

DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT FOR THE STANFORD OUTPATIENT CENTER PROJECT

STATE CLEARINGHOUSE #2005122081

Prepared by

THE CITY OF REDWOOD CITY

with the Assistance of

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CONTENTS

	<u>Page Number</u>
1. INTRODUCTION	1-1
1.1 Purpose of this SEIR	1-1
1.2 Determination to Prepare an SEIR	1-2
1.3 SEIR Relationship to Previous CEQA Documentation	1-2
1.4 SEIR Scope	1-2
1.5 SEIR Organization and Content	1-3
1.6 "Significant Impacts" and Other Key SEIR Terminology	1-3
1.7 Intended Uses of the SEIR	1-5
2. SUMMARY	2-1
2.1 Summary of Proposed Project Changes	2-1
2.2 Summary of Supplemental Impact and Mitigation Findings	2-2
2.3 Summary of Alternatives	2-2
2.4 Mitigation Implementation	2-3
3. DESCRIPTION OF PROJECT CHANGES	3-1
3.1 Setting	3-1
3.2 Applicant's Project Objectives	3-6
3.3 Previous CEQA Documentation	3-9
3.4 Proposed Project Changes--Stanford Outpatient Center Project	3-9
3.5 Anticipated Project Construction Schedule	3-16
3.6 Required Approvals	3-16
4. AESTHETICS (VISUAL FACTORS)	4-1
4.1 Setting	4-1
4.2 Pertinent Plans and Policies	4-2
4.3 Previous EIR Findings Pertinent to the Proposed Project Changes	4-4
4.4 Supplemental Impact and Mitigation Findings	4-5
5. AIR QUALITY	5-1
5.1 Setting	5-1
5.2 Pertinent Plans and Policies	5-3
5.3 Previous EIR Findings Pertinent to the Proposed Project Changes	5-5
5.4 Supplemental Impact and Mitigation Findings	5-6
6. CULTURAL RESOURCES	6-1
6.1 Setting	6-1
6.2 Pertinent Plans and Policies	6-2
6.3 Supplemental Impact and Mitigation Findings	6-2

7.	HAZARDS AND HAZARDOUS MATERIALS	7-1
7.1	Setting	7-1
7.2	Pertinent Plans and Policies.....	7-4
7.3	Previous EIR Findings Pertinent to the Proposed Project Changes	7-8
7.4	Supplemental Impact and Mitigation Findings.....	7-8
8.	HYDROLOGY AND WATER QUALITY	8-1
8.1	Setting	8-1
8.2	Pertinent Plans and Policies.....	8-5
8.3	Supplemental Impact and Mitigation Findings.....	8-5
9.	LAND USE AND PLANNING	9-1
9.1	Setting	9-1
9.2	Pertinent Plans and Policies.....	9-4
9.3	Supplemental Impact and Mitigation Findings.....	9-8
10.	HOUSING	10-1
11.	FIRE/EMERGENCY SERVICES AND CHILD CARE	11-1
11.1	Fire/Emergency Services	11-1
11.2	Child Care	11-5
12.	TRANSPORTATION, CIRCULATION, AND PARKING	12-1
12.1	Setting	12-1
12.2	Pertinent Plans and Policies.....	12-19
12.3	Supplemental Impact and Mitigation Findings.....	12-23
13.	UTILITIES	13-1
13.1	Water Service.....	13-1
13.2	Sewer Service	13-4
13.3	Solid Waste Service	13-10
14.	PROJECT CONSISTENCY WITH LOCAL AND REGIONAL PLANS	14-1
14.1	City of Redwood City Strategic General Plan and Zoning Ordinance	14-1
14.2	Pertinent Regional Plans.....	14-2
14.3	Federal, State, and Local Hazardous Materials Regulations Specifically Applicable to the Proposed Project	14-4
15.	CEQA-REQUIRED ASSESSMENT CONCLUSIONS	15-1
15.1	Growth-Inducing Effects	15-1
15.2	Significant Unavoidable Impacts	15-2
15.3	Irreversible Environmental Changes	15-2
15.4	Cumulative Impacts.....	15-3
15.5	Effects Found Not to be Significant	15-3
16.	MITIGATION MONITORING	16-1
16.1	Monitoring Requirements	16-1
16.2	Supplemental Mitigation Monitoring and Reporting Program.....	16-1

17.	ORGANIZATIONS AND PERSONS CONTACTED	17-1
17.1	City of Redwood City	17-1
17.2	Applicant.....	17-1
17.3	Others.....	17-1
18.	APPENDICES.....	18-1
18.1	Notice of Preparation and Initial Study	
18.2	Supplemental Air Quality Information	
18.3	CEQA Standards for EIR Adequacy	
18.4	CEQA Definition of "Mitigation"	
18.5	SEIR Consultant Team	

List of Figures

3.1	Project Location	3-2
3.2	Project Vicinity--Aerial Photograph	3-3
3.3	Project Site--Aerial Photograph.....	3-4
3.4	Project Site--Existing Site Plan	3-5
3.5	Project Site--Existing Elevations	3-7
3.6	Proposed Modifications--Site Plan	3-19
3.7	Proposed Modifications--Elevations	3-21
3.8	Proposed Modifications--West Lobby	3-23
3.9	Proposed Modifications--Signage Details	3-24
3.10	Proposed Modifications--Signage Details	3-25
3.11	Proposed Modifications--East Lobby	3-26
3.12	Proposed Modifications--Courtyard and Loading Dock.....	3-27
4.1	Project Site--Aerial Photograph.....	4-3
9.1	Project Vicinity Existing Land Use.....	9-3
9.2	General Plan Regulations	9-6
9.3	Zoning Designations	9-7
12.1	Local and Regional Roadway System	12-2
12.2	Local and Regional Transit Facilities	12-5
12.3	Existing Intersection Lane Configurations.....	12-11
12.4	Existing Peak-Hour Intersection Volumes.....	12-12
12.5	Background Peak-Hour Intersection Volumes	12-17
12.6	Project Trip Distribution.....	12-28
12.7	Project Trip Assignments	12-29
12.8	Project Peak-Hour Intersection Volumes	12-30
12.9	Cumulative (2025) Without Project Peak-Hour Intersection Volumes.....	12-41
12.10	Cumulative (2025) With Project Peak-Hour Intersection Volumes.....	12-45
12.11	Possible Future Parking Structures (Plan View)	12-55
12.12	Possible Future Parking Structures (Cross-section)	12-56

List of Tables

1.1	Stanford Outpatient Center Project--Basic Project Data	ii
2.1	Summary of Impacts and Mitigation Measures	2-4
5.1	Federal and State Ambient Air Quality Standards	5-2
5.2	Air Quality Data for Redwood City, 2003 to 2005.....	5-4
5.3	Projected Curbside Carbon Monoxide Concentrations at Major Intersections (in parts per million).....	5-10
5.4	Project Changes in Regional Emissions (in pounds per day)	5-10
7.1	Stanford Outpatient Center Anticipated Hazardous Materials Inventory.....	7-11
7.2	Stanford Outpatient Center Anticipated Hazardous Wastes	7-13
7.3	Exposure Pathways and Controls--Workers and Other Individuals On-Site	7-18
7.4	Exposure Pathways and Controls--Community Environment	7-19
12.1	SamTrans Bus Service	12-7
12.2	Signalized Intersection Level of Service Definitions.....	12-9
12.3	Unsignalized Intersection Level of Service Definitions.....	12-9
12.4	Existing Intersection Levels of Service.....	12-13
12.5	Existing Traffic Volumes and Speeds on Roadway Segments	12-15
12.6	Intersection Levels of Service Under Background Conditions	12-18
12.7	Traffic Volumes on Roadway Segments Under Background Conditions	12-20
12.8	Trip Generation for Medical/Dental Offices	12-26
12.9	Intersection Level of Service Under Project Conditions	12-32
12.10	Traffic Volumes on Roadway Segments Under Project Conditions	12-34
12.11	Levels of Service at Study Intersections Under Cumulative Without Project Conditions	12-42
12.12	Traffic Volumes on Roadway Segments Under Cumulative Without Project Conditions	12-44
12.13	Levels of Service at Study Intersections Under Cumulative With Project Conditions	12-46
12.14	Traffic Volumes on Roadway Segments Under Cumulative With Project Conditions	12-52

**NOTICE OF COMPLETION AND AVAILABILITY OF
DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT FOR THE
PROPOSED STANFORD OUTPATIENT CENTER PROJECT**

Notice is hereby given that the City of Redwood City (the ACity®) has completed and is making available for public review a Draft Supplemental Environmental Impact Report (Draft SEIR) for the proposed Stanford Outpatient Center project. Detailed information about the nature and availability of the Draft SEIR follows.

LEAD AGENCY: City of Redwood City

ADDRESS WHERE COPY OF DRAFT SEIR AND ALL DOCUMENTS INCORPORATED BY REFERENCE IN THE DRAFT SEIR ARE AVAILABLE:

City of Redwood City
1017 Middlefield Road
Redwood City, CA 94063

REVIEW PERIOD: 45-day review period, commencing on June 12, 2006, and concluding on July 26, 2006

CONTACT PERSON AND ADDRESS TO SEND COMMENTS: Maureen Riordan, Senior Planner
City of Redwood City
1017 Middlefield Road
P.O. Box 391
Redwood City, CA 94064
(650) 780-7236 (phone)
(650) 780-0128 (FAX)

NOTICE OF PROPOSED, ANTICIPATED PUBLIC HEARING ON THE DRAFT SEIR:

At this time, the following City of Redwood City Planning Commission public hearing on the Draft SEIR is anticipated:

Time: 7:00 PM
Date: July 18, 2006
Place: City of Redwood City
City Council Chambers
1017 Middlefield Road
Redwood City, CA 94063

DESCRIPTION OF PROJECT:

The proposed Stanford Outpatient Center project includes modifications to a portion of the Midpoint Technology Park, an office/R&D project which was approved by the City of Redwood City in 1997. The previously-approved 1997 Midpoint Technology Park project comprised a total of 14 buildings, including renovation of eight existing buildings and the construction of six new buildings, for a total of 1,010,658 square feet of office/R&D uses.

Stanford Hospital & Clinics, the project applicant, proposes to renovate and convert four of the 14 existing buildings located within the Midpoint Technology Park to create a new Stanford Outpatient Center. The four buildings--constructed between 1998 and 2000, and vacated in 2002--are located at 420, 430, 440, and 450 Broadway, and contain approximately 90,840 square feet, 86,904 square feet, 96,344 square feet, and 86,418 square feet (360,500 total square feet), respectively.

In 1998, the City approved an addition of approximately 60,000 square feet to one of the approved (but not yet constructed) Midpoint Technology Park buildings; however, the approved 47,000-square-foot building and the 60,000-square-foot addition were never constructed.

The applicant anticipates that the proposed changes to the Midpoint Technology Park necessary to develop the Stanford Outpatient Center would consist of an initial phased build-out of three of the buildings (430, 440, and 450 Broadway) beginning construction in 2006 and completing in 2008, with build-out of the fourth building (420 Broadway) to follow in a future phase. The specific sequence of renovation of the four buildings for medical clinic space has not yet been determined by the applicant. The applicant has indicated that, initially, two of the four buildings (440 and 450 Broadway) would be converted to medical clinic space, including clinical research functions related to outpatient health care functions, and two (430 Broadway initially and 420 Broadway later) may be used partially for administrative support uses, such as finance, billing, and human resources, and partially for medical clinic space. Per Redwood City Zoning Ordinance Section 17.3d, any office use on-site must total less than 25 percent of the gross floor area (i.e., 90,125 of the total 360,500 square feet on-site) and must serve the medical clinic uses. The applicant anticipates that, ultimately, all four buildings would be fully occupied with outpatient medical clinics. Urgent care, emergency room, and in-patient hospital services would not be provided.

The proposed physical changes to the project include construction and/or installation of a new patient drop-off area, new entrance canopy, covered walkway and main lobby at the west entrance to 440-450 Broadway, new central courtyard/dining terrace and trellis, new parapet signs at 430, 440 and 450 Broadway, new building function signs at entrances to each building, new monument signs at two existing vehicle entry-exit locations along Broadway, new east entrance lobby at 420-430 Broadway, new roof over existing loading dock, new enclosed pedestrian connection/corridor between 430-440 Broadway, additional rooftop mechanical systems and associated parapet screening additions, emergency generator additions and modifications (there are currently two generators; one would be relocated, and two generators would be added, to provide one for each of four buildings), associated above-ground fuel storage tanks for each

generator, new exterior security cameras, new underground storm water retention basins, and modified and additional underground utility connections.

These proposed project changes will require the following City approvals: SEIR certification, Planned Development (PD) Permit Agreement, Use Permit, grading permit, building permit, water and sewer hook-ups, and other ministerial actions.

ANTICIPATED SIGNIFICANT ENVIRONMENTAL IMPACTS:

The Draft SEIR has concluded that implementation of the proposed project could result in significant environmental impacts in the following areas: Aesthetics (Visual Factors), Air Quality, Cultural Resources, Hazards and Hazardous Materials, Transportation, and Utilities (sewer service).

PRESENCE OF HAZARDOUS WASTE FACILITIES, HAZARDOUS WASTE PROPERTIES, AND HAZARDOUS WASTE DISPOSAL SITES ON THE PROJECT SITE:

The project site is not included on the lists enumerated under Government Code section 65962.5, including, but not limited to, lists of hazardous waste facilities, land designated as hazardous waste property, hazardous waste disposal sites, and others.

1. INTRODUCTION

1.1 PURPOSE OF THIS SEIR

This report has been prepared by the City of Redwood City as a **Supplemental Environmental Impact Report (SEIR)** for the proposed Stanford Outpatient Center project, pursuant to sections 15162 (Subsequent EIRs and Negative Declarations) and 15163 (Supplement to an EIR) of the California Environmental Quality Act (CEQA) Guidelines.¹ The proposed Stanford Outpatient Center project includes modifications to a portion of the Midpoint Technology Park, an office/R&D project which was approved by the City of Redwood City in 1997. The environmental consequences of the Midpoint Technology Park project were addressed in the Final Environmental Impact Report for the Midpoint Technology Park (State Clearinghouse #96072019), certified by the Redwood City Planning Commission on December 17, 1996 (1996 EIR), and the Final Supplemental Environmental Impact Report: Midpoint Technology Park Expansion (also State Clearinghouse #96072019), certified by the Planning Commission on December 1, 1998 (1998 SEIR). The scope of this new SEIR (2006 SEIR) is limited to environmental issues raised by the differences between the currently proposed Stanford Outpatient Center project and the office/R&D project described and evaluated in the 1996 EIR and 1998 SEIR.

The previously-approved 1997 Midpoint Technology Park project comprised a total of 14 buildings, including renovation of eight existing buildings and the construction of six new buildings, for a total of 1,010,658 square feet of office/R&D uses. Stanford Hospital & Clinics, the project applicant, proposes to renovate and convert four of the 14 existing buildings located within the Midpoint Technology Park to create a new Stanford Outpatient Center. The four buildings--constructed between 1998 and 2000, and vacated in 2002--are located at 420, 430, 440, and 450 Broadway, and contain approximately 90,840 square feet, 86,904 square feet, 96,344 square feet, and 86,418 square feet (360,500 total square feet), respectively.

1.2 DETERMINATION TO PREPARE AN SEIR

Sections 15162 (Subsequent EIRs and Negative Declarations) and 15163 (Supplement to an EIR) of the CEQA Guidelines provides that, when a project that has been the subject of a previously certified EIR or SEIR, a supplement to the previously certified EIR or SEIR shall be prepared if:

- substantial changes are proposed in the project which will require major revisions to the previous EIR (or SEIR) due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects, or new

¹California Resources Agency. Guidelines for California Environmental Quality Act. California Code of Regulations, Title 14, Chapter 3, Sections 15000-15387 and Appendices A-L; as amended December 1, 2005. New information has become available or certain regulations have changed since the previous EIR or SEIR was prepared.

information has become available or certain regulations have changed since the previous EIR or SEIR was prepared; and

- minor additions or changes would be necessary to make the previous EIR (or SEIR) adequately apply to the revised project.

Based on its review of the currently proposed changes to the Midpoint Technology Park project addressed in the 1996 EIR, the City has determined that the proposed Stanford Outpatient Center could result in new significant environmental impacts, and preparation of a supplemental EIR is required pursuant to sections 15162 and 15163 of the CEQA Guidelines.

1.3 SEIR RELATIONSHIP TO PREVIOUS CEQA DOCUMENTATION

The approximately 11.3-acre project site is part of the overall 48.4-acre Midpoint Technology Park office and R&D campus. A Final Environmental Impact Report for the Midpoint Technology Park was certified by the Redwood City Planning Commission on December 17, 1996 (1996 EIR).

On December 1, 1998, the Redwood City Planning Commission certified the Final Supplemental Environmental Impact Report: Midpoint Technology Park Expansion (1998 SEIR), which evaluated a proposed addition of approximately 60,000 square feet to one of the approved (but not yet constructed) Midpoint Technology Park buildings (not on the proposed Outpatient Center site).

This 2006 SEIR builds upon these previous CEQA reviews of the Midpoint Technology Park, incorporates these previous CEQA documents by reference, and makes revisions to the previous CEQA documentation as necessary to adequately describe the differences between the Midpoint Technology Park project evaluated in the 1996 EIR and 1998 SEIR, and the proposed Stanford Outpatient Center.

1.4 SEIR SCOPE

Consistent with CEQA sections 15162 and 15163, this 2006 SEIR includes only the information necessary to make the previous CEQA documentation adequate for the project as revised. As provided for in the CEQA statutes and guidelines, the environmental focus of this SEIR is limited to areas of controversy or issues related to the proposed project changes known to the City (the Lead Agency) or identified by other interested agencies and individuals in response to the City's Notice of Preparation (NOP) and Initial Study.¹ These focused areas include (listed in the order that these topics are addressed in this SEIR):

¹The Notice of Preparation (NOP) is a CEQA-required brief notice sent by the Lead Agency to notify the Responsible Agencies, Trustee Agencies, potentially involved federal agencies, and other interested parties requesting notice, that the Lead Agency plans to prepare an EIR or SEIR for a project; the NOP solicits guidance regarding EIR or SEIR scope and content. The City's NOP for the Stanford Outpatient Center project is included in appendix 19.1 of this SEIR. The NOP was sent with the City's Initial Study and Environmental Checklist Form, which is also in appendix 18.1. Also, a public scoping meeting, noticed in the NOP, was held on January 17, 2006 pursuant to CEQA Guidelines section 15082(c) (Notice of Preparation and Determination of Scope of EIR) to solicit comments regarding the appropriate scope and content of the SEIR.

1. Aesthetics,
2. Air quality,
3. Cultural resources,
4. Hazards and hazardous materials,
5. Hydrology and water quality,
6. Land Use and planning,
7. Population and housing,
8. Fire/emergency services and child care,
9. Transportation, circulation, and parking, and
10. Utilities.

1.5 SEIR ORGANIZATION AND CONTENT

The impact and mitigation information in this SEIR is generally organized under the ten headings listed in section 1.4 above. The report describes the following in chapters 4 through 13 for each respective impact category:

1. the existing environmental **setting**, focusing on any changes in environmental conditions which may have occurred since the 1996 EIR and 1998 SEIR;
2. any new **supplemental impact** findings, including impacts which may have changed due to new information, changed circumstances, or changes in the project, and therefore were not considered in the previous CEQA documents; and
3. any **supplemental mitigation** recommendations to avoid or reduce impact changes or new impacts not identified in the previous CEQA documents.

In addition, this report includes a chapter summarizing the SEIR information in terms of various CEQA-required assessment conclusions, including growth-inducing effects, significant unavoidable impacts, irreversible environmental changes, cumulative impacts, and effects found not to be significant (chapter 15); and a chapter outlining the City's **mitigation monitoring** intentions (chapter 16) in keeping with CEQA section 21081.6.

1.6 "SIGNIFICANT IMPACTS" AND OTHER KEY SEIR TERMINOLOGY

This SEIR identifies those adverse environmental impacts that are expected to be "significant," and corresponding mitigation measures warranted to eliminate or reduce those impacts to "less-than-significant" levels. Where it is determined in this report that a particular impact cannot be mitigated to a less-than-significant level, the EIR identifies that impact as "unavoidable." Section 15.2 of the SEIR, Significant Unavoidable Impacts, includes a summary list of all significant project impacts identified as "unavoidable." Identified significant impacts that are not listed as "unavoidable" in section 15.2 have been determined to be capable of mitigation to a less-than-significant level by implementation of the mitigation measure(s) identified in this SEIR.

These particular SEIR terms ("significant," "unavoidable," "mitigation") and other key CEQA terminology used in this SEIR are defined in the box on the next page.

DEFINITIONS OF KEY EIR TERMINOLOGY

Significant/Potentially Significant Impact	"Significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance. (CEQA Guidelines, section 15382.) <i>"An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant."</i> (CEQA Guidelines, section 15382.)
Significant Cumulative Impact	"Cumulative impacts" are defined as <i>"two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts."</i> (CEQA Guidelines, section 15355.)
Unavoidable Significant Impact	"Unavoidable significant impacts" are defined as those significant adverse environmental impacts for which either no mitigation or only partial mitigation is feasible. If the project is to be approved without imposing an alternative design, the Lead Agency (the City) must include in the record of the project approval a written statement of the specific reasons to support its action--i.e., a "statement of overriding considerations." (CEQA Guidelines, sections 15126.2(b) and 15093(b).)
Significance Criteria	The criteria used in this EIR to determine whether an impact is or is not <i>"significant"</i> are based on (a) CEQA-stipulated "mandatory findings of significance"--i.e., where any of the specific conditions occur under which the Legislature and the Secretary of Resources have determined to constitute a potentially significant effect on the environment, which are listed in CEQA Guidelines section 15065; (b) the relationship of the project effect to the adopted policies, ordinances and standards of the City and of responsible agencies; and/or (c) commonly accepted practice and the professional judgment of the EIR authors and Lead Agency staff.
Mitigation Measures	For each significant impact, the EIR must identify a specific "mitigation" measure or set of measures capable of <i>"(a) avoiding the impact altogether by not taking a certain action or parts of an action; (b) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) rectifying the impact by repairing, rehabilitating, or restoring the impacted environment; (d) reducing or eliminating the impact over time by preservation or maintenance operations during the life of the action; or (e) compensating for the impact by replacing or providing substitute resources or environments."</i> (CEQA Guidelines, section 15370.)

SOURCE: Wagstaff and Associates, 2006.

1.7 INTENDED USES OF THE SEIR

The City of Redwood City (the City) is the Lead Agency¹ for all environmental documentation and procedural requirements associated with the Stanford Outpatient Center project. This SEIR has been prepared by the City in keeping with state environmental documentation requirements set forth in the California Environmental Quality Act (CEQA). The report is intended to inform City decision-makers, other responsible agencies, and the general public of the proposed project changes and of the environmental consequences of their approval. The scope of this SEIR is intentionally limited to evaluation and discussion of the environmental implications of the project changes. The SEIR is not intended to address the merits of the project, or the economic or social impacts of the project.

The CEQA Guidelines stipulate that an SEIR is intended to serve as a public information and disclosure document identifying those environmental impacts associated with the proposed project changes that are expected to be significant, and describing mitigation measures and alternatives that could minimize or eliminate these significant adverse impacts.² Such impacts and mitigation needs are discussed in this SEIR to the level of detail necessary to allow reasoned decisions about the project and conditions of project approval.

As used in this SEIR, the terms "Stanford Outpatient Center project," "project," and "project changes," refer to all aspects of the current development plan proposal, including the PD Amendment and Use Permit approval, plus all other City approvals, entitlements, and permits that may be required to allow development of the project. As a result of the information in this SEIR, the City may act to approve or deny these various actions, and/or to establish associated requirements or conditions on project design, construction, and operation that it deems warranted in order to mitigate identified project impacts on the environment.

As the Lead Agency, the City also intends for this SEIR to serve as the CEQA-required environmental documentation for consideration of this project by other Responsible Agencies³ and Trustee Agencies,⁴ potentially including, but not limited to, City/County Association of Governments of San Mateo County in its designated role as the County's Congestion Management Agency, the San Francisco Regional Water Quality Control Board, the San Mateo County Department of Environmental Health, and the Bay Area Air Quality Management District (see "Required Approvals" in Table 1.1).

¹The CEQA Guidelines (Sections 15000-15387, California Code of Regulations, Title 14, Chapter 3) define the "Lead Agency" as the public agency that has the principal responsibility for carrying out or approving a project.

²CEQA Guidelines section 15121(a).

³Under the CEQA Guidelines, the term "Responsible Agency" includes all public agencies, other than the Lead Agency, which have discretionary approval power over aspects of the project for which the Lead Agency has prepared an EIR.

⁴Under the CEQA Guidelines, the term "Trustee Agency" means a state agency having jurisdiction by law over natural resources affected by the project which are held in trust by the people of California.

Table 1.1
STANFORD OUTPATIENT CENTER PROJECT--BASIC PROJECT DATA

PROJECT NAME:	Stanford Outpatient Center Project
LEAD AGENCY:	City of Redwood City, 1017 Middlefield Road, P.O. Box 391, Redwood City, CA 94064--Contact: Maureen Riordan, Senior Planner; phone (650) 780-7236
SITE LOCATION:	420, 430, 440, and 450 Broadway, northeastern portion of Midpoint Technology Park, City of Redwood City
SITE SIZE:	Approximately 11.3 acres
EXISTING GENERAL PLAN DESIGNATION:	Industrial--Research and Development Uses
EXISTING ZONING:	IR (Industrial--Restricted)
EXISTING LAND USE:	Four vacant office/R&D buildings
PROPOSED LAND USE:	Renovation and conversion of four vacant office/R&D buildings, totaling approximately 360,500 square feet, to create a new Stanford Outpatient Center, including medical clinics and associated clinical research functions. Urgent care, emergency room, and in-patient hospital services would not be provided.
PROPOSED PROJECT CHANGES:	New patient drop-off area, new covered walkway and main lobby at west entrance to 440-450 Broadway, new west entry canopy and central courtyard/dining terrace and trellis, new parapet signs at 430, 440 and 450 Broadway, new building function signs at entrances to each building, new monument signs at two existing vehicle entry-exit locations along Broadway, new east entrance lobby at 420-430 Broadway, new roof over existing loading dock, new enclosed pedestrian connection/corridor between 430-440 Broadway, additional rooftop mechanical systems and associated parapet screening additions, emergency generator additions and modifications (there are currently two generators; one would be relocated, and two generators would be added, to provide one for each of four buildings), associated above-ground fuel storage tanks for each generator, new exterior security cameras, new underground storm water retention basins, and modified and additional underground utility connections.
REQUIRED APPROVALS:	City: (a) CEQA compliance (Supplemental Environmental Impact Report certification); (b) Planned Development (PD) Permit Amendment; (c) Use Permit; and (d) other City approvals, including additional grading permit, building permit, water and sewer hook-ups, and other ministerial actions. Other: (a) City/County Association of Governments of San Mateo County (as County's Congestion Management Agency) approval of traffic impact analysis (TIA); (b) San Francisco Bay Regional Water Quality Control Board approval of Storm Water Pollution Prevention Plan (SWPPP); (c) San Mateo County approval of Hazardous Materials Business Plan (HMBP); and (d) Bay Area Air Quality Management District (BAAQMD) permits for generators.
PROJECT APPLICANT:	Stanford Hospital & Clinics

SOURCE: City of Redwood City, Stanford Hospital & Clinics; April 2006.

2. SUMMARY

This SEIR chapter includes a summary description of the proposed project changes, a summary identification of each anticipated supplemental significant impact resulting from the proposed project changes, and a summary of each associated supplemental mitigation measure. This summary should not be relied upon for a thorough understanding of the details of the proposed Stanford Medical Center project, its supplemental impacts, and related mitigation measures. Please refer to Chapter 3 for a complete description of the proposed project changes and Chapters 4 through 13 for a complete description of associated supplemental impacts and mitigation measures.

2.1 SUMMARY OF PROPOSED PROJECT CHANGES

The proposed Stanford Outpatient Center project includes modifications to a portion of the Midpoint Technology Park, an office/R&D project which was approved by the City of Redwood City in 1997. The previously-approved 1997 Midpoint Technology Park project comprised a total of 14 buildings, including renovation of eight existing buildings and the construction of six new buildings, for a total of 1,010,658 square feet of office/R&D uses. Stanford Hospital & Clinics, the project applicant, proposes to renovate and convert four of the 14 existing buildings located within the Midpoint Technology Park to create a new Stanford Outpatient Center. The four buildings--constructed between 1998 and 2000, and vacated in 2002--are located at 420, 430, 440, and 450 Broadway, and contain approximately 90,840 square feet, 86,904 square feet, 96,344 square feet, and 86,418 square feet (360,500 total square feet), respectively.

In 1998, the City approved an addition of approximately 60,000 square feet to one of the approved (but not yet constructed) Midpoint Technology Park buildings; however, the approved 47,000-square-foot building and the 60,000-square-foot addition were never constructed.

The applicant anticipates that the proposed changes to the Midpoint Technology Park necessary to develop the Stanford Outpatient Center would consist of an initial phased build-out of three of the buildings (430, 440, and 450 Broadway) beginning construction in 2006 and completing in 2008, with build-out of the fourth building (420 Broadway) to follow in a future phase. The specific sequence of renovation of the four buildings for medical clinic space has not yet been determined by the applicant. The applicant has indicated that, initially, two of the four buildings (440 and 450 Broadway) would be converted to medical clinic space, including clinical research functions related to outpatient health care functions, and two (430 Broadway initially and 420 Broadway later) may be used partially for administrative support uses, such as finance, billing, and human resources, and partially for medical clinic space. Per Redwood City Zoning Ordinance Section 17.3d, any office use on-site must total less than 25 percent of the gross floor area (i.e., 90,125 of the total 360,500 square feet on-site) and must serve the medical clinic uses. The applicant anticipates that, ultimately, all four buildings would be fully occupied with outpatient medical clinics. Urgent care, emergency room, and in-patient hospital services would not be provided.

The proposed physical changes to the project include construction and/or installation of a new patient drop-off area, new entrance canopy, covered walkway and main lobby at the west entrance to 440-450 Broadway, new central courtyard/dining terrace and trellis, new parapet signs at 430, 440 and 450 Broadway, new building function signs at entrances to each building, new monument signs at two existing vehicle entry-exit locations along Broadway, new east entrance lobby at 420-430 Broadway, new roof over existing loading dock, new enclosed pedestrian connection/corridor between 430-440 Broadway, additional rooftop mechanical systems and associated parapet screening additions, emergency generator additions and modifications (there are currently two generators; one would be relocated, and two generators would be added, to provide one for each of four buildings), associated above-ground fuel storage tanks for each generator, new exterior security cameras, new underground storm water retention basins, and modified and additional underground utility connections.

These proposed project changes will require the following City approvals: SEIR certification, Planned Development (PD) Permit Amendment, Use Permit, grading permit, building permit, water and sewer hook-ups, and other ministerial actions.

2.2 SUMMARY OF SUPPLEMENTAL IMPACT AND MITIGATION FINDINGS

Each significant supplemental impact and associated mitigation measure identified in this SEIR is summarized in the SUMMARY OF SUPPLEMENTAL IMPACTS AND MITIGATIONS chart that follows. The summary chart has been organized to correspond with the more detailed supplemental impact and mitigation discussions in Chapters 4 through 13 of this SEIR. The chart is arranged in five columns: (1) significant adverse supplemental environmental impacts, (2) level of impact significance prior to implementation of recommended supplemental mitigation measures, (3) recommended supplemental mitigation measures, (4) entity responsible for implementing each supplemental mitigation measure, and (5) level of impact significance after implementation of the mitigation measure(s).

For a complete description of the environmental setting, supplemental impacts, and supplemental mitigation measures associated with each topic of concern, please refer to Chapters 4 through 11 of this SEIR.

2.3 SUMMARY OF ALTERNATIVES

The 1996 EIR included an identification and evaluation of a range of alternatives to the proposed Midpoint Technology Park project. The proposed outpatient clinic conversion falls

within the range of alternatives described and evaluated in the 1996 EIR. No further discussion of alternatives to the proposed Midpoint Technology Park project is required.¹

2.4 MITIGATION IMPLEMENTATION

State law (Section 21081.6 of the Public Resources Code) requires all public agencies to adopt mitigation monitoring and reporting programs when they approve projects subject to environmental impact reports. As mandated by this law, a Mitigation Monitoring and Reporting Program (MMRP) Checklist was adopted by the City in 1996 upon certification of the 1996 Final EIR.

The supplemental environmental mitigation measures identified in this SEIR could ultimately be adopted and effectively implemented as conditions of one or more of the required project approvals (PD Permit Amendment, Use Permit, etc.). To satisfy state law, a documented record or "checklist" of supplemental mitigation implementation will be necessary. Prior to City certification of this SEIR, an associated Supplemental Mitigation Monitoring and Reporting Plan Checklist will be prepared.

¹This supplemental EIR is intended to revise the City-certified 1996 EIR through supplementation; it is not intended to be a completely new EIR. As required under CEQA Guidelines section 15163, the scope and content of this supplement to the 1996 EIR is limited to additions and changes necessary to make the previous EIR adequate for the project as revised.

The alternatives evaluation in the 1996 EIR included an evaluation of the following alternatives:

- Alternative 1--the "Project" Alternative (addition of 475,000 square feet of office/R&D space to existing approximately 545,658 square feet of building space; up to approximately 3,600 employees);
- Alternative 2--the "No Project" Alternative (approximately 545,658 square feet of building space; up to approximately 3,000 employees);
- Alternative 3--the "Less Intense" Alternative (addition of approximately 131,000 square feet of additional office/R&D space to existing approximately 545,658 square feet of building space; up to approximately 2,400 employees; and
- Alternative 4--the "More Intense" Alternative (addition of approximately 880,000 square feet of additional office/R&D space to existing approximately 545,658 square feet of building space; up to approximately 4,200 employees.

The proposed Outpatient Center project represents a modification to a portion of the Midpoint Technology Park office/R&D project addressed in the 1996 EIR--i.e., a portion of Alternative 1--the "Project Alternative," and therefore falls within the range of alternatives addressed in the 1996 EIR. The size and employment characteristics of the proposed Outpatient Center fall within the development parameters assumed in the 1996 EIR for Alternative 1. The total floor area of the four Midpoint Technology Park buildings to be converted to the outpatient clinic use (360,500 square feet) would not change. The total anticipated maximum staffing of the outpatient clinic, approximately 670, would be less than the approximately 1,200 employees anticipated for the four buildings in the 1996 EIR.

[insert summary chart]

Table 2.1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
<i>AESTHETICS (VISUAL FACTORS)</i>				
<p>Supplemental Impact 4-1: Rooftop Modification Impacts on Views from Adjacent Apartment Building. The rooftops of 420 and 430 Broadway, the closest project buildings to the adjacent Broadway Towers apartment building, are generally at "eye level" with the top (seventh) floor of the apartment building. The proposed project modifications include installation of additional and replacement rooftop mechanical equipment and associated rooftop screening additions atop 420 and 430 Broadway. Assuming that the height of the rooftop equipment screening would be equal to or greater than the finished height of the modified rooftop mechanical equipment, associated visual effects on the adjacent apartment building would be less-than-significant. Nevertheless, until the project rooftop mechanical equipment and associated screening heights are finalized and the adequacy of the specified screening heights in relationship to the finished mechanical equipment heights can be verified by the City's Architectural Review Committee (ARC) and Planning Commission during the required Planned Development (PD) Permit Amendment</p>	S	<p>Supplemental Mitigation 4-1. To avoid adverse effects on views from the top floor of the adjacent apartment building, the height relationship between the proposed rooftop mechanical equipment modifications and associated equipment screening atop 420 and 430 Broadway shall, to the satisfaction of the ARC and Planning Commission as established through the City's normal design review process for the required PD Permit Amendment, be sufficient to block views of the modified equipment. Implementation of this measure would reduce this potential visual impact to a <i>less-than-significant level</i>.</p>	Applicant	LS

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- S = Significant
 - LS = Less than significant
 - SU = Significant unavoidable impact
 - NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
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approval process, it is assumed that the proposed project rooftop modifications may have a **significant adverse impact** on top floor views from the adjacent apartment building.

Parking Structure Visual Impacts on Adjacent Apartment Building. Chapter 12 (Transportation) of this SEIR includes under *Supplemental Mitigation 12-10*, addressing an identified potential future parking capacity deficiency, possible construction of parking decks at one or more of three possible on-site locations, if and when the *parking monitoring program* called for under the same mitigation indicates a significant parking shortfall. This possible parking deck construction action would have a **less-than-significant visual impact**.

LS

No significant additional impact has been identified; no supplemental mitigation is required.

NA

LS

The possible future "reduced-height" parking decks proposed under *Supplemental Mitigation 12-10* would have less visual impact than the "mitigated" four-story parking structure anticipated in the 1996 EIR--i.e., would effectively mitigate 1996 EIR Impact 6-3. The visual impact of the reduced-height parking deck(s) suggested under *Supplemental Mitigation 12-10* herein on views from the adjacent apartment building would therefore be **less-than-significant**.

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
<p>Other Project Modification Visual Impacts on Views from Adjacent Apartment Building. All other proposed project changes would fall within the "changes in the visual character of the project area" anticipated under Impact 6-3 in the 1996 EIR for the Midpoint Technology Park, and would not add to or worsen the impacts anticipated under Impact 6-3 on views from the adjacent Broadway Towers apartment building.</p>	LS	No significant additional adverse impact has been identified; no supplemental mitigation is required.	NA	LS
<p>Views of Project Modifications from Broadway and U.S. 101. The proposed project changes visible from Broadway and U.S. 101, including the added landscaping, added parapet panels (rooftop mechanical equipment screening), and new parapet signage, would have generally beneficial impacts on views of the project site from Broadway and U.S. 101, adding visual interest and enhancing the visual character of the complex. The proposed added parapet panels would effectively screen views of the proposed additional rooftop mechanical equipment from Broadway and U.S. 101. The proposed new primary and secondary "monument" signage along Broadway at the Outpatient Center entrance driveways, interior "wayfinding" signage, and signage at the various building entry points, would be moderately sized with low signage heights (see Figures 3.9 and 3.10 herein). The visual effects of these proposed</p>	LS	No significant additional adverse impact has been identified; no supplemental mitigation is required.	NA	LS

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
<p>project modifications would fall within, and would not add to or worsen, the project impacts on views from Highway 101 and Broadway already identified in the 1996 EIR under Impact 6-2: Views from Highway 101 (Bayshore Freeway) and Impact 6-4: Views from [Broadway at] Second Avenue, and would be fully mitigated through implementation of Certified Mitigation 6-2 and Certified Mitigation 6-4.</p>				

AIR QUALITY

Supplemental Impact 5-1: Project Construction Period Emissions. Although limited to renovation of existing buildings and grounds, project construction activities, including excavation and grading for the proposed underground storm water retention basins, landscaping modifications, new underground utilities, possible future parking decks, associated construction vehicle traffic (including exhaust emissions), and wind blowing over exposed earth, would generate a combination of fugitive particulate matter emissions and exhaust emissions that would affect local air quality. These possible effects represent a **potentially significant impact**. This impact is similar to Impact 4-2 identified in the 1996 Midpoint Technology Park EIR. The

S	<p>Supplemental Mitigation 5-1. Dust emissions from demolition and construction activities can be greatly reduced by implementing fugitive dust control measures. The significance of construction period particulate impacts is, according to the BAAQMD Guidelines, determined by whether or not appropriate dust control measures are implemented. Implementation of the following conventional BAAQMD-recommended dust control measures would be expected to reduce dust emission impacts to a less-than-significant level:</p> <p>(a) Watering shall be used to control dust generation during any break-up of pavement;</p>	Applicant	LS
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 - NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
<p>following modified mitigation, however, corresponds with the current <u>BAAQMD CEQA Guidelines</u>.</p>		<p>(b) All trucks hauling construction debris from the site shall be covered;</p> <p>(c) Whenever possible, dust-proof chutes shall be used for loading debris onto trucks;</p> <p>(d) Water all active construction areas at least twice daily and more often during windy periods (i.e., gusting to 30 mph or more). Active construction areas adjacent to existing land uses must be kept damp at all times, or must be treated with non-toxic stabilizers or dust palliatives;</p> <p>(e) Water or cover all stockpiles of debris, soil, sand, or other materials that can be blown by the wind;</p> <p>(f) Cover all trucks hauling soil, sand, and other loose materials, or require all trucks to maintain at least two feet of freeboard;</p> <p>(g) Sweep daily (preferably with water sweepers) all paved access roads, parking areas, and staging areas at construction sites;</p> <p>(h) Sweep streets daily (preferably with water sweepers) if visible soil material is carried onto adjacent public streets;</p>		

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 NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		<p>(i) Hydroseed or apply non-toxic soil stabilizers to inactive construction areas;</p> <p>(j) Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.);</p> <p>(k) Install sandbags or other erosion control measures to prevent silt runoff to public roadways; and</p> <p>(l) Replant vegetation in disturbed areas as quickly as possible.</p> <p>In addition, to reduce potential construction vehicle and equipment exhaust emissions to a less-than-significant level:</p> <p>(m) Maintain properly tuned engines and equipment, minimize idling time, and limit the hours of operation of heavy duty equipment and/or the amount of equipment in use.</p>		
<p>Supplemental Impact Due to Changes in Carbon Monoxide Concentrations. Table 5.3 of this SEIR indicates that project traffic changes would increase CO concentrations at the study intersections by up to 0.1 ppm, but concentrations for existing, background, project, and cumulative traffic conditions would remain below the most stringent state or federal standards. Changes in project traffic</p>	LS	No significant project or cumulative impact has been identified; no mitigation is required.	NA	LS

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 SU = Significant unavoidable impact
 NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
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would not result in any new violations of the 1-hour or 8-hour standards for CO, nor contribute substantially to an existing or projected violation. Project and cumulative impacts on local CO concentrations, and are therefore considered to be **less-than-significant**, confirming the conclusions of the 1996 Midpoint Technology Park EIR and 1998 SEIR.

Supplemental Impact Due to Changes in Long-Term Regional Emissions. The proposed Outpatient Center use would generate approximately 3,700 daily vehicle trips beyond those anticipated from the previously approved @Home office/R&D use on the site (see chapter 12 of this SEIR). Neither total project emissions nor the incremental increase over the previous office/R&D use (at full occupancy) would exceed the BAAQMD-established thresholds of significance for ozone precursors (ROG and NOx) or PM₁₀.

LS

No additional significant project or cumulative impact on long-term regional air quality has been identified; no additional mitigation is required.

NA

LS

Therefore, consistent with the BAAQMD CEQA Guidelines, the emission increases associated with the proposed Stanford Outpatient Center project changes would constitute a **less-than-significant project impact** on regional air quality.

Section 2.3 of the BAAQMD CEQA Guidelines states, "For any project that does not

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
<p>individually have significant operational air quality impacts, the determination of significant cumulative impact should be based on an evaluation of the consistency of the project with the local general plan <i>and</i> of the general plan with the regional air quality plan [i.e., BAAQMD Clean Air Plan].⁶ First, the proposed Stanford Outpatient Center project is consistent with the <u>Redwood City Strategic General Plan</u> and <u>Redwood City Zoning Ordinance</u> (see subsection 9.3.4 in chapter 9, Land Use, of this SEIR); project approval would not require a General Plan Amendment or rezoning. Secondly, as discussed in this Air Quality chapter and in chapter 7 (Hazards and Hazardous Materials), the proposed project would be subject to BAAQMD-mandated and other local, state, and federal agency regulations that would result in <i>less-than-significant</i> air quality and hazards/hazardous materials impacts. Finally, the proposed project is subject to the Congestion Management Plan (CMP) of the City/County Association of Governments of San Mateo County (C/CAG), whose guidelines are consistent with the regional air quality plan and Association of Bay Area Governments (ABAG) population projections (see chapter 12--Transportation, Circulation, and Parking--of this SEIR). Therefore, consistent with the <u>BAAQMD CEQA Guidelines</u>, the emission</p>				

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
<p>increases associated with the proposed Stanford Outpatient Center project changes would constitute a less-than-significant cumulative impact on regional air quality.</p> <p>Supplemental Impact Due to New Sources of Toxic Air Contaminants. The proposed Outpatient Center use would include four back-up diesel-powered generators, two of which were included in the previously approved @Home project on-site. In 1998 the California Air Resources Board identified particulate matter from diesel-fueled engines as a toxic air contaminant (TAC). Stationary diesel engines are subject to the permitting authority of the BAAQMD. The emergency generator engines would normally be tested a few hours per month; per BAAQMD regulations, standby engine operation is limited to no more than 200 hours per calendar year for non-emergency uses.</p> <p>Due to the projected limited usage of the emergency generators subject to BAAQMD regulations, the proposed Stanford Outpatient Center would result in a less-than-significant impact associated with toxic air contaminant (TAC) risk.</p>	LS	No additional significant project impact has been identified; no additional mitigation is required.	NA	LS

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
<i>CULTURAL RESOURCES</i>				
<p>Supplemental Impact 6-1: Potential Disturbance of Prehistoric Cultural Resources. Excavation and grading for the proposed underground storm water retention basins, any additional underground utilities, new landscaping, and possible future parking decks could disturb as yet unidentified sensitive, on-site, subsurface cultural resources. This potential effect represents a <i>potentially significant environmental impact</i>. This is a new impact not identified in the 1996 EIR or 1998 SEIR.</p>	S	<p>Supplemental Mitigation 6-1. In the event that subsurface cultural resources are encountered during approved ground-disturbing activities, work in the immediate vicinity shall be stopped and a qualified archaeologist retained to evaluate the finds. The discovery or disturbance of any cultural resource shall be reported to the California Historical Records Information System (CHRIS) and the Native American Heritage Commission. Identified cultural resources shall be recorded on State Department of Parks and Recreation (DPR) form 422 (archaeological sites). Mitigation measures prescribed by these groups and required by the City shall be undertaken before construction activities are resumed. If disturbance of a project area cultural resource cannot be avoided, a mitigation program, including measures set forth in the City's <i>Cultural Resources Management Program</i> and in compliance with sections 15064.5 and 15126.4 of the CEQA Guidelines, shall be implemented. Implementation of these measures would reduce this potential impact to a <i>less-than-significant level</i>.</p>	Applicant	LS

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
<i>HAZARDS AND HAZARDOUS MATERIALS</i>				
<p>Supplemental Impact 7-1: Potential Exposure to Existing Soil or Groundwater Contamination. Excavation and construction of the proposed underground storm water retention basins, underground utilities, and potential future parking decks could expose construction personnel and members of the public to existing soil and groundwater contamination, if any. Implementation of previously Certified Mitigation 9-2 from the 1996 EIR would help to reduce such potential exposure to less than significant levels. In addition, or more specifically, recommendations included in the recent Phase I Environmental Assessment commissioned by the applicant call for preparation by the applicant of a <i>Site Management Plan</i> prior to site development to address potential environmental issues associated with project construction activities (e.g., excavation, dewatering, etc.) and operation, and the recent Phase II Environmental Assessment commissioned by the applicant calls for preparation of a site-specific, construction period <i>Health and Safety Plan</i> (a standard CalOSHA requirement for work at hazardous waste sites). Until these two plans are completed to the satisfaction of the County of San Mateo's Office of Environmental Health, project-related potentials for construction</p>	S	<p>Supplemental Mitigation 7-1: Implement the following:</p> <p><i>Phase II Environmental Assessment Approval:</i> Complete the Regional Water Quality Control Board and San Mateo County Department of Health Services approval process for the Phase II environmental process.</p> <p><i>Site Management Plan:</i> Regardless of the outcome of the Phase II approval process, a construction period <i>Site Management Plan</i> shall be prepared by the applicant and approved by the County of San Mateo's Hazardous Materials Specialist, Office of Environmental Health, prior to site development, to ensure that potential environmental issues associated with construction (e.g., dewatering) and operation of the site are adequately addressed. The <i>Site Management Plan</i> shall include or incorporate by reference an applicant-prepared or appropriate contractor-prepared site-specific construction period <i>Health and Safety Plan</i> (a standard CalOSHA requirement for work at hazardous waste sites). In addition to measures that protect on-site workers, the plan shall include measures to minimize public exposure to contaminated soil and groundwater (e.g., measures for the evaluation, handling</p>	Applicant	LS

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
<p>worker and public exposure to existing soil and groundwater contamination, if any, are assumed to represent a <i>potentially significant impact</i>.</p>		<p>and disposal of groundwater effluent generated during project construction period during dewatering, in accordance with applicable regulations). Such measures shall include dust control, appropriate site security, restriction of public access, and posting of warning signs. The plan shall apply from the time of surface disruption through the completion of earthwork construction.</p> <p>Implementation of these supplemental mitigations, in addition to Certified Mitigation 5-2 from the 1996 EIR, would reduce this supplemental impact to a <i>less-than-significant level</i>.</p>		
<p>Supplemental Impact of Potential Hazardous Materials Disturbance in Existing Buildings. Demolition or renovation of existing buildings could disturb hazardous materials, if any, in existing building components and thereby cause adverse health or safety effects. As noted in subsection 7.2.3(i) of this SEIR, however, the Midpoint Technology Park buildings that the project proposes for renovation were constructed in 1998-2000, after laws were passed banning or regulating the use of asbestos, PCBs, lead, and mercury in building components. The potential for hazardous materials in the existing buildings is therefore considered low, and the</p>	LS	No significant impact has been identified; no mitigation is required.	NA	LS

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 NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
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potential for hazards would represent a **less-than-significant impact**.

Supplemental Impact Due to Hazardous Materials Storage and Handling. The proposed project would introduce additional hazardous materials storage and handling to the site, thereby increasing risks of human and environmental exposure. However, existing SHC health and safety programs--as well as existing local, state, and federal regulations and permitting requirements described in section 7.2 of this SEIR--would limit the potential for exposure to hazardous materials by workers, other individuals on-site, the community, and the environment to established safe levels. Potential dangers due to hazardous materials storage and handling at the proposed project would therefore represent a **less-than-significant impact**.

LS

No significant impact has been identified; no mitigation is required.

NA

LS

(The types of hazardous materials that would be found at the proposed Stanford Outpatient Center would be similar in nature to those that exist now at the Stanford University Medical Center outpatient facilities in Palo Alto. SHC is required to comply with health and safety and environmental protection laws and regulations. To ensure compliance, SHC implements its own health and safety policies and procedures. For the proposed Outpatient Center project, SHC would be expected to implement policies

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
<p><i>and procedures similar in nature to those that currently exist at the Stanford University Medical Center outpatient facilities in Palo Alto. The effectiveness of these controls would also be expected to be similar.</i></p> <p><i>For the most part, the health and safety procedures that protect workers and other individuals in the immediate vicinity of hazardous materials would also protect the more distant community and environment (e.g., local air quality and biota).</i></p> <p><i>SHC maintains Disaster Plans to help ensure that staff can respond to possible hazardous materials emergencies and disasters. In addition, the Redwood City Fire Department provides "first response" capabilities to identify and secure access to hazardous materials incidents. Other jurisdictions are also available, if necessary, to support the Fire Department through mutual aid agreements.</i></p> <p><i>The Redwood City Fire Department has concluded that the proposed related Outpatient Center would not result in a noticeable change in the demand for hazardous materials emergency response services in Redwood City.)</i></p> <p>Supplemental Impact Due to Hazardous Waste Generation. The proposed project</p>	LS	No significant impact has been identified; no additional mitigation is required.	NA	LS

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Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
<p>would generate hazardous waste, but would not substantially increase risks of environmental exposure to hazardous waste. Potential dangers due to hazardous waste generation would represent a less-than-significant impact.</p> <p><i>(The proposed project would incrementally contribute to the volume of hazardous chemical waste generated in Redwood City. Most of SHC's medical waste is currently sent to incineration at Integrated Environmental Systems, a regional medical waste disposal facility in Oakland. Project-related medical waste would continue to be shipped to this facility, unless other arrangements are made.</i></p> <p><i>With implementation of the established SHC health and safety control measures described in chapter 7 of this SEIR pertaining to hazardous waste disposal, no additional mitigation would be necessary.)</i></p> <p>Supplemental Impact Related to Physical Safety Hazards. The proposed project would expose individuals, including construction workers, employees, patients, and other site occupants, to on-site safety hazards. However, established safety programs would minimize the potential for physical hazards, and therefore this exposure would represent a less-than-significant impact.</p>	LS	No significant impact has been identified; no mitigation is required.	NA	LS
<p>S = Significant LS = Less than significant SU = Significant unavoidable impact NA = Not applicable</p>				

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
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(Workers engaged in activities that present special hazards would be adequately trained in accordance with SHC's Injury and Illness Prevention Plan requirements. Project compliance with occupational safety regulatory requirements would also serve to minimize the potential risks that any physical hazards could pose. Accordingly, no additional mitigation would be necessary.)

