layer of dry air that warms as it descends. This warm, dry air acts as a lid, restricting the mobility of the cool, ocean-modified air located near the surface creating an inversion or a reversal of the typical decreasing temperature with height structure of the atmosphere.

Moisture trapped in the cool, lowest layer of the atmosphere forms clouds that make up what is referred to as the "marine layer." The marine layer is the prominent weather feature in the SDAB, an area that is defined roughly by the boundary of San Diego County. The temperature inversion associated with the marine layer also plays an important role in determining the quality of the air in the SDAB. During the summer and fall, emissions generated in the region combine with abundant sunshine under the restraining influences of topography and an inversion to create conditions that are conducive to the formation of photochemical pollutants, such as ozone, and secondary particulates, such as sulfates and nitrates. As a result, the quality of the air in the SDAB is often the poorest during the warmer, summer and fall months.

According to the Western Regional Climate Center, approximately 90 percent of the yearly total precipitation in San Diego County occurs during the period of November through April (U.S. Department of Commerce 2000). During these months, the area of high pressure in the eastern Pacific is occasionally displaced allowing storm systems to spread unsettled weather including precipitation into southern California. This wet period of the year is characterized by increased mixing in the atmosphere and occasional rainfall that helps cleanse the air of pollutants. As a result, air quality in San Diego County is often the best during this time of the year.

The prevailing wind in San Diego County is from the west. As a result, the temperature and moisture content of the air near the ground is often strongly influenced by the cool waters of the Pacific Ocean located to the west. Occasionally, when high pressure is centered near the Great Basin, hot, dry winds called "Santa Ana winds" develop over southern California. These winds blow from the east or offshore and can bring some of the warmest temperatures of the year to San Diego County. Santa Ana wind events occur most often during the winter months and can occasionally allow pollutant-laden air from the Los Angeles area to be drawn southward into the SDAB. This often occurs during the onset or final stages of a Santa Ana wind event. These conditions have the potential to produce some of the poorest air quality days of the year in San Diego County.

Average summer high temperatures in the project vicinity are approximately 87 degrees Fahrenheit (°F). Average winter low temperatures are approximately 43 °F. The average rainfall in the project vicinity is approximately 16 inches annually (Southern California Climate Summaries found at http://www.wrcc.dri.edu/summary/climsmsca.html).

C. Existing Air Quality

Air quality is commonly expressed as the number of days in which air pollution levels exceed state standards set by the CARB or federal standards set by the EPA. Table 2 summarizes the number of days per year during which state and federal standards were exceeded in the SDAB overall during the years 1999 to 2003. The San Diego APCD currently maintains 10 air quality monitoring stations located throughout the greater San Diego metropolitan region. Air pollutant concentrations and meteorological information are continuously recorded at these 10 stations. Measurements are then used by scientists to help forecast daily air pollution levels.

Figure 6 shows the locations of the current monitoring stations in the SDAB. The Escondido–East Valley Parkway monitoring station approximately one-half to three-quarters of a mile southwest of the proposed project sites, is the nearest station to the project area. Table 3 provides a summary of measurements of ozone (O_3), carbon monoxide, nitrogen dioxide, PM_{10}, and $PM_{2.5}$ collected at the Escondido–East Valley Parkway monitoring station (sulfur dioxide is not monitored at this station).

1. Ozone

Ozone historically has been the primary air pollution problem in the SDAB. Because sunlight plays such an important role in its formation, ozone pollution or smog is mainly a concern during the daytime in summer months. Nitrogen oxides and hydrocarbons (reactive organic gases) are known as the chief "precursors" of ozone. These compounds react in the presence of sunlight to produce ozone. The SDAB is currently designated a federal maintenance area for the one-hour ozone standard, a federal "basic" non-attainment area for the eight-hour ozone standard, and a state non-attainment area for ozone. Ozone concentration measurements recorded in the SDAB dating back to the late 1970s show a distinctive downward trend with occasional peaks due primarily to meteorological influences (County of San Diego 2002b).

About half of smog-forming emissions come from cars, trucks, and other motor vehicles (County of San Diego 2004). Population growth in San Diego has resulted in a large increase in the number of automobiles expelling ozone-forming pollutants while operating on area roadways. In addition, the occasional transport of smog-filled air from Los Angeles only adds to the SDABs ozone problem. More strict automobile emission controls, including more efficient automobile engines, have played a large role in why ozone levels have steadily decreased.

The national one-hour ozone standard was exceeded only once at the Escondido–East Valley Parkway monitoring station during the five-year period of 1999 to 2003 (occurring on September 30, 2001). However, the national eight-hour ozone standard was exceeded three days in 2000 and one day in 2001. The stricter state standard for ozone

TABLE 2
AMBIENT AIR QUALITY SUMMARY – SAN DIEGO AIR BASIN

Pollutant	Average Time	California Ambient Air Quality Standards[a]	Attainment Status	National Ambient Air Quality Standards[b]	Attainment Status[c]	Maximum Concentration[d]					Number of Days Exceeding State Standard[d]					Number of Days Exceeding National Standard[d]				
						1999	2000	2001	2002	2003	1999	2000	2001	2002	2003	1999	2000	2001	2002	2003
O_3	1 hour	0.09 ppm	N	0.12 ppm	M	0.12	0.12	0.14	0.12	0.12	27	24	29	15	23	0	0	2	0	1
O_3	8 hours	N/A	N/A	0.08 ppm	**	0.10	0.11	0.12	0.10	0.10	N/A	N/A	N/A	N/A	N/A	16	16	17	13	6
CO	1 hour	20 ppm	A	35 ppm	A	9.9	9.3	8.5	Na	Na	0	0	0	Na	Na	0	0	0	Na	Na
CO	8 hours	9.0 ppm	A	9 ppm	A	6.0	5.9	5.1	4.7	10.6	0	0	0	0	1	0	0	0	0	1
NO_2	1 hour	0.25 ppm	A	N/A	N/A	.172	.117	.148	.126	.148	N/A	N/A	N/A	N/A	N/A	0	0	0	0	0
NO_2	Annual	N/A	N/A	0.053 ppm	A	.021	.020	.018	.018	.019	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A
SO_2	1 hour	25 pphm	A	N/A	N/A	8.4	5.8	6.0	Na	Na	N/A	N/A	N/A	Na	Na	0	0	0	Na	Na
SO_2	24 hours	4 pphm	A	14 pphm	A	1.9	1.1	1.4	Na	Na	0	0	0	Na	Na	0	0	0	Na	Na
SO_2	Annual	N/A	N/A	3 pphm	A	0.3	0.4	0.4	Na	Na	N/A	N/A	N/A	Na	Na	N/A	N/A	N/A	Na	Na
PM_{10}	24 hours	50 $\mu g/m^3$	N	150 $\mu g/m^3$	U	121	139	107	130	280	126*	111*	129*	173*	151*	0	0	0	0	9
PM_{10}	Annual	30 $\mu g/m^3$	N	50 $\mu g/m^3$	A	52	46	49	50	52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
$PM_{2.5}$	24 hours	N/A	N/A	65 $\mu g/m^3$	**	64.3	66.3	60.0	Na	Na	N/A	N/A	N/A	Na	Na	0	1	0	Na	Na
$PM_{2.5}$	Annual	N/A	N/A	15 $\mu g/m^3$	**	18.0	15.8	17.7	Na	Na	N/A	N/A	N/A	Na	Na	N/A	N/A	N/A	Na	Na

SOURCES: State of California 2004a.

[a]California standards for ozone, carbon monoxide (except at Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, and PM_{10} are values that are not to be exceeded. Some measurements gathered for pollutants with air quality standards that are based upon 1-hour, 8-hour, or 24-hour averages, may be excluded if the CARB determines they would occur less than once per year on average.

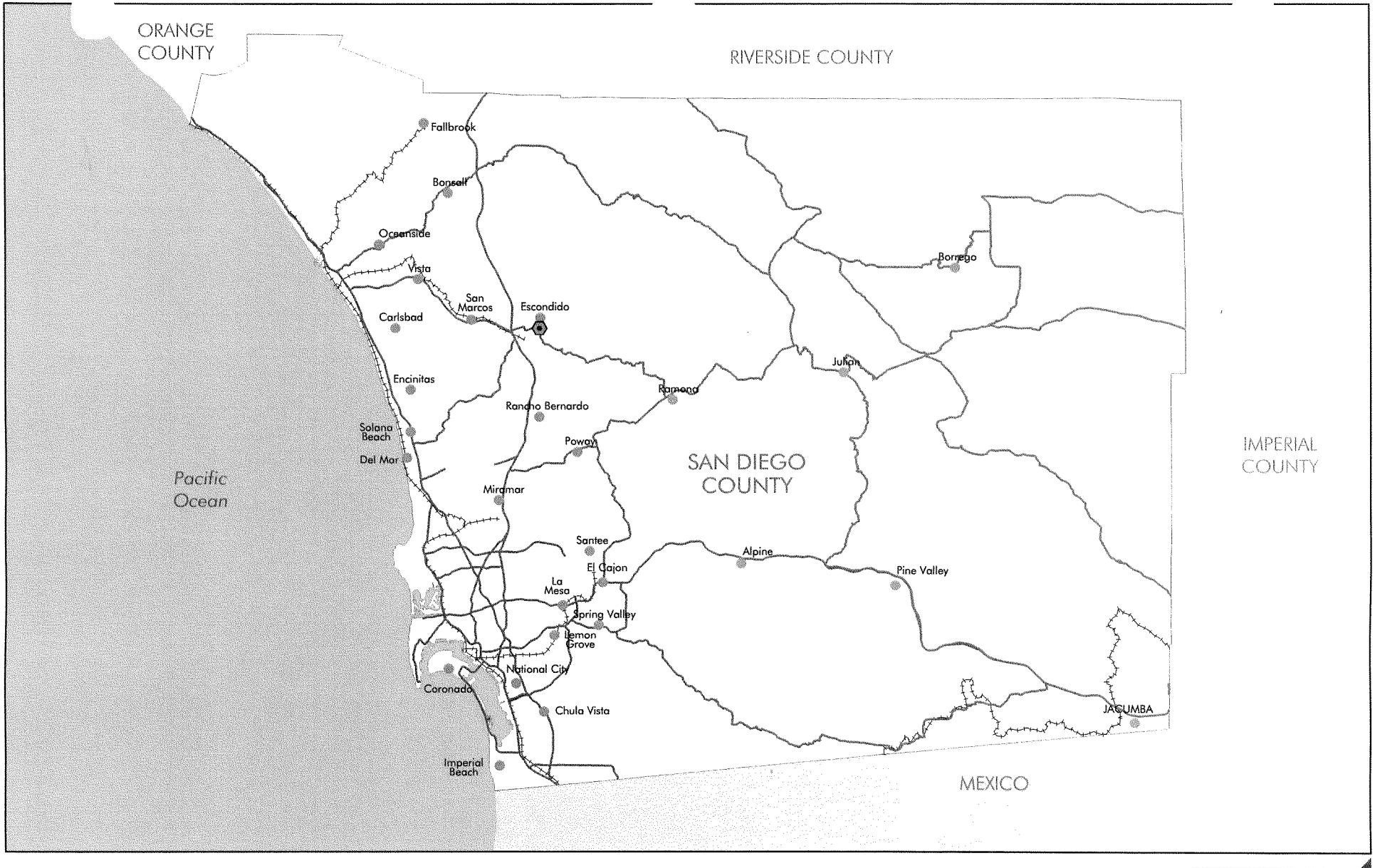
[b]National standards other than for ozone and particulates, and those based on annual averages or annual arithmetic means are not to be exceeded more than once a year. The 1-hour ozone standard is attained if, during the most recent 3-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one.

[c]A = attainment; M = maintenance; N = non-attainment; U = unclassifiable; N/A = not applicable; ** = Attainment status to be determined

[d]N/A = not applicable; Na = data not available

ppm = parts per million, pphm = parts per hundred million, $\mu g/m^3$ = micrograms per cubic meter

*Calculated days = Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.



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Project location

Air basin monitoring station

FIGURE 6

San Diego Air Basin Monitoring Stations

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TABLE 3
SUMMARY OF AIR QUALITY MEASUREMENTS RECORDED AT THE ESCONDIDO-EAST VALLEY PARKWAY MONITORING STATION

Pollutant/Standard	1999	2000	2001	2002	2003
Ozone					
Days State 1-hour Standard Exceeded (0.09 ppm)	1	6	4	2	3
Days Federal 1-hour Standard Exceeded (0.12 ppm)	0	0	1	0	0
Max. 1-hr (ppm)	0.104	0.124	0.141	0.100	0.105
Days Federal 8-hour Standard Exceeded (0.08 ppm)	0	3	1	0	0
Max. 8-hr (ppm)	0.080	0.106	0.098	0.081	0.083
Carbon Monoxide					
Days State 8-hour Standard Exceeded (9.0 ppm)	0	0	0	0	1
Days Federal 8-hour Standard Exceeded (9 ppm)	0	0	0	0	1
State Max. 8-hr (ppm)	5.26	4.93	5.11	3.85	10.64
Federal Max. 8-hr (ppm)	5.26	4.93	5.11	3.85	10.64
Nitrogen Dioxide					
Days State 1-hour Standard Exceeded (0.25 ppm)	0	0	0	0	0
Max. 1-hr (ppm)	0.100	0.083	0.088	0.084	0.135
Federal Annual Average (0.053 ppm)	0.023	0.021	0.020	0.021	0.020
PM_{10}					
Days State 24-hour Standard Exceeded (50 $\mu g/m^3$)*	0.0	12.3	12.6	0.0	30.7
Days Federal 24-hour Standard Exceeded (150 $\mu g/m^3$)*	0.0	0.0	0.0	0.0	3.3
State Max. Daily ($\mu g/m^3$)	50.0	63.0	72.0	50.0	179.0
Federal Max. Daily ($\mu g/m^3$)	52.0	65.0	74.0	51.0	179.0
State Annual Average ($\mu g/m^3$)	29.7	29.5	30.6	25.1	32.7
Federal Annual Average ($\mu g/m^3$)	30.0	29.6	31.2	27.1	31.6
$PM_{2.5}$					
Days Federal 24-hour Standard Exceeded (65 $\mu g/m^3$)	0	1	0	0	1
State Max. Daily ($\mu g/m^3$)	64.3	65.9	60.0	53.6	69.2
Federal Max. Daily ($\mu g/m^3$)	64.3	65.9	60.0	53.6	69.2
State Annual Average ($\mu g/m^3$)	NA	NA	NA	NA	14.2
Federal Annual Average ($\mu g/m^3$)	18.0	15.8	17.5	16.0	14.2

SOURCE: State of California 2004.

NOTE: Lead concentrations in the SDAB have not exceeded the state or federal standard during at least the past 10 years.

*Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.

NA: Not Available

was exceeded at the Escondido–East Valley Parkway monitoring station one day in 1999, six days in 2000, four days in 2001, two days in 2002, and three days in 2003 (State of California 2004a).

Not all of the ozone within the SDAB is derived from local sources. Under certain meteorological conditions, such as during Santa Ana wind events, ozone, and other pollutants are transported from the Los Angeles Basin and combine with ozone formed from local emission sources to produce elevated ozone levels in the SDAB. According to SANDAG, on average, approximately 42 percent of the days that have ozone concentrations over state standards between 1987 and 1994 were attributable to pollution transported from Los Angeles (SANDAG 1994:249-250).

More recent data suggests that this percentage is even higher. According to the San Diego APCD, ozone transported into the SDAB from the South Coast Air Basin (Los Angeles area) was the primary cause for the SDAB exceeding national ozone thresholds on 27 of a total of 33 days from 1994 to 1998 (County of San Diego 2000). The San Diego APCD further explains that the two days in which the national one-hour standard was exceeded in the SDAB in 2001 (see Table 2) were both caused by ozone-rich air transported from the Los Angeles Basin (County of San Diego 2003). There also was an exceedance of the national one-hour standard in 2003 (occurring on September 21, 2003). This also may have been due to transport from outside of the basin; however, the San Diego APCD has yet to determine the cause.

Local agencies can control neither the source nor the transportation of pollutants from outside the SDAB. The San Diego APCDs policy, therefore, has been to control local sources effectively enough to reduce locally produced contamination to clean air standards. Through the use of air pollution control measures outlined in the RAQS, the San Diego APCD has effectively reduced ozone levels in the SDAB.

Actions that have been taken in the SDAB to reduce ozone concentrations include:

- **TCMs if vehicle travel and emissions exceed attainment demonstration levels.** TCMs are strategies that will reduce transportation-related emissions by reducing vehicle use or improving traffic flow.

- **Enhanced motor vehicle inspection and maintenance program.** The smog check program monitors the amount of pollutants automobiles produce. One focus of the program is identifying "gross polluters" or vehicles that exceed two times the allowable emissions for a particular model. Regular maintenance and tune-ups, changing the oil, and checking tire inflation can improve gas mileage and lower air pollutant emissions. It can also reduce traffic congestion due to preventable breakdowns, further lowering emissions.

- **Old car buy-back and retrofit programs.** The old car buy-back program is an incentive program offered by the San Diego APCD to purchase older, more polluting vehicles (1985 and older) and scrap them, thereby getting them off the road. Old car sellers are paid $600 for vehicles built prior to 1975 and $500 for 1975–1985 cars and trucks. There is also a retrofit program designed to retrofit 1975–1980 vehicles with a new technology upgrade kit that reduces smog-forming emissions.

- **Clean-fuel vehicle program.** Cleaner vehicles and fuels will result in continued reductions in vehicle pollutant emissions despite increases in travel.

2. Carbon Monoxide

The SDAB is classified as a state and federal attainment area for carbon monoxide (CO) (County of San Diego 1998). Until 2003 no violations of the state standard for CO had been recorded in the SDAB since 1991 and no violations of the national standard had been recorded in the SDAB since 1989. As seen in Tables 2 and 3, both the federal and state eight-hour CO standards were exceeded throughout the county on one day in 2003. These exceedances occurred on October 28, 2003 at a time when major wildfires were raging throughout the county. Consequently, this exceedance was likely caused by the wildfires (a natural event) and would be considered beyond the control of the San Diego APCD.

Small-scale, localized concentrations of carbon monoxide above the state and national standards have the potential to occur at intersections with stagnation points such as those that occur on major highways and heavily traveled and congested roadways. Localized high concentrations of CO are referred to as "CO hot spots" and are a concern particularly during winter months when automobile engines burn fuel less efficiently and their exhaust contains more CO.

3. PM_{10}

Particulate matter is a complex mixture of very tiny solid or liquid particles composed of chemicals, soot, and dust. Sources of PM_{10} emissions in the SDAB consist mainly of urban activities, dust suspended by vehicle traffic, and secondary aerosols formed by reactions in the atmosphere. For comparison, 10 microns is about one-seventh the diameter of a human hair.

Until 2003 the national standards for PM_{10} had never been exceeded in the SDAB since the standards were established. The EPA has designated the SDAB unclassifiable for PM_{10}. In 2003 the measured federal PM_{10} standard was exceed twice. These two exceedances result in a calculated number of days that the federal standard was exceeded of approximately nine days for the year (see Table 2). The first exceedance occurred on October 29, 2003 at a time when major wildfires were raging throughout the county. The

second exceedance occurred on November 23, 2003 during high winds which caused large amounts of ash from the previous fires to be suspended.

Consequently, these exceedances were likely caused by or were a subsequent result of the wildfires (a natural event) and would be considered beyond the control of the San Diego APCD. As such, these events likely would be covered under the U.S. EPAs Natural Events Policy that permits, under certain circumstances, the exclusion of air quality data attributable to uncontrollable natural events (e.g., volcanic activity, wildland fires, and high wind events).

In additional to the two federal exceedances in 2003, the more strict state standards for PM_{10} historically have not been met. As a result, the SDAB is designated a state non-attainment area for PM_{10}.

Table 2 shows that the 24-hour state PM_{10} standard was exceeded in the SDAB each year from 1999 through 2003. The number of days that the state standard was exceeded appears to be relatively constant over the five-year period. Except for 2003 as discussed above, the much higher 24-hour federal PM_{10} standard has not been exceeded in the SDAB during the same time period.

At the Escondido–East Valley Parkway monitoring station, the calculated number of days that the state PM_{10} standard was exceeded were no days in 1999, approximately twelve days in 2000, approximately thirteen days in 2001, no days in 2002, and approximately 31 days in 2003 (see Table 3). Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day.

Under typical conditions (i.e., no wildfires) particles classified under the PM_{10} category are mainly emitted directly from activities that disturb the soil including travel on roads and construction, mining, or agricultural operations. Other sources include windblown dust, salts, brake dust, and tire wear (County of San Diego 1998). For several reasons hinging on the area's dry climate and coastal location, the SDAB has special difficulty in developing adequate tactics to meet present state particulate standards.

4. $PM_{2.5}$

Airborne, inhalable particles with aerodynamic diameters of 2.5 microns or less ($PM_{2.5}$) have recently been recognized as an air quality concern requiring regular monitoring. Federal regulations required that $PM_{2.5}$ monitoring begin January 1, 1999 (County of San Diego 1999). The Escondido–East Valley Parkway monitoring station is one of five stations in the SDAB that monitors $PM_{2.5}$. Monitoring data has been collected in order to make a determination as to whether the $PM_{2.5}$ standard is currently being met in the SDAB. The initial recommendation is that the SDAB is nonattainment for $PM_{2.5}$.

An official determination of the attainment status for $PM_{2.5}$ in the SDAB is anticipated by December 15, 2004. Federal $PM_{2.5}$ standards established in 1997 include an annual arithmetic mean of 15 $\mu g/m^3$ and a 24-hour concentration of 65 $\mu g/m^3$. State $PM_{2.5}$ standards established in 2002 include an annual arithmetic mean of 12 $\mu g/m^3$ but no separate 24-hour standard. Table 3 shows that the 24-hour $PM_{2.5}$ standard was exceeded once in 2000 and once in 2003 at the Escondido–East Valley Parkway monitoring station since monitoring began there in 1999. With the exception of the federal standard in 2003, both the state and federal annual average standards have consistently been exceeded since monitoring began in 1999.

5. Other Criteria Pollutants

The national and state standards for NO_2, SO_2, and lead are being met in the SDAB and the latest pollutant trends suggest that these standards will not be exceeded in the foreseeable future.

Thresholds of Significance

A. California Air Resources Board

For purposes of assessing the significance of air quality impacts, the CARB has established guidelines, as described below.

For long-term emissions, the direct impacts of a project can be measured by the degree to which the project is consistent with regional plans to improve and maintain air quality. The regional plan for San Diego is the 1991/1992 RAQS and attached TCM plan, as revised by the triennial updates adopted in 1995, 1998, and 2001. The CARB provides criteria for determining whether a project conforms with the RAQS (State of California 1989), which include the following:

1. Is a regional air quality plan being implemented in the project area?
2. Is the project consistent with the growth assumptions in the regional air quality plan?
3. Does the project incorporate all feasible and available air quality control measures?

B. City of Escondido Zoning Code

Section 33-924 of the City's Municipal Code, "Coordination of CEQA, Quality-of-Life Standards, and Growth Management Provisions" provides quality-of-life emission thresholds related to air quality for projects proposed within the city of Escondido. Table 4 below lists these thresholds.

TABLE 4
CITY OF ESCONDIDO AIR EMISSIONS THRESHOLDS

Pollutant	Threshold
CO	550 lbs/day
ROG	55 lbs/day
NOx	55 lbs/day
PM_{10}	150 lbs/day
SOx	250 lbs/day
Lead	3.2 lbs/day

SOURCE: Escondido Municipal Code §33-924(a)(1)(G)(i).

If the project has the potential to produce emissions that would exceed these thresholds, in accordance with City planning guidance a more detailed analysis of potential air quality impacts is then required (Petrek, per. com. 2004). However, simply exceeding these thresholds does not constitute a significant air quality impact. Significance of potential air quality impacts is based on the additional project specific analysis.

The City of Escondido General Plan Community Open Space and Conservation Element also includes policies for assessing Air Quality impacts. These policies are generally consistent with those identified in Appendix G of the 2000 CEQA Guidelines. In combination, these policies and guidelines provide guidance as to what would be considered significant under CEQA. For direct applicability within the city of Escondido, the questions have been revised to reflect regulations and plans for the SDAB and the Escondido area in particular, as well as current air quality designations. The following are used as the basis for analysis of project impacts:

1. Would the proposed project conflict or obstruct the implementation of the San Diego RAQS or applicable portions of the SIP? (City threshold–is the proposed project consistent with the adopted air quality management plan?)

2. Would the proposed project result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation? (City threshold–would potential emissions exceed air quality standards?)

3. Since San Diego County is presently in non-attainment of the federal and/or state Ambient Air Quality Standards for Ozone and PM_{10}, would the proposed project result in a cumulatively considerable net increase of PM_{10} or exceed quantitative thresholds for O_3 precursors, oxides of nitrogen (NO_x), and Volatile Organic Compounds (VOCs)?

4. Would the proposed project expose sensitive receptors (schools, hospitals, resident care facilities, or day-care centers) to substantial pollutant concentrations? (City threshold–would the proposed project expose sensitive receptors [schools, hospitals, convalescent homes] to substantial pollutant concentrations?)

C. Emissions Criteria

Emissions resulting from implementation of the proposed projects would be due primarily to an increase in traffic associated with the construction and the daily operations of the projects. The San Diego APCD does not provide specific numerics for determining the significance of mobile source-related impacts. However, the district does specify Air Quality Impact Analysis (AQIA) trigger levels for new or modified stationary sources (APCD Rules 20.2 and 20.3). If these incremental levels are exceeded, then the district requires that an AQIA be performed for the proposed project. Although these trigger levels do not generally apply to mobile sources, for comparative purposes, these levels are used to evaluate the increased emissions which would be discharged to the SDAB if the proposed project was approved. The AQIA trigger levels are shown in Table 5 (note: there is no level specified for reactive organic compounds).

TABLE 5
AIR QUALITY IMPACT ANALYSIS
TRIGGER LEVELS

Pollutant	Threshold
NOx	250 lbs/day
SOx	250 lbs/day
CO	550 lbs/day
PM_{10}	100 lbs/day
Lead	3.2 lbs/day

SOURCE: San Diego APCD, Rule 20.2 (12/17/1998).

In addition to a comparison with the thresholds, the project should be evaluated to determine it has the potential to produce carbon monoxide hot spots at intersections near the project site. A hot spot is a localized area, most often near a congested intersection, where the state's one-hour or eight-hour carbon monoxide standards are exceeded. Localized carbon monoxide impacts can occur where projects contribute traffic to intersections in areas where the ambient carbon monoxide concentrations are projected to be above the state's standards. However, when they do occur, hot spots almost exclusively occur near intersections with level of service (LOS) E or worse.

D. Public Nuisance Law (Odors)

The State of California Health and Safety Code (H&S) Sections 41700 and 41705, and San Diego APCD Rule 51, commonly referred to as public nuisance law, prohibits emissions from any source whatsoever in such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to the public health or damage to property. The provisions of these regulations do not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals. It is generally accepted that the considerable number of person's requirement in Rule 51 is normally satisfied when 10 different individuals/households have made separate complaints within 90 days. Odor complaints from a "considerable" number of persons or businesses in the area will be considered to be a significant, adverse odor impact.

