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Description:	ADDENDUM TO THE GREAT OAKS MIXED USE PROJECT FINAL ENVIRONMENTAL IMPACT REPORT (SCH# 2013032047) AND THE ENVISION SAN JOSE 2040 GENERAL PLAN FINAL SUPPLEMENT AL ENVIRONMENTAL IMPACT REPORT (SCH# 2009072096)
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CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Department of Planning, Building and Code Enforcement

HARRY FREITAS, DIRECTOR

ADDENDUM TO THE GREAT OAKS MIXED USE PROJECT FINAL ENVIRONMENTAL IMPACT REPORT (SCH# 2013032047) AND THE ENVISION SAN JOSE 2040 GENERAL PLAN FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT (SCH# 2009072096)

Pursuant to Section 15164 of the CEQA Guidelines, the City of San Jose has prepared an Addendum to the Great Oaks Mixed Use Project Final Environmental Impact Report (Great Oaks FEIR) and the Envision San Jose 2040 General Plan Final Environmental Impact Report (GP 2040 FSEIR) because minor changes made to the project, as described below, do not raise important new issues about the significant impacts on the environment.

File Nos. PDC15-059 and PD15-031 Equinix Data Center – Great Oaks Mixed Use Site. The project consists of a conforming Planned Development Rezoning from the A(PD) Planned Development Zoning District to the A(PD) Planned Development Zoning District to include data centers as a permitted use, increase the allowable square footage for data centers from 260,000 square feet to 400,000 square feet, reduce the required parking for data center use, and to remove the setback requirements for Area 2 of the Great Oaks project site and a Planned Development Permit to allow the construction of two, two-story data center buildings totaling approximately 386,000 square feet, all on an approximately 11.15 gross acre site. **Location:** Southwest side of Great Oaks Boulevard approximately 1,000 feet northwesterly of Highway 85 (APN 706-09-117 and -118).

Council District: 2.

The environmental impacts of this project were addressed by two Final Environmental Impact Reports entitled "The Great Oaks Mixed Use Project Environmental Impact Report," adopted by City Council Resolution No. 77219 on November 18, 2014 and "The Envision San Jose 2040 General Plan Final Supplemental Environmental Impact Report" adopted by City Council Resolution 77617 on December 15, 2015. The proposed project is eligible for an addendum pursuant to CEQA Guidelines §15164, which states that "A lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in CEQA Guidelines §15162 calling for preparation of a subsequent EIR have occurred." Circumstances which would warrant a subsequent EIR include substantial changes in the project or new information of substantial importance which would require major revisions of the previous EIR due to the occurrence of new significant impacts and/or a substantial increase in the severity of previously identified significant effects.

The following impacts were reviewed and found to be adequately considered by the Great Oaks FEIR and the GP 2040 FSEIR:

☒ Traffic and Circulation	☒ Soils and Geology	☒ Noise
☒ Cultural Resources	☒ Hazardous Materials	☒ Land Use
☒ Urban Services	☒ Biotic Resources	☒ Air Quality
☒ Aesthetics	☐ Airport Considerations	☐ Microclimate
☒ Energy	☒ Greenhouse Gas Emissions	☒ Construction Period Impacts
☒ Water Quality	☒ Utilities	☒ Facilities and Services

ANALYSIS

The Great Oaks EIR analyzed the development of 154,000 square feet of commercial uses along Great Oaks Boulevard, 260,000 square feet of office/research & development, and 720 residential units. The proposed rezoning would allow for the construction of up to 400,000 square feet of data center uses on the portion of the Great Oaks/iStar site designated for office/research & development, while the Planned Development Permit would allow for the construction of two data center buildings of up to 386,000 square feet in size.

Supplemental reports on air quality, noise, and energy determined that the proposed data center uses would not result in any new significant environmental impacts, nor an increase in the severity of previously identified significant environmental impacts in the Great Oaks FEIR and the GP 2040 FSEIR. This is because the design of the data center buildings will incorporate sound walls and other attenuation measures to reduce noise from backup generator and testing. For this reason, a supplemental or subsequent EIR is not required and an addendum to the Great Oaks EIR has been prepared for the proposed project.

This addendum will not be circulated for public review, but will be attached to the Great Oaks EIR, pursuant to CEQA Guidelines §15164(c).

David Keyon
Environmental Project Manager

2/11/2016
Date

Harry Freitas, Director
Planning, Building and Code Enforcement

Meenaxi R. P.
Deputy

Attachments:

1) Addendum to the Great Oaks Mixed Use Project Final Environmental Impact Report for the Equinix Data Centers Great Oaks Mixed Use Project Site.
2) Mitigation Monitoring and Reporting Program for the Equnix project.

Addendum

to the

Great Oaks Mixed Use Project (SCH# 2013032047)
Final Environmental Impact Report

Equinix Data Center (Great Oaks Mixed Use Site)

File Nos. PDC15-059 and PD15-031

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

February 2016

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SECTION 1.0 INTRODUCTION AND PURPOSE

1.1 BACKGROUND INFORMATION

This Addendum is being prepared to conform to the requirements of the California Environmental Quality Act (CEQA), the CEQA Guidelines, and the regulations and policies of the City of San José.

This Addendum evaluates the potential environmental impacts which might reasonably be anticipated to result from constructing two data center buildings on an approximately 11.15-acre project site located within the 76-acre Great Oaks Mixed Use property (76-acre property) in south San José. Since 2002, multiple projects have been proposed and approved on the 76-acre property, but the property remains largely undeveloped.

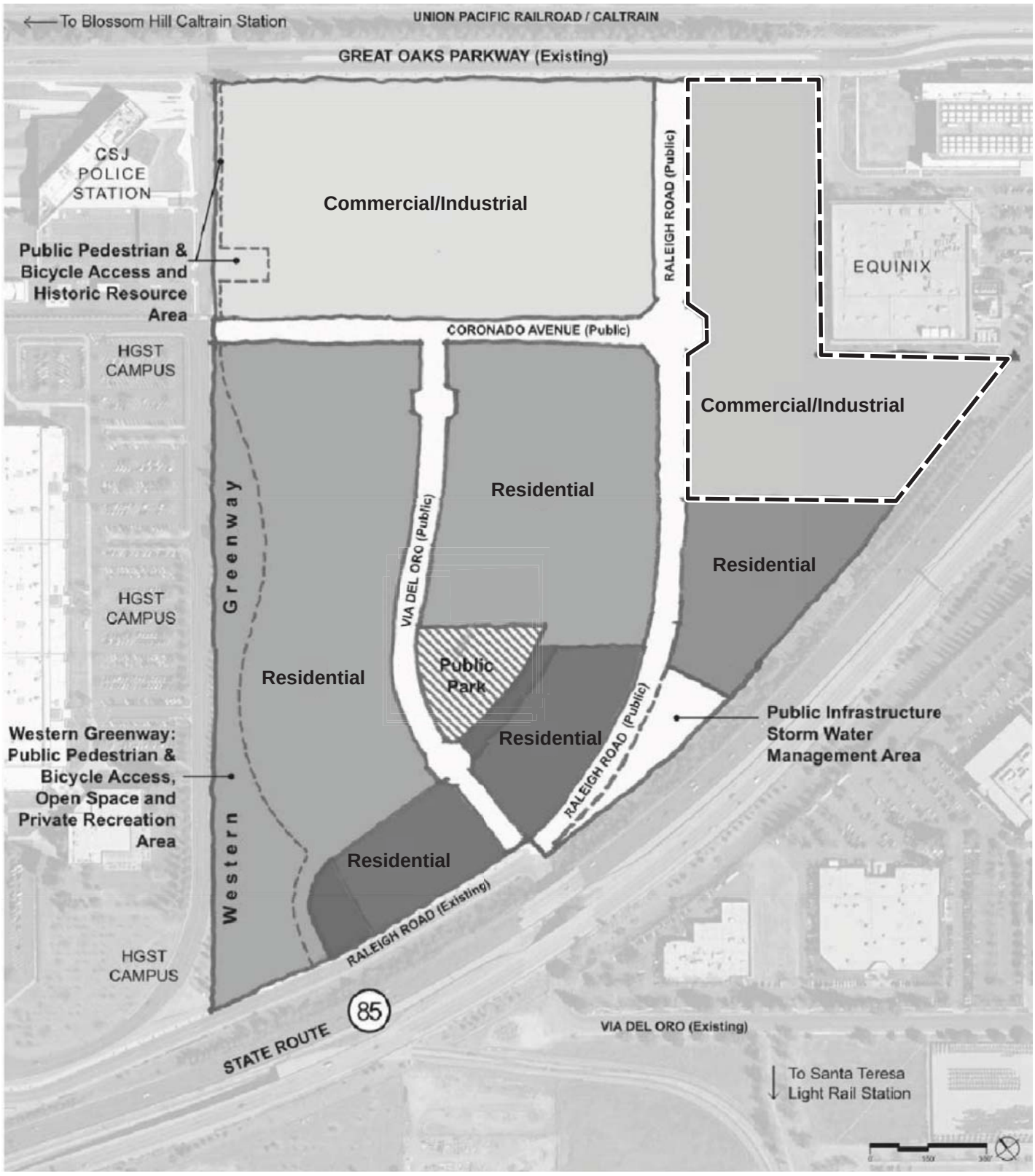
1.1.1 *Previous Environments and Entitlements*

In 2002, a Planned Development (PD) zoning and permit for industrial/R&D and commercial support uses on the 76-acre property was approved; however, the project was never developed. In 2006, the City of San José approved the iStar General Plan Amendment and Planned Development Zoning Project and the property was designated as *Mixed Use with No Underlying Land Use Designation* in the City's 2020 General Plan and zoned *I(PD) – Planned Development*.

In 2010, the City Council certified an Environmental Impact Report (EIR) prepared for the Airport West Stadium and Great Oaks Place project. The EIR evaluated changing the General Plan land use designation on the 76-acre property to *Medium High Density Residential* [12-25 dwelling units per acre (du/ac)] and rezoning the property to *A(PD) – Planned Development* to allow for development of between 1,100 and 1,500 residential units. While the EIR for this project was certified, the decision to approve the residential project was not brought before the City Council.

Subsequent to the 2010 EIR, the City of San José prepared an update to its General Plan, *Envision San José 2040 General Plan*, which was adopted in November 2011. The Program EIR for the General Plan update evaluated the 76-acre property with a land use designation of *Combined Industrial/Commercial.* The *Combined Industrial/Commercial* designation allows for a floor-area-ratio (FAR) of up to 12.0 (one to 24 stories). Properties with this designation are intended for commercial (including big-box retail), office, or industrial developments or a compatible mix of these uses. In addition, the City of San José has an adopted Greenhouse Gas Reduction (GHG) Strategy that was initially approved by the City Council in November 2011 in conjunction with the General Plan. Following litigation, the GHG Reduction Strategy was re-adopted after certification of a Supplemental Program EIR (SPEIR) in December 2015.

In 2014, the City of San José certified the Great Oaks Mixed Use Project Final EIR (Great Oaks FEIR). The Great Oaks Mixed Use Project amended the General Plan land use designation to allow a mix of uses and rezoned the 76-acre property to allow for 260,000 square feet of office uses, 154,000 square feet of commercial uses, and 720 residential units on-site. Figure 1.1-1 on the following page shows the existing development plan for the 76-acre property. The proposed data center buildings are within the Commercial/Industrial area on the General Development Plan.



APPROVED ISTAR GREAT OAKS MIXED USE GENERAL DEVELOPMENT PLAN FIGURE 1.1-1

1.2 PURPOSE OF THE ADDENDUM

CEQA recognizes that between the date an environmental document is completed and the date the project is fully implemented, one or more of the following changes may occur: 1) the project may change; 2) the environmental setting in which the project is located may change; 3) laws, regulations, or policies may change in ways that impact the environment; and/or 4) previously unknown information can arise. Before proceeding with a project, CEQA requires the Lead Agency to evaluate these changes to determine whether or not they affect the conclusion in the environmental document.

In addition, CEQA Guidelines §15162 state that when an EIR has been certified, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole record, one or more of the following:

1. Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:
    a. The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
    b. Significant effects previously examined will be substantially more severe than shown in the previous EIR;
    c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
    d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

If none of the conditions described in §15162 (see above) calling for the preparation of a subsequent EIR have occurred, CEQA Guidelines §15164 state that the lead agency or a responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary.

The project proposes to construct two data center buildings on land designated as *Combined Industrial/Commercial.* Data centers are allowed under the *Combined Industrial/Commercial* General Plan land use designation; however, data center uses are different than the approved office development analyzed in the Great Oaks FEIR and have different environmental impacts. Therefore, additional environmental review is required to evaluate any new potential environmental impacts that were not evaluated in the previous CEQA document. The purpose of this Addendum is to evaluate

the potential for new environmental impacts, compared to the Great Oaks FEIR, resulting from the proposed rezoning and construction of two data centers on the project site.