HYDROLOGY AND WATER QUALITY

Supplemental Impact of Increased Risk of Soil Erosion or Contaminant Spills During Project Construction. Excavation required to construct the proposed underground storm water detention vaults would create a potential for on-site soil erosion. Other proposed construction activities could also increase the potential for surface water contamination. On-site erosion could lead to increased turbidity within the downstream Bayfront Canal and Flood Slough, and to increased sediment accumulation within the downstream Douglas Avenue pumping station, Bayfront Channel, Flood Slough, and San Francisco Bay. These possible construction period erosion and contamination effects would be reduced to **less-than-significant levels** with the implementation of the RWQCB and City

LS

No significant impact has been identified; no mitigation is required.

NA

LS

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 - NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
<p>requirements introduced in subsection 8.1.4 (Water Quality).</p> <p>Long-Term Water Quality Effects. The quality of storm water runoff from the Stanford Outpatient Center would be expected to decline in comparison to previous (office/R&D) runoff conditions, due to the anticipated increase in vehicular activity. The resulting incremental degradation of water quality within downstream receiving waters would represent a less-than-significant impact with implementation of the standard RWQCB and City requirements introduced in subsection 8.1.4 (Water Quality).</p>	LS	No significant impact has been identified; no mitigation is required.	NA	LS
<i>LAND USE AND PLANNING</i>				
<p>Population and Housing Growth and Concentration. The 1996 EIR and 1998 SEIR indicated that the added employment generated by the overall Midpoint Technology Park project would induce substantial additional growth and concentration of population in Redwood City, and identified this effect as a <i>significant unavoidable land use impact</i>. The proposed change in land use and occupancy for the four project buildings is expected to result in a reduction in total employment on-site, and thus a slight reduction in the overall Midpoint Technology Park</p>	LS	No significant additional population or housing growth and concentration impact has been identified; no supplemental mitigation is required.	NA	LS

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 - NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
<p>employment population and housing growth impacts identified in the 1996 EIR.</p> <p>Project Inconsistency with Redwood City Strategic General Plan Policies Regarding Land Use Compatibility. The project site is designated <i>Industrial--Research and Development Uses</i> by the <u>Redwood City Strategic General Plan</u> and is zoned <i>IR (Industrial--Restricted)</i> by the <u>Redwood City Zoning Ordinance</u>. The proposed project is consistent with both the General Plan and zoning designations for the site, which allow public or quasi-public uses "operated by a private non-profit education, religious, recreational, charitable, or medical institution" (<u>Redwood City Zoning Ordinance</u>, Article 2, Section 2.83 and Article 17, Section 17.2). Stanford Hospital & Clinics is a non-profit medical institution. Project development, however, could result in the following new land use impacts:</p> <p>The potential aesthetic (rooftop mechanical equipment), air quality (construction dust), traffic (roadway link intersection capacity), and parking impacts identified in chapters 4 (Aesthetics), 5 (Air Quality), and 12 (Transportation, Circulation, and Parking) of this SEIR, unless adequately mitigated, could be inconsistent with <u>Redwood Strategic General Plan</u> Land Use Element Policy L-2</p>	LS	No additional significant land use impact has been identified; no additional supplemental mitigation is required.	NA	LS

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- S = Significant
 - LS = Less than significant
 - SU = Significant unavoidable impact
 - NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
<p>regarding the protection of residential neighborhoods and Policy L-8 regarding "minimiz[ing] negative impacts on nearby land uses"; however, associated supplemental mitigation requirements are described in these SEIR chapters for implementation as conditions of required project approvals. With implementation of these mitigations, such land use compatibility impacts would be less-than-significant.</p> <p>Cumulative Land Use Impacts. The proposed project, together with other feasible development in the immediate vicinity and elsewhere in Redwood City (see subsection 9.1.3 in this SEIR), could contribute to cumulative land use incompatibilities (cumulative air quality and transportation impacts). The specific cumulative impacts associated with these particular impact categories are addressed, and associated supplemental mitigation requirements are described, in corresponding chapters of this SEIR. With implementation of these mitigations, the cumulative land use impacts of the proposed project would be less-than-significant.</p>	LS	No significant additional cumulative land use impact has been identified; no additional mitigation is required.	NA	LS

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- S = Significant
 - LS = Less than significant
 - SU = Significant unavoidable impact
 - NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
<i>HOUSING</i>				
The 1996 Midpoint Technology Park EIR concluded that the potential effects of the overall Technology Park development on the city's residents/job ratio and on citywide demands for new housing units (an additional demand for 418 units), including demands for affordable housing units (an additional demand for 197 units) represented a significant unavoidable impact . The proposed change in project site land use would reduce the overall Midpoint Technology Park employment total (assuming full buildout) and the associated overall residents/job ratio impact, but not to a less-than-significant level.	S	No mitigation specific to these impacts was adopted, and an associated Statement of Overriding Considerations pursuant to CEQA Guidelines section 15126.2(b) (Significant Environmental Effects Which Cannot be Avoided if the Proposed Project is Implemented) was adopted by the City. No additional mitigation is required.	NA	SU
<i>FIRE/EMERGENCY SERVICES AND CHILD CARE</i>				
Project-Related and Cumulative Increases in Fire Protection and Emergency Medical Service Demands. The 1996 Midpoint Technology Park EIR concluded, "Although the project may generate some additional demands, it should not have any significant impacts on the existing fire services." The proposed project land use changes would not change these 1996 EIR findings; however, the proposed Stanford Outpatient Center could be subject to additional on-site physical and	LS	No additional significant project or cumulative impact has been identified; no additional mitigation is required.	NA	LS

S = Significant
 LS = Less than significant
 SU = Significant unavoidable impact
 NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
<p>operational fire protection requirements. However, the proposed project would not require a new or physically expanded fire facilities, nor has the Redwood City Fire Department (RCFD) concluded that the project would impair or interfere with any emergency plan. Therefore, under CEQA, potential project impacts on fire protection and emergency medical service demands are considered less-than-significant.</p> <p>Regarding potential cumulative fire protection and EMS impacts, as development increases throughout Redwood City, the RCFD will require additional personnel, facilities, and equipment (especially for emergency medical purposes), in order to maintain and continue delivery of an acceptable level of service, including adequate response times. Until specific cumulative RCFD facilities expansion needs are identified in terms of size, staffing, equipment, and location, assessment of associated environmental impacts would be highly speculative. As a result, cumulative effects on RCFD fire protection and emergency medical services do not represent an additional (supplemental) significant "environmental" impact under CEQA.</p> <p>Supplemental Child Care Impacts. The proposed project would contribute to the existing child care shortage in Redwood City.</p>	LS	No significant additional environmental impact has been identified, and no mitigation is required under CEQA. Child care services in	NA	LS

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- S = Significant
 - LS = Less than significant
 - SU = Significant unavoidable impact
 - NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
<p>This non-physical impact is considered less-than-significant from an "environmental" CEQA perspective. The City has no adopted policy <i>requiring</i> provisions for child care in new development.</p> <p>The proposed Stanford Outpatient Center project would not include any residential uses; therefore, a substantial increase in local population resulting from the project would not be expected. Also, as described in chapter 10 (Housing) of this SEIR, the proposed project would employ approximately 538 fewer employees than anticipated in the 1996 EIR, resulting in a reduced impact on citywide demands for new housing. Any increase in local population due to Outpatient Center employees requiring child care relocating to Redwood City would not be considered a substantial addition to the population of children, and any such increase in local population would be less than anticipated in the 1996 EIR.</p>		<p>Redwood City are currently private or non-profit rather than public. The City has no General Plan policy or municipal regulation <i>requiring</i> provisions for child care in new development. Under its current policies, the City may consider granting a density bonus to the project, in return for applicant provision of adequate (i.e., consistent with state space requirements) child care space or facilities on the project site; however, the proposed Stanford Outpatient Center project does not require a density bonus because the project involves the renovation of four <i>existing</i> buildings. Also, C/CAG may grant trip credits for child care provisions.</p>		
<p>TRANSPORTATION, CIRCULATION, AND PARKING</p>				
<p>Supplemental Impact 12-1: Project Impact on Broadway/Second Avenue Intersection. During the PM peak hour, project traffic would</p>	S	<p>Supplemental Mitigation 12-1. The applicant shall install all-way stop sign control at the Broadway/Second Avenue intersection, which</p>	Applicant	LS

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- S = Significant
 - LS = Less than significant
 - SU = Significant unavoidable impact
 - NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
reduce the level of service (LOS) and increase individual vehicle delay by more than five (5) seconds at the Broadway/Second Avenue intersection. This change would represent a significant impact . This impact is similar to Impact 3-3 identified in the 1996 EIR.		would achieve LOS D operations at this location under Project Conditions. Implementation of this measure would reduce the impact to a less-than-significant level .		
Supplemental Impact 12-2: Project Impact on Rolison Road Roadway Segment. Project traffic would increase PM peak-hour and daily traffic on Rolison Road south of Second Avenue by more than five percent. Since this segment of Rolison Road currently carries fewer than 3,000 vehicles per day and is therefore operating as a "local street," the increase in traffic due to the project represents a significant impact . This impact is similar to Impact 3-3 identified in the 1996 EIR.	S	Supplemental Mitigation 12-2. The applicant shall implement traffic calming devices to help maintain vehicle speeds at posted limits along Rolison Road south of Second Avenue. The installation of these devices shall be made in accordance with City standards and shall be coordinated with City emergency services (Fire Department). However, implementation of the traffic calming devices, while improving public safety, would not reduce the impact to a less-than-significant level; therefore, the project impact on Rolison Road south of Second Avenue would represent a significant unavoidable impact .	Applicant	SU
Project Impact on Bay Road Roadway Segment. The Fehr & Peers traffic analysis also found that the project would add some traffic to the Bay Road segment that passes by Taft Elementary School. The project-related traffic increase on this roadway segment during the PM peak hour would be five percent, and the daily increase would be four percent. This project-related increase in traffic volume alone, however, does not translate into an immediate	LS	No significant impact has been identified; no mitigation is required.	NA	LS

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 - SU = Significant unavoidable impact
 - NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
<p>safety concern; the roadway design is also an important safety factor. The existing Bay Road crosswalk in front of the school contains an in-pavement lighting system. This lighting system has push buttons that activate flashing lights to warn motorists when a pedestrian enters the crosswalk. With this system already in place to address pedestrian safety at the Bay Road crosswalk serving the school, the project traffic addition would have a less-than-significant safety impact.</p>				
<p>Supplemental Impact 12-3: Project Impact on Congestion Management Program Facilities. The project would increase PM peak-hour traffic volumes on Woodside Road and El Camino Real (County Congestion Management Program facilities) by more than 100 trips, representing a potentially significant impact on these roads. This is a new impact not identified in the 1996 EIR or 1998 SEIR.</p>	S	<p>Supplemental Mitigation 12-3. Prior to Planned Development (PD) Permit Amendment approval, the applicant shall provide a Transportation Demand Management (TDM) plan for project impacts on Woodside Road and El Camino Real that complies with the <i>C/CAG Guidelines for the Implementation of the Land Use Component of the 1999 Congestion Management Program</i>. Implementation of this measure would reduce the impact to a less-than-significant level.</p>	Applicant	LS
<p>Supplemental Project Impacts on Site Access and Internal Circulation. The proposed site access and internal circulation system changes and refinements would not substantially increase traffic hazards or result in inadequate emergency access. The project would therefore have a less-than-significant impact on site access and internal circulation</p>	LS	<p>No significant impact has been identified; no mitigation is required.</p>	NA	LS

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 - SU = Significant unavoidable impact
 - NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
conditions. (The 1996 EIR and 1998 SEIR did not evaluate this impact.)				
Supplemental Impact 12-4: Project Consistency with General Plan Provisions for Alternative Transportation Modes. Since the project site does not currently have bus service, the project has the potential to conflict with <u>Redwood City Strategic General Plan Circulation Element</u> objectives and policies encouraging the use of alternative transportation modes. This potential inconsistency represents a potentially significant impact . This impact is similar to Impact 3-4 identified in the 1996 EIR.	S	Supplemental Mitigation 12-4. Prior to Planned Development (PD) Permit Amendment approval, the applicant shall provide a Transportation Demand Management (TDM) plan as described in <i>Supplemental Mitigation 12-3</i> above, to City and C/CAG satisfaction. The TDM plan shall include measures to encourage use of transit services, coordinated with SamTrans. Implementation of this measure would reduce this impact to a less-than-significant level .	Applicant	LS
Supplemental Impact 12-5: Cumulative With Project Impacts at Woodside Road/Broadway Intersection. Traffic under Cumulative With Project Conditions would cause an unacceptable increase in delay at the Woodside Road/Broadway intersection during the PM peak hour. This delay increase would represent a significant cumulative impact . This impact is similar to Impact 3-2 identified in the 1996 EIR.	S	Supplemental Mitigation 12-5(a). The project applicant shall pay an additional traffic impact fee for the approximately 393 net new PM peak-hour trips generated by the Stanford Outpatient Center project. The traffic impact fee program is planned to include citywide traffic improvement needs, including improvements that would reduce congestion in the Woodside Road corridor and in the area surrounding the project site on Bay Road.	Applicant	See below.
		Supplemental Mitigation 12-5(b). The project applicant shall implement a transportation demand management (TDM) program to reduce the number of drive-alone auto trips	Applicant	See below.

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 - NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		generated by the project (see <i>Supplemental Mitigation 12-3</i>).		
		The combination of these two measures has the potential to reduce the project's contribution to the cumulative impact at the Woodside Road/Broadway intersection to a <i>less-than-significant level</i> . However, until Caltrans commits to implementing the planned improvements at the Woodside Road/Broadway intersection, the project's contribution to the cumulative impact at this intersection would represent a significant unavoidable impact .		SU
Supplemental Impact 12-6: Cumulative With Project Impacts at Broadway/Charter Street Intersection. Traffic under Cumulative With Project Conditions would cause an unacceptable increase in delay at the Broadway/Charter Street intersection during the PM peak hour. In addition, under Cumulative With Project Conditions, traffic volumes at the intersection are expected to satisfy the peak-hour signal warrant. Cumulative With Project Conditions would therefore cause a potentially significant cumulative impact . This impact is a new impact not identified in the 1996 EIR or 1998 SEIR.	S	Supplemental Mitigation 12-6. A traffic consultant selected by and under the direction of the City, and funded by Stanford Hospital & Clinics, shall periodically monitor the intersection in a similar manner as other unsignalized intersections in Redwood City to determine if and when signalization, or other mitigation as determined by the City, would be warranted in the future. The project applicant shall also contribute its fair share, as determined by the City, to the design and installation of the mitigation measure at the time its installation is determined by the City to be necessary.	City/Applicant	LS
		The intersection is expected to operate at LOS B during the PM peak hour under Cumulative		

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 - NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
<p>Supplemental Impact 12-7: Cumulative With Project Impacts at Broadway/Second Avenue Intersection. Traffic under Cumulative With Project Conditions would cause an unacceptable increase in delay at the Broadway/Second Avenue intersection during both the AM and PM peak hours. In addition, under the Cumulative With Project Conditions, the total delay on the minor street (Second Avenue) would satisfy the peak-hour delay signal warrant. Cumulative With Project Conditions would therefore cause a potentially significant cumulative impact. This impact is a new impact not identified in the 1996 EIR or 1998 SEIR.</p>	S	<p>With Project Conditions with installation of a traffic signal (as one example of a feasible mitigation measure). Implementation of this mitigation measure would therefore reduce the project's contribution to the cumulative impact at the Broadway/Charter Street intersection to a less-than-significant level.</p> <p>Supplemental Mitigation 12-7. The applicant shall implement <i>Supplemental Mitigation 12-1</i> (install all-way stop sign control). Implementation of this measure would reduce the project's contribution to this cumulative impact to a less-than-significant level.</p> <p>Alternatively, implementation of either of the following two mitigation measures would similarly reduce the project's contribution to this cumulative impact to a less-than-significant level and would also result in improving intersection operation to an acceptable level of service (LOS D or better under Cumulative Conditions).</p> <p>A traffic consultant selected by and under the direction of the City, and funded by Stanford Hospital & Clinics, shall periodically monitor the intersection in a similar manner as other unsignalized intersections in Redwood City to determine if and when signalization, or other mitigation as determined by the City, would be warranted in the future. The project applicant</p>	Applicant	LS

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- S = Significant
 - LS = Less than significant
 - SU = Significant unavoidable impact
 - NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		<p>shall also contribute its fair share, as determined by the City, to the design and installation of the mitigation measure at the time its installation is determined by the City to be necessary;</p> <p>or</p> <p>The City could have the applicant contribute its fair share, as determined by the City, to the design and installation of a roundabout at this intersection, assuming the roundabout is physically feasible.</p>		
<p>Supplemental Impact 12-8: Cumulative With Project Impacts at Bay Road/Fifth Avenue Intersection. Traffic under Cumulative With Project Conditions would cause an unacceptable increase in delay at the Bay Road/Fifth Avenue intersection during the PM peak hour. In addition, under Cumulative With Project Conditions, traffic volumes at the intersection are expected to satisfy the peak-hour signal warrant. Cumulative With Project Conditions would therefore cause a potentially significant cumulative impact. This impact is a new impact not identified in the 1996 EIR or 1998 SEIR.</p>	S	<p>Supplemental Mitigation 12-8. The project applicant shall pay additional traffic impact fees for the estimated 393 net new PM peak-hour trips generated by the Stanford Outpatient Center project. Implementation of this mitigation measure would reduce the project's contribution to the cumulative impact at the Bay Road/Fifth Avenue intersection to a less-than-significant level.</p>	Applicant	LS
<p>Supplemental Impact 12-9: Cumulative Impact on Rolison Road Roadway Segment. Cumulative With Project traffic would increase</p>	S	<p>Supplemental Mitigation 12-9. The applicant shall implement <i>Supplemental Mitigation 12-2</i> (traffic calming). However, implementation of</p>	Applicant	SU

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 - NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
PM peak-hour and daily traffic on Rolison Road south of Second Avenue by more than five percent. Since Rolison Road carries fewer than 3,000 vehicles per day, the increase in traffic due to the project would represent a significant cumulative impact . This impact is similar to Impact 3-3 identified in the 1996 EIR.		this With Project Condition mitigation would not reduce this Cumulative With Project impact to a less-than-significant level. No feasible additional mitigation has been identified; therefore, this Cumulative With Project impact on Rolison Road south of Second Avenue would represent a significant unavoidable impact .		
Supplemental Impact 12-10: Project Impact on Parking. The project may not have an adequate number of parking spaces, since the anticipated parking supply (no less than 1,116 spaces) would not meet standard parking demand ratios specified by the Institute of Transportation Engineers (ITE) and the City of Redwood City for a typical medical/dental clinic use. This potential for inadequate parking supply represents a potentially significant impact . This impact is a new impact not identified in the 1996 EIR or 1998 SEIR.	S	Supplemental Mitigation 12-10. A <i>parking monitoring program</i> shall be undertaken by a traffic consultant selected by and under the direction of the City and funded by Stanford Hospital & Clinics. The <i>parking monitoring program</i> shall include completion of an initial baseline on-site and off-site (nearby on-street) parking analysis prior to Outpatient Center occupancy, followed by periodic on-site and off-site recounts (twice per year) for a period of two years following full Outpatient Center occupancy, as determined by the City. The residential streets to be included in the off-site parking counts are: <ul style="list-style-type: none"> ▪ Second Avenue--Rolison Road to Bay Street, ▪ Rolison Road--Second Avenue to Fourth Street, ▪ Hoover Street--Second Avenue to Fourth Street, ▪ Broadway--Second Avenue to Fourth Street, and 	Applicant/City	LS

S = Significant
LS = Less than significant
SU = Significant unavoidable impact
NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		<ul style="list-style-type: none"> ▪ Page Street--Second Avenue to Fourth Street. <p>Simultaneously with the parking counts, field observations shall be conducted at adjacent commercial sites, residential areas, and Andrew Spinas Park to determine if Outpatient Center employees or patients are parking in these areas. If parking demand in these adjacent areas increases by 15 percent or more over the base line surveys, consultations between City staff and the project applicant, based on the field observation data, shall be conducted to decide whether the increased parking demand is due to Stanford Outpatient Center activities or to other development in the area.</p> <p>If the on-site parking demand exceeds specified occupancy levels, or if a 15 percent increase or more in spillover parking into adjacent areas is determined to result from Outpatient Center activities, the applicant shall provide additional on-site parking (e.g., through valet parking and/or installation of additional parking facilities [rather than a four-story parking structure, as anticipated in the 1996 EIR] at one to three possible on-site locations, as illustrated on Figures 12.11 and 12.12 of this SEIR), subject to review and approval by the</p>		

S = Significant
 LS = Less than significant
 SU = Significant unavoidable impact
 NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
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Redwood City Traffic Engineer and Redwood City Planning Commission.

Implementation of this measure would reduce the impact to a ***less-than-significant level***.

UTILITIES

Supplemental Impact Due to Increased Water Demand. The proposed change in land use would not be expected to significantly affect existing City water system supplies or operations, even though the City is currently using more than its contractual allocation from the SFPUC. The City expects that a combination of excess SFPUC supply and recycled water use will be adequate to meet projected City demand for water through the year 2030, including the minor increases in demand expected to result when existing buildings are converted to new uses, such as proposed for the project site.

LS

No significant project or cumulative impact has been identified; no supplemental mitigation is required.

NA

LS

The proposed project is creating minimal new space (e.g., two lobbies and an enclosed walkway), and its projected increase in water demand is equivalent to approximately ten single-family homes.

Supplemental Impact 13-1: Increased Peak Wastewater Flows in the Local Fair Oaks

S

Supplemental Mitigation 13-1. The project applicant's engineer shall work with FOSMD

Applicant

LS

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- LS = Less than significant
- SU = Significant unavoidable impact
- NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
<p>Sewer Maintenance District (FOSMD) Collection System. It is estimated that the proposed Stanford Outpatient Center would increase peak flows in existing collector sewers in Douglas Avenue and in Barron Avenue by approximately two percent over flow rates projected upon build-out of the Midpoint Technology Park. Since these lines were already operating substantially over their design capacities before development of the Technology Park, these additional project-related flows could represent a <i>potentially significant project and cumulative impact.</i></p>		<p>and the San Mateo County Engineering Department to re-evaluate existing peak flow conditions in the local collection network, particularly Lines 100 and 200, to determine if peak flows expected to be generated by the proposed project changes would result in total flows exceeding adopted operational and/or pipe-flow criteria. In the event FOSMD determines that specific collection system improvements are required, the project applicant would contribute its fair share toward the design and construction of these improvements by the County. Implementation of these measures would reduce the identified impact to a <i>less-than-significant level.</i></p>		
<p>Supplemental Impact 13-2: Increased Wastewater Discharges to Redwood City Facilities. Preliminary calculations indicate the proposed project changes would increase FOSMD flows to the Redwood City collection system by approximately 32,800 gpd, which could exceed FOSMD's current conveyance and treatment allocation. This would represent a <i>potentially significant project and cumulative impact.</i></p>	S	<p>Supplemental Mitigation 13-2. The project applicant shall be required to:</p> <p>(a) Coordinate with FOSMD to identify and implement off-site measures designed to reduce existing wastewater flows originating from other properties, thereby freeing up the capacity needed to accommodate the proposed Stanford Outpatient Center's increased wastewater production, and</p> <p>(b) Pay its fair share toward FOSMD's acquisition from Redwood City of any additional sewer capacity required for the project.</p>	Applicant	LS

S = Significant
 LS = Less than significant
 SU = Significant unavoidable impact
 NA = Not applicable

Impacts	Potential Significance Without Mitigation	Mitigation Measures	Mitigation Responsibility	Potential Significance With Mitigation
		Implementation of measures (a) and (b) above would ensure that the identified project and cumulative sewer impact would be limited to a <i>less-than-significant level</i> .		
Supplemental Impacts on Solid Waste Service. The proposed project land use changes would increase demands for solid waste collection and disposal services. This increase and total would not represent an inordinate amount of solid waste for the project size (i.e., would not constitute a rate inconsistent with adopted land use plans, policies, or regulations) and could be adequately served by landfills with sufficient capacities to accommodate both the project and anticipated future solid waste disposal needs. Therefore, project and cumulative impacts on solid waste service are considered <i>less-than-significant</i> .	LS	The proposed Stanford Outpatient Center would be subject to the recycling program identified in the 1996 EIR (Certified Mitigation 7-2). No additional significant project cumulative impact has been identified; no supplemental mitigation is required.	NA	LS

S = Significant
 LS = Less than significant
 SU = Significant unavoidable impact
 NA = Not applicable

3. DESCRIPTION OF PROJECT CHANGES

3.1 SETTING

3.1.1 Regional Location

As illustrated on Figure 3.1 (Project Location), the proposed project site is located at the northern edge of the developed portion of Redwood City, on the inland side of U.S. Highway 101 (Bayshore Freeway). U.S. 101 provides regional access to the approximately 11.3-acre project site via the Woodside Expressway (State Highway 84) interchange to the west and the Marsh Road interchange to the east. Local roadway access is provided by Broadway (from Woodside Expressway) and Page Road/Second Avenue (from Marsh Road).

3.1.2 Local Setting

The project vicinity is shown on Figures 3.1 (Project Location) and 3.2 (Project Vicinity--Aerial Photograph). The Stanford Outpatient Center project would be developed within the boundary of the existing Midpoint Technology Park, specifically the northeastern portion of the business park comprised of four existing buildings at 420, 430, 440, and 450 Broadway and their adjacent parking areas. The existing Midpoint Technology Park campus, which is shown on Figure 3.2, encompasses approximately 48.4 acres. Broadway, an east-west oriented arterial street, bisects the campus. The northeastern portion of the campus proposed for conversion to Stanford Outpatient Center use--i.e., the "project site"--totals approximately 11.3 acres, and is shown on Figures 3.3 (Project Site--Aerial Photograph), 3.4 (Project Site--Existing Site Plan) and 3.5 (Project Site--Existing Building Elevations). As shown on Figure 3.3 and 3.4, the proposed Outpatient Center project site is bounded by U.S. 101 on the north, Rolison Road on the east, Broadway on the south, and a 9.3-acre portion of the Midpoint Technology Park on the west.¹

Existing land uses surrounding the project site are illustrated on Figure 3.2 and include:

To the North: U.S. Highway 101 (Bayshore Freeway);

¹*Note:* The directions (north, east, south, west) used in this document are the "true" directions that correspond with the orientation of the maps, illustrations, and project plans included herein; i.e., this document uses the same directional adjectives as the project application materials submitted to the City of Redwood City in order to maintain consistency with the various project-specific documents and submittals that City staff will be reviewing. *References to traffic flow (e.g., chapter 12), however, describe roadways in common regional nomenclature such as "U.S. 101 North" and "U.S. 101 South."* For example, common perception could conclude that U.S. 101 runs in a north-south direction adjacent to the project site; however, in the project vicinity, U.S. 101 truly runs west-east. Traffic engineering studies typically refer to "101 North" and "101 South" in descriptions of the regional transportation network, with descriptions of other roadways based on the general north-south direction of the highway; therefore, because traffic flow calculations are directly tied to *regional* traffic models, descriptions of *traffic flow direction* in this document correspond with the "U.S. 101 North/U.S. 101 South" assumption.

Figure 3.1. Project Location

Figure 3.2. Project Vicinity Aerial Photograph

Figure 3.3. Project Site--Aerial Photograph

Figure 3.4. Project Site--Existing Site Plan

To the East: the immediately adjacent Broadway Towers Apartments complex (seven stories, formerly the Mariposa Apartments) and associated partially covered parking area (at-grade carports) between Rolison Road, Second Avenue, Broadway and U.S. 101; and east of Second Avenue, the Friendly Acres neighborhood, a single-family residential area that continues east to Marsh Road at the Redwood City/Menlo Park border;

To the South: across Broadway--an approximately 27.8-acre portion of the Midpoint Technology Park, Andrew Spinass Park (tot lot, basketball court, tennis courts, picnic area), and Redwood City Fire Station No. 11; and east of Second Avenue, the Fair Oaks residential neighborhood; and

To the West: the adjacent 9.3-acre portion of the Midpoint Technology Park west of Broadway.

3.1.3 Existing Site Characteristics

As illustrated on Figures 3.3 (Project Site--Aerial Photograph) and 3.4 (Project Site--Existing Site Plan), the 11.3-acre project site is developed with an array of four adjacent office buildings and associated paved areas and landscaping. The paved areas include surface parking, pedestrian pathways and courtyards, and a full basketball court. Landscaping features include a central landscaped area facing Broadway around which the four buildings are arrayed, including turf, pavement features, trees, and other ornamental landscaping. The project site is relatively flat, with a slight downward slope toward the northeast.

The four existing on-site office buildings are currently vacant. They include two 3-story structures--420 and 450 Broadway--fronting on Broadway, and two adjacent 4-story structures--430 and 440 Broadway--located towards center of the site. The existing office building elevations are illustrated on Figure 3.5. As shown, the architectural design of the four buildings is consistent, comprised of concrete frame construction clad with a glass and articulated metal panel "curtain wall" system. The buildings are capped by a metal panel clad parapet incorporating the same articulated panel module, concealing existing rooftop mechanical equipment. The four buildings are visually linked by similar architectural design characteristics and visually unifying pedestrian features, decorative paving, and planting.

Existing landscaping includes deciduous, broad-leafed street trees lining the Broadway frontage, and similar tree species accenting the outside periphery of the four buildings.

3.2 APPLICANT'S PROJECT OBJECTIVES

The applicant's project objectives, as described in the "Initial Study Questionnaire" included with the project application to the City, are to:

1. Provide modern, state-of-the-art facilities [in Redwood City] for outpatient medical services and related teaching and research;
2. Maximize cost-effectiveness of outpatient services and patient convenience by combining a variety of outpatient programs in one location, along with associated patient service facilities; and

Figure 3.5. Project Site--Existing Elevation. 11 x 17 fanfold. page one

Figure 3.5. Project Site--Existing Elevation. 11 x 17 fanfold. page two

3. Ensure safe and convenient site access and circulation for patients and employees.

3.3 PREVIOUS CEQA DOCUMENTATION

The approximately 11.3-acre project site is part of the overall 48.4-acre Midpoint Technology Park office and R&D campus. A Final Environmental Impact Report for the Midpoint Technology Park was certified by the Redwood City Planning Commission on December 17, 1996 (1996 EIR, State Clearinghouse #96072019). The Midpoint Technology Park project was approved by the Redwood City Planning Commission in 1997. The approved project incorporated mitigations identified in the 1996 EIR and included a total of 14 buildings comprised of the renovation of eight existing buildings and construction of six new buildings, for a total of 1,010,658 square feet of office and R&D uses. Construction of the Midpoint Technology Park began in 1998.

Subsequently, in 1998, the Midpoint Technology Park owner proposed an addition of approximately 60,000 more square feet of floor area to one of the approved, but not yet constructed, project buildings at 415 Broadway. To achieve CEQA compliance for this project modification, the Redwood City Planning Commission on December 1, 1998 certified a supplement to the 1996 EIR--the Final Supplemental Environmental Impact Report: Midpoint Technology Park Expansion (1998 SEIR, also State Clearinghouse #96072019)--and the addition was approved by the Planning Commission. Neither the initially approved building at 415 Broadway (47,000 square feet), nor the proposed addition (60,000 square feet), was ever constructed.

The four existing Midpoint buildings at 420-450 Broadway now proposed for use by the Stanford Outpatient Clinic project were constructed between 1998 and 2000 for the @Home Corporation, which vacated the buildings in 2002. Since that time, portions of the buildings have been intermittently occupied; however, all four buildings are now completely vacant.

Stanford Hospital & Clinics submitted an application for Environmental Review to the City of Redwood City on June 1, 2005 for the current Outpatient Center proposal. Additional City and other jurisdictional approvals necessary to implement the Outpatient Center project are identified in section 3.6 herein, "Required Jurisdictional Approvals."

3.4 PROPOSED PROJECT CHANGES--STANFORD OUTPATIENT CENTER PROJECT

3.4.1 General Renovation and Conversion Program

The project applicant, Stanford Hospital & Clinics, proposes to provide the Redwood City community with modern, state-of-the-art, outpatient medical services primarily by relocating existing specialty medical clinics from the Stanford University Medical Center in Palo Alto to Redwood City. To accommodate the relocation, the applicant proposes to renovate and convert four of the 14 existing commercial buildings located within the Midpoint Technology Park office and R&D campus to create a new Stanford Outpatient Center. The four existing buildings--420, 430, 440, and 450 Broadway--contain approximately 90,840 square feet, 86,904 square feet, 96,344 square feet, and 86,418 square feet (360,500 total square feet) of floor area, respectively. Two of the buildings (430 and 440 Broadway) are four stories in height, and the other two (420 and 450 Broadway) are three stories in height (see Figure 3.5).

The specific sequence of the renovation of the four buildings for medical clinic use has not yet been determined. The applicant has indicated that, initially, two of the four buildings (440 and 450 Broadway) would be converted to medical clinic space, including clinical research functions related to the outpatient health care functions, and two (430 Broadway initially and 420 Broadway later) may be used partially for administrative support uses, such as finance, billing, and human resources, and partially for medical clinic space. Per Redwood City Zoning Ordinance Section 17.3d, any office use on-site must total less than 25 percent of the gross floor area (i.e., 90,125 of the total 360,500 square feet on-site) and must serve the medical clinic uses. The applicant anticipates that, ultimately, all four buildings would be fully occupied with outpatient medical clinics. Urgent care, emergency room, and in-patient hospital services would not be provided.

The four-building complex would include space devoted to the following specific Stanford Outpatient Center medical clinic programs and services:

- "Core Programs," including a Musculoskeletal Center, Spine Center, Sleep Disorder Center, Outpatient Surgery Center, Imaging Center, Dermatology Center, and Pain Management Center;
- "Clinical Outpatient Services," including a Physical and Occupational Therapy Center, and a Laboratory;
- "Patient Services," including an Educational Library, In-House Conference Center, and Cafeteria;
- "Central Support Services," including Materials Management, Sterile Processing, and Environmental Services; and
- "Administrative Support Services," including Registration, Information Technology, and Medical Records.

Each of the Core Programs would include teaching and clinical research functions in addition to its outpatient health care function. To the extent that other existing programs are relocated to Redwood City from the Stanford University Medical Center in Palo Alto, or new programs are initiated in the future at the proposed Redwood City Outpatient Center, the applicant states that such programs would be limited to outpatient services similar to those described above.

3.4.2 Proposed Architectural, Signage, and Landscaping Modifications

The letter-number coding (A-1, A-2, etc.) used in the following descriptions corresponds to the letter-number indications shown on Figure 3.6 (Proposed Modifications--Site Plan).

A-1 and A-5. Patient Drop-Off Area, Covered Walkway, and New West Entrance Main Lobby at 440-450 Broadway (see Figures 3.6, 3.7, and 3.8). A new outdoor patient drop-off area (A-1) would be created at the northwest corner of the four-building array. The drop-off area would include a new entry canopy (A-1). A new, approximately 2,100-square-foot, three-story main building lobby (A-5) would also be constructed, connecting 440 and 450 Broadway. New roofing would be added to an existing walkway leading from the drop-off area to the west entrance of the new lobby. The new lobby would also enclose the existing third-story pedestrian

bridge between 440-450 Broadway. Figure 3.8 depicts the proposed west drop-off area and west entrance lobby. The designs of the new entry canopy, main lobby and walkway covering would be subject to City Architectural Review Committee review and Planned Development Permit Amendment review and approval, pursuant to Article 46 (Planned Development Permits) of the Redwood City Zoning Ordinance.

A-3. Parapet Signs at 430, 440, and 450 Broadway (see Figures 3.6, 3.7, and 3.9). Signs would be added to the parapets at 430, 440, and 450 Broadway (A-3) identifying the Outpatient Center from the 101 Freeway. The three added signs would be subject to the Redwood City Sign Ordinance (City Code of Redwood City, Ch. 3, Article II), including City design review and approval of an overall signage program to be submitted by the applicant.

A-4. Monument Signs (see Figures 3.6, 3.7, and 3.10). Monument signs would be added to the two existing vehicular entry-exit locations along Broadway, identifying the Outpatient Center. The two signs would be subject to City design review and approval pursuant to the Redwood City Sign Ordinance.

A-6. New East Entrance Lobby at 420-430 Broadway (see Figures 3.6, 3.7, and 3.11). A new, approximately 1,600-square-foot one-story east entrance lobby (A-6) would be constructed, connecting 420 and 430 Broadway. The design of the new lobby would be subject to City Architectural Review Committee review and Planned Development Permit Amendment review and approval.

A-7. Central Courtyard/Dining Terrace and Trellis (see Figures 3.6, 3.7, and 3.12). A new outdoor courtyard/dining terrace covered by a trellis structure would be located on the southern side of 440 Broadway (A-7). The trellis structure and dining terrace would be subject to City Architectural Review Committee review and Planned Development Permit Amendment review and approval.

A-8 and A-17. Additional Rooftop Mechanical Systems and Screening Additions (see Figures 3.6, 3.7, and 3.12). The project includes adding additional rooftop mechanical (HVAC) equipment (A-8) and associated rooftop screening additions (A-17) atop each of the four buildings 420, 430, 440 and 450 Broadway. The screen wall modifications design would be subject to City Architectural Review Committee review and Planned Development Permit Amendment review and approval.

A-9 and A-16. Covered Loading Dock and New Enclosed Corridor (see Figures 3.6, 3.7, and 3.12). A new roof would be constructed over the existing loading dock (A-9) in the rear parking area between 430-440 Broadway, and a one-story enclosed pedestrian connection/corridor (A-16) would be constructed between 430-440 Broadway immediately south of the loading dock. Both of these modifications would be subject to City Architectural Review Committee review and Planned Development Permit Amendment review and approval.

A-10 and A-15. Landscaping Modifications (see Figure 3.6). Existing on-site landscaping would be modified to accommodate the new construction and visually distinguish and enhance the new outpatient complex. Modifications would include a re-landscaped "campus quad" on the project's Broadway frontage between 420 and 450 Broadway, new and replacement trees and other plantings throughout the periphery of the four buildings (A-10), the dining terrace (A-7), new decorative paving, and new seating areas. Existing trees lost due to the new construction, including a new underground retention basin, parking modifications, and landscaping

modifications, would be replaced with new trees and plantings at the same locations and/or elsewhere on-site. These landscaping and parking layout changes would be subject to City Architectural Review Committee review and Planned Development Permit Amendment review and approval.

A-11 through A-14. Emergency Generator Additions and Modifications (see Figures 3.6 and 3.7). The proposed project would include the addition of two new emergency generators and associated screening (A-11 and A-13), relocation of one existing emergency generator (A-12), and retention of one existing generator at its current location (A-14). The generator modifications, including their screening provisions, materials, and noise abatement specifications, would be subject to City review and approval. In addition, on-site fuel storage requirements for the generators would be subject to City requirements (see section 3.4.7, Proposed Emergency Generator Fuel Storage, herein).

The following additional exterior project components would also be included:

Building Function Signs. Identification signs would be installed at or near the curbside drop-off point and above the front doors of each of the four buildings, subject to City review and approval pursuant to the Redwood City Sign Ordinance.

Security Cameras. Exterior security cameras would be installed on-site.

3.4.3 Proposed Parking Modifications

The proposed project includes modifications to the arrangement of surface and underground parking stalls at 420-450 Broadway to accommodate the new patient drop-off area, additional handicap accessible parking, and the loss of some garage parking under the Radiology Department. The existing on-site total of approximately 1,175 parking spaces would decrease to an amount not less than 1,116 spaces.

The applicant's parking consultant has determined that 1,116 total parking spaces would be sufficient to meet the anticipated peak parking demand of the Outpatient Center, based upon experience at similar Stanford medical clinic facilities in other Bay Area communities. However, the parking per gross floor area ratio provided by this parking total--3.1 spaces per 1,000 square feet--would be lower than the 5.0 spaces per 1,000 square feet specified in the City Code of Redwood City for typical medical/dental clinic uses. Under the City Code, a Use Permit would be required to allow this proposed variation from the City's normal parking requirement. Chapter 12 of this SEIR (Transportation) includes an independent evaluation of the adequacy of the proposed project parking provisions.

3.4.4 Proposed Storm Water Retention System Modifications

A-2. Underground Storm Water Retention Basins (see Figure 3.6). Two underground storm water retention basins (A-2) would be constructed beneath the existing paved surface parking area, one in the northeast quadrant of the site and one in the northwest quadrant of the site. The new basins would continue to comply with the existing overall Midpoint Technology Park Planned Development Permit (1997) condition prohibiting an increase in the rate and quantity of surface water runoff.

When the 420-450 Broadway buildings were originally developed as part of the overall office building campus, it was anticipated that the City's nearby Douglas Avenue pumping station, which is responsible for conveying storm water across U.S. 101, would be incapable of handling the added storm water created by the office park increase in site imperviousness. As a 1997 condition of project approval, the office park was therefore required to limit off-site storm water discharge to pre-development levels. To meet this requirement, the original project drainage design included installation of flow control devices in the two manholes at the points of discharge from the site to limit off-site flow. The limitation on off-site flow in turn created an on-site parking area flooding condition which occurs during most storm events.

Since an upgrade to the City's Douglas pumping station was anticipated, the original storm drainage system flow discharge limitation devices were intended as an interim solution, intentionally allowing the extra storm water to be detained on-site by means of an interim surface storage in the parking lot along the north edge of the property.

As part of the currently-proposed site modifications for the Outpatient Center project, the applicant is considering installation of two underground storm water retention basins under a portion of the existing parking lot to reduce parking lot flooding. The design of the added retention facilities has not yet been finalized, but would be based upon review and approval by the City to ensure that impacts on the local storm drainage system would be beneficial.

3.4.5 Proposed Mechanical Equipment Modifications

To meet the special needs of the proposed Outpatient Center use, the applicant proposes to remove and replace most of the existing office building mechanical equipment within the screened areas on the four building roofs with new mechanical equipment. New mechanical air conditioning units would supply approximately twice as much treated air as the existing equipment and meet higher filtration standards. These mechanical equipment upgrades are described by the applicant as necessary to comply with State Office of Health Planning and Development (OSHPD 3) requirements for licensed clinics, as set forth in the 2001 California Building Code.¹

The proposed new rooftop mechanical system components would consist of evaporative-condenser type air handling units, which would be comprised of supply and return fans, filters, and evaporative chillers. New high-efficiency condensing boilers located on the roof of each building would provide the hot water for building heating. New high-efficiency steam boilers would be located on the roof of 430 Broadway to supply steam for sterilization. It is anticipated that, with the exception of some ductwork, the new rooftop mechanical equipment would fit within the areas defined by the existing equipment screens. Ductwork and any new equipment that does not fit within the existing screens would be enclosed by new screens that would match the design, material, and color of the existing equipment screens.

Other additional equipment required to complete the new mechanical system would be located inside the existing parking garage underneath the four buildings. This additional equipment would consist of medical air and vacuum pumps, a central medical gas cylinder storage area,

¹ The State Office of Health Planning and Development (OSHPD) is responsible for writing health regulations pertaining to licensed medical clinics. The medical clinic regulations are identified in the California Building Standards Code as "OSHPD 3 requirements."

the distribution system for medical gases, a steam condensate receiver, steam condensate pumps, and a de-ionized water system to supply the steam boilers.

3.4.6 Proposed Emergency Generator Modifications

There are currently two 400-kW, 277/480-volt emergency generators supporting the four buildings (see Figure 3.4)--one supports 440 and 450 Broadway, and the other supports 420 and 430 Broadway. The proposed Outpatient Center use would include the following modifications in emergency power capacity:

420 Broadway: The existing 400-kW, 277/480-volt emergency generator would remain in its current location on the south side of the building.

430 Broadway: A new 200-kW, 277/480-volt emergency generator would be added to support this building. The new generator would be located in the landscaped area on the east side of the building, near the loading dock. This new generator would be approximately 10 feet long by 4 feet wide by 8 feet high.

440 Broadway: The existing 400-kW, 277/480-volt emergency generator currently located on the north side of 450 Broadway would be relocated to support this building. The generator would be located in the landscaped area on the east side of the building, near the loading dock.

450 Broadway: A new 600-kW, 277-volt emergency generator would be added to support the emergency needs of Surgery and other clinical services located in this building. The new generator would be located on the north side of the building, in the place currently occupied by the existing generator that would be relocated to serve 440 Broadway. This generator would be approximately 18 feet long by 8 feet wide by 12 feet high, including its weatherproof enclosure.

Each generator would be tested weekly in accordance with National Fire Protection Association (NFPA) 110 Standards for a Level 1 Emergency and Standby Power System. A Level 1 system is defined as an installation where failure of equipment to perform could result in loss of human life or serious injuries.

In formulating the scope of this SEIR, it was determined that: (1) because two of the emergency generators are already on the site, they will not contribute to any increase in existing noise levels, and (2) under the noise mitigation requirements established in the 1996 EIR, the two new emergency generators will be fitted with noise reduction technology, including critical grade silencers, designed to ensure compliance with Redwood City's noise ordinance (as required by the 1996 EIR).

3.4.7 Proposed Emergency Generator Fuel Storage

The two existing 400-kW emergency generators (described in subsection 3.4.6 above) include fuel storage tanks (often called base tanks) that contain enough fuel to enable operation for 24 hours in the event of a major power outage. The fuel tanks are integral parts of the generators, and are located above ground.

The new 600-kW emergency generator and the new 200-kW generator (described in subsection 3.4.6 above) would also include fuel storage tanks with capacities to permit 24 hours of

operation. These fuel storage tanks would also be integral parts of the new generators, and would be located above ground.

3.4.8 Proposed Utility Connections

The proposed project would also require construction of modified and additional underground utility connections (e.g., water, sewer, power) to existing main lines.

3.4.9 Proposed Outpatient Center Daily Operational Characteristics

The applicant has described the following anticipated project operational characteristics:

At full medical clinic operation (all four buildings), the Outpatient Center would house approximately 134 doctors (all Stanford University Medical School faculty); 134 Stanford University medical residents, fellows and students (in combination, one per doctor); and 402 other staff members such as nurses, assistants, and maintenance workers (3 per doctor). The total anticipated maximum staffing on any given day would be approximately 670.

Based on statistics compiled for each of seven existing Stanford clinics in other Bay Area communities,¹ the proposed Outpatient Center is estimated to accommodate up to approximately 938 scheduled patients (7.0 per doctor) and 94 unscheduled patients (e.g., for the laboratory, pharmacy, and health library), for a *maximum* total of about 1,032 patients per day. It is estimated that, on average, the Center would serve approximately 777 scheduled patients (5.8 per doctor) and 78 unscheduled patients, for an *average* total of about 855 patients per day.

The proposed Outpatient Center medical clinics would be open on weekdays only. The majority of patients would be seen by appointment between 8:30 AM (first appointment) and 5:00 PM (last appointment at 4:30 PM). The first patients undergoing outpatient surgery would report at 7:00 AM, and the last patients recovering from outpatient surgery would leave at 6:00 PM. The Sleep Center would be open 24 hours a day for those patients who would remain overnight for clinical observation. Unscheduled patient visits would include users of the health library, laboratory, and pharmacy. No emergency room, urgent care, or in-patient hospital facilities would be provided.

Based on statistics compiled by Stanford Medical Center at its other Bay Area facilities,² Thursday would typically have the most daily appointments (an average of approximately 7.0 patients per doctor), and Friday would typically have the fewest daily appointments (an average of about 4.6 patients per doctor). An overall average appointment rate of 5.8 patients per doctor per day would be expected. Doctors performing outpatient surgery on a particular day, due to the length of the procedure, would typically see fewer patients than usual on that day.

Based on the above statistics, approximately 44 percent of the daily appointments at the proposed Redwood City Outpatient Center would be expected to occur between 9:00 AM and

¹Stanford Medical Center, data compiled from September 2004 through February 2005, and September 2003 through February 2004.

²Stanford Medical Center, data compiled from January 24, 2005 through February 4, 2005 (Monday through Friday, 2-week period).

12:00 PM, and approximately 38 percent between 1:00 PM and 4:00 PM. The typical scheduled patient visit would last approximately 45 minutes: 15 minutes for parking and walking to/from the car, 15 minutes waiting, and 15 minutes in the examination room.

3.5 ANTICIPATED PROJECT CONSTRUCTION SCHEDULE

Stanford Hospital & Clinics anticipates that the proposed changes to the Midpoint Technology Park necessary to develop the Stanford Outpatient Center would consist of an initial phased build-out of three of the buildings (430, 440, and 450 Broadway) beginning construction in 2006 and completing in 2008, with build-out of the fourth building (420 Broadway) to follow in a future phase. As required under the conditions of approval adopted in 1997 for the overall Midpoint Technology Park, all construction would occur between 7:00 AM and 6:00 PM Monday through Friday, and 9:00 AM and 6:00 PM Saturday.

3.6 REQUIRED APPROVALS

3.6.1 Required City of Redwood City Approvals

Implementation of the project would require the following City approvals:

(a) *CEQA Compliance:* Prior to any formal action on the project, the City must first certify this Supplemental Environmental Impact Report and determine that all other applicable CEQA documentation requirements have been met.

(b) *Planned Development (PD) Permit Amendment:* A PD Amendment would be required to allow the proposed new lobbies, covered walkway, sign modifications, rooftop screen walls, covered loading dock/new corridor, relocated and new emergency generators, landscaping modifications, and other proposed exterior site and building modifications. The City's PD Amendment approval process would include Architectural Review Committee (ARC) review and recommendations (to the Planning Commission) regarding these proposed modifications.

(c) *Use Permit:* A Use Permit would be required to allow a proposed variation from the City's parking requirement for medical facilities (Article 30.4) and an expansion of the existing outdoor emergency generator system.

(d) *Other Required City Approvals:* Project development is also expected to require new City approvals for additional grading permit, building permit, water and sewer hook-ups, and other ministerial actions.

3.6.2 Other Required Approvals

Implementation of the project is also expected to require one or both of the following approvals from other jurisdictions:

(a) *City/County Association of Governments of San Mateo County (C/CAG) Approvals:* The project would require approval of a Transportation Impact Analysis (TIA) by C/CAG in its designated role as the County's Congestion Management Agency.

(b) *San Francisco Bay Regional Water Quality Control Board (RWQCB) Approvals:* The applicant would be required to file a *Notice of Intent* and a *Storm Water Pollution Prevention Plan (SWPPP)* in accordance with National Pollution Discharge Elimination System (NPDES) requirements.

(c) *San Mateo County Approvals:* A Hazardous Materials Business Plan (HMBP) would need to be approved by the San Mateo County Department of Environmental Health (SMCDEH).

(d) *Bay Area Air Quality Management District (BAAQMD) Approvals:* The project would require BAAQMD permits for new generators.

Figure 3.6. Proposed Modifications--Site Plan (11 x 17)

Figure 3.6. Proposed Modifications--Site Plan continued

Figure 3.7. Proposed Modifications--Elevations (11 x 17)

Figure 3.7. Proposed Modifications--Elevations continued

Figure 3.8. Proposed Modifications--West Lobby

Figure 3.9. Proposed Modifications--Signage Details

Figure 3.10. Proposed Modifications--Signage Details

Figure 3.11. Proposed Modifications--East Lobby

Figure 3.12. Proposed Modifications--Courtyard and Loading Dock

4. AESTHETICS (VISUAL FACTORS)

This SEIR chapter describes the aesthetic implications of the proposed Stanford Outpatient Center, focusing on associated changes in the 1996 Midpoint Technology Park EIR project that may result in significant new or substantially changed visual impacts or mitigation needs.

4.1 SETTING

4.1.1 Project Site Visual Characteristics

As illustrated on Figure 3.3, the 11.3-acre project modification site, at the northeast corner of the 48.4-acre Midpoint Technology Park site, is generally flat. The four existing office buildings include two 3-story structures--420 and 450 Broadway--fronting on Broadway, and two adjacent 4-story structures--430 and 440 Broadway--located towards center of the site. The four on-site buildings are visually linked by similar architectural design characteristics and intervening pedestrian and landscaping elements (visually unifying pedestrian features, decorative paving, integrated planting, etc.).

The architectural design of the four buildings is consistent, comprised of concrete frame construction clad with a glass and articulated metal panel "curtain wall" system; the separation between each floor is delineated with exposed concrete spandrels painted to match the white mullions and rooftop equipment screens. The buildings are capped by a metal panel clad parapet incorporating the same articulated panel module, and concealing existing rooftop mechanical equipment. Existing landscaping includes deciduous, broad-leaved street trees lining the Broadway frontage, and similar tree species accenting the outside periphery of the four buildings.

Adjacent parcels to the west and on the opposite side of Broadway contain other Midpoint Technology Park one- and two-story buildings and associated similar surface parking provisions and landscaping treatments.

The adjacent parcel to the east contains the seven-story Broadway Towers apartment building (previously the Mariposa Apartments) fronting on Second Avenue between Broadway and Highway 101. The "podium" style, R-5 (Multi-family High-Density) apartment structure includes six stories of residential apartments atop a one-story, sub-grade parking level.