Every use and operation shall be conducted so that no unreasonable heat, odor, vapor, glare, vibration (displacement), dust, smoke, or other forms of air pollution subject to air pollution control district standards of particulate matter shall be discernible at the property line of the parcel upon which the use or operation is located.

Therefore, any unreasonable odor discernible at the property line of the project sites will be considered a significant odor impact.

Air Quality Assessment

Air quality impacts can result from the construction and operation of the project facilities. Construction impacts are short term and result from fugitive dust, equipment exhaust, and indirect effects associated with construction workers and deliveries. In the case of this project, operational impacts result mainly from mobile sources associated with the vehicular travel along the roadways within the project area.

Operational impacts can occur on two levels. Regional impacts resulting from growth-inducing development or local hot-spot effects stemming from sensitive receivers being placed close to highly congested roadways.

Analysis considers buildout of both the Wal-Mart and EUSD projects.

A. Construction-Related Emissions

Construction-related activities are temporary, short-term sources of air emissions. Sources of construction-related air emissions include:

- Fugitive dust from grading activities
- Construction equipment exhaust
- Construction-related trips by workers, delivery trucks, and material-hauling trucks
- Construction-related power consumption

The proposed Wal-Mart project would develop a 143,183-gross-square-foot building with an outdoor seasonal garden center, outdoor display and sales areas, loading dock, retaining wall, parking, and landscaping on the 11.11-acre parcel. The project would require demolition and removal of a single-family residence in the southern portion of the site and removal of two office/retail buildings consisting of the existing 61,500-square-foot administrative office building occupied by the EUSD and a 7,245-square-foot ancillary building used by the EUSD for storage and by a neighborhood retail use. In addition, site preparation calls for the removal of a portion of the existing slope in the southern and western portions of the site. A total of 80,000 cubic yards of cut and 17,000 cubic yards of fill are required for the project with 63,000 cubic yards remaining for export.

The proposed EUSD building would provide office and meeting space for ongoing EUSD activities within a two-story building of approximately 60,000-gross-square-feet with a loading dock and landscaping on a 4.57-acre site. The EUSD requires parking for approximately 220 cars, which would allow for on-site employee parking, expected to be at the rear of the site, and visitor parking to be available in front. The site is relatively flat and very little grading would be required during site preparation. The project would also require demolition and removal of a 1940s era half-round wood and metal shop/warehouse currently owned by the City of Escondido. The structure is still used for storage.

1. Equipment Emissions

Heavy-duty construction equipment is usually diesel-powered. In general, emissions from diesel-powered equipment contain more nitrogen oxides, sulfur oxides, and particulate matter than gasoline-powered engines. However, diesel-powered engines generally produce less carbon monoxide and less reactive organic gases than do gasoline-powered engines.

Standard construction equipment includes dozers, rollers, scrapers, dewatering pumps, backhoes, loaders, paving equipment, delivery/haul trucks, jacking equipment, welding machines, pile drivers, and so on. Heavy-duty equipment emissions are difficult to quantify because of day-to-day variability in construction activities and equipment used.

Table 6 gives emissions factors for a typical mix of equipment on a large construction site. For example, a diesel-powered scraper, often the most common type of equipment used during grading operations, generates 1.26 pounds per hour (lb/hr) of carbon

TABLE 6
EXHAUST EMISSIONS FACTORS FROM TYPICAL CONSTRUCTION EQUIPMENT
[in grams (pounds) per hour]

	Carbon Monoxide		Hydrocarbons		Nitrogen Oxides		Sulfur Oxides		Particulate	
Equipment Type	G	D	G	D	G	D	G	D	G	D
Trucks: off-highway	–	816.81 (1.794)	–	86.84 (0.192)	–	1889.16 (4.166)	–	206.0 (0.454)	–	116.0 (0.256)
Tracked loader	–	91.15 (0.201)	–	44.55 (0.098)	–	375.22 (0.827)	–	34.4 (0.076)	–	26.4 (0.058)
Tracked tractor	–	157.01 (0.346)	–	55.06 (0.121)	–	570.70 (1.26)	–	62.3 (0.137)	–	50.7 (0.112)
Scraper	–	568.19 (1.257)	–	128.15 (0.282)	–	1740.74 (3.840)	–	210.0 (0.463)	–	184.0 (0.406)
Motor Grader	5490.0 (12.1)	68.46 (0.151)	186.0 (0.410)	18.07 (0.040)	145.0 (0.320)	324.43 (0.713)	7.59 (0.0167)	39.0 (0.086)	9.40 (0.0207)	27.7 (0.061)
Wheeled dozer	–	816.81 (1.794)	–	86.84 (0.192)	–	1889.16 (4.166)	–	206.0 (0.454)	–	116.0 (0.256)
Wheeled loader	7060.0 (15.6)	259.58 (0.572)	241.0 (0.531)	113.17 (0.25)	235.0 (0.518)	858.19 (1.89)	10.6 (0.0234)	85.2 (0.182)	13.5 (0.0298)	77.9 (0.172)
Wheeled tractor	4320.0 (9.52)	1622.77 (3.59)	164.0 (0.362)	85.26 (0.188)	195.0 (0.430)	575.84 (1.269)	7.03 (0.0155)	40.9 (0.090)	10.9 (0.0240)	61.5 (0.136)

SOURCE: EPA AP-42 1985:Tables II-7.1 and II-7.2.
Fuel types: G = gasoline-powered; D = diesel-powered

monoxide, 0.28 lb/hr of hydrocarbons, 3.84 lb/hr of nitrogen oxides, 0.46 lb/hr of sulfur oxides, and 0.41 lb/hr of particulate matter. Actual air emissions at any given time would depend on the number and type of equipment in operation.

Table 7 provides a list of the on-site equipment that will be involved with this project. Table 7 also indicates the total number of hours that each type of equipment is anticipated to operate over the duration of construction. In addition to the on-site equipment, it is assumed that eight trucks per hour will access the site to haul the exported material from grading (63,000 cubic yards) off-site.

Maximum daily emissions during construction are anticipated to occur during site grading activities. For estimating maximum daily equipment emissions, it is assumed that every piece of equipment could operate simultaneously for a period of eight hours a day. Furthermore, it is assumed that the haul trucks would make eight round trips per hour (64 round trips per day), have a capacity of 20 cubic yards, and would haul the material 10 miles one-way. Twenty-two construction days per month were assumed. With these assumptions it is estimated that it will take approximately 49 construction days to haul all of the material off-site.

TABLE 7
PROJECT EQUIPMENT LIST AND ESTIMATED ACTIVITY IN HOURS

Equipment	Number	Total Cumulative Hours of Operation (all pieces of equipment)
Track Dozer	1	80
Track Loader	1	80
Scraper	2	30
Compactor	2	30
Water Truck	1	80

SOURCE: Gonzalez, per. com. 2004

Construction emissions were calculated using the URBEMIS2002 computer program (Yolo-Solano Air Quality Management District 2003). Table 8 shows the projected maximum daily emission levels for each pollutant. The URBEMIS2002 output files are contained in Attachment 1. Emission factors are not available for lead and, consequently, lead emissions are not calculated. The basin is currently in attainment of the state and federal lead standards. Furthermore, diesel fuel is not leaded.

TABLE 8
CONSTRUCTION GRADING EMISSIONS
(pounds per day)

Pollutant	Maximum Daily Emissions (pounds)	Average Daily Emissions (pounds)*	City of Escondido Significance Threshold (pounds/day)	APCD Significance Threshold (pounds/day)
CO	129.3	15.4	550	550
ROG	18.8	2.1	55	–
NOx	**166.5**	16.5	55	250
SO_x[1]	0.5	0	250	–
PM_{10}	31.4	4.0	150	100

*Assumes grading activities occur over 49 days
Bold type indicates emissions exceed threshold
[1]Emissions calculated by URBEMIS2002 are for SO_2

As seen in Table 8, maximum daily emissions of NOx are projected to exceed the City of Escondido thresholds. Consequently, under City of Escondido guidance additional analysis of potential air quality impacts must be performed to evaluate the significance of the potential impacts. All other pollutant emissions are below threshold levels. Average daily construction emissions also were calculated by averaging the on-site equipment emissions over the assumed 49-day hauling period. Table 8 also shows the average daily construction emissions over the period of grading. As seen, the average daily emissions are less than the City's thresholds.

For assessing the significance of the air quality emissions resulting during construction of the proposed projects, the construction emissions were compared to the APCD AQIA thresholds as described above. As seen in Table 8, both maximum daily and average daily construction emissions are projected to be less than the APCD thresholds. Because construction is a one time, temporary activity, and because both maximum and average daily construction emissions are projected to be below the APCD AQIA thresholds, operation of equipment during project construction is not anticipated to result in significant air quality impacts.

2. Fugitive Dust

Fugitive dust is any solid particulate matter that becomes airborne directly or indirectly as a result of the activities of man or natural events (such as windborne dust), other than that emitted from an exhaust stack. Construction dust is comprised primarily of chemically inert particles that are too large to enter the human respiratory tract when inhaled. As on-going construction activities are a part of normal activities within the City, and given the relatively small size of the two project areas, fugitive dust emissions to the air basin are

not expected to be significant with the Wal-Mart/EUSD project. However, they could be perceived as a nuisance to the immediate area. Dust control during grading operations would be implemented to reduce potential nuisance impacts.

Although air quality impacts resulting from construction-related activities could be perceived as a nuisance, they are considered a short term, temporary, one-time activity, and would therefore not be significant.

B. Operation-Related Emissions

1. Direct Project Impacts

a. Localized Carbon Monoxide Impacts

Small-scale, localized concentrations of CO above the state and national standards have the potential to occur near stagnation points of heavily traveled intersections. Localized, high concentrations of CO are referred to as "CO hot spots". CO hot spots can occur when projects contribute traffic to area intersections. However, CO hot spots almost exclusively occur near intersections with LOS E or worse.

Traffic impact analyses were conducted for the proposed Wal-Mart and EUSD projects by Linscott, Law & Greenspan (LLG) and summarized in reports dated March 25, 2004 (LLG 2004a and 2004b). The reports show that all of the signalized intersections in the vicinity of the project are calculated to operate at LOS E or better with the combination of existing traffic, near-term cumulative projects traffic, and traffic anticipated with the proposed project.

One unsignalized intersection, Harding Street/East Grand Avenue, is calculated to degrade from LOS E to LOS F without mitigation. According to the traffic report, the movement that operates poorly at this intersection is the northbound residential driveway left-turn movement onto East Grand Avenue. During the peak hours approximately 25 vehicles per hour are projected to turn left onto East Grand Avenue (LLG 2004a). Because the poor level of service is a result of a very small number of vehicles that are experiencing long waits for left-turn movements, it is not likely that a CO hot spot would occur at this intersection. Additionally, a signal is proposed at this intersection to mitigate traffic impacts. If this signal were installed, the anticipated level of service at this intersection would improve to LOS C (Prasad, pers. com. 2004).

The Bear Valley Parkway/East Valley Parkway is also an unsignalized intersection that is projected to operate at LOS F with or without the project. The traffic report indicates that the movement that operates poorly at this intersection is the northbound traffic on Bear Valley Parkway that is trying to turn left onto East Valley Parkway. During the peak hours approximately 11 vehicles per hour are projected to turn left onto East Valley

Parkway (LLG 2004a). Again, because the poor level of service is a result of a very small number of vehicles that are experiencing long waits for left-turn movements, it is not likely that a CO hot spot would occur at this intersection.

As stated above, hot spots almost exclusively occur near intersections with LOS E or worse in combination with relatively high traffic volumes on all roadways. With the two exceptions discussed above, after mitigation, all of the studied intersections in the project vicinity are expected to operate at LOS E or better. Additionally, as indicated previously, the basin is in attainment of both the federal and state CO standards. As indicated in Table 3, background CO concentrations are well below federal and state standards. Therefore, since no intersections would operate at substandard conditions as a result of implementation of the proposed project, and since no substantial traffic delays are anticipated for the primary direction of traffic flow, no direct significant localized CO impacts are anticipated at the affected intersections.

The traffic report prepared for the project also indicates that certain segments of East Valley Parkway will operate at LOS F, the worst segment being between Washington Avenue and Lake Wohlford Road where the volume to capacity ratio is projected to be as high as 2.46 (LLG 2004a). To assess the potential for these conditions to result in a carbon monoxide hot-spot, the EMFAC2002 model (State of California, 2004b) was run with the CALINE4 dispersion model (State of California 2000) to estimate the carbon monoxide concentrations adjacent to this roadway segment.

Tailpipe emissions were estimated using the CARB's on-road motor vehicle emissions model called EMFAC2002 (State of California 2004b). EMFAC2002 was used to estimate running exhaust emissions in units of grams per mile for vehicles traveling on East Valley Parkway. Inputs for the EMFAC2002 model run were based on local climatology near the project site and were chosen to provide worst-case carbon monoxide exhaust emission estimates at adjacent receptors.

In order to determine concentrations of carbon monoxide at potential sensitive receiver locations adjacent to East Valley Parkway, the CALINE4 model was used (State of California 2000). CALINE4 is a simple line source Gaussian plume dispersion model that uses inputs such as roadway geometry, meteorological conditions, traffic volumes, and receptor locations to determine air pollutant concentrations at specified points. CALINE4 is typically used to predict carbon monoxide impacts near roadways.

Worst-case running exhaust carbon monoxide emissions in the EMFAC2002 model occur with the greatest temperature and humidity. In the EMFAC2002 model an average summer high temperature of 85 degrees Fahrenheit and an average summer humidity of 75 percent was assumed.

The CALINE 4 program was run assuming a suburban environment and with the worst-case wind angle option. The worst-case wind angle option results in the greatest predicted pollutant concentrations at the modeled receivers and generally represents a worse wind condition than actually occurs. Other worst-case assumptions used in the modeling include a wind speed of 0.5 meter/second, atmospheric stability class of 7, and a mixing height of 1,000 meters.

The peak hour traffic volume was assumed to be equal to 10 percent of the ADT for the roadway, or 3,697 vehicles per hour (LLG 2004a). Slower speeds result in greater CO emissions per mile for a given traffic volume. The results of the modeling indicate that even if the traffic were so congested that the average vehicle speed was only 5 miles per hour (a highly unlikely condition), the traffic would only increase the carbon monoxide concentration at a receiver 50 feet from the center of the roadway by 3.2 ppm. Traffic generated carbon monoxide concentrations decrease with increasing distance from the roadway. The EMFAC2002 and CALINE4 input and output data are contained in Attachment 2.

The projected CO concentration of 3.2 ppm is the average one-hour concentration contribution by the traffic on the roadway. Using a worst-case persistence factor of 0.8 (Garza et al. 1997), the estimated eight-hour average concentration contribution due to the traffic on East Valley Parkway would be approximately 2.6 ppm. As seen in Table 3, with the exception of 2003 the maximum eight-hour background CO concentration in the project vicinity was approximately 5.3 ppm, which occurred in 1999 (the maximum CO concentration of 10.6 ppm recorded in 2003 was an anomalous condition created by wildfires as discussed above). If the traffic contribution of 2.6 ppm is added to the background concentration of 5.3 ppm, the resulting total eight-hour average carbon monoxide concentration at receivers 50 feet from the center of East Valley Parkway between Washington Avenue and Lake Wohlford Road would be approximately 7.9 ppm, well below the state and federal eight-hour standards of 9 ppm.

Consequently, no significant carbon-monoxide hot-spot impacts are anticipated.

b. Toxic Air Emissions and Odors

The proposed developments are not anticipated to create nor expose sensitive receivers to odors. No significant odor impacts are anticipated.

The following discussion is based on information contained in the Phase I Environmental Site Assessment for the Proposed Wal-Mart Supercenter #5214 prepared by Kleinfelder, Inc. dated June 13, 2003 and a second report, the Phase I and II Environmental Site Assessment for the City of Escondido Green Mutual Building at 1201 East Washington Avenue prepared by SECOR International Incorporated on September 24, 2003.

Wal-Mart Site. A Phase I Records Search was prepared for the Wal-Mart site. The Phase I Records Search reveals the presence of a contaminant, perchloroethylene (PCE), in on-site soils, groundwater, and soil vapor. The PCE is suspected to have been released by a dry cleaning machine that was removed in 1994 from the Lovett's One Hour Cleaners (Case No. H11085). A new owner replaced the machine in 1996 with another dry cleaning machine. Existing equipment showed no signs of leakage during a site visit to the project site. The existing Lovett's One Hour Cleaners disposes of approximately five gallons of PCE per month through a permitted disposal company (Safety Kleen). Groundwater monitoring wells have been located on the site and the most recent of eight subsequent site assessments indicates that groundwater in the vicinity has been impacted by PCE and two of its degradation by products, trichloroethylene (TCE) and dichloroethylene (DCE). PCE-impacted soils were encountered at depths ranging from 1.5 feet to 14 feet below ground surface (bgs). No groundwater production wells or other hydrologic receptors were identified within approximately 1,000 feet of the dry cleaners and pipelines associated with the San Jacinto-San Vicente Aqueduct are located above the water table. A Site Assessment Summary Report for the Lovett's One Hour Cleaners at 1378 East Grand Avenue prepared in April 2001 for the La Caze Development Company, owners of the shopping center, determined that the level of risk from vapor exposure associated with PCE-impacted soil and groundwater beneath the property is considered insignificant (PIC Environmental Services 2001).

In addition to the above, the project site includes existing buildings that are likely to be constructed with asbestos-containing building materials and lead-based paint due to their age and the existing residence likely includes an abandoned septic system. Other contaminants, including pesticides, fungicides, and/or fertilizers, may have been released during past activities associated with nursery operations at the residential site. Documented and potential releases associated with the above comprise potential historical and/or existing Records of Environmental Concern (REC).

Consequently, future demolition of the structure could release hazardous materials into the environment and would be considered a significant direct project impact.

EUSD Site. The Phase II Environmental Site Assessment (ESA) prepared for the EUSD site addresses four RECs, four potential RECs, and other environmental concerns identified in the Phase I portion of the project. No signs of staining or stressed vegetation were reported in the site assessment.

A Pre-Demolition Asbestos Survey of the existing half-round building found that the window putty, floor tiles and mastic, and hot water heater insulation contained therein were identified as asbestos containing materials (ACMs). The hot water heater ACM is considered a Class I ACM material and the remaining components are considered Class II ACM Materials. The survey also identified significant levels of lead in the building's paint and adjacent soil samples. Future demolition of the structure could release

hazardous materials into the environment and would be considered a significant direct project impact. Removal in conformance to existing regulatory abatement requirements would reduce impacts to below a level of significance.

Consequently, future demolition of the structure could release hazardous materials into the environment and would be considered a significant direct project impact.

2. Cumulative Project Impacts

a. Mobile and Area Source Emissions

Mobile source emissions would originate from project-generated traffic. Area source emissions are emissions generated due to on-site stationary sources such as natural gas combustion (e.g., heating systems), landscape maintenance activities, and other similar sources.

The EUSD administration complex is an existing use within the City and the proposed project would simply relocate these uses a few blocks away from their present location. Consequently, traffic associated with the administration complex already exists within the project area. As such, the EUSD administration complex portion of the proposed project would generate no new traffic or area sources of emissions. Consequently, only the traffic and area source emissions generated by the Wal-Mart retail center are evaluated as new sources of air emissions in this section.

Mobile and area source emissions due to implementation of the proposed project were calculated using the URBEMIS2002 computer program. This program does not compute emission factors for lead. However, the basin is currently in attainment of the state and federal lead standards and any increases in these emissions attributable to implementation of the proposed project are not anticipated to be significant. Therefore, lead is not considered further.

As indicated in the traffic report prepared for the project (LLG 2004a), the proposed Wal-Mart retail center is anticipated to generate 9,000 trips per day. For the purposes of computing the emissions, it was assumed that buildout of the proposed project would occur in 2005. The average winter and summer temperatures used in URBEMIS2002 were assumed to be 40° and 85° F, respectively. Given the large retail nature of the project, the "pass-by" trip option in UREBEMIS2002 was used. The San Diego County defaults for the other input parameters such as vehicle fleet mix and trip length were assumed.

Table 9 provides a summary of the calculated mobile- and area-source emissions emitted to the SDAB due to implementation of the proposed Wal-Mart project for the summer and winter seasons. The URBEMIS2002 output files are contained in Attachment 1.

TABLE 9
AVERAGE DAILY PROJECT EMISSIONS TO THE SAN DIEGO AIR BASIN
(pounds per day)

Season	Pollutant	Area Emissions[1]	Mobile Emissions (vehicle)	Total Emissions[3]	City of Escondido Threshold	APCD Threshold	Do Emissions Exceed Thresholds?
Summer	CO	1.2	798.1	799.3	550	550	Yes/Yes
	NOx	1.5	81.7	83.1	55	250	Yes/No
	ROG	0.2	69.3	69.5	55	–	Yes/–
	SO_X[2]	0.0	0.7	0.7	250	250	No/No
	PM_{10}	0.0	65.6	65.6	150	100	No/No
Winter	CO	0.6	949.8	950.4	550	550	Yes/Yes
	NOx	1.4	123.1	124.6	55	250	Yes/No
	ROG	0.1	90.1	90.2	55	–	Yes/–
	SO_X[2]	0.0	0.7	0.7	250	250	No/No
	PM_{10}	0.0	65.6	65.6	150	100	No/No

SOURCE: San Diego APCD, Rule 20.2 (12/17/1998); Escondido Municipal Code §33-924(a)(1)(G)(i).
[1]Area emissions include emissions from on-site stationary sources such as natural gas combustion (e.g., heating systems), landscaping maintenance, etc.
[2]Emissions calculated by URBEMIS2002 are for SO_2
[3]Totals may differ due to rounding

Table 9 shows that the increase in emissions emitted to the SDAB as a result of operation of the proposed project are projected to exceed the San Diego APCD threshold for carbon monoxide, and the city of Escondido thresholds for CO, NOx and ROG.

As indicated previously, if the air emissions resulting from the proposed project are projected to exceed City standards, then in accordance with City planning guidance a more detailed analysis of potential air quality impacts is required. For assessing the significance of the air quality emissions resulting from operation of the proposed project, the operations emissions were compared to the APCD AQIA thresholds as described above. However, exceedance of these thresholds does not de facto mean that the project emissions would cause a significant air quality impact to the SDAB. Rather, as discussed below, because the emissions resulting from the project could exceed the City and APCD emission thresholds, further analysis of the potential air quality impacts is required. This analysis is presented in the discussion of the conformance of the proposed project to regional and local plans contained the following section.

b. Conformance with Regional Plans

A determination of whether the potential emissions resulting from operation of the proposed project would result in a significant impact is based on an evaluation of the extent to which the proposed project conforms to existing regional and local planning documents.

WAL-MART

The proposed project was assessed to determine consistency with the adopted General Plan land use policies. A brief analysis is provided below:

City of Escondido General Plan/Midway Neighborhood. Located within the Tier 1 Midway Neighborhood, the land use designation for the Wal-Mart site and areas to the north and east carry the General Plan land use designation of General Commercial (GC). Land immediately to the west is designated Office (O). Areas south of the proposed Wal-Mart site, south of East Grand Avenue, are designated Urban III (U3).

At a "Plan-to-Plan" level, adoption of proposed amendments to the General Plan land use designation and zoning would ensure project consistency with the land use plan, including the Growth Management Element, which allows development within the Tier 1 Midway Neighborhood of the type proposed. The project is also consistent with the East Valley Parkway Interim Overlay Ordinance. Proposed development would intensify development in the higher density Tier 1 Midway Neighborhood as anticipated by Land Use Policy A1.1. In addition, implementation of a regional commercial project at this site would be consistent with Economic Policy B3.2 because it would reduce the need for residents to commute out of the area to shop at this type of facility and would help to diversify the economic base.

Zoning. The project includes an amendment to the Overlay Zone to allow a reduction in parking requirements and more flexibility than currently allowed. The parking study shows that adequate parking would be provided even during peak use hours.

East Valley Parkway Commercial Area Plan/Escondido Business Enhancement Zone. The project would be located within the boundaries established for the East Valley Parkway Commercial Area Plan and would be consistent with Commercial Policies B4.2, B4.9, and B4.12. Among other reasons, the project would strengthen and rehabilitate a portion of an existing commercial area and improve site access. The project does not request waivers or approvals pursuant to those allowed for development within the Business Enhancement Zone (BEZ).

EUSD ADMINISTRATION SITE

Relocation of the existing EUSD administration building from the proposed Wal-Mart site to the Ash Street/Washington Street site as proposed would be consistent with the adopted land use designation as provided in the City of Escondido General Plan and with the adopted zoning. The proposed EUSD Administration Building would be a permitted under the approved GC land use category and zone and would be compatible with the adjacent senior residential facility (zoned U-3) located to the east.

City of Escondido General Plan/Midway Neighborhood. Construction of a one- or two-story office building as proposed for EUSD administrative use is allowed under the existing plan and zoning. The project must conform with design guidelines for new construction on the site and would not result in a significant land use impact.

Consequently, the proposed projects are consistent with the adopted General Plan and Zoning. As such it may be concluded that the projects are consistent with the growth assumptions used in the SIP demonstrations.

3. Conformance with Specific Criteria

In addition to the above discussion, the State and City have specified a number of criteria used as an aid in determining the significance of a project's potential air quality impacts. These criteria are discussed below.

a. California Air Resources Board

1. Is a regional air quality plan being implemented in the project area?

   The proposed project is in the city of Escondido, which is within the SDAB. The 1991/1992 RAQS (and triennial updates) are implemented by APCD throughout the air basin. Therefore, the proposed project fulfills the first criteria from the CARB guidelines described in the Standards of Significance section.

2. Is the project consistent with the growth assumptions in the regional air quality plan?

   The proposed project is not growth inducing and has been designed to accommodate the already projected increase in population and housing demand in the Escondido area. As such, the proposed project is considered consistent with the growth assumptions in the RAQS. Consequently, the proposed project conforms with the applicable regional plans.

3. Does the project incorporate all feasible and available air quality control measures?

   With the incorporation of the air quality control measures recommended in this report, the project will incorporate all necessary air quality control measures.

b. City of Escondido

1. Would the proposed project conflict or obstruct the implementation of the San Diego RAQS or applicable portions of the SIP? (City threshold–is the proposed project consistent with the adopted air quality management plan?)

   The proposed project is consistent with the adopted local air quality plan (the RAQS) and would not conflict or obstruct the implementation of the San Diego RAQS or applicable portions of the SIP.

2. Would the proposed project result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation? (City threshold–would potential emissions exceed air quality standards?)

   The proposed project emissions would not exceed air quality standards.

3. Since San Diego County is presently in non-attainment of the federal and/or state Ambient Air Quality Standards for Ozone and PM_{10}, would the proposed project result in a cumulatively considerable net increase of PM_{10} or exceed quantitative thresholds for O_3 precursors, oxides of nitrogen (NO_x), and Volatile Organic Compounds (VOCs)?