Based on knowledge of the project site, the proposed project (as described in *Section 3.0*), site specific environmental review, and environmental review completed for the project area in the certified Great Oaks FEIR, the City has concluded that the project would not result in any new impacts, nor substantially increase the magnitude of any significant impacts, which were not previously disclosed in the certified Great Oaks FEIR. For these reasons, a supplemental or subsequent EIR is not required and an addendum to the Great Oaks FEIR has been prepared for the proposed project.

The Addendum will not be formally circulated for public review, but will be attached to the Great Oaks FEIR, pursuant to CEQA Guidelines §15164(c). All documents referenced in this Addendum are available for public review in the Department of Planning, Building and Code Enforcement (PBCE) at San José City Hall, 200 East Santa Clara Street, 3rd Floor, during normal business hours.

SECTION 2.0 PROJECT INFORMATION

2.1 PROJECT TITLE

Equinix Data Center Project (Great Oaks Mixed Use Site), File Nos. PDC15-059 and PD15-031

2.2 PROJECT LOCATION

The project proposes to develop an 11.15-acre project site within the larger 76-acre property located adjacent to and just north of State Route (SR) 85, and south of Monterey Highway, in south San José. The entire 76-acre property is comprised of nine parcels [Assessor Parcel Numbers (APNs): 706-08-008, -010, -011, -015, -021, -022, and -023, 706-09-117 and -118]; however, the proposed Equinix development would only occur on the 11.15-acre eastern portion of the property (APN 706-09-117 and a portion of 706-09-118). The project site is designated as *Combined Industrial/Commercial* in the General Plan, is undeveloped and consists of grassland and trees.

For the purposes of this Addendum, the analysis focuses on the 11.15-acre site bounded by non-commercial orchard land (previously used for agricultural purposes) to the west and northwest, Great Oaks Boulevard to the northeast, existing data center uses to the east, State Route 85 (SR 85) to the south, and vacant land (approved for residential uses) to the southwest. Regional and vicinity maps of the project site are shown on Figures 1.1-1 and 1.1-2, respectively. An aerial photograph of the project site and surrounding land uses is shown on Figure 1.1-3.

2.3 LEAD AGENCY CONTACT

David Keyon, *Planner*
City of San José
Planning Division
200 E. Santa Clara Street, 3rd Floor
San José, CA 95113
Phone: (408) 535-3555

2.4 PROPERTY OWNER/PROJECT APPLICANT

Matthew Soltis
Equinix
One Lagoon Drive, 4th Floor
Redwood City, CA 94065

2.5 ASSESSOR'S PARCEL NUMBERS

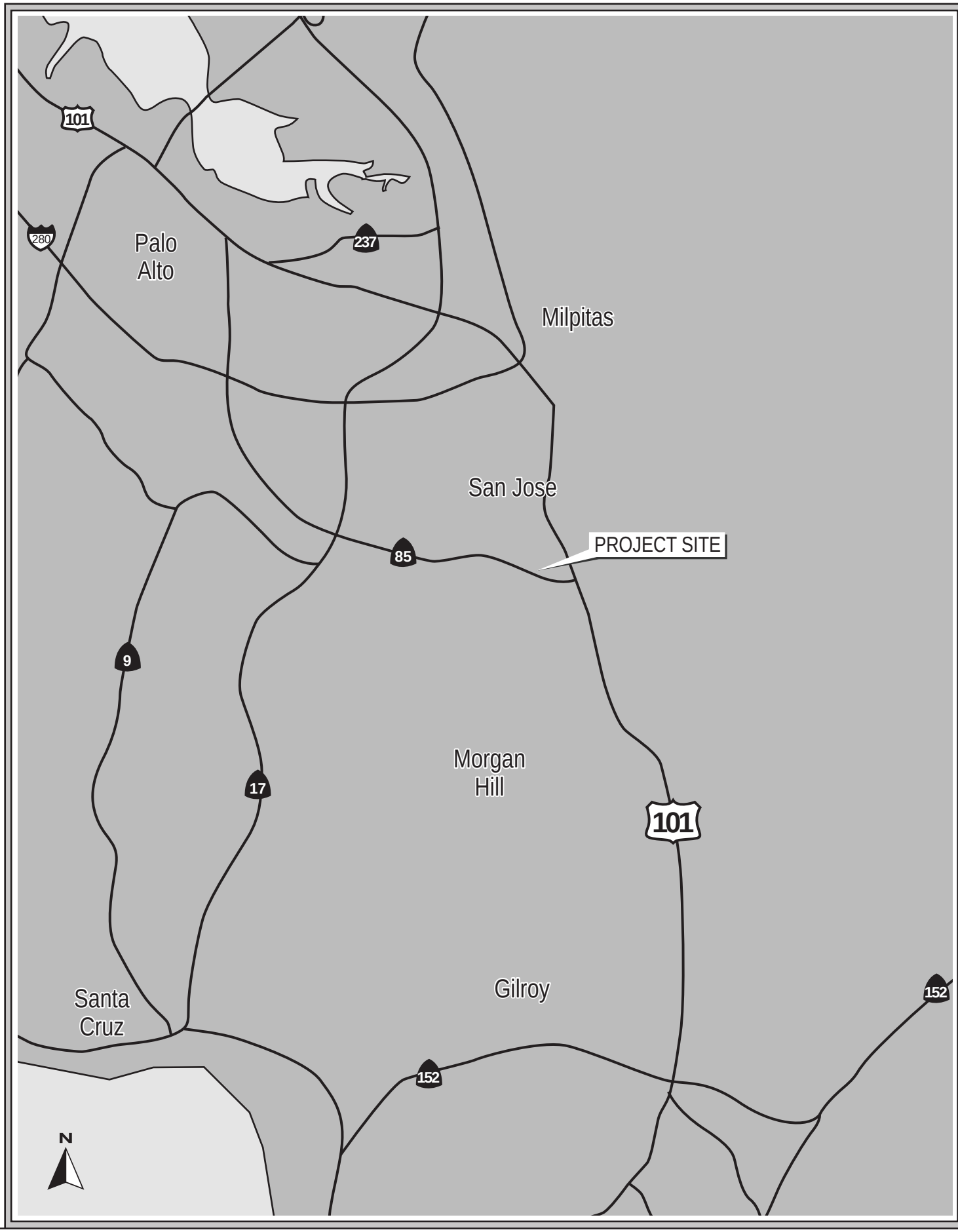
706-09-117 and -118 (portion)

2.6 ZONING DISTRICT AND GENERAL PLAN DESIGNATIONS

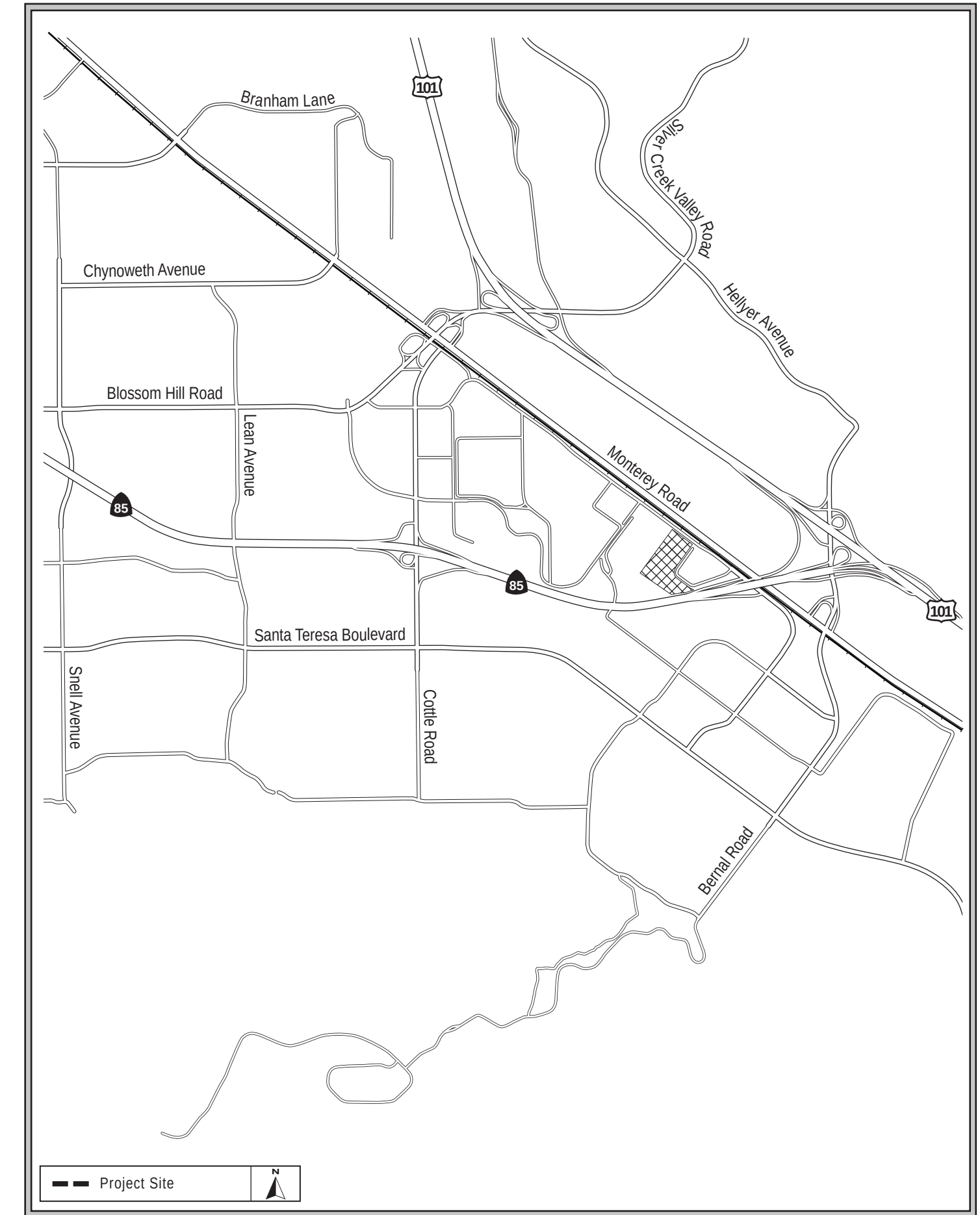
Zoning District: *A(PD)*
General Plan Designation: *Combined Industrial/Commercial*

2.7 PROJECT-RELATED APPROVALS, AGREEMENTS AND PERMITS

- Planned Development Rezoning
- Planned Development Permit
- Grading Permit
- Building Permit(s)
- Tree Removal Permit



REGIONAL MAP FIGURE 2.2-1



VICINITY MAP

FIGURE 2.2-2

AERIAL PHOTOGRAPH AND SURROUNDING LAND USES

FIGURE 2.2-3

SECTION 3.0 PROJECT DESCRIPTION

3.1 PROJECT OVERVIEW

The iStar property is an approximately 76-acre site in south San José with three General Plan land use designations on different portions of the property. The northern and eastern portion of the 76-acre property is designated as *Combined Industrial/Commercial*, the southern portion of the property is designated as *Urban Residential*, and the central and western portion of the property is designated as *Mixed Use Neighborhood*. The 76-acre property currently has entitlements for up to 720 residential units, 260,000 square feet of office/industrial uses, and 154,000 square feet of commercial uses. The allowed maximum building height is 65 feet (five stories).

The current Equinix project proposes to rezone and develop an 11.15-acre site on the eastern portion of the 76-acre property, previously approved for 260,000 square feet of office uses, with two, 193,000 square foot data center buildings. The proposed data center buildings (SV-10 and SV-11) would house computer servers and supporting equipment for private clients, as well as associated office uses, in environmentally controlled structures. The project includes landscaping around the data center buildings and 160 surface parking spaces throughout the site. A conceptual site plan is provided on Figure 3.1-1.