4.1.2 Surrounding Vantage Points

(a) Broadway Towers Apartments. The eastern façade of the easternmost project structure at 420 Broadway is approximately 225 feet from the western façade of the adjacent Broadway Towers apartment building. The seven-story apartment structure is oriented on a north-south axis, parallel to the east property line of the project site; therefore approximately half of the Broadway Towers residential units have views directly towards or over the 11.3-acre project site--i.e., the four existing three- and four-story project structures and surface parking area.

(b) U.S. Highway 101. U.S. Highway 101 (the Bayshore Freeway) forms the north boundary of the 48.4-acre Midpoint Technology Park campus, including the 11.3-acre project site. The highway provides direct views of the rear, northern edge of the Midpoint campus, including the rear elevations of the various three- and four-story building clusters and intervening surface parking areas which comprise the north half of the campus between Broadway and the freeway. As illustrated on Figure 3.2 (Project Vicinity--Aerial Photograph), there are a total of four Midpoint Technology Park building clusters along the freeway edge; two of those four building clusters comprise the project site.

(c) Broadway. As illustrated on Figure 4.1 (Project Site--Aerial Photograph), Broadway functions as a central spine traversing the 48.4-acre Midpoint Technology campus, providing primary vehicular access to each campus component on each side of the route via a series of similar and visually unifying entrance/exit driveways along an approximately 3,000-foot segment of Broadway. This 3,000-foot segment of Broadway provides direct views into all components of the campus fronting along both sides of the route, including the 11.3-acre project site.

The 11.3-acre project site portion of the campus includes approximately 1,300 feet of frontage along the north side of Broadway. As illustrated on Figure 4.1 (Project Site--Aerial Photograph), the four project buildings--420 through 450 Broadway--are configured in a U-shaped array oriented towards the Broadway frontage, around a landscaped commons.

4.2 PERTINENT PLANS AND POLICIES

4.2.1 Redwood City General Plan

The Redwood City Strategic General Plan contains the following policy directly pertinent to consideration of the aesthetic impacts of the proposed project changes:

- *Residential neighborhoods should be protected from the encroachment of incompatible activities or land uses which may have a negative impact on the residential living environment.* (Land Use Policy L-1, page 6-5)

4.2.2 Other City-Adopted Policies

In addition, the Redwood City City Council adopted the following relevant policy on September 10, 2001:

- *It is the policy of the City of Redwood City that in the design of public and private projects, high priority be given to creating comfortable, enjoyable, and aesthetically pleasing public spaces.*

4.2.3 Zoning Ordinance

The proposed project changes include a request for City approval of a Planned Development (PD) Permit Amendment. Article 46 of the Redwood City Zoning Ordinance identifies objectives for Zoning Administrator and Planning Commission use in considering whether to approve PD Permits and Amendments. Section 46.1 includes the following two PD Permit objectives which relate to visual quality:

Figure 4.1. Project Site--Aerial Photograph.

- *to encourage the development of innovative projects which incorporate the highest quality architectural solutions, building materials, and landscaping concepts; and*
- *to promote the most functional and aesthetic relationships between building structures, signs, open space and parking areas in residential, commercial and industrial zoning districts.*

4.2.4 Redwood City Planning Division Urban Design Guidelines

The Redwood City Planning Division Urban Design Guidelines were drafted by the City primarily for application in Downtown Redwood City; however, the text of the Guidelines does not limit their application solely to Downtown. The following specific Guidelines are pertinent to consideration of the proposed project changes:

- *The bases of all buildings fronting on streets shall relate to the pedestrian scale by incorporating various amenities such as well-defined entrance areas, outdoor courtyards, public/private seating, and appropriate lighting conditions. The use of arcades, trellises, colonnades, landscaped pathways, judiciously located porches or porticos, and aesthetically designed entrance ways are also recommended for enhancing the streetscape.*
- *Parking facilities shall be less prominent than the principal structures which they serve, unless they are of exemplary architectural design quality.*
- *A sense of visual continuity with the adjacent structures, local streetscape, and general area shall be maintained.*

4.3 PREVIOUS EIR FINDINGS PERTINENT TO THE PROPOSED PROJECT CHANGES

The 1996 Final EIR for the Midpoint Technology Park (December 1996) set forth the following certified impact and mitigation findings which remain applicable to the proposed project changes and will serve to ensure that most of the visual effects of the proposed project changes will be less than significant (only those visual impact and mitigation findings pertinent to consideration of the proposed changes are listed):

Impact 6-2: Views from Highway 101 (Bayshore Fwy.). The proposed project will affect the views from the Bayshore Freeway as a result of the removal of many existing trees, and the construction of the new four-story parking structure [*subsequently replaced by an underground parking garage*] and the new three- [*420 and 450 Broadway; now constructed*] and four-story [*430 and 440 Broadway; now constructed*] buildings which will be visible from the freeway.

Certified Mitigation 6-2. All signage and landscaping/irrigation improvements shall be reviewed and approved by City.

Impact 6-3: Views [of Proposed Four-Story Parking Structure] from Apartment Building on Second Avenue. The most significant changes in the visual character of the project area will occur on the southeasterly portion of the project area. This portion of the project area is proposed to be developed with a four-story parking structure [*subsequently replaced by an*

underground parking garage], two four-story buildings [430 and 440 Broadway; now constructed], and two three-story buildings [420 and 450 Broadway; now constructed].

...those units located within that portion of the [adjacent existing seven-story] apartment building [facing or overlooking] the parking structure would have their northerly views interrupted and would look directly into the parking structure, or onto the roof of the structure.

Certified Mitigation 6-3. Move the westerly wing of the parking structure opposite the seven-story apartment building to the east, so that the end wall of the parking structure facing Broadway coincides with or does not extend beyond the end wall of the apartment building facing the Bayshore Freeway.

Impact 6-7: Night Lighting. Night lighting of the buildings, parking lots, parking structure, and walkways can [result in] a negative visual impact on...surrounding areas, especially... the adjacent apartment building and nearby residential neighborhoods...

Certified Mitigation 6-7. ...The developer shall submit [a] lighting plan for new construction, including the garage, for City review and approval.

Impact 6-8: Visual Division of Project Area by Broadway. Broadway visually and physically divides the [overall Midpoint Technology Park] campus into two separate elements, due to [the roadway's] width and the amount of traffic through the middle of the project area....[C]ertain design features can be installed to help to minimize this perceived division.

Certified Mitigation 6-8. The project architect shall submit a landscape and hardscape plan in order to visually connect the project across Broadway. The program could include elements of common landscape, paving, and signage, which will be the subject of review by [the] Architectural Review Committee.

Relevant to the proposed Stanford Outpatient Center, Certified Mitigation 6-8 was implemented as part of the previously approved Midpoint Technology Park project. Two crosswalks with textured color pavement and pedestrian lights were installed across Broadway, visually and functionally connecting both sides of the street with the courtyard in front of 420-450 Broadway (the proposed Outpatient Center buildings).

4.4 SUPPLEMENTAL IMPACT AND MITIGATION FINDINGS

4.4.1 Supplemental Analysis Scope

The scope of this supplemental visual impact analysis is limited to identification of the mitigating (beneficial) and additional adverse visual impacts of the proposed project changes (proposed architectural, signage, and landscaping modifications; and possible future parking structure).

4.4.2 Significance Criteria

Based on the significance criteria established in the 1996 Midpoint Technology Park EIR (section 6.3.1), a proposed project change would be considered to have a significant adverse visual (aesthetic) impact if it would:

- (a) Conflict with adopted environmental plans and goals of the community where it is located;
or
- (b) Have a substantial demonstrative negative aesthetic effect.

Based on the significance criteria established in Appendix G of the latest (2006) CEQA Guidelines, a proposed project change would also be considered to have a significant adverse visual (aesthetic) impact if it would:

- (c) Have a substantial adverse effect on a scenic vista;
- (d) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- (e) Substantially degrade the existing visual character or quality of the site and its surroundings; or
- (f) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

4.4.3 Supplemental Impacts and Mitigations

Supplemental Impact 4-1: Rooftop Modification Impacts on Views from Adjacent Apartment Building. The rooftops of 420 and 430 Broadway, the closest project buildings to the adjacent Broadway Towers apartment building, are generally at "eye level" with the top (seventh) floor of the apartment building. The proposed project modifications include installation of additional and replacement rooftop mechanical equipment and associated rooftop screening additions atop 420 and 430 Broadway. Assuming that the height of the rooftop equipment screening would be equal to or greater than the finished height of the modified rooftop mechanical equipment, associated visual effects on the adjacent apartment building would be less-than-significant. Nevertheless, until the project rooftop mechanical equipment and associated screening heights are finalized and the adequacy of the specified screening heights in relationship to the finished mechanical equipment heights can be verified by the City's Architectural Review Committee (ARC) and Planning Commission during the required Planned Development (PD) Permit Amendment approval process, it is assumed that the proposed project rooftop modifications may have a **significant adverse impact** on top floor views from the adjacent apartment building (see criteria [a] and [e] in subsection 4.4.2, "Significance Criteria," above).

Explanation:

Figure 4.2 (Project Site--Aerial Photograph) shows the relationship of the existing project buildings to the existing adjacent Broadway Towers apartment building to the east. As shown in the photograph below, the rooftops of the two project buildings nearest to the adjacent apartment building--420 and 430 Broadway--are generally at "eye level" with the top floor of the apartment building. As also shown in the photograph, existing rooftop mechanical equipment atop the closest, northeast wing of 420 Broadway, and atop 430 Broadway, is

effectively concealed from view by the existing parapet screening; and, because the southwest wing of 420 Broadway has a lower existing parapet, existing rooftop mechanical equipment atop this wing is not fully concealed.



View towards project from adjacent apartment building. Closest, northeast wing of 420 Broadway is in center, southwest wing of 420 Broadway is on the left, and 430 Broadway is further away on the right. (Photo provided by applicant.)

The proposed project modifications include installation of additional and replacement rooftop mechanical equipment on these structures and associated rooftop screening additions atop the southwest wing of 420 Broadway--see item A-17 on Figure 3.6 (Proposed Modifications--Site Plan) and "East Elevation" on Figure 3.7 (Proposed Modifications--Elevations) in chapter 3 (Description of Project Changes) herein. The existing rooftop mechanical screen (parapet) on the northeast wing of 420 Broadway would not be modified--see item A-18 on Figure 3.6.

Assuming that the height of the existing rooftop equipment screening (A-18) and added rooftop equipment screening (A-17) on 420 Broadway would be equal to or greater than the finished height of the mechanical equipment, the effects of these modifications on views from the adjacent apartment building would be less-than-significant. Nevertheless, until project rooftop mechanical equipment and associated screening details are finalized and the adequacy of the specified screening heights in relationship to the finished mechanical equipment heights can be verified by the City's Architectural Review Committee (ARC) and Planning Commission during the required Planned Development (PD) Permit Amendment approval process, it is assumed that the project rooftop modifications may have a significant adverse impact on adjacent apartment building top floor views.

Supplemental Mitigation 4-1. To avoid adverse effects on views from the top floor of the adjacent apartment building, the height relationship between the proposed rooftop mechanical equipment modifications and associated equipment screening atop 420 and 430 Broadway shall, to the satisfaction of the ARC and Planning Commission as established through the City's normal design review process for the required PD Permit Amendment, be sufficient to block views of the modified equipment. Implementation of this measure would reduce this potential visual impact to a ***less-than-significant level***.

Parking Structure Visual Impacts on Adjacent Apartment Building. Chapter 12 (Transportation) of this SEIR includes under *Supplemental Mitigation 12-10*, addressing an identified potential future parking capacity deficiency, possible construction of parking decks at one or more of three possible on-site locations, if and when the *parking monitoring program* called for under the same mitigation indicates a significant parking shortfall. This possible parking deck construction action would have a ***less-than-significant visual impact*** for the following reasons:

The 1996 Midpoint Technology Park EIR under "*Impact 6-3: Views from Apartment Building on Second Avenue*," identified a potentially significant adverse visual impact associated with "the proposed four-story parking structure"... "on the southeasterly [*northeasterly*] portion of the project area" on views from "those units located within that portion of the [*adjacent existing seven-story*] apartment building [*facing or overlooking*] the parking structure." The parking structure anticipated under this 1996 EIR impact finding was proposed to be located at the northeast corner of the project site near the adjacent Broadway Towers apartment building.

To mitigate this identified potential visual impact, the 1996 EIR under Certified Mitigation 6-3 called for locating "the end wall of the parking structure facing Broadway" so that it "coincides with or does not extend beyond the end [*north*] wall of the apartment building," indicating that this modification would reduce the impact of the parking structure on views from the adjacent apartment building to a less-than-significant level.

Chapter 12 (Transportation) of this SEIR includes under *Supplemental Mitigation 12-10*, as mitigation for the potential future parking capacity impacts of the proposed outpatient clinic use, the possible construction of "reduced-height parking decks (rather than a four-story parking structure)" at one or more of three possible on-site locations in the event that additional parking is needed. The proposed three possible on-site parking deck locations, and an associated cross-section, are illustrated on Figures 12.11 and 12.12, respectively, in chapter 12 herein.

The possible future reduced-height parking decks proposed under *Supplemental Mitigation 12-10* would have less visual impact than the "mitigated" four-story parking structure anticipated in the 1996 EIR--i.e., would effectively mitigate 1996 EIR Impact 6-3. The visual impact of the reduced-height parking deck(s) suggested under *Supplemental Mitigation 12-10* herein on views from the adjacent apartment building would therefore be ***less-than-significant***.

Supplemental Mitigation. No significant additional impact has been identified; no supplemental mitigation is required.

Other Project Modification Visual Impacts on Views from Adjacent Apartment Building.

All other proposed project changes would fall within the Midpoint Technology Park-related "changes in the visual character of the project area" anticipated under Impact 6-3 in the 1996 EIR, and would not add to or worsen the impacts anticipated under Impact 6-3 on views from the adjacent Broadway Towers apartment building.

The proposed landscaping modifications (see Figure 3.6), including the added tree canopy in the north parking area planting triangle and planting median along the east edge of 420 Broadway, and at the eastern entrance driveway on Broadway, would improve the quality of foreground views from the affected adjacent apartment units.

The proposed new building sign on the east-facing parapet of 430 Broadway (A-3), which would be visible from adjacent (northwest-facing) Broadway Towers apartment units, would be subject to City design review and approval pursuant to the Redwood City Sign Ordinance, and would fall within and not add to the project impacts on views from the adjacent apartment building anticipated in the 1996 EIR.

The proposed new lobby structure at the east entrance between 420 and 430 Broadway (A-6), the top of the proposed new dining terrace trellis on the south side of 440 Broadway (A-7), and the new enclosed walkway connection between 430 and 440 Broadway, would also be visible from the adjacent upper floor, northwest-facing apartment units. These new elements would be subject to City Planned Development Permit Amendment review and approval, pursuant to Article 46 (Planned Development Permits) of the Redwood City Zoning Ordinance, would add visual interest, and would fall within and not add to the project impacts on views from the adjacent apartment building anticipated in the 1996 EIR.

Supplemental Mitigation: No significant additional adverse impact has been identified; no supplemental mitigation is required.

Views of Project Modifications from Broadway and U.S. 101. The proposed project changes visible from Broadway and U.S. 101, including the added landscaping, added parapet panels (rooftop mechanical equipment screening), and new parapet signage, would have generally beneficial impacts on views of the project site from Broadway and U.S. 101, adding visual interest and enhancing the visual character of the complex. The proposed added parapet panels would effectively screen views of the proposed additional rooftop mechanical equipment from Broadway and U.S. 101. The proposed new primary and secondary "monument" signage along Broadway at the Outpatient Center entrance driveways, interior "wayfinding" signage, and signage at the various building entry points, would be moderately sized with low signage heights (see Figures 3.9 and 3.10). The visual effects of these proposed project modifications would fall within, and would not add to or worsen, the project impacts on views from Highway 101 and Broadway already identified in the 1996 EIR under Impact 6-2: Views from Highway 101 (Bayshore Freeway) and Impact 6-4: Views from [Broadway at] Second Avenue, and would be fully mitigated through implementation of Certified Mitigation 6-2 and Certified Mitigation 6-4.

Supplemental Mitigation: No significant additional adverse impact has been identified; no supplemental mitigation is required.

5. AIR QUALITY

This SEIR chapter describes the air quality implications of the proposed Stanford Outpatient Center, focusing on associated changes in the Midpoint Technology Park project, or changes in regulatory provisions, from those addressed in the 1996 EIR and 1998 SEIR. The BAAQMD has prepared, and periodically updates, air quality impact guidelines for use in preparing environmental documents under the California Environmental Quality Act (CEQA). This chapter: (1) utilizes updated BAAQMD-specified methods of air quality analysis; (2) incorporates traffic forecasts that reflect the proposed changes in project site land use, completed and planned local roadway improvements, currently anticipated local and regional cumulative growth, and changes in travel patterns which have occurred since certification of the 1996 EIR and 1998 SEIR; and (3) applies current (updated) regulatory standards and associated significance thresholds. This air quality chapter was prepared with the assistance of Donald Ballanti, air quality management consultant and certified meteorologist. The traffic data applied in this air quality chapter is derived from the traffic analysis included in chapter 12 (Transportation, Circulation, and Parking) of this SEIR.

5.1 SETTING

The 1996 EIR provides a comprehensive description of existing regional air quality conditions. Updated information relevant to the proposed project changes and pertinent air quality standards is provided below.

5.1.1 Air Quality Standards

Both the U. S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established, and periodically update, ambient air quality standards for common pollutants (e.g., ozone, carbon monoxide). The standards represent safe levels of contaminants that avoid specific adverse health effects associated with each pollutant. The standards cover what are called "criteria" pollutants, referring to the fact that the health and other effects of these particular pollutants are described in criteria documents. The national and state standards have been set at levels that protect groups that are more sensitive (e.g., asthmatics). California has adopted more stringent standards for some pollutants. Table 5.1 summarizes current national and state air quality standards.

In addition to criteria pollutants, toxic air contaminants (TACs) are another group of pollutants of concern, particularly with respect to diesel exhaust emissions. TACs are injurious in small quantities and are regulated despite the absence of criteria documents. Unlike criteria pollutants, TACs are regulated on the basis of risk rather than specification of safe levels of contamination.

Table 5.1
FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS

<u>Pollutant</u>	<u>Averaging Time</u>	<u>Federal Primary Standard</u>	<u>State Standard</u>
Ozone	1-Hour	0.12 ppm	0.09 ppm
	8-Hour	0.08 ppm	0.07 ppm
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.05 ppm	---
	1-Hour	---	0.25 ppm
Sulfur Dioxide	Annual	0.03 ppm	---
	24-Hour	0.14 ppm	0.05 ppm
	1-Hour	---	0.25 ppm
Particulates (PM ₁₀)	Annual	50 ug/m3	20 ug/m3
	24-Hour	150 ug/m3	50 ug/m3
Particulates (PM _{2.5})	Annual	15 ug/m3	12 ug/m3
	24-Hour	65 ug/m3	--
Lead (Pb)	3-Month	1.5 ug/m3	--
	30-Day	--	1.5 ug/m3
Sulfates	24-Hour	25 ug/m3	--
Hydrogen Sulfide	1-Hour	0.03 ppm	--
Vinyl Chloride	24-Hour	0.01 ppm	--

SOURCE: Donald Ballanti, Certified Consulting Meteorologist, February 2006; and California Air Resources Board, Ambient Air Quality Standards (<http://www.arb.ca.gov/aqs/aqs2.pdf>).

ppm = parts per million
 ug/m3 = micrograms per cubic meter

5.1.2 Current Air Quality

The Bay Area Air Quality Management District (BAAQMD) enforces rules and regulations regarding air pollution sources and is the primary agency preparing the regional air quality plans mandated under state and federal law. The BAAQMD monitors air quality at several locations within the San Francisco Bay Air Basin, including one in Redwood City. Table 5.2 summarizes recent exceedances of the federal and state standards at the Redwood City monitoring station. The table indicates that, over the previous three years, all federal and state ambient air quality standards have been met in the project vicinity with the exception of the state standards for ozone and PM₁₀.

5.1.3 Sensitive Receptors in the Project Vicinity

The BAAQMD defines "sensitive receptors" as facilities where sensitive receptor population groups (e.g., children, the elderly, the acutely ill, and chronically ill) are likely to be located. Such facilities include medical clinics, as well as residences, schools, playgrounds, child care centers, retirement homes, convalescent homes, and hospitals. In the project vicinity, the Broadway Towers Apartment complex is adjacent to the project site on the east, the Friendly Acres single-family residential neighborhood is farther east, Andrew Spinas Park is southeast of the site across Broadway, Taft Elementary School at 917 10th Avenue is approximately one-half mile southeast, Hi-Tech High School at 890 Broadway is approximately one-half mile west, and Hoover Park and Elementary School are about one-half mile southwest of the project site.

5.2 PERTINENT PLANS AND POLICIES

5.2.1 Redwood City Strategic General Plan

The adopted Redwood City Strategic General Plan Land Use and Conservation Elements (both adopted in 1990) contain the following objective and policy related to air quality and pertinent to the proposed project:

- *The City should take into consideration the cumulative air quality impacts from proposed developments and should establish and enforce appropriate land use as well as other regulations to reduce air pollution.* (Land Use Policy L-13, page 6-6)
- *Promote expansion and improvement of public transportation services and facilities, where appropriate, for their air quality benefits.* (Conservation Policy C-1, page 10-4)

5.2.2 Regional Air Quality Plan

The federal Clean Air Act and the California Clean Air Act of 1988 require the California Air Resources Board, based on air quality monitoring data, to designate as "nonattainment areas" those portions of the state where the federal or state ambient air quality standards are not met. Due to the differences between the national and state standards, the designation of nonattainment areas is different under the federal and state legislation. Under the California Clean Air Act, San Mateo County is classified as a nonattainment area for ozone and particulate matter (PM₁₀ and PM_{2.5}). The county is either in attainment or unclassified for other pollutants.

Table 5.2
AIR QUALITY DATA FOR REDWOOD CITY, 2003 TO 2005

<u>Pollutant</u>	<u>Standard</u>	<u>Days Exceeding Ambient Standards During:</u>		
		<u>2003</u>	<u>2004</u>	<u>2005</u>
Ozone	Federal 1-Hour	0	0	0
Ozone	State 1-Hour	1	1	0
Ozone	Federal 8-Hour	0	0	0
Carbon Monoxide	State/Federal 8-Hour	0	0	0
Nitrogen Dioxide	State 1-Hour	0	0	0
PM ₁₀	Federal 24-Hour	0	0	0
PM ₁₀	State 24-Hour	0	1	0
PM _{2.5}	Federal 24-Hour	0	0	0

SOURCE: California Air Resources Board, Aerometric Data Analysis and Management (ADAM), 2005 (<http://www.arb.ca.gov/adam/cgi-bin/adamtop/d2wstart>).

5.3 PREVIOUS EIR FINDINGS PERTINENT TO THE PROPOSED PROJECT CHANGES

The Final EIR for the Midpoint Technology Park (December 1996) set forth the following certified impact and mitigation findings which remain applicable to the proposed project changes and would help to ensure that the air quality effects of the proposed project changes would be less-than-significant (only those air quality impact and mitigation findings applicable to the proposed project changes are listed):

Impact 4-1: Air Quality Impact Vehicular Emissions. Expansion of...office/R&D space will add more trips and potentially aggravate the CO and ozone problems.

Certified Mitigation 4-1(a-c and e-h). Refer to certified mitigation under [Transportation, Circulation, and Parking].

Certified Mitigation 4-1(e). Facilitate pedestrian access to bus transit stops.

Regarding this impact, new and modified mitigations specific to the proposed Stanford Outpatient Center project are included in chapter 12 (Transportation, Circulation, and Parking) of this SEIR.

Impact 4-2: Construction Emissions Impact. Earth moving,...renovating buildings, and buildings new buildings [e.g., expanded lobbies, covered walkways, and possibly parking decks] will release dust and related suspended particulate. The level of impact could be significant, especially near construction sites.

Certified Mitigation 4-2a. Areas of soil redistribution should be watered down twice daily or more, if necessary, to trap fugitive dust and particulate during construction until planting, grass growth, or building coverage reduces the need for such measures.

Certified Mitigation 4-2b. If water is limited, soil binders such as Asoil cement® may be spread in conjunction with watering, or sheet coverings such as burlap may be used on small areas. Areas covered with soil binders should be turned over prior to revegetation.

Certified Mitigation 4-2c. During periods of excessive wind (i.e., gusting to 30 mph or more), construction involving soil disturbance should be temporarily suspended.

Certified Mitigation 4-2d. Disturbed soils should be planted or paved as soon as possible to reduce construction-related dust.

The requirements of Certified Mitigations 4-2(a-d) above have been incorporated into *Supplemental Mitigation 5-1* of this SEIR. *Supplemental Mitigation 5-1* is consistent with current Redwood City requirements and the latest BAAQMD CEQA Guidelines (revised December 1999).

5.4 SUPPLEMENTAL IMPACT AND MITIGATION FINDINGS

5.4.1 Supplemental Analysis Scope

The scope of this supplemental air quality analysis is limited to identification of the mitigating (beneficial) effects of, and any additional adverse impacts associated with, the proposed project changes.

5.4.2 Significance Criteria

The BAAQMD has revised recommended thresholds of significance since publication of the 1996 Midpoint Technology Park EIR. The latest BAAQMD CEQA Guidelines¹ provide the following definitions of a significant air quality impact:

- (a) Any project contributing to carbon monoxide (CO) concentrations exceeding the State Ambient Air Quality Standard of 9 parts per million (ppm) averaged over 8 hours, or 20 ppm for 1 hour.
- (b) Any project that generates criteria air pollutant emissions in excess of the BAAQMD *[specified]* annual or daily thresholds. The current thresholds are 15 tons per year or 80 pounds per day for reactive organic gases (ROG), nitrogen oxides (NO_x), or PM₁₀. Any proposed project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact.
- (c) Any project with the potential to frequently expose members of the public to objectionable odors.
- (d) Any project with the potential to expose sensitive receptors or the general public to substantial levels of toxic air contaminants (TACs).
- (e) Any project that does not apply appropriate dust-control measures during construction. The BAAQMD significance thresholds for construction dust impacts are based on the appropriateness of construction dust controls. The BAAQMD Guidelines provide feasible control measures for construction emissions of PM₁₀. If the appropriate construction controls are to be implemented, then air pollutant emissions for construction activities would be considered less-than-significant.

Regarding significance criterion (c) above, the Initial Study (appendix 18.1 of this SEIR) determined that the proposed project would have a less-than-significant impact; therefore, this criterion is not discussed in this chapter.

5.4.3 Pertinent Project Changes

For the purposes of this air quality evaluation, the key project changes are:

- The proposed change in land use from office/R&D use to medical clinic, and associated changes in traffic volumes and trip distribution due primarily to patients visiting the

¹Bay Area Air Quality Management District. BAAQMD CEQA Guidelines, 1996 (Revised December 1999).

Outpatient Center throughout the day (see chapter 12--Transportation, Circulation, and Parking--of this SEIR);

- The introduction of on-site medically related hazardous materials that could result in toxic air emissions under upset conditions, a situation that was not present when the existing buildings were previously occupied by office/R&D uses (see chapter 7--Hazards and Hazardous Materials--of this SEIR); and
- The introduction of additional diesel-powered emergency generators that will emit diesel exhaust, which contains criteria pollutants and toxic air contaminants (TACs), during their periodic testing or operation during an emergency.

Mitigations for impacts resulting from these project changes are described below.

5.4.4 Supplemental Impacts and Mitigations

Supplemental Impact 5-1: Project Construction Period Emissions. Although limited to renovation of existing buildings and grounds, project construction activities, including excavation and grading for the proposed underground storm water retention basins, landscaping modifications, new underground utilities, possible future parking decks, associated construction vehicle traffic (including exhaust emissions), and wind blowing over exposed earth, would generate a combination of fugitive particulate matter emissions and exhaust emissions that would affect local air quality. These possible effects represent a ***potentially significant impact*** (see criteria [a], [b], and [e] in subsection 5.3.2, "Significance Criteria," above). This impact is similar to Impact 4-2 identified in the 1996 Midpoint Technology Park EIR. The following modified mitigation, however, corresponds with the current BAAQMD CEQA Guidelines.

The proposed project changes would require excavating and grading for the underground water retention basin, landscaping modifications, new underground utilities, and one or more possible future parking decks (see Supplemental Mitigation 12-3). In addition to the dust created during excavation and grading, substantial dust emissions could be created as debris is loaded onto trucks and transported for disposal.

Construction activities would also generate vehicular and equipment exhaust emissions that could affect local air quality.

Supplemental Mitigation 5-1. Dust emissions from demolition and construction activities can be greatly reduced by implementing fugitive dust control measures. The significance of construction period particulate impacts is, according to the BAAQMD Guidelines, determined by whether or not appropriate dust control measures are implemented. Implementation of the following conventional BAAQMD-recommended dust control measures would be expected to reduce dust emission impacts to a ***less-than-significant level***:

(continued)

Supplemental Mitigation 5-1 (continued):

- (a) Watering shall be used to control dust generation during any break-up of pavement;
- (b) All trucks hauling construction debris from the site shall be covered;
- (c) Whenever possible, dust-proof chutes shall be used for loading debris onto trucks;
- (d) Water all active construction areas at least twice daily and more often during windy periods (i.e., gusting to 30 mph or more). Active construction areas adjacent to existing land uses must be kept damp at all times, or must be treated with non-toxic stabilizers or dust palliatives;
- (e) Water or cover all stockpiles of debris, soil, sand, or other materials that can be blown by the wind;
- (f) Cover all trucks hauling soil, sand, and other loose materials, or require all trucks to maintain at least two feet of freeboard;
- (g) Sweep daily (preferably with water sweepers) all paved access roads, parking areas, and staging areas at construction sites;
- (h) Sweep streets daily (preferably with water sweepers) if visible soil material is carried onto adjacent public streets;
- (i) Hydroseed or apply non-toxic soil stabilizers to inactive construction areas;
- (j) Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.);
- (k) Install sandbags or other erosion control measures to prevent silt runoff to public roadways; and
- (l) Replant vegetation in disturbed areas as quickly as possible.

In addition, to reduce potential construction vehicle and equipment exhaust emissions to a ***less-than-significant level***:

- (m) Maintain properly tuned engines and equipment, minimize idling time, and limit the hours of operation of heavy duty equipment and/or the amount of equipment in use.

Supplemental Impact Due to Changes in Carbon Monoxide Concentrations. Carbon monoxide (CO) is an odorless, colorless, poisonous gas whose primary source in the Bay Area is automobiles. Concentrations of CO are typically highest near intersections of major roads. At the local level, the proposed Stanford Outpatient Center would increase traffic and alter trip distribution on the local street network, thereby changing CO levels along roadways used by project traffic.

Carbon monoxide concentrations under worst-case meteorological conditions have been predicted for the three signalized project-affected study intersections with the highest levels of project-related and/or project-plus-cumulative congestion (see chapter 12--Transportation, Circulation, and Parking--of this SEIR); the three intersections are: Woodside/Veterans, Woodside/Broadway, and Woodside/Middlefield. Peak-hour traffic volumes were applied to the screening form of the CALINE-4 dispersion model to predict maximum 1- and 8-hour CO concentrations near these intersections for existing, background, project (increases in traffic associated with the project changes), and cumulative conditions. The model results were used to predict the maximum 1- and 8-hour concentrations for CO. (Appendix 18.2 of this SEIR provides a description of the model and a discussion of the methodology and assumptions used in the analysis.)

Table 5.3 displays the results of the CALINE-4 analysis. The peak 1-hour concentrations are to be compared to the federal 1-hour standard of 35 ppm and the state standard of 20 ppm. The 8-hour concentrations are to be compared to the state and federal standard of 9 ppm.

Table 5.3 indicates that project traffic changes would increase CO concentrations at the study intersections by up to 0.1 ppm, but concentrations for existing, background, project, and cumulative traffic conditions would remain below the most stringent state or federal standards. Changes in project traffic would not result in any new violations of the 1-hour or 8-hour standards for CO, nor contribute substantially to an existing or projected violation, project and cumulative impacts on local CO concentrations, and are therefore considered to be **less-than-significant**, confirming the conclusions of the 1996 Midpoint Technology Park EIR and 1998 SEIR.

Supplemental Mitigation. No significant project or cumulative impact has been identified; no mitigation is required.

Supplemental Impact Due to Changes in Long-Term Regional Emissions. The proposed Stanford Outpatient Center would generate approximately 3,700 daily vehicle trips beyond those anticipated from the previously approved @Home development on the site (see chapter 12 of this SEIR). Regional emissions of reactive organic gases (ROG), nitrogen oxides (NO_x), and PM₁₀ associated with project vehicle use have been calculated using the URBEMIS-2002 emission model. (The URBEMIS-2002 model and the conditions assumed in its use are described in appendix 19.2 of this SEIR.)

Table 5.4 identifies: (1) total daily emissions and the incremental daily emission increases associated with project trip generation (compared with the previously approved project) for ROG, NO_x (two precursors of ozone), and PM₁₀; (2) the emission estimates from office/R&D use of the site as assumed in the 1996 Midpoint Technology Park EIR; and (3) the BAAQMD's thresholds of significance for these pollutants.

Table 5.3
 PROJECTED CURBSIDE CARBON MONOXIDE CONCENTRATIONS AT MAJOR
 INTERSECTIONS (IN PARTS PER MILLION)

<u>Intersection</u>	<u>Existing (2006)¹</u>		<u>Background (2006)</u>		<u>Project (2006)</u>		<u>Cumulative (2010)</u>	
	<u>1-Hour</u>	<u>8-Hour</u>	<u>1-Hour</u>	<u>8-Hour</u>	<u>1-Hour</u>	<u>8-Hour</u>	<u>1-Hour</u>	<u>8-Hour</u>
Woodside/ Veterans	11.4	5.9	12.2	6.5	12.2	6.5	11.1	5.8
Woodside/ Broadway	12.7	6.8	13.7	7.5	13.8	7.6	12.3	6.6
Woodside/ Middlefield	13.1	7.1	13.9	7.6	13.9	7.6	12.4	6.7
Most Stringent Standard	20.0	9.0	20.0	9.0	20.0	9.0	20.0	9.0

SOURCE: Donald Ballanti, Certified Consulting Meteorologist, February 2006.

¹The year in each column refers to the emissions factors used in the comparative calculations. Over time, emissions factors are reduced as older vehicles are replaced with lower-polluting, newer vehicles. Therefore, "cumulative" future (e.g., 2010) emissions are typically lower than "existing" emissions. In the table, constant 2006 emissions factors were applied to "existing," "background," and "project" conditions to make direct comparisons under a worst-case scenario, consistent with CEQA.

Table 5.4
 PROJECT CHANGES IN REGIONAL EMISSIONS (IN POUNDS PER DAY)

<u>Scenario</u>	<u>ROG</u>	<u>NO_x</u>	<u>PM₁₀</u>
Previously Approved Office/R&D Use Emissions	23.3	23.3	24.1
Proposed Outpatient Center Emissions	36.9	35.7	33.7
Net Increase	13.6	12.4	9.6
BAAQMD Significance Threshold	80.0	80.0	80.0

SOURCE: Donald Ballanti, Certified Consulting Meteorologist, February 2006.

ROG = reactive organic gases
 NO_x = nitrogen oxides
 PM₁₀ = particulate matter, 10 microns

Neither total project emissions nor the incremental increase over the previous office/R&D use of the site (at full occupancy) would exceed the thresholds of significance for ozone precursors (ROG and NO_x) or PM₁₀.

Therefore, consistent with the BAAQMD CEQA Guidelines, the emission increases associated with the proposed Stanford Outpatient Center project changes would constitute a ***less-than-significant project impact*** on regional air quality.

Section 2.3 of the BAAQMD CEQA Guidelines states, "For any project that does not individually have significant operational air quality impacts, the determination of significant cumulative impact should be based on an evaluation of the consistency of the project with the local general plan *and* of the general plan with the regional air quality plan [i.e., BAAQMD Clean Air Plan]."⁶ First, the proposed Stanford Outpatient Center project is consistent with the Redwood City Strategic General Plan and Redwood City Zoning Ordinance (see subsection 9.3.4 in chapter 9, Land Use, of this SEIR); project approval would not require a General Plan Amendment or rezoning. Secondly, as discussed in this Air Quality chapter and in chapter 7 (Hazards and Hazardous Materials), the proposed project would be subject to BAAQMD-mandated and other local, state, and federal agency regulations that would result in *less-than-significant* air quality and hazards/hazardous materials impacts. Finally, the proposed project is subject to the Congestion Management Plan (CMP) of the City/County Association of Governments of San Mateo County (C/CAG), whose guidelines are consistent with the regional air quality plan and Association of Bay Area Governments (ABAG) population projections (see chapter 12--Transportation, Circulation, and Parking--of this SEIR). Therefore, consistent with the BAAQMD CEQA Guidelines, the emission increases associated with the proposed Stanford Outpatient Center project changes would constitute a ***less-than-significant cumulative impact*** on regional air quality.

Supplemental Mitigation: No additional significant project or cumulative impact on long-term regional air quality has been identified; no additional mitigation is required.

Supplemental Impact Due to New Sources of Toxic Air Contaminants. The proposed Stanford Outpatient Center would include four back-up diesel-powered generators, two of which were included in the previously approved @Home project on-site. In 1998 the California Air Resources Board identified particulate matter from diesel-fueled engines as a toxic air contaminant (TAC). Stationary diesel engines are subject to the permitting authority of the BAAQMD. The emergency generator engines would normally be tested a few hours per month; per BAAQMD regulations, standby engine operation is limited to no more than 200 hours per calendar year for non-emergency uses.

Due to the projected limited usage of the emergency generators subject to BAAQMD regulations, the proposed Stanford Outpatient Center would result in a ***less-than-significant impact*** associated with toxic air contaminant (TAC) risk.

Supplemental Mitigation: No additional significant project impact has been identified; no additional mitigation is required.

6. CULTURAL RESOURCES

This SEIR chapter describes the project's potential additional impacts on cultural (archaeological) resources and identifies supplemental mitigation measures as necessary to reduce potentially significant impacts to less-than-significant levels.

The potential impact of Midpoint Technology Park construction operations, including earthmoving, on potential archaeological resources, was determined by the City to be less-than-significant in its original June 1996 Initial Study Checklist (item 20) for the Midpoint Technology Park. There are no known archaeological sites on or in the vicinity of the project site. No archaeological resources were discovered during the recent construction of the Midpoint Technology Park campus, including the @Home buildings. Due to the previous disturbance of the site, it is unlikely that any unrecorded archaeological resources would be encountered during the limited excavation activities anticipated for the project. Nevertheless, there is some potential to encounter such artifacts and remains during the limited excavation and grading activities associated with construction of the proposed new underground storm water retention basins, additional underground utility infrastructure, new landscaping, and/or possible future parking decks.

6.1 SETTING

6.1.1 Prehistoric Habitation of the Margins of the San Francisco Bay¹

An extensive marsh system comprised the original landscape of the project site vicinity. Permanent settlements demonstrating long periods of habitation (up to 5,000 years at nearby San Bruno Mountain) were located west of the Bay margin on dry lands bordering the fresh water and close to the hills farther west.

Almost 100 years of archaeological survey work done on the margins of San Francisco Bay have demonstrated that prehistoric Bay margin sites are found in a number of predictable locations. The Costanoan people inhabited the San Francisco Bay area and predated Spanish occupation by up to 4,000 years. Seasonal camps and villages have been found next to existing or former water courses draining into the bay on lands that were elevated above the high tide line directly adjacent to the original marsh system that bordered the bay. Village sites were marked by shells and other refuse, in some instances eventually creating raised "shell mounds," several of which have been found in Redwood City.

Investigations of various nearby sites along the Bay margin have not found evidence of recorded historic or prehistoric resources, however. These investigations have included a Northwest Information Center file inspection for the 14-acre Bayside Gardens site on East Bayshore Road northwest of the project site, an archaeological survey of the 150-acre Leslie

¹This section is adapted from the Bayside Gardens Project Draft Environmental Impact Report, prepared for the City of Redwood City by Wagstaff and Associates, June 2004, pages 14-1 and 14-2.

Salt pond area north of the project site, and a field inspection of a 5.2-acre property off Bair Island Road northwest of the project site.

6.1.2 Potential for Cultural Resources on the Project Site

Approximately 85 percent of the 11.3-acre project site consists of building footprints or pavement. The remaining 15 percent of the site is comprised of a central landscaped area facing Broadway and additional parking and building entrance area turf and vegetation. There are no known archaeological sites on or in the vicinity of the project site. No archaeological resources were discovered during the recent construction of the Midpoint Technology Park campus. Due to the previous disturbance of the site, the potential for discovering unrecorded archaeological resources is limited. Based on all of these factors, the likelihood of uncovering buried archaeological resources at the project site is very low. Nevertheless, given the site's location near the Bay margin, the potential for the site to contain prehistoric artifacts or remains cannot be completely discounted.

6.2 PERTINENT PLANS AND POLICIES

The Redwood City Strategic General Plan Historic Resources Element (HRE) contains no policies relevant to the proposed project site. All current HRE policies pertain to landmark districts and structures, none of which exist on the project site or in the project vicinity. The existing buildings on-site, due to their recent construction (1998), are not considered historic structures.

For all identified historic sites or sites that have a potential for on-site discovery, reconnaissance, and identification of cultural resources,¹ the Redwood City Planning and Redevelopment Department typically requires developers to prepare a *cultural resources management plan*. Since the likelihood of uncovering buried archaeological resources at the project site is very low (see subsection 6.1.2, above), a *cultural resources management plan* would not be warranted for the proposed project.

6.3 SUPPLEMENTAL IMPACT AND MITIGATION FINDINGS

6.3.1 Supplemental Analysis Scope

This supplemental analysis focuses on the cultural resources implications of the proposed project changes (i.e., the differences between the project evaluated in the 1996 EIR and 1998 SEIR and the currently proposed project). For cultural resources, the key project changes are the limited excavation and grading that would be associated with:

- construction of the proposed new underground storm water retention basin;
- any proposed additional underground utilities; and
- proposed new landscaping.

¹Redwood City Planning and Redevelopment Department, *Cultural Resources Management Plan*, revised 2000.

6.3.2 Significance Criteria

Based on the CEQA Guidelines, the project would be considered to have a significant cultural resources impact if it would:

- (a) Cause a substantial adverse change in the significance of an archaeological resource as defined in CEQA Guidelines section 15064.5;¹ or
- (b) Disturb any human remains, including those interred outside of formal cemeteries.²

These criteria are not cited in the 1996 EIR or 1998 SEIR, as those documents did not evaluate cultural resources impacts.

6.3.3 Supplemental Impacts and Mitigations

Supplemental Impact 6-1: Potential Disturbance of Prehistoric Cultural Resources. Excavation and grading for the proposed underground storm water retention basins, any additional underground utilities, new landscaping, and possible future parking decks, could disturb as yet unidentified sensitive, on-site, subsurface cultural resources. This potential represents a ***potentially significant environmental impact*** (see criteria [a] and [b] in section 6.3.2, "Significance Criteria," above). This is a new impact not identified in the 1996 EIR or 1998 SEIR.

Native American resource sites occur in the immediate region. While the proposed project is not expected to affect cultural resources, it is possible that concentrations of archaeological material could be found during excavation and grading, based on the known prehistory of the project site vicinity.

¹CEQA Guidelines, Appendix G, item V(b).

²CEQA Guidelines, Appendix G, item V(d).

Supplemental Mitigation 6-1. In the event that subsurface cultural resources are encountered during approved ground-disturbing activities, work in the immediate vicinity shall be stopped and a qualified archaeologist retained to evaluate the finds. The discovery or disturbance of any cultural resource shall be reported to the California Historical Records Information System (CHRIS) and the Native American Heritage Commission. Identified cultural resources shall be recorded on State Department of Parks and Recreation (DPR) form 422 (archaeological sites). Mitigation measures prescribed by these groups and required by the City shall be undertaken before construction activities are resumed. If disturbance of a project area cultural resource cannot be avoided, a mitigation program, including measures set forth in the City's *Cultural Resources Management Program* and in compliance with sections 15064.5 and 15126.4 of the CEQA Guidelines, shall be implemented. In the event that any human remains are encountered, earth-moving shall be stopped until the County Coroner's office has been contacted. Implementation of these measures would reduce this potential impact to a ***less-than-significant level***.

7. HAZARDS AND HAZARDOUS MATERIALS

This SEIR chapter describes the hazardous materials implications of the proposed Stanford Outpatient Center and identifies mitigation measures to reduce potentially significant impacts to less-than-significant levels, focusing on project changes that would introduce the use, handling, storage, generation, transport, and disposal of medically related hazardous materials. In addition, section 11.1 (Fire/Emergency Services) of this SEIR discusses hazardous materials issues specifically relevant to the Redwood City Fire Department.

7.1 SETTING

7.1.1 Existing On-Site Hazardous Conditions

The 11.3-acre project site contains two existing emergency generator base (above-ground) fuel storage tanks in which diesel fuel is stored. The potential for spill or release of fuel at these two locations is an existing hazardous materials concern noted by the Redwood City Fire Department.¹ Before development of the Midpoint Technology Park, the project site contained a Sears appliance service center (whose address was 1325 Douglas Avenue), which had already been demolished before approval of the Technology Park.

7.1.2 Previous Hazardous Materials Investigations

The 1996 EIR prepared for the Midpoint Technology Park documented studies of soil contamination and groundwater pollution on the project site and in the site vicinity. The EIR noted that a property located at 800 Chestnut Street near Woodside Road and Bay Road (southwest of the current project site) had leaking underground storage tanks and evidence of other groundwater pollution. At the time the 1996 EIR was prepared, the property was overseen by the California Regional Water Quality Control Board (RWQCB) and a soil and groundwater remediation system was being installed.²

The 1996 EIR also discussed the Level 1 Environmental Site Assessment (ESA) prepared for the then-existing 46-acre Ampex campus, which included most of the Midpoint Technology Park site, including the western portion of the current 11.6-acre project site, along with areas to the west and south. Based on the conclusions in this Level 1 ESA, the 1996 EIR identified the following three project-related hazardous materials impact concerns:

¹Jamie Lee, Fire Prevention Officer, Redwood City Fire Department; written communication, January 27, 2006.

²Draft Environmental Impact Report for the Midpoint Technology Park, prepared for the City of Redwood City by LCP Associates Planning Consultants, September 1996, pp. 119-123.

1. Groundwater contamination within the Midpoint Technology Park site has resulted from at least two Volatile Organic Solvent (VOC)¹ plumes that originated from off-site sources and migrated through the site. The plumes were first identified through past groundwater monitoring and investigation conducted primarily as part of historical investigations of the adjacent, off-site Ampex facility, to evaluate the presence of VOCs beneath and adjacent to the Midpoint Technology Park site. Additionally, groundwater was sampled from trenches on the Midpoint Technology Park site and analyzed for VOCs in 1998 during construction of the existing Midpoint Technology Park structures. Except for trichloroethylene (TCE) (see section 7.1.3 which follows), measured VOC concentrations in the site samples taken at that time were beneath RWQCB established health risk screening thresholds.

The RWQCB has therefore required that access to the site be permitted for any further investigation and cleanup of this groundwater pollution. The RWQCB has also indicated that it does not intend to name the owner of the Midpoint Technology Park site as a party responsible for this on-site groundwater contamination. The 1996 Draft EIR (Impact 9-1) noted that because the RWQCB has determined that the property owner is not responsible for the VOC plumes originating from an off-site source, there are no project-related significant impacts. Hence, no mitigation regarding this issue is required.

2. Two sump pits (small drainage reservoirs) in the southwest corner of the Midpoint Technology Park site (southwest of the current project site) were identified in the past by the RWQCB for the presence of contaminants and in need of remediation.² Subsequent to preparation of the 1996 Draft EIR, remediation of the sumps was completed. Therefore, 1996 Final EIR Certified Mitigation 9-1, regarding remediation of the sump area, states: "None [required]. Work is completed to the satisfaction of the RWQCB."
3. The 1996 EIR noted that the former Sears appliance service center at 1325 Douglas Avenue (on the proposed Stanford Outpatient Center site) previously had an underground fuel storage tank (UST). Petroleum hydrocarbons were identified in soil and groundwater as part of the UST removal in the late 1980s; the petroleum-impacted soil was subsequently removed.

The 1996 Draft EIR (Impact 9-1) also noted, "With regard to other potential pollution issues [*i.e.*, excluding the sumps], there is no evidence of leakage from the remaining above-ground fuel tanks; there is no evidence of pollution from the several tanks that have been removed and which have all received formal closure."

Data collected as part of the post-1996 EIR UST removal activities in the 1980s indicate that remaining concentrations of residual petroleum in the remediated soil were beneath

¹Volatile organic compounds (VOCs) are chemicals that easily form vapors at normal temperature and pressure (e.g., methyl tertiary butyl ether, dychloroethene, trichloroethene, dychloroethane, freon, acetone, benzene, etc.). Typical examples of materials containing VOCs include organic solvents, certain paint additives, fuels, and dry cleaning chemicals; also, VOCs are emitted naturally by some plants and trees. (*Material Safety Data Sheets Hyper Glossary*, www.ilpi.com/msds/ref/voc, accessed May 2, 2006.)

²Midpoint Technology Park Draft EIR, pp. 119-123.

current RWQCB health risk screening thresholds, and met water quality criteria of Title 22 of the California Health and Safety Code.¹

The current Midpoint Technology Park site was also granted regulatory closure in 1995 by the San Mateo County Environmental Health Services Agency.²

7.1.3 Recent Site-Specific Hazardous Materials Investigations

Additional, updated site-specific Phase I and Phase II environmental assessments were conducted in 2004 and 2005 for the Stanford Hospital & Clinics project by Geomatrix Consultants, Inc. The 2004/2005 assessment results are summarized below.

(a) 2004 Phase I Environmental Assessment Findings:³ The 2004 Phase I assessment report indicated that the 11.4-acre project site exhibited no evidence of USTs, automotive (e.g., lead acid) batteries, or large quantities (greater than five-gallon containers) of hazardous materials. The report indicated that, except for the two existing emergency generators and accompanying above-ground diesel fuel tanks (see Figure 3.4, Project Site--Existing Site Plan, of this SEIR), all existing storage facilities are enclosed within the buildings. The report also indicated that the project site (in its previous use as @Home) is listed on a publicly available database as disposing of hazardous waste; however, no further information was listed regarding types or quantities. Given the previous use of the site as R&D/office, it is not expected that large quantities of hazardous waste capable of affecting soil or groundwater would have been generated.

(b) 2005 Phase II Environmental Assessment Findings:^{4,5} The 2005 Phase II Environmental Assessment included more detailed on-site investigations, including groundwater sampling, to evaluate groundwater conditions associated with the former UST and the existing VOC plumes. Nine groundwater sampling soil borings were conducted; groundwater was encountered at depths ranging from approximately 10 to 13 feet below ground surface (bgs). Methyl tertiary butyl ether (MTBE) and trichloroethene (TCE) were detected in all nine samples; other VOCs (e.g., dychloroethene [DCE], dychloroethane [DCA], freon, acetone, benzene) were detected in

¹Geomatrix Consultants, Inc.; *Environmental Site Assessment, 420-450 Broadway, Executive Summary*, 2004.

²Geomatrix, *Environmental Site Assessment*, and Midpoint Technology Park Draft EIR (pp. 119-123).

³Geomatrix, *Environmental Site Assessment*. Although referring to the same types of organic compounds, this Geomatrix report uses the term Ahalogenated volatile organic compounds (HVOCs),@ while the 1996 EIR uses the more general term Avolatile organic compounds (VOCs).@ Other Geomatrix reports referenced in this Supplemental EIR use the latter term. To maintain consistency between the 1996 EIR and this Supplemental EIR, the term Avolatile organic compounds (VOCs)@ is used throughout the Supplemental EIR.

⁴Letter from Deepa Gandhi, P.E., Staff Engineer, and Martin B. Bloes, Senior Scientist, Geomatrix Consultants, Inc., to Annette Walton, Stanford Management Company, regarding AResults of Grab Groundwater Sampling Program, 420-450 Broadway Street@, Project 1909.009; February 16, 2005.

⁵Letter from Martin Bloes, Senior Scientist, et al., Geomatrix Consultants, Inc., to Deno Milano, Groundwater Protection Program, San Mateo County Department of Health Services, regarding AResponse to Comments, Results of Phase II Subsurface Investigation at Former Ampex Facility@, Project 1909.011; June 24, 2005.

one or more samples. All concentrations were below the RWQCB screening levels used to evaluate the potential for indoor air quality impacts from groundwater for residential land use on the soil type (Ahigh permeability vadose zone[®]) existing on-site. Concentrations were below their respective maximum acceptable contaminant levels per Title 22 of the California Health and Safety Code, except for MTBE, TCE, DCE, and DCA.