   The proposed project emissions would not result in a cumulatively considerable net increase of PM_{10} or exceed quantitative thresholds for O_3 precursors, NO_x, and VOCs.

4. Would the proposed project expose sensitive receptors (schools, hospitals, resident care facilities, or day-care centers) to substantial pollutant concentrations? (City threshold–would the proposed project expose sensitive receptors [schools, hospitals, convalescent homes] to substantial pollutant concentrations?)

The proposed project would not expose sensitive receptors to substantial pollutant concentrations.

Consequently, no significant air quality impacts are anticipated with construction and operation of the proposed project.

Conclusions and Recommendations

A. Criteria Pollutants

With respect to criteria air pollutants, no significant air quality impacts are identified for either the construction phase or operation of the proposed project.

Dust and emission control during grading operations would be implemented to reduce potential nuisance impacts and to ensure compliance with APCD rules and regulations. As a matter of standard practice the applicant will implement the following standard construction measures during construction activities:

1. All unpaved construction areas shall be sprinkled with water or other acceptable San Diego APCD dust control agents during dust-generating activities to reduce dust emissions. Additional watering or acceptable APCD dust control agents shall be applied during dry weather or windy days until dust emissions are not visible.

2. Trucks hauling dirt and debris shall be properly covered to reduce windblown dust and spills.

3. A 20 mile-per-hour speed limit on unpaved surfaces shall be enforced.

4. On dry days, dirt and debris spilled onto paved surfaces shall be swept up immediately to reduce resuspension of particulate matter caused by vehicle movement. Approach routes to construction sites shall be cleaned daily of construction-related dirt in dry weather.

5. On-site stockpiles of excavated material shall be covered or watered.

6. Disturbed areas shall be hydroseeded, landscaped, or developed as quickly as possible and as directed by the County to reduce dust generation.

7. To the maximum extent feasible:

    a. Heavy-duty construction equipment with modified combustion/fuel injection systems for emissions control shall be utilized during grading and construction activities.

    b. Catalytic reduction for gasoline-powered equipment shall be used.

8. Equip construction equipment with prechamber diesel engines (or equivalent) together with proper maintenance and operation to reduce emissions of nitrogen oxide, to the extent available and feasible.

9. Electrical construction equipment shall be used to the extent feasible.

10. The simultaneous operations of multiple construction equipment units shall be minimized (i.e., phase construction to minimize impacts).

Based on the analysis presented here, there will be no significant air quality impacts during project construction. Therefore, no mitigation is required.

B. Toxic Air Emissions and Odors

The proposed developments are not anticipated to create nor expose sensitive receivers to odors. No significant odor impacts are anticipated.

Future demolition of the structures on both the Wal-Mart and EUSD sites could release hazardous materials into the environment and would be considered a significant direct project impact. The following mitigation measures will ensure that toxic air emission impacts will be less than significant.

1. Wal-Mart Site

a. As a condition of approval and throughout site grading and construction, the project proponent shall be responsible for ongoing monitoring, risk assessment, and possibly remediation of PCE and its degradation by-products on-site. These measures shall be conducted in accordance with San Diego County Department of Environmental Health (DEH) guidelines and recommendations until Case No. H11085 is closed.

b. As a condition of project approval, and prior to any demolition of the existing on-site structures (single-family residential and commercial uses), a hazardous material building survey and remediation, as required, shall be performed in accordance with existing federal, state, and local regulations, including guidelines established by the

County of San Diego DEH. Any required remediation shall be supervised by a registered environmental health specialist (REHS).

c. As a condition of project approval, and prior to any site grading or demolition of the existing on-site structures (single-family residential and commercial uses), soil samples shall be collected and analyzed for pesticides, arsenic and copper (fungicides), and nitrates (fertilizers) at the former garden nursery. Remediation shall be implemented as warranted.

2. EUSD Site

a. As a condition of project approval, and prior to any scraping, equipment removal, or demolition of the existing half-round building, the City of Escondido/EUSD shall ensure that a Certified Asbestos Abatement Contractor removes existing ACMs. The identified ACMs may be left in place under an asbestos operations and maintenance (O&M) program only if the building remains on the property.

b. As a condition of project approval, and prior to any scraping, equipment removal, or demolition of the existing half-round building, the City of Escondido/EUSD shall ensure that a lead-based paint (LBP) professional shall create an abatement plan the contractors can use to protect workers and the environment from lead exposure. Contractors responsible for removal of equipment or demolition shall possess all necessary training, certifications, and licenses pertaining to LBP abatement and shall follow all applicable federal state and local regulations, including County of San Diego DHS, regulations pertaining to LBP removal.

c. Due to the large quantity of storage materials located throughout the interior of the half-round building, all interior storage materials shall be removed and, as a condition of approval and prior to any scraping, or demolition of the site, the City of Escondido/EUSD shall provide for an additional site visit by the preparer of the ESA to verify that no additional areas of concern are identified within the structure.

References Cited

California, State of

1989 Guidelines for Air Quality Impact Assessment for General Development and Transportation-Related Projects. June.

2000 *Caltrans Software.* CALINE4 software available from the Caltrans Web Site at http://www.dot.ca.gov/hq/InfoSvcs/EngApps/.

2004a *California Air Quality Data Statistics*. California Air Resources Board Internet Site. URL http://www.arb.ca.gov/adam/welcome.html. March.

2004b *On-Road Emissions Inventory Program.* EMFAC2002. California Air Resources Board Internet Site: http://www.arb.ca.gov/msei/on-road/on-road.htm. Page updated April 6.

Garza, Vicente J., Peter Graney, and Daniel Sperling

1997 *Transportation Project-Level Carbon Monoxide Protocol, Revised December, 1997.* Institute of Transportation Studies, University of California, Davis. Report number UCD-ITS-RR-97-21. December.

Linscott, Law & Greenspan

2004a Traffic Impact Analysis, Escondido Wal-Mart, Escondido, California. July 7.

2004b Traffic Impact Analysis, Escondido Union School District Office Building, Escondido, California. March 25.

Gonzalez, Anthony

2004 E-mail to Donna Steel, RECON, from Nasland.

Kleinfelder, Inc.

2003 Phase I Environmental Site Assessment, Proposed Wal-Mart Supercenter #5214, Escondido, California, APNs: 230-230-1400, -1500, -3100, and -3200. June 13.

PIC Environmental Services

2001 Site Assessment Summary Report for the Property Referenced as Lovett's 1 Hour Cleaners, 1378 East Grand Avenue, Escondido, California. Prepared for La Caze Development Company. April 24.

Petrek, James

2004 Personal communication with David Gottfredson, RECON. June 25. Senior Planner, City of Escondido.

Prasad, Narasimha

2004 Personal communication with Donna Steel, RECON. May 17. Linscott, Law & Greenspan.

San Diego, County of

1992 1991/1992 Regional Air Quality Strategies. Air Pollution Control District. June.

1998 *Air Quality in San Diego County*. 1997 Annual Report. San Diego Air Pollution Control District.

1999 *Air Quality in San Diego County*. 1998 Annual Report. San Diego Air Pollution Control District.

2000 *Air Quality in San Diego County*. 1999 Annual Report. San Diego Air Pollution Control District.

2002a *Fact Sheet – Public Complaint Program* dated November 12. Accessed from the San Diego Air Pollution Control District Internet Site at http://www.sdapcd.org/comply/cplt/english.pdf on June 22, 2004.

2002b *Frequently Asked Questions*. San Diego Air Pollution Control District Internet Site URL http://www.sdapcd.co.san-diego.ca.us/news/FAQS.htm. January.

2003 *Air Quality in 2002 – Fact Sheet*. San Diego Air Pollution Control District. February.

2004 *Air Quality in 2003 – Fact Sheet.* San Diego Air Pollution Control District. April 4.

San Diego Association of Governments (SANDAG)

1994 Regional Transportation Plan. February.

SECOR International Incorporated

2003 Phase I and II Environmental Site Assessment, City of Escondido Green Mutual Building, 1201 East Washington Avenue, Escondido, California, 92025. September 24.

U.S. Department of Commerce

2000 *San Diego County Climate Archives*, National Weather Service San Diego, National Oceanic and Atmospheric Administration Internet site URL http://www.wrh.noaa.gov/sandiego/county.html#Chula Vista/, December.

U.S. Environmental Protection Agency (EPA)

1997 *Implementation of Standards – Fact Sheet*, United States Environmental Protection Agency Office of Air & Radiation Office of Air Quality Planning & Standards Internet Site URL http://www.epa.gov/ttn/oarpg/naaqsfin/implem.html. September.

2004a Air Quality Designations and Classifications for the 8-Hour Ozone National Ambient Air Quality Standards; Early Action Compact Areas With Deferred Effective Dates; Final Rule. *Federal* Register 69(84):23857-23951, April 30.

2004b Final Rule To Implement the 8-Hour Ozone National Ambient Air Quality Standard – Phase 1; Final Rule. *Federal Register* 69(84):23951-24000, April 30.

Yolo-Solano Air Quality Management District

2003 *Software User's Guide: URBEMIS2002 for Windows with Enhanced Construction Module, Version 7.4.* Prepared by Jones & Stokes Associates. May.

ATTACHMENTS

ATTACHMENT 1

URBEMIS 2002 For Windows 7.5.0

File Name: L:\DRAFT\3859q\construction_scraper.urb
Project Name: Wal-Mart Construction
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

Construction Start Month and Year: June, 2004
Construction Duration: 4
Total Land Use Area to be Developed: 15.68 acres
Maximum Acreage Disturbed Per Day: 2.4 acres
Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 210000

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2004***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	1.26	-	1.26
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.18	2.99	0.66	0.05	0.09	0.08	0.01
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.18	2.99	0.66	0.05	1.35	0.08	1.27
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	24.00	-	24.00
Off-Road Diesel	3.64	28.17	26.94	-	1.35	1.35	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.01	0.00	0.08	0.00	0.00	0.00	0.00
Maximum lbs/day	3.65	28.17	27.02	0.00	25.35	1.35	24.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	3.65	28.17	27.02	0.05	25.35	1.35	24.00

Phase 3 - Building Construction Assumptions: Phase Turned OFF
Start Month/Year for Phase 1: Jun '04
Phase 1 Duration: 1.763 months
Building Volume Total (cubic feet): 70500
Building Volume Daily (cubic feet): 3000
On-Road Truck Travel (VMT): 112
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Jul '04
Phase 2 Duration: 2.237 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Scrapers	313	0.660	8.0

URBEMIS 2002 For Windows 7.5.0

File Name: L:\DRAFT\3859q\construction_scraper.urb
Project Name: Wal-Mart Construction
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

Construction Start Month and Year: June, 2004
Construction Duration: 4
Total Land Use Area to be Developed: 15.68 acres
Maximum Acreage Disturbed Per Day: 2.4 acres
Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 210000

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source *** 2004***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	1.26	-	1.26
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.18	2.99	0.66	0.05	0.09	0.08	0.01
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.18	2.99	0.66	0.05	1.35	0.08	1.27
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	24.00	-	24.00
Off-Road Diesel	3.64	28.17	26.94	-	1.35	1.35	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.01	0.00	0.08	0.00	0.00	0.00	0.00
Maximum lbs/day	3.65	28.17	27.02	0.00	25.35	1.35	24.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	3.65	28.17	27.02	0.05	25.35	1.35	24.00

Phase 3 - Building Construction Assumptions: Phase Turned OFF
Start Month/Year for Phase 1: Jun '04
Phase 1 Duration: 1.763 months
Building Volume Total (cubic feet): 70500
Building Volume Daily (cubic feet): 3000
On-Road Truck Travel (VMT): 112
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Jul '04
Phase 2 Duration: 2.237 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Scrapers	313	0.660	8.0

URBEMIS 2002 For Windows 7.5.0

File Name: L:\DRAFT\3859q\construction_water.urb
Project Name: Wal-Mart Construction
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

Construction Start Month and Year: June, 2004
Construction Duration: 4
Total Land Use Area to be Developed: 15.68 acres
Maximum Acreage Disturbed Per Day: 2.4 acres
Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 210000

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source *** 2004***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	1.26	-	1.26
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.18	2.99	0.66	0.05	0.09	0.08	0.01
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.18	2.99	0.66	0.05	1.35	0.08	1.27
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	24.00	-	24.00
Off-Road Diesel	3.60	24.99	29.02	-	1.15	1.15	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.01	0.00	0.08	0.00	0.00	0.00	0.00
Maximum lbs/day	3.61	24.99	29.10	0.00	25.15	1.15	24.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	3.61	24.99	29.10	0.05	25.15	1.15	24.00

Phase 3 - Building Construction Assumptions: Phase Turned OFF
Start Month/Year for Phase 1: Jun '04
Phase 1 Duration: 1.763 months
Building Volume Total (cubic feet): 70500
Building Volume Daily (cubic feet): 3000
On-Road Truck Travel (VMT): 112
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Jul '04
Phase 2 Duration: 2.237 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Off Highway Trucks	417	0.490	8.0

URBEMIS 2002 For Windows 7.5.0

File Name: L:\DRAFT\3859q\construction_tractor.urb
Project Name: Wal-Mart Construction
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

Construction Start Month and Year: June, 2004
Construction Duration: 4
Total Land Use Area to be Developed: 15.68 acres
Maximum Acreage Disturbed Per Day: 2.4 acres
Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 210000

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source *** 2004***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	1.26	-	1.26
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.18	2.99	0.66	0.05	0.09	0.08	0.01
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.18	2.99	0.66	0.05	1.35	0.08	1.27
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	24.00	-	24.00
Off-Road Diesel	1.45	12.66	9.52	-	0.61	0.61	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.01	0.00	0.08	0.00	0.00	0.00	0.00
Maximum lbs/day	1.46	12.66	9.60	0.00	24.61	0.61	24.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	1.46	12.66	9.60	0.05	24.61	0.61	24.00

Phase 3 - Building Construction Assumptions: Phase Turned OFF
Start Month/Year for Phase 1: Jun '04
Phase 1 Duration: 1.763 months
Building Volume Total (cubic feet): 70500
Building Volume Daily (cubic feet): 3000
On-Road Truck Travel (VMT): 112
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Jul '04
Phase 2 Duration: 2.237 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Crawler Tractors	143	0.575	8.0

URBEMIS 2002 For Windows 7.5.0

File Name: L:\DRAFT\3859q\construction_tractor.urb
Project Name: Wal-Mart Construction
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

Construction Start Month and Year: June, 2004
Construction Duration: 4
Total Land Use Area to be Developed: 15.68 acres
Maximum Acreage Disturbed Per Day: 2.4 acres
Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 210000

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source *** 2004***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	1.26	-	1.26
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.18	2.99	0.66	0.05	0.09	0.08	0.01
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.18	2.99	0.66	0.05	1.35	0.08	1.27
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	24.00	-	24.00
Off-Road Diesel	1.45	12.66	9.52	-	0.61	0.61	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.01	0.00	0.08	0.00	0.00	0.00	0.00
Maximum lbs/day	1.46	12.66	9.60	0.00	24.61	0.61	24.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	1.46	12.66	9.60	0.05	24.61	0.61	24.00

Phase 3 - Building Construction Assumptions: Phase Turned OFF
Start Month/Year for Phase 1: Jun '04
Phase 1 Duration: 1.763 months
Building Volume Total (cubic feet): 70500
Building Volume Daily (cubic feet): 3000
On-Road Truck Travel (VMT): 112
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Jul '04
Phase 2 Duration: 2.237 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Crawler Tractors	143	0.575	8.0

URBEMIS 2002 For Windows 7.5.0

File Name: L:\DRAFT\3859q\construction.urb
Project Name: Wal-Mart Construction
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

Construction Start Month and Year: June, 2004
Construction Duration: 4
Total Land Use Area to be Developed: 15.68 acres
Maximum Acreage Disturbed Per Day: 2.4 acres
Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 210000

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source *** 2004***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	1.26	-	1.26
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.18	2.99	0.66	0.05	0.09	0.08	0.01
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.18	2.99	0.66	0.05	1.35	0.08	1.27
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	24.00	-	24.00
Off-Road Diesel	16.68	131.99	120.97	-	6.28	6.28	0.00
On-Road Diesel	2.05	34.44	7.64	0.53	1.07	0.94	0.13
Worker Trips	0.06	0.03	0.70	0.00	0.01	0.00	0.01
Maximum lbs/day	18.79	166.46	129.31	0.53	31.36	7.22	24.14
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	18.79	166.46	129.31	0.53	31.36	7.22	24.14

Phase 3 - Building Construction Assumptions: Phase Turned OFF
Start Month/Year for Phase 1: Jun '04
Phase 1 Duration: 1.763 months
Building Volume Total (cubic feet): 70500
Building Volume Daily (cubic feet): 3000
On-Road Truck Travel (VMT): 112
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Jul '04
Phase 2 Duration: 2.237 months
On-Road Truck Travel (VMT): 1280
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
4	Crawler Tractors	143	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
2	Scrapers	313	0.660	8.0

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
ree-standing discount su	90.11	123.13	949.77	0.67	65.62
Office park	10.89	17.30	126.63	0.10	9.61
TOTAL EMISSIONS (lbs/day)	101.00	140.43	1,076.40	0.77	75.23

Includes correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2005 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Free-standing discount su	60.00 trips / 1000 sq. ft.	150.00	9,000.00
Office park	14.00 trips / 1000 sq. ft.	60.00	840.00

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	56.10	2.30	97.10	0.60
Light Truck < 3,750 lbs	15.10	4.00	93.40	2.60
Light Truck 3,751- 5,750	15.50	1.90	96.80	1.30
Med Truck 5,751- 8,500	6.80	1.50	95.60	2.90
Lite-Heavy 8,501-10,000	1.00	0.00	80.00	20.00
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	10.00	20.00	70.00
Heavy-Heavy 33,001-60,000	0.80	0.00	12.50	87.50
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00
Motorcycle	1.60	87.50	12.50	0.00
School Bus	0.30	0.00	0.00	100.00
Motor Home	1.40	14.30	78.60	7.10

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	10.8	7.3	7.3
Rural Trip Length (miles)	15.0	10.0	10.0	15.0	10.0	10.0
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			
% of Trips - Commercial (by land use)						
Free-standing discount superstore				2.0	1.0	97.0
Office park				48.0	24.0	28.0

URBEMIS 2002 For Windows 7.5.0

File Name: L:\DRAFT\3859q\construction.urb
Project Name: Wal-Mart Construction
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

Construction Start Month and Year: June, 2004
Construction Duration: 4
Total Land Use Area to be Developed: 15.68 acres
Maximum Acreage Disturbed Per Day: 2.4 acres
Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 210000

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source *** 2004***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	1.26	-	1.26
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.18	2.99	0.66	0.05	0.09	0.08	0.01
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.18	2.99	0.66	0.05	1.35	0.08	1.27
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	24.00	-	24.00
Off-Road Diesel	16.68	131.99	120.97	-	6.28	6.28	0.00
On-Road Diesel	2.05	34.44	7.64	0.53	1.07	0.94	0.13
Worker Trips	0.06	0.03	0.70	0.00	0.01	0.00	0.01
Maximum lbs/day	18.79	166.46	129.31	0.53	31.36	7.22	24.14
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	18.79	166.46	129.31	0.53	31.36	7.22	24.14

Phase 3 - Building Construction Assumptions: Phase Turned OFF
Start Month/Year for Phase 1: Jun '04
Phase 1 Duration: 1.763 months
Building Volume Total (cubic feet): 70500
Building Volume Daily (cubic feet): 3000
On-Road Truck Travel (VMT): 112
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Jul '04
Phase 2 Duration: 2.237 months
On-Road Truck Travel (VMT): 1280
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
4	Crawler Tractors	143	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
2	Scrapers	313	0.660	8.0

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Free-standing discount su	69.29	81.67	798.10	0.67	65.62
Office park	9.38	11.39	115.38	0.10	9.61
TOTAL EMISSIONS (lbs/day)	78.67	93.06	913.48	0.77	75.23

Includes correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2005 Temperature (F): 85 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Free-standing discount su	60.00 trips / 1000 sq. ft.	150.00	9,000.00
Office park	14.00 trips / 1000 sq. ft.	60.00	840.00

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	56.10	2.30	97.10	0.60
Light Truck < 3,750 lbs	15.10	4.00	93.40	2.60
Light Truck 3,751- 5,750	15.50	1.90	96.80	1.30
Med Truck 5,751- 8,500	6.80	1.50	95.60	2.90
Lite-Heavy 8,501-10,000	1.00	0.00	80.00	20.00
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	10.00	20.00	70.00
Heavy-Heavy 33,001-60,000	0.80	0.00	12.50	87.50
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00
Motorcycle	1.60	87.50	12.50	0.00
School Bus	0.30	0.00	0.00	100.00
Motor Home	1.40	14.30	78.60	7.10

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	10.8	7.3	7.3
Rural Trip Length (miles)	15.0	10.0	10.0	15.0	10.0	10.0
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			
% of Trips - Commercial (by land use)						
Free-standing discount superstore				2.0	1.0	97.0
Office park				48.0	24.0	28.0

URBEMIS 2002 For Windows 7.5.0

File Name: L:\DRAFT\3859q\operation.urb
Project Name: Wal-Mart Construction
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2004 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	18.79	166.46	129.31	0.53	31.36	7.22	24.14

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	0.19	1.46	1.16	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	69.29	81.67	798.10	0.67	65.62

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	69.48	83.13	799.27	0.67	65.62

URBEMIS 2002 For Windows 7.5.0

File Name: L:\DRAFT\3859q\operation.urb
Project Name: Wal-Mart Construction
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

CONSTRUCTION EMISSION ESTIMATES

*** 2004 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	18.79	166.46	129.31	0.53	31.36	7.22	24.14

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	0.11	1.45	0.58	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	90.11	123.13	949.77	0.67	65.62

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	90.21	124.58	950.35	0.67	65.62

URBEMIS 2002 For Windows 7.5.0

File Name: L:\DRAFT\3859q\operation.urb
Project Name: Wal-Mart Construction
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.11	1.45	0.58	-	0.00
Wood Stoves	0.00	0.00	0.00	0.00	0.00
Fireplaces	0.00	0.00	0.00	0.00	0.00
Landscaping - No winter emissions					
Consumer Prdcts	0.00	-	-	-	-
TOTALS(lbs/day,unmitigated)	0.11	1.45	0.58	0.00	0.00

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Free-standing discount su	90.11	123.13	949.77	0.67	65.62
TOTAL EMISSIONS (lbs/day)	90.11	123.13	949.77	0.67	65.62

Includes correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2005 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Free-standing discount su	60.00 trips / 1000 sq. ft.	150.00	9,000.00

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	56.10	2.30	97.10	0.60
Light Truck < 3,750 lbs	15.10	4.00	93.40	2.60
Light Truck 3,751- 5,750	15.50	1.90	96.80	1.30
Med Truck 5,751- 8,500	6.80	1.50	95.60	2.90
Lite-Heavy 8,501-10,000	1.00	0.00	80.00	20.00
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	10.00	20.00	70.00
Heavy-Heavy 33,001-60,000	0.80	0.00	12.50	87.50
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00
Motorcycle	1.60	87.50	12.50	0.00
School Bus	0.30	0.00	0.00	100.00
Motor Home	1.40	14.30	78.60	7.10

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	10.8	7.3	7.3
Rural Trip Length (miles)	15.0	10.0	10.0	15.0	10.0	10.0
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			
% of Trips - Commercial (by land use)						
Free-standing discount superstore				2.0	1.0	97.0

URBEMIS 2002 For Windows 7.5.0

'ile Name: L:\DRAFT\3859q\operation.urb
'roject Name: Wal-Mart Construction
'roject Location: San Diego County
)n-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

\REA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.11	1.45	0.58	-	0.00
Wood Stoves - No summer emissions					
Fireplaces - No summer emissions					
Landscaping	0.08	0.01	0.58	0.00	0.00
Consumer Prdcts	0.00	-	-	-	-
TOTALS(lbs/day,unmitigated)	0.19	1.46	1.16	0.00	0.00

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
ee-standing discount su	69.29	81.67	798.10	0.67	65.62
OTAL EMISSIONS (lbs/day)	69.29	81.67	798.10	0.67	65.62

ncludes correction for passby trips.
oes not include double counting adjustment for internal trips.