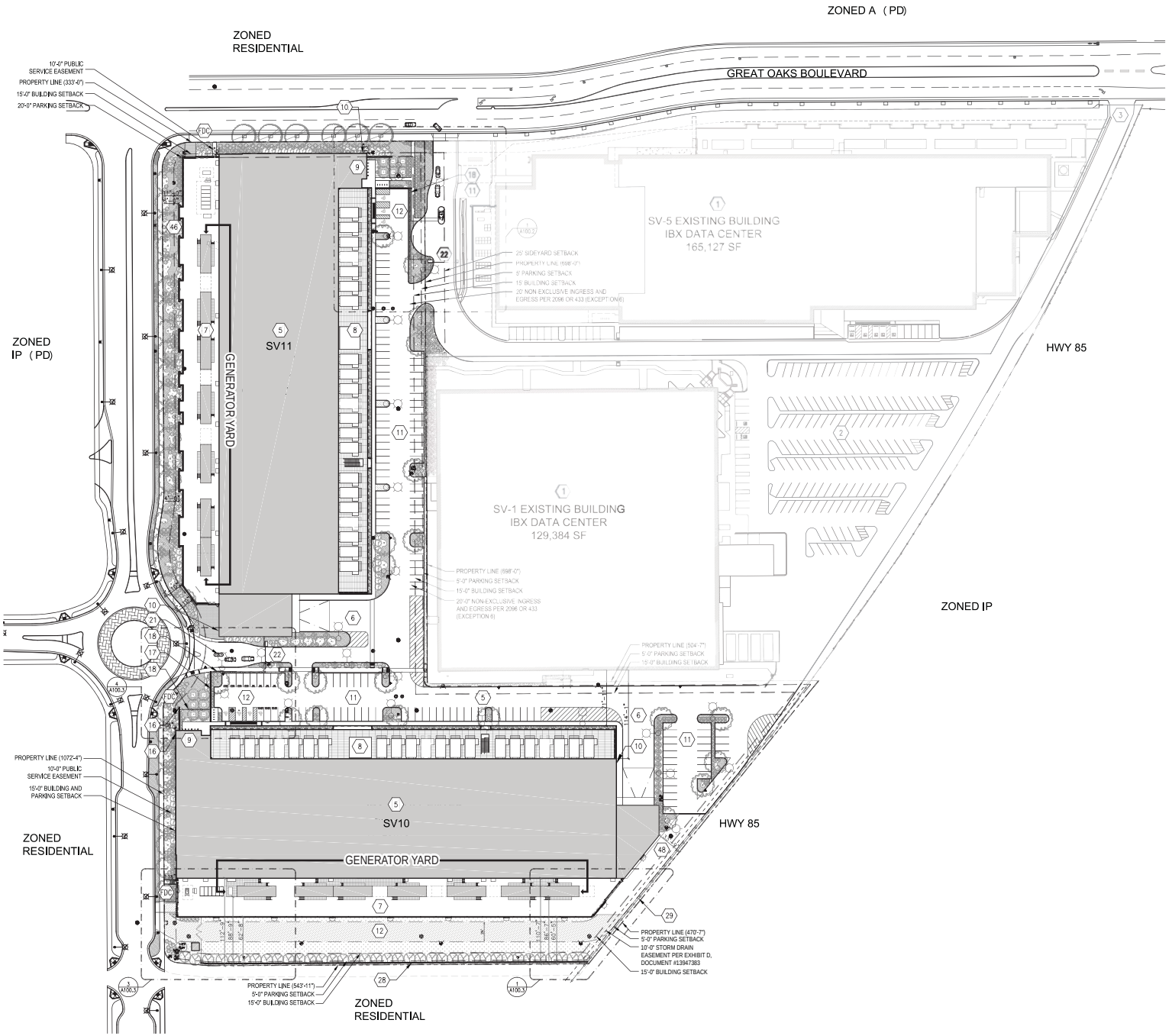
A comparison of the key changes to the project description for the 11.15-acre area within the Industrial/Commercial area on the 76-acre property are summarized in Table 3.1-1.

Table 3.1-1: Project Revisions - Industrial/Commercial Area

Feature	2014 Great Oaks FEIR	Proposed Revisions
Type of Industrial Use	Office/Industrial	Data Center
Square Footage	260,000	386,000
Parking	Per City of San José Municipal Code Chapter 20.90[1]	160 spaces

[1] For example, parking requirements for office uses is 1 parking space for 300 square feet in the City's Municipal Code. There is not a specific requirement in the Municipal Code for data center uses.

The maximum building height for the 76-acre property would remain the same (65 feet) under the proposed project. Compared to the approved office uses, data centers have fewer employees that would travel to and from the site. Electrical demand of the data center buildings, for building cooling and operation of computer servers would be greater than office buildings.



CONCEPTUAL SITE PLAN

FIGURE 3.1-1

3.2 PROJECT COMPONENTS

3.2.1 *Data Center Buildings*

The project proposes to construct two, two-story data center buildings that would each be approximately 193,000 square feet in size with a building footprint of approximately 96,500 square feet. Each building would contain approximately 2,880 server cabinets divided into three modules, and three loading docks (approximately 4,000-5,500 square feet in area) for shipping and receiving uses. A three-story office component (not to exceed 65 feet in height) would also be attached to the main two-story building to provide customer care, security, building operations, and flex office functions. The office component would range from approximately 16,550 to 24,000 square feet in each building.

The proposed two-story data center buildings would each include seven generators (six primary and one redundant) located in generator yards adjacent to the buildings. The generators would provide standby backup electricity for each building; each generator would provide 3.0 megawatts (MW) of backup power. During normal facility operation, these generators would not be operated other than for periodic testing and maintenance requirements. Testing of each generator would generally be completed monthly (11 of 12 months) for a period of five minutes at no load and for a period of 60 minutes at full load. An annual four-hour test of all generators at one time would be completed during the final month. Each generator would be tested for a total of approximately 16 hours per year to ensure that they are ready to come online in the event of a power failure. Testing would take place between the hours of 8:00 AM and 5:00 PM.

Each of the Caterpillar 3516C model engine-generators would be installed within an individual acoustical enclosure designed to control noise levels of the generator during operation. The individual enclosures are proposed to have a guaranteed acoustical performance of 78 dBA at 23 feet. In addition, each generator yard would be surrounded by an acoustically-lined 25 foot tall metal screen wall. The acoustical metal screen wall would consist of corrugated steel over a supporting metal framework and lined with fiberglass and cement board insulation. The design of the generator enclosures combined with the acoustical metal screen wall around the generator yards are proposed to meet City of San José Municipal Code and General Plan requirements at the property line of the closest future residential uses to the south and west.

Evaporative cooling units and air handling equipment would also be installed in an outdoor mechanical yard at each building. The mechanical yards would also be surrounded by a two-story metal wall.

3.2.2 *Public Improvements*

As part of its land use entitlements for the development of the 76-acre property, the applicant is required to construct certain public improvements in advance of development of the individual parcels. If approved, the project would extend Raleigh Road, which would form the northwesterly boundary of the parcel within the 76-acre property. The Raleigh Road extension would be a four-lane public street, including curb, gutter, sidewalks, streetlights, and fire hydrants, and would include a median dividing northbound and southbound traffic on the block between Great Oaks Boulevard and future Coronado Avenue. The intersection of Raleigh Road and Great Oaks Boulevard would be

a controlled intersection with a traffic signal that allows full traffic movements. The intersection of Raleigh Road and Coronado Avenue would be configured with a traffic roundabout.

The project would also install utility infrastructure within Raleigh Road to serve the proposed project and future development on the 76-acre property. Utility lines to be installed would consist of a new 12-inch diameter water main, six- to eight-inch sanitary sewer line, and recycled water pipes. In addition, a hydromodification management control basin, approximately 131,500 cubic feet in size, would be constructed on-site to manage stormwater runoff.

3.2.3 *Site Access, Circulation, and Parking*

The data center buildings would be accessible via Great Oaks Boulevard and Raleigh Road (to be constructed). The main delivery truck driveway for access to the loading dock areas would be located on Great Oaks Boulevard at the existing driveway serving the existing data centers adjacent to the project site; secondary truck access would be available from the future Raleigh Road roundabout. Each access point would be gated and electronically secured.

The project proposes to construct 160 surface parking spaces to be located throughout the 11.15-acre site. In addition, six loading dock spaces would be provided for delivery trucks.

3.2.4 *Stormwater Management*

Development of the proposed project would create more than one-acre of impervious surfaces and would, therefore, require the incorporation of hydromodification management controls. The project includes installation of an on-site hydromodification management control basin and bioretention areas to manage stormwater runoff in accordance with Provision C.3.g of the Regional Water Quality Control Board's "Municipal Stormwater NPDES Permit" and City of San José Policy 8-14: Post-Construction Hydromodification Management

3.2.5 Site Design: Energy Demand and Efficiency Measures

3.2.5.1 *Maximum Load Demand*

The projected maximum load demand for each of the proposed data center buildings is approximately 19 megawatts (MW). This load includes the power required to operate tenant information technology (IT) equipment as well as mechanical cooling systems, uninterruptible power systems (UPS) and general building lighting and power loads. The project applicant estimates the demand for maximum load anticipated with the proposed site improvements based on the occupancy of the data center buildings with data center uses supported by the proposed mechanical and electrical infrastructure.

3.2.5.2 *Backup System Design*

In data center designs, it is commonplace to build levels of systems and equipment redundancy into the overall electrical and mechanical infrastructure. The base number of systems that are required to serve the design load of the facility is referred to as "N". When redundant systems are added to the base quantity of systems, the number of redundant systems is referred to as "X", as in the

representation "N+X". One level of redundant systems is planned for this facility (i.e. X=1 or "N+1"). This level of redundancy allows operations to continue should a piece of major equipment (i.e. a generator, switchboard, UPS module) fail or need to be taken offline for maintenance.

All standby generators, including redundant units, may be called into operation in the event of an interruption of the electric service from PGE. The output from the system during such operation would be limited to the maximum demand load of the building (approximately 19 MW).

3.2.5.3 *Energy and Water Efficiency Measures*

Due to heat generated by the data center IT equipment, cooling systems are one of the primary uses of energy in the buildings. In order to reduce greenhouse gas emissions and reduce the use of energy related to building operations, the project proposes to implement a number of efficiency measures related to selection and operation of electrical and mechanical equipment for building cooling (Appendix A). Table 3.2-1 lists the proposed efficiency measures related to mechanical and electrical systems in the buildings. Additional energy efficiency measures associated with tenant improvements and water use reduction are listed in Table 3.2-2.

Table 3.2-1: Efficiency Features – Project Mechanical and Electrical Systems

Optimize Energy Performance	a. **Standards** CA Title 24 energy requirements will be exceeded. ASHRAE TC9-9 extended thermal envelope values will be utilized to allow economizer operation during greater periods of the year with A/C compressors operating only during peak load periods. b. **Measurement & Verification** Metering will be provided to validate conservation measures c. **Efficient Equipment** High efficiency (96%+) UPS, indirect evaporative cooling (IDEC) & variable refrigerant flow (VRF) cooling systems. d. **Renewable Energy** Roof-mounted photovoltaic systems (owner-furnished) e. **Enhanced Commissioning** Independent commissioning agent reviews system design and verifies the performance of the installed systems (CAPCOA Best Management Practice; Measure BE-3). f. **Cool Roof**: Reduce Heat Island effect, the roofing materials meet Solar Reflectance Index value (SRI) of at least 78 for low sloped roofs, as well as meeting the following regulations: 1. EnergyStar/Title 24 Requirements for Cool Roofing 2. LEED/Green Globe Requirements for Cool Roofing

Table 3.2-1: Efficiency Features – Project Mechanical and Electrical Systems	
Heating, Ventilation & Air Conditioning (HVAC)	a. **High-Efficiency Systems** Indirect Evaporative Cooling (IDEC) systems for data halls and Variable Refrigerant Flow (VRF) systems for office/support areas. Systems designed using ASHRAE TC9-9 extended thermal envelope values (max. 26.5 deg. C/79 deg. F) to allow economizer operation during greater periods of the year with A/C compressors operating only during peak load periods. Scalable cooling systems with only those units required to serve the actual load in operation to improve efficiency. Highly efficient Variable Refrigerant Flow (VRF) cooling systems for office/support areas to reduce fan energy. b. **Airflow Management** Hot aisle containment, separated ceiling plenum to provide physical separation of hot and cool air in data halls. Use of blanking panels and other measures to avoid bypass of cold air into hot aisles.
Lighting	a. **LED Lighting** High-efficiency, low mercury content LED lamping used throughout b. **Lighting Controls** Automatic-off and occupancy based lighting control. Dimming control for all spaces with lighting loads >0.5 watts/sf. Automatic demand-limiting control of lighting per Title 24 requirements.
Electrical	a. High-efficiency (96%+) UPS systems. b. Separate metering of building mechanical and lighting loads to validate compliance and conservation measures.