It is unclear if the presence of MTBE on-site is associated with the former UST or with the off-site plumes. Otherwise, as concluded in the Phase I environmental assessment, the presence of all other VOCs beneath the site is probably associated with the two plumes originating off-site; although a responsible party has not been identified, the RWQCB has determined that the owner of the Midpoint Technology Park (which includes the Outpatient Center site) is not responsible for the VOC plumes. Mitigation recommendations described in the 2004/2005 Phase I and Phase II reports for these remaining on-site VOC conditions are summarized on pages 7-14 through 7-15 herein under *Supplemental Impact 7-1*.

7.2 PERTINENT PLANS AND POLICIES

7.2.1 City of Redwood City

(a) Strategic General Plan. The City of Redwood City establishes policies for hazardous materials management through its General Plan. The Redwood City Strategic General Plan Safety Element contains the following public health and safety objective and policy pertinent to consideration of the proposed Outpatient Center project:

- *Protect City residents from the risks inherent in the use, storage, transport, and distribution of hazardous materials.* (Objective 2, page 12-3)
- *Review and update, as needed, the City's disaster response plans in coordination with the County's natural disaster preparedness plan.* (Policy S-3, page 12-3)

(b) Other City Requirements. The Redwood City Fire Department and Redwood City Community Development Services Department, Building and Inspection Division, also have regulatory roles in protecting the public from dangers associated with hazardous materials and wastes. Fire Department permits are required for storing, dispensing, using, or handling hazardous materials in excess of quantities specified in Section 105 of the Uniform Fire Code. These individual quantities can be increased when they are segregated within control areas separated by not less than a one-hour fire-resistive occupancy separation. The number of control areas within a building may be as high as four.¹

When the maximum quantities of hazardous materials exceed the exempt amounts per control area, buildings or structures (or portions thereof) are classified as Group H Occupancies by the Uniform Building Code. Buildings or structures in this classification may require superior construction, decreased allowable floor areas or building heights, increased distances between buildings, spill control and secondary containment, fire extinguishing systems, or other measures. Some of these measures may not be practical to carry out in existing buildings.²

¹Lee.

²Lee.

7.2.2 Federal, State, and Local Regulations Specifically Applicable to the Proposed Project

Hazardous materials handling and hazardous waste management are subject to laws and regulations at all levels of government, as described below. The following regulations apply to medical clinics, such as the Outpatient Center use proposed for the project site.

(a) Hazardous Materials Management and Emergency Planning. State and federal laws require detailed planning to ensure that hazardous materials are properly handled, used, stored, and disposed of, and, in the event that such materials are accidentally released, to prevent or mitigate injury to health or the environment. California's Hazardous Materials Release Response Plans and Inventory Law, sometimes called the "Business Plan Act," aims to minimize the potential for accidents involving hazardous materials and to facilitate an appropriate response to possible hazardous materials emergencies. The law requires businesses that use hazardous materials to provide inventories of those materials to designated emergency response agencies, to illustrate on a diagram where the materials are stored on-site, to prepare an emergency response plan, and to train employees to use the materials safely. Businesses that handle certain very hazardous substances must undertake a systematic analysis of their operations, study the potential consequences of possible worst-case accidents, and prepare Risk Management Plans to reduce apparent risks.

Stanford Hospitals & Clinics handles such materials in its overall operations, but not in quantities sufficient to trigger State Risk Management Plan requirements. For the proposed Stanford Outpatient Center, these laws would be enforced locally by the County of San Mateo Health Services Agency (CSMHSA) and by the Redwood City Fire Department, which also enforces fire code regulations pertaining to hazardous materials storage.

(b) Building and Fire Safety. The Redwood City Community Development Services Department, Building and Inspection Division, has adopted and enforces the Uniform Building Code. The Redwood City Fire Department enforces the Uniform Fire Code, as amended by the City Code of Redwood City. These laws specify management practices for flammable materials, including some packaging and containment requirements. They also set forth appropriate construction standards (e.g., fire separations and fire suppression systems) depending on building occupancy classifications. The Uniform Fire Code incorporates relevant portions of National Fire Protection Association Standard 99, which addresses hazardous materials and fire safety at hospitals. The Redwood City Building and Inspection Division and the Redwood City Fire Department review proposed building design plans to ensure compliance with the Uniform Building Code and Uniform Fire Code, respectively.

(c) Worker Safety. Occupational safety standards exist in federal and state laws to minimize worker safety risks from both physical and chemical hazards in the workplace. The California Division of Occupational Safety and Health (CalOSHA) is responsible for developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, CalOSHA obligates businesses to prepare Injury and Illness Prevention Plans and Chemical Hygiene Plans. The Hazard Communication Standard requires that workers be informed of the hazards associated with the materials they handle. For example, manufacturers are to appropriately label containers, Material Safety Data Sheets are to be available in the workplace, and employers are to properly train workers. The U.S. Occupational Safety and Health Administration's Bloodborne Pathogens Standard requires

the use of Universal Precautions (e.g., handling all human blood and certain body fluids as if they contain infectious agents) in the workplace.

(d) Hazardous Waste Handling. The U.S. Environmental Protection Agency (EPA) has authorized the California Department of Toxic Substances Control (DTSC) to enforce hazardous waste laws and regulations in California. Hazardous waste generators are responsible for all phases of hazardous waste disposal. Generators must ensure that their wastes are disposed of properly, and legal requirements dictate the disposal requirements for many waste streams (e.g., banning many types of hazardous wastes from landfills). Many hazardous waste generators that produce more than about 13 tons of hazardous waste per year are required to prepare Hazardous Waste Minimization Plans pursuant to the California Hazardous Waste Source Reduction and Management Review Act. All hazardous waste generators must certify that, at a minimum, they make a good faith effort to minimize their waste and select the best waste management method available. Hazardous waste laws and regulations are enforced locally by the San Mateo County Health Department, Environmental Health Division.

(e) Radioactive Materials Management. The Radiologic Health Branch of the California Department of Health Services administers the federal and state radiation safety laws that govern the storage, use, and transportation of radioactive materials and the disposal of radioactive wastes. The Radiologic Health Branch licenses institutions that use radioactive materials and radiation-producing equipment, such as x-ray equipment. To maintain a radioactive materials license, an institution must meet training and radiation safety requirements and be subject to routine inspections.

(f) Medical Waste Handling. The California Department of Health Services Medical Waste Management Program delegates authority to enforce the California Medical Waste Management Act and related regulations locally to the San Mateo County Health Department, Environmental Health Division. Medical waste is generally regulated in the same manner as hazardous waste, except that special provisions apply to storage, disinfection, containment, and transportation. State law imposes a continual tracking system for disposal, and a calibration and monitoring system for on-site treatment. Facilities that treat medical wastes must obtain permits and are subject to annual audits. Medical waste is to be stored in closed red bags marked "biohazard" and, when transported for disposal, placed inside hard-walled containers with lids.

(g) Hazardous Materials Transportation. The U.S. Department of Transportation has developed regulations pertaining to the transport of hazardous materials and hazardous wastes by all modes of transportation, including packaging specifications for different types of materials. The U.S. Postal Service has developed additional regulations for the transport of hazardous materials by mail. The U.S. Environmental Protection Agency (EPA) has also promulgated regulations for the transport of hazardous wastes; these more stringent requirements include tracking shipments with manifests to ensure that wastes are delivered to their intended destinations. In California, the California Highway Patrol, the California Department of Transportation, and the California Department of Toxic Substances Control (DTSC) play a role in enforcing hazardous material and waste transportation requirements.

(h) Oversight of Contaminated Properties. Depending on specific circumstances, the San Mateo County Health Department, San Francisco Bay Regional Water Quality Control Board (RWQCB), or the California Department of Toxic Substances Control (DTSC) oversees sites contaminated by hazardous materials releases. The administering agency implements applicable soil and groundwater cleanup laws, including Superfund. Decisions regarding

cleanup and future use of a site are typically based on actual and reasonably projected risks present at the site. This approach focuses on the level of risk acceptable for planned land uses.

(i) Hazardous Building Components. Structural building components, particularly in older buildings, sometimes contain hazardous materials such as, among others, asbestos, polychlorinated biphenyls (PCBs), lead, and mercury. These materials are subject to various regulations. In the case of the proposed Stanford Outpatient Center, the Midpoint Technology Park buildings to be renovated and converted were constructed in 1998, after laws were passed banning or regulating the use of asbestos, PCBs, lead, and mercury in building components.

Asbestos. Asbestos is regulated both as a hazardous air pollutant and as a potential worker safety hazard. Bay Area Air Quality Management District (BAAQMD) and California Division of Occupational Safety and Health (CalOSHA) regulations restrict asbestos emissions from demolition and renovation activities, and specify safe work practices to minimize the potential for release of asbestos fibers. These regulations prohibit emissions of asbestos from asbestos-related manufacturing, demolition, and construction activities; require medical examinations and monitoring of employees engaged in activities that could disturb asbestos; specify precautions and safe work practices that must be followed to minimize the potential for release of asbestos; and require notice to federal and local government agencies prior to beginning renovation or demolition that could disturb asbestos.

PCBs. The California Department of Toxic Substances Control (DTSC) classifies PCBs as a hazardous waste when concentrations exceed 5 parts per million (ppm) in liquids or 50 ppm in non-liquids. Fluorescent light ballasts, which may contain PCBs, are regulated as hazardous waste and must be transported and disposed of as hazardous waste. Ballasts manufactured after January 1, 1978, should not contain PCBs and are required to have a label clearly stating that PCBs are not present.

Lead. CalOSHA standards establish a maximum safe exposure level for types of construction work where lead exposure may occur, including demolition of structures where materials containing lead are present; removal or encapsulation of materials containing lead; and new construction, alteration, repair, or renovation of structures with materials containing lead. Inspection, testing, and removal of lead-containing building materials must be performed by state-certified contractors who comply with applicable health and safety and hazardous materials regulations. Typically, building materials with lead-based paint attached are not considered hazardous waste unless the paint is chemically or physically removed from the building debris.

Mercury. Spent fluorescent light tubes, thermostats, and other electrical equipment contain heavy metals such as mercury that, if disposed of in landfills, can leach into soil or groundwater. Lighting tubes typically contain concentrations of mercury that may exceed regulatory thresholds for hazardous waste and, as such, must be managed in accordance with hazardous waste regulations. Elemental mercury waste is considered hazardous. Mercury can also be present in traps in the plumbing of older buildings in which mercury-containing equipment has been used.

7.3 PREVIOUS EIR FINDINGS PERTINENT TO THE PROPOSED PROJECT CHANGES

The 1996 EIR set forth the following certified impact and mitigation findings which remain applicable to the proposed project changes; these existing mitigation requirements would help to mitigate the hazardous materials effects of the proposed project changes:

Impact 9-2. The County of San Mateo Health Services Division and the RWQCB will allow new construction to take place in the project area, including the former Sears site [*i.e., the current project site*]. The County requires review by their Hazardous Materials Specialist, Office of Environmental Health, as part of the City's building permitting process for new construction [*e.g., new lobbies, enclosed walkways, possible parking decks*], and official closure for the demolition of any buildings proposed to be removed [*no buildings are to be removed under the current project*].

Certified Mitigation 9-2a. The County of San Mateo's Hazardous Materials Specialist, Office of Environmental Health, shall review and provide approval for new construction.

Certified Mitigation 9-2c. ...proper permitting for any groundwater disposal activities during construction, and

Certified Mitigation 9-2d. The Hazardous Materials Specialist will require a thorough understanding of groundwater pumping activities by all contractors involved in construction activities such as excavation, grading, or in groundwater pumping and removal of toxic or hazardous materials.

Specific to the proposed Stanford Outpatient Center project, the requirements of Certified Mitigation 9-2 above are described in more detail in subsection 7.4.4 (Supplemental Impacts and Mitigations) of this SEIR chapter under Supplemental Impact and Mitigation 7-1, "Potential Exposure to Existing Soil or Groundwater Contamination."

7.4 SUPPLEMENTAL IMPACT AND MITIGATION FINDINGS

7.4.1 Supplemental Analysis Scope

This supplemental analysis focuses on the hazard implications of the proposed project changes (i.e., the differences between the project evaluated in the 1996 EIR and 1998 SEIR and the currently proposed Outpatient Center project). For purposes of this evaluation, the key project changes are:

- The proposed change in land use from office/R&D use to medical clinic, and associated changes in the potential for hazardous materials to be used, handled, stored, generated, transported, or disposed; and
- Any associated changes in emergency access requirements.

7.4.2 Significance Criteria

Applying a similar significance criterion to that used in the 1996 EIR, the project would be considered to have a significant impact related to hazards or hazardous materials if it would directly or indirectly:¹

- (a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;

In addition, based on the current CEQA Guidelines, the project would be considered to have a significant impact related to hazards or hazardous materials if it would directly or indirectly:²

- (b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; or
- (c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. *(NOTE: The Initial Study Checklist prepared for the proposed project indicated that the project site might be located within one-quarter mile of the existing Taft Elementary School at 917 10th Avenue. However, a review of street maps confirms that there are no existing schools within one-quarter mile of the project site; Taft Elementary School is located approximately one-half mile from the site. Therefore, this issue is not discussed further in this SEIR.)*

7.4.3 Project Use, Storage, and Generation of Hazardous Materials

(a) Overview. Similar to existing outpatient services at the Stanford University Medical Center in Palo Alto, the proposed Stanford Outpatient Center would include activities that make use of and store a variety of hazardous materials. Most hazardous materials use would be associated with laboratory activities, patient treatment, and diagnostics. Typical hazardous materials used, stored, or generated on-site would include:

- Solvents and chemical reagents;
- Drugs and pharmaceuticals used for medical therapy;
- Infectious agents, including bacteria, viruses, and similar agents;
- Test samples (e.g., blood or tissue specimens) for use in testing procedures;
- Diesel fuel (for on-site generators); and
- Miscellaneous materials used for maintenance and cleaning.

For purposes of this SEIR, *hazardous materials* are materials that, because of their quantity, concentration, or physical or chemical characteristics, pose substantial hazards to human health

¹CEQA Guidelines, Appendix G, item VII(a).

²CEQA Guidelines, Appendix G, items VII(b) and VII(c).

or safety, or to the environment, particularly if released. *Hazardous wastes* are a subset of hazardous materials. They pose substantial hazards to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed. Hazardous materials can be categorized as non-radioactive chemicals, radioactive materials, or biohazardous materials. *Radioactive materials* contain atoms with unstable nuclei that spontaneously emit ionizing radiation to increase their stability. *Biohazardous materials* include infectious agents (i.e., microorganisms, bacteria, molds, parasites, or viruses) that normally contribute to human diseases. *Medical wastes* include both biohazardous wastes (byproducts of biohazardous materials) and sharps (devices capable of cutting or piercing, such as hypodermic needles, razor blades, and broken glass) resulting from the diagnosis, treatment, or immunization of human beings, or similar research.

The following paragraphs describe the types of hazardous materials typically handled at Stanford Hospital & Clinics (SHC) facilities, along with established SHC health and safety policies and procedures.

(b) Hazardous Materials Use and Storage. Table 7.1 lists the potential hazardous materials anticipated on-site at the proposed Outpatient Center. Patient care activities at the proposed Outpatient Center would involve the handling and storage of relatively small quantities of hazardous materials, such as chemical reagents and other pharmaceuticals; chemicals used to sterilize equipment; chemicals used for specimen preservation; and solvents, corrosives, and stains used in clinical laboratories. Some of these materials would require dispensing under a fume hood or in a designated area. In addition, facilities maintenance activities would require various common hazardous materials, including paints, pesticides and herbicides, oils and lubricants, and cleaners (which may include solvents and corrosive materials, in addition to soaps and detergents).

All human body fluids and tissues--such as blood, urine, stool, and saliva--are assumed to be potentially biohazardous. Biohazardous materials would be handled in clinical laboratories, operating rooms, pathology, radiology, and other areas of the Outpatient Center.

No unsealed radioactive materials would be used on-site. X-ray equipment would be on-site, but this equipment would not involve radioactive atoms or require storage of radioactive materials.^{1,2}

As required by law, storage of some hazardous materials would be accommodated in containers manufactured specifically for the type of hazardous material (e.g., flammable material containers, oxygen tanks) and only in the areas where the materials are needed.

All hazardous materials use and storage on-site would be subject to federal, state, and local regulations (see section 7.2, herein).

¹Mirna Cintron, Environmental Health and Safety Specialist, Stanford Hospital & Clinics; written and personal communications, April 24 and 27, 2006. The radioactivity of X-ray equipment is integral to operation of the equipment and does not exist as radioactive atoms or involve radioactive material stored in containers. "Digital" X-ray equipment, which might be included on-site, emits less radioactivity than standard X-ray equipment, or no radioactivity at all. Nevertheless, X-ray equipment and its use are regulated in a manner similar to radioactive materials.

²Mark How, Senior Health Physicist, Stanford University Health Physics; written communication, April 27, 2006.

Table 7.1
STANFORD OUTPATIENT CENTER ANTICIPATED HAZARDOUS MATERIALS INVENTORY

<u>Type of Material</u>	<u>Examples</u>	<u>Maximum Amount Anticipated On-Site</u>
Nonflammable Gases	nitrous oxide, carbon dioxide, nitrogen, oxygen, helium, argon	25,000 cubic feet
Flammable Gases	hydrogen, acetylene	3,800 cubic feet
Combustible Liquids	hydrolic oil, machine oil, diesel	3,000 gallons
Liquid Nitrogen ¹		13,750 gallons
Liquid Oxygen ¹		1,100 gallons
Flammable Liquids	ethanol, methanol, acetone, xylenes, acetronile, solvents	1,200 gallons
Oxidizers	hydrogen peroxide, sodium hypochlorite, osmium tetroxide	150 gallons
Etiological Materials ²	formalin, chloroform	120 gallons
Corrosive Materials	photographic developer and fixer, acetic acid, ammonium hydroxide	550 gallons
Toxic Materials	polyethylene glycol, xylene	200 gallons
Other Liquid Materials ³	floor finish, cleaners	1,000 gallons
Other Solid Materials ³	sodium chloride, ammonium sulfate, sodium phosphate	100 pounds

SOURCE: Mirna Cintron, Environmental Health and Safety Specialist, Stanford Hospital & Clinics, April 2006.

Notes:

1. Liquid nitrogen and liquid oxygen are cryogenic. They are normally gases at room temperature, and as liquids, they are extremely cold.
2. Etiological materials (i.e., used in researching the cause or origin of a disease) may contain disease-causing agents.
3. Many "other" materials are not necessarily hazardous, although they do appear on the *Hazardous Materials Business Plan* chemical inventory for the Stanford University Medical Center in Palo Alto.

(c) Hazardous Waste Generation. Use of hazardous materials typically produces hazardous waste; however, much of the hazardous material handled by SHC is consumed through use. Table 7.2 summarizes hazardous materials handled at SHC that typically result in remaining waste. Currently, SHC waste is shipped to hazardous waste treatment, storage, and disposal facilities in accordance with the California Hazardous Waste Control Law. Most hazardous waste is shipped to the Aptus incinerator in Utah. The facility is owned by Safety-Kleen, which also transports the waste.

Almost all of the medical waste generated by SHC (e.g., hypodermic needles, razor blades, broken glass) is shipped for disposal, typically to the Integrated Environmental Systems medical waste incinerator at 499 High Street in Oakland, California.

(d) Physical Hazards. Various physical safety hazards also exist at SHC facilities. Common work activities--such as lifting, using sharp tools, and performing repetitive motions--are associated with various physical hazards. Some employees work with equipment that presents special hazards, such as high-voltage electrical equipment, X-ray-producing instruments, lasers, and high-intensity magnetic fields. Some hazardous materials pose physical safety hazards, like burns, if not properly managed. Classes of materials that can be associated with physical injuries include pressurized liquids and gases, cryogenic (extremely cold) liquids, flammable materials, and corrosive chemicals.

(e) Health and Safety Program Implementation. For its existing outpatient centers, SHC has prepared various plans and policies as required by applicable regulations, including Hazard Communication Programs, Safety Management Plans, Bloodborne Pathogen Standard Exposure Control Plans, Hazardous Materials and Waste Management Plans, a Radiation Safety Manual, a Chemical Waste Management Policy, a Medical Waste Management Policy, a Cytotoxic Handling and Disposal Policy, Disaster and Emergency Preparedness Management Plans, Hazardous Materials Response Team Plans, and Hazardous Materials Business Plans.

In addition to the external oversight provided by regulatory agencies described in section 7.2 above, SHC reviews its environmental health and safety performance through Administrative & Environmental Rounds/Hazard Assessment Rounds Programs. These programs involve inspections of housekeeping, maintenance, supply, and health and safety at medical center facilities. Inspection team members represent the SHC's Housekeeping, Environmental Health and Safety, Engineering and Maintenance, Design and Construction, Security Services, and Materials Management departments. Weekly inspections cover all facilities over the course of a year. Weekly deficiencies are tracked until corrections are completed. SHC also occasionally conducts internal audits of specific programs.

7.4.4 Supplemental Impacts and Mitigations

Activities at the proposed Stanford Outpatient Clinic would use hazardous materials and generate hazardous waste. The hazardous materials now found at the existing outpatient facilities at the Stanford University Medical Center in Palo Alto and described above are expected to reflect the range of hazardous materials types that could be found at the proposed Stanford Outpatient Center in Redwood City, and the nature of the hazards associated with such materials is expected to be similar.

Table 7.2
STANFORD OUTPATIENT CENTER ANTICIPATED HAZARDOUS WASTES

<u>Type of Waste</u>	<u>Examples</u>	<u>Anticipated Waste Volume (pounds)¹</u>
Flammable Materials	solvents	32,907
Corrosive Materials	acids, bases	720
Toxic Materials	glutaraldehyde, mercury	545
Reactive Materials	aerosols, oxidizers	127
Other Hazardous Liquids	oil and water, latex paints	81,867
Other Hazardous Solids	batteries, light ballasts	890

SOURCE: Mirna Cintron, Environmental Health and Safety Specialist, Stanford Hospital & Clinics, January 2006.

¹ Waste volume corresponds to weight of waste containers shipped. Actual volumes may be considerably smaller. In addition to the waste above, the Stanford Outpatient Center would discard some gas cylinders in compliance with applicable laws.

To assess the potential for the proposed project to pose a significant impact, the following analysis considers the pathways through which exposure to hazards could potentially occur and evaluates the controls that would foreseeably be placed on each of these pathways. Exposure pathways that would be sufficiently controlled so as to pose no substantial hazard are considered to result in less-than-significant environmental impacts.

Supplemental Impact 7-1: Potential Exposure to Existing Soil or Groundwater Contamination. Excavation and construction of the proposed underground storm water retention basins, underground utilities, and potential future parking decks could expose construction personnel and members of the public to existing soil and groundwater contamination, if any. Implementation of previously Certified Mitigation 9-2 from the 1996 EIR would help to reduce such potential exposure to less than significant levels. In addition, or more specifically, recommendations included in the recent Phase I Environmental Assessment commissioned by the applicant call for preparation by the applicant of a *Site Management Plan* prior to site development to address potential environmental issues associated with project construction activities (e.g., excavation, dewatering, etc.) and operation, and the recent Phase II Environmental Assessment commissioned by the applicant calls for preparation of a site-specific, construction period *Health and Safety Plan* (a standard CalOSHA requirement for work at hazardous waste sites). Until these two plans are completed to the satisfaction of the County of San Mateo's Office of Environmental Health, project-related potentials for construction worker and public exposure to existing soil and groundwater contamination, if any, are assumed to represent a **potentially significant impact** (see criterion [a] in subsection 7.4.2, "Significance Criteria," above).

Explanation:

The proposed project would involve construction of two underground storm water detention basins, underground utilities (e.g., water, sewer, power), and possible foundation excavation for potential future parking decks (*Supplemental Mitigation 12-10*). While the project site does not appear on the State of California Hazardous Waste and Substances Sites List, the 1996 EIR noted that groundwater contamination from at least two volatile organic compound (VOC) plumes had originated from off-site sources and migrated through a portion of the Midpoint Technology Park site.

If soils on-site were contaminated, earth-moving activities undertaken without appropriate safeguards could potentially expose workers, and possibly the public, to chemicals in the soil. Exposure would most likely occur through skin contact or inhalation. Workers directly engaged in on-site activities would face the greatest potential for exposure. The public could be exposed if construction site access were insufficiently controlled or if contaminated soil were to become airborne. Any contaminated soil found on-site would need to be managed appropriately, and residual risk to future site occupants would need to be kept within acceptable levels, as determined by the San Mateo County Health Department and other appropriate oversight agencies. Without such measures, the project could create a hazard through the inappropriate management and disposal of hazardous materials, thereby posing a potentially significant impact.

For these reasons, steps to characterize the potential for contamination have been implemented, as required under previously Certified Mitigation 9-2, to ensure that the proposed project changes will not create unacceptable risks. Specifically, SHC has commissioned Geomatrix Consultants, Inc., licensed Environmental Assessors, to conduct site-specific Phase I and Phase II environmental assessments, following associated state and federal regulatory protocols. The assessment results are summarized in section 7.1.3 herein, and associated mitigation recommendations are summarized below.

2004 Phase I Environmental Assessment Mitigation Recommendations: In the 2004 Phase I report, Geomatrix recommended the following more specific procedures to address potential encounters with residual petroleum or VOCs on the project site:

- Construction activities in the northeast area of the site (where an underground storm water retention basin and possible parking deck are proposed) may encounter residual petroleum from the former UST. Although it is expected that residual concentrations would not pose a significant human health risk, the material, if encountered, should be evaluated with respect to construction worker exposure and to proper disposal. ***This evaluation was completed as part of the Phase II environmental assessment, as summarized below.***
- Groundwater is expected to occur at depths of less than ten feet below ground surface at the site. Therefore, dewatering effluent generated during construction (e.g., while excavating for the underground storm water retention basins and possible parking decks) should be evaluated, and, if necessary, treated for the presence of VOCs prior to disposal. Grab groundwater sampling should be conducted to evaluate current groundwater conditions. ***Grab groundwater sampling was completed as part of the Phase II environmental assessment, as summarized below.***

- Groundwater beneath the project site contains VOCs originating from an off-site source. Although this condition is not expected to result in a significant human health risk to project employees and visitors, measurements and data regarding indoor air quality within the project structures should be collected and evaluated. ***This procedure was completed as part of the Phase II environmental assessment, as summarized below.***

2005 Phase II Environmental Assessment Approval Status: The findings of the project-commissioned 2005 Phase II Environmental Assessment were summarized in section 7.1.3(b) herein. According to Geomatrix, as documented in its Phase II report, based on comparisons of the VOC and MTBE concentrations in groundwater with RWQCB screening criteria, the current levels of on-site presence of these chemicals should not pose an unacceptable human health risk for Outpatient Center employees and visitors, or limit the use of the site as an outpatient medical facility. Geomatrix, on behalf of Stanford Hospital & Clinics, has initiated correspondence with the RWQCB to obtain regulatory clearance verifying that Stanford Hospital & Clinics is not the party responsible for cleanup of the VOCs in groundwater under the project site. Also, the San Mateo County Department of Health Services (SMCDHS), Groundwater Protection Program, has provided comments to Geomatrix regarding the Phase II environmental assessment (e.g., regarding sampling procedures, analytical methods, sampling locations). As of the preparation of this SEIR, the RWQCB and SMCDHS approval processes for the Phase II environmental assessment were ongoing.

These measures, along with the application of cleanup standards subject to review by responsible agencies, would serve to protect public health and the environment during site remediation, thereby minimizing potential adverse effects.

To the extent that the proposed project could involve removing existing contaminants from soil or groundwater, it could also be beneficial over the long term. Contaminant removal could reduce potential health threats and prevent individuals from encountering these contaminants in the future.

Supplemental Mitigation 7-1: Implement the following:

Phase II Environmental Assessment Approval: Complete the RWQCB and SMCDHS approval process for the Phase II environmental process.

Site Management Plan: Regardless of the outcome of the Phase II approval process, a construction period *Site Management Plan* shall be prepared by the applicant and approved by the County of San Mateo's Hazardous Materials Specialist, Office of Environmental Health, prior to site development, to ensure that potential environmental issues associated with construction (e.g., dewatering) and operation of the site are adequately addressed. The *Site Management Plan* shall include or incorporate by reference an applicant-prepared or appropriate contractor-prepared site-specific construction period *Health and Safety Plan* (a standard CalOSHA requirement for work at hazardous waste sites). In addition to measures that protect on-site workers, the plan shall include measures to minimize public exposure to contaminated soil and groundwater (e.g., measures for the evaluation, handling and disposal of groundwater effluent generated during project construction period during dewatering, in accordance with applicable regulations). Such measures shall include dust control, appropriate site security, restriction of public access, and posting of warning signs. The plan shall apply from the time of surface disruption through the completion of earthwork construction.

Implementation of these supplemental mitigations, in addition to Certified Mitigation 5-2 from the 1996 EIR, would reduce this supplemental impact to a ***less-than-significant level***.

Supplemental Impact of Potential Hazardous Materials Disturbance in Existing Buildings.

Demolition or renovation of existing buildings could disturb hazardous materials, if any, in existing building components and thereby cause adverse health or safety effects. As noted in subsection 7.2.3(i) above, however, the Midpoint Technology Park buildings that the project proposes for renovation were constructed in 1998-2000, after laws were passed banning or regulating the use of asbestos, PCBs, lead, and mercury in building components. The potential for hazardous materials in the existing buildings is therefore considered low, and the potential for hazards would represent a ***less-than-significant impact***.

Supplemental Mitigation. No significant impact has been identified; no mitigation is required.

Supplemental Impact Due to Hazardous Materials Storage and Handling. The proposed project would introduce hazardous materials storage and handling to the site, thereby increasing risks of human and environmental exposure. However, existing SHC health and safety programs--as well as existing local, state, and federal regulations and permitting requirements described in section 7.2, above--would limit the potential for exposure to hazardous materials by workers, other individuals on-site, the community, and the environment to established safe levels. Potential dangers due to hazardous materials storage and handling at the proposed project would therefore represent a ***less-than-significant impact***.

Explanation:

Typical On-Site Hazardous Materials and Agents. The types of hazardous materials that would be found at the proposed Stanford Outpatient Center would be similar in nature to those that exist now at the Stanford University Medical Center outpatient facilities in Palo Alto. Table 7.1 lists the potential hazardous materials anticipated on-site at the proposed Stanford Outpatient Center.

The hazards posed by chemicals and infectious agents vary. Some chemicals can pose physical hazards (e.g., chemical burns) or health hazards (e.g., poisoning), including potential acute or chronic illnesses. The properties and health effects of different chemicals are unique to each chemical and depend on the extent to which an individual is exposed. Exposure to excessive levels of radiation, whether from radiation-producing equipment or radioactive materials, can result in headaches, skin burns, or chronic illness, including cancer; the project is not anticipated to use any unsealed radioactive materials.

Exposure to biohazardous materials can cause a range of illnesses, depending on the infectious agent encountered. Some infections can result in short-term discomfort (e.g., mild symptoms that can easily be treated or go away by themselves), while others can result in serious acute effects (e.g., dangerous disruptions of life functions). Some chronic diseases may or may not be curable or treatable. Some diseases may be communicable. In all these cases, the risks posed by the hazardous materials depend on the potential for exposure.

Impacts on Workers and Other Individuals On-Site. The project-related effects of hazardous materials handling and storage would generally be limited to the immediate areas where the materials would be located because this is where exposure would be most likely. (Exposure at more distant locations would require some mechanism to transport the material to the more distant locations.) The individuals most at risk would therefore be Outpatient Center employees or others in the immediate vicinity of the hazardous materials. The routes through which these individuals could be exposed include inhalation, ingestion, contact, injection, and other accidents.

As described previously, SHC is required to comply with health and safety and environmental protection laws and regulations. To ensure compliance, SHC implements its own health and safety policies and procedures. Table 7.3 summarizes the primary means through which SHC protects workers and other individuals on-site from exposure to hazardous materials. For the proposed Outpatient Center project, SHC would be expected to implement policies and procedures similar in nature to those that currently exist at the Stanford University Medical Center outpatient facilities in Palo Alto. The effectiveness of these controls would also be expected to be similar.

Impacts on Greater Community and Environment. For the most part, the health and safety procedures that protect workers and other individuals in the immediate vicinity of hazardous materials would also protect the more distant community and environment (e.g., local air quality and biota). The pathways through which the greater community or the environment could be exposed to hazardous materials include air emissions, transport of hazardous materials to or from the site, waste disposal, human contact, and accidents. Table 7.4 lists some of the primary means SHC uses to protect the community and the environment from exposure to

Table 7.3
EXPOSURE PATHWAYS AND CONTROLS--WORKERS AND OTHER INDIVIDUALS
ON-SITE

<u>Exposure Pathway</u>	<u>Examples of Control Measures</u>
Inhalation (breathing a hazardous substance)	<ul style="list-style-type: none">▪ Working with volatile materials in fume hoods¹▪ Working with potentially aerosol-suspended biohazardous materials in biosafety cabinets²▪ Keeping containers closed when not in use▪ Wearing face masks or respirators, as necessary
Ingestion (swallowing a hazardous substance)	<ul style="list-style-type: none">▪ Not eating or drinking near hazardous materials▪ Not storing food in refrigerators used for hazardous materials▪ Not smoking near hazardous materials▪ Washing hands and work areas
Contact (absorbing a hazardous substance through the skin or eyes)	<ul style="list-style-type: none">▪ Wearing protective clothing and shoes, as necessary▪ Wearing eye protection (glasses or goggles), as necessary▪ Wearing gloves, as necessary▪ Washing hands and work areas▪ Working with radioactive materials behind shields
Injection (puncturing or cutting the skin with a contaminated object)	<ul style="list-style-type: none">▪ Participating in awareness training▪ Keeping sharps in puncture-resistant containers
Other Accidents	<ul style="list-style-type: none">▪ Participating in emergency response training▪ Purchasing and handling many hazardous materials in relatively small containers▪ Maintaining emergency equipment (e.g., safety showers, emergency eye washes, first aid kits)▪ Providing appropriate lips on shelves where hazardous materials are stored and other restraints, where necessary▪ Segregating incompatible hazardous materials and storing flammable materials in fire-rated cabinets▪ Providing secondary containment for hazardous materials that are not in use▪ Calling the Redwood City Fire Department and its Hazardous Materials Emergency Response Team, if necessary

SOURCE: Mirna Cintron, Environmental Health and Safety Specialist, Stanford Hospital & Clinics, January 2006.

Notes:

¹ Fume hoods are cabinets with front-opening (usually sliding) glass doors connected to overhead exhaust fans that draw air from the room through the cabinet and expel it into the atmosphere through rooftop stacks.

² Biosafety cabinets look similar to fume hoods. They filter aerosols and remove particles from the air, but they do not necessarily exhaust the filtered air to the outdoors.

Table 7.4
EXPOSURE PATHWAYS AND CONTROLS--COMMUNITY ENVIRONMENT

<u>Exposure Pathway</u>	<u>Examples of Control Measures</u>
Air Emissions	<ul style="list-style-type: none">▪ Using fume hood ventilation or alternative exhaust systems to dilute and subsequently disperse emissions to the atmosphere¹
Transport to and from the Site	<ul style="list-style-type: none">▪ Following packaging requirements specified by the U.S. Department of Transportation, the U.S. Postal Service, and the California Department of Health Services Radiologic Health Branch and Medical Waste Program▪ Identifying container contents with appropriate labels▪ Using licensed hazardous waste haulers▪ Documenting hazardous waste shipments
Waste Disposal	<ul style="list-style-type: none">▪ Training workers▪ Segregating wastes▪ Collecting hazardous waste for appropriate disposal▪ Diluting and treating wastewater from the site▪ Labeling trash cans▪ Following federal and state hazardous waste disposal regulations and procedures, including those for hazardous waste manifest documentation
Human Contact	<ul style="list-style-type: none">▪ Identifying container contents with appropriate labels▪ Training workers▪ Implementing standard hygiene practices (e.g., wearing protective clothing and gloves when necessary, leaving protective clothing at work, and washing hands and work areas)▪ Implementing medical surveillance programs to monitor the health of those who work with certain biohazardous materials▪ Monitoring the exposure of those who work with radioactive materials
Accidents	<ul style="list-style-type: none">▪ Providing emergency response training▪ Maintaining emergency equipment (e.g., safety showers, emergency eye washes, first aid kits)▪ Calling the Redwood City Fire Department and its Hazardous Materials Emergency Response Team, if necessary▪ Not providing floor drains in areas where relatively large quantities of hazardous materials may be handled

SOURCE: Mirna Cintron, Environmental Health and Safety Specialist, Stanford Hospital & Clinics, January 2006.

Note:

¹ Fume hoods are cabinets with front-opening (usually sliding) glass doors connected to overhead exhaust fans that draw air from the room through the cabinet and expel it into the atmosphere through rooftop stacks.

hazardous materials. The effectiveness of these controls at the proposed Outpatient Center would be expected to be similar to existing conditions at the Stanford University Medical Center outpatient facilities in Palo Alto.

Most hazardous materials storage at the proposed Outpatient Center would present little risk of upset, particularly to the community or environment away from the immediate vicinity of the hazardous materials. The materials would generally be stored in small, individual containers (with exceptions such as some compressed gases). Therefore, the probability of a major hazardous materials incident would be relatively low.

Minor incidents would be more likely, but the consequences of such accidents would not be expected to be severe due to the typically small quantities of materials handled at any particular time, and the equipment and training provided to SHC staff.

SHC maintains Disaster Plans to help ensure that staff can respond to possible hazardous materials emergencies and disasters. In addition, the Redwood City Fire Department provides "first response" capabilities to identify and secure access to hazardous materials incidents.

Other jurisdictions are also available, if necessary, to support the Redwood City Fire Department through mutual aid agreements. Hazardous materials spills and releases posing immediate threats to life or property are mitigated through an agreement among the Fire Department, the San Mateo County Environmental Health Services Division, and the South County Fire Authority Hazardous Materials Response Team. These entities provide a unified response to hazardous materials emergencies.¹ (The Redwood City Fire Department has concluded that demand for hazardous materials emergency services at the proposed Stanford Outpatient Center would not result in a noticeable change in the demand for hazardous materials emergency response services in Redwood City. See further discussion in chapter 11 [Fire/Emergency Services and Child Care].)

Aside from accidents possibly occurring on-site, accidents during hazardous waste transport to and from the site could expose individuals and the environment to risks at some distance from the project site. The U.S. Department of Transportation, the U.S. Postal Service, and the California Department of Health Services Radiologic Health Branch and Medical Waste Program all specify packaging requirements for hazardous materials and wastes that limit the potential for packages to fail on impact. These requirements reduce the potential for hazardous materials releases to occur in the unlikely event of an accident.

Hazardous Materials Use and Storage Impact Summary. Tables 7.3 and 7.4 summarize the hazardous materials controls that would be implemented at the proposed Stanford Outpatient Center. In addition, SHC reviews new building plans to minimize risks and to ensure compliance with health and safety laws and regulations. Administration & Environmental Rounds/Hazard Assessment Rounds and periodic program audits also would be implemented.

These mechanisms would be expected to minimize the potential for exposure to adverse health or safety effects from the use and storage of hazardous materials. Furthermore, SHC would implement Disaster and Emergency Preparedness Management Plans, and the City of Redwood City would continue to provide emergency response services. As a result, the proposed project would not create a significant hazard to the public or the environment through

¹Lee.

the transport or use of hazardous materials; or through reasonably foreseeable upset or accident conditions involving the release of hazardous materials.

Supplemental Impact Due to Hazardous Waste Generation. The proposed project would generate hazardous waste, but would not substantially increase risks of environmental exposure to hazardous waste. Potential dangers due to hazardous waste generation would represent a ***less-than-significant impact***.

Explanation:

The use of hazardous materials at the proposed Outpatient Center would result in hazardous waste generation, including hazardous chemical and medical waste generation.

Even proper hazardous waste disposal, regardless of the method selected, often affects the environment. Hazardous waste landfills generally leak at some point and occasionally fail. Waste incinerators release toxic air contaminants to the atmosphere and result in ash that contains unburnable hazardous constituents (such as metals). Most other treatment and recycling methods also result in hazardous residuals that must be disposed of as hazardous waste. These residuals are usually either incinerated or landfilled. For this reason, the generation and disposal of hazardous waste is considered to be a form of pollution, and current hazardous waste management policies designate hazardous waste disposal as the least desirable management approach. Waste management strategies that seek to prevent pollution by reducing waste generation at its source are considered the most desirable approach.

Pollution prevention is a national objective established by the Pollution Prevention Act of 1990. This priority is reflected in San Mateo County's *Hazardous Waste Management Plan*.

Hazardous Chemical Waste. The proposed project would incrementally contribute to the volume of hazardous chemical waste generated in Redwood City. The increased hazardous chemical waste generation would increase the volume of waste managed at hazardous waste facilities inside and outside California. The increased demand for waste treatment and disposal would incrementally contribute to the demand for new hazardous waste treatment, recycling, and disposal facilities. The likely effects of hazardous waste disposal would probably occur far from the project site (since no hazardous chemical waste landfills or incinerators are located in the Redwood City vicinity).

California's hazardous chemical waste generators rely heavily on out-of-state treatment and disposal facilities to meet their disposal needs. For example, no hazardous chemical waste incinerators in California accept waste from third-party generators such as SHC. Out-of-state facilities may not receive environmental supervision equivalent to that of California. Therefore, the possibility exists that some hazardous waste generated as a result of the project could be managed at facilities that do not comply with some standards deemed appropriate by California.

Medical Waste. Most of SHC's medical waste is currently sent to incineration at Integrated Environmental Systems, a regional medical waste disposal facility in Oakland (on High Street near I-880). As with most hazardous waste disposal technologies, incineration involves potentially hazardous air emissions, including dioxins, and residuals that must be landfilled. Project-related medical waste would continue to be shipped to the Integrated Environmental Systems facility, unless other arrangements are made.

In November 1997, the Bay Area Air Quality Management District (BAAQMD) prepared a health risk screening analysis to assess the maximum potential acute and chronic risks posed by the incineration of medical waste at the Integrated Environmental Systems Oakland facility.¹ The analysis relied on conservative assumptions in estimating health risks. It assumed that the facility would operate at its maximum permitted capacity (its design capacity) of 2,000 pounds of medical waste per hour and that the facility would operate 24 hours a day for 365 days a year. In reality, the facility operates about 75 percent of the time. The study concluded that the maximum cancer risk posed by these operations would be no higher than 9.4 cancer cases per million individuals exposed. The total chronic and acute hazard indices (which indicate the potential for substantial chronic and acute health effects if over 1.0) would be at most approximately 0.37 and 0.008, respectively. The portion of this risk attributable to all SHC activities would be a relatively small fraction of the total. The portion attributable to the Outpatient Center project would be smaller still.

Hazardous Waste Summary. The proposed project is expected to increase SHC's generation of hazardous waste and, therefore, its demand for hazardous waste disposal services. This overall increase in demand would, by itself, have little observable effect on the levels of existing hazards that waste disposal poses to the public or the environment. With implementation of the established SHC health and safety control measures described in this chapter, no additional mitigation would be necessary.

Supplemental Mitigation. No significant impact has been identified; no additional mitigation is required.

Supplemental Impact Related to Physical Safety Hazards. The proposed project would expose individuals, including construction workers, project employees, patients, and other site occupants, to on-site safety hazards. However, established safety programs would minimize the potential for physical hazards, and therefore this exposure would represent a ***less-than-significant impact***.

Explanation:

The proposed project would introduce potential physical safety hazards on-site. These hazards would include, among others, electrical shock hazards from high-voltage equipment, safety risks posed by compressed gas cylinders (including those filled with inert gases), radiation hazards from x-ray equipment (regulated as radioactive material), and exposure to magnetic fields, intense light, or lasers. Other more common hazards would include slips and falls, overexertion, and repetitive motions. Workers engaged in activities that present special hazards, such as those mentioned above, would be adequately trained in accordance with SHC's Injury and Illness Prevention Plan requirements. Although individuals would be exposed to physical safety hazards with the project, compliance with occupational safety regulatory requirements would minimize the potential risks that physical hazards could pose. Accordingly, no additional mitigation would be necessary.

Supplemental Mitigation. No significant impact has been identified; no mitigation is required.

¹Bay Area Air Quality Management District, Toxic Evaluation Section; *Supplemental Health Risk Screening Analysis for Integrated Environmental Systems, Inc.*; November 1997.

8. HYDROLOGY AND WATER QUALITY

This SEIR chapter describes the hydrology (i.e., storm drainage and flood control) and water quality implications of the Stanford Outpatient Center, focusing on project aspects that differ from those addressed in the 1996 Midpoint Technology Park Final EIR and 1998 SEIR. The chapter also describes current water quality regulations and how they would apply to the proposed Stanford Outpatient Center project.

8.1 SETTING

8.1.1 Local Topography and Drainage

The 11.3-acre project site is fully built out and nearly flat, with a gentle natural slope northward toward San Francisco Bay of less than one percent. Elevations on-site range between approximately six and eight feet above mean sea level. The slow flow of storm water runoff toward the Bay is blocked by U.S. 101, which is now crossed by force mains or large-diameter, gravity flow culverts. North of the freeway, these facilities discharge into the Bayfront Canal, which runs along the landward side of Cargill's salt evaporation ponds before discharging through a tide gate into Flood Slough and the Bay.

The project site has a fully developed network of in-ground storm drains, which are part of the larger Midpoint Technology Park drainage system. This system drains to the northwest corner of the Technology Park at the end of Douglas Avenue, where it discharges into the City-operated Douglas Avenue pumping station. This station serves the Douglas Avenue Drainage Basin, a 655-acre basin roughly bounded by Second Avenue, El Camino Real, Chestnut Street and U.S. 101. The station pumps the basin's storm water runoff into a 42-inch diameter force main that crosses the freeway and discharges into a drainage ditch that flows east, paralleling the freeway for approximately 1,900 feet, to three, 21-inch-diameter culverts that connect it to the beginning of the Bayfront Canal.

According to a utility study prepared for construction of the Midpoint Technology Park,¹ the Douglas Avenue pumping station only has capacity to accommodate the runoff from a one-year recurrence interval storm (a storm intensity expected to occur on an annual basis), although a representative of the City Engineering Department and the applicant's engineer have both concluded that the pumping station probably can accommodate a two-year capacity (i.e., a storm level expected to occur at least every other year).² In either case, the station's capacity is considerably lower than the City's typical 100-year recurrence interval design requirement.

¹Brian Kangas Foulk, Consulting Engineers; *Midpoint Technology Park Utilities Study*; August 27, 1996.

²Paul Willis, Redwood City Engineering and Construction Department, personal communication, February 8, 2005; and Ed Boscocci, Brian Kangas Foulk, Consulting Engineers, personal communication, January 31, 2005.

Plans have been in place for several years to upgrade the Douglas Avenue pumping station, as well as the Fifth Avenue pumping system, but have not been implemented because of discharge constraints within the downstream Bayfront Canal.¹ This canal borders low-lying mobile home parks north of the freeway, and it accepts runoff from Atherton Creek in addition to the Fifth Avenue and Douglas Avenue Drainage Basins before reaching the tide gate at Flood Slough. When high tides in the slough coincide with peak upstream storm water discharges, the canal backs up and regularly threatens the adjacent mobile homes. To address this situation, the City is currently negotiating with Cargill to permit diversion of the Bayfront Canal into the existing salt ponds during high tides, which would allow the canal to accommodate much higher rates of upstream runoff. There is no indication when this or some other downstream solution might be implemented, so further improvements to the upstream Douglas Avenue and Fifth Avenue pumping systems remain on hold.²

8.1.2 Rainfall and Runoff

Average annual rainfall in the project vicinity is approximately 20 inches.³ Nearly 95 percent of this precipitation falls during the winter rainy season, October through April, with the heaviest rainfall typically occurring in December, January, and February. Rainfall intensity during a 30-minute duration, 100-year recurrence interval storm is approximately 1.65 inches per hour, while during the more frequent 10-year and one-year storms, the intensity decreases, respectively, to 1.15 inches and 0.33 inches per hour.⁴ As noted above, the existing Douglas Avenue pumping station only has sufficient capacity for a one-year storm; runoff generated by more intense rainfall events backs up into low-lying areas throughout the drainage basin.

Storm water runoff is that portion of rainfall that is not absorbed into the ground, taken up by plants, or lost through evaporation. Coarse-grained, permeable soils and heavy vegetative cover reduce runoff, while steep slopes, fine-grained soils, and impervious surfaces (buildings and pavement) increase runoff. The duration, frequency, and total amount of rainfall also affect the volume of runoff; frequent or heavy rains saturate the soil and reduce infiltration, so that the percentage of rain that runs off the land increases with the severity of a storm.

Since the project site is fully developed, infiltration can only occur within existing lawn and other landscaped areas, which cover approximately 15 percent of the site. It is estimated that native existing soils underlying imported topsoil in these areas have a runoff coefficient of about 40 percent, as compared to a runoff coefficient of 95 percent for buildings and pavement. This results in a composite runoff coefficient of 84 percent, which means approximately 84 percent of

¹A 66-inch diameter freeway culvert was recently added to increase the capacity of the Fifth Avenue system, but, thus far, the culvert has been used only to increase the volume of subsurface detention storage, rather than total discharge capacity.

²Marilyn Williams Harang, Redwood City Wastewater Management Services Division Superintendent; personal communication, February 8, 2005.

³Santa Clara Valley Water District, "Mean Annual Precipitation Map for San Francisco and Monterey Bay Region," October 1989.

⁴California Department of Transportation, *Guidelines for the Use of Standards Developed by the 1941 - 1971 Rainfall Intensity-Duration-Frequency Analysis*; October 1974.

the rain that falls on the site would be expected to eventually run off into the on-site and downstream storm drain systems.¹

8.1.3 On-site Drainage Conditions

Because the Douglas Avenue pumping station had such limited capacity prior to construction of the Midpoint Technology Park, excess runoff was ponding within the lowest areas adjacent to the freeway, covering roughly two-thirds of the 48.4-acre property (and all of the 11.3-acre project site), sometimes to depths in excess of three feet.² To protect the proposed Technology Park improvements, the new buildings on the site were elevated above the maximum, 100-year flood elevation (5.3 feet above mean sea level), and to prevent a worsening of existing flooding elsewhere within the drainage basin, all parking and landscaped areas were left low to maximize the volume of available flood storage. According to calculations prepared in 1996, upon completion of the Midpoint Technology Park, water would begin backing up from the Douglas Avenue pumping station when the rainfall intensity exceeded a one-year storm, and would reach maximum depths on the Technology Park site of approximately 1.2 feet during a 10-year storm and 2.3 feet during a 100-year storm, an improvement over previous on-site conditions.³

8.1.4 Water Quality

(a) Existing Water Quality Conditions. The project site is currently covered by buildings, pavement, and landscaping. When the site was occupied by the previous tenants, it is assumed that these surfaces generated the typical range of non-point source urban pollutants, such as litter, packaging materials, landscaping fertilizers and pesticides, heavy metals, oil and gas residues, tire fragments, and debris normally deposited by vehicular traffic. Storm water runoff would have carried these materials through the Douglas Avenue pumping station to the Bayfront Canal, Flood Slough and San Francisco Bay, where they would have contributed to a small but cumulative degradation of water quality.

(b) Federal and State Water Quality Regulations. In California, the discharge of pollutants to water bodies from point and non-point sources is regulated at the federal level by the U.S. Environmental Protection Agency's National Pollution Discharge Elimination System (NPDES), under the auspices of sections 401 and 402 of the Clean Water Act, and at the state level by the

¹Runoff coefficients represent an estimate of the percentage of total rainfall expected to end up as runoff. They are often used in conjunction with the Rational Method, a widely used means of estimating maximum rates of storm water runoff from both undeveloped and developed watersheds. For each subarea within a watershed, the runoff coefficient is multiplied by the number of acres within the contributing drainage area and by the expected peak rainfall intensity (expressed in inches per hour) to calculate the peak rate of storm water runoff (expressed as cubic feet per second).

²Because the project site lies at the low end of a watershed that drains by gravity to the Douglas Avenue pumping station, the site historically (i.e., prior to development of the Midpoint Technology Park) provided the flood storage needed when runoff rates exceeded the station's capacity. The previously cited Midpoint Technology Park Utilities Study determined this storage equaled 43 acre-feet during a 10-year storm and as much as 81 acre-feet during a 100-year storm. The 100-year flooding volume includes 16 acre-feet it was estimated would spill out of Atherton Creek, extending the area of inundation across the boundary between the Douglas Avenue and Fifth Avenue basins.

³Brian Kangas Foulk, August 27, 1996.

Porter-Cologne Water Quality Control Act, Water Code section 13260. Federal regulations issued in November 1990 and revised in 2003 expanded the original scope of the NPDES to include permitting of storm water discharges from construction sites that disturb areas larger than one acre. (The proposed project changes, including the proposed storm water retention vault installation and landscape modifications, would disturb an area larger than one acre.)

In the Bay Area, the NPDES program and the Porter-Cologne Act are administered by the San Francisco Bay Regional Water Quality Control Board (RWQCB), a division of the State Water Resources Control Board (SWRCB).