PERATIONAL (Vehicle) EMISSION ESTIMATES

nalysis Year: 2005 Temperature (F): 85 Season: Summer

MFAC Version: EMFAC2002 (9/2002)

ummary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
ree-standing discount su	60.00 trips / 1000 sq. ft.	150.00	9,000.00

ehicle Assumptions:

leet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
ight Auto	56.10	2.30	97.10	0.60
ight Truck < 3,750 lbs	15.10	4.00	93.40	2.60
ight Truck 3,751- 5,750	15.50	1.90	96.80	1.30
ed Truck 5,751- 8,500	6.80	1.50	95.60	2.90
ite-Heavy 8,501-10,000	1.00	0.00	80.00	20.00
ite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
ed-Heavy 14,001-33,000	1.00	10.00	20.00	70.00
eavy-Heavy 33,001-60,000	0.80	0.00	12.50	87.50
ine Haul > 60,000 lbs	0.00	0.00	0.00	100.00
rban Bus	0.10	0.00	0.00	100.00
otorcycle	1.60	87.50	12.50	0.00
chool Bus	0.30	0.00	0.00	100.00
otor Home	1.40	14.30	78.60	7.10

ravel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
rban Trip Length (miles)	10.8	7.3	7.5	10.8	7.3	7.3
ural Trip Length (miles)	15.0	10.0	10.0	15.0	10.0	10.0
rip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			
% of Trips - Commercial (by land use)						
Free-standing discount superstore				2.0	1.0	97.0

Equipment	Per Piece Pounds per Day ROG	NOx	CO	SO2	PM10	Number of pieces
Scraper	3.64	28.17	26.94	0	1.35	2
Off-Highway Truck	3.6	24.99	29.02	0	1.15	1
Tracked Tractor (loader/dozer)	1.45	12.66	9.52	0	0.61	2
Tracked Tractor (compactor)	1.45	12.66	9.52	0	0.61	2

Equipment	Total Pounds per Day ROG	NOx	CO	SO2	PM10
Scraper	7.28	56.34	53.88	0	2.7
Off-Highway Truck	3.6	24.99	29.02	0	1.15
Tracked Tractor (loader/dozer)	2.9	25.32	19.04	0	1.22
Tracked Tractor (compactor)	2.9	25.32	19.04	0	1.22
	16.68	131.97	120.98	0	6.29

Equipment	Pounds per Hour ROG	NOx	CO	SO2	PM10	Total Hours per piece	Number of Construction Days
Scraper	0.455	3.52125	3.3675	0	0.16875	30	49
Off-Highway Truck	0.45	3.12375	3.6275	0	0.14375	80	
Tracked Tractor (loader/dozer)	0.18125	1.5825	1.19	0	0.07625	80	
Tracked Tractor (compactor)	0.18125	1.5825	1.19	0	0.07625	30	

Equipment	Average Pounds per Day ROG	NOx	CO	SO2	PM10
Scraper	0.557143	4.311735	4.123469	0	0.206633
Off-Highway Truck	0.734694	5.1	5.922449	0	0.234694
Tracked Tractor (loader/dozer)	0.591837	5.167347	3.885714	0	0.24898
Tracked Tractor (compactor)	0.221939	1.937755	1.457143	0	0.093367
	2.105612	16.51684	15.38878	0	0.783673

Acres per day	2.4	
Total Acres	15.68	
PM10 fugitive dust (pounds per day)	24	3.2
		3.983673

ATTACHMENT 2

KEY TO FILE CODES
ATTACHMENT 2

Walmart_out.doc	CALINE4 output file, carbon monoxide dispersion analysis
Walmartsummer_inp.doc	EMFAC2002 input file, summer, 85 °F, 75% humidity
Walmartsummer_rts.doc	EMFAC2002 output file, summer, 85 °F, 75% humidity

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Walmart
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	29.4 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M) X1	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A	*	0	0	300	0	* AG	3697	13.3	.0	13.1

III. RECEPTOR LOCATIONS AND MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	*	COORDINATES (M) X	Y	Z	* BRG (DEG)	* PRED CONC (PPM)
1. Recpt 1	*	150	15	1.8	* 102.	* 3.2

```
1 2 20 0 923                ! Number of scenarios in file, version info
San Diego Air Basin Avg 2005 Wal-Mart Summer ! Scenario Title
Emfac     8  2              ! Program mode TOG  PM10
2005                        ! Calendar Year
13                          ! Month/Season
 2                          ! Geographic area selection: San Diego Air Basin
SD  11                      ! Air Basin Code/Number
    4    1    1             ! Number of "Emfac" mode speeds, temps, RHs
                            ! Emfac speeds (hours 1-24)
   5.0  10.0  20.0  25.0    0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
   0.0   0.0   0.0   0.0    0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
                            ! Emfac temperatures (hours 1-24)
  85.0   0.0   0.0   0.0    0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
   0.0   0.0   0.0   0.0    0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
                            ! Emfac rel humidities (hours 1-24)
  75.0   0.0   0.0   0.0    0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
   0.0   0.0   0.0   0.0    0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
FFFFF                       ! WEIGHT Output Options
FFTTF                       ! EMFAC Output Options
TFFFF                       ! BURDEN Output Options
FTFFF                       ! CALIMFAC Output Options
FFFFF                       ! EMFACnn Output Options
25                          ! First hour printed for detailed Burden output
6 1                         ! Bag and correction for Calimfac output
1965                        ! First model year considered in calculations
2005                        ! Last model year considered in calculations

                            ! Data on I/M Programs
                            ! --------------------
 5                          ! Number of I/M programs (num_prog) in scenario  1
38                          ! Area used for I/M basis: San Diego (SD)
 2  3 1984                  ! Subprograms, start month, and start year for I/M program  1
 2 2                        ! Inspection frequency (1=Annual, 2=Biennial)
 1 2                        ! Test method
 2 2                        ! Visual/Functional checks
 1 1                        ! Exhaust Cutpoint Stringency
 1 1                        ! Repair Cost
 1 1                        ! Mechanic Inspection Effectiveness
  0  0                      ! Minimum vehicle age
 45 45                      ! Maximum vehicle age
 1966 1980                  ! Minimum model year
 1979 2040                  ! Maximum model year
 1 1                        ! Free years
 0 0                        ! Years to skip
 1 1                        ! Mechanic Repair Effectiveness
 1 1                        ! Evap test: 1 => None, 2 => Gas Cap, 3 => Pressure-purge
 0.17 0.17                  ! Change of ownership percentage
 0.00 0.00                  ! Annual % vehs captured by random roadside program
 0.00 0.00                  ! Annual % vehs captured by remote sensing program
 0.00 0.00                  ! Annual % vehs captured by tamper detection program
  0  0                      ! Years of annual inspections for a gross polluter
  0  0                      ! Zero if high-emitter profile is not used
  F  F                      ! True if bad exhaust text algorithm is used
  T  T                      ! True if ARB's OBD II assumptions are used for OBD II vehicles
  T  T                      ! All PCs  included in program [Yes(T) or No(F)]
  T  T                      ! All LDT  included in program [Yes(T) or No(F)]
  T  T                      ! All MDV  included in program [Yes(T) or No(F)]
  F  F                      ! All HDGV included in program [Yes(T) or No(F)]
  F  F                      ! All HDDV included in program [Yes(T) or No(F)]
  F  F                      ! All MCs  included in program [Yes(T) or No(F)]
                            ! Tech groups (if any) in subprogram.
 3  7 1990                  ! Subprograms, start month, and start year for I/M program  2
 2 2 2                      ! Inspection frequency (1=Annual, 2=Biennial)
 1 1 2                      ! Test method
 3 3 3                      ! Visual/Functional checks
 2 2 2                      ! Exhaust Cutpoint Stringency
 2 2 2                      ! Repair Cost
 2 2 2                      ! Mechanic Inspection Effectiveness
  0  0  0                   ! Minimum vehicle age
 45 45 45                   ! Maximum vehicle age
 1966 1966 1980             ! Minimum model year
 2040 1979 2040             ! Maximum model year
 1 1 1                      ! Free years
 0 0 0                      ! Years to skip
 2 2 2                      ! Mechanic Repair Effectiveness
 1 1 1                      ! Evap test: 1 => None, 2 => Gas Cap, 3 => Pressure-purge
 0.17 0.17 0.17             ! Change of ownership percentage
 0.00 0.00 0.00             ! Annual % vehs captured by random roadside program
 0.00 0.00 0.00             ! Annual % vehs captured by remote sensing program
 0.00 0.00 0.00             ! Annual % vehs captured by tamper detection program
  0  0  0                   ! Years of annual inspections for a gross polluter
```

```
 0  0  0                ! Zero if high-emitter profile is not used
 F  F  F                ! True if bad exhaust text algorithm is used
 T  T  T                ! True if ARB's OBD II assumptions are used for OBD II vehicles
 F  T  T                ! All PCs  included in program [Yes(T) or No(F)]
 F  T  T                ! All LDT  included in program [Yes(T) or No(F)]
 F  T  T                ! All MDV  included in program [Yes(T) or No(F)]
 T  F  F                ! All HDGV included in program [Yes(T) or No(F)]
 F  F  F                ! All HDDV included in program [Yes(T) or No(F)]
 F  F  F                ! All MCs  included in program [Yes(T) or No(F)]
                        ! Tech groups (if any) in subprogram.
1  7 1996               ! Subprograms, start month, and start year for I/M program  3
2                       ! Inspection frequency (1=Annual, 2=Biennial)
2                       ! Test method
3                       ! Visual/Functional checks
3                       ! Exhaust Cutpoint Stringency
2                       ! Repair Cost
2                       ! Mechanic Inspection Effectiveness
 0                      ! Minimum vehicle age
45                      ! Maximum vehicle age
1966                    ! Minimum model year
2040                    ! Maximum model year
1                       ! Free years
0                       ! Years to skip
2                       ! Mechanic Repair Effectiveness
1                       ! Evap test: 1 => None, 2 => Gas Cap, 3 => Pressure-purge
0.17                    ! Change of ownership percentage
0.00                    ! Annual % vehs captured by random roadside program
0.00                    ! Annual % vehs captured by remote sensing program
0.00                    ! Annual % vehs captured by tamper detection program
 0                      ! Years of annual inspections for a gross polluter
 0                      ! Zero if high-emitter profile is not used
 F                      ! True if bad exhaust text algorithm is used
 T                      ! True if ARB's OBD II assumptions are used for OBD II vehicles
 T                      ! All PCs  included in program [Yes(T) or No(F)]
 T                      ! All LDT  included in program [Yes(T) or No(F)]
 T                      ! All MDV  included in program [Yes(T) or No(F)]
 T                      ! All HDGV included in program [Yes(T) or No(F)]
 F                      ! All HDDV included in program [Yes(T) or No(F)]
 F                      ! All MCs  included in program [Yes(T) or No(F)]
                        ! Tech groups (if any) in subprogram.
2  6 1998               ! Subprograms, start month, and start year for I/M program  4
2 2                     ! Inspection frequency (1=Annual, 2=Biennial)
2 2                     ! Test method
3 3                     ! Visual/Functional checks
3 3                     ! Exhaust Cutpoint Stringency
3 3                     ! Repair Cost
2 2                     ! Mechanic Inspection Effectiveness
 0  0                   ! Minimum vehicle age
30 30                   ! Maximum vehicle age
1974 1974               ! Minimum model year
2040 2040               ! Maximum model year
4 4                     ! Free years
0 0                     ! Years to skip
2 2                     ! Mechanic Repair Effectiveness
2 2                     ! Evap test: 1 => None, 2 => Gas Cap, 3 => Pressure-purge
0.17 0.17               ! Change of ownership percentage
0.00 0.00               ! Annual % vehs captured by random roadside program
0.00 0.00               ! Annual % vehs captured by remote sensing program
0.00 0.00               ! Annual % vehs captured by tamper detection program
 0  0                   ! Years of annual inspections for a gross polluter
 0  0                   ! Zero if high-emitter profile is not used
 F  F                   ! True if bad exhaust text algorithm is used
 T  T                   ! True if ARB's OBD II assumptions are used for OBD II vehicles
 F  T                   ! All PCs  included in program [Yes(T) or No(F)]
 F  T                   ! All LDT  included in program [Yes(T) or No(F)]
 F  T                   ! All MDV  included in program [Yes(T) or No(F)]
 T  F                   ! All HDGV included in program [Yes(T) or No(F)]
 F  F                   ! All HDDV included in program [Yes(T) or No(F)]
 F  F                   ! All MCs  included in program [Yes(T) or No(F)]
                        ! Tech groups (if any) in subprogram.
 2  1 2001              ! Subprograms, start month, and start year for I/M program  5
 2 2                    ! Inspection frequency (1=Annual, 2=Biennial)
 2 4                    ! Test method
 3 3                    ! Visual/Functional checks
 3 1                    ! Exhaust Cutpoint Stringency
 3 3                    ! Repair Cost
 2 2                    ! Mechanic Inspection Effectiveness
  0  0                  ! Minimum vehicle age
 30 30                  ! Maximum vehicle age
 1974 1974              ! Minimum model year
 2040 2040              ! Maximum model year
```

```
 4 4                    ! Free years
 0 0                    ! Years to skip
 2 2                    ! Mechanic Repair Effectiveness
 2 2                    ! Evap test: 1 => None, 2 => Gas Cap, 3 => Pressure-purge
 0.17 0.17              ! Change of ownership percentage
 0.00 0.00              ! Annual % vehs captured by random roadside program
 0.00 0.00              ! Annual % vehs captured by remote sensing program
 0.00 0.00              ! Annual % vehs captured by tamper detection program
  0  0                  ! Years of annual inspections for a gross polluter
  0  0                  ! Zero if high-emitter profile is not used
  F  F                  ! True if bad exhaust text algorithm is used
  T  T                  ! True if ARB's OBD II assumptions are used for OBD II vehicles
  F  T                  ! All PCs  included in program [Yes(T) or No(F)]
  F  T                  ! All LDT  included in program [Yes(T) or No(F)]
  F  T                  ! All MDV  included in program [Yes(T) or No(F)]
  T  F                  ! All HDGV included in program [Yes(T) or No(F)]
  F  F                  ! All HDDV included in program [Yes(T) or No(F)]
  F  F                  ! All MCs  included in program [Yes(T) or No(F)]
                        ! Tech groups (if any) in subprogram.
#
```

Title : San Diego Air Basin Avg 2005 Wal-Mart Summer
Version : Emfac2002 V2.2 Sept 23 2002
Run Date : 05/19/04 15:05:15
Scen Year: 2005 -- Model Years: 1965 to 2005
Season : Summer
Area : San Diego AB

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Year:2005 -- Model Years 1965 to 2005 Inclusive -- Summer
Emfac2002 Emission Factors: V2.2 Sept 23 2002

San Diego A Basin Average Basin Average

Table 1: Running Exhaust Emissions (grams/mile)

Pollutant Name: Total Organic Gases Temperature: 85F Relative Humidity: 75%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	1.079	1.141	1.276	3.569	10.044	5.507	1.266
10	0.730	0.784	0.875	2.552	6.712	4.341	0.870
20	0.389	0.427	0.474	1.464	3.396	3.094	0.474
25	0.305	0.338	0.373	1.169	2.571	2.798	0.375

Pollutant Name: Carbon Monoxide Temperature: 85F Relative Humidity: 75%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	10.813	13.836	12.327	37.140	71.533	41.065	13.293
10	9.252	11.655	10.094	24.924	47.282	33.727	10.933
20	7.180	8.851	7.413	13.151	24.424	26.525	8.085
25	6.471	7.927	6.582	10.338	19.084	25.395	7.194

Pollutant Name: Oxides of Nitrogen Temperature: 85F Relative Humidity: 75%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.465	0.715	1.253	13.565	17.814	0.593	1.233
10	0.403	0.611	1.067	11.350	13.930	0.617	1.042
20	0.323	0.482	0.843	8.841	9.935	0.669	0.818
25	0.298	0.443	0.780	8.220	9.019	0.696	0.757

Pollutant Name: Carbon Dioxide Temperature: 85F Relative Humidity: 75%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	1214.256	1447.348	1991.386	2084.250	2638.736	223.390	1389.330
10	899.275	1073.597	1450.580	1911.019	2249.630	190.777	1044.448
20	566.749	678.113	895.025	1746.433	1879.939	146.175	682.280
25	479.629	574.315	753.211	1707.722	1792.988	131.143	587.870

Pollutant Name: Sulfur Dioxide Temperature: 85F Relative Humidity: 75%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.012	0.015	0.022	0.145	0.144	0.003	0.020
10	0.009	0.011	0.017	0.143	0.140	0.003	0.016
20	0.006	0.007	0.012	0.142	0.136	0.002	0.013
25	0.005	0.006	0.010	0.141	0.135	0.002	0.012

Pollutant Name: PM10 Temperature: 85F Relative Humidity: 75%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.056	0.086	0.099	0.765	0.635	0.066	0.102
10	0.037	0.057	0.067	0.600	0.458	0.052	0.072

20	0.019	0.030	0.036	0.394	0.265	0.037	0.041
25	0.015	0.023	0.028	0.330	0.213	0.034	0.033

Pollutant Name: PM10 - Tire Wear Temperature: 85F Relative Humidity: 75%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.008	0.008	0.009	0.026	0.010	0.004	0.009
10	0.008	0.008	0.009	0.026	0.010	0.004	0.009
20	0.008	0.008	0.009	0.026	0.010	0.004	0.009
25	0.008	0.008	0.009	0.026	0.010	0.004	0.009

Pollutant Name: PM10 - Break Wear Temperature: 85F Relative Humidity: 75%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.013	0.013	0.013	0.013	0.013	0.013	0.013
10	0.013	0.013	0.013	0.013	0.013	0.013	0.013
20	0.013	0.013	0.013	0.013	0.013	0.013	0.013
25	0.013	0.013	0.013	0.013	0.013	0.013	0.013

Pollutant Name: Gasoline - mi/gal Temperature: 85F Relative Humidity: 75%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	7.153	5.946	4.151	3.211	3.153	27.649	6.565
10	9.645	8.011	5.704	4.827	4.742	32.892	8.847
20	15.272	12.679	9.379	9.258	9.105	42.999	14.019
25	18.036	14.975	11.264	11.809	11.625	47.258	16.567

Pollutant Name: Diesel - mi/gal Temperature: 85F Relative Humidity: 75%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	27.560	28.913	22.011	5.249	3.670	0.000	10.306
10	27.560	28.913	22.011	5.249	3.670	0.000	10.306
20	27.560	28.913	22.011	5.249	3.670	0.000	10.306
25	27.560	28.913	22.011	5.249	3.670	0.000	10.306

Title : San Diego Air Basin Avg 2005 Wal-Mart Summer
Version : Emfac2002 V2.2 Sept 23 2002
Run Date : 05/19/04 15:05:15
Scen Year: 2005 -- Model Years: 1965 to 2005
Season : Summer
Area : San Diego AB

****

Year:2005 -- Model Years 1965 to 2005 Inclusive -- Summer
Emfac2002 Emission Factors: V2.2 Sept 23 2002

San Diego A Basin Average Basin Average

Table 2: Starting Emissions (grams/trip)

Pollutant Name: Total Organic Gases Temperature: 85F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.133	0.133	0.202	0.818	0.733	1.380	0.181
10	0.213	0.214	0.328	1.085	0.990	1.410	0.276
20	0.363	0.365	0.565	1.589	1.473	1.499	0.453
30	0.498	0.502	0.778	2.055	1.917	1.626	0.614
40	0.619	0.624	0.968	2.481	2.321	1.792	0.759

50	0.725	0.731	1.135	2.868	2.686	1.996	0.887
60	0.811	0.819	1.271	3.162	2.965	2.102	0.990
120	1.056	1.094	1.644	3.772	3.542	2.409	1.277
180	1.183	1.217	1.787	4.024	3.777	2.609	1.411
240	1.253	1.288	1.892	4.270	4.006	2.809	1.494
300	1.320	1.357	1.993	4.510	4.229	3.008	1.576
360	1.386	1.425	2.093	4.744	4.447	3.206	1.655
420	1.450	1.491	2.189	4.972	4.660	3.403	1.732
480	1.512	1.555	2.283	5.195	4.867	3.600	1.807
540	1.572	1.618	2.374	5.412	5.068	3.795	1.880
600	1.631	1.678	2.463	5.623	5.264	3.990	1.951
660	1.687	1.737	2.549	5.828	5.454	4.183	2.020
720	1.742	1.794	2.632	6.028	5.639	4.376	2.086

Pollutant Name: Carbon Monoxide Temperature: 85F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	1.010	1.128	1.760	9.761	6.898	6.092	1.587
10	1.567	1.784	2.771	12.568	9.516	5.651	2.332
20	2.619	3.026	4.680	17.902	14.464	4.897	3.740
30	3.590	4.172	6.439	22.861	19.030	4.315	5.043
40	4.482	5.222	8.048	27.446	23.215	3.905	6.239
50	5.292	6.177	9.507	31.657	27.019	3.667	7.329
60	6.023	7.035	10.815	35.494	30.441	3.601	8.313
120	9.468	11.576	16.234	50.607	42.845	7.101	12.878
180	11.847	14.024	18.300	54.420	45.520	9.540	15.310
240	12.461	14.736	19.218	58.017	48.076	11.737	16.143
300	13.042	15.410	20.092	61.398	50.512	13.687	16.929
360	13.589	16.047	20.920	64.563	52.828	15.391	17.670
420	14.104	16.646	21.705	67.513	55.023	16.849	18.365
480	14.585	17.208	22.445	70.247	57.099	18.059	19.014
540	15.033	17.732	23.140	72.765	59.054	19.023	19.617
600	15.448	18.218	23.791	75.068	60.890	19.740	20.175
660	15.830	18.667	24.397	77.155	62.605	20.211	20.686
720	16.179	19.079	24.959	79.026	64.200	20.434	21.152

Pollutant Name: Oxides of Nitrogen Temperature: 85F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.251	0.355	0.639	1.042	0.998	0.221	0.365
10	0.314	0.437	0.824	1.539	1.483	0.244	0.469
20	0.425	0.580	1.150	2.411	2.336	0.286	0.652
30	0.516	0.698	1.418	3.122	3.031	0.322	0.802
40	0.587	0.791	1.626	3.672	3.569	0.352	0.919
50	0.639	0.858	1.775	4.061	3.949	0.375	1.003
60	0.670	0.899	1.866	4.290	4.172	0.393	1.054
120	0.689	0.929	1.911	4.312	4.194	0.394	1.079
180	0.695	0.937	1.913	4.294	4.177	0.386	1.083
240	0.690	0.930	1.900	4.266	4.151	0.374	1.076
300	0.683	0.921	1.883	4.230	4.117	0.360	1.066
360	0.674	0.908	1.860	4.184	4.074	0.343	1.052
420	0.663	0.893	1.832	4.129	4.023	0.323	1.036
480	0.649	0.875	1.799	4.065	3.962	0.301	1.016
540	0.634	0.854	1.761	3.992	3.894	0.275	0.993
600	0.617	0.830	1.718	3.910	3.817	0.247	0.968
660	0.597	0.803	1.669	3.819	3.731	0.216	0.939
720	0.575	0.773	1.616	3.718	3.636	0.182	0.907

Pollutant Name: Carbon Dioxide Temperature: 85F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	10.050	12.059	15.001	13.284	12.234	28.549	11.466
10	13.250	15.759	21.253	17.465	16.869	31.253	15.216
20	19.853	23.423	33.971	25.724	26.033	36.512	22.921
30	26.725	31.438	46.976	33.841	35.054	41.576	30.897
40	33.866	39.804	60.269	41.817	43.931	46.443	39.146
50	41.277	48.521	73.848	49.652	52.665	51.113	47.668
60	48.958	57.590	87.714	57.346	61.256	55.587	56.462
120	94.078	111.876	162.623	91.170	98.876	76.431	107.054

180	108.370	128.814	188.573	103.234	113.081	77.561	123.306
240	122.160	145.185	213.418	114.588	126.449	78.628	138.957
300	135.447	160.987	237.159	125.230	138.978	79.631	154.009
360	148.231	176.222	259.796	135.161	150.671	80.571	168.460
420	160.513	190.889	281.328	144.382	161.526	81.448	182.310
480	172.292	204.989	301.756	152.892	171.544	82.261	195.560
540	183.568	218.521	321.080	160.690	180.724	83.010	208.210
600	194.342	231.485	339.299	167.778	189.066	83.696	220.259
660	204.613	243.882	356.413	174.155	196.572	84.319	231.708
720	214.382	255.711	372.423	179.821	203.239	84.878	242.557

Pollutant Name: Sulfur Dioxide Temperature: 85F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.001	0.001	0.001	0.000
30	0.000	0.000	0.001	0.001	0.001	0.001	0.000
40	0.000	0.000	0.001	0.001	0.001	0.001	0.001
50	0.001	0.001	0.001	0.001	0.001	0.001	0.001
60	0.001	0.001	0.001	0.001	0.001	0.001	0.001
120	0.001	0.001	0.002	0.002	0.002	0.001	0.001
180	0.001	0.002	0.002	0.002	0.002	0.001	0.001
240	0.001	0.002	0.002	0.002	0.002	0.001	0.002
300	0.002	0.002	0.003	0.002	0.002	0.001	0.002
360	0.002	0.002	0.003	0.003	0.002	0.001	0.002
420	0.002	0.002	0.003	0.003	0.003	0.001	0.002
480	0.002	0.002	0.003	0.003	0.003	0.001	0.002
540	0.002	0.002	0.004	0.003	0.003	0.001	0.002
600	0.002	0.003	0.004	0.003	0.003	0.001	0.003
660	0.002	0.003	0.004	0.003	0.003	0.001	0.003
720	0.002	0.003	0.004	0.003	0.003	0.001	0.003

Pollutant Name: PM10 Temperature: 85F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.001	0.001	0.001	0.001	0.001	0.017	0.001
10	0.002	0.003	0.002	0.002	0.002	0.015	0.002
20	0.003	0.005	0.004	0.002	0.003	0.011	0.004
30	0.004	0.007	0.006	0.003	0.004	0.009	0.005
40	0.006	0.009	0.008	0.004	0.004	0.007	0.007
50	0.007	0.010	0.009	0.004	0.005	0.005	0.008
60	0.008	0.012	0.011	0.005	0.006	0.004	0.009
120	0.011	0.017	0.015	0.007	0.008	0.011	0.013
180	0.012	0.018	0.016	0.007	0.009	0.017	0.014
240	0.012	0.018	0.016	0.007	0.009	0.022	0.014
300	0.013	0.019	0.017	0.008	0.009	0.027	0.015
360	0.013	0.020	0.018	0.008	0.010	0.031	0.015
420	0.014	0.021	0.018	0.009	0.010	0.035	0.016
480	0.014	0.021	0.019	0.009	0.010	0.038	0.017
540	0.014	0.022	0.019	0.009	0.011	0.040	0.017
600	0.015	0.022	0.020	0.009	0.011	0.042	0.017
660	0.015	0.023	0.020	0.010	0.011	0.043	0.018
720	0.015	0.024	0.021	0.010	0.012	0.043	0.018

```
Title    : San Diego Air Basin Avg 2005 Wal-Mart Summer
Version  : Emfac2002 V2.2 Sept 23 2002
Run Date : 05/19/04 15:05:15
Scen Year: 2005 -- Model Years: 1965 to 2005
Season   : Summer
Area     : San Diego      AB
*******************************************************************************
     Year:2005 -- Model Years 1965 to 2005 Inclusive --  Summer
     Emfac2002 Emission Factors: V2.2 Sept 23 2002

          San Diego      A              Basin Average                 Basin Average
```

Table 4: Hot Soak Emissions (grams/trip)

Pollutant Name: Total Organic Gases Temperature: 85F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.066	0.065	0.042	0.032	0.122	0.202	0.062
10	0.128	0.125	0.082	0.061	0.228	0.382	0.120
20	0.240	0.235	0.154	0.112	0.401	0.682	0.224
30	0.340	0.333	0.220	0.157	0.534	0.921	0.318
40	0.386	0.379	0.251	0.177	0.589	1.023	0.361

Hot soak results are scaled to reflect zero emissions for trip lengths of less than 5 minutes (about 25% of in-use trips).