Table 3.2-2: Efficiency Measures for Tenants and Water Use Reduction

Recycling Program	a. Implementation of LEED guidelines for the storage and collection of recyclables (LEED CS 2009 - Materials and Resources/ Prerequisite 1), intended to facilitate the reduction of waste generated by building occupants that is hauled to and disposed of in landfills. Additionally, the building Owner has implemented the following Exemplary Policies: 1. 30% Recycled Content (LEED CS 2009 – Innovation and Design Process/ Credit 1.4), a 10% increase over LEED CS 2009 - Materials and Resources Credits 4.2. 2. 95% Waste Recycling (LEED CS 2009 – Innovation and Design Process/ Credit 1.5), a 20% increase over LEED CS 2009 - Materials and Resources Credit 2.2.
Operation Practices	a. The building Owner has implemented the LEED policy for Green cleaning (LEED CS 2009 - Innovation & Design Process/ Credit 1.1), intended to reduce the exposure of building occupants and maintenance personnel to potentially hazardous chemical, biological and particulate contaminants, which adversely affect air quality, human health, building finishes, building systems and the environment.
IT Equipment	a. Install Energy Star equipment will be installed where applicable.
Electrical and Lighting	a. High-efficiency (96%+) UPS systems. b. Separate metering of building mechanical and lighting loads to validate compliance and conservation measures. c. High-efficiency, low mercury content LED lamping used throughout d. Automatic-off and occupancy based lighting control e. Dimming control for all spaces with lighting loads >0.5 watts/sf. f. Automatic demand-limiting control of lighting per Title 24 requirements.
Heating, Ventilation & Air Conditioning (HVAC)	a. Indirect Evaporative Cooling (IDEC) systems for data halls and Variable Refrigerant Flow (VRF) systems for office/support areas. b. Systems designed using ASHRAE TC9-9 extended thermal envelope values (max. 26.5 deg. C/79 deg. F) to allow economizer operation during greater periods of the year with A/C compressors operating only during peak load periods. c. Scalable cooling systems with only those units required to serve the actual load in operation to improve efficiency. d. Highly efficient Variable Refrigerant Flow (VRF) cooling systems for office/support areas to reduce fan energy.

Table 3.2-2: Efficiency Measures for Tenants and Water Use Reduction	
	e. Hot aisle containment, separated ceiling plenum to provide physical separation of hot and cool air in data halls. Use of blanking panels and other measures to avoid bypass of cold air into hot aisles.
Materials	a. LEED guidelines for the storage and collection of recyclables have been implemented (LEED CS 2009 - Materials and Resources/ Prerequisite 1), facilitating the reduction of waste generated by building occupants that is hauled to and disposed of in landfills. Additionally, the building Owner has implemented the following Exemplary Policies: 1. 30% Recycled Content (LEED CS 2009 – Innovation and Design Process/ Credit 1.4), a 10% increase over LEED CS 2009 - Materials and Resources Credits 4.2. 2. 95% Waste Recycling (LEED CS 2009 – Innovation and Design Process/ Credit 1.5), a 20% increase over LEED CS 2009 - Materials and Resources Credit 2.2. b. The building Owner has implemented the following LEED policies regarding Materials and Resources: 1. Regional Materials, 20% (LEED CS 2009 - Materials and Resources/ Credits 5.1 and 5.2), ensuring that all building materials or products have been extracted, harvested or recovered, as well as manufactured within a 500 mile (800 kilometer) radius of the project site. 2. Certified Wood (LEED CS 2009 - Materials and Resources/ Credit 6), ensuring that a minimum of 50% (based on cost) of wood-based materials and products that are certified in accordance with the Forest Stewardship Council's principles and criteria, for wood building components.
Indoor Environmental Quality	a. The building Owner has implemented the following LEED policies regarding Indoor Environmental Quality: 1. Outdoor Air Delivery Monitoring (LEED CS 2009 - Indoor Environmental Quality/ Credit 1), ensuring that CO2 concentrations are monitored within all densely occupied spaces. 2. Increased Ventilation (LEED CS 2009 - Indoor Environmental Quality/ Credit 2), Increasing the breathing zone outdoor air ventilation rates to all occupied spaces by at least 30% above the minimum rates required by ASHRAE Standard 62.1-2007.

Table 3.2-2: Efficiency Measures for Tenants and Water Use Reduction	
	3. Construction IAQ Management Plan (LEED CS 2009 - Indoor Environmental Quality/ Credit 3), implementing the following strategies: ▪ During construction, meet or exceed the recommended control measures of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guidelines For Occupied Buildings Under Construction, 2nd Edition 2007, ANSI/SMACNA 008-2008 (Chapter 3). ▪ Protect stored on-site and installed absorptive materials from moisture damage. ▪ Providing filtration media at the return air grille of air handlers utilizing filtration media with a Minimum Efficiency Reporting Value (MERV) of 8 as determined by ASHRAE Standard 52.2-1999. 4. Low Emitting Materials: ▪ Adhesives and Sealants (LEED CS 2009 - Indoor Environmental Quality/ Credit 4.1), ensuring that all adhesives and sealants used within the building's weatherproofing system meet the minimum VOC content as prescribed by LEED. ▪ Paints and Coatings (LEED CS 2009 - Indoor Environmental Quality/ Credit 4.2), ensuring that all paints and coatings used inside the building's moisture barrier meet the minimum VOC content as prescribed by LEED. ▪ Flooring Systems (LEED CS 2009 - Indoor Environmental Quality/ Credit 4.3), ensuring that the flooring systems meet the following criteria: o Carpet: Must meet the testing and product requirements of the CRI Green Label Plus program. o Cushion: Must meet the testing and product requirements of the CRI Green Label program. o Adhesive: Must meet the requirements of EQc4.1. o Hard surface flooring must be certified as compliant with the FloorScore standard. o Concrete, wood, bamboo and cork floor finishes such as sealer, stain and finish must

Table 3.2-2: Efficiency Measures for Tenants and Water Use Reduction	
	meet the requirements of South Coast Air Quality o Management District (SCAQMD) Rule 1113, Architectural Coatings, rules in effect on January 1, 2004. o Tile setting adhesives and grout must meet South Coast Air Quality Management District (SCAQMD) Rule 1168. VOC limits correspond to an effective date of July 1, 2005 and rule amendment date of January 7, 2005. ▪ Composite Wood & Agrifiber Products (LEED CS 2009 - Indoor Environmental Quality/ Credit 4.4), ensuring that all composite wood and agrifiber products contain no added ureaformaldehyde. Additionally, all laminating adhesives used to fabricate on-site and shop applied composite wood and agrifiber assemblies must not contain added urea-formaldehyde. 5. Indoor Chemical and Pollutant Source Control (LEED CS 2009 - Indoor Environmental Quality/ Credit 5), ensuring that MERV filtration ratings of at least 13 are provided. 6. Thermal Comfort (LEED CS 2009 - Indoor Environmental Quality/ Credit 7), ensuring the heating, ventilating and air conditioning (HVAC) systems and the building envelope meet ASHRAE Standard 55-2004.
Water Use Reduction [Indirect energy savings]	a. Ultra low flow toilets and faucets will be used throughout

Power Usage Effectiveness During Operation

Power Usage Effectiveness (PUE) is a metric used to compare the operating efficiency of data center facilities. PUE is defined as the ratio of total power use of a facility to the power used strictly by the information technology (IT) equipment (e.g. PUE=Total Facility Power/IT Equipment Power). For example, with a PUE of 2.0 a data center would use (2) watts of total power for every (1) watt of power used by the IT equipment.

Equinix, the project applicant, builds and operates multi-tenant data centers. Their business model is to provide the infrastructure to house, power, cool and deliver data connectivity for critical IT equipment of their tenants. Computing equipment is provided by the tenants. Unlike an individual company-owned and operated enterprise data center, Equinix does not control the specifications and operation of its tenants' IT equipment.

It is projected that the measures included in the project to minimize total power usage will result in a facility PUE of approximately 1.25 on an average annualized basis and 1.40 under peak conditions of outdoor temperature/humidity.

3.2.6 Construction Schedule

The proposed project would be constructed in two phases, one phase per building, over an approximately 11-month period.

SECTION 4.0 SETTING, ENVIRONMENTAL CHECKLIST AND IMPACTS

This section of the Addendum describes any changes that have occurred in environmental conditions on and near the project area since certification of the Great Oaks FEIR, as well as environmental impacts associated with the proposed project or changed conditions. The environmental checklist, as recommended in the CEQA Guidelines Appendix G, was used to compare the environmental impacts of the "Proposed Project" with those of the "Approved Project" (i.e., development evaluated in the 2014 Great Oaks FEIR) and to identify whether the proposed project would likely result in new significant environmental impacts. The right-hand column in the checklist lists the source(s) for the answer to each question. The sources cited are identified at the end of this section.

Mitigation measures are identified for all significant project impacts. "Mitigation Measures" are measures that will minimize, avoid, or eliminate a significant impact (CEQA Guidelines §15370).

4.1 AESTHETICS

4.1.1 Setting

Visual Character of the Project Site and Surrounding Area

The 11.15-acre project site is vacant and consists of bare ground and vegetation. It is located in an urban area developed with multi-story buildings, paved parking lots, landscape trees, roadways, a railroad, and houses. Non-commercial orchard lands (previously used for agricultural purposes) are located to the west and northwest of the site. Great Oaks Boulevard, a four-lane roadway with a center median, forms the northeast boundary, and large concrete buildings with metal and stone exteriors (approximately 55-feet tall) are located to the east of the site. State Route (SR) 85, a six-lane freeway, is located to the south, and vacant land (approved for residential uses) to the southwest. A row of large, mature trees line the north side of Great Oaks Boulevard, obscuring views of the existing railroad tracks, SR 82/Monterey Highway, and residences north of Great Oaks Boulevard from the project site. Additional trees and vegetation also separate the project site from SR 85 to the south.

Views of the Project Site from the Surrounding Area

The project site and most of the immediate surrounding area are flat and, as a result, the site is only visible from the immediate area. The site is visible from the surrounding roadways (Great Oaks Boulevard and SR 85), the surrounding areas within the 76-acre property, and the Equinix property east of the site.

SR 85, which is elevated in this area, blocks views of the site from areas south of SR 85. The project site is visible from SR 85, which is a designated scenic urban throughway.

4.1.2 Environmental Checklist and Discussion of Impacts

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact Than "Approved Project"	Checklist Source(s)
Would the project:						
1. Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒	☐	1,2
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒	☐	1,2
3. Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	☒	☐	1,2
4. Create a new source of substantial light or glare which will adversely affect day or nighttime views in the area?	☐	☐	☐	☒	☐	1,2

4.1.2.1 *Change in Visual Character and Scenic Views*

The project proposes to construct two data center buildings that would not exceed 65 feet in height and would be similar in height to the existing 55-foot data center buildings east of the project site. Replacement of the approved office uses with two data center buildings would result in the same significant visual impacts related to scenic views impacts, as identified in the Great Oaks FEIR. **[Same Impact as Approved Project (Significant and Unavoidable Impact)]**

4.1.2.2 *Light and Glare Impacts*

The project would have outdoor security night lighting. In accordance with the City's Outdoor Lighting on Private Developments Policy, light fixtures will be oriented downward and designed to preclude spillover light and glare. **[Same Impact as Approved Project (Less Than Significant Impact)]**

4.1.3 Conclusion

The project would not result in new or more significant aesthetic and visual impacts than those addressed in the certified Great Oaks FEIR.

4.2 AGRICULTURE AND FORESTRY RESOURCES

4.2.1 Setting

As described in the Great Oaks FEIR, according to the Santa Clara County Important Farmland Map 2012, the data center project site is designated as *Grazing Lands.* Other areas within the 76-acre property are designated as *Urban and Built-Up Land* and *Unique Farmland.* The project site is not the subject of a Williamson Act contract.[1] The project site is not currently used for agricultural purposes. The project site is not used as forest land or timberland.

4.2.2 Environmental Checklist and Discussion of Impacts

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact Than "Approved Project"	Checklist Source(s)
Would the project:						
1. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒	☐	1,2
2. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒	☐	1,2
3. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒	☐	1,2
4. Result in a loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒	☐	1,2

[1] California Department of Conservation. *Santa Clara County Williamson Act FY 2013-2014.* Map. 2013.

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact Than "Approved Project"	Checklist Source(s)
Would the project:						
5. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒	☐	1,2

Agricultural Resources

The certified Great Oaks FEIR identified that development of the 76-acre property would result in the loss of Unique Farmland, on a portion of the site, which would be a significant impact. The project proposes to develop data center buildings on land designated as Grazing Lands, which are not considered a significant agricultural resource under CEQA. Identified impacts to agricultural resources would not change under the proposed project.

Forestry Resources

There are no forest resources on the project site or in the surrounding area. Therefore, replacing the approved office uses with two data center buildings would not result in significant impacts to forest resources. **[Same Impact as Approved Project (No Impact)]**

4.2.3 Conclusion

The project would not result in new or more significant agricultural or forestry impacts than those addressed in the certified Great Oaks FEIR.

4.3 AIR QUALITY

The following discussion is based in part on an Air Quality Assessment prepared by *Illingworth & Rodkin, Inc*. in January 2016. A copy of this report is included in Appendix B of this Addendum.

4.3.1 Setting

4.3.1.1 *Regulatory Framework*

The federal Clean Air Act governs air quality in the United States. In addition to being subject to federal requirements, air quality in California is also governed by more stringent regulations under the California Clean Air Act. At the federal level, the United States Environmental Protection Agency (U.S. EPA) administers the federal Clean Air Act. The California Clean Air Act is administered by the California Air Resources Board (CARB) at the state level and by the Air Quality Management Districts at the regional and local levels. The Bay Area Air Quality Management District (BAAQMD) regulates air quality at the regional level, which includes the nine-county Bay Area.