For storm water discharges associated with construction activities, federal regulations allow two permitting options, Individual Permits and General Permits. The SWRCB utilizes a single statewide General Permit for construction-related storm water discharges. This General Permit requires dischargers where construction activity disturbs one acre or more, to:

- (1) Develop and implement a Storm Water Pollution Prevention Plan (SWPPP) that specifies Best Management Practices (BMPs) to be employed (1) on the construction site to prevent all construction materials that may be sources of pollution from contacting storm water and to prevent all products of erosion from moving off-site into receiving waters, and (2) on the developed site throughout the life of the project to minimize the discharge of urban pollutants into receiving waters;
- (2) Eliminate or reduce non-storm water discharges to storm sewer systems and other waters of the nation, utilizing Source Control Measures approved by the City;
- (3) Install permanent treatment control devices; and
- (4) Enter into an agreement with the City to maintain and perform inspections of all permanent storm water pollution prevention devices.

Revised storm water quality control regulations adopted by the RWQCB, effective July 1, 2003 (the "C.3" regulations), stipulate that construction activities that create one acre or more of impervious surface are subject to newly revised permitting requirements--i.e., must apply for an NPDES General Permit for Discharges of Storm Water Runoff Associated With Construction Activity (General Construction Permit) (*Municipal Storm Water Permit Revisions: Impacts to Cities and New Development Programs*, www.SCVURPPP.org, March 24, 2003). The SWPPP must be prepared before construction begins, usually during the planning and design phases of a project. The SWPPP must include specifications for Best Management Practices (BMPs) to be incorporated in project landscaping and engineering specifications for projects creating one acre or more of impervious surface, which would be implemented during project construction to control contamination of surface flows and the potential discharge of pollutants from the site. Additionally, the SWPPP must describe measures to prevent or control pollutants in runoff after construction is complete, and must include an Operations and Maintenance Plan providing for ongoing inspection and maintenance of these measures. As of August 15, 2006, the impervious area threshold will fall to 10,000 square feet.

New development projects covered under the revised standards include both private development projects and public projects such as streets, roads, and parking lots. Significant projects covered under the revised standards include major reworking of existing sites, but do

not include regular maintenance (e.g., roof replacement, routine repaving) and interior remodels.

Projects must incorporate source controls, design measures, and treatment controls to minimize storm water pollutant discharges. Where incorporating controls into a project is clearly impracticable--for example, at highly constrained urban sites--projects are allowed to satisfy their obligation elsewhere by implementing measures to provide an "equivalent water quality benefit." The permit allows cities to develop their own program to do this, subject to approval of the RWQCB. Alternately, projects may participate in regional solutions--such as storm water wetlands that treat runoff from a broad area--rather than providing on-site treatment controls.

(c) City Water Quality Control Requirements. In addition to its own programs designed to protect water quality (such as street cleaning and litter control), Redwood City has developed an "NPDES Permit Requirements Checklist" for implementation of its own Storm Water Pollution Prevention Program. The checklist sets forth specific provisions and design requirements for all construction activities, since new construction and redevelopment projects constitute a significant source of pollutants in municipal storm water discharges. Also, because the time of construction typically represents the only opportunity to incorporate permanent pollution control measures into a project, the checklist includes provisions covering site design and pollutant source controls.

8.1.5 Groundwater

Local groundwater recharge would not be affected by the proposed project, since there would be no change in the nature or extent of pervious areas through which rainwater could percolate into the soil.

8.2 PERTINENT PLANS AND POLICIES

The Redwood City Strategic General Plan Open Space, Conservation, and Safety Elements (adopted in 1990) contain the following drainage policy pertinent to consideration of the environmental impacts of the proposed project changes:

- *New development should be designed to provide protection from potential impacts of flooding during the 100-year flood. (Safety Policy S-8, page 12-3)*

8.3 SUPPLEMENTAL IMPACT AND MITIGATION FINDINGS

8.3.1 Supplemental Analysis Scope

The scope of this supplemental hydrology and water quality analysis is limited to identification of the mitigating (beneficial) effects of, and any additional adverse impacts associated with, the proposed project changes.

8.3.2 Significance Criteria

The significance criteria used in the 1996 EIR are not the same as those suggested in the current (2006) CEQA Guidelines. Based on the current CEQA Guidelines,¹ the project would be expected to have a significant hydrology or water quality impact if it would:

- (a) Violate any water quality standards or waste discharge requirements;
- (b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- (c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- (d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- (e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- (f) Otherwise substantially degrade water quality;
- (g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- (h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows;
- (i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam;
- (j) Inundation by seiche, tsunami, or mudflow; or
- (k) Conflict with any applicable land use plan, policy, or regulation adopted by the City of Redwood City or the Regional Water Quality Control Board for the purpose of avoiding or mitigating an adverse effect on hydrology or water quality.

Regarding significance criteria (b), (d), (e), (g), (h), (i), and (j) above, the Initial Study (appendix 19.1 of this SEIR) determined that the proposed project would have no impact or a less-than-significant impact. Regarding criterion (k), the proposed Stanford Outpatient Center would be subject to the hydrology and water quality regulations and policies described in sections 8.1.4 and 8.2 above.

¹CEQA Guidelines, Appendix G, items VIII(a)-(j) and IX(b).

8.3.3 Pertinent Project Changes

The applicant has proposed one change to the existing site drainage improvements: an on-site storm water retention system, in the form of underground storage vaults, would be constructed to hold the storm water that currently backs up on the surface into on-site parking and landscaped areas. Runoff from up to a one-year recurrence interval storm would still be discharged directly to the Douglas Avenue pumping station, but higher flows from more intense storms would be diverted to the proposed vaults, which are being designed to accommodate up to a 100-year storm. The stored water would slowly drain out to the pumping station when capacity becomes available, after the peak of the storm has passed. Although the design of the proposed retention system has not yet been completed, the project engineer expects that one or more pumps would be needed to lift water out of the lowest of the new vaults into the existing gravity trunk line that connects the project site to the downstream sections of the Midpoint Technology Park drainage system and the Douglas Avenue pumping station.¹

Preliminary calculations prepared by the project engineers indicate that approximately 16,000 cubic feet (120,000 gallons) of storage capacity would be required to ensure that all runoff is stored underground rather than on the surface. An early design indicates that the vaults would need to be approximately 4 feet high by 5 feet wide, and 800 lineal feet of vault would be required. The vaults would be installed underneath the existing parking lot, although how they would be arranged or exactly where they would be placed on the site has not yet been determined. The installation would be designed to avoid the existing water and sewer utility easement the runs east-west across the north parking lot, following the abandoned Douglas Avenue right of way.

Since there are no plans to significantly modify the surface of the project site or change the amount of impervious cover (buildings and pavement), there would be no increase in the site's existing runoff characteristics. Therefore, if the discharge controls on the proposed underground storage vaults replicate the off-site discharge controls on the existing surface storage system, there should be no increased effect on the Douglas Avenue pumping station.

As noted in section 8.1.1, above, until the plans that have been in place for several years to upgrade the Bayfront Canal and Douglas Avenue pumping station are implemented, it is unlikely that the proposed underground vaults would prevent future flooding on the project site. Prior to its construction, the 48.4-acre Midpoint Technology Park site theoretically provided 14 acre-feet (610,000 cubic feet) of flood storage during a two-year storm, and as much as 81 acre-feet (3.5 million cubic feet) during a 100-year storm. A representative of the City's Engineering Department is not aware of any significant on-site flooding problems since construction of the park,² but it is not clear where such a large volume of water could go other than the low area at the downstream end of the Douglas Avenue Basin, north of the freeway. Some of the water would likely end up on the adjoining portion of the Technology Park site, but that would still leave more unconveyed water than could be accommodated by the proposed on-site storage vaults. As a result, flooding should still be anticipated within low-lying portions of the on-site parking lots and landscaped areas during major storm events, until the Douglas Avenue pumping station is improved.

¹Patrick McGuire, Brian Kangas Foulk, Consulting Engineers; personal communication, January 30, 2006.

²Willis, February 8, 2005.

Certified Mitigation 7-4 from the 1996 EIR would apply to the proposed Stanford Outpatient Center. The applicable text of the mitigation states: "[I]f and when the City decides to improve the storm drainage facility, the developer (or heirs) will be required to deposit funds with the City as "fair share" (for storm water runoff impacts caused only by the new development) participation in the system's construction costs. The developer will be required to participate and not protest the formation of an assessment district for storm drain system improvements."

In order to avoid potential flooding to the existing and proposed on-site emergency generators and associated above ground diesel fuel tanks, the Redwood City Engineering Department will also require that the generators and fuel tanks be elevated at least one foot above the highest anticipated flood elevation on-site.¹ Therefore, the generators and fuel tanks would be elevated at least 3.3 feet above ground level.

8.3.4 Supplemental Impacts and Mitigations

Supplemental Impact of Increased Risk of Soil Erosion or Contaminant Spills During Project Construction. Excavation required to construct the proposed underground storm water detention vaults would create a potential for on-site soil erosion. Other proposed construction activities could also increase the potential for surface water contamination. On-site erosion could lead to increased turbidity within the downstream Bayfront Canal and Flood Slough, and to increased sediment accumulation within the downstream Douglas Avenue pumping station, Bayfront Channel, Flood Slough, and San Francisco Bay. These possible construction period erosion and contamination effects would be reduced to ***less-than-significant levels*** with the implementation of the RWQCB and City requirements introduced previously in subsection 8.1.4 (Water Quality) and further described below.

Explanation:

It is estimated that construction of the detention vaults would entail the excavation of at least 2,250 cubic yards of soil and existing pavement, and the offhaul of approximately 1,600 cubic yards of excess material.² Without proper controls, storage of this material on the site and

¹Jon Lynch, City Engineer, Redwood City; personal communication, April 21, 2006.

²As noted in subsection 8.3.3 (Pertinent Project Changes), specifically how the vaults would be laid out has not yet been determined. However, if it is assumed they would be installed in four parallel rows, with each row approximately 7.5 feet wide (5 feet for the vault, plus 2.5 feet for walls and clearance between structures), so that the entire structure would be approximately 30 feet wide. Four rows would reduce the overall length requirement to 200 feet, for a total structure area of 6,000 square feet. An assumed overall excavation depth of 8 feet (4 feet of vault, plus 2 feet for floor and roof, plus 2 feet of cover), with 1:1 side slopes around the perimeter of the excavation, would yield a surface excavation area of 9,072 square feet. Averaging this with the 6,000 square-foot area at the bottom of the excavation, then multiplying by the 8 foot depth, results in a total excavation of 60,300 cubic feet, or 2,250 cubic yards.

Total offhaul volume would be the volume of the vault structure (6,000 square feet x 6 feet high) plus the volume of surface pavement to be reconstructed over the excavation (assumed 10" depth x 9,072 square feet), which equals 43,560 square feet, or 1,613 cubic yards. These estimates are intended to be conservatively high for both total excavation and offhaul; actual construction volumes would likely be lower.

subsequent off-site hauling would expose it to both wind and water erosion that could adversely affect downstream drainage facilities and waterways. In addition, spilled or improperly used construction materials, such as fuel, paint, cement, or solvents, could be washed into area storm drains or seep into the underlying groundwater.

Following the completion of project construction, there should be little likelihood of on-site erosion since the area of vault construction would be completely paved over, and all re-landscaped areas would be fully stabilized.

It is expected that the proposed vault installation and landscape modifications would disturb an area larger than one acre (the minimum area of disturbance regulated by the NPDES), so the project applicant would be required to obtain an NPDES general construction permit from the State Water Resources Control Board. The terms of this permit require applicants to prepare a Storm Water Pollution Prevention Plan (SWPPP) to demonstrate that project development would not cause any increase in sedimentation, turbidity, or hazardous material concentrations within downstream receiving waters.

Design requirements and implementation measures for project-specific erosion and sedimentation controls would be set forth in the applicant's SWPPP, in accordance with State and RWQCB design standards, and with the City's NPDES Permit Requirements Checklist and Storm Water Pollution Prevention Program. During construction, the City Engineer would monitor implementation of the project's approved SWPPP, with a particular focus on erosion control.

Pollution control measures that should be incorporated into the project's SWPPP are described in the City's NPDES Permit Requirements Checklist. It is also recommended that additional measures, as described in the *Construction Handbook of Best Management Practices*,¹ should also be considered to address conditions specific to the project site.

Supplemental Mitigation. No significant impact has been identified; no mitigation is required.

Long-Term Water Quality Effects. The quality of storm water runoff from the Stanford Outpatient Center would be expected to decline in comparison to previous (office/R&D) runoff conditions, due to the anticipated increase in vehicular activity. The resulting incremental degradation of water quality within downstream receiving waters would represent a **less-than-significant impact** with implementation of the standard RWQCB and City requirements introduced previously in subsection 8.1.4 (Water Quality) and further described below.

Explanation:

In commercial areas, potential non-point source pollutants typically include litter, landscaping fertilizers and pesticides, heavy metals, oil and gas residues, tire fragments, and debris normally deposited by vehicular traffic. Storm water runoff from developed sites can carry these pollutants into surface waters, where they can cause a small but cumulative degradation of water quality. Although the proposed project changes would not significantly change the site or

¹Camp Dresser & McKee, Larry Walker Associates, Uribe & Associates, and Resources Planning Associates, for the State Stormwater Quality Task Force (a municipal agency advisory body); *California Storm Water Best Management Practice Handbooks: Construction Activity*, March 1993.

its existing runoff characteristics, ***the number of vehicle trips is expected to more than double*** compared to the site's previous use (see chapter 12 of this SEIR), which is expected to result in a proportionate increase in the deposition of vehicle-related pollutants.

At this point, the applicant has not yet proposed the installation of any non-point source pollutant control measures.

As a condition of grading permit issuance to help reduce the long-term accumulation of non-point source pollutants from the project within downstream surface waters, the project would be required to incorporate long-term source control and/or pre-discharge treatment measures into the required *Storm Water Pollution Prevention Plan* (SWPPP) in accordance with RWQCB regulations and City of Redwood City design guidelines, subject to approval by the City Engineer.

(a) Source Control and Pre-Discharge Treatment Measures. Non-point source pollutant controls typically include both source control and pre-discharge treatment measures. Typical source controls include painting "Drains to the Bay" labels on storm drains, enforcing strict prohibitions on the use or disposal of contaminants, prohibiting the use of non-biodegradable fertilizers and pesticides, restricting vehicle maintenance and washing to areas not directly connected to the storm drain system, and regular cleaning and maintenance of all streets and parking areas, particularly at the onset of the rainy season, to reduce the build-up of the urban pollutants and debris that are normally washed into storm drains. Pervious pavement and infiltration basins are also used as source controls by reducing the total amount of storm water runoff, although it is expected the area's relatively impermeable soils and high groundwater table would preclude the use of these measures on the project site.

Pre-discharge treatment measures are put in place to remove storm water pollutants that bypass source controls. They are normally designed in accordance with "best management practices" and can be further categorized as either *active* or *passive*. The *active* category typically refers to either straight media filtration or to media filtration combined with hydrodynamic separators for removal of oil and grease, sediment, and debris. Simple filters can be installed in individual catch basins, while the much larger filter/separators are installed as "end of the line" structures that treat the runoff collected by many catch basins before it is discharged off-site. Both types of treatment measures require regular inspection, cleaning, and disposal of trapped pollutants, which generally makes them more effective on commercial or high-density residential sites, where a single owner is responsible for areawide maintenance.

Passive pre-discharge treatment methods generally utilize either small ponds or gently sloping swales to achieve pollutant removal through sedimentation and/or filtration. Ponds provide an opportunity for sediments to settle out before off-site discharge, while grass-lined swales (biofilters) pick up pollutants as the water slowly filters through the surface vegetation. Pollutants trapped in the sediment or adhering to the grass can then be removed by regular maintenance.

(b) Application to Proposed Project. It could be difficult to incorporate passive treatment measures into the already developed project site, because improvement grades have already been established and because open areas within the parking lots that might provide suitable locations are already fully landscaped. These options should still be evaluated by the applicant's engineer, but it is expected that active treatment measures might be more viable. The City Engineer has indicated that the City would prefer to see the installation of one (or

possibly a few) combination filter/hydrodynamic separators, as opposed to individual catch basin filters.¹ Test data indicates these facilities are more effective than individual filters, and are usually easier to properly maintain because there are fewer on a site. Guidelines for installing separators suggest that they should be installed upstream of any detention facilities, so they would need to be placed before the inlet(s) to the proposed storm water detention vaults.

(c) Approval Process. The design of all long-term water quality protection measures to be incorporated into the SWPPP would be the responsibility of the project applicant, subject to approval by the City Engineer. Selection of the appropriate source control and pre-discharge treatment measures, as well as establishment of a long-term maintenance and operation program, would need to be closely coordinated with the City to confirm that the plan conforms with current state and federal clean water goals. The project applicant would be required to enter into an agreement with the City to ensure ongoing maintenance and performance responsibility for all permanent storm water control measures.

Supplemental Mitigation. No significant impact has been identified; no mitigation is required.

¹Lynch, personal communication, February 13, 2006.

9. LAND USE AND PLANNING

This SEIR chapter addresses the land use and planning implications of the proposed project site change from the former @Home office/R&D use to the Stanford Outpatient Center medical clinic use, focusing on the project aspects that differ from those addressed in the 1996 Midpoint Technology Park Final EIR and 1998 SEIR.

9.1 SETTING

The 1996 EIR and 1998 SEIR together provided a complete and adequate description of project vicinity land uses and planning considerations at the time. Portions of those setting descriptions most relevant to the proposed project changes are summarized and updated below.

9.1.1 Existing On-Site Land Use

The Stanford Outpatient Center project would be developed within the boundary of the existing Midpoint Technology Park, specifically the northeastern portion of the business park comprised of four existing buildings at 420, 430, 440, and 450 Broadway and their adjacent grounds and parking areas.

The existing Midpoint Technology Park campus encompasses approximately 48.4 acres. Broadway, an east-west oriented arterial street, bisects the campus. The northeastern portion of the campus proposed for conversion to Stanford Outpatient Center use--i.e., the "project site"--totals approximately 11.3 acres. The project site is bounded by U.S. 101 on the north, Rolison Road on the east, Broadway on the south, and a 9.3-acre portion of the Midpoint Technology Park on the west.¹

Approximately 85 percent of the 11.3-acre project site consists of building footprints or pavement. The remaining 15 percent of the site is comprised of a central landscaped area facing Broadway--including turf, several trees, vegetation, and pedestrian walkways--and various parking area and building entrance area landscaping (turf and vegetation).

¹*Note:* The directions (north, east, south, west) used in this document are the "true" directions that correspond with the orientation of the maps, illustrations, and project plans included herein; i.e., this document uses the same directional adjectives as the project application materials submitted to the City of Redwood City in order to maintain consistency with the various project-specific documents and submittals that City staff will be reviewing. *References to traffic flow (e.g., chapter 12), however, describe roadways in common regional nomenclature such as "U.S. 101 North" and "U.S. 101 South."* For example, common perception could conclude that U.S. 101 runs in a north-south direction adjacent to the project site; however, in the project vicinity, U.S. 101 truly runs west-east. Traffic engineering studies typically refer to "101 North" and "101 South" in descriptions of the regional transportation network, with descriptions of other roadways based on the general north-south direction of the highway; therefore, because traffic flow calculations are directly tied to *regional* traffic models, descriptions of *traffic flow direction* in this document correspond with the "U.S. 101 North/U.S. 101 South" assumption.

The four existing Midpoint buildings (totaling approximately 360,500 square feet) proposed for conversion to Stanford Outpatient Clinic use were originally constructed between 1998 and 2000 for the @Home Corporation, which vacated the buildings in 2002. Since that time, portions of the four buildings have been intermittently occupied; however, the four buildings are now completely vacant.

9.1.2 Existing Adjacent Land Uses

Existing land uses adjacent to the project site are diagrammed on Figure 9.1 (Project Vicinity Existing Land Use). U.S. Highway 101 (Bayshore Freeway) is located north of the project site. Uses located immediately east of the project site include the adjacent Broadway Towers Apartments (seven stories, formerly Mariposa Apartments) and associated carport area, along Rolison Road and Second Avenue between Broadway and U.S. 101; and, across Second Avenue, the Friendly Acres neighborhood.

Across Broadway to the south are an approximately 27.8-acre portion of the Midpoint Technology Park, as well as Andrew Spinas Park (tot lot, basketball court, tennis courts, picnic area), and Redwood City Fire Station No. 11. Uses located to the west of the project site include the adjacent 9.3-acre portion of the Midpoint Technology Park; and, across Douglas Avenue generally to Woodside Road, heavy commercial and light industrial uses, several with accessory office uses.

9.1.3 Cumulative Development Trends in the Project Vicinity

Other development projects that are either currently under construction, approved, pending, or anticipated in Redwood City include:

- West Point Marina: Phase I (under construction)--408 slips and Harbor Master office; Phase II (approved)--boatyard shop and storage areas plus boat house/rowing facility; and Phase III (approved)--yacht club, four retail shops, yacht sales office and showroom, marina shop, sailing school/charter service, and restaurant;
- Downtown cinema/retail complex (under construction; 2107 Broadway; 4,200 seats plus 80,000 sq. ft. retail);
- Abbott Labs R&D (approved; 1 Chesapeake Drive; 541,000 sq. ft.);
- New medical office building (approved; 369 Main Street; 7,500 sq. ft.);
- Kaiser Master Plan (approved; four medical office buildings totaling 441,000 sq. ft.; hospital of 420,000 sq. ft.; wellness center of 20,000 sq. ft.; administration building; and five parking structures);
- Bayside Gardens (pending, not yet approved; East Bayshore Road; 600 apartments plus 8,300 sq. ft. retail);
- Sequoia Hospital expansion (pending, not yet approved; 170 Alameda de las Pulgas; hospital addition of 143,000 sq. ft.; medical office building of 50,000 sq. ft.; and parking structure);

Figure 9.1. Project Vicinity Existing Land Use.

- Costco expansion (pending, not yet approved; 2300 Middlefield Road; addition of 25,000 sq. ft. plus 16-pump gas station);
- Downtown Precise Plan (pending, not yet approved; 2,400-3,400 residential units over 30+ yrs.);
- El Camino Real residential (potential future; 800 units over 30+ yrs.);
- Woodside Road residential (potential future; 800 units over 30+ yrs.);
- Marina Shores development (potential future; 42 acres of mixed use, not yet decided);
- Jefferson/Middlefield site (across from downtown cinema) (potential future; adjacent to downtown cinema, possible future commercial development);
- Various multifamily residential projects (approved or pending; totaling approximately 170 units); and
- Currently unoccupied space in existing developments, including Pacific Shores (970,000 sq. ft. unoccupied), Midpoint Technology Park (289,000 sq. ft. unoccupied, not including proposed project buildings), Seaport Center, and Woodside Technology Park.

Additional development is also expected to occur over time in neighboring communities--e.g., North Fair Oaks, East Menlo/Menlo Park, Atherton, San Carlos, Woodside, and other incorporated and unincorporated San Mateo County areas.

The potential cumulative environmental impacts of this foreseeable surrounding development, in combination with the proposed Stanford Outpatient Center land use change, have been evaluated and described in appropriate chapters of this SEIR, including: Air Quality (chapter 5), Hazards and Hazardous Materials (chapter 7), Housing (chapter 10), Fire/Emergency Services and Child Care (chapter 11), Transportation/Circulation/Parking (chapter 12), and Utilities (chapter 13).

9.2 PERTINENT PLANS AND POLICIES

9.2.1 Redwood City Strategic General Plan

The current Redwood City Strategic General Plan (adopted in 1990) contains the following land use-related statements, objective, and policies relevant to consideration of the land use and planning implications of the proposed project:

Summary (Chapter 2):

- *Pleasant residential neighborhoods free of traffic, noise and pollution is a primary goal of the Strategic General Plan. (Statement from page 2-1)*

Land Use Element:

- *Integrate a range of land uses to ensure that Redwood City is a desirable place to live.... [This] land use goal recognizes the diversity and complexity of the present urban form but envisions a more desirable and harmonious physical relationship between the parts and pieces that make up Redwood City--as changed uses, as new construction, and as redevelopment occur in the course of time. (Goal statements from page 6-1)*
- *Provide sufficient land for a variety of employment opportunities with optimum commute access. (Objective 3, page 6-5)*
- *Residential neighborhoods should be protected from the encroachment of incompatible activities or land uses which may have a negative impact on the residential living environment. (Policy L-2, page 6-5)*
- *Industrial and employment areas should encourage accessory uses and services such as restaurants, health clubs, child care, office supply sales, and delicatessens. (Policy L-7, page 6-5)*
- *Industrial development should incorporate measures to minimize negative impacts on nearby land uses. (Policy L-8, page 6-5)*

Conservation Element:

- *The visual qualities of the community should be preserved and improved. (Policy C-7, page 10-4)*

9.2.2 City-Adopted On-Site Land Use Designations

Figure 9.2 (General Plan Designations) and Figure 9.3 (Zoning Designations) illustrate the current City-adopted land use designations for the project site and vicinity. The project site is designated *Industrial--Research and Development Uses* by the Redwood City Strategic General Plan and is zoned *IR (Industrial--Restricted)* by the Redwood City Zoning Ordinance. The proposed project is consistent with both the General Plan and zoning designations for the site, which allow public or quasi-public uses "operated by a private non-profit education, religious, recreational, charitable, or medical institution and having the primary purpose of serving the local community" (Redwood City Zoning Ordinance, Article 2, Section 2.83 and Article 17, Section 17.2). Stanford Hospital & Clinics is a non-profit medical institution.

9.2.3 ABAG's Regional Land Use Policy Framework

The most recent regional land use policy document by the Association of Bay Area Governments (ABAG) is entitled A Proposed Land Use Policy Framework for the San Francisco Bay Area, adopted by the ABAG Executive Board in July 1990. The document is described as a regional policy framework for future land use decisions in the Bay Area. The document contains policies pertinent to the proposed project that direct growth where regional infrastructure (e.g., freeways, transit, water, solid waste disposal, sewage treatment) is available and natural resources will not be overburdened; and encourage development that discourages long-distance commuting.

Figure 9.2. General Plan Designations.

Figure 9.3. Zoning Designations.

9.3 SUPPLEMENTAL IMPACT AND MITIGATION FINDINGS

9.3.1 Supplemental Analysis Scope

The scope of this supplemental land use and planning impact analysis is limited to identification of the mitigating (beneficial) effects and any additional adverse impacts associated with, the proposed project changes.

9.3.2 Significance Criteria

Based on the CEQA Guidelines, the project would be considered in this SEIR to have a significant additional land use and planning impact if it would:¹

- (a) Physically divide the community;
- (b) Conflict with any applicable land use plan, policy, or regulation of the City of Redwood City (including, but not limited to, the Redwood City Strategic General Plan and Zoning Ordinance), the City/County Association of Governments of San Mateo County (C/CAG), the San Francisco Bay Regional Water Quality Control Board (RWQCB), or the Association of Bay Area Governments (ABAG), adopted for the purpose of avoiding or mitigating an environmental effect; or
- (c) Conflict with any applicable habitat conservation plan or natural community conservation plan.

Regarding significance criteria (a) and (c) above, the Initial Study (appendix 19.1 of this SEIR) determined that the proposed project would have no impact; therefore, these criteria are not discussed in this chapter.

9.3.3 Pertinent Project Changes

Figure 3.4 in chapter 3 herein (Description of Project Changes) illustrates the proposed project site plan. The visual impacts on adjacent land uses of the proposed changes to the site and buildings are evaluated in chapter 4 (Aesthetics) of this SEIR. Other environmental effects associated with the proposed change in land use are discussed in other corresponding individual SEIR chapters (e.g., air quality--chapter 5, hazards and hazardous materials--chapter 7, population and housing--chapter 10, traffic--chapter 12). Anticipated "land use" impacts, based on the criteria listed in section 9.3.2, above, are described below.

9.3.4 Supplemental Impacts and Mitigations

Population and Housing Growth and Concentration. The 1996 EIR and 1998 SEIR indicated that the added employment generated by the Midpoint Technology Park project would induce substantial additional growth and concentration of population in Redwood City, and identified this effect as a *significant unavoidable land use impact*. The proposed change in land use and occupancy for the four project buildings is expected to result in a reduction in total

¹CEQA Guidelines, Appendix G, item IX(a-c); and sections 15064(b and d) and 15125(d).

employment on-site, and thus a slight reduction in the overall Midpoint Technology Park employment population and housing growth impacts identified in the 1996 EIR.¹

Supplemental Mitigation: No significant additional population or housing growth and concentration impact has been identified; no supplemental mitigation is required.

Project Inconsistency with Redwood City Strategic General Plan Policies Regarding Land Use Compatibility. The project site is designated *Industrial--Research and Development Uses* by the Redwood City Strategic General Plan and is zoned *IR (Industrial--Restricted)* by the Redwood City Zoning Ordinance. The proposed project is consistent with both the General Plan and zoning designations for the site, which allow public or quasi-public uses "operated by a private non-profit education, religious, recreational, charitable, or medical institution" (Redwood City Zoning Ordinance, Article 2, Section 2.83 and Article 17, Section 17.2). Stanford Hospital & Clinics is a non-profit medical institution. Project development, however, could result in the following new land use impacts:

The proposed project involves introduction of a new large-scale medical clinic use in proximity to existing residential (e.g., Broadway Towers Apartments and Friendly Acres neighborhood), heavy commercial, light industrial, R&D, and public (Andrew Spinas Park, Taft Elementary School) uses. Although the project would result in a decrease in the Midpoint Technology Park employment total identified in the 1996 EIR, the proposed introduction of an average of approximately 855 patients per day on the currently unused project site may raise land use concerns regarding compatibility with these adjacent and nearby uses.

The currently proposed site plan indicates that the one patient drop-off area would be located on the west side of the site, away from residential and public uses adjacent to and near the site's eastern boundary (see Figure 3.4 in chapter 3 and Figure 9.1 in this chapter). However, the potential aesthetic (rooftop mechanical equipment), air quality (construction dust), traffic (roadway link intersection capacity), and parking impacts identified in chapters 4 (Aesthetics), 5 (Air Quality), and 12 (Transportation, Circulation, and Parking) of this SEIR, unless adequately mitigated, could be inconsistent with Redwood Strategic General Plan Land Use Element Policy L-2 regarding the protection of residential neighborhoods and Policy L-8 regarding "minimiz[ing] negative impacts on nearby land uses"; however, associated supplemental mitigation requirements are described in these SEIR chapters for implementation as conditions of required project approvals. With implementation of these mitigations, such land use compatibility impacts would be ***less-than-significant***.

Regarding existing light industrial/R&D and heavy commercial uses in the project vicinity, and their compatibility with the proposed Outpatient Center use of the project site, these existing land uses would continue to operate under land use controls, performance standards, and regulations imposed by the City, including the City Code of Redwood City and the Redwood City Zoning Ordinance. Also, as part of the project approval process, the proposed project would require City Planned Development Permit Amendment approval (per Article 46 of the Zoning

¹The population and housing impact differences associated with the proposed project land use changes are discussed in chapter 10--Population and Housing--of this SEIR. Under the previously approved project, the four on-site buildings would have accommodated approximately 1,300 employees; the Stanford Outpatient Center project would accommodate approximately 670 employees (see chapter 10).

Ordinance) and Use Permit approval (per Article 30.4 of the Zoning Ordinance). These approval procedures would involve City review of site, building, signage, lighting, landscape, and parking plans in order to, in part, "promote the most functional and aesthetic relationships between building structures, signs, open space and parking areas in residential, commercial and industrial zoning districts" (Article 46).

Mitigation: No additional significant land use impact has been identified; no additional supplemental mitigation is required.

Cumulative Land Use Impacts. The proposed project, together with other feasible development in the immediate vicinity and elsewhere in Redwood City (see subsection 9.1.3 herein), could contribute to cumulative land use incompatibilities (cumulative air quality and transportation impacts). The specific cumulative impacts associated with these particular impact categories are addressed, and associated supplemental mitigation requirements are described, in corresponding chapters of this SEIR. With implementation of these mitigations, the cumulative land use impacts of the proposed project would be ***less-than-significant***.

Supplemental Mitigation. No significant additional cumulative land use impact has been identified; no additional mitigation is required.

10. HOUSING

The 1996 Midpoint Technology Park EIR concluded that the potential effects on the city's residents/job ratio and on citywide demands for new housing units (an additional demand for 418 units), including demands for affordable housing units (an additional demand for 197 units) represented a **significant unavoidable impact**. No mitigation specific to these impacts was adopted, and an associated Statement of Overriding Considerations pursuant to CEQA Guidelines section 15126.2(b) (Significant Environmental Effects Which Cannot be Avoided if the Proposed Project is Implemented) was adopted by the City.

The 1996 EIR indicated that the proposed 1,010,658-square-foot Midpoint Technology Park would employ "an estimated 3,600 workers" at full buildout (1996 Draft EIR, chapter V, page 7), resulting in a square feet per employee ratio of approximately 280. Applying this ratio to the four project buildings, which total approximately 360,500 square feet in floor area, yields a subtotal of approximately 1,288 employees. As indicated in subsection 3.4.9 of this SEIR, the total anticipated maximum staffing of the proposed Stanford Outpatient Center on any given day would be approximately 670--i.e., approximately 538 fewer employees than anticipated in the 1996 EIR, resulting in a **reduced impact** on the city's resident/job ratio, citywide demands for new housing, and affordable housing.

In addition, the State of California Department of Housing and Community Development (HCD) has concluded that the *City of Redwood City Revised Draft Housing Element*, which included consideration of the 1996 EIR-identified employment total for the Midpoint Technology Park, "will be in full compliance with State housing element law (Article 10.6 of the Government Code) when adopted with all revisions [*emphasis in original*] and submitted to this Department for review pursuant to Government Code Section 65585(g)."¹ The *Revised Draft Housing Element* states that the housing programs identified in the Element "can accommodate new residential development commensurate with the City's total regional housing need of 2,544 units."² Because this regional housing need total included housing demands generated by the Midpoint Technology job total anticipated in the 1996 EIR, the proposed Stanford Outpatient Center project would result in a reduction in this estimated regional housing need.

¹Cathy E. Creswell, Deputy Director, State of California Department of Housing and Community Development, Division of Housing Policy Development; letter to Michael Church, Planning Director, City of Redwood City, re. "Review of the City of Redwood City's Revised Housing Element"; March 4, 2004.

²Creswell.

11. FIRE/EMERGENCY SERVICES AND CHILD CARE

This SEIR chapter addresses the potential fire protection/emergency medical service and child care implications of the proposed Stanford Outpatient Center, focusing on the project aspects that differ from those addressed in the 1996 Midpoint Technology Park Final EIR and 1998 SEIR, for informational purposes at the request of Redwood City officials and staff.

11.1 FIRE/EMERGENCY SERVICES

11.1.1 Setting

(a) Existing Fire Protection Service in Project Vicinity. The Redwood City Fire Department (RCFD) provides fire protection and suppression, and emergency medical services (EMS), in the project vicinity. The RCFD is currently staffed by 60 emergency personnel (including 18 captains, 18 firefighter-paramedics, and 24 firefighters) and 8 administrative staff located at five stations.¹

Redwood City Fire Station #11, located at 1091 Second Avenue (at Broadway), is less than one-tenth of a mile from the proposed Stanford Outpatient Center project site. Actual travel time from this station to the project site is less than one minute. Station #11 currently provides first response with a 1,500-gallons-per-minute (gpm) pumper staffed by three firefighters.

Redwood City Fire Station #9, located at 755 Marshall Street (between Jefferson Avenue and Main Street), is located approximately 1.4 miles from the project site. Actual travel time is approximately four minutes. Response from this station can currently be provided with a 1,500-gpm pumper staffed by three firefighters, a 100-foot aerial ladder truck with four firefighters, and a battalion chief for incident command.

The actual time from the receipt of a fire alarm to the time of dispatch and response will vary (fire alarms are relayed through a private central station alarm company before receipt at the San Mateo County 911 Public Safety Communications Center.² Nevertheless, the overall Fire Department response time to the proposed project is well within goals established by the RCFD.³

¹Redwood City Fire Department website [www.ci.redwood-city.ca.us/fire], accessed February 10, 2006.

²Jamie Lee, Fire Prevention Officer, Redwood City Fire Department; written communication, January 27, 2006.

³Lee.

11.1.2 Pertinent Plans and Policies

The Redwood City Strategic General Plan Safety Element contains the following relevant policies regarding fire services:

- *Alternative water resources for firefighting purposes should be identified for use during a disaster.* (Policy S-6, page 12-3)
- *New development should provide adequate access for emergency vehicles, particularly firefighting equipment, as well as provide secure evacuation routes for the inhabitants of the area.* (Policy S-7, page 12-3)

11.1.3 Supplemental Analysis Scope

The scope of this supplemental fire protection and emergency medical services impact analysis is limited to identification of the mitigating (beneficial) effects of, and any additional adverse fire/emergency services impacts associated with, the proposed project changes.

11.1.4 Significance Criteria

Based on the CEQA Guidelines, the project would be expected to have a significant impact on fire protection and emergency medical services if it would:

- (a) Result in a need for new or physically altered facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection or emergency medical services¹; or
- (b) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

11.1.5 Pertinent Project Changes

All four project buildings would ultimately be occupied with outpatient medical clinics, including clinical research functions related to outpatient health care functions. Urgent care, emergency room, and in-patient hospital services would not be provided. The project changes would also introduce the use, handling, storage, generation, transport, and disposal of a range of medically related hazardous materials. Chapter 7 (Hazards and Hazardous Materials) of this SEIR describes these anticipated conditions in more detail, and associated implications for the Redwood City Fire Department. Project impacts on the Fire Department fire protection and emergency response demands are described below.

¹CEQA Guidelines, Appendix G, items XIII(a) and VII(g). In 1996, when the Midpoint Technology Park EIR was prepared, the CEQA Initial Study Checklist included the question, "Will the proposal have an effect upon [emphasis added], or result in a need for a new or altered governmental service in...fire protection?". The 2005 CEQA Environmental Checklist Form, which has been applied in scoping this SEIR, asks a similar, but more restrictive, question related to the provision of or the "need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts," thereby limiting potential impacts on fire protection services to those resulting from the need and construction of new physical facilities (e.g., a new fire station).

11.1.6 Supplemental Impact and Mitigation Findings

Project-Related and Cumulative Increases in Fire Protection and Emergency Medical Service Demands. The 1996 Midpoint Technology Park EIR (p. V.107) and 1998 SEIR (Summary of Impacts and Mitigation) noted that the proposed 14 Technology Park buildings and one parking structure would "generate some demands on the existing fire protection services," and concluded, "Although the project may generate some additional demands, it should not have any significant impacts on the existing fire services." Certified Mitigation 7-6 (p. V.108) stated, "The project sponsor shall conform to all the applicable fire codes and ordinances." The proposed project land use changes would not change these 1996 EIR findings; however, depending on the occupancy classification designated for the specific new medical clinic uses on the site, the proposed Stanford Outpatient Center could be subject to additional on-site physical and operational fire protection requirements, including:¹

- smoke barriers (Uniform Building Code [UBC] section 308);
- a manual fire alarm system (Uniform Fire Code [UFC] section 1006.27);
- an automatic fire sprinkler system (UFC section 1006.2.7) (including for the proposed covered walkway and new lobbies);
- occupancy separations (UBC section 302) (including in the new lobbies);
- more restrictive requirements for the fire protection of exterior walls (UBC section 503); and
- restrictions on basic allowable floor space (UBC section 504).

The main concern of the RCFD for the previous project building occupants (@Home) was the potential for a spill or release of the fuel stored for the two existing emergency generators on-site.² These generators and associated base (above-ground) fuel storage tanks would remain on-site for the proposed project, and another two generators and associated base fuel storage tanks would be added. In addition, the proposed change from office/R&D to medical clinic use would result in an increased potential for hazardous material spills or releases posing immediate health or life safety impacts.

Remediation of any hazardous materials spill or release would require use of RCFD personnel and resources for a relatively long duration. During the remediation period, RCFD apparatus and personnel would be less available to respond to other emergencies and calls for service within the city.

Chapter 7 (Hazards and Hazardous Materials) of this SEIR describes in more detail the anticipated use, handling, storage, generation, transport, and disposal of hazardous materials

¹Maureen Riordan, Senior Planner, City of Redwood City; written communication, May 10, 2005; based on communications with the Redwood City Fire Department.

²Jamie Lee, Fire Prevention Officer, Redwood City Fire Department; written communication, January 27, 2006.

resulting from the proposed project. Fire Department permits would be required to store, dispense, use, or handle hazardous materials in excess of quantities specified within Section 105 of the Uniform Fire Code (UFC). These individual quantities could be increased if they are segregated within control areas separated by not less than a one-hour fire-resistive occupancy separation. The number of required control areas within a building may be as high as four.

Where the maximum quantities of hazardous materials are expected to exceed the exempt amounts per control area, buildings or structures, or portions thereof, would be classified as Group H Occupancies by the Uniform Building Code (UBC). H Occupancies may require superior building construction, decreased allowable floor areas, decreased allowable building heights, increased distances between buildings, spill control and secondary containment, fire extinguishing systems, and other measures. Implementation of some of these measures may not be practical with the existing project buildings.

As also described in chapter 7 herein, the San Mateo County Environmental Health Services Division would require a hazardous materials business plan and inventory statement for the project. As the Certified Unified Program Agency (CUPA) for the County of San Mateo, Health Services is responsible for regulating medical waste and hazardous waste generation at the proposed project site.

Currently, hazardous materials spills and releases posing immediate life threatening or property damage are mitigated through an agreement with the San Mateo County Environmental Health Services Division, the South County Fire Authority Hazardous Materials Response Team, and the RCFD. These entities provide a unified response to such hazardous materials emergencies.¹

The RCFD has **not** concluded that the proposed project would require a new or expanded fire station (significance criterion [a] above), nor has the Department concluded that the project would impair or interfere with any emergency plan (significance criterion [b] above). Therefore, potential project impacts on fire protection and emergency medical service demands are considered ***less-than-significant***.

Regarding potential cumulative impacts, as development increases throughout Redwood City, the RCFD will require additional personnel, facilities, and equipment (especially for emergency medical purposes), in order to maintain and continue delivery of an acceptable level of service, including adequate response times. Until specific RCFD facilities expansion needs are identified in terms of size, staffing, equipment, and location, assessment of associated environmental impacts would be highly speculative (see CEQA Guidelines section 15145, Speculation). As a result, cumulative effects on RCFD fire protection and emergency medical services do not represent an additional (supplemental) significant "environmental" impact under CEQA.

Supplemental Mitigation. No additional significant project or cumulative impact has been identified; no additional mitigation is required.

¹Lee (previous five paragraphs).

11.2 CHILD CARE

Child care was not discussed in the 1996 EIR or 1998 SEIR. For informational purposes, the following section has been included in this SEIR at the request of City officials and staff.

11.2.1 Setting

(a) Child Care Facilities, Enrollment, and Capacity in Redwood City. Redwood City has 60 center-based child care programs (including full- and part-day facilities) and 120 licensed family child care homes. The types of child care offered in the city include care for infants (up to 2 or 2.5 years); preschool age children (2.5 to 5 years); kindergarten children (after school only); and first through sixth grade children (after school only). The majority of this care is provided by a combination of not-for-profit and for-profit, private sources. The Redwood City School District operates some state-funded programs on school sites, but these programs are restricted by stringent income guidelines.¹

According to the most recent child care needs assessment survey, child care programs in Redwood City (including adjacent unincorporated County areas) have a total licensed capacity in centers and family child care homes of 3,361 children. Total estimated child care need in Redwood City (ages 0 to 13 years) is 11,937 spaces for children in all age groups.² Therefore, the current need for child care in Redwood City is estimated to exceed the amount of available licensed space by more than three times.

The estimated need by income-eligible, working families for state-subsidized child care in Redwood City is 5,761 spaces; the actual estimated total of existing subsidized, licensed space (including all types of funding) is approximately 839 spaces.³ Therefore, the current need for subsidized child care in Redwood City is estimated to exceed the amount of available licensed space by approximately seven times.

(b) Availability of Child Care in the Project Vicinity. Due to the primarily non-residential land use/zoning and the relatively lower income levels of residents in the area, parent fee-based child care centers (i.e., open to the public without eligibility requirements) have not been developed in the project vicinity. Center-based child care and part-day (3-hour) preschool at school sites and community facilities in the vicinity are almost all publicly funded for income-eligible families living in Redwood City.

Child care centers in the generally "southeast" quadrant of Redwood City, including the vicinity of the proposed project site, are:

- Fair Oaks Child Development Center,
- Garfield Child Development Center,
- Taft Child Development Center,

¹Kristen Anderson, Redwood City Child Care Coordinator, written communication, February 3, 2006.

²Anderson.

³San Mateo County, 2000. *Redwood City Child Care Need and Availability*, summary of data from Redwood City section of *Childcare Needs Assessment, San Mateo County, 1999-2000*.

- Hoover Child Development Center,
- Redwood City Child Development Program,
- Fair Oaks Head Start,
- Menlo Park Head Start, and
- Community Education Center at Taft and Hoover Schools (48/44 3-hour slots).

All of the above are state- or federally-funded for very low-income populations. A few of the programs have 1 to 3 full-fee spaces for non-eligible children. Many of the classrooms hold only part-day preschool (3 hours) or after school care for elementary school children.

The nearest "parent fee-based" child care centers are:

- Kiddie Garden/Peninsula Christian School at 1305 Middlefield Road near Main Street/downtown (36 children, ages 3 to 5 yrs), and
- Redwood Children's Center, 1445 Hudson Street (45 children, ages 2.5 to 5 years).

There are also approximately 25 licensed family child care homes in this quadrant of Redwood City that can serve an estimated 216 children ages birth to 12 years (including the providers' own children 10 years and younger).

11.2.2 Pertinent Plans and Policies

The Redwood City Strategic General Plan Land Use Element and Human Services Element contain the following relevant policy and proposal regarding child care services:

- *Development of child care facilities should be encouraged in both residential and non-residential areas in ways that are compatible with existing uses, in order to promote availability and accessibility of services.* (Policy L-12, page 6-5)
- *The Committee should encourage the provision of child care facilities to meet Redwood City residents' needs.* (Social Environment Proposal c, page 15-12)

The City of Redwood City does not provide child care as a public service and does not impose any development fees on new development for the funding of child care. The City does offer density bonuses to developers as incentive to provide facilities for child care in new development; a density bonus ordinance was recently passed and applied to the Abbott Labs R&D project. In addition, child care is considered an accessory use when serving an employment site, so no additional use permit is required.¹

¹Anderson.

11.2.3 Significance Criteria

The CEQA Guidelines do not outline any significance criteria specific to provision of child care services; for example, child care in Redwood City is not considered a "public service" requiring "government facilities" as described in CEQA Guidelines Appendix G, item XIII.

11.2.4 Supplemental Impact and Mitigation Findings

Supplemental Child Care Impacts. The proposed project would contribute to the existing child care shortage in Redwood City. This non-physical impact is considered ***less-than-significant*** from an "environmental" CEQA perspective. The City has no adopted policy *requiring* provisions for child care in new development.

Due to the existing shortage of child care facilities in Redwood City, every substantial addition to the population of children in the City exacerbates existing unmet needs for such services. The primary variables that contribute to the existing shortage of locally available child care services include the shortage of affordable, available space for such facilities and the relatively low average wage for child care workers, which, when combined with the high cost of living in the Redwood City area, contribute to low recruitment and high turnover.

As noted in subsection 11.2.2, above, the City's General Plan *encourages*, but does not require, new development to provide for child care. According to the Redwood City Child Care Coordinator, in order for provision of child care to be feasible, facility costs need to be low enough to cover the costs of the child care operator. In a large residential or commercial project, this outcome can be achieved through developer provision of dedicated, rent-free, or low-rent physical space to house the child care facility which, in turn, can be operated by the contracted provider. Therefore, any potential child care impacts from new development could be mitigated through the voluntary provision of on-site space where a private or non-profit operator could set up child care facilities, consistent with state space requirements.¹ To encourage on-site provision of child care, the City has passed a density bonus ordinance (for both residential and non-residential development). Also, the City/County Association of Governments (C/CAG), as the Congestion Management Agency for San Mateo County, grants traffic "trip credits" to developments that offer child care provisions (e.g., on-site child care, shuttle service to nearby child care facilities) to help mitigate traffic impacts of the development,² including trips resulting from employees driving between work and off-site child care facilities.

The Stanford Medical Center and Stanford University include the following child care centers on the Palo Alto campus for employees and students:

- The Arboretum Child Care Center serves the Medical Center community, as well as other Stanford-affiliated groups. The center is licensed for 125 children (infant through 5 years) and has a waiting list of approximately 380
- Two other full-day child care centers, as well as two part-day preschools, are located on campus.

¹Anderson.

²*Guidelines for Implementing the Land Use Component of the Congestion Management Program*, C/CAG; September 21, 2004.

Due to the full occupancy of on-campus facilities, another child care center has been planned.¹

The proposed Stanford Outpatient Center project would not include any residential uses; therefore, a substantial increase in local population resulting from the project would not be expected. Also, as described in chapter 10 (Housing) of this SEIR, the proposed project would employ approximately 538 **fewer** employees than anticipated in the 1996 EIR, resulting in a **reduced impact** on citywide demands for new housing. Any increase in local population due to Outpatient Center employees requiring child care relocating to Redwood City would not be considered a substantial addition to the population of children, and any such increase in local population would be less than anticipated in the 1996 EIR.

Supplemental Mitigation. No significant additional environmental impact has been identified, and no mitigation is required under CEQA. Child care services in Redwood City are currently private or non-profit rather than public. The City has no General Plan policy or municipal regulation *requiring* provisions for child care in new development. Under its current policies, the City may consider granting a density bonus to the project, in return for applicant provision of adequate (i.e., consistent with state space requirements) child care space or facilities on the project site; however, the proposed Stanford Outpatient Center project does not require a density bonus because the project involves the renovation of four *existing* buildings. Also, C/CAG may grant trip credits for child care provisions.

¹Anderson.

12. TRANSPORTATION, CIRCULATION, AND PARKING

This SEIR chapter describes the transportation, circulation and parking implications of the proposed Stanford Outpatient Center project. As prescribed by the Redwood City Traffic Engineer, and based on changing conditions over the years since the 1996 EIR and 1998 SEIR were prepared, this chapter provides an evaluation of existing and projected traffic conditions compared to previous environmental documentation for the Midpoint Technology Park, and the effects of the proposed change in project site land use from office/R&D to outpatient medical center on these conditions. The chapter is based on a transportation impact analysis prepared for the applicant by Fehr & Peers, transportation consultants, and an independent "peer review" of the Fehr & Peers findings by the SEIR transportation consultant, George W. Nickelson, P.E. Complete copies of the Fehr & Peers transportation impact analysis report and George W. Nickelson, P.E., review are on file at the Redwood City Planning Department, 1017 Middlefield Road.

12.1 SETTING

This section describes the existing local and regional road network, transit services, pedestrian and bicycle facilities serving the project site, and associated existing and background traffic conditions.

12.1.1 Roadway Network

Figure 12.1 presents the roadway network serving the project site. Regional access to the project site is provided by U.S. 101, I-280, El Camino Real (State Route 82), and Woodside Road (State Route 84). Local access is provided by Marsh Road, Bay Road, Broadway, Charter Street, Douglas Avenue, 2nd Avenue, 5th Avenue, Florence Street, Rolison Road, Scott Drive, and Veterans Boulevard. For the purpose of this SEIR chapter only, U.S. 101 was assumed to be oriented north-south, and all facilities running parallel to U.S. 101 were assumed to be oriented north-south.¹

¹*Note:* The directions (north, east, south, west) used in this document are the "true" directions that correspond with the orientation of the maps, illustrations, and project plans included herein; i.e., this document uses the same directional adjectives as the project application materials submitted to the City in order to maintain consistency with the various project-specific documents and submittals that City staff will be reviewing. *References to traffic flow in this chapter, however, describe roadways in common regional nomenclature such as "U.S. 101 North" and "U.S. 101 South."* For example, common perception could conclude that U.S. 101 runs in a north-south direction adjacent to the project site; however, in the project vicinity, U.S. 101 truly runs west-east. Traffic engineering studies typically refer to "101 North" and "101 South" in descriptions of the regional transportation network, with descriptions of other roadways based on the general north-south direction of the highway; therefore, because traffic flow calculations are directly tied to *regional* traffic models, descriptions of *traffic flow direction* in this chapter correspond with the "U.S. 101 North/U.S. 101 South" assumption.

Figure 12.1. Roadway System and Study Intersections.

(a) Regional Roadways. The following regional roadways serve the project site:

U.S. 101 is a major north-south interregional route serving Redwood City. Access to the project site from U.S. 101 is accommodated via interchanges at Woodside Road (SR 84) and Marsh Road.

I-280 is a major north-south regional route serving Redwood City. The route begins in San Francisco and extends south to San Jose, primarily as an eight-lane facility. Access to the project site from I-280 is provided via an interchange with Woodside Road.