Title : San Diego Air Basin Avg 2005 Wal-Mart Summer
Version : Emfac2002 V2.2 Sept 23 2002
Run Date : 05/19/04 15:05:15
Scen Year: 2005 -- Model Years: 1965 to 2005
Season : Summer
Area : San Diego AB

****

Year:2005 -- Model Years 1965 to 2005 Inclusive -- Summer
Emfac2002 Emission Factors: V2.2 Sept 23 2002

San Diego A Basin Average Basin Average

Table 5a: Partial Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Total Organic Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
85	0.269	0.267	0.205	0.021	0.010	0.461	0.259

Title : San Diego Air Basin Avg 2005 Wal-Mart Summer
Version : Emfac2002 V2.2 Sept 23 2002
Run Date : 05/19/04 15:05:15
Scen Year: 2005 -- Model Years: 1965 to 2005
Season : Summer
Area : San Diego AB

****

Year:2005 -- Model Years 1965 to 2005 Inclusive -- Summer
Emfac2002 Emission Factors: V2.2 Sept 23 2002

San Diego A Basin Average Basin Average

Table 5b: Multi-Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Total Organic Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
85	0.023	0.022	0.017	0.001	0.003	0.036	0.021

Title : San Diego Air Basin Avg 2005 Wal-Mart Summer
Version : Emfac2002 V2.2 Sept 23 2002
Run Date : 05/19/04 15:05:15
Scen Year: 2005 -- Model Years: 1965 to 2005
Season : Summer

Area : San Diego AB

****

Year:2005 -- Model Years 1965 to 2005 Inclusive -- Summer
Emfac2002 Emission Factors: V2.2 Sept 23 2002

San Diego A Basin Average Basin Average

Table 6a: Partial Day Resting Loss Emissions (grams/hour)

Pollutant Name: Total Organic Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
85	0.118	0.120	0.091	0.010	0.005	0.210	0.114

Title : San Diego Air Basin Avg 2005 Wal-Mart Summer
Version : Emfac2002 V2.2 Sept 23 2002
Run Date : 05/19/04 15:05:15
Scen Year: 2005 -- Model Years: 1965 to 2005
Season : Summer
Area : San Diego AB

****

Year:2005 -- Model Years 1965 to 2005 Inclusive -- Summer
Emfac2002 Emission Factors: V2.2 Sept 23 2002

San Diego A Basin Average Basin Average

Table 6b: Multi-Day Resting Loss Emissions (grams/hour)

Pollutant Name: Total Organic Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
85	0.010	0.010	0.008	0.000	0.001	0.017	0.010

Title : San Diego Air Basin Avg 2005 Wal-Mart Summer
Version : Emfac2002 V2.2 Sept 23 2002
Run Date : 05/19/04 15:05:15
Scen Year: 2005 -- Model Years: 1965 to 2005
Season : Summer
Area : San Diego AB

****

Year:2005 -- Model Years 1965 to 2005 Inclusive -- Summer
Emfac2002 Emission Factors: V2.2 Sept 23 2002

San Diego A Basin Average Basin Average

Table 7: Estimated Travel Fractions

Pollutant Name: Temperature: ALL Relative Humidity: ALL

	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
%VMT	0.564	0.300	0.086	0.044	0.003	0.004	1.000
%TRIP	0.540	0.288	0.118	0.049	0.001	0.005	1.000
%VEH	0.569	0.303	0.078	0.031	0.001	0.017	1.000

Title : San Diego Air Basin Avg 2005 Wal-Mart Summer
Version : Emfac2002 V2.2 Sept 23 2002
Run Date : 05/19/04 15:05:15

Scen Year: 2005 -- Model Years: 1965 to 2005
Season : Summer
Area : San Diego AB

****

Year:2005 -- Model Years 1965 to 2005 Inclusive -- Summer
Emfac2002 Emission Factors: V2.2 Sept 23 2002

San Diego A Basin Average Basin Average

Table 8: Evaporative Running Loss Emissions (grams/minute)

Pollutant Name: Total Organic Gases Temperature: 85F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
1	0.042	0.433	0.353	0.312	0.620	0.172	0.200
2	0.048	0.229	0.187	0.174	0.354	0.204	0.121
3	0.053	0.163	0.133	0.128	0.266	0.220	0.097
4	0.057	0.131	0.107	0.105	0.222	0.229	0.087
5	0.059	0.113	0.092	0.092	0.196	0.236	0.080
10	0.063	0.080	0.065	0.065	0.143	0.254	0.069
15	0.064	0.074	0.059	0.056	0.126	0.262	0.067
20	0.064	0.073	0.058	0.051	0.118	0.268	0.067
25	0.063	0.075	0.059	0.049	0.112	0.273	0.067
30	0.062	0.073	0.058	0.047	0.111	0.268	0.065
35	0.061	0.072	0.056	0.046	0.109	0.264	0.064
40	0.059	0.070	0.055	0.045	0.107	0.259	0.062
45	0.058	0.068	0.053	0.044	0.106	0.255	0.061
50	0.056	0.067	0.052	0.044	0.104	0.247	0.059
55	0.054	0.065	0.051	0.043	0.102	0.237	0.057
60	0.052	0.064	0.050	0.042	0.100	0.229	0.055

APPENDIX K

Cultural Resources Letter Report for 1314 East Grand Avenue (RECON)

1927 Fifth Avenue
San Diego, CA 92101-2358
P 619.308.9333 F 619.308.9334
www.recon-us.com

RECON

May 18, 2004

Mr. Jay Paul
City of Escondido
201 N. Broadway
Escondido, CA 92025

Reference: Cultural Resource Assessment for the Wal-Mart Commercial Center Project (RECON Number 3859A)

Dear Mr. Paul:

The following letter presents a summary of the historical and architectural assessment for a single-family residence at 1314 East Grand Avenue, City of Escondido, California. The subject property is within the project area for the proposed Wal-Mart Commercial Center. The residence and its associated grounds sit atop high ground on the north side of East Grand Avenue, occupying the southwest corner of the commercial center site. The residence overlooks the existing paved parking area, Escondido Union School District offices, and Escondido Village Mall shopping center to the north. The change in elevation is approximately 60 feet.

The cultural resource information summarized herein is supplemental to other studies conducted for the proposed project. As a result of this review it was determined that the home does not qualify as a historic resource under the criteria used by the City of Escondido.

A review of the existing residence was conducted in May 2004 by RECON cultural resource analyst Russ Collett. The review included exterior inspections to identify architectural characteristics of the house, determine its general condition, and estimate its fit within Escondido's local register criteria. A Chain of Title was obtained for the subject property which provided names of persons associated with the property since 1904. The archival research was conducted using a number of sources including the Pioneer Room of the Escondido Public Library, California Room of the San Diego Public Library, Escondido Historical Society, California State Archives, San Diego Historical Society, City of Escondido Planning and Building Records Departments, and the County of San Diego Assessor's records. Additional information regarding the construction history for the house was sought from Lucy Burk, a member of the Escondido Historic Preservation Commission.

Records show that the existing residence was constructed in 1948 and is stylistically consistent with residential construction of the late 1940s and early 1950s. The residence is not associated with persons who are recognized for their substantial contributions to Escondido's history, although it is associated with Edwin S. Bulen. Mr. Bulen is recognized as a member of Escondido's business community as a dairyman and his association with the subject property began in 1936 when he purchased 20 acres of agricultural land to start a dairy. He and his wife Dorothy achieved this goal in 1937 with the dairy's opening. The house was constructed as the primary residence for Mr. Bulen and his wife Dorothy in 1948. Prior to 1948 the Bulens lived at another East Grand Avenue address near the subject property. In 1951, Mr. Bulen sold his interest in the dairy business, but retained ownership of the property. By 1954 he had secured a seat in the California State Assembly which he held for a single term. Later in 1954 he opened a cash-and-carry storefront across from his former dairy and by 1958 had sold this as well and retired from active business enterprise. By 1962, Mr. Bulen had divorced and married his second wife Evelyn. Several records for the period between

1937 and 1952 could not be located through the sources consulted. As a result, the home's designer and builder could not be determined at this time. Overall, it is a good example of mid-twentieth century residential construction style and practice. Common materials and methods of the period were applied to make advantageous use of the sloping location. The architectural integrity of the building is good, showing no major alterations or changes that are out of keeping with its original character.

The building is not architecturally unique in Escondido for this period and does not represent innovative applications of materials or techniques. Mr. Bulen was not instrumental in developing the dairy industry in Escondido and his dairy operation was not noted as being large or influential. Although he retained ownership of the property when it was sought as the location for a new shopping center in 1964, he was not instrumental in the development of what became north county's largest and most modern shopping center at the time (Escondido Village Mall).

Article 40 of Escondido's Zoning Ordinance identifies the attributes that an older building must have in order to qualify for inclusion on the local register. Most, if not all, of the buildings on the register have also been recognized as historic resources through their inclusion in the Escondido Historic Site Survey. The Bulen house was not included in the 1990 survey nor in the updated survey published in 2001. The fact that the Bulen house is not included in the survey does not preclude its consideration under the criteria for local register listing. The following discussion addresses the seven criteria for local register listing and their relation to the Bulen house.

A historic building must meet two of seven criteria in order to be included in the local register. The seven criteria are: (1) strong identification with a person or persons who significantly contributed to the culture, history, or development of Escondido; (2) that embody distinguishing characteristics of an architectural type, specimen, or are representative of a recognized architect's work and are not substantially altered; (3) that are connected with a business or use that was once common but is now rare; (4) that are the sites of significant historical events; (5) that are 50 years old or have achieved historical significance within the past 50 years; (6) that are an important focal point in the visual quality or character of a neighborhood, street, area, or district; and (7) that is one of the few remaining examples in the city possessing distinguishing characteristics of an architectural type. The architectural characteristics of the Bulen house are considered under criteria 2, 5, 6, and 7. Each of these is discussed relative to the physical attributes of the house as it stands.

Criterion 2 includes two subordinate portions, one dealing with the architectural type and the other with the architect. The type is consistent with contemporaneous residential buildings and is therefore representative of the type. The Bulen house does not satisfy this criterion while it is characteristic of homes built in the late 1940s or early 1950s, it is not of a unique style nor does it represent an excellent example of this period. An association with a recognized architect could not be identified through the available sources. Criterion 5 is met given the 1948 construction date reported in County Assessor records. Criterion 6 is not satisfied as the house does not represent an important visual focal point for the neighborhood. Criterion 7 is also not met since there are numerous examples of residential construction from this period throughout Escondido.

Based on the available sources of information regarding Mr. Bulen and the residence there is insufficient material to support a finding of significance. The proposed project would result in demolition of the existing house. Considering our findings, the loss of the house would not represent a significant impact. Members of the historic preservation commission have requested that the building be documented prior to demolition in a manner that is consistent with the city's historic sites survey. If the City elects to complete this documentation it could include completion of California Department of Parks and Recreation form DPR 523 incorporating 35mm photographs of the building and basic floor plan and elevation sketches. The completed form to be submitted to the South Coastal Information Center for assignment of an official state identification number within the California Historical Resource Information System (CHRIS). Copies of the

completed form including the CHRIS number to be provided to the City of Escondido, the Escondido Historical Society, and the Pioneer Room of the Escondido Library. Physical preservation of the building in-place is not recommended.

Please call if you have any questions.

Sincerely,

Russell O. Collett
Cultural Resource Analyst

ROC:sh

APPENDIX L

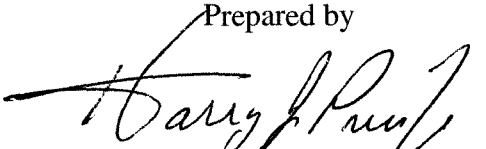
Cultural Resources Report for 1201 East Washington Avenue (RECON)

HISTORIC BUILDING SURVEY OF THE ESCONDIDO MUTUAL WATER DISTRICT SHOP/WAREHOUSE, 1201 EAST WASHINGTON AVENUE, ESCONDIDO, CALIFORNIA

Prepared for

CITY OF ESCONDIDO
201 N. BROADWAY
ESCONDIDO, CA 92025

Prepared by



HARRY J. PRICE
PROJECT ARCHAEOLOGIST

RECON NUMBER 3859A
MARCH 2, 2004

1927 Fifth Avenue
San Diego, CA 92101-2358
P 619.308.9333 F 619.308.9334

RECON

NATIONAL ARCHAEOLOGICAL DATA BASE INFORMATION

Author:	Harry J. Price, Jr.
Consulting Firm:	RECON Environmental, Inc. 1927 Fifth Avenue San Diego, CA 92101-2358
Report Date:	March 2, 2004
Report Title:	Historic Building Survey of the Escondido Mutual Water District Shop/Warehouse, 1201 East Washington Avenue, Escondido, California
Submitted to:	City of Escondido
Contract Number:	RECON Number 3859A
U.S.G.S. Quadrangle Map:	Escondido 7.5-minute series 1967/1975
Acreage:	4.57 acres
Keywords:	Escondido, Escondido Mutual Water District, half-round building, warehouse, metal building

ABSTRACT

This report represents the completion of a historic building survey for a 9,000-square-foot half-round wood and metal shop/warehouse built by the Escondido Mutual Water District and currently owned by the City of Escondido in the city of Escondido, California. A review of files at the Pioneer Room at the Escondido Public Library, the City of Escondido, the San Diego Aerospace Museum; and an on-foot reconnaissance of the parcel was completed between September 2 and September 8, 2003. The subject building is on a lot at the southeastern corner of the intersection of East Washington and North Ash Street, addressed as 1201 East Washington Avenue, in the city of Escondido (Assessor's Parcel Number 2301410100). The property is part of a proposed 11+-acre Wal-Mart retail facility development on the northern side of East Grand Avenue, between Ash Street and Harding Avenue, addressed as 1330 East Grand Avenue. As part of the Wal-Mart development, it is proposed the existing Escondido Union High School District Offices at the East Grand Avenue property be moved to the East Washington Avenue property. The property is currently occupied by the shop/warehouse.

The Escondido Mutual Water District (EMWD) constructed the half-round shop/warehouse in 1941. The building was divided into four rooms, housing a shop, stock room, electrical department, and water department. The City of Escondido took control of the EMWD, and the shop/warehouse, in 1971. There are no indications of significant alterations to the building. It is currently being used for storage. The building does not qualify under CEQA guidelines for inclusion in the California Register of Historical Resources (CRHR). The building does meet two of the seven criteria to qualify under the City of Escondido guidelines as eligible for inclusion on the local register of historic places or be given historic landmark status.

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FIGURES

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PHOTOGRAPHS

ATTACHMENTS

Management Summary

This report presents the methods and results of a historic resource evaluation for a shop/warehouse building located at 1201 East Washington in the city of Escondido, California (Figure 1). A pedestrian field survey and historic documentation were completed between September 2 and 8, 2003 by Harry J. Price.

The Washington Avenue property is part of a larger project to build a Wal-Mart at an 11+-acre (479,160 square feet) site at 1330 East Grand Avenue. The Grand Avenue property is bounded on the north by East Valley Parkway, on the south by East Grand Avenue, on the west by North Ash Street, and extends to Harding Street on the east. The Escondido Union High School District Offices currently occupy part of the Grand Avenue property and will have to be relocated. The School District is proposing to construct a new 60,000-square-foot facility at the 4.75-acre (199,000 square feet) 1201 East Washington Avenue property (Figures 2 and 3). The 9,000-square-foot half-round shop/warehouse is the only building currently occupying the East Washington Avenue property. The only other structure on the remaining 190,000 square feet of the parcel is a small concrete loading dock located in the southwest corner of the lot. A row of trees runs north to south about 100 feet east of the warehouse and a second clump of trees is in the southeast corner of the parcel. The remainder of the parcel is asphalt parking area and flat bare dirt.

The existing shop/warehouse facility on the property was constructed in 1941 and is not considered historic under California Environmental Quality Act (CEQA) or City of Escondido guidelines for historic structures.

Undertaking Information

In accordance with CEQA and policies and requirements of the City of Escondido regarding the protection of historic resources, a historic resource archival search, pedestrian survey, and historic structure assessment were completed on the East Washington Avenue property. A City of Escondido Historic Resources Inventory form for the building was completed in 1991 (Attachment 1) and was used for preliminary information.

The proposed project is located at the southeastern corner of East Washington Avenue and North Ash Street in the community of Escondido (Assessor's Parcel Number 236-450-08, 236-450-09, and 236-450-11). The proposed project includes construction of a Wal-Mart on property at 1330 East Grand Avenue, an the relocation of Escondido Union High School Offices from the East Grand Avenue property to the property at 1201 East

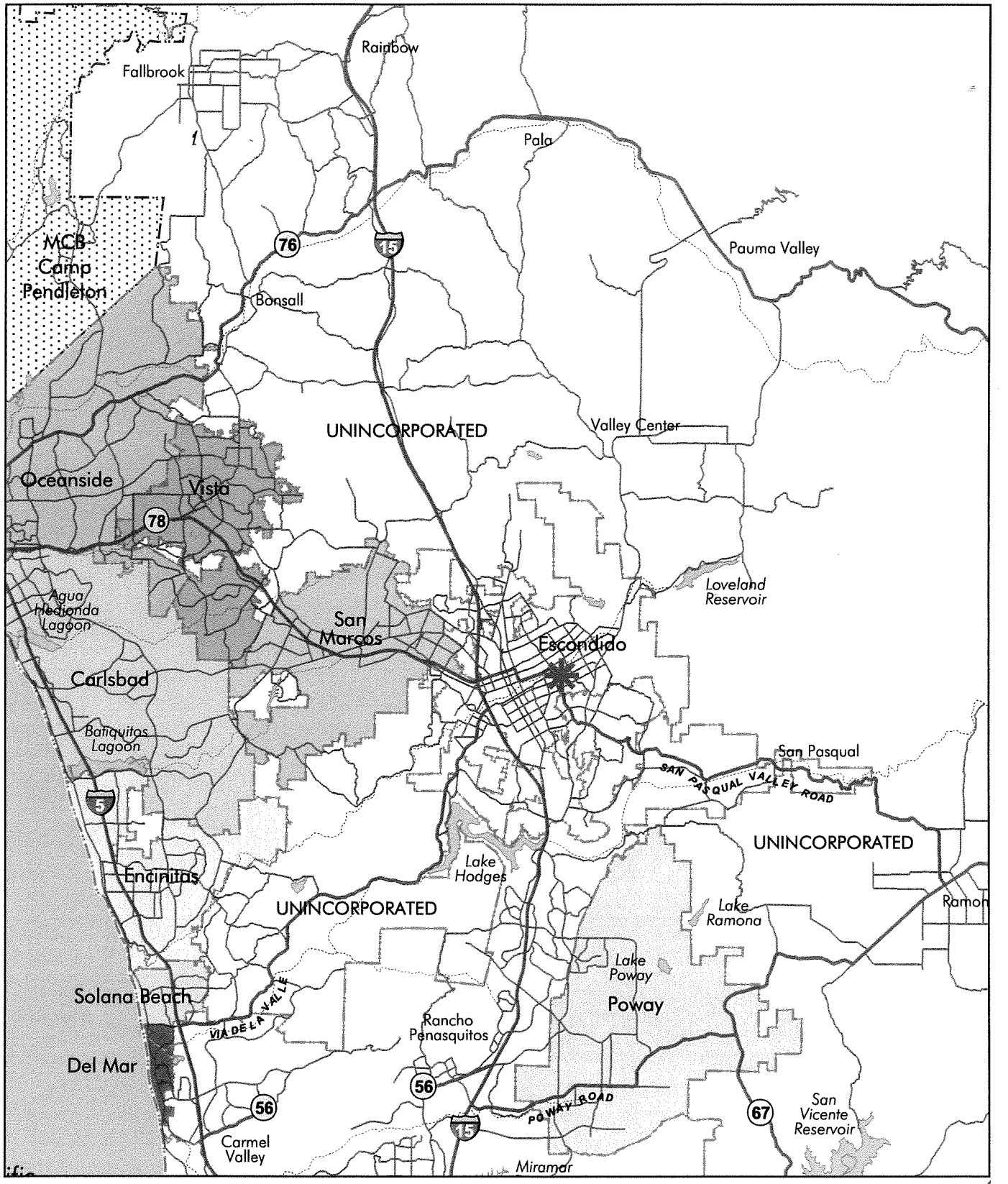

FIGURE 1
Regional Location

RECON

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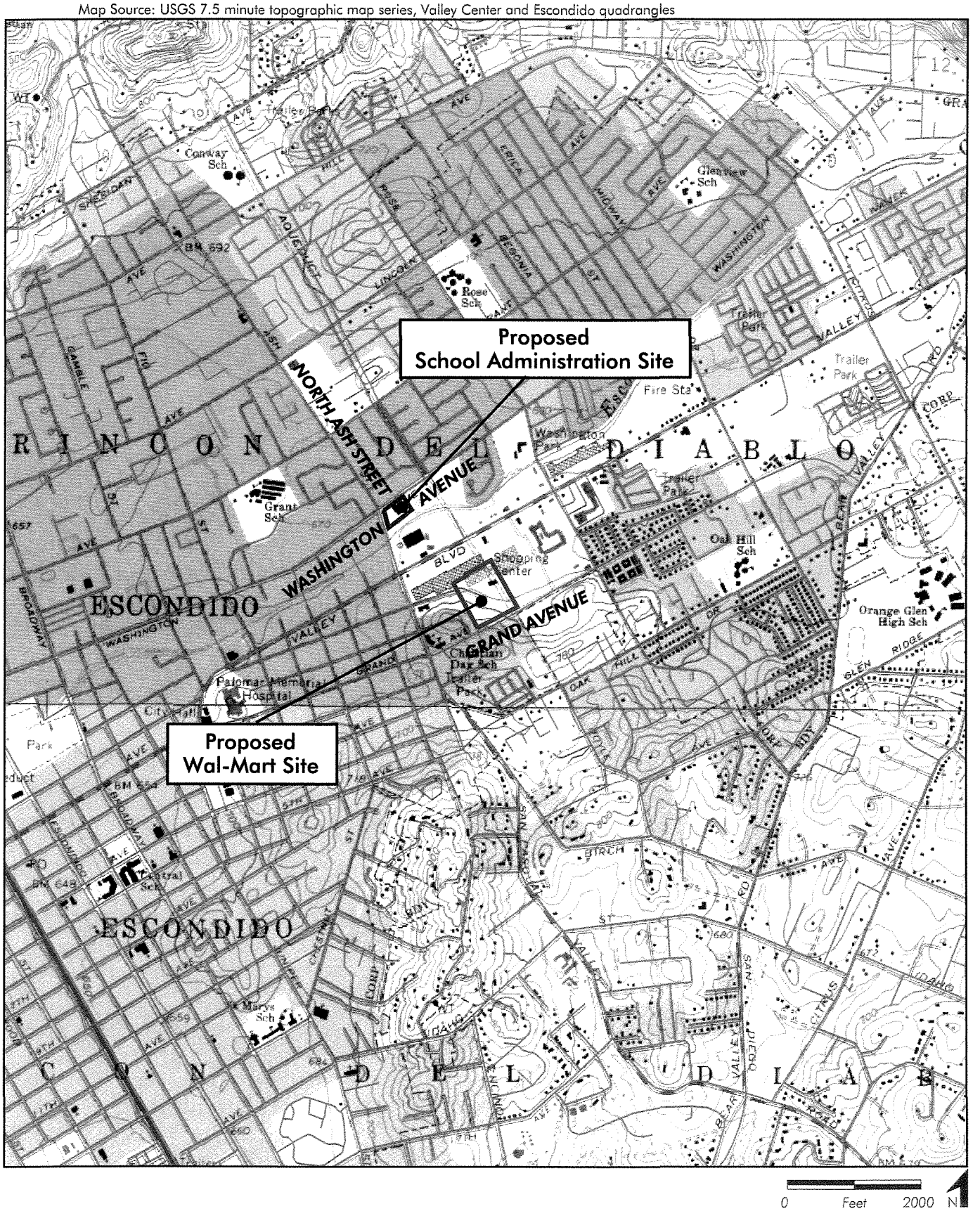
fig1 (reg1) 08/08/03

Map Source: USGS 7.5 minute topographic map series, Valley Center and Escondido quadrangles



RECON

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FIGURE 2
Project Location on USGS Map

Proposed School Administration Site
(EMWD Building Site)

Proposed Wal-Mart Site

RECON

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fig3 (aerial) 10/10/03

FIGURE 3
Aerial Photograph of Project

Washington Avenue. The shop/warehouse is the only building on the E. Washington Avenue property.

Setting

A brief discussion of the project setting is provided, as well as observations of existing conditions. This information is provided as a preliminary context for the cultural chronology that follows.

A. Natural Setting

Single-family residences, multi-family residential units, and small commercial buildings surround the project area. Escondido Creek, immediately to the south of the East Washington Avenue property, is contained in a wide, concrete-lined canal. Previous grading on the property has altered topography, and any original variation in elevation is gone. There are no native plant communities on the property. There are a number of exotic trees on the property, including a row of 17 pine trees east of the warehouse and several pepper trees in the southeast and southwest corners. The eastern half of the parcel is bare dirt with some gravel, and the west half is asphalt and concrete.

Both East Valley Parkway and East Washington Avenue show up as roads on the 1901 U.S. Geological Survey 15-minute topographic map. There are no buildings on or immediately adjacent to the project property. One building is shown on the east side of Ash Street, approximately one-third of the block north of the Washington Avenue and Ash Street intersection. On the 1942 U.S. Army Corps of Engineers 15-minute topographic map, a building is shown on the project property, and well as four buildings directly opposite, on the north side of East Washington Avenue Escondido Creek has not yet been channelized on the 1942 map.

B. Cultural Setting

The history of San Diego County is generally divided into the Spanish (1769-1821), Mexican (1821-1846), and American (post 1846) periods. The Spanish period began with the establishment of a mission and presidio in 1769. The Spaniards introduced European crops, cattle, and other livestock. Their goal was to convert the Native Americans to Christianity and teach them to be agriculturists. The Mexican period began in 1821 when Mexico achieved independence from Spain. During the 1820s, a small village began to form at the base of Presidio Hill that became the Pueblo of San Diego (present-day Old Town). The town served as a market center and port for 30 ranchos in the county that were chiefly involved in cattle raising for the exportation of hides and tallow. Rancho Rincon del Diablo, located in the present-day Escondido Valley, was 12,633 acres

granted to Juan Bautista Alvarado in 1843. Alvarado grazed cattle and built a house on the southern portion of the grant.

In 1846, San Diego was occupied by American troops and officially became part of the United States with the Treaty of Guadalupe Hidalgo (1848). Between 1855 and 1864, Judge O.S. Witherby acquired the title to Rancho Rincon del Diablo from the heirs of Alvarado. The land was initially purchased by a group of Stockton businessmen in 1883. Two years later, the Escondido Land and Town Company acquired the ranch and in 1885 and 1886, began to plat a town-site and subdivide the neighboring land into various tracts.

The founders of Escondido laid out the west side for small farms where families raised fruit, hay, grapes, or vegetables. The plots were often block-size. Both Victorian and Craftsman-style buildings housed these families. The area's rise to the west from the valley floor provided the upper reaches with views of the town and the mountains to the east. Wealthy mid-western families built substantial winter homes on the slopes. A sanitarium and a country hotel were erected on view lots before World War I. During World War II, the Army constructed Camp Escondido on multiple blocks of the flat area. After the war, housing was so hard to come by that many blocks were divided, enabling individuals and developers to fill the need for single-family and multi-family dwellings. State Highway 395 (Centre City Parkway) cut off the west side of the city from downtown in 1949.

The history of the East Washington Street property is directly connected to the development of irrigation in the Escondido area. The first company set up to bring water to Escondido, the Escondido Irrigation District, was formed as a private venture in 1889. The district plan was to build a dam on the San Luis Rey River and a 13-mile canal to bring the water to Escondido (*Times-Advocate* 1983). A $450,000 bond was approved in June 1894. Work progressed slowly, but the canal and dam were completed in 1895 (*Times-Advocate* 1988). Financial problems plagued the district for the next several years, until 1904, when reorganization took place. A new board was selected in 1895 and the Escondido Mutual Water District (EMWD) was formed. Individuals purchased stock in the district, the amount of stock determining the amount of water an individual was entitled to (*Times-Advocate* 1983).

The City of Escondido tried to buy the EMWD in 1912, but the asking price was more than the City was willing to pay. Consequently, the City set up its own water system and operated it concurrently to the EMWD's operations (*Times-Advocate* 1988). In 1925 the City of Escondido purchased EMWD's city works, and in the 1960s sued to take control of the remainder of EMWD. In 1941 EMWD built the structure at Ash and Washington as an operations building (*Times-Advocate* 1941a, 1941b). The building was divided into four rooms, housing a shop, stock room, electrical department, and water department.