United States Environmental Protection Agency and
National Ambient Air Quality Standards

The U.S. EPA is responsible for enforcing the federal Clean Air Act and establishing the National Ambient Air Quality Standards (NAAQS). NAAQS are required under the 1977 Clean Air Act and subsequent amendments. The ambient air quality in a given area depends on the quantities of pollutants emitted within the area, transport of pollutants to and from surrounding areas, local and regional meteorological conditions, as well as the surrounding topography of the air basin. Air quality is described by the concentration of various pollutants in the atmosphere. Units of concentration are generally expressed in parts per million (ppm) or micrograms per cubic meter ($\mu g/m^3$).

As required by the federal Clean Air Act, NAAQS have been established for six major air pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter, including PM_{10} and $PM_{2.5}$, sulfur oxides, and lead. The "primary" standards have been established to protect the public health. The "secondary" standards are intended to protect the nation's welfare and account for air pollutant effects on soil, water, visibility, materials, vegetation and other aspects of the general welfare.

The U.S. EPA regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain types of locomotives. The agency has jurisdiction over emission sources outside state waters (e.g., beyond the outer continental shelf) and establishes various emission standards, including those for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission standards established by CARB.

California Air Resources Board and California Ambient Air Quality Standards

CARB, which is part of the California Environmental Protection Agency (CalEPA), is responsible for meeting the state requirements of the federal Clean Air Act, administering the California Clean Air Act, and establishing the California Ambient Air Quality Standards (CAAQS). The California Clean Air Act requires all air districts in the state to endeavor to achieve and maintain the CAAQS. CARB regulates mobile air pollution sources, such as motor vehicles. CAAQS are generally the same or more stringent than NAAQS.

The agency is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB has established passenger vehicle fuel specifications and oversees the function of local air pollution control districts and air quality management districts, which in turn administer air quality activities at the regional and county level. CARB also conducts or supports research into the effects of air pollution on the public and develops innovative approaches to reducing air pollutant emissions.

Bay Area Air Quality Management District

The BAAQMD is the regional agency tasked with managing air quality in the region. The BAAQMD is primarily responsible for assuring that the federal and state ambient air quality standards are maintained in the San Francisco Bay Area. Air quality standards are set by the federal government (the 1970 Clean Air Act and its subsequent amendments) and the state (California Clean Air Act and its subsequent amendments). Regional air quality management districts such as BAAQMD must prepare air quality plans specifying how state standards would be met. The BAAQMD's most recently adopted Clean Air Plan is the 2010 Clean Air Plan (2010 CAP). The 2010 CAP provides an updated comprehensive plan to improve the Bay Area's air quality and protect public health, taking into account future growth projections to 2035. The BAAQMD has published CEQA Air Quality Guidelines that are used in this assessment to evaluate air quality impacts of projects.

Envision San José 2040 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating air quality impacts resulting from planned development within the City. Future development on the project site would be subject to applicable General Plan policies, including those listed below.

Envision San José 2040 Relevant Air Quality Policies

Policies	Description
Policy TR-6.3	Plan industrial and commercial development so that truck access through residential areas is avoided. Minimize truck travel on streets designated in this General Plan as Residential Streets.
Policy MS-2.6	Promote roofing design and surface treatments that reduce the heat island effect of new and existing development.

4.3.1.2 *Background Information*

Regional and Local Criteria Air Pollutants

The project site is located in Santa Clara County, which is in the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the state and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM_{10}) and fine particulate matter ($PM_{2.5}$). These criteria air pollutants are discussed in more detail below.

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO_X). These precursor pollutants react under certain meteorological conditions to form high ozone levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempt to reduce ozone levels. High ozone levels aggravate respiratory and cardiovascular diseases, reduce lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM_{10}) and fine particulate matter where particles have a diameter of 2.5 micrometers or less ($PM_{2.5}$). Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Local Community Risk/Toxic Air Contaminants and Fine Particulate Matter

Toxic air contaminants (TACs) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, the criteria air pollutants listed above. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, state, and federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to CARB, diesel exhaust is a complex mixture of gases, vapors and fine particles. CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of diesel particulate matter (DPM).

$PM_{2.5}$ is a complex mixture of substances that includes elements such as carbon and metals; compounds such as nitrates, organics, and sulfates; and complex mixtures such as diesel exhaust and wood smoke. Long-term and short-term exposure to $PM_{2.5}$ can cause a wide range of health effects.

4.3.1.3 *Existing Conditions*

Air Quality Monitoring Data

The significance of a pollutant concentration is determined by comparing the concentration to an appropriate ambient air quality standard. The standards represent the allowable pollutant concentrations designed to ensure that the public health and welfare are protected, while including a reasonable margin of safety to protect the more sensitive individuals in the population. The San Francisco Bay Area is considered to be one of the cleanest metropolitan areas in the country with respect to air quality. BAAQMD monitors air quality conditions at more than 28 locations throughout the Bay Area. There is a monitoring station in San José. Summarized air pollutant data for this station are provided in Table 4.3-1. This table shows the highest air pollutant concentrations measured at the station over the five year period from 2010 through 2014.

Table 4.3-1: Highest Measured Air Pollutant Concentrations in San José

Pollutant	Average Time	Measured Air Pollutant Levels By Year				
		2010	2011	2012	2013	2014
Ozone (O_3)	1-Hour	**0.126 ppm**	**0.098 ppm**	**0.101 ppm**	**0.093 ppm**	0.089 ppm
	8-Hour	**0.086 ppm**	**0.0967 ppm**	0.062 ppm	**0.079 ppm**	0.066 ppm
Carbon Monoxide (CO)	8-Hour	2.2 ppm	2.2 ppm	1.9 ppm	2.5 ppm	1.9 ppm
Nitrogen Dioxide (NO_2)	1-Hour	0.064 ppm	0.061 ppm	0.067 ppm	0.059 ppm	0.058 ppm
	Annual	0.014 ppm	0.015 ppm	0.013 ppm	0.015 ppm	0.013 ppm
Respirable Particulate Matter (PM_{10})	24-Hour	46.8 µg/m^3	44.3 µg/m^3	**60 µg/m^3**	**58 µg/m^3**	**55 µg/m^3**
	Annual	19.5 µg/m^3	19.2 µg/m^3	18.8 µg/m^3	**22.3 µg/m^3**	19.9 µg/m^3
Fine Particulate Matter ($PM_{2.5}$)	24-Hour	**41.5 µg/m^3**	**50.5 µg/m^3**	**38.4 µg/m^3**	**57.7 µg/m^3**	**60.4 µg/m^3**
	Annual	9.0 µg/m^3	9.9 µg/m^3	9.1 µg/m^3	12.4 µg/m^3	8.4 µg/m^3

Notes: ppm = parts per million, µg/m^3 = micrograms per cubic meter. Values in **bold** exceed ambient air quality standard.
Source: BAAQMD. Air Pollution Summaries for 20010 through 2014. Available at: http://www.baaqmd.gov/about-air-quality/air-quality-summaries.

During the past three years, ozone concentrations in San José exceeded federal standards on zero to one days and state standards on zero to one days annually. PM_{10} concentrations measured in San José exceed state standards on one to five measurement days per year, while $PM_{2.5}$ concentrations exceed federal standards on two to six measurement days annually. Note that PM_{10} and $PM_{2.5}$ are measured every sixth day, so PM_{10} levels are estimated to exceed the standard on zero to 30 days and $PM_{2.5}$ levels exceeded standards on 12-36 days annually. Ambient air quality standards for other air pollutants are not exceeded in San José.

Attainment Status

Areas with air quality that exceed adopted air quality standards are designated as "nonattainment" areas for the relevant air pollutants. Nonattainment areas are sometimes further classified by degree (marginal, moderate, serious, severe, and extreme for ozone, and moderate and serious for carbon

monoxide and PM_{10}) or status ("nonattainment-transitional"). Areas that comply with air quality standards are designated as "attainment" areas for the relevant air pollutants. "Unclassified" areas are those with insufficient air quality monitoring data to support a designation of attainment or nonattainment, but are generally presumed to comply with the ambient air quality standard. State Implementation Plans must be prepared by states for areas designated as federal nonattainment areas to demonstrate how the area will come into attainment of the exceeded federal ambient air quality standard.

The Bay Area as a whole is considered by U.S. EPA as "nonattainment" for ground-level ozone, PM_{10} and $PM_{2.5}$. The area is nonattainment or unclassified for all other pollutants.

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 14, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as "sensitive receptors." Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, elementary schools, and parks. The closest existing, off-site sensitive receptors to the project site are residences located north of the site across Monterey Road and south of the site across SR 85. Future residences are also planned in the areas adjacent to the west and southern project site boundaries (refer to Figure 1.1-1).

4.3.2 Environmental Checklist and Discussion of Impacts

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact Than "Approved Project"	Checklist Source(s)
Would the project:						
1. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒	☐	1,2,5
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	☒	☐	1,2,5
3. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is classified as non-attainment under an applicable federal or state ambient air quality standard including releasing emissions which exceed quantitative thresholds for ozone precursors?	☐	☐	☐	☒	☐	1,2,5

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact Than "Approved Project"	Checklist Source(s)
Would the project:						
4. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☒	☐	1,2,5
5. Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒	☐	1

4.3.2.1 *Thresholds of Significance*

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA and were posted on BAAQMD's website and included in the Air District's updated CEQA Guidelines (updated May 2011). The significance thresholds identified by BAAQMD and used by the City of San Jose in the Great Oaks FEIR and this analysis are summarized in Table 4.3-2.

Table 4.3-2: Air Quality Significance Thresholds

Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lb/day)	Average Daily Emissions (lb/day)	Annual Average Emissions (tons/year)
Criteria Air Pollutants			
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82	82	15
$PM_{2.5}$	54	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	
Health Risks and Hazards for New Sources			
Excess Cancer Risk	Greater than 10.0 per one million		
Chronic or Acute Hazard Index	Greater than 1.0		
Incremental annual average $PM_{2.5}$	Greater than 0.3 $\mu g/m^3$		

Table 4.3-2: Air Quality Significance Thresholds	
Health Risks and Hazards for Sensitive Receptors (Cumulative from all sources within 1,000 foot zone of influence) and Cumulative Thresholds for New Sources	
Excess Cancer Risk	Greater than 100 per one million
Chronic Hazard Index	Greater than 10.0
Annual Average $PM_{2.5}$	Greater than 0.8 µg/m^3
Note: ROG = reactive organic gases, NOx = nitrogen oxides, PM_{10} = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less; and GHG = greenhouse gas.	

4.3.2.2 *Overview*

The certified Great Oaks FEIR identified significant and unavoidable operation emissions of NO_x and ROG associated with development of the 76-acre property. Construction air quality and local air quality impacts were less than significant.

Air emissions associated with the operation of data centers compared to a typical office building vary in two primary areas. First, employment intensities are much lower for data centers and there are fewer vehicular trips to and from these facilities. Second, data centers include cooling equipment and backup emergency generators that are sources of emissions during operation and routine generator testing.

4.3.2.3 *Criteria Air Pollutant Emissions*

Project construction and operational air pollutant emissions for the proposed data center buildings were modeled using the California Emissions Estimator Model (CalEEMod) and the results are discussed below. Please refer to Appendix B for details regarding CalEEMod inputs and model assumptions.

Construction-Related Emissions

The project proposes to replace the approved office uses on the site with two data center buildings. Construction emissions would occur as exhaust emissions from construction equipment, truck travel and worker travel, and from fugitive dust emissions associated with demolition and ground disturbance. Construction emissions for the proposed project were compared to construction emissions evaluated for the approved office uses as part of the Great Oaks Mixed Use Project. As shown on Table 4.3-3 below, construction of the proposed project would not result in a substantial increase in construction-related emissions compared to the approved office uses. **[Less Impact Than Approved Project (Less Than Significant Impact)]**

Table 4.3-3: Comparison of Construction Period Emissions			
Description	**ROG Emissions (tons)**	**NOx Emissions (tons)**	**$PM_{2.5}$ Exhaust Emissions (tons)**
Approved Great Oaks Office Uses (260,000 square feet)	3.77 tons	6.48 tons	0.35 tons
Proposed Equinix SV-10 & SV-11 Data Center (386,000 square feet)	2.86 tons	6.86 tons	0.36 tons
Difference (Project – Great Oaks)	-0.91 tons	0.38 tons	<0.01 tons
Average Daily Emissions	*15 lbs/day*	*36 lbs/day*	*2 lbs/day*
BAAQMD Thresholds	*54 lbs/day*	*54 lbs/day*	*54 lbs/day*
Significant?	***No***	***No***	***No***

Construction Fugitive Dust

During grading and construction activities, dust would be generated. Most of the dust would result during grading activities. The amount of dust generated would be highly variable and is dependent on the size of the area disturbed at any given time, amount of activity, soil conditions and meteorological conditions. Nearby areas could be adversely affected by dust generated during construction activities. Nearby land uses primarily consist of commercial and office uses that are separated by roadways or open areas. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less than significant if best management practices are employed to reduce these emissions. Implementation of standard measures, as discussed in the Great Oaks Mixed Use Draft EIR, would result in less than significant construction fugitive dust emission impacts. **[Same Impact as Approved Project (Less Than Significant Impact)]**

Operational Emissions

The two data buildings would each include seven, three (3) MW generators (14 generators total) located adjacent to the buildings. Each generator would be supported by an 8,000 gallon aboveground diesel fuel tank for backup emergency power. During normal facility operation, these generators would not be operated other than for periodic testing and maintenance requirements. Testing of each generator would generally be completed twice per month to ensure that they are ready to come online in the event of a power failure. Testing would take place between the hours of 8:00 AM and 5:00 PM. Each generator would be tested monthly (11 of 12 months) for a period of five minutes at no load and for a period of 60 minutes at full load. An annual four-hour test would be completed during the final month. Each generator would be tested for a total of approximately 16 hours per year. The generators would run continuously during power outages. Estimated total emissions from the proposed generators under expected operating conditions is shown in Table 4.3-4 on the following page.