Woodside Road (SR 84) is a four- to five-lane divided arterial roadway extending east-west through Redwood City to the City of Woodside. Woodside Road connects I-280 to U.S. 101. The road intersects with Bay Road and Broadway north of the project site. At the U.S. 101/Woodside Road junction, SR 84 joins U.S. 101, continues south and eventually east across the Dumbarton Bridge to I-880 and into Union City.

El Camino Real (SR 82) is a north-south, six-lane, intraregional arterial roadway and is one of the primary commercial corridors in the city.

(b) Local Roadways. The following local roadways serve the project site:

Marsh Road is a four- to five-lane minor arterial roadway extending east-west from Middlefield Road to east of U.S. 101. Marsh Road is south of the project site and provides direct access to U.S. 101. From the southern portion of the project site, access to Marsh Road is via Bay Road, which turns into Florence Street.

Bay Road is a four-lane, north-south roadway extending from north of Woodside Road South to 8th Avenue. As Bay Road approaches 15th Avenue, it turns into Florence Street and connects to Marsh Road.

Broadway is a two- to four-lane north-south roadway. Broadway begins at 5th Avenue and continues north of Woodside Road and ends south of Whipple Avenue.

Charter Street is a two-lane minor roadway extending east-west with all-way stop-controlled intersections at Bay Road and Broadway. Charter Street is located north of the project site; it begins at Middlefield Road and continues east of Broadway, where it dead-ends.

Douglas Avenue is a two-lane minor roadway extending east-west directly north of the project site. The street intersects with Bay Road and Broadway with all-way stop controls. Douglas Avenue begins at Middlefield Road and continues east of Broadway, where it dead-ends.

Second Avenue is an east-west minor two-lane roadway directly south of the project site. The street begins at the railroad tracks west of Middlefield Road and continues east past the project site, where it intersects Rolison Road, a frontage road along U.S. 101. Second Avenue intersects with both Bay Road and Broadway with an all-way stop control and two-way stop control, respectively.

Fifth Avenue is an east-west two-lane roadway south of the project site. Fifth Avenue extends from El Camino Real, where it is an arterial roadway through the project vicinity extending to Rolison Road. Both Bay Road and Broadway intersect with 5th Avenue.

Florence Street/Bohannon Drive is a two-lane roadway extending north-south. Bay Road turns into Florence Street at 15th Avenue. At the intersection with Marsh Road, Florence becomes Bohannon Drive, which extends south along the railroad tracks then turns east and joins with Scott Drive.

Rolison Road/Scott Drive is a two-lane minor roadway that begins at Marsh Road and extends north. Rolison Road is a two-lane frontage road that parallels U.S. 101. Rolison Road has residential land uses on one side of the roadway and a sound wall on the other side. Scott Drive is the continuation of Rolison Road south of Marsh Road. Farther south, Scott Drive turns into Bohannon Drive.

Veterans Boulevard is an east-west, six-lane, divided arterial roadway extending south from Whipple Avenue to Chestnut Street. Between Chestnut Street and Woodside Road, Veterans Boulevard becomes two lanes. The northern and southern termini of this street are a southbound off-ramp from and on-ramp to U.S. 101, respectively.

(c) Study Intersections. Intersections, rather than midblock roadway segments, are almost always the critical capacity-controlling locations for urban and suburban roadway networks. The following 14 "study" intersections have been identified in consultation with City staff for analysis in this SEIR:

Signalized Intersections:

1. Woodside Road/Veterans Boulevard
2. Woodside Road/Broadway
3. Woodside Road/Bay Road
4. Woodside Road/Middlefield Road
5. Marsh Road/Scott Road
6. Marsh Road/Florence Street/Bohannon Drive

Unsignalized Intersections:

7. Broadway/Charter Street
8. Broadway/Douglas Avenue
9. Broadway/2nd Avenue
10. Broadway/5th Avenue
11. Bay Road/Charter Street
12. Bay Road/Douglas Avenue
13. Bay Road/2nd Avenue
14. Bay Road/5th Avenue

12.1.2 Transit Service

Figure 12.2 shows existing transit facilities near the project site.

Figure 12.2. Transit Facilities.

(a) Caltrain Service. The Peninsula Corridor Joint Powers Board operates commuter rail service (Caltrain) between San Jose and San Francisco. During the peak commute period, Caltrain also provides extended service south of San Jose to Morgan Hill and Gilroy. The closest Caltrain station to the project site is the Redwood City station located in downtown Redwood City near Jefferson Street. Caltrain operates from 4:30 AM until 1:30 AM on 15- to 60-minute headways during the weekday. In addition, the Baby Bullet service also operates during peak hours in the morning and the afternoon periods; however, the express train service does not currently serve the Redwood City Station.

(b) SamTrans Service. The San Mateo County Transit District (SamTrans) provides bus service in San Mateo County. Bus routes 270, 271, 295, and 297/397 provide bus service within Redwood City near the project site; however, none of these existing routes directly serves the project site. Route 51B, described in the 1996 EIR as running "on Broadway through the [Midpoint Technology Park] project site," no longer operates anywhere on the SamTrans system; Route 270, which does not pass by the Outpatient Center project site, generally traverses the same route as previous Route 51B in Redwood City.¹ Table 12.1 summarizes the service frequencies for the SamTrans routes that serve Redwood City.

12.1.3 Pedestrian and Bicycle Facilities

(a) Sidewalks. Sidewalks are provided on both sides of Broadway in front of the project site. No sidewalks or crosswalks are provided around the intersections of Woodside Road/Veterans Boulevard and Woodside Road/Middlefield Road. Woodside Road and Broadway have sidewalks and signalized crosswalks on all four legs except the east leg. The other 11 study intersections have sidewalks on all four legs.

(b) Bicycle Facilities. Bicycle facilities comprise bike paths (Class I), bike lanes (Class II), and bike routes (Class III). Bike paths are paved trails that are separated from roadways. Bike lanes are lanes on roadways and are designated for bicycle use by striping, pavement legends, and signs. Bike routes are roadways designated for bicycle use by signs only.

Class II bike lanes are provided on Broadway starting at 5th Avenue and continuing through to Douglas Avenue. Field observations showed that existing bike lanes near the project site are in good condition.

12.1.4 On-Site Parking

There are approximately 1,175 on-site parking spaces located within the 11.3-acre project site, including spaces in surface lots around the four existing buildings and in parking structures beneath the four buildings.² Access to the on-site parking areas is provided via two driveways

¹SamTrans information line (800-660-4287) and website (www.SamTrans.com); May 8, 2006. Also, *Final Environmental Impact Report for the Pacific Shores Center Project* (State Clearinghouse #93053065); prepared for the City of Redwood City by Recon Environmental Corporation; certified May 8, 1995. Current SamTrans staff could not locate information regarding when Route 51B was discontinued; however, because Route 51B existed *before* the @Home buildings on the current project site were constructed (i.e., when the site was vacant), no direct correlation can be drawn between the discontinuation of Route 51B and the vacation of the @Home buildings.

²The adequacy of this existing on-site parking supply for the proposed change in on-site land use from office to outpatient medical clinic is described in section 12.3.4 (Supplemental Project Impacts and Mitigations) herein, under *Supplemental Impact 12-10 (Project Impact on Parking)*.

Table 12.1
SAMTRANS BUS SERVICE

Route	From	To	Hours of Operation		Headway During Commute Periods (in minutes)	
			Weekday	Weekend	AM	PM
83*	Bay/Christopher	Santa Cruz/Elder	7:15 am-8:05 am	None	N/A	N/A
270	Redwood City Caltrain Station	Florence Street/17 th Avenue	6:35 am-12:10 am	9:35 am-12:10 am	60	60
271	Woodside Plaza	Redwood City Caltrain Station	6:30 am-6:30 pm	None	30	30
295	San Mateo Caltrain Station	Florence Street/17 th Avenue	6:00 am-7:55 pm	None	30	60
297/397	Stanford Shopping Center	Mission/1 st	12:45 am-12:20 am (next day)	12:45 am-12:20 am (next day)	60	60

SOURCE: San Mateo Transportation Authority (www.samtrans.org)

Notes:

*This bus operates only during school periods.

N/A = not applicable

located on Broadway. Some limited on-street parking is located on nearby side streets such as Douglas Avenue and 2nd Avenue.

12.1.5 Analysis Methodology

(a) Traffic Condition Scenarios. Study intersection operation has been evaluated in this SEIR analysis during the morning (AM) and evening (PM) peak hours for the following scenarios.

- *Scenario 1: Existing Conditions*--Existing volumes obtained from recent (2005) traffic counts.
- *Scenario 2: Background Conditions*--Existing volumes plus traffic from approved but not yet constructed developments in the area. Due to the high vacancy rates at some of the existing major office complexes in the study area, estimated trips from these underused developments were added to the background traffic conditions. These added trips include the full occupancy of the existing vacant buildings. For existing buildings on the project site, the trip generation was based on the rates used in the certified EIR for the Midpoint Technology Park (1996 EIR). This scenario forms the basis against which project impacts are determined.

- *Scenario 3: Project Conditions*--Existing, plus background, plus the net new traffic generated by the proposed change from office/R&D to medical clinic, as compared to the volumes previously evaluated in the 1996 EIR.
- *Scenario 4: Cumulative No Project Conditions*--Existing plus background plus traffic associated with other pending and possible future developments in the area, without the project. Based on input from City staff, a one-percent annual growth was also applied to account for other regional growth on City streets under Cumulative Conditions.
- *Scenario 5: Cumulative Plus Project Conditions*--The existing plus background plus cumulative condition described under Scenario 4, plus the net new traffic generated by the project--i.e., the proposed change in project site use from office/R&D to medical clinic.

(b) Level of Service Calculations. Operations of the study intersections have been evaluated using the "Level of Service" (LOS) calculations and grading system. The term "Level of Service" refers to a commonly used grading system methodology for evaluating and describing roadway system operational conditions. The LOS grading system considers such traffic flow factors as speed, travel time, delay, and freedom to maneuver. Six levels of operation are used ranging from LOS A, representing the best operating conditions, to LOS F, representing the worst operating conditions. LOS E represents "at capacity" operations. When demand exceeds the design capacity of a roadway facility, stop-and go conditions typically result and operations are designated as LOS F. The City has established a minimum acceptable operating level of **LOS D** for signalized and unsignalized intersections.

Signalized Intersections. The signalized intersection LOS methodology evaluates intersection operation based on average control vehicular delay for all vehicles entering the intersection.¹ Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration. The average control delay for signalized intersections is correlated to a level of service designation, as shown in Table 12.2.

Unsignalized Intersections. The LOS rating for unsignalized intersections is based on the weighted average control delay expressed in seconds per vehicle (see Table 12.3).² At two-way or side street-controlled intersections, LOS is calculated for each controlled movement, not for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. For all-way stop-controlled locations, LOS is computed for the intersection as a whole considering all approaches.

¹Average control delay at signalized intersections is calculated using the method described in chapter 16 of the 2000 *Highway Capacity Manual*, using the TRAFFIX analysis software. Consistent with common practice, the average delay for signalized study intersections (with the exception of the Broadway/Woodside Road intersection) was calculated for this analysis using the TRAFFIX level of service analysis software package. The Broadway/Woodside Road intersection has five approach legs and four departure legs, and the TRAFFIX software package cannot analyze intersections with more than four approaches. Therefore, the Synchro software package was used to analyze the level of service at the Broadway/Woodside Road intersection. The Synchro software package correlates LOS designations to the average control delay and is consistent with the methodology presented in the 2000 *Highway Capacity Manual*.

²Operations of the unsignalized intersections were evaluated using the methodology contained in chapter 17 of the 2000 *Highway Capacity Manual*.

Table 12.2
SIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Description of Operations	Average Control Delay (seconds/vehicle)
A	Insignificant Delays: No approach phase is fully used and no vehicle waits longer than one red indication.	≤ 10
B	Minimal Delays: An occasional approach phase is fully used. Drivers begin to feel restricted.	> 10 to 20
C	Acceptable Delays: Major approach phase may become fully used. Most drivers feel somewhat restricted.	> 20 to 35
D	Tolerable Delays: Drivers may wait through no more than one red indication. Queues may develop but dissipate rapidly without excessive delays.	> 35 to 55
E	Significant Delays: Volumes approaching capacity. Vehicles may wait through several signal cycles and long vehicle queues from upstream.	> 55 to 80
F	Excessive Delays: Represents conditions at capacity, with extremely long delays. Queues may block upstream intersections.	> 80

SOURCE: *Highway Capacity Manual*, Transportation Research Board, 2000.

Table 12.3
UNSIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Description of Operations	Average Control Delay (seconds/vehicle)
A	No delay for stop-controlled approaches.	0 to 10
B	Operations with minor delays.	> 10 to 15
C	Operations with moderate delays.	> 15 to 25
D	Operations with some delays.	> 25 to 35
E	Operations with high delays and long queues.	> 35 to 50
F	Operation with extreme congestion, with very high delays and long queues unacceptable to most drivers.	> 50

SOURCE: *Highway Capacity Manual*, Transportation Research Board, 2000.

State Highway Facilities: State highway facilities serving the project vicinity--U.S. 101, I-280, Woodside Road (SR 84) and El Camion Real (SR 82)--are subject to Caltrans LOS criteria. Caltrans' *Guide for the Preparation of Traffic Impact Studies* states, "Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on State highway facilities; however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State Highway is operating at less than the appropriate target LOS, the existing LOS should be maintained." For previous EIRs prepared by the City of Redwood City, the City's LOS D policy has been applied to intersections along Woodside Road (SR 84), consistent with Caltrans guidelines. As further explained in section 12.3.2 (Significance Criteria) herein, for intersections along this State Highway route where the existing LOS already exceeds LOS D, the City defines a small increment of delay (five seconds) as the significant impact criteria, which is also generally consistent with Caltrans guidelines.

12.1.6 Existing Traffic Conditions

(a) Existing Traffic Volumes and Lane Configurations. Peak operational conditions at roadway intersections usually occur during the morning and evening between 7:00 and 9:00 AM and 4:00 and 6:00 PM, respectively. Intersection operations were evaluated for the highest one-hour traffic volume during each of these periods.

Existing peak-hour traffic counts were conducted in June 2005. Copies of the traffic counts are included in appendix A of the Fehr & Peers transportation impact analysis available for review at the Redwood City Planning Department.

Figure 12.3 illustrates existing intersection lane configurations and traffic control devices, and Figure 12.4 shows existing traffic volumes at each of the study intersections during the AM and PM peak hours, based on the June 2005 counts.

(b) Existing Intersection Levels of Service. The existing lane configurations and the peak-hour turning movement volumes were used to calculate the levels of service for each of the 14 study intersections during each peak hour. Table 12.4 summarizes the results of the existing LOS analysis. Level of service calculation worksheets are included in appendix B of the Fehr & Peers transportation impact analysis available for review at the Redwood City Planning Department.

The results of this analysis show that the study intersections generally vary in existing operational condition from LOS A to LOS D. Most of the study intersections currently operate within acceptable standards (LOS D or better). An exception is the Woodside Road/Broadway intersection, which currently operates at an unacceptable LOS E during the PM peak hour.

(c) Field Observations. Field observations of the key study intersections in the project vicinity were conducted to verify the calculated operations. In general, observation confirmed that most of the study intersections are operating at or near the calculated levels of service.

Figure 12.3. Existing Intersection Lane Configurations.

Figure 12.4. Existing Peak-Hour Intersection Volumes.

Table 12.4
EXISTING INTERSECTION LEVELS OF SERVICE

<u>Intersections</u>	<u>Traffic Control Device</u>	<u>Peak Hour</u>	<u>Average Intersection Delay¹</u>	<u>LOS²</u>
1. Woodside Road/Veterans Boulevard	Signal	AM	23.2	C
		PM	42.5	D
2. Woodside Road/Broadway ³	Signal	AM	50.3	D
		PM	78.9	E
3. Woodside Road/Bay Road	Signal	AM	21.7	C
		PM	27.0	C
4. Woodside Road/Middlefield Road*	Signal	AM	38.6	D
		PM	46.2	D
5. Marsh Road/Scott Road	Signal	AM	22.2	C
		PM	21.5	C
6. Marsh Road/Florence Street/Bohannon Drive	Signal	AM	18.7	C
		PM	21.6	C
7. Broadway/Charter Street	All-way Stop Control	AM	11.4	B
		PM	14.7	B
8. Broadway/Douglas Avenue	All-way Stop Control	AM	9.6	A
		PM	10.6	B
9. Broadway/2nd Avenue	Two-way Stop Control	AM	7.2	B
		PM	8.9	B
10. Broadway/5th Avenue	Two-way Stop Control	AM	4.1	A
		PM	4.6	A
11. Bay Road/Charter Street	All-way Stop Control	AM	11.2	B
		PM	12.9	B
12. Bay Road/Douglas Avenue	All-way Stop Control	AM	9.9	A
		PM	10.5	B
13. Bay Road/2nd Avenue	All-way Stop Control	AM	10.1	B
		PM	10.4	B
14. Bay Road/5th Avenue	All-way Stop Control	AM	13.8	B
		PM	15.6	C

SOURCE: Fehr & Peers

Notes:

¹ Average control delay per vehicle for signalized intersections using the methodology described in the 2000 *Highway Capacity Manual*. LOS calculations conducted using the TRAFFIX analysis software package.

² LOS = Level of Service

³ This intersection has five approaches and was analyzed using the Synchro software package.

* Denotes County Congestion Management Program (CMP) monitored intersection.

AM = AM Peak Hour; PM = PM Peak Hour

Bold font indicates unacceptable conditions.

At the Woodside Road/Veterans Boulevard intersection, the morning and evening peak hours have long queues in the eastbound and westbound directions. The eastbound queue occasionally blocks the adjacent Broadway/Woodside Road intersection. In addition, the Woodside Road/Veterans Boulevard intersection has no accommodation for pedestrian traffic.

The Broadway/Woodside Road intersection has heavy traffic in both the AM and PM peak hours. The east and west traffic volumes on Woodside are approximately equal with similar queuing on the intersection approaches. The queue westbound on Woodside sometimes spills back into the adjacent Woodside Road/Veterans Boulevard intersection and blocks traffic.

At the Florence Street/Marsh Road intersection, waiting vehicle queues in the southbound direction occasionally do not clear the intersection in a single signal cycle during the AM peak hour. In the PM peak hour, eastbound left-turning vehicle queues occasionally do not clear the intersection in a single signal cycle length.

The unsignalized intersections along both Bay Road and Broadway have moderate to low traffic volumes during both the morning and evening peak hours, and operate acceptably.

(d) Roadway Segments. In addition to intersection turning movement volumes, data were collected on eight "study" roadway segments located south of the project site. Twenty-four hour machine counts were taken at these locations to determine the existing daily and peak-hour volumes. Speed data were also collected at each location. The 85th percentile speed is commonly used to establish speed limits for roadways.¹ Table 12.5 presents the average daily, AM peak-hour, and PM peak-hour traffic count and 85th percentile speed data results.

Of these eight "study" locations, four roadway segments currently carried fewer than 3,000 vehicles per day (vpd). Roadways carrying fewer than 3,000 vpd are considered "local streets" by the City of Redwood City. The four roadway segments that currently fall into this "local street" category, based on existing traffic volumes, are:

- Rolison Road south of 2nd Avenue--2,280 vpd
- Hoover Street south of 2nd Avenue--1,920 vpd
- Page Street south of 2nd Avenue--1,735 vpd
- Second Avenue between Bay Road and Broadway--2,920 vpd

Traffic calming devices (speed humps) were installed on Hoover Street and Page Street as a result of a traffic calming study conducted as a 1997 condition of approval for the original Midpoint Technology Park. Due to these traffic calming devices, the 85th percentile speeds on these two roadways are lower than on the six other study roadway segments.

¹The 85th percentile speeds are also a factor in traffic signal warrants; they are used to determine whether an intersection should be treated as an urban or rural location. If 85th percentile speeds are over 40 miles per hour (mph), a location within a small urban area should be treated as a rural location. In the case of this analysis, 85th percentile speeds on all facilities surveyed were below the 40 mph threshold. Therefore, the traffic signal warrants at all locations were considered urban.

Table 12.5

EXISTING TRAFFIC VOLUMES AND SPEEDS ON ROADWAY SEGMENTS

<u>Location</u>	<u>Average Daily Traffic (ADT)</u>	<u>AM Peak Hour</u>	<u>PM Peak Hour</u>	<u>85th Percentile Speed (miles per hour)</u>
NB - Broadway north of 2nd Avenue	3,595	335	260	33
SB - Broadway north of 2nd Avenue	3,955	135	425	36
<i>Total Two-Way Traffic</i>	<i>7,550</i>	<i>470</i>	<i>685</i>	
NB - Broadway south of 2nd Avenue	2,090	200	145	34
SB - Broadway south of 2nd Avenue	2,370	85	245	37
<i>Total Two-Way Traffic</i>	<i>4,460</i>	<i>285</i>	<i>390</i>	
NB - Rolison Road south of 2nd Avenue	1,040	105	70	36
SB - Rolison Road south of 2nd Avenue	1,240	70	135	35
<i>Total Two-Way Traffic</i>	<i>2,280</i>	<i>175</i>	<i>205</i>	
NB - Hoover Street south of 2nd Avenue	995	90	70	23
SB - Hoover Street south of 2nd Avenue	925	40	110	31
<i>Total Two-Way Traffic</i>	<i>1,920</i>	<i>130</i>	<i>180</i>	
NB - Page Street south of 2nd Avenue	880	80	70	26
SB - Page Street south of 2nd Avenue	845	55	90	26
<i>Total Two-Way Traffic</i>	<i>1,725</i>	<i>135</i>	<i>160</i>	
NB - Bay Road south of 2 nd Avenue	5,165	430	395	32
SB - Bay Road south of 2 nd Avenue	5,055	305	440	31
<i>Total Two-Way Traffic</i>	<i>10,220</i>	<i>735</i>	<i>835</i>	
WB - 2nd Avenue – Bay & Broadway	1,565	95	125	29
EB - 2nd Avenue – Bay & Broadway	1,355	80	65	29
<i>Total Two-Way Traffic</i>	<i>2,920</i>	<i>175</i>	<i>190</i>	
WB - 5th Avenue – Bay & Broadway	2,495	175	205	32
EB - 5th Avenue - Bay & Broadway	2,290	120	215	32
<i>Total Two-Way Traffic</i>	<i>4,785</i>	<i>295</i>	<i>420</i>	

SOURCE: Fehr & Peers

Note: NB = northbound, SB = southbound, WB = westbound, EB = eastbound

12.1.7 Background Traffic Conditions

Background Conditions serve as the baseline scenario against which project impacts are identified.

(a) Background Traffic Estimates. Traffic volumes under Background Conditions were estimated by adding existing volumes, traffic estimates from approved but not yet constructed projects, and traffic estimates from underused developments in the study area, including the project site. In collaboration with the City Traffic Engineer and other Redwood City staff, trip generation amounts and trip assignments for the following approved but not yet constructed developments in the area were included in the background traffic estimates:

- 1501 Seaport Boulevard (West Point Marina),
- Chesapeake (Abbott Labs),
- Kaiser Hospital Master Plan,
- 2107 Broadway (Downtown Cinema),
- 1540 El Camino Real (Villa Montgomery Apartments),
- 890 Broadway (High Tech School), and
- 2300 Middlefield Road Costco Expansion.

In addition, trip generation amounts and trip assignments from the following underused sites (unoccupied existing space) in the study area were included in the background traffic estimates:

- Pacific Shores (approximately 970,000 square feet unoccupied space),
- 500 Arguello (approximately 38,300 square feet unoccupied space),
- off-site components of Midpoint Technology Park (approximately 289,000 square feet unoccupied space), and
- the four on-site Excite@Home Buildings (approximately 360,000 square feet unoccupied space).

The approved project trip inventories and trip distribution assumptions are described in Appendix C of the Fehr & Peers transportation impact analysis available for review at the Redwood City Planning Department. Figure 12.5 presents traffic volumes at the study intersections during the AM and PM peak hours under Background Conditions.

(b) Background Intersection Level of Service. Background Condition levels of service were calculated for the study intersections for the AM and PM peak hours. Table 12.6 presents the LOS calculation results under Background Conditions. The LOS calculation worksheets are contained in Appendix B of the Fehr & Peers transportation impact analysis available for review at the Redwood City Planning Department.

Figure 12.5. Background Peak-Hour Intersection Volumes.

Table 12.6
INTERSECTION LEVELS OF SERVICE UNDER BACKGROUND CONDITIONS

Intersection	Traffic Control Device	Peak Hour	Average Intersection Delay ¹	LOS ²
1. Woodside Road/Veterans Boulevard	Signal	AM	26.6	C
		PM	52.3	D
2. Woodside Road/Broadway ³	Signal	AM	85.3	F
		PM	112.8	F
3. Woodside Road/Bay Road	Signal	AM	21.1	C
		PM	27.5	C
4. Woodside Road/Middlefield Road*	Signal	AM	43.7	D
		PM	54.3	D
5. Marsh Road/Scott Road	Signal	AM	23.8	C
		PM	23.0	C
6. Marsh Road/Florence Street/Bohannon Drive	Signal	AM	27.5	C
		PM	31.8	C
7. Broadway/Charter Street	All-way Stop Control	AM	20.2	C
		PM	26.1	D
8. Broadway/Douglas Avenue	All-way Stop Control	AM	12.7	B
		PM	14.0	B
9. Broadway/2nd Avenue	Two-way Stop Control	AM	22.0	C
		PM	26.6	D
10. Broadway/5th Avenue	Two-way Stop Control	AM	10.9	B
		PM	11.5	B
11. Bay Road/Charter Street	All-way Stop Control	AM	13.0	B
		PM	15.1	C
12. Bay Road/Douglas Avenue	All-way Stop Control	AM	10.9	B
		PM	11.9	B
13. Bay Road/2nd Avenue	All-way Stop Control	AM	10.7	B
		PM	11.3	B
14. Bay Road/5th Avenue	All-way Stop Control	AM	16.1	C
		PM	19.4	C

SOURCE: Fehr & Peers

Notes:

¹ Average control delay per vehicle for signalized intersections using the methodology described in the 2000 *Highway Capacity Manual*. LOS calculations conducted using the TRAFFIX analysis software package.

² LOS = Level of Service

³ This intersection has five approaches and was analyzed using the Synchro software package.

* Denotes County Congestion Management Plan (CMP) monitored intersection.

AM = AM Peak Hour; PM = PM Peak Hour

Bold font indicates unacceptable conditions.

The addition of Background Conditions traffic increases the delays at the study intersections. Most will continue to operate at acceptable levels; however, the Woodside Road/Broadway intersection is projected to operate at unacceptable LOS F during both the AM and PM peak hours.

(c) Background Traffic on Roadway Segments. Table 12.7 presents background traffic volumes for the eight study roadway segments. Based on the background traffic growth assumptions, daily traffic on the study roadway segments will increase from 4 to 67 percent.

These "background" increases are due to the combined effects of applying a background growth factor, anticipated increase in occupancy at the Midpoint Technology Park, and full occupancy of vacant on-site office space. Since traffic calming devices have been installed on both Hoover Street and Page Street, no additional background traffic was assigned to these facilities.

Under Background Conditions, the following three roadway segments will carry fewer than 3,000 vehicles per day (vpd), thereby maintaining their "local street" designation:

- Rolison Road south of 2nd Avenue--2,550 vpd,
- Hoover Street south of 2nd Avenue--1,920 vpd, and
- Page Street south of 2nd Avenue--1,735 vpd.

With the re-occupancy of the existing vacant space in the Midpoint Technology Park, including the project site, it is estimated that the roadway segment on 2nd Avenue between Bay Road and Broadway will carry a traffic volume of 4,865 daily trips--i.e., a volume that exceeds the route's "local street" identification.

12.2 PERTINENT PLANS AND POLICIES

The City of Redwood City has jurisdiction over all City streets and City-operated traffic signals. The City/County Association of Governments of San Mateo County (C/CAG) is the state-authorized Congestion Management Agency for San Mateo County, and with the Metropolitan Transportation Commission (MTC) oversees and coordinates funding for intra-regional transportation improvement programs. The State of California Department of Transportation (Caltrans) has jurisdiction over Redwood City-serving freeways (U.S. 101 and I-280), freeway ramps, and designated state routes (SR 82/El Camino Real and SR 84/Woodside Road).

12.2.1 Redwood City Strategic General Plan

The Redwood City Strategic General Plan Circulation Element (adopted in 1990, revised in 1993) contains the following relevant objectives and policies:

- *Allow for the safe and convenient movement and access of motor vehicles in Redwood City, but not at the expense of the environment or the overall quality of life in Redwood City or to the detriment of alternative transportation modes. (Motor Vehicle Transportation Objective 1, page 7-7)*

Table 12.7
 TRAFFIC VOLUMES ON ROADWAY SEGMENTS UNDER BACKGROUND CONDITIONS

Location	Existing Conditions			Background Conditions			% Change
	AM	PM	ADT	AM	PM	ADT	
NB - Broadway north of 2nd Avenue	335	260	3,595	555	295	5,130	
SB - Broadway north of 2nd Avenue	135	425	3,955	200	595	5,615	
<i>Total Two-Way Traffic</i>	<i>470</i>	<i>685</i>	<i>7,550</i>	<i>755</i>	<i>890</i>	<i>10,745</i>	<i>42%</i>
NB - Broadway south of 2nd Avenue	200	145	2,090	300	170	2,865	
SB - Broadway south of 2nd Avenue	85	245	2,370	130	335	3,325	
<i>Total Two-Way Traffic</i>	<i>285</i>	<i>390</i>	<i>4,460</i>	<i>430</i>	<i>505</i>	<i>6,190</i>	<i>39%</i>
NB - Rolison Road south of 2nd Avenue	105	70	1,040	130	90	1,290	
SB - Rolison Road south of 2nd Avenue	70	135	1,240	70	140	1,260	
<i>Total Two-Way Traffic</i>	<i>175</i>	<i>205</i>	<i>2,280</i>	<i>200</i>	<i>230</i>	<i>2,550</i>	<i>12%</i>
NB - Hoover Street south of 2nd Avenue	90	70	995	90	70	995	
SB - Hoover Street south of 2nd Avenue	40	110	925	40	110	925	
<i>Total Two-Way Traffic</i>	<i>130</i>	<i>180</i>	<i>1,920</i>	<i>130</i>	<i>180</i>	<i>1,920</i>	<i>0%¹</i>
NB - Page Street south of 2nd Avenue	80	70	880	80	70	880	
SB - Page Street south of 2nd Avenue	55	90	845	55	90	845	
<i>Total Two-Way Traffic</i>	<i>135</i>	<i>160</i>	<i>1,725</i>	<i>135</i>	<i>160</i>	<i>1,725</i>	<i>0%¹</i>
NB - Bay Road south of 2nd Avenue	430	395	5,165	445	395	5,265	
SB - Bay Road south of 2nd Avenue	305	440	5,055	320	465	5,340	
<i>Total Two-Way Traffic</i>	<i>735</i>	<i>835</i>	<i>10,220</i>	<i>765</i>	<i>860</i>	<i>10,605</i>	<i>4%</i>
WB - 2nd Avenue – Bay & Broadway	95	125	1,565	120	210	2,350	
EB - 2nd Avenue - Bay & Broadway	80	65	1,355	140	130	2,515	
<i>Total Two-Way Traffic</i>	<i>175</i>	<i>190</i>	<i>2,920</i>	<i>260</i>	<i>340</i>	<i>4,865</i>	<i>67%</i>
WB - 5th Avenue - Bay & Broadway	175	205	2,495	185	250	2,870	
EB - 5th Avenue - Bay & Broadway	120	215	2,290	250	235	3,315	
<i>Total Two-Way Traffic</i>	<i>295</i>	<i>420</i>	<i>4,785</i>	<i>435</i>	<i>485</i>	<i>6,185</i>	<i>29%</i>

SOURCE: Fehr & Peers

Notes:

¹ Background traffic was not assigned to these facilities due to the existing traffic calming devices that limit travel speeds.

ADT = average daily traffic

NB = northbound, SB = southbound, WB = westbound, EB = eastbound

- *Create conditions to allow for better utilization of the existing public transportation system that will increase public transportation use and the subsequent improvement of the public transportation infrastructure and expansion of service.* (Public Transportation Objective 1, page 7-13)
- *Establish site planning and architectural standards for new building projects that would incorporate transit access and orientation. Such standards would apply to both public and private building projects located along existing bus routes to enhance pedestrian access and convenient public transit access.* (Public Transportation Policy PT-4, page 7-14)
- *Make walking and bicycling a realistic and more widespread transportation alternative in Redwood City by establishing a series of policies to create an urban environment that will make walking and bicycling safe, efficient, and convenient.* (Non-Motorized Transportation Objective, page 7-26)
- *All new traffic signal installations and existing traffic signal modifications shall include installation of bicycle-sensitive signal detector loops.* (Non-Motorized Transportation Policy NM-11, page 7-27)

12.2.2 Redwood City Traffic Impact Mitigation Fee Program

The *Redwood City Traffic Impact Mitigation Fee Study (TIF)* has been prepared and adopted by the City to establish a source of funding for future transportation system capital improvements in Redwood City. The Redwood City fee program has been formulated to fund over 13 identified transportation improvement projects located throughout the City. Specific improvement funding targets identified in the study that involve the local roadway system serving the project vicinity are described below.

Identified Intersection Improvement Needs:

- Bay Road/Fifth Street identified for installation of a traffic signal.

Identified Travel Corridor and Areawide Improvements:

- Woodside Road (SR 84) identified for widening to six lanes from El Camino Real to U.S. 101 to improve traffic flow to LOS D. A Caltrans-prepared Project Study Report (PSR) and Environmental Document (ED) were prepared for this project. At this point, the City has decided not to pursue widening this section of Woodside Road.
- Woodside Road identified for widening to six lanes from El Camino Real to Valota Road to improve traffic flow to LOS D. No further project development work has been performed for this section of Woodside Road.
- Neighborhood traffic management programs (NTMP) identified as generally needed, including installation of traffic calming/improvement projects in local neighborhoods to alleviate cut-through traffic and speeding.

Identified Alternative Modes/Transit Potential Projects:

- A City-based shuttle system identified as a potential project.
- A full-time city transportation demand management (TDM) coordinator identified as a potential way to encourage alternative transportation modes. The coordinator would have the responsibility to develop TDM traffic reduction plans, assist employers in establishing and operating employee trip reduction plans, and coordinate with regional agencies and traffic relief organizations.
- Miscellaneous transit, pedestrian, and bicycle projects identified as potential improvements, such as bus shelters, benches, pedestrian amenities, Americans with Disability Act (ADA) curb ramps, closing sidewalk and bike lane gaps, park and ride lots, and transit center improvements.

12.2.3 C/CAG Guidelines

C/CAG has adopted guidelines for its Congestion Management Program (CMP) in order to reduce the regional traffic impacts of substantive new developments. The guidelines apply to all projects in San Mateo County that generate 100 or more net new peak-period trips on the CMP network and are subject to CEQA review. Projects that meet this criterion are required to:

(1) Determine if a combination of acceptable mitigation options/measures is possible that have the capacity to fully reduce the demand for net new trips that a project is anticipated to generate on the CMP roadway network (including the first 100 trips). Such options/measures could include:

- implementation of adequate roadway and/or transit improvements so that the added peak-hour trips will have no measurable impact on the CMP roadway network;
- contribution of a one-time only payment of \$20,000 per peak-hour trip (including the first 100 trips) to a special fund for the implementation of appropriate transportation demand management (TDM) system measures at the development;
- implementation of a TDM program that has the capacity to fully reduce the demand for new peak-period trips (C/CAG has provided a list of TDM measures and their associated "trip credit" to assist in the development of a TDM program); and/or
- negotiation with C/CAG staff for other acceptable ways to mitigate trips for specific developments on a case-by-case basis.

Also, the portion of traffic impact mitigation fees collected by the City through its Traffic Impact Fee Mitigation Program that are used to mitigate project impacts on the CMP roadway network will count as a credit toward the project's per-trip mitigation requirements under the CMP.

(2) If a combination of options/measures selected from the list above can fully reduce the number of project trips on the CMP roadway network, this information must be included as part of the environmental documents that are circulated and adopted by the local jurisdiction.

(3) If the combination of options/measures listed above cannot fully reduce the number of trips on the CMP roadway network, C/CAG staff should be contacted for review and approval as

early in the process as possible so that the agreed upon mitigation plan can be included in the environmental documents placed in circulation.

(4) If an agreement is not reached with C/CAG staff on the mitigation plan, an immediate review by the C/CAG Board will be scheduled so that the local jurisdiction project approval process will not be delayed.

12.3 SUPPLEMENTAL IMPACT AND MITIGATION FINDINGS

12.3.1 Supplemental Analysis Scope

This supplemental analysis focuses on the transportation and parking implications of the proposed project changes (i.e., the differences between the project evaluated in the 1996 EIR and 1998 SEIR and the currently proposed project), including the following:

- the proposed change in land use from office/R&D to medical clinic, and associated changes in anticipated traffic;
- possible circulation effects of the proposed project modifications, including new landscaping and entry signage, and on-site circulation changes;
- emergency access requirements for the proposed medical clinic land use;
- project circulation feature and transit provision compliance with City policies and standards that support alternative transportation modes; and
- the adequacy of the project's proposed parking program.

12.3.2 Significance Criteria

Applying significance criterion used in the 1996 EIR and 1998 SEIR, the project would be considered to have a significant supplemental traffic impact if it would:

- (a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections).

In addition, based on the current CEQA Guidelines, the project would be considered to have a significant supplemental traffic impact if it would meet any of the following criteria (which differ slightly from the criteria cited in the 1996 EIR and 1998 SEIR):

- (b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways;¹
- (c) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses;²

¹CEQA Guidelines, Appendix G, item XV(b).

²CEQA Guidelines, Appendix G, item XV(d).

- (d) Result in inadequate emergency access;¹ or
- (e) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).²

In applying these criteria, the following City and C/CAG standards have been used to identify intersection impacts, roadway impacts, and transit, bicycle, and pedestrian impacts.³

(1) Intersection Impacts. According to Redwood City standards, a significant traffic impact at a study intersection would occur if the project would cause:

- operations at a signalized intersection to deteriorate from an acceptable level (LOS D or better) to an unacceptable level (LOS E or F);
- the average delay at a signalized intersection operating at an unacceptable level (LOS E or F) to increase by five (5) or more seconds;
- operations at an unsignalized intersection to deteriorate from an acceptable level (LOS D or better) to an unacceptable level (LOS E or F) and either: (1) a traffic volume increase at the intersection sufficient to satisfy the peak-hour warrant for traffic signal installation, or (2) the delay to increase by five (5) or more seconds; or
- the delay at an unsignalized intersection operating at an unacceptable level (LOS E or F) to increase by five (5) or more seconds and a traffic volume increase at the intersection sufficient to satisfy the peak-hour warrant for traffic signal installation.

(2) Roadway Impacts. For the purpose of this analysis, a significant traffic impact on local roadway segment would occur if:

- the roadway segment currently carries fewer than 3,000 vehicles per day; and
- there is a project-related increase in traffic volume of more than five (5) percent of the daily or peak-hour traffic. For low-volume roadways, the absolute threshold is five (5) peak-hour trips or 50 daily trips.

On C/CAG-designated Congestion Management Program (CMP) roads (e.g., SR 82 [El Camino Real], SR 84 [Woodside Road]), the project impact would be considered significant if the project would generate more than 100 net new peak-hour trips. Projects generating this number of trips are required to comply with the *C/CAG Guidelines for the Implementation of the Land Use Component of the 1999 Congestion Management Program*.

¹CEQA Guidelines, Appendix G, item XV(e).

²CEQA Guidelines, Appendix G, item XV(g).

³These standards are consistent with recent transportation and circulation analyses prepared for other transportation impact studies in Redwood City. The standards for signalized intersections are similar to the criteria used in the 1996 EIR and 1998 SEIR, while the other standards elaborate on or modify the criteria used in those earlier documents.

Since the U.S. 101 freeway, a C/CAG-designated CMP road, currently does not comply with the C/CAG adopted LOS standard of E, the project would be considered to have a significant impact if it would add traffic equal to one (1) percent or more of the segment capacity or cause the freeway segment volume-to-capacity ratio to increase by one (1) percent.

(3) Transit, Bicycle and Pedestrian Impacts. Following common transportation planning practice, the proposed project would be considered to result in a significant transit, bicycle, and/or pedestrian impact if it would:

- Conflict with any existing, planned, or possible future transit, bicycle, and/or pedestrian facilities and services;
- Cause transit, bicycle, or pedestrian facilities to be frequently blocked by cars or other potential safety obstructions/hazards;
- Cause vehicles to cross pedestrian or bicycle facilities on a regular basis at driveway entrances lacking adequate sight distance or warning system; or
- Encourage pedestrians to cross roads in undesignated areas.

12.3.3 Project Traffic Generation and Distribution

(a) Trip Generation. The amount of traffic generated by the proposed project changes has been estimated by applying the daily trip rate, peak-hour percentages, and inbound/outbound splits published in the Institute of Transportation Engineers (ITE) *Trip Generation, 7th Edition for "Medical-Dental Office Buildings"* (ITE Land Use Code 720); the ITE rate is based on trips per employee. The net new trips generated by the proposed change of use were determined by comparing the estimated trip generation from the 1996 EIR for an office/R&D use to the new ITE trip generation estimates for a medical/dental office building use. The detailed net trip generation estimates are presented in Table 12.8.

As shown in Table 12.8, it is estimated that the proposed Outpatient Center project would generate 3,688 added (net new) daily trips and 393 added (net new) PM peak-hour trips (194 inbound and 199 outbound). Table 12.8 also indicates that the proposed project would result in a slight reduction in trips during the AM peak hour.

Use of ITE employment-based trip generation rate for the proposed project land use change represents a conservative, "worst case" traffic assessment approach for the following reasons:

The anticipated scheduling of project employee arrivals and departures influences the AM and PM peak-hour traffic estimates. For example, the applicant indicates that surgery center staff would arrive outside the AM peak period and depart before the PM peak period, since surgery preparation would begin as early as 7:00 AM and most procedures would end before 3:00 PM. Another employee group would arrive between 7:00 and 8:00 AM. Some staff would have a standard 8:00 AM to 5:00 PM schedule, and some clinics would see patients beginning at 8:00 or 8:30 AM. However, the largest portion of employees would arrive between 8:00 and 8:30 AM. These employees would typically begin to see patients between 9:00 and 9:30 AM. Some of the faculty (doctors) would arrive between 9:00 and 9:30 AM, after making rounds at the Stanford Medical Center in Palo Alto and just before seeing patients at the Redwood City Outpatient Center. Finally, some employees of the sleep center would work overnight, arriving in the evening and leaving early in the morning.

Table 12.8
TRIP GENERATION FOR MEDICAL/DENTAL OFFICES

<u>Land Use</u>	<u>Project Size</u>	<u>AM Peak Hour</u>			<u>PM Peak Hour</u>			<u>Daily Trips</u>
		<u>In</u>	<u>Out</u>	<u>Total</u>	<u>In</u>	<u>Out</u>	<u>Total</u>	
Medical/Dental Offices ¹	670	0.42	0.11	0.53	0.36	0.70	1.06	8.91
Rates per Employee	Employees							
Trips		281	74	355	241	469	710	5,970
Midpoint Technology Park 1996 EIR ²	360 KSF							
Rates per 1,000 square feet (KSF)		0.83	0.17	1.00	0.13	0.75	0.89	6.34
Trips		299	61	360	47	270	317	2,282
Net New Trips		-18	13	-5	194	199	393	3,688

SOURCE: Fehr & Peers

Notes:

¹ Institute of Transportation Engineers, *Trip Generation, 7th Edition*; Medical-Dental Office Building--Land Use Code 720.

² Institute of Transportation Engineers, *Trip Generation, 5th Edition*; Research Center--Land Use Code 760.

An estimated breakdown of daytime employee arrivals would be as follows:

- Before 7:00 AM: 5 percent,
- 7:00 AM to 8:00 AM: 30 to 40 percent,
- 8:00 AM to 9:00 AM: 50 to 55 percent, and
- After 9:00 AM: 5 percent.

Similarly, afternoon employee and patient departures would be spread out over the period from 3:00 PM to 6:00 PM or later. For the most part, patient appointments would end around 5:00 PM, and some staff could be expected to stay after 6:00 PM to finish tasks after their appointments.

It is important to note that the estimated 670 employee total for the project represents the total number of employees on the payroll; on any given work day, the actual number of employees to and from the site would be less than 670 due to vacations and sick days. The number of employees on-site would also fluctuate because doctors would not see patients five days a week (see section 3.4.9 herein).

Finally, it also should be noted that initially, part of some of the project buildings would be used for administrative purposes rather than as clinic facilities. Potential project trip generation was therefore evaluated for both medical outpatient uses and office uses, and it was determined that the trip generation for medical outpatient uses would be higher than the trip generation for administrative office uses for the PM peak hour and on a daily basis. During the AM peak hour, the trip generation would be approximately the same for both the outpatient and office uses. Based on this trip generation comparison, the traffic analysis in this SEIR focuses on the scenario under which all four buildings would be used for medical outpatient clinics to ensure that worst-case traffic effects are fully analyzed.

(b) Trip Distribution. The proposed project Stanford Outpatient Center clinics would be relocated from existing facilities at the Stanford University Medical Center in Palo Alto. To determine the directions of approach and departure of patients using the proposed relocated Outpatient Center, Stanford Hospital & Clinics outpatient zip code data for 2003 and 2004 was applied to identify the general travel patterns of future Outpatient Center patients.

Figure 12.6 presents projected project trip distribution characteristics based on the zip code survey. Based on the zip code analysis, just over 60 percent of the patients would come from the south (Santa Clara and Santa Cruz counties); approximately 22 percent would come from the north (San Mateo, San Francisco, and Marin counties); and the remaining trips would originate in areas east of the Bay Area.

Also, based on the existing clinic trip origination and destination zip code data, approximately 70 percent of the Outpatient Center patients would come from areas south of Woodside Road. The traffic analysis assumes the following distribution of these trips:

- 40 percent would use U.S. 101 south of the site;
- 5 percent would come from the East Bay using the Dumbarton Bridge;
- 10 percent would use Middlefield Road; and
- 15 percent would use El Camino Real south of the site.

Project trips from northbound U.S. 101 would use both the Woodside Road and Marsh Road interchanges. Trips using the Marsh Road interchange were assigned to both Bay Road and Rolison Road.

(c) Trip Assignment. The net new trips generated by the proposed project were assigned to the roadway system based on the directions of approach and departure (trip distribution) discussed above. Figure 12.7 illustrates the project trip assignments for both peak hours at the 14 study intersections. Project trips were added to Background Condition traffic volumes to estimate volumes under Project Conditions. Figure 12.8 shows the resultant traffic volumes at the study intersections under Project Conditions.

Figure 12.6. Project Trip Distribution.

Figure 12.7. Project Trip Assignments.

Figure 12.8. Project Peak-Hour Intersection Volumes.

12.3.4 Supplemental Project Impacts and Mitigations

Supplemental Impact 12-1: Project Impact on Broadway/Second Avenue Intersection. During the PM peak hour, project traffic would reduce the level of service (LOS) and increase individual vehicle delay by more than five (5) seconds at the Broadway/Second Avenue intersection. This change would represent a **significant impact** (see criteria for "Intersection Impacts" in subsection 12.3.2, "Significance Criteria," above). This impact is similar to Impact 3-3 identified in the 1996 EIR.

Explanation:

Estimated traffic volumes under Project Conditions were added to the background roadway network to calculate levels of service for all study intersections. The results of this analysis, summarized in Table 12.9, indicate that two intersections are expected to operate at unacceptable LOS F under the Project Conditions scenario:

- Woodside Road/Broadway--would operate at LOS F during both the AM and PM peak hours with or without the project; and
- Broadway/Second Avenue (unsignalized, stop sign control)--would operate at LOS F during the PM peak hour with the project.

The Woodside Road/Broadway intersection would operate at LOS F during the AM and PM peak hours with or without the project. The project would result in a slight reduction in the AM peak-hour delay (compared to the previous office/R&D use on the project site) and an increase of fewer than five seconds in the PM peak-hour delay. Therefore, project traffic would produce a less-than-significant impact at this intersection (see criteria for "Signalized Intersections" in subsection 12.3.2, "Significance Criteria," above).

The Broadway/Second Avenue intersection would experience a change in PM peak-hour LOS from LOS D without the project to LOS F with the project. The project-related traffic increment would also meet the peak-hour delay warrant for signalization,¹ and vehicles would

¹The peak-hour signal warrant analysis is intended to examine the general correlation between the planned level of future development and the need to install new traffic signals. Signal warrant calculation sheets are included in Appendix D of the Fehr & Peers traffic report on file at the City of Redwood City Planning Department. The analysis estimates future development-generated traffic compared with a subset of the standard traffic signal warrants recommended in the Federal Highway Administration Manual on Uniform Traffic Control Devices and on Caltrans Guidelines. While this analysis is considered adequate for CEQA purposes (i.e., evaluates potential impacts against SEIR significance criteria), it should not serve as the only basis for deciding whether and when to install a signal at Broadway/Second Avenue. To reach such a decision, the full set of warrants should be investigated by an experienced engineer, based on field-measured (rather than forecast) traffic data and a thorough study of traffic and roadway conditions. Furthermore, the decision to install a signal should not be based solely upon the warrants, since the installation of signals can lead to certain types of collisions. The City of Redwood City should undertake regular monitoring of actual traffic conditions and accident data at Broadway/Second Avenue, and regularly re-evaluate the full set of warrants in order to set priorities and plan for intersection signalization. Stanford Hospital & Clinics should fund the collection and analysis of the data, which would be undertaken by a traffic consultant hired by the City.

Table 12.9

INTERSECTION LEVELS OF SERVICE UNDER PROJECT CONDITIONS

Intersection	Traffic Control Device	Peak Hour	Background		Project		Change in Delay	Significant Impact?
			Average Intersection Delay ¹	LOS ²	Average Intersection Delay ¹	LOS ²		
1. Woodside Road/Veterans Boulevard	Signal	AM	26.6	C	26.6	C	0.0	No
		PM	52.3	D	52.1	D	-0.2	No
2. Woodside Road/Broadway ³	Signal	AM	85.3	F	81.8	F	-3.5	No
		PM	112.8	F	117.7	F	4.9	No
3. Woodside Road/Bay Road	Signal	AM	21.1	C	21.2	C	0.1	No
		PM	27.5	C	27.5	C	0.0	No
4. Woodside Road/Middlefield Road*	Signal	AM	43.7	D	43.2	D	-0.5	No
		PM	54.3	D	54.5	D	0.2	No
5. Marsh Road/Scott Road	Signal	AM	23.8	C	24.0	C	0.2	No
		PM	23.0	C	24.2	C	1.2	No
6. Marsh Road/Florence Street/Bohannon Drive	Signal	AM	27.5	C	27.6	C	0.1	No
		PM	31.8	C	32.7	C	0.9	No
7. Broadway/Charter Street	All-way Stop Control	AM	20.2	C	17.9	C	-2.3	No
		PM	26.1	D	32.4	D	6.3	No
8. Broadway/Douglas Avenue	All-way Stop Control	AM	12.7	B	12.0	B	-0.7	No
		PM	14.0	B	15.7	C	1.7	No
9. Broadway/2nd Avenue	Two-way Stop Control	AM	22.0	C	26.8	D	4.7	No
		PM	26.6	D	85.2	F	58.6	Yes
10. Broadway/5th Avenue	Two-way Stop Control	AM	10.9	B	11.2	B	0.3	No
		PM	11.5	B	12.1	B	0.6	No
11. Bay Road/Charter Street	All-way Stop Control	AM	13.0	B	13.0	B	0.0	No
		PM	15.1	C	15.1	C	0.0	No
12. Bay Road/Douglas Avenue	All-way Stop Control	AM	10.9	B	10.9	B	0.0	No
		PM	11.9	B	11.9	B	0.0	No
13. Bay Road/2nd Avenue	All-way Stop Control	AM	10.7	B	10.8	B	0.1	No
		PM	11.3	B	12.3	B	1.0	No
14. Bay Road/5th Avenue	All-way Stop Control	AM	16.1	C	17.1	C	1.0	No
		PM	19.4	C	27.9	D	8.5	No

SOURCE: Fehr & Peers

Notes:

¹ Average control delay per vehicle for signalized intersections using the methodology described in the 2000 *Highway Capacity Manual*. LOS calculations conducted using the TRAFFIX analysis software package.

² LOS = Level of Service

³ This intersection has five approaches and was analyzed using the Synchro software package.*Denotes a County Congestion Management Program (CMP) monitored intersection.**Unsignalized Intersection

AM = AM Peak Hour; PM = PM Peak Hour

experience an increase in delay of more than five (5) seconds. These project effects meet the significance criteria for unsignalized intersections (see criteria for "Intersection Impacts" in subsection 12.3.2, "Significance Criteria," above). A similar impact was identified in the 1996 EIR as Impact 3-3. The mitigation included in the 1996 EIR for this impact included traffic diverters at the Broadway/Second Avenue intersection; this mitigation has not been implemented. (Other road segments analyzed in the 1996 EIR were not reanalyzed in this SEIR because they now have speed humps that were installed in accordance with the traffic calming plan recommended as a mitigation measure in the 1996 EIR.)