In the 1950s a third water district was created in the Escondido area. EMWD wanted to purchase water from the then new Metropolitan Water District of Southern California (MWDSC), which had access to Colorado River water. EMWD could not purchase water from MWDSC because they were a privately owned company. A publicly owned company, the Rincon del Diablo Municipal Water District, was formed to purchase water from the MWDSC and sell it to EMWD (*Times-Advocate* 1988).

A group of Indian bands brought a lawsuit against the EMWD and the U.S. Department of the Interior in 1969, claiming the two stole Indian water rights in the original 1894 San Luis Rey River dam and canal agreement. In 1971 the City took over controlling interest on the EMWD, but could only lease the company shares until the lawsuit was decided (*San Diego Union* 1971). A final verdict was reached in 1985, and the City took complete control of EMWD.

Research Design

Based on the recommendations by the City of Escondido, a historic resource archival search, pedestrian survey, and assessment of the existing building was completed by a qualified cultural resource professional. The requirement for completing this work was based on a City of Escondido Historic Resources Inventory Form completed in 1991 that listed the building (mistakenly called a Quonset Hut) on this property as individually significant at a local level (1991; see Attachment 1). The entire East Washington Avenue property was surveyed to determine if other historic or prehistoric cultural resources were present. One historic structure, probably a concrete loading dock or ramp, was identified in the southwest corner of the property. No prehistoric cultural resources were identifier on the property.

Methods

Methods used for this survey included a review of pertinent literature and of historic-era maps. A field survey was completed on September 2 and 8, 2003, by Harry J. Price, RECON archaeologist. Mr. Price's resume is provided as Attachment 2.

The survey required four person-hours to complete. The property was walked and all exposed areas were carefully inspected for evidence of both surface and possible subsurface archaeological and historical materials. Inspection of the structure included observations of both exterior and interior architectural elements and building design. Photographs using 35-millimeter slide film were taken of both the outside and inside of the building, and included construction details of the interior framework, and window and door details.

A. Historic Research Issues

Historic resources in the city of Escondido are evaluated for their importance under the California Environmental Quality Act and their significance under the City's Historic Resources Code (Article 40, sec. 33-794, Escondido Zoning Ordnances). The California Register of Historical Resources (CRHR) serves as a tool for determining the applicability of CEQA to a historic property. The CRHR uses the evaluative criteria of the National Register of Historic Places in evaluating the significance of historic properties (Section 15064.5, CEQA 2001 as amended). These criteria are:

- Is the resource associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage?

- Is the resource associated with the lives of persons important in California's past?

- Does the resource embody the distinctive characteristics of a type, period, region, or method of construction? Does it represent the work of an important creative individual, or does it have high artistic values?

- Has the resource yielded, or will it be likely to yield, information important to prehistory or history?

The determination of significance for historic buildings within the city of Escondido is based on age, location, context, association with an important person or event, uniqueness, and integrity. The City has developed a set of 13 criteria to address when evaluating a possible historic resource for inclusion on the list of historic landmarks or the local historic register. Seven of these criteria are applicable to the EMWD building:

- Resources that are strongly identified with a person or persons who significantly contributed to the culture, history, pre-history, or development of the city of Escondido, region, state, or nation.

- Building or buildings that embody distinguishing characteristics of architectural type, specimen, or are representative of a recognized architect's work and are not substantially altered.

- Historical resources that are connected with a business or use that was once common but is now rare.

- Historical resources that are the site of significant historical events.

- Historical resources that are 50 years old or have achieved historical significance within the past 50 years.

- Historical resources that are an important key focal point in the visual quality or character of a neighborhood, street, or district.

- Historical building that is one of the few remaining examples in the city possessing distinguishing characteristics of an architectural type.

A historic property must meet at least two of these criteria to be eligible for inclusion on the local register of historic places or be given historic landmark status.

The City of Escondido has designated a number of areas as historic districts, including the Westside Historic District. Boundaries for historic districts were determined by the Escondido Community Development Department and local residents. Criteria used in determining a potential district in Escondido include:

- The proposed historical district as a geographically definable area possessing a significant concentration or continuity of sites, buildings, structures, or objects unified by past events, or aesthetically by plan or physical development;

- The collective historical value of the proposed district may be greater than that of each individual resource; and

- The designation is in conformance with the purpose of the City's historic preservation provisions set forth in the City's general plan.

B. Pedestrian Survey

A historical resource survey of the property was conducted on September 2 and 8, 2003 by Harry J. Price, RECON archaeologist. The shop/warehouse was photographed and architectural elements were documented during the field visit.

Archival Research Results

Archival information collected for the property includes a review of historic maps, DMWD files, and newspaper articles at the Pioneer Center. A chain of title listing all previous owners was reviewed during the survey phase.

The EMWD shop/warehouse at 1201 East Washington Avenue is half round in shape, similar to, but not, a Quonset Hut. The construction is wood truss framing covered with

corrugated metal sheets. It rests on a poured concrete slab. The 9,000-square-foot building measures 60 feet wide, 30 feet high, and 150 feet long.

The building was constructed by EMWD in 1941. The EMWD filed a building permit in February 1941, which was listed in the February 5, 1941 *Times-Advocate*. The listing was for "Escondido Mutual Water Company, Washington and Ash Streets, 9000 square foot warehouse, $9000" (*Times-Advocate* 1941a).

A second article in the *Times-Advocate*, dated November 6, 1941 (*Times-Advocate* 1941b), described the construction then taking place on the building. The article described the construction of the truss framework as taking place on-site. The arch design was chosen, according to the article, as a way to have great structural strength and not have pillars to break up floor space The building was described as divided into four rooms, housing a stock room, electrical department, water department, and a shop. The article described five large rolling doors to be installed on the west side, one for each of the first three departments, and two for the shop. It was also noted that the building was being misidentified as an aircraft hanger by many local people; the article ended with the sentence: "No it's not a hanger."

The building was taken over by the City of Escondido when it took over the EMWD in 1971, although the City could not take final control until a lawsuit between Indian groups and the City-owned Escondido Irrigation District was resolved in 1985.

The City of Escondido Historic Resources Inventory was checked for listing of the building. Judy Wright and Mary Stoddard filled out an inventory form in 1991. The building is described as a "Quonset hut," massive in scale, clad with corrugated metal panels. The architectural style is listed as Quonset Hut. Condition of the building is described as good, and related listed features are a chain link fence. Construction date is noted as 1940A; original location, architect, and builder are listed as unknown. The owner is listed as the City of Escondido. The form includes a short structural description and history of Quonset huts. The building was given the local ranking of Individually Significant.

The EMWD building is not within Escondido's historic district, the Old Escondido Neighborhood District. The Old Escondido Neighborhood District lies within the boundaries of South Escondido Boulevard, Fifth Avenue, Chestnut Street, and Thirteenth Avenue. The EMWD building is approximately three-quarters of a mile northeast of the historic district.

Historic U.S. Geological Survey maps were examined for indications of buildings on the project lot and general development in the area. Both East Valley Parkway and East Washington Avenue are shown as existing roads on the 1901 U.S. Geological Survey 15-minute topographic map. There are no buildings on or immediately adjacent to the

project property. One building is shown on the east side of Ash Street, approximately one-third of the block north of the Washington Avenue and Ash Street intersection.

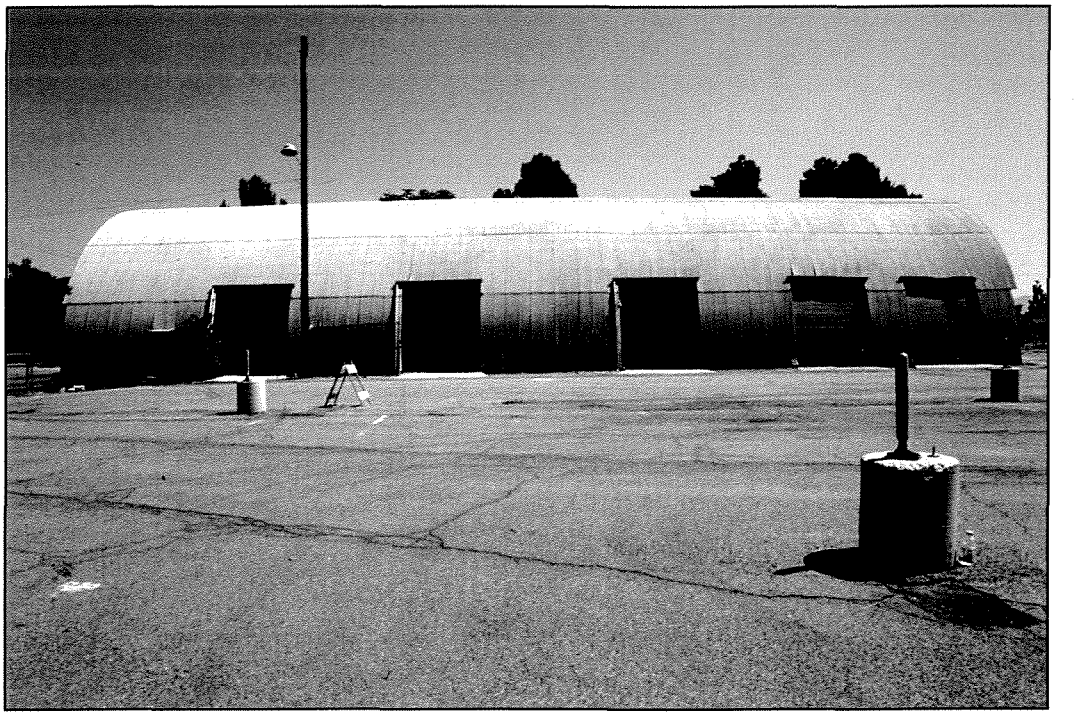
On the 1942 U.S. Army Corps of Engineers 15-minute topographic map, a building is shown on the project property, and well as four small buildings directly opposite, on the north side of East Washington Avenue Escondido Creek has not yet been channelized on the 1942 map.

Survey Results

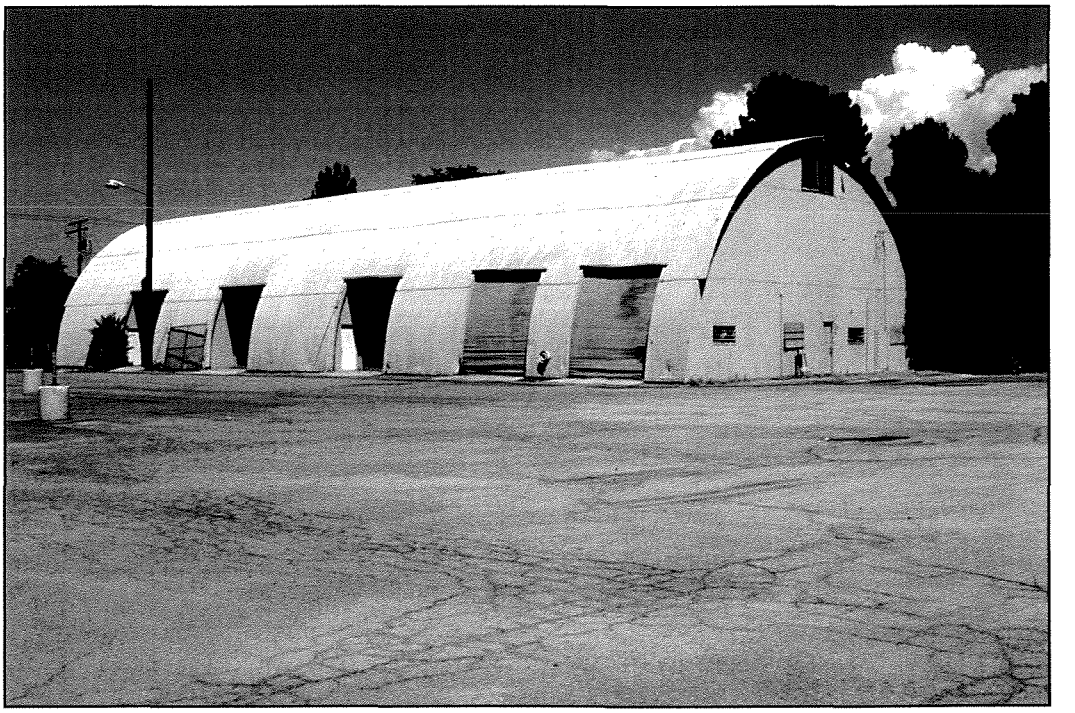
The EMWD shop/warehouse at 1201 East Washington Avenue is half round in shape, on a poured concrete slab foundation. Although it does resemble a Quonset hut in general shape and design, there are several differences that will be discussed later. The construction is wood truss framing covered with corrugated metal sheets attached to the framing by nails. The 9,000-square-foot building measures 60 feet wide, 30 feet high, and 150 feet long (Photographs 1 and 2).

There are five large roll-up doors on the west side of the building (see Photograph 2). There is one door for each of the three northern interior sections in the building, and two for the southernmost section. The two southern roll-up doors are curved to match the outside of the building and appear to be original (Photograph 3). The three northern roll-up doors are inset into the building and are perpendicular to the floor (Photograph 4). These roll-up doors are possibly replacements of original curved doors. The sides of the recesses are sheets of exterior plywood scored to resemble tongue-and-groove siding (Photograph 5). If these recesses were part of the original building construction, it would seem more likely they would be covered with corrugated metal like the rest of the building. The difference in installation of these doors could be the result of an inability of obtaining replacement doors that were the same as the doors used in the original construction. The existing door openings would have to be modified to accept replacement doors of a different size, which hung differently. There is an entrance door in one side of each of the rolling door recesses (see Photograph 5). These entrance doors are newer, plain doors. A single entrance door is located approximately 15 feet from the north end of the building (Photograph 6), covered by a small shed roof. The door is recessed at the bottom, and the top is even with the metal siding. The door is two-panel, with a metal-framed, double-hung window in the top panel. The bottom panel has been covered by a piece of plywood. There are no indications of other openings that have been subsequently sealed up.

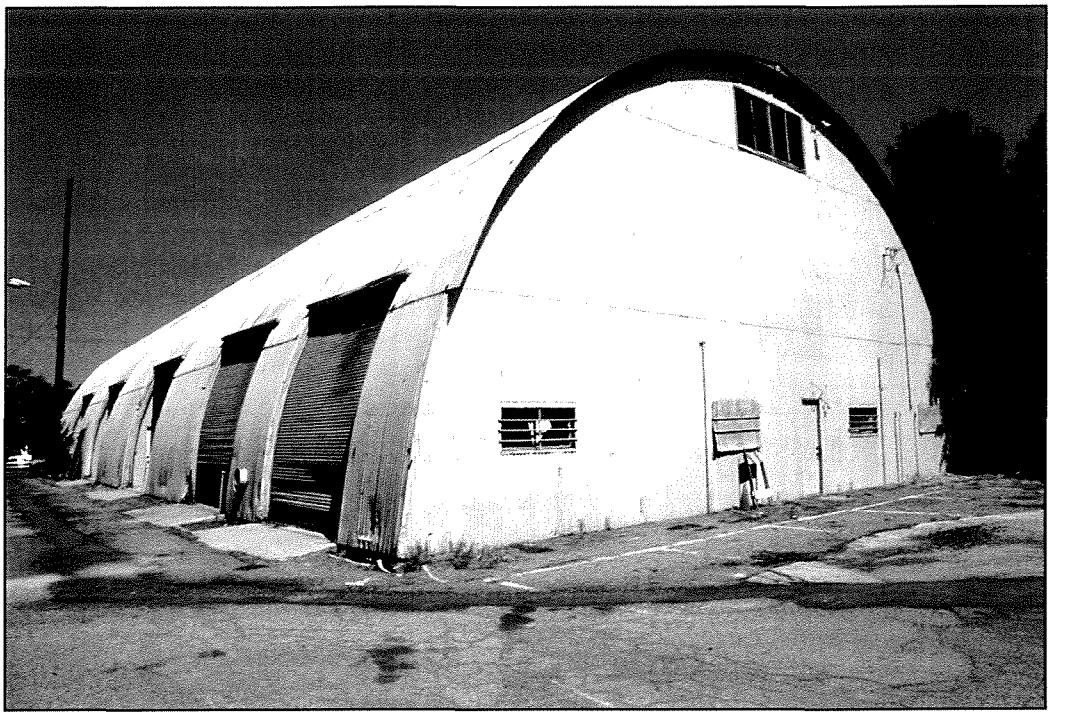
The south end of the building has one door and four narrow windows at ground floor level (Photograph 7). The door is plain and without a window, and is offset a little to the left (west) of center of the wall. The four windows are casement style, approximately 4 feet wide and 18 inches high, wood and metal framed (Photograph 8). The two center



PHOTOGRAPH 1
Looking at West and South Elevations of the
Escondido Mutual Water District (EMWD) Shop/Warehouse

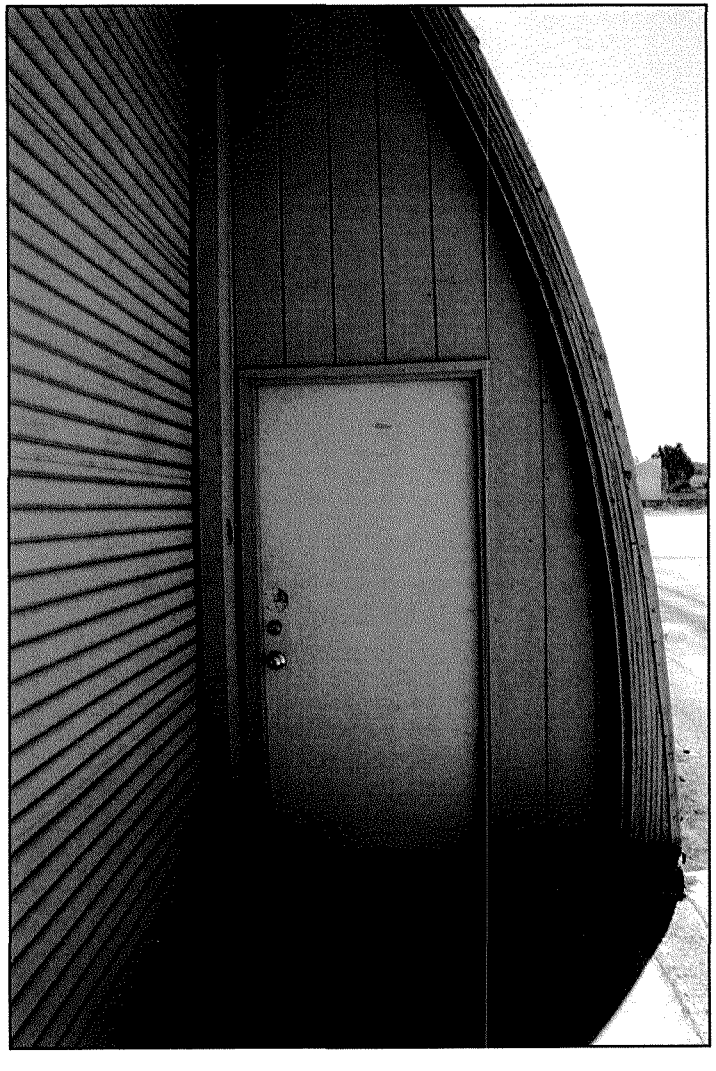


PHOTOGRAPH 2
The EMWD Shop/Wherehouse, West Elevation

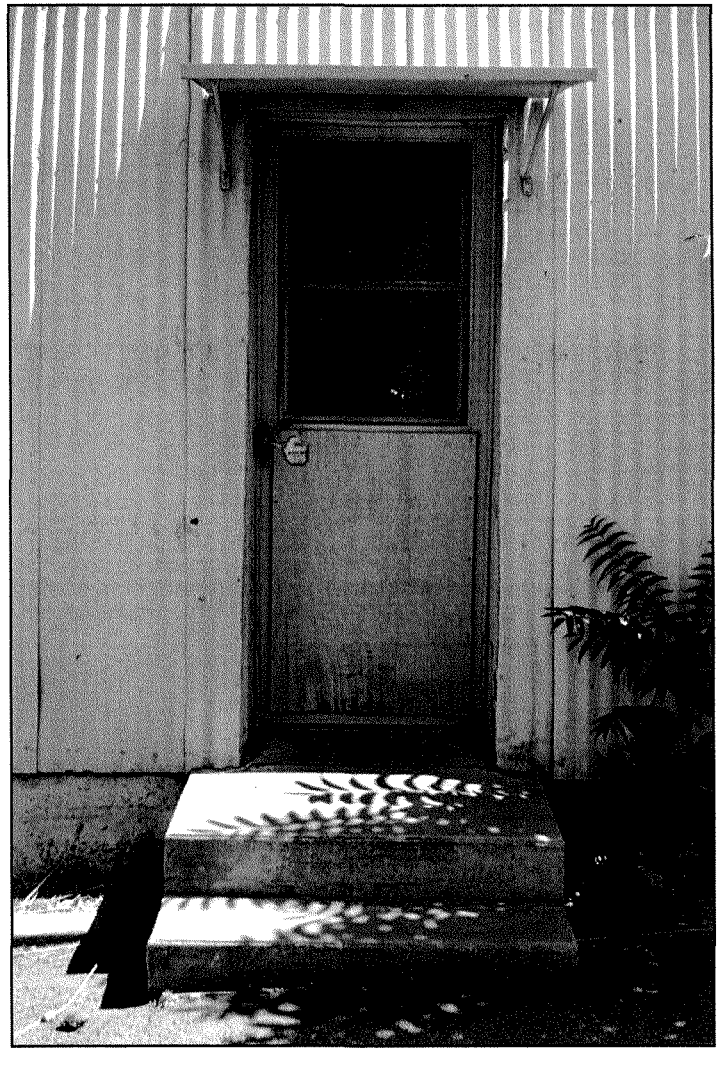


PHOTOGRAPH 3
West and South Elevations, Note Mounting of Southern Roll-Up Two Doors

PHOTOGRAPH 4
Example of Mounting of Northern 3 Roll-Up Doors



PHOTOGRAPH 5
Typical Door Built into Recess Wall
of Northern 3 Roll-Up Doors



PHOTOGRAPH 6
Entrance Door at North End of West Side of Building

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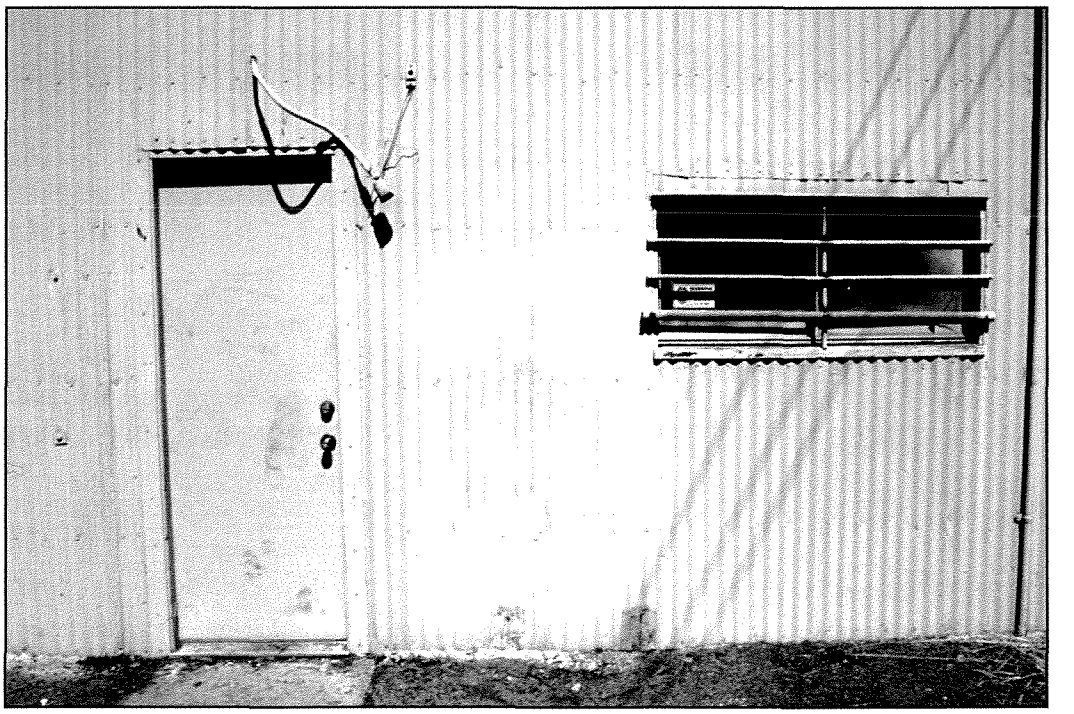
PHOTOGRAPH 7
South Elevation of EMWD Building



PHOTOGRAPH 8
Door and Window in South Wall

windows are also offset to the left (west) of center. Three bars have been attached to the outside frame to prevent break-ins. There is a wide ventilation window in the center of the wall, near the roofline. This window is hopper style, divided into four sashes, hinged at the bottom and opening into the building (Photograph 9). There is no indication of other openings that have been closed off.

The east side of the building has only a single opening, a door, offset to the right (north) of middle of the side (Photographs 10 and 11). The two-panel, wood door is even with the metal siding at the bottom, and extends past the siding at the top. The door opening is boxed in at the top, with a small shed roof (Photograph 12). There are no indications of additional openings that have been sealed up.

Extending out to the east of this wall is a fenced-in area. The area, once graveled, extends from the rear to the front of the building, and is approximately 70 feet wide. There are two fences, one inside the other. The outer fence is an older wire mesh fence. The inner fence is a more recently installed 6-foot-high chain-link fence with razor wire along the top. The distance between the fences is approximately 10 feet at the south end, and 4 feet along the east and north sides. There is a light pole at the northeast corner of the enclosed area. The area appears to have been for outside storage of equipment. A line of pine trees runs parallel to the long side of the fence. There were originally 17 trees but several have died and been cut down.

The north end of the building comes to within about two and half feet of the sidewalk (Photograph 13). There is one entrance door and three windows at ground-floor level (see Photograph 13). The windows are casement style with two sashes (Photograph 14). A wide hopper style window with four sashes is set at the top of the arch, close to the roof, matching the one at the south end. The door is a four-panel, wood door, with a transom above (Photograph 15). The door is set approximately six feet from the right (west) corner of the north end.