Table 4.3-4: Maximum Daily and Annual Generator Emissions			
Pollutant	**Average Daily Emissions All 14 Units[a] (lb/day)**	**Total Annual Emissions[b]: 16 Hours Operation All 14 Units**	
		(lb/year)	**(ton/year)[c]**
NOx	41.2	15,031	7.5
ROG	0.4	134	0.1
CO	3.5	1,285	0.6
PM_{10}	0.2	86	0.04
$PM_{2.5}$	0.2	80	0.04
SO_2	0.03	10	0.0

Notes:

[a] Average daily emissions calculated from total annual emissions and 365 days per year.

[b] Assumes operation at 100% engine load for 15 hours/year per engine and one hour per year at 10% load.

[c] Short tons (2,000 lbs per ton).

The generators would be fueled using ultra low sulfur diesel fuel with a maximum sulfur content of 15 parts per million (ppm). Diesel fuel has a very low volatility and emissions of ROG from fuel storage would be negligible. The generators would meet U.S. EPA Tier 2 emission standards.

To evaluate the change in emissions to the Great Oaks Mixed Use project as a whole, average daily and annual emissions from operation of the proposed project were compared with those from the approved office uses. Mobile emissions for the data center uses would be reduced compared to the approved office uses to reflect the fewer vehicle trips anticipated for the data centers. These results are summarized in Tables 4.3-5 and 4.3-6 below.

Table 4.3-5: Summary of Average Daily Emissions (lbs/day) from Project Operation				
Emission Source	**Nitrogen Oxides (NOx)**	**Reactive Organic Gases (ROG)**	**Respirable Particulates (PM_{10})**	**Fine Particulates ($PM_{2.5}$)**
Great Oaks Office Mixed Use (approved project)				
	12.6	11.5	8.8	3.3
Equinix SV-10 & SV 11 Project				
Emergency Generators	41.2	0.4	0.2	0.2
Mobile & Area Sources	7.9	4.3	6.0	2.2
Total	**49.1**	**4.7**	**6.2**	**2.4**
Change compared to Great Oaks Mixed Use Project	*+36.5*	*-6.9*	*-2.6*	*-0.9*
BAAQMD Threshold	*54*	*54*	*82*	*54*

Table 4.3-6: Summary of Total Annual Emissions (tons/year) from Project Operation				
Emission Source	**Nitrogen Oxides (NOx)**	**Reactive Organic Gases (ROG)**	**Respirable Particulates (PM_{10})**	**Fine Particulates ($PM_{2.5}$)**
Great Oaks Office Mixed Use (approved project)				
	2.3	2.1	1.6	0.6
Equinix SV-10 & SV-11 Project				
Emergency Generators	7.5	0.1	0.04	0.04
Mobile & Area Sources	1.4	0.8	1.1	0.3
Total	**8.9**	**0.9**	**1.1**	**0.3**
Change compared to Great Oaks Mixed Use Project	*+6.6*	*-1.2*	*-0.5*	*-0.3*
BAAQMD Threshold	*10*	*10*	*15*	*10*

As shown in Tables 4.3-5 and 4.3-6, the total average daily and annual emissions from operation of the proposed data centers as well as a projected increase in NO_x are estimated to be below the significance thresholds established by the BAAQMD.

The Great Oaks FEIR disclosed significant emissions of ROG and NO_x for development of the 76-acre property, since these emissions exceeded the annual and daily thresholds of 10 tons per year and 54 pounds per day, respectively. Replacement of the approved office uses with the proposed data center uses would decrease projected ROG and particulate matter emissions. The reduction in emissions would not be large enough to reduce identified ROG impacts from development of the entire 76-acre site to a less than significant level, however. The increase in NOx emissions would

not exceed 54 pounds per day or 10 tons per year and would not be a substantial increase when evaluated in the context of applicable thresholds. Therefore, replacement of the approved office uses with data center uses would not result in a new or substantially more severe operational air quality impact and the conclusions regarding the significance of air quality impacts for ROG and NO_x would not change. **[Same Impact as Approved Project (Significant and Unavoidable)]**

Air Quality Standards for Regional Air Pollutants

Due to the limited number of hours that each emergency generator would be operated for testing and maintenance purposes, emissions from these units would be relatively low. Since project emissions of ozone precursor pollutants (ROG and NO_x) would not substantially increase and particulate matter (i.e., PM_{10} and $PM_{2.5}$) were found to be less than BAAQMD significance thresholds (refer to Tables 4.3-5 and 4.3-6), the project would not cause or contribute to violations of an ambient air quality standard for those pollutants. **[Same Impact as Approved Project (Less Than Significant Impact)]**

Air Quality Standards for Local Air Pollutants (Carbon Monoxide from Project Traffic)

Increased intersection congestion can lead to increased localized CO concentrations (hot spots) in the vicinity of the intersection. Typically, there needs to be a substantial increase in the number of vehicles accessing an intersection and a decrease in the intersection level of service (LOS) in order for there to be elevated CO concentrations of concern. Since the number of vehicles associated with the project would be minimal, the proposed project would not cause or contribute to a violation of an ambient air quality standard and the impact is considered less than significant. **[Same Impact as Approved Project (Less Than Significant Impact)]**

4.3.2.4 *Toxic Air Contaminant and Fine Particulate Matter Health Risks*

The proposed project would be a source of air pollutant emissions from construction and then from operation of emergency generators for testing and maintenance purposes. These generators are diesel-fueled and emit DPM, which is a TAC. The generators are also a source of $PM_{2.5}$, which has known adverse health effects.

The BAAQMD CEQA Air Quality Guidelines considers exposure of sensitive receptors to air pollutant levels that result in an unacceptable cancer risk or hazard to be significant. For cancer risk the BAAQMD considers an increased risk of contracting cancer that is greater than 10.0 in one million to be significant for a single source. For cumulative exposure to TACs from existing sources affecting a sensitive receptor, in addition to a proposed new source, the BAAQMD considers an increased risk of contracting cancer that is greater than 100 in one million to be significant. The BAAQMD CEQA Guidelines also consider exposure to annual $PM_{2.5}$ concentrations that exceed 0.3 micrograms per cubic meter ($\mu g/m^3$) from a single source to be significant and an annual $PM_{2.5}$ concentration that exceed 0.8 $\mu g/m^3$ from cumulative sources to be significant.

Construction-Related Health Risks

Construction impacts to sensitive receptors were addressed in the Great Oaks FEIR. Significant $PM_{2.5}$ concentrations were predicted. Dust control measures to control fugitive $PM_{2.5}$ emissions were

identified as standard measures included in the project and found to fully reduce the impact. As shown in Table 4.3-3, construction of the proposed project would result in similar $PM_{2.5}$ emissions to the approved project. Therefore, implementation of the project would not result in a new significant construction impact from fine particulate matter. **[Same Impact as Approved Project (Less Than Significant Impact)]**

Operational TAC Impacts

Diesel Particulate Matter

Operation and testing of the proposed generators would emit DPM. Potential health risks from operation of the project's generators for testing and maintenance purposes and annual load testing were evaluated using air quality dispersion modeling and following the BAAQMD health risk screening analysis guidelines. DPM concentrations and potential cancer risks from operation of the generators were evaluated at the nearby future residential sites and at existing residences in the project vicinity. The closest sensitive receptors to the site are approximately 70 feet south of the SV-10 building. Air quality modeling and annual average DPM concentrations was conducted using the EPA's AERMOD dispersion model; please refer to Appendix B for further details regarding the AERMOD model and the inputs utilized.

The maximum modeled annual DPM concentration from the operation of the proposed project was 0.00491 $\mu g/m^3$ at a location just south of the SV-10 building in the future residential area south of the project site. DPM concentrations at all existing residential locations farther away from the data centers would be lower than the maximum concentration.

Potential increased cancer risk at the location of the maximum residential DPM concentrations were also calculated in accordance with current BAAQMD recommended methodology. The maximum increased cancer risks from the proposed project is shown in Table 4.3-7 below.

Table 4.3-7: Maximum Increased Community Risk Level

Source	Cancer Risk (per million)	Maximum Annual $PM_{2.5}$ ($\mu g/m^3$)	Maximum Hazard Index
Proposed Project (SV-10 and SV-11)	2.7	< 0.01	< 0.01
BAAQMD Single Source Threshold	*10.0*	*0.3*	*1.0*
Significant?	*No*	*No*	*No*

The maximum modeled annual $PM_{2.5}$ concentration was 0.008 micrograms per cubic meter ($\mu g/m^3$). This $PM_{2.5}$ concentration is much lower than the BAAQMD significance threshold of 0.3 $\mu g/m^3$ used to judge the significance of health impacts from $PM_{2.5}$. This would be considered a less than significant impact. Potential non-cancer health effects due to chronic exposure to DPM were also evaluated. Non-cancer health hazards from TAC exposure are expressed in terms of a hazard index (HI), which is the ratio of the TAC concentration to a reference exposure level (REL). TAC concentrations below the REL are not expected to cause adverse health impacts, even for sensitive

individuals. The chronic inhalation REL for DPM is 5 $\mu g/m^3$. The maximum modeled annual DPM concentration was 0.008 $\mu g/m^3$, which is much lower than the REL. The maximum computed hazard index based on this DPM concentration is 0.002 which is much lower than the BAAQMD significance criterion of a hazard index greater than 1.0. Therefore, the project would have a less than significant community risk impact. **(New Less Than Significant Impact)**

Cumulative Operational TAC Exposure

As described in the Great Oaks FEIR and Appendix B, there are several sources of TACs within 1,000 feet of the project site. Illingworth & Rodkin prepared an updated cumulative operational TAC analysis which evaluated the cumulative cancer risk, hazard index, and $PM_{2.5}$ concentrations associated with each source at the closest future on-site residences, which would be subject to cumulative concentrations associated with the project than the off-site receptors on north of U.S. 101. The sum of impacts from cumulative sources (i.e., sources within 1,000 feet of the project) would be below the thresholds used by BAAQMD. Therefore, the project would not result in a significant cumulative TAC impact.

Table 4.3-8: Impacts from Cumulative Sources – On-site Receptors

Source	Maximum Cancer Risk (per million)	Maximum Hazard Index	Maximum Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)
Highway 85 and Monterey Highway Traffic	2.5	<0.01	0.16
Caltrain and Union Pacific Railroad	8.1	<0.01	0.02
Plant No. 12845 - Ahead TeK	0.0	0.0	0.02
Plant No. 19733 – Stion Corporation	0.0	0.0	0.0
Plant No. 19635 - Orchard Supply Hardware	0.4	<0.01	0.00
Equinix – SV-1, SV-5, SV-10 (future), and SV-11 (future)	4.5	<0.01	<0.01
On-Site Project Sources (Delivery/Gas Trucks and Gas Station Operation)	1.8	0.0	0.00
Maximum Single Source	8.1	<0.01	0.16
BAAQMD Threshold - Single Source	***10***	***1.0***	***0.3***
Cumulative Sources	17.3	<0.1	0.2
BAAQMD Threshold – Cumulative Sources	***100***	***10.0***	***0.8***

Note: (1) Except for Equinix facility emissions, the community risk levels are those reported in the Great Oaks Mixed Use DEIR for on-site receptors.
(2) Cumulative source cancer risk adjusted upward by factor of 1.3744 to account for new 2015 OEHHA guidance. Equinix modeling included the 2015 OEHHA adjustments.

4.3.3 Conclusion

The project would not result in new or more significant impacts to air quality than those addressed in the certified Great Oaks FEIR.

4.4 BIOLOGICAL RESOURCES

4.4.1 Setting

As described in the Great Oaks FEIR, habitats on the 76-acre property include former agricultural areas (hay and orchards), and ruderal ornamental conditions. There are no designated heritage trees present on-site. There are no regulated habitats (e.g., wetlands), as defined by the United States Army Corps of Engineers or California Department of Fish and Wildlife, located on-site. Existing on-site conditions have not changed since preparation of the Great Oaks FEIR in 2011.