Supplemental Mitigation 12-1. The applicant shall install all-way stop sign control at the Broadway/Second Avenue intersection, which would achieve LOS D operations at this location under Project Conditions. Implementation of this measure would reduce the impact to a ***less-than-significant level***.

Supplemental Impact 12-2: Project Impact on Rolison Road Roadway Segment. Project traffic would increase PM peak-hour and daily traffic on Rolison Road south of Second Avenue by more than five percent. Since this segment of Rolison Road currently carries fewer than 3,000 vehicles per day and is therefore operating as a "local street," the increase in traffic due to the project represents a ***significant impact*** (see criteria for "Roadway Impacts" in subsection 12.3.2, "Significance Criteria," above). This impact is similar to Impact 3-3 identified in the 1996 EIR.

Explanation:

Table 12.10 lists Background Condition traffic volumes and the percent increase in traffic due to the project trips for the eight study roadway segments. Based on the "Roadway Impacts" criteria, the project would have a potentially significant impact on the Rolison Road segment, which would carry less than 3,000 vehicles per day (vpd)--i.e., operates as a "local street"--and would experience a greater-than-five-percent increase in PM peak-hour and daily traffic.

This same impact was identified as Impact 3-3 of the 1996 EIR. (Other road segments analyzed in the 1996 EIR were not reanalyzed in this SEIR because they now have speed humps that were installed in accordance with the traffic calming plan recommended as a mitigation measure in the 1996 EIR.) The mitigation included in the 1996 EIR for this impact included investigating traffic calming on Rolison Road. Another specific 1996 EIR recommendation involved closing the connection to Rolison at Marsh Road; however, this recommendation was not supported by City staff and was not included in the 1996 Mitigation and Monitoring Program. Traffic diverters were also identified as mitigation for this impact, but have not been installed, at the intersection of Broadway/Second Avenue and Page Street/Second Avenue. (A traffic calming study was conducted in the Friendly Acres residential neighborhood, and speed humps were subsequently installed on Hoover Street and Page Street.)

Table 12.10

TRAFFIC VOLUMES ON ROADWAY SEGMENTS UNDER PROJECT CONDITIONS

Location	Background Conditions			Project Trips			Percent Increase		
	AM	PM	ADT	AM	PM	ADT	AM	PM	ADT
NB - Broadway north of 2nd Avenue	555	295	5,130	51	106	891			
SB - Broadway north of 2nd Avenue	200	595	5,615	19	154	1,295			
<i>Total Two-Way Traffic</i>	755	890	10,745	70	260	2,186	9%	29%	20%
NB - Broadway south of 2nd Avenue	300	170	2,865	35	43	362			
SB - Broadway south of 2nd Avenue	130	335	3,325	70	73	614			
<i>Total Two-Way Traffic</i>	430	505	6,190	105	116	976	24%	23%	16%
NB - Rolison Road south of 2nd Avenue	130	90	1,290	4	20	168			
SB - Rolison Road south of 2nd Avenue	70	140	1,260	2	25	210			
<i>Total Two-Way Traffic</i>	200	230	2,550	6	45	378	3%	20%	15%
NB - Hoover Street south of 2nd Avenue	90	70	995	0	0	0			
SB - Hoover Street south of 2nd Avenue	40	110	925	0	0	0			
<i>Total Two-Way Traffic</i>	130	180	1,920	0	0	0	0%	0%	0%
NB - Page Street south of 2nd Avenue	80	70	880	0	0	0			
SB - Page Street south of 2nd Avenue	55	90	845	0	0	0			
<i>Total Two-Way Traffic</i>	135	160	1,725	0	0	0	0%	0%	0%
NB - Bay Road south of 2nd Avenue	445	395	5,265	0	23	193			
SB - Bay Road south of 2nd Avenue	320	465	5,340	2	24	202			
<i>Total Two-Way Traffic</i>	765	860	10,605	2	47	395	0%	5%	4%
WB - 2nd Avenue - Bay & Broadway	120	210	2,350	5	54	454			
EB - 2nd Avenue - Bay & Broadway	140	130	2,515	11	43	362			
<i>Total Two Way Traffic</i>	260	340	4,865	16	97	816	6%	29%	17%
WB - 5th Avenue - Bay & Broadway	185	250	2,870	10	73	614			
EB - 5th Avenue - Bay & Broadway	250	235	3,315	35	43	362			
<i>Total Two-Way Traffic</i>	435	485	6,185	45	116	976	10%	24%	16%

SOURCE: Fehr & Peers

Notes:

ADT = average daily traffic

NB = northbound, SB = southbound, WB = westbound, EB = eastbound

Bold font indicates potentially significant project impact.

Supplemental Mitigation 12-2. The applicant shall implement traffic calming devices to help maintain vehicle speeds at posted limits along Rolison Road south of Second Avenue. The installation of these devices shall be made in accordance with City standards and shall be coordinated with City emergency services (Fire Department). However, implementation of the traffic calming devices, while improving public safety, would not reduce the impact to a less-than-significant level; therefore, the project impact on Rolison Road south of Second Avenue would represent a **significant unavoidable impact**.

Project Impact on Bay Road Roadway Segment. The Fehr & Peers traffic analysis also found that the project would add some traffic to the Bay Road segment that passes by Taft Elementary School. The project-related traffic increase on this roadway segment during the PM peak hour would be five percent, and the daily increase would be four percent. This project-related increase in traffic volume alone, however, does not translate into an immediate safety concern; the roadway design is also an important safety factor. The existing Bay Road crosswalk in front of the school contains an in-pavement lighting system. This lighting system has push buttons that activate flashing lights to warn motorists when a pedestrian enters the crosswalk. With this system already in place to address pedestrian safety at the Bay Road crosswalk serving the school, the project traffic addition would have a **less-than-significant** safety impact.

Supplemental Mitigation. No significant impact has been identified; no mitigation is required.

Supplemental Impact 12-3: Project Impact on Congestion Management Program Facilities. The project would increase PM peak-hour traffic volumes on Woodside Road and El Camino Real (County Congestion Management Program facilities) by more than 100 trips, representing a **potentially significant impact** on these roads (see criteria for "Roadway Impacts" in subsection 12.3.2, "Significance Criteria," above). This is a new impact not identified in the 1996 EIR or 1998 SEIR.

Explanation:

The proposed project would increase the number of PM peak-hour trips on Woodside Road and El Camino Real, which are County Congestion Management Program facilities, by more than 100 trips; therefore the project would be required to provide a Transportation Demand Management (TDM) plan under the San Mateo County Congestion Management Program guidelines.

Based on the anticipated project trip generation compared to the previous office/R&D uses on-site, no net new trips are anticipated on the U.S. 101 freeway during the morning peak hour. Based on the anticipated project trip generation and distribution, the project would add 80 southbound and 77 northbound net new project trips on U.S. 101 south of Marsh Road during the evening peak hour. This assumes that 40 percent of the net new trips would travel to and from the south on U.S. 101. On U.S. 101 north of Woodside Road, the project would

add 20 northbound and 19 southbound net new trips during the evening peak hour. This assumes that 10 percent of the net new trips would travel to and from the north on U.S. 101.

For the purposes of the freeway analysis, the following assumptions were made for each direction of flow on U.S. 101:

- the three (3) mixed-flow lanes in the immediate study area have a capacity of 2,300 vehicles per hour (vph),
- a High Occupancy Vehicle (HOV, carpool) lane extends south from Whipple Avenue through Santa Clara County with a capacity of 1,800 vph,
- fifteen (15) percent of the traffic flow uses the HOV lanes extending south of the project site (south of Woodside Road), and
- auxiliary lanes are not considered to add freeway capacity.

Based on the above assumptions, the directional capacities (northbound or southbound) of the affected U.S. 101 freeway segments were assumed to be 8,700 vph south of Whipple Avenue and 6,900 vph north of Whipple Avenue. South of Whipple Avenue, the project would need to add more than 87 net new trips in a single direction during the morning or evening peak hour to exceed one percent of the freeway capacity. North of Whipple Avenue, the project would need to add more than 69 net new trips in a single direction to exceed one percent of the freeway capacity. Since the anticipated net new project trips would not exceed more than one percent of the freeway capacity, there would be no new significant project impact on the freeway based on the significance criteria cited in subsection 13.3.2, "Significance Criteria," above.

Supplemental Mitigation 12-3. Prior to Planned Development (PD) Permit Amendment approval, the applicant shall provide a Transportation Demand Management (TDM) plan for project impacts on Woodside Road and El Camino Real that complies with the *C/CAG Guidelines for the Implementation of the Land Use Component of the 1999 Congestion Management Program* (see details below). Implementation of this measure would reduce the impact to a ***less-than-significant level***.

The 1996 EIR (Certified Mitigation 3-4a, b, and c) recommended TDM actions for the then-proposed Midpoint Technology Park as mitigation for impacts related to General Plan policies for reducing auto use and encouraging use of alternative transportation modes. The applicant for the current Stanford Outpatient Center project has proposed additional TDM actions. Specifically, the project applicant proposes to incorporate the following TDM measures into the project to reduce single-occupancy vehicle trips and parking demand. The measures are divided into two categories: (1) those required in the 1996 EIR prepared for the Midpoint Technology Park, and (2) new actions that are proposed by the current applicant to provide for the proposed medical clinic. ***A TDM measure worksheet that estimates the C/CAG trip credits for the applicant's current TDM proposal is included at the end of this SEIR chapter.***

1996 EIR Mitigation Measures--Required Actions:

- Appoint an on-site TSM (transportation system management) coordinator.
- Encourage telecommuting (provision of high-speed, broadband connections at employees' homes).
- Explore compressed work weeks (four ten-hour days or other staggered work-hour arrangements).
- Provide peak period shuttle service to the Redwood City Caltrain Station. (The current applicant would work with both the Peninsula Corridor Joint Powers Board [JPB] and the City of Redwood City to provide shuttle service between the proposed Outpatient Center and the Downtown Station.)
- Coordinate with SamTrans to improve the schedule and frequency of service on the existing bus route (51B). (Note: There is no longer a SamTrans route designated as 51B.)
- Provide improved bus stops and bus turnouts within the project site, including street and curb modifications where needed and the construction of shelters and benches that conform to SamTrans standards at all bus stops.
- Develop bicycle routes on the streets within and near the project site (e.g., at project site intersections), and coordinate these routes with the City's citywide bicycle route system.
- Provide bicycle storage facilities on the project site.
- Provide employee shower facilities within the project site.

TDM Actions Proposed by Current Applicant:

- Subsidize transit tickets for all feasible transit modes.
- Offer Commuter Checks (federal pre-tax program for the purchase of transit passes).
- Offer Go-Passes (Caltrain reduced-rate pass program).
- Implement a carpool program.
- Offer preferential parking near building entrances.
- Provide carpool incentives similar to the existing programs at Stanford's Palo Alto facilities.
- Provide a guaranteed ride home program for employees who use alternative modes of transportation other than drive alone.
- Provide a commute assistance center for employees.

- Allow flextime scheduling--staggered work hours that allow employee arrivals outside the normal commuter morning and evening peaks.
- Provide video conferencing facilities.
- Provide on-site amenities:
 - Cafeteria
 - Exercise facilities
 - Banking (ATM).
- Conduct Employee TDM Survey. (Stanford currently conducts an annual TDM survey of all employees and would include employees at the Redwood City facilities.)

The Stanford Medical School in cooperation with Stanford University provides an extensive TDM program for its employees at the Palo Alto campus. Many of these programs would be extended to employees located at the Redwood City Outpatient Center. For example, the university is currently the largest participant in the Caltrain Go Pass program. Based on the current Go Pass program, approximately half of the employees (300) at the new Outpatient Center would receive Caltrain Go Passes. In addition, faculty members have high-speed connections that allow them to telecommute from home, and the majority of the faculty members work compressed clinic schedules of three to four days per week. The existing Stanford TDM program also includes carpool incentives and a guaranteed ride home program that would be extended to the Redwood City site.

The carpool program would include the use of external ride-matching services such as RIDES, which would provide additional opportunities for Stanford staff to carpool with other local employees.

C/CAG staff would need to review the TDM plan to confirm the level of trip credits for which the project would qualify.

Supplemental Project Impacts on Site Access and Internal Circulation. The proposed site access and internal circulation system changes and refinements would not substantially increase traffic hazards or result in inadequate emergency access. The project would therefore have a ***less-than-significant impact*** on site access and internal circulation conditions. (The 1996 EIR and 1998 SEIR did not evaluate this impact.)

Explanation:

Since the project proposes reuse of recently constructed (1998) buildings, the site access locations and internal circulation system would require a minimum of modifications. The two existing driveways on Broadway would continue to be used for vehicular access to the site. Internal vehicular circulation would continue to be provided via parking aisles in parking rows with 90-degree parking spaces. Access to the underground parking area would continue to be provided from the parking aisles. A patient drop-off area would be created in the northwest portion of the project site. Pedestrian facilities at the site would provide adequate circulation between the buildings and to/from Broadway and the surrounding commercial and residential areas. The existing site access and proposed internal circulation system refinement would be adequate to meet the demands of the Outpatient Center.

The project does not propose any new features that would interfere with emergency access. Since the proposed medical clinic use does not include emergency services, emergency access needs would be similar to those associated with the previous office/R&D uses.

Supplemental Mitigation. No significant impact has been identified; no mitigation is required.

Supplemental Impact 12-4: Project Consistency with General Plan Provisions for Alternative Transportation Modes. Since the project site does not currently have bus service, the project has the potential to conflict with Redwood City Strategic General Plan Circulation Element objectives and policies encouraging the use of alternative transportation modes. This potential inconsistency represents a **potentially significant impact** (see criterion [f] in subsection 12.3.2, "Significance Criteria," above). This impact is similar to Impact 3-4 identified in the 1996 EIR.

Currently, there is no bus service provided immediately in front of the project site on Broadway; Route 51B, described in the 1996 EIR as running "on Broadway through the [Midpoint Technology Park] project site," no longer operates anywhere on the SamTrans system; Route 270, which does not pass by the Outpatient Center project site, generally traverses the same route as previous Route 51B in Redwood City.¹ As described in subsection 12.1.2 (Transit Service) above, some SamTrans bus routes operate nearby on Bay Street. The 1996 EIR (Mitigation 3-4b) recommended coordination with SamTrans to improve bus service to the project site. The current project applicant would be required to comply with this 1996 EIR mitigation measure as part of the new Transportation Demand Management (TDM) plan described under *Supplemental Mitigation 12-3* in this chapter.

One possibility would be to reroute the existing Route 270 onto Broadway in front of the project site. Currently, Route 270 serves the Caltrain station and operates on Bay Street, Charter Street, and Broadway near the project site, but does not travel directly by the site. The route primarily serves commercial areas such as Kaiser Hospital, Seaport Village, Harbor Village, and Marsh Road (in Menlo Park).

Supplemental Mitigation 12-4. Prior to Planned Development (PD) Permit Amendment approval, the applicant shall provide a Transportation Demand Management (TDM) plan as described in *Supplemental Mitigation 12-3* above, to City and C/CAG satisfaction. The TDM plan shall include measures to encourage use of transit services, coordinated with SamTrans. Implementation of this measure would reduce this impact to a **less-than-significant level**.

¹SamTrans information line (800-660-4287) and website (www.SamTrans.com); May 8, 2006. Also, Final Environmental Impact Report for the Pacific Shores Center Project (State Clearinghouse #93053065); prepared for the City of Redwood City by Recon Environmental Corporation; certified May 8, 1995. Current SamTrans staff could not locate information regarding when Route 51B was discontinued; however, because Route 51B existed *before* the @Home buildings on the current project site were constructed (i.e., when the site was vacant), no direct correlation can be drawn between the discontinuation of Route 51B and the vacation of the @Home buildings.

12.3.5 Cumulative (2025) Traffic Conditions

(a) Cumulative Without Project Conditions. Cumulative Without Project Conditions are defined as projected year 2025 conditions without the proposed project. A methodology similar to the one used for the Background Conditions was applied to estimate future cumulative conditions, as described below.

Cumulative Without Project Traffic Projections. Traffic volumes under Cumulative Without Project Conditions were developed following a three-step process:

1. A growth factor of one percent per year, recommended by City staff and used in other traffic studies in Redwood City, was applied to existing traffic volumes (2005), to account for regional traffic growth expected in the area.
2. Traffic associated with approved, pending, and potential future projects in the area was also assigned to the roadway network--i.e., was added to the traffic volumes derived in Step 1.
3. Traffic associated with underused developments near the project site and the vacant buildings on the project site were also assigned to the roadway network--i.e., was added to the traffic volumes derived in Step 2 to obtain turning movement volumes under Cumulative Without Project Conditions. Figure 12.9 shows the resulting Cumulative Without Project traffic volumes for the AM and PM peak hours.

Cumulative Without Project Roadway Improvement. Based on previous traffic studies in Redwood City, the following roadway improvement was assumed to be implemented by the year 2025:

- *Veterans Boulevard, Chestnut Street to Woodside Road.* Southbound Veterans Boulevard is expected to be widened to two lanes as part of the Redwood City Traffic Impact Fee Mitigation Study. City staff has indicated that this project is approximately 10 to 15 years away from implementation. This improvement is expected to increase queuing capacity at the Veterans Boulevard/Woodside Road intersection; however, the intersection lane configurations at the southbound approach would remain the same due to the constraint of receiving lanes on the U.S. 101 southbound ramp. Therefore, no change to the lane configurations at the intersection was assumed.

Cumulative Without Project Intersection Levels of Service. Levels of service (LOS) were calculated for the study intersections using the Cumulative Without Project traffic volumes during the AM and PM peak hours. Table 12.11 presents the LOS calculation results under Cumulative Without Project Conditions. The LOS calculation worksheets are contained in Appendix B of the Fehr & Peers report on file at the City of Redwood City Planning Department. The results of this analysis show that five intersections are expected to operate at an unacceptable level (LOS E or worse) under Cumulative Without Project Conditions:

- Woodside Road/Veterans Boulevard (PM peak hour),
- Woodside Road/Broadway (AM and PM peak hours),
- Woodside Road/Middlefield Road (AM and PM peak hours),
- Broadway/Charter Street (unsignalized--meets signal warrants) (PM peak hour), and
- Broadway/Second Avenue (unsignalized--meets signal warrants) (PM peak hour).

Figure 12.9. Cumulative (2025) Without Project Peak-Hour Intersection Volumes.

Table 12.11
 LEVELS OF SERVICE AT STUDY INTERSECTIONS UNDER CUMULATIVE WITHOUT
 PROJECT CONDITIONS

<u>Intersections</u>	<u>Traffic Control Device</u>	<u>Peak Hour</u>	<u>Average Intersection Delay¹</u>	<u>LOS²</u>
1. Woodside Road/Veterans Boulevard	Signal	AM	33.1	C
		PM	91.4	F
2. Woodside Road/Broadway ³	Signal	AM	146.7	F
		PM	208.7	F
3. Woodside Road/Bay Road	Signal	AM	24.2	C
		PM	38.1	D
4. Woodside Road/Middlefield Road*	Signal	AM	139.3	F
		PM	188.3	F
5. Marsh Road/Scott Road	Signal	AM	42.5	D
		PM	27.7	C
6. Marsh Road/Florence Street/Bohannon Drive	Signal	AM	40.3	D
		PM	42.1	D
7. Broadway/Charter Street	All-way Stop Control	AM	31.3	D
		PM	48.4	E⁴
8. Broadway/Douglas Avenue	All-way Stop Control	AM	14.9	B
		PM	17.4	C
9. Broadway/2nd Avenue	Two-way Stop Control	AM	33.5	D
		PM	48.3	E
10. Broadway/5th Avenue	Two-way Stop Control	AM	11.5	B
		PM	12.4	B
11. Bay Road/Charter Street	All-way Stop Control	AM	16.3	C
		PM	20.9	C
12. Bay Road/Douglas Avenue	All-way Stop Control	AM	12.4	B
		PM	14.1	B
13. Bay Road/2nd Avenue	All-way Stop Control	AM	12.3	B
		PM	13.2	B
14. Bay Road/5th Avenue	All-way Stop Control	AM	23.7	C
		PM	34.6	D

SOURCE: Fehr & Peers

Notes:

¹ Average control delay per vehicle for signalized intersections using the methodology described in the 2000 *Highway Capacity Manual*. LOS calculations conducted using the TRAFFIX analysis software package.

² LOS = Level of Service

³ This intersection has five approaches and was analyzed using the Synchro software package.

⁴ This intersection meets the peak-hour volume traffic signal warrant and therefore meets the unsignalized impact criteria.

*Denotes County Congestion Management Program (CMP) monitored intersection.

AM = AM Peak Hour; PM = PM Peak Hour

Bold font indicates unacceptable conditions.

Of the two unsignalized intersections that would operate at unacceptable LOS, the intersection of Broadway/Charter Street also meets the traffic signal warrant for peak-hour volumes.

Roadway Segments. Table 12.12 presents estimated cumulative traffic volumes for the eight analyzed roadway segments. Based on the cumulative traffic growth assumptions, the roadway segments would experience increases in daily traffic from 8 to 30 percent. Since traffic calming devices (i.e., speed humps) have been installed on both Hoover Street and Page Street, no additional cumulative traffic was assigned to these facilities.

Under cumulative conditions, three roadway segments would carry fewer than 3,000 vehicles per day (vpd) and therefore fall into the "local street" category:

- Rolison Road south of Second Avenue--2,755 vpd,
- Hoover Street south of Second Avenue--1,920 vpd, and
- Page Street south of Second Avenue--1,725 vpd.

(b) Cumulative With Project Conditions. Cumulative With Project Conditions are defined as Cumulative Without Project Conditions plus the net new traffic generated by the proposed project, as compared to the volumes previously evaluated in the 1996 certified EIR for the Midpoint Technology Park. Figure 12.10 shows the resulting Cumulative With Project traffic volumes for the AM and PM peak hours.

Cumulative With Project Intersection Levels of Service. Levels of service were calculated for the study intersections using the Cumulative With Project traffic volumes during the AM and PM peak hours. Table 12.13 presents the LOS calculation results under Cumulative With Project Conditions. The LOS calculation worksheets are contained in Appendix B of the Fehr & Peers traffic report on file at the City of Redwood City Planning Department. The results of this analysis show that the following six intersections are expected to operate at an unacceptable level (LOS E or worse) under this With Project scenario:

- Woodside Road/Veterans Boulevard,
- Woodside Road/Broadway (PM peak hour),
- Woodside Road/Middlefield Road,
- Broadway/Charter Street (unsignalized--meets signal warrant) (PM peak hour),
- Broadway/Second Avenue (unsignalized--does not meet signal warrant, but both AM and PM peak-hour delay would increase by more than five [5] seconds), and
- Bay Road/Fifth Avenue (unsignalized--meets signal warrant) (PM peak hour).

Cumulative With Project Conditions would have potential significant impacts at the Woodside Road/Broadway, Broadway/Charter Street, Broadway/Second Avenue, and Bay Road/Fifth Avenue intersections. Cumulative With Project impacts at the Woodside Road/Veterans Boulevard and Woodside Road/Middlefield Road intersections would not be considered significant, since these intersections already operate unacceptably and the proposed project would not cause a five-second increase in delay at these intersections.

Table 12.12
 TRAFFIC VOLUMES ON ROADWAY SEGMENTS UNDER CUMULATIVE WITHOUT PROJECT
 CONDITIONS

<u>Location</u>	<u>Background Conditions</u>			<u>Cumulative Without Project Conditions</u>			<u>Percent Change</u>
	<u>AM</u>	<u>PM</u>	<u>ADT</u>	<u>AM</u>	<u>PM</u>	<u>ADT</u>	
NB - Broadway north of 2nd Avenue	555	295	5,130	642	352	6,006	
SB - Broadway north of 2nd Avenue	200	595	5,615	236	889	7,945	
<i>Total Two-Way Traffic</i>	<i>755</i>	<i>890</i>	<i>10,745</i>	<i>878</i>	<i>1,241</i>	<i>13,951</i>	<i>30%</i>
NB - Broadway south of 2nd Avenue	300	170	2,865	355	205	3,392	
SB - Broadway south of 2nd Avenue	130	335	3,325	153	396	3,943	
<i>Total Two-Way Traffic</i>	<i>430</i>	<i>505</i>	<i>6,190</i>	<i>508</i>	<i>601</i>	<i>7,335</i>	<i>19%</i>
NB - Rolison Road south of 2nd Avenue	130	90	1,290	152	106	1,533	
SB - Rolison Road south of 2nd Avenue	70	140	1,260	38	164	1,222	
<i>Total Two-Way Traffic</i>	<i>200</i>	<i>230</i>	<i>2,550</i>	<i>190</i>	<i>270</i>	<i>2,755</i>	<i>8%</i>
NB - Hoover Street south of 2nd Avenue	90	70	995	90	70	995	
SB - Hoover Street south of 2nd Avenue	40	110	925	40	110	925	
<i>Total Two-Way Traffic</i>	<i>130</i>	<i>180</i>	<i>1,920</i>	<i>130</i>	<i>180</i>	<i>1,920</i>	<i>0%</i>
NB - Page Street south of 2nd Avenue	80	70	880	80	70	880	
SB - Page Street south of 2nd Avenue	55	90	845	55	90	845	
<i>Total Two-Way Traffic</i>	<i>135</i>	<i>160</i>	<i>1,725</i>	<i>135</i>	<i>160</i>	<i>1,725</i>	<i>0%</i>
NB - Bay Road south of 2nd Avenue	445	395	5,265	583	337	5,760	
SB - Bay Road south of 2nd Avenue	320	465	5,340	339	554	6,059	
<i>Total Two-Way Traffic</i>	<i>765</i>	<i>860</i>	<i>10,605</i>	<i>922</i>	<i>891</i>	<i>11,819</i>	<i>11%</i>
WB - 2nd Avenue - Bay & Broadway	120	210	2,350	153	238	2,781	
EB - 2 nd Avenue - Bay & Broadway	140	130	2,515	206	155	3,373	
<i>Total Two-Way Traffic</i>	<i>260</i>	<i>340</i>	<i>4,865</i>	<i>359</i>	<i>393</i>	<i>6,154</i>	<i>27%</i>
WB - 5 th Avenue - Bay & Broadway	185	250	2,870	225	299	3,440	
EB - 5th Avenue - Bay & Broadway	250	235	3,315	298	282	3,965	
<i>Total Two-Way Traffic</i>	<i>435</i>	<i>485</i>	<i>6,185</i>	<i>523</i>	<i>581</i>	<i>7,405</i>	<i>20%</i>

SOURCE: Fehr & Peers

Notes:

ADT = average daily traffic

NB = northbound, SB = southbound, WB = westbound, EB = eastbound

Figure 12.10. Cumulative (2025) With Project Peak-Hour Intersection Volumes.

Table 12.13
 LEVELS OF SERVICE AT STUDY INTERSECTIONS UNDER CUMULATIVE WITH PROJECT
 CONDITIONS

Intersections	Traffic Control Device	Peak Hour	Cumulative Without Project		Cumulative With Project		Change in Delay	Significant Impact?
			Average Intersection Delay ¹	LOS ²	Average Intersection Delay ¹	LOS ²		
1. Woodside Road/ Veterans Boulevard	Signal	AM	33.1	C	33.1	C	0.0	No
		PM	91.4	F	91.3	F	-0.1	No
2. Woodside Road/Broadway	Signal	AM	146.7	F	141.8	F	-4.9	No
		PM	208.7	F	216.5	F	8.2	Yes
3. Woodside Road/Bay Road	Signal	AM	24.2	C	24.2	C	0.0	No
		PM	38.1	D	38.1	D	0.0	No
4. Woodside Road/ Middlefield Road*	Signal	AM	84.2	F	82.0	F	-2.2	No
		PM	107.0	F	108.1	F	1.1	No
5. Marsh Road/Scott Road	Signal	AM	42.5	D	43.5	D	1.0	No
		PM	27.7	C	30.4	D	2.7	No
6. Marsh Road/ Florence Street/Bohannon Drive	Signal	AM	40.3	D	40.9	D	0.6	No
		PM	42.1	D	45.2	D	3.1	No
7. Broadway/Charter Street	All-way Stop Control	AM	31.3	D	26.0	D	-5.3	No
		PM	48.4	E	62.0	F	13.6	Yes
8. Broadway/ Douglas Avenue	All-way Stop Control	AM	14.9	B	13.8	B	-1.1	No
		PM	17.4	C	20.3	C	2.9	No
9. Broadway/2nd Avenue	Two-way Stop Control	AM	33.5	D	45.7	E	12.2	Yes
		PM	48.3	E	>100	F	>45.8	Yes
10. Broadway/5th Avenue	Two-way Stop control	AM	11.5	B	11.9	B	0.4	No
		PM	12.4	B	13.3	B	0.9	No
11. Bay Road/Charter Street	All-way Stop Control	AM	16.3	C	16.3	C	0.0	No
		PM	20.9	C	20.9	C	0.0	No
12. Bay Road/Douglas Avenue	All-way Stop Control	AM	12.4	B	12.4	B	0.0	No
		PM	14.1	B	14.1	B	0.0	No
13. Bay Road/2nd Avenue	All-way Stop Control	AM	12.3	B	12.5	B	0.2	No
		PM	13.2	B	14.7	B	1.5	No
14. Bay Road/5th Avenue	All-way Stop Control	AM	23.7	C	26.0	C	2.3	No
		PM	34.6	D	55.2	F	20.6	Yes

SOURCE: Fehr & Peers

Notes:

¹ Average control delay per vehicle for signalized intersections using the methodology described in the 2000 *Highway Capacity Manual*. LOS Calculations conducted using the TRAFFIX analysis software package.

² LOS = Level of Service

³ This intersection has five approaches and was analyzed using the Synchro software package.

* Denotes Congestion Management Program (CMP) monitored intersection.

**Unsignalized Intersection

AM = AM Peak Hour; PM = PM Peak Hour

Bold font indicates potentially significant cumulative impact.

12.3.6 Supplemental Cumulative Impacts and Mitigations

Supplemental Impact 12-5: Cumulative With Project Impacts at Woodside Road/Broadway Intersection. Traffic under Cumulative With Project Conditions would cause an unacceptable increase in delay at the Woodside Road/Broadway intersection during the PM peak hour. This delay increase would represent a **significant cumulative impact** (see "Intersection Impacts" criteria in subsection 12.3.2, "Significance Criteria," above). This impact is similar to Impact 3-2 identified in the 1996 EIR.

Explanation:

As shown in Table 12.13, traffic added by the project trips under Cumulative With Project Conditions would increase delay at the Woodside Road/Broadway intersection during the PM peak hour. During the AM peak hour, the intersection delay would decrease slightly due to the difference in the travel patterns between previous office/R&D uses and proposed medical uses. The intersection is expected to operate at an unacceptable LOS F during both the AM and PM peak hours under both the Background and Project Conditions. The addition of project trips is expected to increase delay by 8.2 seconds during the PM peak period, which would exceed the five-second threshold of significance established for this analysis.

The 1996 EIR identified a significant impact at this intersection under Project Conditions. The Certified Mitigation identified in the 1996 EIR Mitigation and Monitoring Program was the addition of a northbound right-turn overlap phase for traffic using Broadway. This right-turn overlap would run concurrently with the westbound left-turn phase (from Woodside Road to Broadway) and with the southbound U.S. 101 off-ramp phase. As a result of the combined benefit from these two overlaps, the intersection would operate at an acceptable level of service.

In addition, the 1996 EIR identified a significant impact at this intersection under Cumulative With Project Conditions. The Certified Mitigation identified for the cumulative impact in the 1996 EIR Mitigation and Monitoring Program was the right-turn overlaps plus the addition of a second westbound left-turn lane from Woodside Road to Broadway. The second left-turn lane improvement was not recommended by City staff and was excluded from the mitigation plan. Instead, a condition was added that would require the applicant to contribute a fair share amount to an areawide traffic assessment district and agree not to oppose the creation of the district.

The current implementation status of the mitigation measures recommended in the 1996 EIR is as follows:

- A northbound right-turn overlap phase has been added to the intersection that runs concurrently with the westbound left-turn movement from Woodside Road. However, the second overlap has not been implemented because Caltrans did not support the proposed mitigation for reasons related to signal phasing and operation.
- The project made a monetary contribution to an areawide fee program as a condition of use.

- A traffic mitigation fee program was implemented by the City and has been in place for approximately five years.

The recent Abbott Laboratories EIR identified an impact at this intersection and recommended the same right-turn overlap operation and the addition of an emergency vehicle pre-emption as mitigation. The impact at this intersection was still deemed significant and unavoidable, however, due to the uncertainty that Caltrans would implement the improvements. Therefore, Abbott Laboratories was also required to implement an aggressive TDM program to help reduce the impact at both the Woodside Road/Broadway and Woodside Road/Veterans Boulevard intersections.

Supplemental Mitigation 12-5(a). The project applicant shall pay an additional traffic impact fee for the approximately 393 net new PM peak-hour trips generated by the Stanford Outpatient Center project. The traffic impact fee program is planned to include citywide traffic improvement needs, including improvements that would reduce congestion in the Woodside Road corridor and in the area surrounding the project site on Bay Road.

Supplemental Mitigation 12-5(b). The project applicant shall implement a transportation demand management (TDM) program to reduce the number of drive-alone auto trips generated by the project (see *Supplemental Mitigation 12-3*).

The combination of these two measures has the potential to reduce the project's contribution to the cumulative impact at the Woodside Road/Broadway intersection to a *less-than-significant level*. However, until Caltrans commits to implementing the planned improvements at the Woodside Road/Broadway intersection, the project's contribution to the cumulative impact at this intersection would represent a **significant unavoidable impact**.

Supplemental Impact 12-6: Cumulative With Project Impacts at Broadway/Charter Street Intersection. Traffic under Cumulative With Project Conditions would cause an unacceptable increase in delay at the Broadway/Charter Street intersection during the PM peak hour. In addition, under Cumulative With Project Conditions, traffic volumes at the intersection are expected to satisfy the peak-hour signal warrant. Cumulative With Project Conditions would therefore cause a **potentially significant cumulative impact** (see "Intersection Impacts" criteria in subsection 12.3.2, "Significance Criteria," above). This impact is a new impact not identified in the 1996 EIR or 1998 SEIR.

Explanation:

The results of the intersection analysis indicate that the Broadway/Charter Street intersection is expected to operate at an unacceptable LOS E during the PM peak hour under Cumulative Without Project Conditions. Under Cumulative With Project Conditions, LOS would

deteriorate to F, and the intersection volumes are expected to satisfy the peak-hour signal warrant. Therefore, these conditions would result in a significant cumulative impact at the Broadway/Charter Street intersection as defined by the significance criteria for impacts on unsignalized intersections.

Supplemental Mitigation 12-6. A traffic consultant selected by and under the direction of the City, and funded by Stanford Hospital & Clinics, shall periodically monitor the intersection in a similar manner as other unsignalized intersections in Redwood City to determine if and when signalization, or other mitigation as determined by the City, would be warranted in the future. The project applicant shall also contribute its fair share, as determined by the City, to the design and installation of the mitigation measure at the time its installation is determined by the City to be necessary.

The intersection is expected to operate at LOS B during the PM peak hour under Cumulative With Project Conditions with installation of a traffic signal (as one example of a feasible mitigation measure). Implementation of this mitigation measure would therefore reduce the project's contribution to the cumulative impact at the Broadway/Charter Street intersection to a ***less-than-significant level***.

Supplemental Impact 12-7: Cumulative With Project Impacts at Broadway/Second Avenue Intersection. Traffic under Cumulative With Project Conditions would cause an unacceptable increase in delay at the Broadway/Second Avenue intersection during both the AM and PM peak hours. In addition, under the Cumulative With Project Conditions, the total delay on the minor street (Second Avenue) would satisfy the peak-hour delay signal warrant. Cumulative With Project Conditions would therefore cause a ***potentially significant cumulative impact*** (see "Intersection Impacts" criteria in subsection 12.3.2, "Significance Criteria," above). This impact is a new impact not identified in the 1996 EIR or 1998 SEIR.

Explanation:

The results of the intersection analysis (see Table 12.13) indicate that the Broadway/Second Avenue intersection is expected to operate at an acceptable LOS D in the AM peak hour and an unacceptable LOS E during the PM peak hour under Cumulative Without Project Conditions. The introduction of the proposed project to the cumulative scenario is expected to degrade operations at this intersection from LOS D to LOS E during the AM peak and from LOS E to LOS F during the PM peak hour. Under Cumulative With Project Conditions, the intersection would also experience an increase in delay of more than five (5) seconds during both peak hours and would meet the peak-hour delay signal warrant during the PM peak hour. The proposed project is therefore expected to contribute to a ***significant cumulative impact*** at the Broadway/Second Avenue intersection.

Supplemental Mitigation 12-7. The applicant shall implement *Supplemental Mitigation 12-1* (install all-way stop sign control). Implementation of this measure would reduce the project's contribution to this cumulative impact to a ***less-than-significant level***.

Alternatively, implementation of either of the following two mitigation measures would similarly reduce the project's contribution to this cumulative impact to a ***less-than-significant level*** and would also result in improving intersection operation to an acceptable level of service (LOS D or better under Cumulative Conditions).

A traffic consultant selected by and under the direction of the City, and funded by Stanford Hospital & Clinics, shall periodically monitor the intersection in a similar manner as other unsignalized intersections in Redwood City to determine if and when signalization, or other mitigation as determined by the City, would be warranted in the future. The project applicant shall also contribute its fair share, as determined by the City, to the design and installation of the mitigation measure at the time its installation is determined by the City to be necessary;

or

The City could have the applicant contribute its fair share, as determined by the City, to the design and installation of a roundabout at this intersection, assuming the roundabout is physically feasible.

Installation of a traffic signal would be the most common approach to achieving future cumulative LOS D conditions-- the intersection would operate at LOS C or better. However, due to the intersection's location next to a residential area, it may be desirable to consider a roundabout which could also provide additional benefit in terms of traffic calming and off-peak operations. The physical feasibility of implementing a roundabout would have to be studied further, and the ultimate design would have to be acceptable to the Redwood City Fire Department due to the proximity of a fire station to the intersection.

Supplemental Impact 12-8: Cumulative With Project Impacts at Bay Road/Fifth Avenue Intersection. Traffic under Cumulative With Project Conditions would cause an unacceptable increase in delay at the Bay Road/Fifth Avenue intersection during the PM peak hour. In addition, under Cumulative With Project Conditions, traffic volumes at the intersection are expected to satisfy the peak-hour signal warrant. Cumulative With Project Conditions would therefore cause a ***potentially significant cumulative impact*** (see "Intersection Impacts" criteria in subsection 12.3.2, "Significance Criteria," above). This impact is a new impact not identified in the 1996 EIR or 1998 SEIR.

Explanation:

The results of the intersection analysis indicate that the Bay Road/Fifth Avenue intersection is expected to operate at an acceptable LOS D during the PM peak hour under Cumulative Without Project Conditions. The proposed project is expected to degrade intersection operations from LOS D to F during the PM peak period. In addition, under Cumulative With Project Conditions, the intersection volumes are expected to satisfy the peak-hour signal warrant. The proposed project is therefore expected to contribute to a significant cumulative impact at the Bay Road/Fifth Avenue intersection.

This intersection was analyzed in the City of Redwood City's Traffic Impact Mitigation Fee Study, was identified in that study for signalization, and is therefore included in the fee program.

Supplemental Mitigation 12-8. The project applicant shall pay additional traffic impact fees for the estimated 393 net new PM peak-hour trips generated by the Stanford Outpatient Center project. Implementation of this mitigation measure would reduce the project's contribution to the cumulative impact at the Bay Road/Fifth Avenue intersection to a ***less-than-significant level***.

The project is estimated to add 393 net new trips during the PM peak hour. The traffic impact fee program includes citywide traffic improvements, including improvements that would reduce congestion in the Woodside Road corridor and in the area surrounding the project site on Bay Road. Specifically, the signalization of the Bay Road/Fifth Avenue intersection is included in the City's traffic impact fee program. With these improvements, the intersection would operate at an acceptable level of service.

Supplemental Impact 12-9: Cumulative Impact on Rolison Road Roadway Segment. Cumulative With Project traffic would increase PM peak-hour and daily traffic on Rolison Road south of Second Avenue by more than five percent. Since Rolison Road carries fewer than 3,000 vehicles per day, the increase in traffic due to the project would represent a ***significant cumulative impact*** (see criteria for "Roadway Impacts" in subsection 12.3.2, "Significance Criteria," above). This impact is similar to Impact 3-3 identified in the 1996 EIR.

Table 12.14 indicates cumulative traffic volumes, the trips forecast to be added by the proposed project, and the percent increase in traffic due to the project trips for the eight study roadway segments. Similar to Project Conditions, Cumulative With Project Conditions would create an impact on the Rolison Road segment south of Second Avenue, which would carry fewer than 3,000 vehicles per day (vpd) and experience a greater-than-five-percent increase in PM peak-hour and daily traffic.

This impact was identified in Impact 3-3 of the 1996 EIR. The mitigation included in the EIR was to investigate traffic calming on local streets, including Page Street, Hoover Street, Rolison Road, and portions of Broadway (south of Second Avenue). One specific EIR recommendation was to close the connection to Rolison at Marsh Road. This

Table 12.14
 TRAFFIC VOLUMES ON ROADWAY SEGMENTS UNDER CUMULATIVE WITH PROJECT
 CONDITIONS

Location	Cumulative Without Project			Cumulative With Project			Percent Change		
	AM	PM	ADT	AM	PM	ADT	AM	PM	ADT
NB - Broadway north of 2nd Avenue	642	352	6,006	51	106	891			
SB - Broadway north of 2nd Avenue	236	889	7,945	19	154	1,295			
<i>Total Two-Way Traffic</i>	878	1,241	13,951	70	260	2,186	8%	21%	16%
NB - Broadway south of 2nd Avenue	355	205	3,392	35	43	362			
SB - Broadway south of 2nd Avenue	153	396	3,943	70	73	614			
<i>Total Two-Way Traffic</i>	508	601	7,335	105	116	976	21%	19%	13%
NB - Rolison Road south of 2nd Avenue	152	106	1,533	4	20	168			
SB - Rolison Road south of 2nd Avenue	38	164	1,222	2	25	210			
<i>Total Two-Way Traffic</i>	190	270	2,755	6	45	378	3%	17%	14%
NB - Hoover Street south of 2nd Avenue	90	70	995	0	0	0			
SB - Hoover Street south of 2nd Avenue	40	110	925	0	0	0			
<i>Total Two-Way Traffic</i>	130	180	1,920	0	0	0	0%	0%	0%
NB - Page Street south of 2nd Avenue	80	70	880	0	0	0			
SB - Page Street south of 2nd Avenue	55	90	845	0	0	0			
<i>Total Two-Way Traffic</i>	135	160	1,725	0	0	0	0%	0%	0%
NB - Bay Road south of 2nd Avenue	583	337	5,760	-	23	193			
SB - Bay Road south of 2nd Avenue	339	554	6,059	2	24	202			
<i>Total Two-Way Traffic</i>	922	891	11,819	2	47	395	0%	5%	3%
WB - 2nd Avenue - Bay & Broadway	153	238	2,781	5	54	454			
EB - 2nd Avenue - Bay & Broadway	206	155	3,373	11	43	362			
<i>Total Two-Way Traffic</i>	359	393	6,154	16	97	816	4%	25%	13%
WB - 5th Avenue - Bay & Broadway	225	299	3,440	10	73	614			
EB - 5th Avenue - Bay & Broadway	298	282	3,965	35	43	362			
<i>Total Two-Way Traffic</i>	523	581	7,405	45	116	976	9%	20%	13%

SOURCE: Fehr & Peers

Notes:

ADT = average daily traffic

NB = northbound, SB = southbound, WB = westbound, EB = eastbound

Bold font indicates potentially significant cumulative impact.

recommendation was not supported by City staff and was removed from the Mitigation and Monitoring Program. Traffic diverters were also identified as mitigation, but have not been installed, at the intersections of Broadway/Second Avenue and Page Street/Second Avenue. A traffic calming study was conducted in the Friendly Acres residential neighborhood, and speed humps were installed on Hoover Street and Page Street.

Supplemental Mitigation 12-9. The applicant shall implement *Supplemental Mitigation 12-2* (traffic calming). However, implementation of this With Project Condition mitigation would not reduce this Cumulative With Project impact to a less-than-significant level. No feasible additional mitigation has been identified; therefore, this Cumulative With Project impact on Rolison Road south of Second Avenue would represent a ***significant unavoidable impact***.

Supplemental Impact 12-10: Project Impact on Parking. The project may not have an adequate number of parking spaces, since the anticipated parking supply (no less than 1,116 spaces) would not meet standard parking demand ratios specified by the Institute of Transportation Engineers (ITE) and the City of Redwood City for a typical medical/dental clinic use. This potential for inadequate parking supply represents a ***potentially significant impact*** (see criterion [e] in subsection 12.3.2, "Significance Criteria," above). This impact is a new impact not identified in the 1996 EIR or 1998 SEIR.

A parking analysis was prepared by Fehr & Peers for the proposed Outpatient Center. The parking demand assumptions used in this analysis were based on available data from the existing Stanford outpatient clinics located at the Stanford Medical Center in Palo Alto for those individual clinics that would be relocated to the Redwood City site. The Fehr & Peers parking analysis was independently reviewed for adequacy by George W. Nickelson, P.E., the SEIR transportation consultant. The Fehr & Peers parking analysis and Nickelson peer review documents are on file at the City of Redwood City Planning Department.

Based on these analyses, Fehr & Peers determined and George W. Nickelson, P.E., concurred that the anticipated parking supply (no less than 1,116 spaces) would be sufficient to meet the anticipated peak parking demand of the proposed Outpatient Center project. However, it was also agreed that the parking demand ratio developed and applied in the Fehr & Peers parking analysis (3.1 spaces per 1,000 square feet of gross floor area) is lower than the average peak parking ratio of 4.43 spaces per 1,000 square feet suggested by the Institute of Transportation Engineers for more typical medical/dental clinic uses. The Fehr & Peers parking demand ratio is also lower than the ratio of 5.0 spaces per 1,000 square feet specified in the City Code of Redwood City for a typical medical/dental clinic use.

In that light, the applicant has proposed implementing a *parking monitoring program* to ensure that parking demand does not exceed the parking supply provided on-site. A copy of the *parking monitoring program* proposal is included in Appendix F of the Fehr & Peers report on file at the City of Redwood City Planning Department. To implement the *parking monitoring program*, a baseline on-site and off-site parking survey would be performed prior to occupancy of the buildings by the Outpatient Center to document current parking patterns, including parking on nearby streets. The baseline data would then be compared to on-site

and off-site data periodically collected once the Outpatient Center is open. It is proposed by the applicant that the on-site and off-site (on-street) parking counts would be conducted twice a year to determine parking occupancy patterns, for a period of two years following full occupancy of the site. Stanford Hospital & Clinics would fund the parking monitoring program, which would be undertaken by a traffic consultant selected by and under the direction of the City.

Supplemental Mitigation 12-10. A *parking monitoring program* shall be undertaken by a traffic consultant selected by and under the direction of the City and funded by Stanford Hospital & Clinics. The *parking monitoring program* shall include completion of an initial baseline on-site and off-site (nearby on-street) parking analysis prior to Outpatient Center occupancy, followed by periodic on-site and off-site recounts (twice per year) for a period of two years following full Outpatient Center occupancy, as determined by the City. The residential streets to be included in the off-site parking counts are:

- Second Avenue--Rolison Road to Bay Street,
- Rolison Road--Second Avenue to Fourth Street,
- Hoover Street--Second Avenue to Fourth Street,
- Broadway--Second Avenue to Fourth Street, and
- Page Street--Second Avenue to Fourth Street.

Simultaneously with the parking counts, field observations shall be conducted at adjacent commercial sites, residential areas, and Andrew Spinas Park to determine if Outpatient Center employees or patients are parking in these areas. If parking demand in these adjacent areas increases by 15 percent or more over the base line surveys, consultations between City staff and the project applicant, based on the field observation data, shall be conducted to decide whether the increased parking demand is due to Stanford Outpatient Center activities or to other development in the area.

If the on-site parking demand exceeds specified occupancy levels, or if a 15 percent increase or more in spillover parking into adjacent areas is determined to result from Outpatient Center activities, the applicant shall provide additional on-site parking (e.g., through valet parking and/or installation of additional parking facilities such as reduced-height parking decks [rather than a four-story parking structure, as anticipated in the 1996 EIR] at one to three possible on-site locations, as illustrated on Figures 12.11 and 12.12 herein), subject to review and approval by the Redwood City Traffic Engineer and Redwood City Planning Commission.

Implementation of this measure would reduce the impact to a ***less-than-significant level***.

Three locations for providing on-site reduced-level parking decks have been preliminarily identified in the event that additional parking is needed. The three possible on-site locations are illustrated on Figures 12.11 and 12.12. Chapter 4 (Aesthetics) of this SEIR evaluates the

Figure 12.11. Possible Future Parking Structures (Plan View).

Figure 12.12. Possible Future Parking Structures (Cross-Section).

potential visual impacts of these possible future parking decks, whose location and design would be subject to Redwood City Planning Commission review and approval.

APPENDIX: TDM MEASURES PROPOSED FOR THE STANFORD OUTPATIENT CENTER PROJECT

The following table is part of a transportation impact analysis prepared for the applicant by Fehr & Peers, transportation consultants, and an independent "peer review" of the Fehr & Peers findings by the SEIR transportation consultant, George W. Nickelson, P.E. Complete copies of the Fehr & Peers transportation impact analysis report and George W. Nickelson, P.E., review are on file at the Redwood City Planning Department, 1017 Middlefield Road.

13. UTILITIES

This SEIR chapter describes the water, sewer, and solid waste service implications of the proposed Stanford Outpatient Center project, focusing on project and regulatory provisions that differ from those addressed in the 1996 Midpoint Technology Park Final EIR and 1998 SEIR.

13.1 WATER SERVICE

13.1.1 Setting

This section updates the water service information included in the 1996 EIR.

(a) Existing Water Supply. Potable water is provided for the project site and most of the city by the Redwood City Water Department, which purchases its entire supply from the City and County of San Francisco, through the San Francisco Public Utilities Commission (SFPUC). Redwood City is one of 30 public and private wholesale water customers in Alameda, Santa Clara, and San Mateo Counties that purchase water from the SFPUC, under the terms of a master contract that allocates 184 million gallons per day (mgd) for wholesale use outside San Francisco. This total supply is allocated among the wholesale customers by individual contracts between the SFPUC and each user. Under the terms of its current contract, Redwood City is guaranteed an annual, assured supply of 12,243 acre-feet (10.93 mgd), subject to drought or other shortages beyond the SFPUC's control.

For at least the past six years, Redwood City has been exceeding its allotment by between 200 and 1,400 acre-feet per year (af/yr). The SFPUC has been able to satisfy the City's excess demand by drawing on water allocations that are not being fully used by other wholesale customers. Long-range projections indicate that the City expects these current water transfers of 200 to 1,400 af/yr to temporarily end by 2010, with reintroduction and gradual increase of the water transfers to 750 af/yr by the year 2030. Total water use is projected to increase by 2,189 af/yr over this 25-year period, with the shortfall made up through gradual expansion of the City's wastewater recycling program to nearly 2,000 af/yr.¹

(b) Existing Distribution Facilities. Water is supplied to the project site through a network of City-owned water mains that, in the project area, includes a 10-inch main on Broadway and an 8-inch main that runs through the site on the abandoned Douglas Avenue right of way. Fire protection is provided by hydrants on Broadway and in the parking lot behind 440 Broadway, and also by each building's internal fire suppression system. When the Midpoint Technology Park was developed, the City determined that the existing water system was able to deliver adequate hydrant flows while also meeting the buildings' domestic and fire suppression requirements.² It is noted, though, that the *2005 Urban Water Management Plan* reported that

¹City of Redwood City; *2005 Urban Water Management Plan*; December 19, 2005.

²LCP Associates, Planning Consultants. *Draft Environmental Impact Report for the Midpoint Technology Park*; September 1996.

the City may need to add storage facilities in the Friendly Acres area (which includes the project site) to address pressure drops that can now occur during prolonged interruptions in the SFPUC supply.¹

(c) Existing Water Demand. The applicant's engineer previously estimated the water demand of the four project buildings by assuming that the buildings supported a 50/50 mix of office and R&D uses.² According to Attachment Q, "Water Demand Projection Worksheet," of the Redwood City Engineering Design Standards, commercial offices have an average water demand of 130 gallons per day per 1,000 square feet (gpd/1,000 sf), while R&D space has an average demand of 210 gpd/1,000 sf. Using the 50/50 assumption, the estimated average water demand for the previous @Home occupancy would have been 170 gpd/1,000 sf, resulting in a total demand of approximately 61,285 gpd for the four buildings (360,500 square feet).