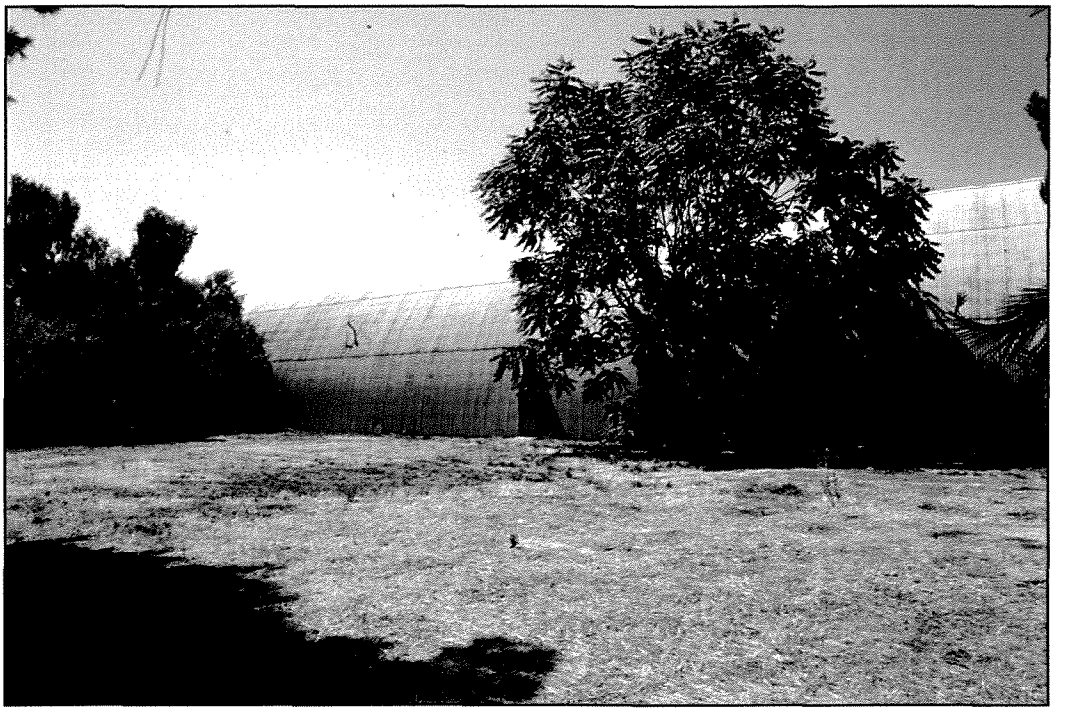
The wooden truss framework is exposed in the building interior (Photograph 16). Trusses are constructed of curved six-inch-by-six-inch boards. Nailed to these are a series of one-inch-by-ten-inch boards running lengthwise on the inside curve, butted end to end (Figure 4). There is one set of overlapping one-inch-by-ten-inch boards on the left side of the six-inch-by-six-inch boards. The trusses are spaced approximately 32 inches apart.

Nailed to the outside of the trusses are one-inch-by-eight-inch boards, running horizontally. These boards are spaced approximately 24 inches apart, and the corrugated metal skin is nailed to them (Photograph 17).

A set of diagonal bracing boards is attached to the inside face of the horizontal boards. These are one-inch-by-eight-inch boards, spaced about four feet apart, running up to the right on the sides and in a V shape on the ends (Photograph 18). These boards extend

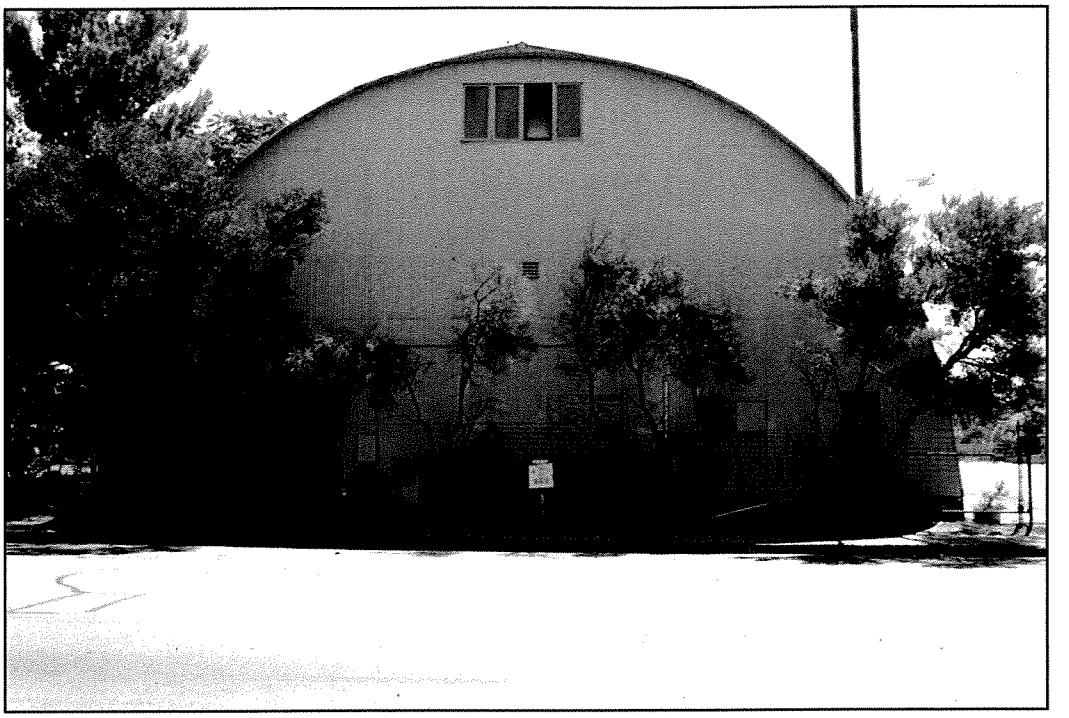
PHOTOGRAPH 9
Hopper Windows at Apex of South Wall

PHOTOGRAPH 10
East Elevation of EMWD Shop/Warehouse



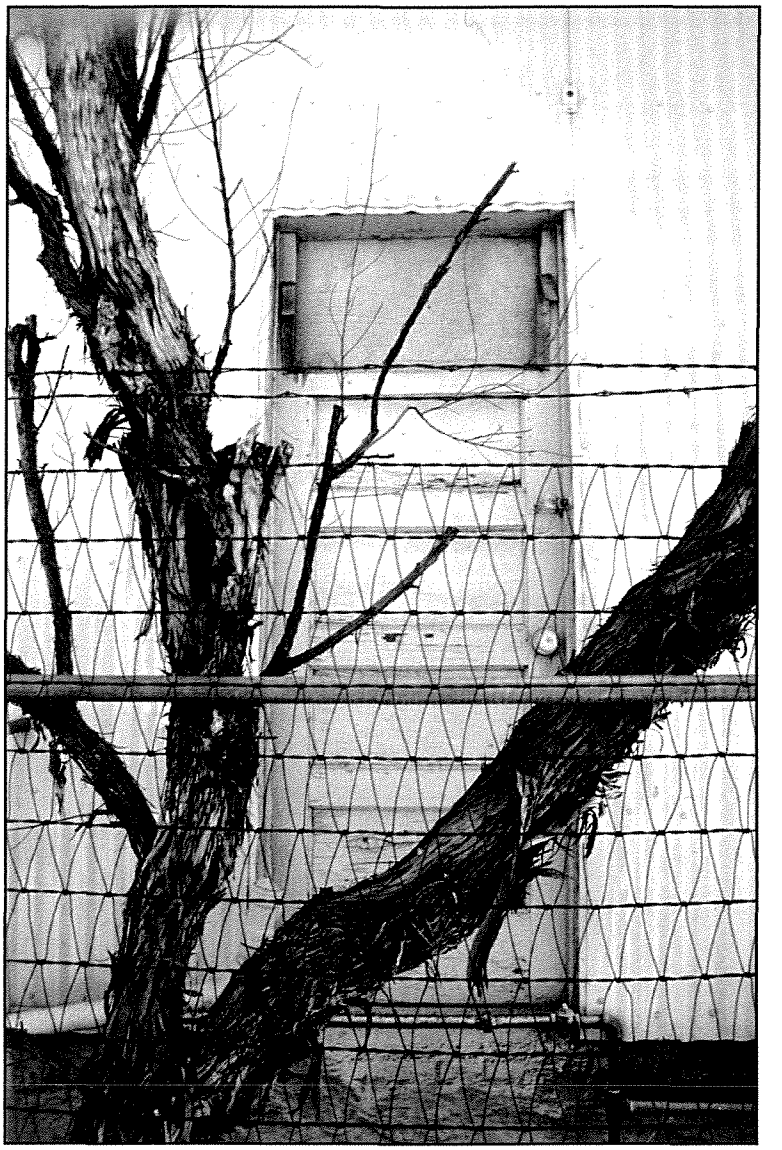
PHOTOGRAPH 11
Looking Southwest at East Wall

PHOTOGRAPH 12
Entrance Door in East Wall



PHOTOGRAPH 13
North Elevation of EMWD Shop/Warehouse

PHOTOGRAPH 14
Detail of Windows in North Wall



PHOTOGRAPH 15
Entrance Door in North Wall

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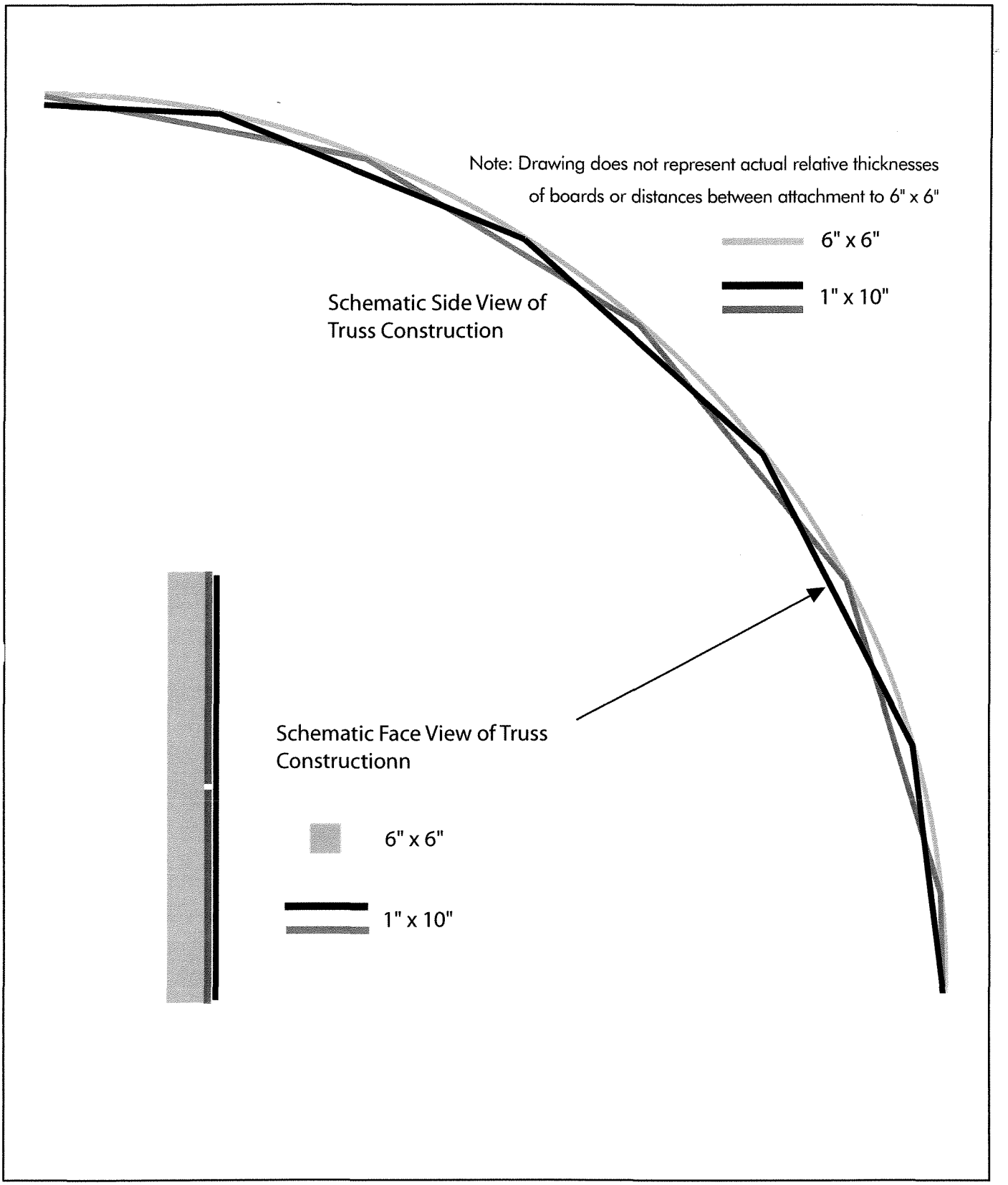
Map Source: Latitude 33 Planing and Engineering, 1998



0 Feet 100

FIGURE 4
Truss Construction

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PHOTOGRAPH 16
Wooden Truss Structure of EMWD Shop/Warehouse

PHOTOGRAPH 17
Truss and Bracing Structure of Top
and South End of Building

PHOTOGRAPH 18
Detail of Wood Bracing and Horizontal Boards
for Sheet Metal Siding Attachment

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about two-thirds of the way up the sides and ends of the structure. Above that, the spacing becomes much greater.

The interior of the building is divided into four sections, matching the description in the 1941 article. The two northernmost dividers are chain-link fencing, seven feet high. The southern divider is wood-framed, with corrugated metal on one side, and approximately eight feet high. The two chain-link fence dividers may be replacements of earlier wooden dividers, but there is no evidence visible at the time to know this for sure.

The northern section has an enclosed and roofed office space in the northwest corner, about 15 feet deep and extending approximately 25 feet towards the center of the building (Photograph 19). The northern door on the west side opens into this office, which is divided into a larger and smaller room. Double doors open from the large room into the main building area. The exterior is covered in corrugated metal, and the inside is paneled in fiberboard. There are no windows in this office. On the long outside wall of the office is a panel labeled "RESERVOIR LEVELS," with four covered gages (Photograph 20).

The next space, moving south, has a small room in the northwest corner also (Photograph 21). This room is covered with clapboards instead of corrugated metal. The room has a door and three windows. The inside walls are fiberboard and there is a bench running along two walls.

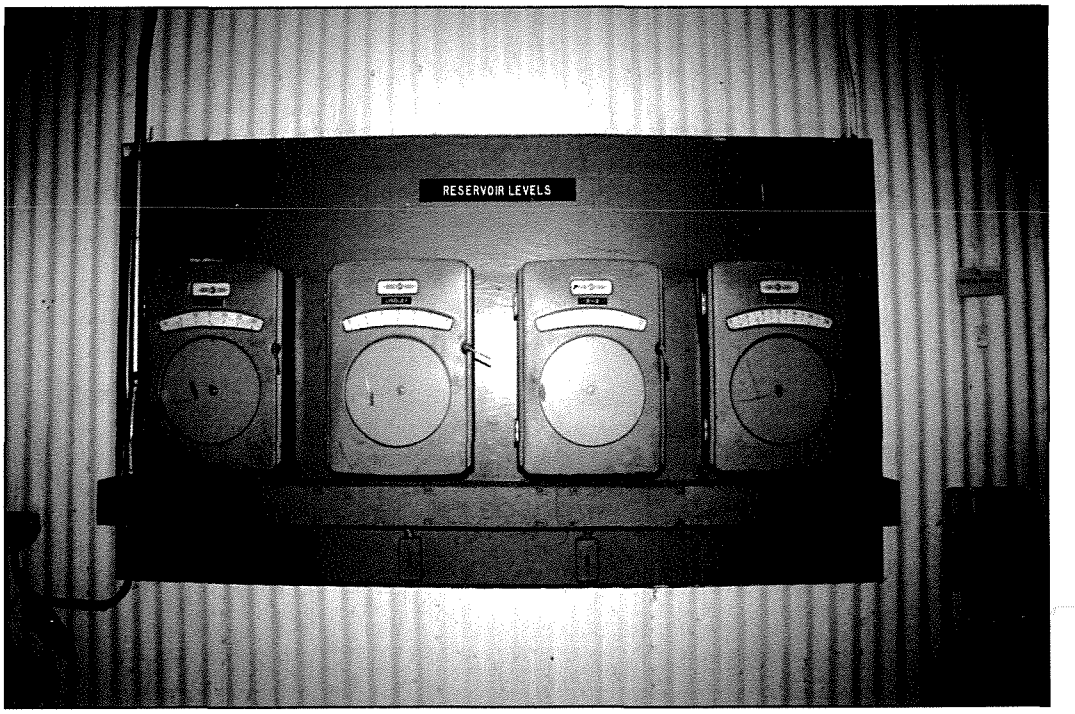
The third space, moving south, has five open stalls built against the wood and metal divider separating the third and fourth spaces. The stalls are approximately eight feet wide and eight feet deep, and extend out from the west wall (Photograph 22). There is an enclosed room built against the east wall, extending out about 10 feet, covered with corrugated metal. This room has one door, and is about eight feet deep (Photograph 23).

The first three rooms are all currently filled with office furniture, storage cabinets, cages, and other items.

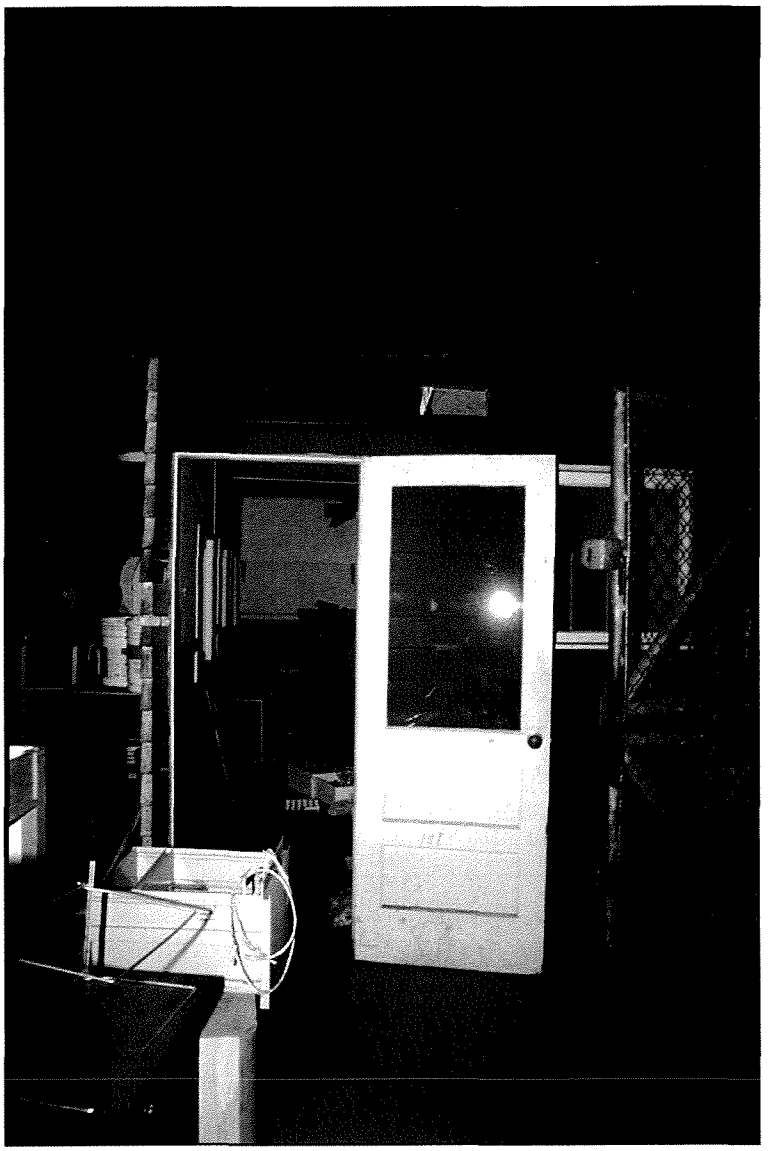
The southern space is completely empty. It has no rooms or stalls, just a metal and wood rack on the north wall (see Photograph 18). There is what appears to be a vehicle hoist in the floor about 6 feet in from the southernmost roll-up door. There was no visible control apparatus for the hoist. This may have been removed or it may just be the top portion of a hoist lying on the ground.

One associated feature with two elements was identified during the survey of the project property. The feature consists of a low concrete structure, most probably a loading dock, and a large diameter concrete pipe with a concrete cap. The loading dock structure is approximately 30 inches high, 23 feet long, and 12 feet wide (Photographs 24 and 25). It is divided into two sections; the south section is a cement-topped platform and the north section is a floor and sidewalls pointing north. There is a plywood ramp on one side of

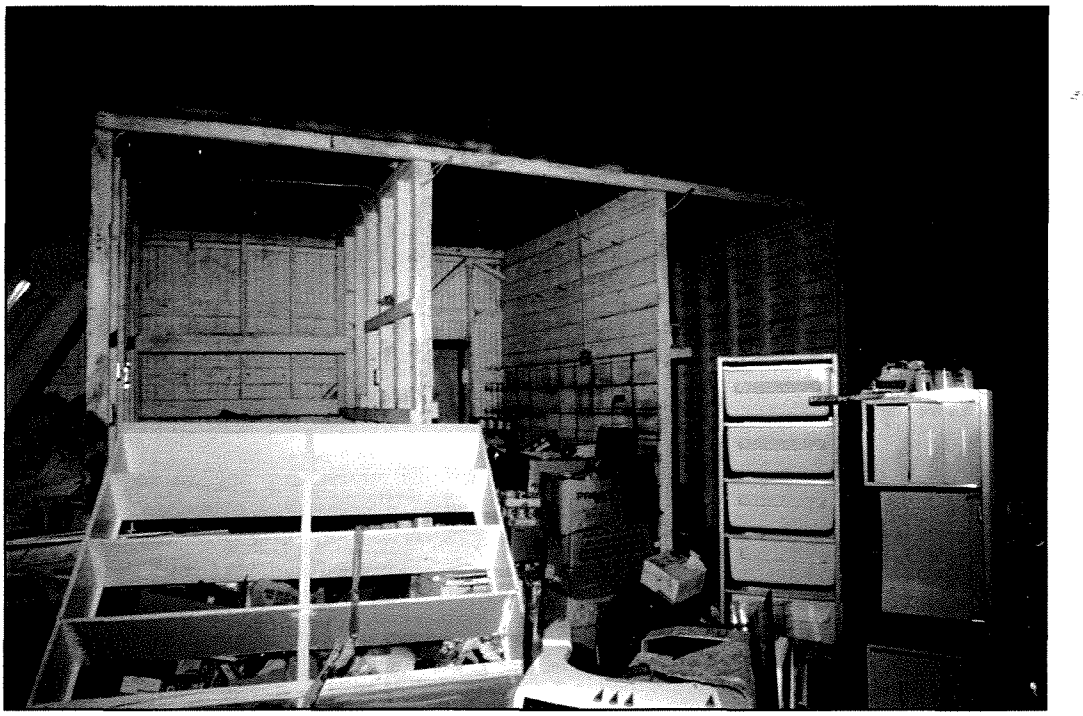
PHOTOGRAPH 19
Northern Interior Office, Note Corrugated Sheet Metal Sides



PHOTOGRAPH 20
"Reservoir Levels" Panel on Side of Northern Office



PHOTOGRAPH 21
Middle Interior Room, Note Clap Board Siding



PHOTOGRAPH 22
Open Wooden Stalls in Third Space

PHOTOGRAPH 23
Small Enclosed Room on East Side of Wall
Dividing Third and Fourth (Southern) Spaces

PHOTOGRAPH 24
Loading Dock in Yard Looking West

PHOTOGRAPH 25
Open End of Loading Dock with Ramp on Right Side

the north section leading up to the platform of the south section. The dock was constructed by pouring the outside walls, and then filling up the southern half with dirt and topping with cement. There are lag bolts protruding from the edge of the southern half of the platform, which may indicate a structure, or at least wooden walls, once stood on the platform.

The pipe is located about four feet to the west of the loading dock, and protrudes out of the ground about 30 inches. The concrete pipe is approximately 30 inches in diameter and has a slightly convex cement lid fixed to it (Photograph 26). A one-inch iron pipe sticks out of the top of the cap, and a three-inch iron pipe comes out of the concrete pipe about a foot above the ground and turns down to the ground.

A. Building Discussion

Although the EMWD building has been identified as a Quonset hut in the past, it does not show specific Quonset hut characteristics.

A significant difference in construction between the EMWD building and Quonset huts is that Quonset huts are described as having metal frameworks and the project building has a wooden framework. Quonset huts were designed from the start with a pressed wood interior lining. The EMWD building has no interior lining, and there is no indication that one originally existed and was later removed.

It is noted in the November 1941 article that the wooden truss framework was constructed on-site. It mentions nothing about the trusses being prefabricated or as coming pre-cut in a kit. Quonset frames came ready to bolt together. In fact, the article makes no reference to the building being pre-fabricated or being purchased ready to build.

After a short time the Quonset hut design was changed to incorporate a 4-foot vertical sidewall, to increase usable interior space (U.S. Navy 2003). The curve of the walls on the EMWD building extends all the way to the ground. This could indicate an early style hut, but the size of the EMWD building does not fall within the range of Quonset hut sizes, especially early Quonset huts. The EMWD building is much larger than the sizes of Quonset huts being produced in 1941 (U.S. Navy 2003). The George A. Fuller Co. produced Quonsets in 16 feet by 36 feet size, and Stran-Steel produced huts in 20 feet by 48 feet and 40 feet by 100 feet (Burk, pers. com. 2003). All of these are much smaller than the project building. Quonset huts could be connected together to form longer buildings, but the width of the arch roof would remain 16 feet, 20 feet, or 40 feet.

There is also a problem reconciling the construction of the EMWD building to the dates of the introduction of Quonset huts. The initial request for a design for a prefabricated

PHOTOGRAPH 26

Concrete Pipe with Concrete Cap Located Next to Loading Dock

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building by the Navy was not given out until March 1941 (Burk, pers. com. 2003). The George A. Fuller Company delivered the first Quonset huts to the Navy by the end of April 1941, with all production going to fill the Navy contract. Demand was so high, in fact, that a second manufacturer, Stran-Steel in Detroit, was contracted to help fill the orders (Burk, pers. com. 2003). There would be no way for a Quonset hut to become military surplus at a time when the Navy was still having initial orders filled and letting additional contracts to new contractors to help fill these existing orders.

It has been suggested that the EMWD building was used for a hanger during World War II in conjunction with part of Washington Avenue being used as an airstrip. The archives at the San Diego Aerospace Museum were checked for any references to temporary airfields in Escondido during the war. A series of letters from and to the Commander, 11th Naval District, in 1941 discuss the development of proposed additional airfields in San Diego County (U.S. Navy 1941a, 1941b, 1941c). There is no mention of an airfield in or even near Escondido, proposed or existing, to be used by the military.

A 1944 Sectional Aeronautical Chart of San Diego compilation by the U.S. Coast and Geodetic Survey shows no airfields in Escondido (U.S. Coast and Geodetic Survey 1944). A compilation of information on San Diego County airfields makes no mention of an airfield at or near Washington Street during World War II (Leiser 1995). There is a listing of an airfield along Lincoln Avenue, operational between 1922 and 1928. Lincoln Avenue is approximately 0.7 mile north of Washington Avenue. The idea of an airfield at Washington Avenue may be a mixing of recollection of the 1920's airfield on Lincoln Avenue and the EMWD building's resemblance to a hanger (noted above).