The project site is located within the Santa Clara Valley Habitat Plan/Natural Community Conservation Plan, which is a framework intended to protect, enhance, and restore natural resources in specific areas of Santa Clara County while improving and streamlining the environmental permitting process for impacts on threatened and endangered species. The project site is located in land cover Fee Zone B (Agricultural and Valley Floor Lands).

4.4.2 Environmental Checklist and Discussion of Impacts

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact than "Approved Project"	Checklist Source(s)
Would the project:						
1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☐	☐	☒	☐	1,2
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☐	☐	☒	☐	1,2

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact than "Approved Project"	Checklist Source(s)
Would the project:						
3. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒	☐	1,2
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, impede the use of native wildlife nursery sites?	☐	☐	☐	☒	☐	1,2
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒	☐	1,2
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒	☐	1,2

4.4.2.1 *Impacts to Biological Resources*

Special-Status Species and Habitats

Replacement of the approved office uses on the project site with two data center buildings would not result in new or more significant impacts to special-status species or habitats compared to what was previously evaluated in the Great Oaks FEIR. The project proposes to implement all applicable mitigation measures, as described in the Great Oaks FEIR and consistent with City of San José policies and regulations. **[Same Impact as Approved Project (Less Than Significant Impact with Mitigation Incorporated)]**

Trees

Replacement of the approved office uses on the project site with two data center buildings would result in the removal of ordinance-sized orchard and landscape trees on-site. The Great Oaks FEIR

determined that development of the project site may result in the removal of all existing trees on the project site and result in a significant impact to trees. This is not a new impact. The project proposes to plant replacement trees and implement applicable mitigation measures, as described in the Great Oaks FEIR and consistent with City of San José policies and regulations. **[Same Impact as Approved Project (Less Than Significant Impact with Mitigation Incorporated)]**

Santa Clara Valley Habitat Plan/Natural Community Conservation Plan

The project would pay required land cover fees and fees to mitigate indirect impacts to serpentine habitat, as appropriate. Replacement of the approved office uses on the project site with two data center buildings, with the payment of applicable fees, would not conflict with the provisions of the adopted Santa Clara Valley Habitat Plan/Natural Community Conservation Plan. **[Same Impact as Approved Project (Less Than Significant Impact)]**

4.4.3 Conclusion

The project would not result in new or more significant impacts to biological resources than those addressed in the certified Great Oaks FEIR.

4.5 CULTURAL RESOURCES

4.5.1 Setting

As described in the Great Oaks FEIR, there are no recorded archeological sites or reported prehistoric resources located within or adjacent to the project site. There is a fruit dehydrator building on the 76-acre property that is eligible as a Candidate City Landmark and potentially eligible for the California Register of Historic Resources (CRHR) and the National Register of Historic Places (NRHP). This structure is located north of the data center project site; there are no historic or potentially historic structures located on the 11.7-acre project site.

4.5.2 Environmental Checklist and Discussion of Impacts

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact than "Approved Project"	Checklist Source(s)
Would the project:						
1. Cause a substantial adverse change in the significance of an historical resource as defined in §15064.5?	☐	☐	☐	☐	☒	1,2
2. Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	☐	☐	☐	☒	☐	1,2
3. Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?	☐	☐	☐	☒	☐	1,2
4. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒	☐	1,2

4.5.2.1 *Impacts to Cultural Resources*

Impacts to Historic Resources

The project proposes to construct two data center buildings on the 11.7-acer project site. The certified Great Oaks FEIR determined that construction on the overall 76-acre property would result in a less than significant impact to historic resources with mitigation included in the project. The western portion of the 76-acre property contains structures and infrastructure related to the site's historic agricultural uses; however, there are no historic structures located on the data center project site. Implementation the project would not require the demolition of, or result in the alteration of, potentially historic resources. The proposed project would have no impact on historic resources. **[Same Impact as Approved Project (Less Than Significant Impact with Mitigation Incorporated)]**

Impacts to Archaeological Resources

The project proposes to construct two data center buildings, which could impact unknown, buried cultural resources. The project proposes to implement applicable mitigation measures, as described in the Great Oaks FEIR and consistent with City of San José policies and regulations, to reduce potential impacts to unknown cultural resources to a less than significant level.

Replacement of the approved office uses on the project site with two data center buildings would not result in new or greater impacts to unknown prehistoric, archaeological, or historic resources compared to what was previously evaluated in the Great Oaks FEIR. **[Same Impact as Approved Project (Less Than Significant Impact with Mitigation Incorporated)]**

4.5.3 Conclusion

The project would not result in new or more significant impacts to cultural resources than those addressed in the certified Great Oaks FEIR.

4.6 GEOLOGY AND SOILS

4.6.1 Setting

4.6.1.1 *Existing Conditions*

The following discussion provides an overview of geologic conditions. Conditions on-site have not changed since the certification of the Great Oaks FEIR.

Soils

The project area includes two types of Holocene fluvial deposits: basin deposits and levee deposits. The Basin Deposits are comprised of dark-colored clay and fine silty clay, rich in organic material. Levee Deposits are comprised of sandy and clayey silt ranging from sandy to silty clay. The surface soils on the site consist of Campbell silty clay, which is underlain by Quaternary alluvium. The alluvium in this area consist of unconsolidated to weakly consolidated silt, sand, and gravel, and could be up to 50 meters in thickness. The soils on-site could exhibit a moderate potential for expansion.

Seismicity and Liquefaction

The three major fault lines in the area are the Hayward Fault, San Andreas Fault, and Calaveras Fault. The Hayward Fault (active segment) is approximately 18 miles north of the project site, San Andreas Fault is approximately 11 miles southwest of the site, and the Calaveras Fault is approximately six miles east of the site. Because of the proximity of the site to these faults, any ground shaking, ground failure, or liquefaction due to an earthquake could cause damage to structures. According to the Santa Clara County *Fault Rupture Hazard Zones* map, the project site is not located within a fault rupture hazard zone.

The project site is located within a liquefaction hazard zone.[2] Because the soils on the site are mostly medium-dense to dense and the site water table is relatively deep (34 feet), the potential for liquefaction at the site is low to moderate.

The project site has a high potential for ground failure vertically and a moderately high potential for ground failure laterally.

[2] Santa Clara County. *Santa Clara County Geologic Hazard Zones, Liquefaction Hazard Zones Map*. Sheet 37. June 2004.

4.6.2 Environmental Checklist and Discussion of Impacts

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact than "Approved Project"	Checklist Source(s)
Would the project:						
1. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:						
a. Rupture of a known earthquake fault, as described on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	☐	☒	☐	1,2
b. Strong seismic ground shaking?	☐	☐	☐	☒	☐	1,2
c. Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒	☐	1,2
d. Landslides?	☐	☐	☐	☒	☐	1,2
2. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒	☐	1,2
3. Be located on a geologic unit or soil that is unstable, or that will become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒	☐	1,2
4. Be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (2007), creating substantial risks to life or property?	☐	☐	☐	☒	☐	1,2

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact than "Approved Project"	Checklist Source(s)
Would the project:						
5. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒	☐	1,2

4.6.2.1 *Geology and Soil Impacts*

The project proposes to construct two data center buildings on the project site. Replacement of the approved office uses with two data center buildings would not result in new or greater impacts related to soil erosion, soil siltation, or expansive soils, or seismic-related impacts. Implementation of standard permit conditions, as identified in the Great Oaks FEIR and in conformance with the California Building Code, would result in the same less than significant soil and seismic-related impacts. **[Same Impact as Approved Project (Less Than Significant Impact)]**

4.6.3 Conclusion

The project would not result in new or more significant geology and soil impacts than those addressed in the certified Great Oaks FEIR.

4.7 GREENHOUSE GAS EMISSIONS

4.7.1 Setting

Climate change associated with the "greenhouse effect" is a process in which greenhouse gases (GHGs) accumulate over time in the earth's atmosphere and trap radiation and heat, thereby contributing to an increase in the temperature of the earth's atmosphere over time. The main GHGs that contribute to global warming and associated climate change are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated compounds. Emissions of GHGs that contribute to global climate change are largely attributable to human activities associated with the transportation, industrial/manufacturing, utility, residential, commercial, and agricultural sectors.

In California, GHG emissions are regulated primarily through Assembly Bill 32 (AB 32) and Senate Bill 375 (SB 375). AB 32, also known as the Global Warming Solutions Act, established a goal to reduce GHG emissions in the State to 1990 levels by 2020. SB 375 builds on AB 32 by requiring the California Air Resources Board to develop regional GHG reduction targets to be achieved from the automobile and light truck sectors for 2020 and 2035 in comparison to 2005 emissions.

At a local level, GHG emission reduction is addressed in the City's General Plan policies, Private Sector Green Building Policy (Policy 6-32) and Greenhouse Gas Reduction Strategy.

4.7.1.1 *Existing Conditions*

As described in the Great Oaks FEIR, the project site is currently unoccupied and greenhouse gas emissions from human activity are limited.

4.7.2 Environmental Checklist and Discussion of Impacts

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact Than "Approved Project"	Checklist Source(s)
Would the project:						
1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☐	☒	☐	1,3
2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒	☐	1,3

4.7.2.1 *Overview of Impact Assessment*

GHG emissions worldwide contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. No single land use project could generate sufficient GHG emissions on its own to noticeably change the global average temperature. The combination of

GHG emissions from past, present, and future projects in San José, the entire state of California, and across the nation and around the world, contribute cumulatively to the phenomenon of global climate change and its associated environmental impacts.

Per the CEQA Guidelines, a lead agency may analyze and mitigate significant greenhouse gas emissions in a plan for the reduction of greenhouse gas emissions that has been adopted in a public process following environmental review. The City of San José has an adopted GHG Reduction Strategy that was initially approved by the City Council in November 2011 in conjunction with the General Plan, and following litigation, was re-adopted after certification of a Supplemental EIR in December 2015. The City's projected emissions and the GHG Reduction Strategy are consistent with measures necessary to meet statewide 2020 goals established by AB 32 and addressed in the Climate Change Scoping Plan.

The following discussion focuses on whether project emissions represent a cumulatively considerable contribution to climate change as determined by consistency with City of San José and statewide efforts to curb GHG emissions. Projects that are consistent with the City's General Plan land use designation and adopted GHG Reduction Strategy would have a less than significant impact related to GHG emissions.

4.7.2.2 *Project Impact*

The project proposes to develop two data center buildings. GHG impacts from the project would consist of emissions during construction and electricity consumption during operation of the data centers. The operational phase would also generate GHG emissions from vehicles traveling to and from the project site.

The City's GHG Reduction Strategy measures center around five strategies: energy, waste, water, transportation, and carbon sequestration. Some measures are considered mandatory for all proposed development projects while others are considered voluntary. Voluntary measures could be incorporated as mitigation measures for proposed projects at the discretion of the City.

Compliance with the mandatory measures and any voluntary measures required by the City would ensure an individual project's consistency with the GHG Reduction Strategy. In accordance with the General Plan SPEIR, projects that are consistent with the GHG Reduction Strategy are considered to have a less than significant impact related to GHG emissions. Below is a listing of the mandatory and voluntary criteria provided by the City of San José.

<u>Mandatory Criteria</u>

1. Consistency with the Land Use/Transportation Diagram (General Plan Goals/Policies IP-1, LU-10)

2. Implementation of Green Building Measures (GP Goals: MS-1, MS-2, MS-14)
   - Solar Site Orientation
   - Site Design
   - Architectural Design
   - Construction Techniques

- Consistency with City Green Building Ordinance and Policies
- Consistency with GHGRS Policies: MS-1.1, MS-1.2, MC-2.3, MS-2.11, and MS-14.4)

3. Pedestrian/Bicycle Site Design Measures
   - Consistency with Zoning Ordinance
   - Consistency with GHGRS Policies: CD-2.1, CD-3.2, CD-3.3, Cd-3.4, CD-3.6, CD-3.8, CD-3.10, CD-5.1, LU-5.4, LU-5.5, LU-9.1, TR-2.8, TR-2.11, TR-2.18, TR-3.3, TR-6.7)

4. Salvage building materials and architectural elements from historic structures to be demolished to allow re-use (General Plan Policy LU-16.4), if applicable;

5. Complete an evaluation of operational energy efficiency and design measures for energy-intensive industries (e.g. data centers) (General Plan Policy MS-2.8), if applicable;

6. Preparation and implementation of the Transportation Demand Management (TDM) Program at large employers (General Plan Policy TR-7.1), if applicable; and

7. Limits on drive-through and vehicle serving uses; all new uses that serve the occupants of vehicles (e.g. drive-through windows, car washes, service stations) must not disrupt pedestrian flow. (General Plan Policy LU-3.6), if applicable.