13.1.2 Pertinent Plans and Policies

The adopted Redwood City Strategic General Plan does not contain objectives or policies pertaining directly to water service; however, section 64562 of the California Health and Safety Code requires all public water systems to have sufficient water available from their water sources and distribution reservoirs to supply adequately, dependably, and safely the total requirements of all users under maximum demand conditions before agreement is made to permit additional service connections to a system (i.e., a *water supply* must be established before any specific location for development can be considered).

13.1.3 Supplemental Impacts and Mitigation Findings

(a) Supplemental Analysis Scope. The scope of this supplemental water service analysis is limited to identification of the mitigating (beneficial) effects of, and any additional adverse impacts associated with, the proposed project changes.

(b) Significance Criteria. The current (2006) CEQA Guidelines suggest water service significance criteria different from those included in the 1996 EIR. Based on the current CEQA Guidelines, the project would be described in this SEIR as having a significant environmental impact related to water supply or service if it would:³

- (1) Result in the provision of, or the need for, new, expanded or physically altered facilities to maintain acceptable service ratios or other performance objectives for water service, the construction of which could cause significant environmental effects;
- (2) Result in the need for new or expanded water supply entitlements; or
- (3) Result in a water service condition that is inconsistent with any applicable land use plan, policy, or regulation of an agency that has jurisdiction over the project, including California Health and Safety Code provisions and Redwood City Strategic General Plan provisions, adopted for the purpose of avoiding or mitigating an environmental effect.

¹2005 *Urban Water Management Plan*. Normal system operating pressures throughout the lower parts of Redwood City are maintained through connection to the SFPUC aqueducts. When this system goes down for maintenance or during an emergency, the City has to rely on water stored in its 12 reservoirs.

²Letter from Daniel Schaefer, Brian Kangas Foulk, Engineering Consultants to the Applicant, to Jon Lynch, City Engineer, Redwood City; March 9, 2005.

³CEQA Guidelines, Appendix G, items XVI(b) and (d), and IX(b).

(c) Pertinent Project Changes. Stanford Hospital & Clinics, the project applicant, proposes to renovate and convert four of the 14 existing buildings located within the Midpoint Technology Park to create a new Stanford Outpatient Center, including a change in land use from office/R&D to medical clinic. The project would include additional water service hook-ups as necessary.

(d) Supplemental Impacts and Mitigations:

Supplemental Impact Due to Increased Water Demand. The previously cited City "Water Demand Projection Worksheet" lists "medical offices (other than hospitals)" as having an average water demand of 180 gpd/1,000 sf, or 10 gpd/1,000 sf more than under the project site's previous use (as calculated in subsection 13.1.1, Setting, herein). This change would equate to a 3,605 gpd (six percent) increase in total demand, which is less than the City Water Department's 100,000 gpd threshold for assessment of water system impacts and payment of associated fees. As a result, the proposed change in land use would not be expected to significantly affect existing water system supplies or operations, even though the City is currently using more than its contractual allocation from the SFPUC. As noted above, the City expects that a combination of excess SFPUC supply and recycled water use will be adequate to meet projected City demand for water through the year 2030. According to a representative of the City's Water Department, these projections include the minor increases in demand expected to result when existing buildings are converted to new uses, such as proposed for the project site.¹

The expected increase in demand on the project site would also not meet the threshold of Senate Bill (SB) 610, requiring the local water supplier for a proposed project (in this case, the City) to determine if the project's anticipated demand has been included in its long-range planning and if any new water supplies will be needed to meet that demand. Under SB610, a "project" is defined as a minimum of 500 dwelling units or hotel/motel rooms, 500,000 square feet of retail space, 250,000 square feet of office space, 40 acres or 650,000 square feet of industrial space, or any project that would have a demand equal to more than 500 dwelling units. The proposed project is creating minimal new space (e.g., for two lobbies and an enclosed walkway), and its projected increase in water demand is equivalent to approximately ten single-family homes, so the provisions of SB 610 would not apply.

Although the project would not substantially affect local water supplies, any retrofit of the existing interior plumbing systems would have to comply with California Assembly Bill 325, the Water Conservation and Landscaping Act. This act was adopted to limit the impact of future water shortages and minimize the environmental impacts associated with increased surface water diversions, generally by curtailing water use. The provisions of the act direct local governments to require the use of low-flow plumbing fixtures and the installation of drought-tolerant landscaping for all new development.

Based on the above analysis, the proposed project changes would result in a ***less-than-significant project and cumulative impact*** on water supply and service.

¹Peter Ingram, City of Redwood City, Public Works Services Director; personal communication, February 7, 2005.

Supplemental Mitigation. No significant project or cumulative impact has been identified; no supplemental mitigation is required.

13.2 SEWER SERVICE

13.2.1 Setting

This section updates the sewer service information included in the 1996 EIR.

(a) Treatment and Institutional Arrangements. The project site is located in the Fair Oaks Sewer Maintenance District (FOSMD, or the District). FOSMD is a San Mateo County benefit assessment district established for the collection and conveyance of wastewater to Redwood City facilities, which then convey it to the South Bayside System Authority (SBSA) wastewater treatment plant. This plant, which is jointly owned by the West Bay Sanitary District and the cities of Belmont, San Carlos and Redwood City, provides a secondary level of treatment with final effluent discharge into San Francisco Bay. The plant's permitted dry weather capacity is 29 million gallons per day (mgd), of which 14.1 mgd, almost 49 percent, is allocated for Redwood City's use. Through a contractual arrangement, 2.2 mgd, or approximately 20 percent of Redwood City's total allocation, is made available to treat wastewater generated within the FOSMD.¹ The cost of these outside treatment and conveyance services is included in the sewer charges paid by all FOSMD customers.

According to a representative of the Redwood City Public Works Department, the City currently does not know if FOSMD is exceeding its treatment allocation, because the meter used to monitor inflow at the point of connection to the City's collection system no longer works. As a result, the City would like to see the meter repaired and the status of the District's allocation confirmed before any new connections or other increases in flow (such as conversion of existing uses) are approved.²

FOSMD covers portions of Woodside, Atherton, Redwood City, and unincorporated San Mateo County. Because these areas are mostly built out, a representative of the San Mateo County Department of Public Works (which is responsible for operation of the FOSMD), does not expect wastewater flows to grow substantially in the future or cause the District to exceed its Redwood City treatment allocation (subject to resolution of the flow metering issue).³

(b) Wastewater Collection. In the project vicinity, the FOSMD collection system extends throughout the commercial/industrial neighborhood surrounding the project site, draining by gravity from south to north into a 30-inch-diameter trunk line on the north side of U.S. 101. This trunk line runs west alongside the freeway till just before Woodside Road, then crosses to the south side before discharging into the Redwood City collection system near the end of Veterans Boulevard.

¹Anne Stillman, San Mateo County Department of Public Works; personal communication, February 15, 2006.

²Chu Chang, Engineering and Construction Manager, Redwood City; personal communication, February 16, 2006.

³Stillman.

City-owned 30-inch-diameter and 33-inch-diameter trunk lines take the wastewater to a 48-inch main at Walnut Street that carries most of the City's wastewater to the main SBSA pumping station at the end of Maple Street, back on the north side of the freeway. This station discharges into a 52-inch force main that runs west and north along the edge of San Francisco Bay to the SBSA treatment plant, at the north end of Redwood Shores. According to a City official, this entire system has adequate dry weather capacity, but City discharges to the Maple Street pumping station occasionally exceed the station- and force-main capacity during periods of peak wet weather flow. As noted above, it is currently unknown how much of this excess flow originates within the FOSMD collection system.¹

Wastewater from the existing buildings on the project site is divided between two segments of the local FOSMD collection system. Four-Forty Broadway drains to Line 900, which runs from east to west through the rear parking lot, following the abandoned Douglas Avenue right of way to Line 100 in the remaining portion of Douglas Avenue. Line 100 then runs north underneath the freeway to the previously described 30-inch trunk line. Four-Twenty and 450 Broadway drain to Line 800 in Broadway, which runs east to Line 200 at the (theoretical) intersection of Broadway and Barron Avenue. Line 200 runs north in Barron, picking up wastewater from 430 Broadway before it reaches Rolison Road, and then continues under the freeway to the 30-inch trunk line.²

(c) Existing Wastewater Generation. The 1996 *Midpoint Technology Park Utilities Study* used an average wastewater generation rate of 80 gallons per day per 1,000 square feet (80 gpd/1,000 sf), resulting in a total average daily flow of 38,000 gpd for the approximately 475,000 square feet of proposed net new development anticipated in 1996 for the 48.4-acre Technology Park. The Study also determined that Lines 100 and 200 were already carrying peak wet weather wastewater flows³ that exceeded their full-flow capacity by as much as 82 percent on Line 200 and 155 percent on Line 100. To measure the Technology Park's impact on these lines, the average discharge rate was increased by 300 percent (a "peaking" factor that accounts for fluctuations in wastewater production over the course of a day), and then divided between the two collectors. These calculations showed that peak flows would increase by 23.3 gpm (3 percent) in Line 100 and by 55.8 gpm (2.1 percent) in Line 200. Because this represented only a minimal increase of already deficient peak flow conditions, the 1996 Technology Park Utilities Study concluded that capacity upgrades should not be the responsibility of the project applicant, but that the applicant should pay a proportionate share of any future systemwide improvements undertaken by FOSMD.⁴ This conclusion was repeated in the Midpoint Technology Park EIR (Impact and Certified Mitigation 7-3), which also

¹Grace Lee, City of Redwood City, Engineering and Construction Department; personal communication, February 21, 2006.

²Brian Kangas Foulk, Consulting Engineers; *Midpoint Technology Park Utilities Study*; August 27, 1996.

³Peak flows during the dry season occur as wastewater production varies over the course of a day. Peak flows are higher during the rainy season because a combination of inflow and infiltration (I&I) is added to the base, dry weather flow. Inflow is mainly caused by the connection of private storm drain lines to the sanitary sewer system, while infiltration is caused by groundwater seepage through leaking pipe joints and broken sewer mains. Both problems are common within older collection systems.

⁴Brian Kangas Foulk, August 27, 1996. It is noted the Technology Park's cited peak flow contributions included wastewater discharges from all six new buildings, only four of which, totaling approximately 360,500 square feet, are included in the currently proposed Stanford Outpatient Center project. In addition, wet weather I&I was not included in these calculations, because it had already been accounted for within the pre-existing local collection system.

recommended the deficient lines be monitored to provide early identification of excess flow conditions before they resulted in overflows or unacceptable back-ups.¹

Downstream of these local collection lines, the 1996 Technology Park Utilities Study estimated that total Technology Park flows would equal less than 0.8 percent of total capacity within the 30-inch-diameter trunk line that connects FOSMD to Redwood City's collection system; it was therefore concluded the project's impact on this facility would not be significant.²

FOSMD reports that several collection system improvements have been completed since construction of the Midpoint Technology Park, but it does not appear they fully addressed the pre-existing capacity problems in Lines 100 and 200.³ No improvements have been made to Line 100, and the segment of Line 200 between Broadway and Rolison Road was replaced with a slightly longer line of the same diameter. Calculations prepared for this SEIR indicate that this replacement may have increased capacity within the segment by approximately 50 percent (from 1,423 gpm to 2,130 gpm), but, even with this improvement, Line 200 would still provide only about 80 percent of the capacity needed to accommodate previously estimated peak flow rates prior to construction of the Midpoint Technology Park.⁴

13.2.2 Pertinent Plans and Policies

The adopted Redwood City Strategic General Plan contains no objectives or policies related to sewer service and pertinent to potential environmental impacts of the proposed project.

13.2.3 Supplemental Impact and Mitigation Findings

(a) Supplemental Analysis Scope. The scope of this supplemental sewer service analysis is limited to identification of the mitigating (beneficial) effects of, and any additional adverse impacts associated with, the proposed project changes.

(b) Significance Criteria. The current (2006) CEQA Guidelines suggest sewer service significance criteria different from those included in the 1996 EIR. Based on the current CEQA Guidelines, the project would be expected to have a significant impact on sewer service if it would:⁵

- (1) Exceed the wastewater treatment requirements of the applicable Regional Water Quality Control Board;

¹LCP Associates, Planning Consultants. Draft Environmental Impact Report for the Midpoint Technology Park; September 1996.

²Brian Kangas Foulk, August 27, 1996.

³Stillman.

⁴The principal flow constraint in Line 200 between Broadway and Rolison was within a 365-foot section with a very flat 0.12 percent slope. The other section had a much higher capacity because its 0.47 percent slope was nearly four times as steep. If the change in grade between existing manholes at Broadway and Rolison was evenly distributed over the entire length of the longer replacement sewer, its slope would be approximately 0.2 percent, resulting in a peak capacity of 2,108 gpm, or 478 gpm less than needed to accommodate pre-Midpoint Technology Park peak flow rates.

⁵ CEQA Guidelines, Appendix G, items XVI(a), (b), and (e), and IX(b).

- (2) Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental impacts;
- (3) Result in a determination by the wastewater treatment provider that serves the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments; or
- (4) Result in a public service condition that is inconsistent with any applicable land use plan, policy, or regulation of an agency that has jurisdiction over the project, including the Redwood City Strategic General Plan, adopted for the purpose of avoiding or mitigating an environmental effect.

Regarding significance criteria (1), (2), and (4) above, the sewer service evaluation in this section concludes that the proposed project changes would result in less-than-significant impacts.

(c) Pertinent Project Changes. The project includes renovation and conversion of applicant, proposes four of the 14 existing buildings located within the Midpoint Technology Park to create a new Outpatient Center, including a change in land use from office/R&D to medical clinic. The project would include additional sewer service hook-ups as necessary.

(d) Supplemental Impacts and Mitigations.

Supplemental Impact 13-1: Increased Peak Wastewater Flows in the Local FOSMD Collection System. It is estimated that the proposed Stanford Outpatient Center would increase peak flows in existing collector sewers in Douglas Avenue and in Barron Avenue by approximately two percent over flow rates projected upon build-out of the Midpoint Technology Park. Since these lines were already operating substantially over their design capacities before development of the Technology Park, these additional project-related flows could represent a ***potentially significant project and cumulative impact*** (see criterion [3] under subsection 13.2.3[b], "Significance Criteria," above).

Explanation:

According to Attachment L of the Redwood City Engineering Design Standards, typical wastewater generation citywide is currently estimated as 95 percent of domestic water consumption (excluding irrigation). As a result, water demand calculations prepared by the applicant's engineer indicate the proposed Stanford Outpatient Center project's average wastewater flow would increase by approximately six percent, from 58,220 gpd to 61,645

gpd.¹ This increase would equal less than two-tenths of one percent (0.155%) of FOSMD's 2.2 mgd allocation of conveyance and treatment capacity from Redwood City.

This estimated change in average daily flow would result in a peak flow increase of 7.1 gpm,² with approximately 21 percent (1.5 gpm) discharged into FOSMD Line 100 and 79 percent (5.6 gpm) into Line 200.³ These additional peak flows would increase flow rates in Lines 100 and 200 by 0.2 percent above the rates calculated in the 1996 *Midpoint Technology Park Utilities Study* and EIR⁴; however, the proposed conversion would likely have a greater impact on the FOSMD collection system than these numbers indicate, because the 1996 impact calculations were based on a wastewater generation rate of 80 gpd/1,000 sf, rather than the current water demand rate of 170 gpd/1,000 sf cited in subsection (d) above (based on a letter from the applicant's engineer to the City Engineer). If it is assumed that the proposed project changes would increase wastewater generation rates from 80 gpd/1,000 sf to 171 gpd/1,000 sf (95 percent of the proposed clinic's estimated water demand), the net increase for the proposed 360,500-square-foot project would be 32,805 gpd, rather than 3,425 gpd, over the site's previous use. This higher daily flow rate would increase the proposed project's peak flow contribution to the FOSMD collection system beyond the levels calculated in the previous paragraph. Peak flows in Line 100 would increase by 14.2 gpm, or 1.8 percent, while peak flows in Line 200 would increase by 54.1 gpm, or 2.0 percent, over the peak flow rates expected to result after build-out of the Midpoint Technology Park.⁵ These increases in wastewater generation would be added to an existing collection system that is already operating over its design capacity.

¹Letter from Daniel Schaefer, Brian Kangas Foulk, Consulting Engineers to the Applicant, to Jon Lynch, City Engineer, Redwood City; March 9, 2005. As described in section 13.1 (Water Service) and outlined in the cited letter, the proposed medical clinics would have a water demand of approximately 180 gpd/1,000 sf, while the previous use had an assumed average demand of 170 gpd/1,000 sf (130 gpd/1,000 sf for offices; 210 gpd/1,000 sf for R&D). The expected change in total wastewater production can be found by multiplying these water demand figures by 95% and applying them to the project's 360,500 square feet of total floor area:

180 gpd/1,000 sf x 95%	= 171 gpd/1,000 sf x 360,500 sf	= 61,645 gpd
170 gpd/1,000 sf x 95%	= 161.5 gpd/1,000 sf x 360,500 sf	= <u>58,220</u> gpd
Net increase		= 3,425 gpd

²(3,425 gpd flow increase x 300%) / 1,440 minutes/day = 7.1 gpm

³The *Midpoint Technology Park Utilities Study* determined the project site would have a total peak flow of 60 gpm, with 12.5 gpm (20.8%) discharged to Line 100 and 47.5 gpm (79.2%) discharged to Line 200. These percentages have been applied to the SEIR calculations of the proposed project's impact on each sewer line.

⁴The 1996 Utilities Study estimated pre-development peak flow rates of 767 gpm in Line 100 and 2,673 gpm in Line 200. Dividing the proposed project's peak flow contributions by these figures yields percentage increases of 0.196% and 0.21%, respectively.

⁵The cited percentage increases are obtained by dividing the estimated, project-related flow increase within each sewer line by the sum of pre-Midpoint Technology Park development flows and flows attributable to the Technology Park itself, as cited in the 1996 Utilities Study:

Line 100 = 14.2 gpm) (766.6 gpm + 23.3 gpm)	= 1.80%
Line 200 = 54.1 gpm) (2,672.9 gpm + 55.8 gpm)	= 1.98%

Supplemental Mitigation 13-1. The project applicant's engineer shall work with FOSMD and the San Mateo County Engineering Department to re-evaluate existing peak flow conditions in the local collection network, particularly Lines 100 and 200, to determine if peak flows expected to be generated by the proposed project changes would result in total flows exceeding adopted operational and/or pipe-flow criteria. In the event FOSMD determines that specific collection system improvements are required, the project applicant would contribute its fair share toward the design and construction of these improvements by the County. Implementation of these measures would reduce the identified impact to a ***less-than-significant level***.

Because the over-capacity conditions in Lines 100 and 200 pre-existed both the development of the Midpoint Technology Park and the proposed Stanford Outpatient Center, the project sponsor should not be responsible for implementation of all the required improvements, only payment of a fair share, as described in *Mitigation 13-2* and prescribed by CEQA Guidelines section 15041 (Authority to Mitigate). Section 15041 states, "A lead agency for a project has authority to require feasible changes in any or all activities involved in the project in order to substantially lessen or avoid significant effects on the environment, consistent with applicable constitutional requirements such as the 'nexus' and 'rough proportionality' standards established by case law."

Supplemental Impact 13-2: Increased Wastewater Discharges to Redwood City Facilities. Preliminary calculations indicate the proposed project changes would increase FOSMD flows to the Redwood City collection system by approximately 32,800 gpd, which could exceed FOSMD's current conveyance and treatment allocation. This would represent a ***potentially significant project and cumulative impact*** (see criterion [3] in subsection 13.2.3[b], "Significance Criteria," above).

Explanation:

The estimated increase in average daily flow from the project site would equal approximately 1.5 percent of FOSMD's 2.2 mgd Redwood City allocation. Until the FOSMD flow meter is placed back into service and existing flow rates are documented, this increase would be considered a potentially significant project and cumulative impact.

Supplemental Mitigation 13-2. The project applicant shall be required to:

(a) Coordinate with FOSMD to identify and implement off-site measures designed to reduce existing wastewater flows originating from other properties, thereby freeing up the capacity needed to accommodate the proposed Stanford Outpatient Center's increased wastewater production, and

(b) Pay its fair share toward FOSMD's acquisition from Redwood City of any additional sewer capacity required for the project.

Implementation of measures (a) and (b) above would ensure that the identified project and cumulative sewer impact would be limited to a ***less-than-significant level***.

In summary, the potential significance of this impact may be greater than the calculated two percent peak flow increase would indicate. Because the site has been vacant for several years, the additional flows introduced to the collection system when the project changes are complete and the buildings occupied would increase peak flows by almost five percent on Line 100 and four percent on Line 200 over current conditions. In addition, changes that may have occurred elsewhere within these lines' upstream drainage areas since development of the Midpoint Technology Park could have further increased existing peak flow rates, making the proposed Outpatient Center's contribution even more significant.

13.3 SOLID WASTE SERVICE

13.3.1 Setting

This setting updates the solid waste service information included in the 1996 EIR.

(a) Solid Waste Collection and Disposal Services. BFI Peninsula in San Carlos provides solid waste collection, recycling, transportation, and disposal services to Redwood City and other Peninsula cities. Residential and commercial solid waste from Redwood City is taken to the South Bayside Integrated Facility, located on Shoreway Road in San Carlos.

(b) Integrated Facility and Landfill Capacity. The South Bayside Integrated Facility in San Carlos accepts Class III wastes from Redwood City and a number of surrounding communities. The current permitted through-put capacity of the Integrated Facility is 3,000 tons per day.¹ Total annual waste disposal for Redwood City is estimated at 98,043 tons (which takes into account the City's current estimated 60 percent diversion rate).²

¹California Integrated Waste Management Board Solid Waste Information System (SWIS) website [www.ciwmb.ca.gov/SWIS], accessed March 2, 2006.

²Rick Simonson, Hilton Farnkopf & Hobson, LLC; written communication, March 1, 2006.

After leaving the South Bayside Integrated Facility, materials are then transferred to Ox Mountain Landfill, a Class III landfill in Half Moon Bay which accepts a slightly broader range of materials than the transfer station. The Ox Mountain landfill has a permitted through-put capacity of 3,598 cubic yards per day, and total capacity of 37,900,000 cubic yards of material. The expected closure date of this landfill is in the year 2018.¹

(c) Recycling and Waste Diversion. The BFI Recyclery is also located on Shoreway Road, adjacent to the Integrated Facility and BFI administrative offices in Redwood City. BFI operates a voluntary curbside recycling program in its service area, including Redwood City. Materials accepted include plastic, glass, aluminum, tin, paper, and newspaper. Recyclables are picked up once a week along with regular waste and then processed at the BFI Recyclery, which also operates an on-site Buy-Back Center open to the public.

In 1998, the California Integrated Waste Management Board (CIWMB) approved Redwood City's waste stream diversion estimates of 46 percent (103,089 tons disposed of a total 191,025 tons generated). In 2004, the most recent year for which figures are available, the City reported a 60 percent diversion rate (which has not yet been approved by the CIWMB).²

13.3.2 Pertinent Plans and Policies

The adopted Redwood City Strategic General Plan contains no objectives or policies related to solid waste service and pertinent to potential environmental impacts of the proposed project.

13.3.3 Supplemental Impact and Mitigation Findings

(a) Supplemental Analysis Scope. This section describes impacts associated with the proposed conversion of the existing site buildings to Outpatient Center use. The scope of this supplemental analysis is limited to identification of the mitigating (beneficial) effects of, and any additional adverse impacts associated with, the proposed land use change.

(b) Significance Criteria. The significance criteria used in the 1996 EIR are not the same as those suggested in the current (2006) CEQA Guidelines. Based on the current CEQA Guidelines, the project would be expected to have a significant impact on solid waste service if it would:³

- (1) Result in a need for new or physically altered facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for solid waste service;
- (2) Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- (3) Fail to comply with federal, state, and local statutes and regulations related to solid waste.

¹SWIS website.

²Simonson.

³CEQA Guidelines, Appendix G, items XIII(9), XVI(f-g), and IX(b).

(c) Hazardous Waste. Chapter 7 (Hazards and Hazardous Materials) of this SEIR addresses the handling and disposal of medical waste anticipated from the proposed project changes.

(d) Supplemental Impacts and Mitigations:

Supplemental Impacts on Solid Waste Service. The proposed project land use changes would increase demands for solid waste collection and disposal services. Based on average solid waste generation rates for the proposed project land uses,¹ the Stanford Outpatient Center would be expected to generate a total of approximately 21,340 pounds (10.67 tons) per day of solid waste, an increase of approximately 19,400 pounds (9.7 tons) per day of solid waste beyond that projected in the 1996 EIR for the proposed @Home office/R&D buildings.

This increase and total would not represent an inordinate amount of solid waste for the project size, i.e., a rate inconsistent with adopted land use plans, policies, or regulations, and could be adequately served by landfills with sufficient capacities to accommodate both the project and anticipated future solid waste disposal needs. Therefore, project and cumulative impacts on solid waste service are considered ***less-than-significant***.

Supplemental Mitigation. The proposed Stanford Outpatient Center would be subject to the recycling program identified in the 1996 EIR (Certified Mitigation 7-2). No additional significant project cumulative impact has been identified; no supplemental mitigation is required.

¹Average solid waste generation rates are estimated at 0.059 pound/square foot/day for "medical office/hospital" uses. These rate estimates were derived by Wagstaff and Associates from data provided by the California Integrated Waste Management Board (CIWMB) (www.ciwmb.ca.gov/WasteChar/WasteGenRates). Accessed March 2, 2006.

14. PROJECT CONSISTENCY WITH LOCAL AND REGIONAL PLANS

Section 15125(d) of the California Environmental Quality Act (CEQA) Guidelines requires EIRs to "...discuss any inconsistencies between the proposed project and applicable general plans and regional plans." The Guidelines indicate that the objective of this discussion is to identify possible modifications to the project to reduce any inconsistencies with relevant plans and policies.

14.1 CITY OF REDWOOD CITY STRATEGIC GENERAL PLAN AND ZONING ORDINANCE

14.1.1 City-Adopted On-Site Land Use Designations

The project site is designated *Industrial--Research and Development Uses* by the Redwood City Strategic General Plan and is zoned *IR (Industrial--Restricted)* by the Redwood City Zoning Ordinance. The proposed project is consistent with both the General Plan and zoning designations for the site, which allow public or quasi-public uses "operated by a private non-profit education, religious, recreational, charitable, or medical institution and having the primary purpose of serving the local community" (Redwood City Zoning Ordinance, Article 2, Section 2.83 and Article 17, Section 17.2). Stanford Hospital & Clinics is a non-profit medical institution.

14.1.2 Project Consistency with Other Pertinent General Plan Policies

In addition to the General Plan land use designation for the project site, project consistency with other relevant General Plan policies pertinent to environmental issues has been evaluated in chapters 4 through 13 of this SEIR as part of the impact analysis for each environmental topic area (aesthetics, hazards and hazardous materials, transportation, circulation, and parking, etc.). Throughout chapters 4 through 13, relevant General Plan policies have been listed and have been considered as criteria for determining the significance of environmental impacts. Where an apparent substantial inconsistency between the project and a General Plan environmental policy has been determined, a significant adverse environmental impact has been identified, and mitigation measures have been recommended to reduce or eliminate the identified inconsistency.

The ultimate determination whether the proposed project changes, after implementation of the mitigations identified in this SEIR, are or are not consistent with one or more General Plan goals or policies is not an SEIR purpose or a responsibility of the SEIR authors under CEQA; rather, such a discretionary interpretation is the responsibility of City officials and decision-makers assigned such authority. In particular, interpretation of Stanford Outpatient Center project application consistency with Redwood City Strategic General Plan policy is the ultimate responsibility of the City of Redwood City Planning Commission, with their decision appealable to the City Council.

14.2 PERTINENT REGIONAL PLANS

14.2.1 ABAG's Regional Land Use Policy Framework

The most recent regional land use policy document by the Association of Bay Area Governments (ABAG) is entitled A Proposed Land Use Policy Framework for the San Francisco Bay Area, adopted by the ABAG Executive Board in July 1990. The document is described as a regional policy framework for future land use decisions in the Bay Area. The document contains policies pertinent to the proposed project that direct growth where regional infrastructure (e.g., freeways, transit, water, solid waste disposal, sewage treatment) is available and natural resources will not be overburdened; and encourage development that discourages long-distance commuting. The proposed project's potential impacts on public services, transportation, and utilities are discussed in chapters 11 (Fire/Emergency Services and Child Care), 12 (Transportation, Circulation, and Parking), and 13 (Utilities) of this SEIR.

14.2.2 Regional Clean Air Plan

The policies of the Bay Area Air Quality Management District (BAAQMD) Clean Air Plan call for consideration of traffic-related air quality impacts in the review of development projects. Specifically, the BAAQMD calls for such air quality effects to be analyzed in environmental impact reports on such projects, subject to BAAQMD review. Chapter 5 (Air Quality) of this SEIR provides an analysis of air quality impacts, and also discusses the proposed Stanford Outpatient Center project's relationship to BAAQMD significance thresholds. This SEIR identifies mitigation measures to reduce project-specific air quality impacts to less-than-significant levels; in addition, the project's contribution to cumulative air quality impacts would be less-than-significant.

14.2.3 San Mateo County Congestion Management Program

The City/County Council of Governments of San Mateo County (C/CAG) is the state-designated regional Congestion Management Agency (CMA) that sets state and federal funding priorities for improvements affecting its San Mateo County Congestion Management Program (CMP) designated regional roadway system. C/CAG-designated CMP roadway system components in Redwood City include SR 82 (El Camino Real), SR 84 (Woodside Road), U.S. 101, and I-280. C/CAG-designated CMP intersections in Redwood City include El Camino Real/Whipple Avenue, Bayfront Expressway/Marsh Road (borders Redwood City), and Woodside Road/Middlefield Road.

C/CAG has adopted mitigation guidelines to reduce the number of net new regional roadway system vehicle trips generated by new developments, entitled *C/CAG Guidelines for the Implementation of the Land Use Component of the 1999 Congestion Management Program*. These guidelines apply to all developments that generate 100 or more net new peak-period trips on the CMP network and are subject to CEQA review. These guidelines ensure that *"the developer and/or tenants will reduce the demand for all new peak-hour trips (including the first 100 trips) projected to be generated by the development."*¹

¹Revised C/CAG Guidelines for the Implementation of the Land Use Component of the 1999 Congestion Management Program; C/CAG (Walter Martone); October 11, 2000.

Chapter 12 (Transportation, Circulation, and Parking) of this SEIR has been prepared in a manner consistent with the requirements of the CMP and C/CAG guidelines.

14.2.4 California Regional Water Quality Control Board (RWQCB) Water Quality Control Plan

Addressing its legal mandates from the U.S. Environmental Protection Agency (EPA) and the state's Porter-Cologne Act, the San Francisco Bay Regional Water Quality Control Board (RWQCB, or Regional Board) developed and adopted the first San Francisco Bay Basin Water Quality Control Plan (Basin Plan) in 1968. After several revisions and an extensive public hearing process, the current Basin Plan was adopted in 1995 (1995 Basin Plan).¹

(a) Federal and State Water Quality Regulations. In California, the discharge of pollutants to water bodies from point and non-point sources is regulated at the federal level by the U.S. Environmental Protection Agency's National Pollution Discharge Elimination System (NPDES), under the auspices of sections 401 and 402 of the Clean Water Act, and at the state level by the Porter-Cologne Water Quality Control Act, Water Code section 13260. Federal regulations issued in November 1990 and revised in 2003 expanded the original scope of the NPDES to include permitting of storm water discharges from construction sites that disturb areas larger than one acre. (The proposed project changes, including the proposed storm water retention vault installation and landscape modifications, would disturb an area larger than one acre.)

In the Bay Area, the NPDES program and the Porter-Cologne Act are administered by the San Francisco Bay Regional Water Quality Control Board (RWQCB), a division of the State Water Resources Control Board (SWRCB).

For storm water discharges associated with construction activities, federal regulations allow two permitting options, Individual Permits and General Permits. The SWRCB utilizes a single statewide General Permit for construction-related storm water discharges. This General Permit requires dischargers where construction activity disturbs one acre or more, to:

- (1) Develop and implement a Storm Water Pollution Prevention Plan (SWPPP) that specifies Best Management Practices (BMPs) to be employed (1) on the construction site to prevent all construction materials that may be sources of pollution from contacting storm water and to prevent all products of erosion from moving off-site into receiving waters, and (2) on the developed site throughout the life of the project to minimize the discharge of urban pollutants into receiving waters;
- (2) Eliminate or reduce non-storm water discharges to storm sewer systems and other waters of the nation; and

¹San Francisco Bay Basin Water Quality Control Plan. California Regional Water Quality Control Board, San Francisco Bay Region; June 1995.

(3) Maintain and perform inspections of all BMPs.¹

(b) City Water Quality Control Requirements. In addition to its own programs designed to protect water quality (such as street cleaning and litter control), Redwood City has developed an "NPDES Permit Requirements Checklist" for implementation of its own Stormwater Pollution Prevention Program. The checklist sets forth specific provisions and design requirements for all construction activities, since new construction and redevelopment projects constitute a significant source of pollutants in municipal storm water discharges. Also, because the time of construction typically represents the only opportunity to incorporate permanent pollution control measures into a project, the checklist includes provisions covering site design and pollutant source controls.

(c) Proposed Project's Compliance With RWQCB Requirements. The proposed Stanford Outpatient Center project would be required to comply with the 1995 Basin Plan. Compliance would require preparation and implementation of an approved *Storm Water Pollution Prevention Plan (SWPPP)* during project construction and operation, and a *storm water permit* to comply with NPDES regulations (see further discussion in chapter 8, Hydrology and Water Quality, of this SEIR). With implementation of such measures, the project would be consistent with the 1995 Basin Plan.

14.3 FEDERAL, STATE, AND LOCAL HAZARDOUS MATERIALS REGULATIONS SPECIFICALLY APPLICABLE TO THE PROPOSED PROJECT

Hazardous materials handling and hazardous waste management are subject to laws and regulations at all levels of government, as described below. The following regulations apply to medical clinics, such as the Stanford Outpatient Center use proposed for the project site.

¹In 1994, the RWQCB issued recommendations for *New and Redevelopment Controls for Storm Water Programs* to define the local regulatory framework and to provide guidelines designed to help construction permittees comply with the terms of the General Permit. These recommendations include policies that define watershed protection goals; set forth minimum non-point source pollutant control requirements for site planning, construction, and post-construction activities; and establish criteria for ongoing reporting of water quality control activities. The RWQCB watershed protection goals are based on policies identified in the Board's San Francisco Bay Basin Water Quality Control Plan (Basin Plan), (California Regional Water Quality Control Board. San Francisco Bay Basin Water Quality Control Plan; 1995) and the entire program relies on the implementation of "best management practices" to limit pollutant contact with storm water runoff at its source and to remove pollutants before they are discharged into receiving waters. The California Storm Water Quality Task Force (The State Storm Water Task Force is a committee of the California Chapter of the American Public Works Association) has published a series of best management practices handbooks that can be used to identify the most effective ways to achieve the water quality objectives identified by the Basin Plan for the beneficial uses of surface waters, groundwaters, wetlands, and marshes.

The Basin Plan's water quality objectives specify that the presence or concentration of listed, potentially deleterious constituents of surface water runoff shall not be permitted to cause a nuisance or adversely affect beneficial uses. A partial list of these constituents includes floating material, suspended material, settleable material, oil and grease, biostimulatory substances, sediment, pH, dissolved oxygen, bacteria, and toxic substances that are lethal to or that produce other detrimental responses in aquatic organisms. (California Regional Water Quality Control Board). Many, if not all, of these constituents are found in storm water runoff within urban and suburban areas.

14.3.1 Hazardous Materials Management and Emergency Planning

State and federal laws require detailed planning to ensure that hazardous materials are properly handled, used, stored, and disposed of, and, in the event that such materials are accidentally released, to prevent or mitigate injury to health or the environment. California's Hazardous Materials Release Response Plans and Inventory Law, sometimes called the "Business Plan Act," aims to minimize the potential for accidents involving hazardous materials and to facilitate an appropriate response to possible hazardous materials emergencies. The law requires businesses that use hazardous materials to provide inventories of those materials to designated emergency response agencies, to illustrate on a diagram where the materials are stored on-site, to prepare an emergency response plan, and to train employees to use the materials safely. Businesses that handle certain very hazardous substances must undertake a systematic analysis of their operations, study the potential consequences of possible worst-case accidents, and prepare Risk Management Plans to reduce apparent risks. Stanford Hospitals & Clinics handles such materials in its overall operations, but not in quantities sufficient to trigger State Risk Management Plan requirements. For the proposed Stanford Outpatient Center, these laws would be enforced locally by the County of San Mateo Health Services Agency (CSMHSA) and by the Redwood City Fire Department, which also enforces fire code regulations pertaining to hazardous materials storage.

14.3.2 Building and Fire Safety

The Redwood City Community Development Services Department, Building and Inspection Division, has adopted and enforces the Uniform Building Code. The Redwood City Fire Department enforces the Uniform Fire Code, as amended by the City Code of Redwood City. These laws specify management practices for flammable materials, including some packaging and containment requirements. They also set forth appropriate construction standards (e.g., fire separations and fire suppression systems) depending on building occupancy classifications. The Uniform Fire Code incorporates relevant portions of National Fire Protection Association Standard 99, which addresses hazardous materials and fire safety at hospitals. The Redwood City Building and Inspection Division and the Redwood City Fire Department review proposed building design plans to ensure compliance with the Uniform Building Code and Uniform Fire Code, respectively.

14.3.3 Worker Safety

Occupational safety standards exist in federal and state laws to minimize worker safety risks from both physical and chemical hazards in the workplace. The California Division of Occupational Safety and Health (CalOSHA) is responsible for developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, CalOSHA obligates businesses to prepare Injury and Illness Prevention Plans and Chemical Hygiene Plans. The Hazard Communication Standard requires that workers be informed of the hazards associated with the materials they handle. For example, manufacturers are to appropriately label containers, Material Safety Data Sheets are to be available in the workplace, and employers are to properly train workers. The U.S. Occupational Safety and Health Administration's Bloodborne Pathogens Standard requires the use of Universal Precautions (e.g., handling all human blood and certain body fluids as if they contain infectious agents) in the workplace.

14.3.4 Hazardous Waste Handling

The U.S. Environmental Protection Agency (EPA) has authorized the California Department of Toxic Substances Control (DTSC) to enforce hazardous waste laws and regulations in California. Hazardous waste generators are responsible for all phases of hazardous waste disposal. Generators must ensure that their wastes are disposed of properly, and legal requirements dictate the disposal requirements for many waste streams (e.g., banning many types of hazardous wastes from landfills). Many hazardous waste generators that produce more than about 13 tons of hazardous waste per year are required to prepare Hazardous Waste Minimization Plans pursuant to the California Hazardous Waste Source Reduction and Management Review Act. All hazardous waste generators must certify that, at a minimum, they make a good faith effort to minimize their waste and select the best waste management method available. Hazardous waste laws and regulations are enforced locally by the San Mateo County Health Department, Environmental Health Division.

14.3.5 Radioactive Materials Management

The Radiologic Health Branch of the California Department of Health Services administers the federal and state radiation safety laws that govern the storage, use, and transportation of radioactive materials and the disposal of radioactive wastes. The Radiologic Health Branch licenses institutions that use radioactive materials and radiation-producing equipment, such as x-ray equipment. To maintain a radioactive materials license, an institution must meet training and radiation safety requirements and be subject to routine inspections.

14.3.6 Medical Waste Handling

The California Department of Health Services Medical Waste Management Program delegates authority to enforce the California Medical Waste Management Act and related regulations locally to the San Mateo County Health Department, Environmental Health Division. Medical waste is generally regulated in the same manner as hazardous waste, except that special provisions apply to storage, disinfection, containment, and transportation. State law imposes a continual tracking system for disposal, and a calibration and monitoring system for on-site treatment. Facilities that treat medical wastes must obtain permits and are subject to annual audits. Medical waste is to be stored in closed red bags marked "biohazard" and, when transported for disposal, placed inside hard-walled containers with lids.

14.3.7 Hazardous Materials Transportation

The U.S. Department of Transportation has developed regulations pertaining to the transport of hazardous materials and hazardous wastes by all modes of transportation, including packaging specifications for different types of materials. The U.S. Postal Service has developed additional regulations for the transport of hazardous materials by mail. The U.S. Environmental Protection Agency (EPA) has also promulgated regulations for the transport of hazardous wastes; these more stringent requirements include tracking shipments with manifests to ensure that wastes are delivered to their intended destinations. In California, the California Highway Patrol, the California Department of Transportation, and the California Department of Toxic Substances Control (DTSC) play a role in enforcing hazardous material and waste transportation requirements.

14.3.8 Oversight of Contaminated Properties

Depending on specific circumstances, the San Mateo County Health Department, San Francisco Bay Regional Water Quality Control Board (RWQCB), or the California Department of Toxic Substances Control (DTSC) oversees sites contaminated by hazardous materials releases. The administering agency implements applicable soil and groundwater cleanup laws, including Superfund. Decisions regarding cleanup and future use of a site are typically based on actual and reasonably projected risks present at the site. This approach focuses on the level of risk acceptable for planned land uses.

14.3.9 Hazardous Building Components

Structural building components, particularly in older buildings, sometimes contain hazardous materials such as, among others, asbestos, polychlorinated biphenyls (PCBs), lead, and mercury. These materials are subject to various regulations. In the case of the proposed Stanford Outpatient Center, the Midpoint Technology Park buildings to be renovated and converted were constructed between 1998 and 2000, after laws were passed banning or regulating the use of asbestos, PCBs, lead, and mercury in building components.

15. CEQA-REQUIRED ASSESSMENT CONCLUSIONS

This chapter summarizes the SEIR findings in terms of the various assessment categories suggested by the California Environmental Quality Act (CEQA) Guidelines for EIR content. The findings of this SEIR regarding the proposed project changes are summarized below in terms of potential "growth-inducing effects," "significant unavoidable impacts," "irreversible environmental changes," and "cumulative impacts."

15.1 GROWTH-INDUCING EFFECTS

CEQA Guidelines section 15126.2(d) requires that the EIR discuss "...the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment."

Stanford Hospital & Clinics, the project applicant, proposes to relocate existing medical clinics from the Stanford University Medical Center in Palo Alto to Redwood City. To accommodate the relocation, the applicant proposes to renovate and convert four of the 14 existing buildings located within the Midpoint Technology Park to create a new Stanford Outpatient Center. The four buildings--constructed between 1998 and 2000, and vacated in 2002--are located at 420, 430, 440, and 450 Broadway, and contain approximately 90,840 square feet, 86,904 square feet, 96,344 square feet, and 86,418 square feet (360,500 total square feet), respectively. The proposed project changes would include architectural, signage, landscaping, parking, and storm water system modifications, as well as modified and additional underground utility connections (e.g., water, sewer, power) to existing main lines.

Neither the proposed project changes nor any of the mitigation measures identified in this SEIR would require the provision of new or physically altered governmental or public facilities for fire protection, police protection, schools, parks, water supply and service, wastewater treatment, storm drainage, solid waste service, or other public facilities which could foster economic or population growth (see the Initial Study, and chapters 11 and 13 of this SEIR). In addition, the proposed project changes would result in less on-site employment than the previously approved @Home development (670 versus 1,288 employees), resulting in a **reduced impact** on population growth and housing needs (see chapter 10--Housing--of this SEIR). Therefore, the proposed project changes would not induce substantial population growth or foster the construction of additional housing, either directly or indirectly.

The development of other, potential, as-yet unidentified projects in the Stanford Outpatient Center vicinity (e.g., pharmacies, restaurants, medical supply stores) could result indirectly from the operation of the Outpatient Center. Within the existing urban environment of the project vicinity, such projects would be considered infill development and would be subject to the established development regulations, standards, and requirements of the City of Redwood City (including the Strategic General Plan, Zoning Ordinance, and City Code) and other responsible agencies (e.g., Regional Water Quality Control Board). No substantial, detrimental growth-inducing effect is expected.

15.2 SIGNIFICANT UNAVOIDABLE IMPACTS

CEQA Guidelines section 15126.2(b) requires that the EIR discuss "significant environmental effects which cannot be avoided if the proposed project is implemented." Significant unavoidable impacts are those that would not be reduced to less-than-significant levels by the mitigation measures recommended in this SEIR.

Mitigation measures have been identified to reduce identified significant and potentially significant effects associated with the proposed Stanford Outpatient Center project to less-than-significant levels, with the exception of the following significant unavoidable impacts:

- **Supplemental Impact 12-2: Project Impact on Rolison Road Roadway Segment** (see chapter 12--Transportation, Circulation, and Parking--of this SEIR);
- **Supplemental Impact 12-5: Cumulative With Project Impacts at Woodside Road/Broadway Intersection** (see chapter 12--Transportation, Circulation, and Parking--of this SEIR); and
- **Supplemental Impact 12-9: Cumulative Impact on Rolison Road Roadway Segment** (see chapter 12--Transportation, Circulation, and Parking--of this SEIR).

The above supplemental impacts have been identified in this SEIR as **significant and unavoidable**.

15.3 IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA Guidelines section 15126.2(c) requires that the EIR discuss "significant irreversible environmental changes which would be caused by the proposed project should it be implemented." Irreversible environmental changes caused by the proposed Stanford Outpatient Center project would include the following:

- As discussed in chapter 9 (Land Use and Planning) of this SEIR, the project would renovate and convert four vacant buildings and associated parking area into medical clinic uses. For practical purposes, this change in land use would be permanent and would be an irreversible environmental change.
- The project would permanently alter on-site and off-site views of and through the project site, as discussed in chapter 4 (Aesthetics) of this SEIR.
- The project may result in loss of prehistoric resources, as described in chapter 6 (Cultural Resources) of this SEIR.

15.4 CUMULATIVE IMPACTS

Section 15130(a) of the CEQA Guidelines requires that the EIR "discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable...." The CEQA Guidelines (section 15355) define "cumulative impacts" as "...two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts."

Reasonably foreseeable development projects in the project area are identified in chapter 9 (Land Use and Planning) of this SEIR. In conjunction with these reasonably foreseeable projects, the various changes to the project site, as outlined in SEIR chapter 3 (Description of Project Changes), would cause the following significant cumulative impacts, all associated with traffic (see chapter 12--Transportation, Circulation, and Parking--of this SEIR):

- ***Supplemental Impact 12-5: Cumulative With Project Impacts at Woodside Road/Broadway Intersection;***
- ***Supplemental Impact 12-6: Cumulative With Project Impacts at Broadway/Charter Street Intersection;***
- ***Supplemental Impact 12-7: Cumulative With Project Impacts at Broadway/Second Avenue Intersection;***
- ***Supplemental Impact 12-8: Cumulative With Project Impacts at Bay Road/Fifth Avenue Intersection;*** and
- ***Supplemental Impact 12-9: Cumulative Impact on Rolison Road Roadway Segment.***

This SEIR recommends mitigation measures that would reduce the project's contribution to these cumulative impacts to less-than-significant levels, with the exception of *Supplemental Impact 12-5* and *Supplemental Impact 12-8*, which are identified as significant unavoidable impacts.

15.5 EFFECTS FOUND NOT TO BE SIGNIFICANT

Section 15128 of the CEQA Guidelines requires that the EIR "contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR."

During the City's Initial Study process for the proposed Stanford Outpatient Center project, it was determined that a number of possible environmental effects of the project changes would be insignificant or could be adequately addressed through the City's normal development review process with no need for further environmental assessment in this SEIR. These determinations are explained in the Initial Study checklist narrative, which is included in appendix 18.1 of this SEIR.

16. MITIGATION MONITORING

16.1 MONITORING REQUIREMENTS

CEQA section 21081.6 of the California Public Resources code requires all lead agencies to adopt mitigation implementation monitoring and reporting programs when they approve projects subject to environmental impact reports or mitigated negative declarations. Pursuant to this requirement and in conjunction with certification of the 1996 Final EIR and 1998 Final Supplemental EIR, and approval of the Midpoint Technology Park project and proposed addition, the City prepared and adopted an associated 1996 Mitigation Monitoring and Reporting Program (1996 MMRP) for the Midpoint Technology Park project and a 1998 Supplemental Mitigation Monitoring and Reporting Program (1998 SMMRP) for the proposed addition to the Technology Park. The 1996 MMRP and 1998 SMMRP were formulated to provide a mitigation implementation checklist for City use to ensure full and timely implementation of each mitigation measure identified in the 1996 Final EIR and 1998 Final Supplemental EIR.

16.2 SUPPLEMENTAL MITIGATION MONITORING AND REPORTING PROGRAM

Similarly, in conjunction with its certification of the final version of this 2006 SEIR (2006 FSEIR) and any subsequent formal action on the proposed Stanford Outpatient Center project, the City will prepare and adopt an associated 2006 Supplemental Mitigation Monitoring and Reporting Plan (2006 SMMRP). The 2006 SMMRP will be prepared as an updated, stand-alone mitigation implementation document that supersedes the 1996 MMRP and 1998 SMMRP. The 2006 SMMRP will be an administrative document included with the CEQA-required written Findings (CEQA Guidelines section 15091) that will accompany the 2006 FSEIR. The 2006 SMMRP will contain all information necessary to implement the City's 2006 FSEIR-based CEQA Findings, including:

- (1) all of the new supplemental mitigation measures identified in the 2006 FSEIR necessary to address changes between the 1996 and 1998 Midpoint Technology Park project and the conditioned Stanford Outpatient Center project; and
- (2) associated reiteration or revisions to mitigation information from the earlier 1998 SMMRP which the 2006 FSEIR indicates are necessary to adequately address the conditioned 2006 Outpatient Center project. These revisions will be presented with "strike-outs" to illustrate the changes between the previous 1998 SMMRP and the current 2006 SMMRP.

Consistent with this purpose, the 2006 SMMRP will establish a reporting system to document monitoring activities and ultimate compliance with mitigation measures. The 2006 SMMRP will describe the specific steps necessary to ensure full implementation and enforcement of each mitigation measure.

17. ORGANIZATIONS AND PERSONS CONTACTED

17.1 CITY OF REDWOOD CITY

Kristen Anderson, Child Care Coordinator
Chu Chang, Engineering and Construction Manager, Engineering and Construction Department
Marilyn Williams Harang, Superintendent, Wastewater Management Services Division
Rich Haygood, City Traffic Engineer, Community Development Services Department
Peter Ingram, Public Works Services Director
Grace Lee, Engineering and Construction Department
Jamie Lee, Fire Prevention Officer, Redwood City Fire Department
Jon Lynch, City Engineer, Engineering and Construction Department
Tom Passanisi, AICP, Principal Planner, Community Development Services Department
Maureen Riordan, Senior Planner and SEIR Project Manager, Community Development Services Department
Rajesh Sewak, Finance Department
Paul Willis, Engineering and Construction Department

17.2 APPLICANT

Sharmila Badkar, Anshen + Allen Architects
Ed Boscocci, Brian Kangas Foulk, Engineering Consultants to the Applicant
Lawrence Carr, Director of Government Relations, Stanford Hospital & Clinics
Mirna Cintron, Environmental Health and Safety Specialist, Stanford Hospital & Clinics
Kevin Curran, Director, Real Estate, Planning and Development, Stanford University Medical Center
Robert Eckols, Senior Associate, Fehr & Peers, Transportation Consultants to the Applicant
Garry Marshall, AIA, ACHA, Anshen + Allen Architects
Patrick McGuire, Brian Kangas Foulk, Engineering Consultants to the Applicant
Barbara Schussman, Partner, Bingham McCutchen LLP

17.3 OTHERS

Anne Stillman, San Mateo County Department of Public Works

18. APPENDICES

- 18.1 Notice of Preparation and Initial Study
- 18.2 Supplemental Air Quality Information
- 18.3 CEQA Standards for EIR Adequacy
- 18.4 CEQA Definition of "Mitigation"
- 18.5 SEIR Consultant Team

APPENDIX 18.1

NOTICE OF PREPARATION AND INITIAL STUDY

APPENDIX 18.2

SUPPLEMENTAL AIR QUALITY INFORMATION

APPENDIX 18.3:

CEQA STANDARDS FOR EIR ADEQUACY

According to section 15151 of the CEQA Guidelines, the standards for Adequacy of an EIR are as follows:

An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.

APPENDIX 18.4:

CEQA DEFINITION OF "MITIGATION"

According to section 15370 of the CEQA EIR Guidelines, the term "mitigation" includes:

- (a) Avoiding the impact altogether by not taking a certain action or parts of an action.
- (b) Minimizing impacts by limiting the degree of magnitude of the action and its implementation.
- (c) Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.
- (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- (e) Compensating for the impacts by replacing or providing substitute resources or environments.

APPENDIX 18.5 SEIR CONSULTANT TEAM

CITY OF REDWOOD CITY

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Tom Passanisi, Principal Planner

WAGSTAFF AND ASSOCIATES

Urban and Environmental Planners; Prime Contractor

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