In addition to the lack of written evidence of an airfield in association with the EMWD building, the physical surroundings of the building during World War II make the possibility of an airstrip most unlikely. Washington Avenue is shown as a class 1 road on the 1942 War Department map (U.S. Army Corps of Engineers 1942), which would mean that it was surfaced and, as such, would carry a fair amount of traffic. In addition, there are four houses on the north side of Washington Avenue, opposite and to the east of the EMWD building. The relative narrowness of Washington Avenue, combined with the adjacent houses, would make landings and take-offs very hazardous. Also, the street would have to be blocked off anytime landings were to take place, blocking traffic. Emergency landings would be a nightmare to manage, with the necessity of quickly clearing off cars using the road in time for a plane in trouble to land. These potential obstructions would be even more critical if an inexperienced pilot or a pilot in trouble was trying to land on Washington Avenue. There is no sense in using an existing surface street with motor traffic as an airstrip when a vacant field could be found anywhere on the fringes of Escondido to construct a landing strip.

1. Significance Evaluation under CEQA Guidelines

- Is the EMWD building associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage?

The EMWD building is not associated with an event that has had a significant impact on California's history or cultural heritage. Since the building was built by EMWD, it is associated with Escondido's development of a municipal water system. This gives the building a very tenuous link with Escondido's development as a major citrus and orchard crop producing area. The building, however, is not part of the actual collection or transportation system that brought water to Escondido from the San Luis Rey River. It is not part of the canal system or dam, but a shop/warehouse with no architectural or structural elements to tie it specifically to the municipal water system.

The building could be considered significant to the history of the growth of Escondido itself. The Escondido Mutual Water District did play an important part in the development of Escondido as a citrus and orchard crops growing center in the first half of the twentieth century. However, there are no architectural or design elements that relate specifically to the water district. It was not a main flow regulation center, with accompanying piping and regulation/diversion valves. It has no names or dedications as part of the building structure or decoration to link it directly to the EMWD.

- Is the EMWD building associated with the lives of persons important in California's past?

No people important to California's past are associated with the EMWD building. The people involved in the development of the EMWD and other water-related utilities are significant in the development of Escondido, but do not affect development outside of San Diego County. None of the people involved in the EMWD are specifically connected to the building by having designed, lived in, or worked in the shop/warehouse.

- Does the EMWD building embody the distinctive characteristics of a type, period, region, or method of construction? Does it represent the work of an important creative individual, or does it have high artistic values?

The EMWD building does employ some of the distinctive characteristics of a type, the Quonset hut. It does not, however, have the correct characteristics to be a Quonset hut. Size and framework composition do not match the Quonset hut specifications. Also, the construction date of the EMWD building makes it unlikely it is a surplus military Quonset hut. Since this same type of metal building has been used for at least the second half of the twentieth century, it cannot be considered to have distinctive period characteristics.

There is nothing unique about the building methods or materials to make the building unique to a period, method, or region. All construction materials and methods are common to many places. There is no specific time period represented in the construction methods or in the materials used. Since there is no indication that the building was a prefabricated building, it cannot be associated with a specific manufacturer or considered an example of that manufacturers' design.

The building is not the work of an important creative individual. In fact, there is no record of who designed the building, if there even was an initial design. No building plans were on file at the City of Escondido, and the newspaper articles do not mention a person or architectural firm that designed the building. There are no high artistic values represented by the construction methods or materials used in the EMWD building.

The single positive characteristic of the EMWD building is that it appears to not have been significantly altered from its original form. The original size of the building has not been altered. The original five large roll-up doors still remain, although three may have been replaced and their frames altered. No additional large doors have been installed. There is no evidence of original doors or windows that have been covered or filled in. The framework seems to be original material, with no obvious additions or alterations. The interior divisions appear to be in the same places, although the materials used in the separating walls may have changed.

- Has the EMWD building yielded, or will it be likely to yield, information important to prehistory or history?

There is little likelihood that the EMWD building itself will yield information important to history or prehistory. The only information available from the building is the actual construction techniques and materials used in the building itself. The shell-type construction of the building makes construction techniques and building materials easy to see since there are no interior hollow walls or interior covering of the framework. Consequently, there should be no significant covered building techniques or materials yet to find. And since the building does not qualify under the previous criteria, no new information should be present to change that determination.

The EMWD shop/warehouse does not meet the criteria for listing on the California Register of Historical Places and is therefore not historically significant under CEQA.

2. Evaluation Under City of Escondido Historic Landmark Criteria

For a structure to qualify for the Escondido local register or historical landmark status, it must qualify under two or more of the seven criteria listed below.

a. Resources that are strongly identified with a person or persons who significantly contributed to the culture, history, pre-history, or development of the city of Escondido, region, state, or nation.

Several people associated with the development of the irrigation and water system of Escondido are contributors to the development of Escondido as a whole. Unfortunately, none of these people can be directly associated with the EMWD building. None of the people involved in the EMWD are specifically connected to the building by having designed, lived in, or worked in the shop/warehouse. The building is connected with the development of the water system in Escondido by being part of the physical structure of the transportation and maintenance system, not by being associated with a particular person's efforts.

b. Building or buildings that embody distinguishing characteristics of architectural type, specimen, or are representative of a recognized architect's work and are not substantially altered.

The building is not representative of a particular architectural style or type. Although it does superficially resemble a Quonset hut, it does not exhibit architectural and construction details specific to Quonset huts. Size and framework composition do not match the Quonset hut specifications. The EMWD building has a wooden truss framework, while Quonset huts had a metal framework. The EMWD building is much larger than the sizes of Quonset huts being produced in 1941. The George A. Fuller Co. produced Quonsets in 16 feet by 36 feet size, and Stran-Steel produced huts in 20 feet by 48 feet and 40 feet by 100 feet. All of these are much smaller than the project building, which measures 60 feet by 150 feet. Although Quonset huts could be connected together to form longer buildings, the width would remain 16 feet, 20 feet, or 40 feet. Also, the construction date of the EMWD building makes it unlikely that it is a surplus military Quonset hut.

There is no record of a recognized architect associated with the design of the EMWD building. There is no record of who designed the building, if there even was an initial design. No building plans were on file at the City of Escondido, and the newspaper articles do not mention a person or architectural firm responsible for the design of the building.

c. Historical resources that are connected with a business or use that was once common but is now rare.

The uses that the EMWD building were designed and constructed for are not now rare. The Escondido Irrigation District continues to perform the same basic jobs that the Escondido Mutual Water District did when the building was constructed. Also, there are

no architectural features specific to particular irrigation-related functions incorporated into the EMWD building that would make it an unusual or rare example.

d. Historical resources that are the site of significant historical events.

No historically significant events took place in or around the EMWD building.

e. Historical resources that are 50 years old or have achieved historical significance within the past 50 years.

The EMWD building is over 50 years old (63 years old to be exact). It does meet this criterion for historical significance.

f. Historical resources that are an important key focal point in the visual quality or character of a neighborhood, street, or district.

The EMWD building is most certainly a focal point in the visual character of its surrounding neighborhood. The neighborhood is mixed commercial, multi-family residential, and single-family residential. The buildings and homes are of mixed architectural style and age, the EMWD building being by far the largest building. A large plain, corrugated building would not usually be considered to be a positive visual quality focal point.

The surrounding neighborhood has no real historic character, with several different periods and architectural styles being represented. The commercial buildings date from the later 1900s, while the residences across the street from the EMWD building are from the early 1900s. The EMWD building, with its lack of specific architectural or period style does not add to the character of the neighborhood.

g. Historical building that is one of the few remaining examples in the city possessing distinguishing characteristics of an architectural type.

Although the EMWD building is not an example of a generally recognized architectural style, such as Mission Revival, Arts and Crafts, or Art Deco, it is a unique representative of a large, half-round structure in Escondido. Since the building was constructed from plans drawn up by EMWD, it exhibits features specifically included to address their needs. This contributes to its unique characteristics, as no other similarly constructed buildings would have the particular combination of styles and locations of doors, windows, and interior fittings the EMWD building has. The EMWD building was even considered unique when it was constructed, since at least one newspaper article was written about its' construction techniques, appearance, and proposed usage.

The EMWD building seems to be little altered from the original design. The three northern roll-up doors may be replacements, but they are in the original locations. Some interior details may have changed, and the chain-link interior divisions may be replacements for wooden walls, but the larger office and small rooms appear to be original and there are no signs of other major alterations.

It is also notable that the EMWD building is not a Quonset hut purchased as military surplus. As a Quonset hut, it could be considered a representative of a particular architectural style, but one that is still represented by existing Quonset huts and well documented in historic literature and photographs.

Recommendations

The Escondido Mutual Water District shop/warehouse does not meet the criteria under CEQA guidelines for inclusion in the California Register of Historical Resources. The EMWD building does meet two of the seven City of Escondido historic resources guidelines, which makes it eligible for inclusion on the local register of historic places or to be given historic landmark status.

There are three options available for the EMWD building; use of the existing EMWD building in the school districts plans for the property, moving the building to a new location, or additional recordation of the building before its destruction.

The first alternative option would be to modify the school district's plan to include the EMWD building. An architectural design firm that has experience in utilization of existing structures can be retained to explore the possibilities of this option. The goal of this option is to retain as much of the historic fabric of the building as possible, while making it a usable space.

The next option would be to move the EMWD building to another location. This option would at least save the basic structure of the building. Again, it is desirable to modify the building as little as possible. The wooden truss system and exterior layout at least should be saved with this option.

The third option is the detailed recording of the building at Historic American Building Survey (HABS) Documentation Level I and its demolition. HABS Level I documentation includes a full set of drawings depicting existing or historic conditions, large format negative photographs of exterior and interior views, and a written history and description.

HABS Level I drawings include a site plan, elevations, cross sections, and details of construction techniques and architectural elements. These should be produced from

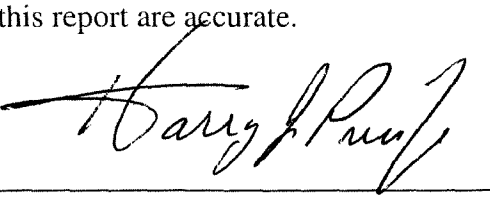
accurate, recorded measurements taken in the field. Original conditions can also be depicted, when they can be sufficiently documented by adequate historical source material.

As part of HABS documentation, a series of large format photographs, in black and white, would be taken of the exterior and interior of the building. These should include elevations of each side of the building, and photographs of architectural and construction details. Interior shots should include the office interiors and exteriors, structural elements of construction, and architectural details. All interior photographs should be done after the building has been emptied of its current furniture and other contents.

The written history should be based on primary sources as much as possible. In addition to the actual history of the building, the document should include a section identifying the sources searched and the limitations of the project.

Certification and Project Staff

This report was prepared in compliance with the California Environmental Quality Act and with policies and procedures of the City of Escondido. To the best of our knowledge, the statements and information contained in this report are accurate.



Harry J. Price
Project Archaeologist

The following individuals participated in the field tasks or preparation of this report. Resumes for key personnel are included as Attachment 2.

Harry J. Price	Project Archaeologist; Report Author
Vince Martinez	Graphic Designer
Stacey Higgins	Production Specialist

References Cited

Burk, Lucy
2003 Personal communication with Harry J. Price, RECON. September.

Leiser, Edward L.
1995 San Diego Airfields, Past and Present 1883-1995. MS. on file at San Diego Aerospace Museum

San Diego Union
1971 Issue of the *San Diego Union,* May 25. Original on file at the Pioneer Room, Escondido Public Library.

Times-Advocate
1941a "Building Permit List Issued." February 5. Original on file at the Pioneer Room, Escondido Public Library.

1941b "Water Company Warehouse Looms." November 6. Original on file at the Pioneer Room, Escondido Public Library.

1983 Issue of the *Times-Advocate,* May 1. Original on file at the Pioneer Room, Escondido Public Library

1988 Issue of the *Times-Advocate,* October 21. Original on file at the Pioneer Room, Escondido Public Library.

U.S. Coast and Geodetic Survey
1944 Sectional Aeronautical Chart, San Diego quadrangle. March 2.

U.S. Geological Survey
1901 15-Minute Edition of the Escondido Quadrangle, San Diego County. July 15.

U.S. Navy
1941a Letter to Commanding Officer, Miramar Naval Air Station, San Diego, California, Discussing Development of New and Existing Airfields in San Diego County for Use by the Navy. January 27. On file at the San Diego Aerospace Museum, San Diego.

1941b Letter to Commandant, 11th Naval District, Discussing Development of New and Existing Airfields in San Diego County for Use by the Navy. February 20. On file at the San Diego Aerospace Museum, San Diego.

1941c Letter to Commandant, 11th Naval District, Discussing Development of New and Existing Airfields in San Diego County for Use by the Navy. March 24. On file at the San Diego Aerospace Museum, San Diego.

2003 Quonset Hut. Building the Navy's Bases in World War II: History of the Bureau of Yards and Docks and the Civil Engineer Corps, 1940-1946. Vol.1. Washington: Government Printing Office, 1947.

U.S. Army Corps of Engineers

1942 15-Minute Escondido Quadrangle, Grid Zone "G" San Diego County. War Department.

ATTACHMENTS

ATTACHMENT 1

City of Escondido Historic Resources Inventory Form

City of Escondido

HISTORIC RESOURCES INVENTORY

IDENTIFICATION AND LOCATION

1. Historic Name

Ser.No.
Natl. Reg. Status
Local Designation
Local Ranking Individ.Signif.

2. Common or Current Name
3. Number & Street 1201 East Washington Avenue

Cross-Corridor

City: Escondido Vicinity Only Zip 92025 County: San Diego

4. UTM zone A B C D
5. Quad map No. Parcel No. 230-140-59 Other

DESCRIPTION

6. Property Category structure If district,number of documented resources
7. Briefly describe the present physical appearance of the property,including condition, boundaries, related features, surroundings, and (if appropriate) architectural style.

The large quonset hut at 1201 East Washington is massive in scale and seems to fill most of the corner lot with a very narrow setback. It is clad with corrugated metal panels with entries and high vents at the ends. The property is surrounded by a chain link fence.
The architectural style is: Quonset Hut
The condition is: good
The related features are: chain link fence
The surroundings are: residential; commercial
The boundaries are:

8. Planning Agency
City of Escondido

9. Owner and Address
City of Escondido

10. Type of Ownership public

11. Present Use commercial

12. Zoning

13. Threats none

HISTORICAL INFORMATION

14. **Construction Date(s)** 1940A **Original location** unknown **Date moved**

15. **Alterations & date** none apparent

16. **Architect** unknown **Builder** unknown

17. **Historic attributes (with number from list)** 08--industrial building

SIGNIFICANCE AND EVALUATION

18. **Context for Evaluation: Theme** commercial architecture **Area** Escondido
Period 1800s-1945 **Property Type** **Context formally developed?** no

19. **Briefly discuss the property's importance within the context. Use historical and architectural analysis as appropriate. Compare with similar properties.**

1201 East Washington Avenue. The Quonset hut is the most famous of the mass-produced, mass-distributed, prefabricated buildings. The familiar steel tunnel structure was developed during World War II as quick-built housing for Allied soldiers and quickly found its way into the postwar housing market.

The Quonset consists of structural steel I-shaped ribs to which corrugated metal skins are fastened so as to assemble a huge metal shell. There are no structural obstructions, like columns, inside which makes for planning flexibility. The Quonset shell is available nationally, through local dealers who also assemble the parts after which the owner completes the inside of the shell. Since the Quonset is mass-produced it is one of the least expensive structures available in America. It takes about four person-days to assemble a 1000-square-foot Quonset.

Like the tipi, the longhouse, and the geodesic dome, the roof and walls of the Quonset hut are the same material. This is advantageous as far as leaking and cost are concerned, but it does create an unusable space where the roof/walls meet the floor. The basic Quonset hut, like a tunnel, will allow light to enter only at its ends, but creative engineering work by architectural firms, such as Campbell and Wong of California, has inspired many ways to gain natural light through the sides of the Quonset.

It is now owned by the City of Escondido and now houses poles and equipment for clearing mineral desposits from concrete water pipes.

1201 East Washington is a good example of Quonset hut architecture.

20. **Sources**
American Shelter

21. **Applicable National Register criteria**

22. **Other Recognition:**
State Landmark Number N/A

23. **Evaluator**
Date of Evaluation 1990

24. **Survey type** project related

25. **Survey name** Escondido survey

26. **Year Form Prepared** 1991
By(Name) Judy Wright/Mary Stoddard


RUSTIC RD
ASH ST
ROOSEVELT ST
HOOVER ST
JEFFERSON AVE
WASHINGTON
BEECHWOOD DRIVE
ELMWOOD
DRIVE
1223 East Washington Avenue
N

ATTACHMENT 2

Resume of Key Personnel

HARRY PRICE, JR.

Archaeologist

Education Bachelor of Arts, Anthropology, San Diego State University, 1976

Certifications Archaeological Field Training at Bancroft Ranch House and San Diego Presidio
Qualified Archaeological Monitor, City of San Diego

Experience **21 years**

RECON
1986 - present, Archaeologist

An experienced field archaeologist in the areas of excavation, site mapping, soil profiling, column sampling, surface collection, and field reconnaissance, serves as field crew supervisor, conducts field surveys, provides illustration of artifacts, prepares maps of archaeological sites.

Archaeological duties include organizing personnel and equipment for work in the field, daily assignment of duties to field crew, daily field notes on progress and results, site sampling strategy (i.e., shovel tests, 1x1-meter units, trenching), placement of sample units, and site mapping.

California Department of Transportation
1980-1984, Archaeological Project Leader

Selected Projects

Field Supervisor
Cultural Resource Survey for Areas VII and VIII of The El Sobrante Landfill Expansion, Riverside County, CA
Rock Wall Mitigation Requirements for La Costa Village Development, Carlsbad, CA
Cultural Resource Surveys of Portions of Eight County Parks, San Diego, CA
Archaeological Field Survey of Saint William of York Property, San Diego, CA
Cultural Resource Survey for the Hieatt-Jett Property, Carlsbad, CA
Cultural Resource Survey for the El Corazon Property, Oceanside, CA
Testing of CA-RIV-6965, El Sobrante Landfill Expansion, Riverside County, CA
Testing of CA-SDI-16661 on the Holly Springs Property, Carlsbad, CA

Field Surveying
Cultural Resources Survey of the Proposed Jefferson Business Park Parcels, Murrieta, CA
Archaeological Survey of a Portion of the Rifle Range, Marine Corps Logistics Base (MCLB) Barstow, CA
Archaeological Survey of the Upper Area of Wall Rock Canyon, San Clemente Island, CA
Cultural Resource Survey for a 230kV Transmission Corridor from Imperial Valley Substation to the International Border with Mexico
Phase I Survey for a Portion of the Parachute Drop Zone, Range 2510, Naval Air Facility El Centro, Imperial County, CA

Cultural Resource Inventory and Survey of a Portion of Target Area 103, Naval Air Facility, El Centro, Imperial County, CA
Cultural Resource Inventory and Survey of a Portion of Target Area 101, Range 2510, Naval Air Facility, El Centro, Imperial County, CA
Phase I Survey of Nine Cantonment Areas, Marine Corps Base (MCB) Camp Pendleton, Oceanside, CA
Cultural Resource Survey of a Portion of Cleveland National Forest in the Vicinity of Loveland Reservoir, San Diego, CA
Cultural Resource Survey for Volcan Mountain, San Diego County, CA
Cultural Resource Survey for the Borrego Airport, Imperial County, CA
Cultural Resource Survey for a Portion of the Yuma Proving Grounds, AZ
Cultural Resource Survey for a Portion of MCB Camp Pendleton, Oceanside, CA
Cultural Resource Survey for Los Peñasquitos Canyon Preserve, San Diego, CA
Cultural Resource Survey of a Portion of the Devers to Palo Verde 500kV Transmission Line, Riverside County, CA
Cultural Resource Survey of the Proposed Lake Murray, Cowles Mountain, and Fortuna Mountain Regional Park, San Diego, CA
Cultural Resource Survey of a Portion of the Yuma Proving Grounds, Yuma, AZ
Data Recovery of Several Prehistoric Sites on the Devers to Palo Verde Transmission Line, AZ
Survey of a Portion of the Devers to Palo Verde Transmission Line, Riverside County, CA

Dig Foreman

Data Recovery at Ten Archaeological Sites at Westwood Valley, San Diego, CA
Testing of Several Sites at Merigan Ranch, San Diego, CA
Data Recovery at Oak Creek, San Diego, CA
Data Recovery at Santee Greens Development, El Cajon, CA

Excavation

National Register Eligibility Evaluation of CA-SDI-4426, MCB Camp Pendleton, CA
Archaeological Evaluation of Two Sites, Central San Clemente Island, CA
Focused Data Recovery for a Portion of CA-SDI-687, San Diego, CA
Evaluation and Eligibility Determination for Six Small Archaeological Sites, MCB Camp Pendleton, CA
Data Recovery at CA-SDI-14,649 in the Case Springs Area of MCB Camp Pendleton, CA
Dry Lakes Data Recovery at 4-IMP-5620 for the Bureau of Land Management, Imperial County, CA
Site Excavation of a Portion of the Devers to Palo Verde 500kV Transmission Line, Riverside County, CA
Mitigation of Site SDI-4687 on Carrillo Ranch, San Diego, CA
Black Mountain Ranch Data Recovery, San Diego, CA
Woodward Trust Property Survey and Testing, City of Del Mar, CA
Data Recovery at South Pointe Farms, San Diego, CA
Savage/Spreckles Tire Factory and Aztec Brewing Company Archaeological Studies and Construction Monitoring, San Diego, CA
Testing at 9 Sites in The Villages and The Ranch at Stallions Crossing, San Diego, CA

Data Recovery for Aviara, Carlsbad, CA
Data Recovery at Ten Archaeological Sites at Westwood Valley, San Diego, CA
Excavation of Five Sites Along SR-86, Imperial County, CA
Excavations at Los Peñasquitos (Johnson Taylor) Ranch House, San Diego, CA
Archaeological Testing of Six Sites at the Proposed North City West, Seventh Development Unit, City of San Diego, CA
Data Recovery at Marlotto Adobe, San Diego, CA
Test Excavation at CA-SDI-674 in Bonsall, 11-SD-76, San Diego, CA
Testing of Archaeological Sites at Travertine Material Site, San Diego, CA
Test Excavations of Site on a Portion of State Route 86, Imperial and Riverside Counties, CA
Testing of Proposed Material Sites for State Route 86, Imperial and Riverside Counties, CA
Testing of Sites for Proposed Highway 52 in Clairemont Mesa, San Diego, CA
Test Excavations at a Site on Highway 78, Oceanside, CA
Testing of Sites for a Portion of State Route 52/Interstate 15, San Diego, CA
Test Excavations of Site at Highway 94 and Jamacha Junction, San Diego, CA
Data Recovery at Shadow Ridge, San Diego, CA
Data Recovery at Circle R Resort, San Diego, CA
Excavation at Old Town, San Diego, CA
Extended Initial Studies at Mira Costa Estates, San Diego, CA
Test Excavations at Rancho Guajome, Vista, CA
Data Recovery at the Encino Roadhouse, San Fernando Valley, CA
Data Recovery at Santa Fe Knolls, San Diego, CA
Data Recovery at SDM-W-100, -147A, and-147B on the Villa la Cumbre Property, Carlsbad, CA
Data Recovery of SDM-W-40, -1588, -1585, -1587, -1588, and –1667 on San Dieguito Estates, San Diego, CA
Data Recovery of Nine Archaeological Sites at La Costa North Lake and Golf Course Complex, Carlsbad, CA
Mitigation of CAL:5:15 at Sweetwater Village Rancho, San Diego, CA
Data Recovery at Campus Point, San Diego, CA

Monitoring

Construction Monitoring of MILCON P-071 Iron/Manganese Water Treatment Plant, MCB Camp Pendleton, CA
Grading of Camino del Sur and Lusardi Creek Bridge, Black Mountain Ranch, San Diego, CA
Grading of AAA Office Site in Mission Valley, San Diego, CA
Sewer Pump Station 45 Pipe Installation, San Diego, CA
House Destruction and Grading, Juniper and 15th Street, Escondido, CA
M2i Development Construction Monitoring, San Diego, CA
Construction Monitoring at MILCON P-634, MCB Camp Pendleton, CA
Salk Institute Grading, San Diego, CA
North Mission Valley Interceptor Sewer Monitoring, San Diego, CA
San Diego Avenue Monitoring, San Diego, CA

Other Work

Historic Building Survey of the Escondido Mutual Water District Shop/Warehouse, Escondido, CA
Historic American Building Survey for the Descanso Ranger Station, Engine

Garage (Building No. 2304), National Park Service Pacific West Region Office, San Diego, CA

National Register Evaluation/Documentation of Schwanbeck's Store, Crossroads, for the Bureau of Land Management Lake Havasu Field Office, CA

Historic American Engineering Record Documentation of Six Base End Stations in the White's Point Reservation, Los Angeles County, CA; National Park Service and Department of the Air Force

Evaluation and Documentation of the Alta Loma Heights Citrus Association Packing House, Rancho Cucamonga, CA

Publications

"From Adams to Wedgewood: The Ceramics from Rancho Guajome," pp. 91-142. In *Rancho Guajome: Window on the Past,* edited by Gary Fink, San Diego County Department of Transportation, March 1980.

"Euro-American Ceramics Analysis." In *Broken Fragments of Past Lifeways, Vol. II,* edited by Susan M. Hector, Ph.D., August 1986.

Archaeological Survey Report for a Proposed Right-of-Way Easement, Caltrans, August 1980.

Second Addendum Archaeological Survey Report for Route 8/15 Interchange 11-SD-15, R6.0-R7.0, 11-SD-8, 5.1/6.3; Caltrans, August 1980.

Archaeology Survey Report, Phase I, 11-SD-805, P.M. 24.4; Caltrans, November 1980.

Phase I Archaeological Survey Report for Lane Additions and Sound Barrier on Interstate 8, 11-SD-8, P.M. 8.5-10.4; Caltrans, January 1981.

Archaeological Survey Report for a Portion of Proposed Route 52, Interstate 15, and the Route 52/I-15 Interchange, P.M. 6.8/8.8 (52), P.M. 9.7/12.0 (15); Caltrans, 1981.

Archaeological Survey Report for Category 4B and 5 Projects, 11-SD-94, P.M. 19.4-19.9; Caltrans, April 1981.

Addendum Archaeological Survey Report for a Proposed Access Road on Interstate 15 in Rainbow Valley, 11-SD-15, P.M. 51.2-53.6; Caltrans, January 1982.

Archaeological Survey Report for Category 4B and 5 Projects, 11-SD-78, P.M. 19.2-20.6; Caltrans, January 1982.

Historic Property Survey for Interchange of 11-SD-8 and 11-SD-15, 11-SD-15, P.M. R6.0-R7.0, 11-SD-8, P.M. 5.1/6.3; Caltrans, August 1980.

Historic Property Survey for Auxiliary Lanes and Sound Barrier, 11-SD-8, P.M. 8.510.4; Caltrans, 1981.