The project is consistent with mandatory criteria 1 as data center uses are allowed under the site's *Combined Industrial/Commercial* General Plan land use designation. The project is also consistent with criteria 2 and 3. Specifically, the project proposes to achieve LEED Silver Certification and would construct sidewalks on the future Raleigh Road extension, thereby improving pedestrian connectivity in the project area.

An evaluation of operational energy efficiency and design measures for the data center buildings was completed by *Jacobs – Global Buildings Design* (Appendix A). The design measures incorporated in the project to maximize energy efficiency for the lifetime of the project are described in *Section 3.2.5 Site Design: Energy Demand and Efficiency Measures* and Appendix A. Therefore, the project is consistent with criteria 5.

Criteria 4, 6, and 7 are not applicable to the proposed project because there are no historic structures on-site, the project would not be a large employer in the area, and the site does not propose drive-through uses.

Table 4.7-1 on the following page provides a summary of the voluntary criteria and describes the proposed project's compliance with each criterion. **[Same Impact as Approved Project (Less Than Significant Impact)]**

4.7.3 Conclusion

The project would not result in new or more significant GHG emission impacts than those addressed in the certified Great Oaks FEIR.

Table 4.7-1: Voluntary Greenhouse Gas Reduction Strategy Criteria		
Policies	**Description of Project Measure**	**Project Conformance/ Applicability**
BUILT ENVIRONMENT AND RECYCLING		
Installation of solar panels or other clean energy power generation sources on development sites, especially over parking areas MS-2.7, MS-15.3, MS-16.2	The project does not propose on-site renewable power generation.	☐ Proposed ☒ Not Proposed or ☐ Not Applicable
Use of Recycled Water Use recycled water wherever feasible and cost-effective (including non-residential uses outside of the Urban Service Area) MS-17.2, MS-19.4	The closest recycled water line is located approximately one mile east of the project site in Bernal Road. The project does not propose to use recycled water on-site.	☐ Required/ Proposed ☒ Not Proposed or ☐ Not Applicable
TRANSPORTATION AND LAND USE		
Car share programs Promote car share programs to minimize the need for parking spaces TR-8.5	The project is not a large employment use that would warrant a car share program.	☐ Proposed ☐ Not Proposed or ☒ Not Applicable
Limit parking above code requirements TR-8.4	The project proposes to provide 160 parking spaces regular stalls consistent with the City's parking requirements.	☒ Project is Parked at or below Code Requirements ☐ Project is Parked above Code Requirements or ☐ Not Applicable

Table 4.7-1: Voluntary Greenhouse Gas Reduction Strategy Criteria		
Policies	**Description of Project Measure**	**Project Conformance/ Applicability**
Consider opportunities for reducing parking spaces (including measures such as shared parking, TDM, and parking pricing to reduce demand) TR-8.12	Given the nature of the proposed use, the project does not propose shared parking or TDM measures.	☐ Proposed ☐ Project Does Not Propose or ☒ Not Applicable

4.8 HAZARDS AND HAZARDOUS MATERIALS

4.8.1 Setting

4.8.1.1 *Existing Conditions*

Sources of Contamination

As identified in the Great Oaks FEIR, due to the project site's agricultural use for over six decades, there is a potential for hazardous materials (such as pesticides and/or chemicals associated with the repair and maintenance of agricultural equipment and maintenance of the property) to be present in the soil and groundwater.

There are no existing hazardous material impacts on-site related to petroleum storage tanks, septic systems. A database search was completed for the Great Oaks Mixed Use Project at the time of preparation of the EIR to determine whether the project site was listed on any federal, state, local, historical, and/or brownfield databases as a known or suspected source of contamination, or a site that handles or stores hazardous materials.

In addition, a database search was completed for the site to evaluate the likelihood of contamination incidents near the project site. Based on the groundwater flow direction, case status, and/or distance of the incident/facility in relation to the project site, the Great Oaks FEIR concluded that off-site spill incidents are not likely to significantly impact the project site.[3] Development conditions on-site and in the vicinity have not changed substantially since preparation of the Great Oaks FEIR.

In conformance with a mitigation measure in the Great Oaks FEIR, the California Department of Toxic Substances Control (DTSC) is overseeing the investigation and cleanup of residential and commercial parcels planned for development as a part of the Great Oaks Mixed Use Project. Two active cases currently have DTSC oversight under their Voluntary Cleanup Program on the western portion of the 76-acre property. Case 60002251 is located in the southwestern portion of the property in the area planned for residential development; chemicals of concern at the site include arsenic and dieldrin from the site's previous agricultural uses.[4] Case 60002294 (Proposed Costco Wholesale Warehouse and Fuel Facility) is located in the northwestern portion of the property; potential contaminants of concern include metals and organochlorine pesticides.[5]

Other Hazards

The project site is not located within one-quarter mile of an existing or proposed school. The project site is not located within an airport land use plan, two miles of a public or public use airport, or

[3] Sources: 1) Geomatrix. Report of Results – Limited Phase I and Phase II Activities. November 2007; 2) Geomatrix. Environmental and Geotechnical Investigation. June 2000; 3) Harding Lawson Associates. Addendum, Phase 1 Environmental Site Assessment. April 26, 2000; and 4) Harding Lawson Associates. Phase 1 Environmental Site Assessment. June 25, 1999.

[4] Department of Toxic Substances Control. *Community Letter*. January 13, 2016. Available at: <http://www.envirostor.dtsc.ca.gov/regulators/deliverable_documents/9544131219/Great%20Oaks%20Combined%20Survey.pdf>

[5] Department of Toxic Substances Control. *EnviroStor Database, Case 60002294*. Accessed February 4, 2016. Available at: <http://www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=60002294>

private airstrip. The project site is not located within a wildland fire hazard zone, as identified in the City's General Plan.

4.8.2 Environmental Checklist and Discussion of Impacts

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact Than "Approved Project"	Checklist Source(s)
Would the project:						
1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒	☐	1,2
2. 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?	☐	☐	☐	☒	☐	1,2
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒	☐	1,2
4. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, will it create a significant hazard to the public or the environment?	☐	☐	☐	☒	☐	1,2
5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, will the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒	☐	1,2

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact Than "Approved Project"	Checklist Source(s)
Would the project:						
6. For a project within the vicinity of a private airstrip, will the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒	☐	1,2
7. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒	☐	1,2
8. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒	☐	1,2

4.8.2.1 *Hazards and Hazardous Material Impacts*

Possible On-site Sources of Contamination

The Great Oaks FEIR identified potential sources of contamination related to historic agricultural activities. There have been no changes to uses on the site and development of the two data center buildings would not result in new impacts related to on-site hazardous materials contamination on the site. Consistent with the Great Oaks FEIR, the project will be required to implement the following mitigation measure to reduce impacts from hazardous materials that may be encountered in stockpiled soils during site development.

> **MM HAZ-1.1:** Prior to issuance of any Planned Development Permit, a soil management plan (SMP) shall be developed that identifies management practices for characterizing the stockpiled soil and handling buried structures, wells, burn areas, debris, or impacted soil that may be encountered during site development activities. If, after characterizing the stockpiled soil (or other impacted soil encountered on-site), concentrations of chemicals are found above residential CHHSLs or other clean up level approved by a regulatory oversight agency, remedial measures are required. Possible remedial measures include: 1) excavation and off-site disposal of the impacted soil at a permitted facility; 2) use of engineering and administrative controls such as consolidation and capping of the soil on-site and land use covenants restricting certain activities/uses; and 3) a combination of the above. The project shall obtain regulatory agency oversight and approval of the remedial measure(s) prior to site development.

Mitigation measures including, but not limited to preparation and implementation of a Soil Management Plan under regulatory agency oversight, would reduce the identified impacts to a less than significant level. **[Same Impact as Approved Project (Less Than Significant Impact with Mitigation Incorporated)]**

Impacts from the Project

The project proposes to construct two data center buildings on the project site. Diesel fuel for each of the 14 proposed generators (seven per each building) would be stored in aboveground tanks located under each generator. Each storage tank will have a storage capacity of 8,000 gallons of diesel. The tanks would be double-walled and have a leak detection system. Some oils and lubricants could be stored on-site for the maintenance of mechanical equipment in the equipment yards. Limited quantities of water treatment chemicals for the cooling towers would also be used on-site.

Hazardous materials storage at the site is regulated under local, State and federal regulations. Businesses must complete a Hazardous Materials Business Plan for the safe storage and use of chemicals. Firefighters, health officials, planners, public safety officers, health care providers and others rely on the Business Plan in an emergency. None of the hazardous materials that would be used on the site are considered regulated substances under the California Accidental Release Prevention (CalARP) program that could have off-site consequences if accidentally released.

Conformance with relevant laws and regulations would minimize the likelihood of hazardous materials releases from the proposed fuel storage tanks, and the use or storage of diesel fuel, oils and lubricants by the project would not create a significant impact on the environment.

For these reasons, replacement of the approved office uses on the site with two data center buildings would not result in new or greater impacts related to hazards or hazardous materials compared to what was evaluated in the Great Oaks FEIR. Implementation of regulatory controls, as identified in the Great Oaks FEIR and in conformance with City of San José policies and regulations, would result in the same less than significant hazard and hazardous materials impacts from the project. **[Same Impact as Approved Project (Less Than Significant Impact)]**

4.8.3 Conclusion

The project, with the implementation of mitigation measures, would not result in new or more significant hazards or hazardous material impacts than those addressed in the certified Great Oaks FEIR.

4.9 HYDROLOGY AND WATER QUALITY

4.9.1 Setting

Hydrology and Drainage

The project site is located within the Guadalupe River watershed, which drains an area of 170 square miles in the central and southern portions of San José as well as adjoining cities and unincorporated areas to the southwest. There are no waterways present on the site. The nearest waterways include Coyote Creek, Canoas Creek, Arroyo Calero Creek, Alamitos Creek, and the Guadalupe River. The depth of groundwater at the site is between 25 to 30 feet below ground surface (bgs). Stormwater runoff from the project site flows into a 24-inch storm drain line located in Great Oaks Boulevard. The project site is undeveloped and consists primarily of pervious surface (i.e. dirt).

Flooding

The project site is not located within a 100-year floodplain.[6] According to the FEMA Flood Insurance Rate Map (FIRM), the project site is located within Zone D, which is defined as an area of undetermined, but possible, flood hazards. The site is not subject to seiche or tsunami.[7] The nearest areas prone to flooding during a 100-year storm event are located along the banks of Coyote Creek, approximately one-half mile to the northeast and within the Coyote Creek watershed.

The site is subject to inundation in the event of failure of Anderson Dam, located approximately 12 miles upstream (to the southeast) on Coyote Creek.[8] Anderson Dam is owned and operated by the Santa Clara Valley Water District (SCVWD).

Water Quality

The existing stormwater runoff quality from the site is similar to that of typical urban runoff (e.g., contaminated with oil and grease, plant and animal debris, pesticides, litter, and heavy metals), which have been found to adversely affect the aquatic habitats to which they drain. These condition shave not substantially changed since certification of the Great Oaks FEIR.

[6] Sources: 1) Federal Emergency Management Agency. *Flood Insurance Rate Map*. Community-Panel Number 060349 0044D. 2 August 1982. 2) Federal Emergency Management Agency. *Flood Insurance Rate Map*. Community-Panel Number 06085C0407H. 18 May 2009.

[7] Association of Bay Area Governments. *ABAG Geographic Information Systems, Hazard Maps, Tsunami Evacuation Planning Map for San Francisco & San Mateo Counties*. ABAG. California Office of Emergency Services. 22 June 2005. http://www.abag.ca.gov/bayarea/eqmaps/tsunami/tsunami.html.

[8] Sources: 1) Association of Bay Area Governments. *Dam Failure Inundation Hazard Map for SE San José*. 20 October 2003. ABAG. State Office of Emergency Services. 22 June 2005. http://www.abag.ca.gov/cgi-bin/pickdamx.pl. 2) Santa Clara Valley Water District. *Anderson Dam EAP 2003 Flood Inundation Map*. Sheet 5. March 2003.

4.9.2 Environmental Checklist and Discussion of Impacts

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact than "Approved Project"	Checklist Source(s)
Would the project:						
1. Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒	☐	1,2
2. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there will 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 will drop to a level which will not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒	☐	1,2
3. 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 will result in substantial erosion or siltation on-or off-site?	☐	☐	☐	☒	☐	1,2
4. 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 will result in flooding on-or off-site?	☐	☐	☐	☒	☐	1,2
5. Create or contribute runoff water which will exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒	☐	1,2
6. Otherwise substantially degrade water quality?	☐	☐	☐	☒	☐	1,2

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact than "Approved Project"	Checklist Source(s)
Would the project:						
7. 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?	☐	☐	☐	☒	☐	1,2
8. Place within a 100-year flood hazard area structures which will impede or redirect flood flows?	☐	☐	☐	☒	☐	1,2
9. 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?	☐	☐	☐	☒	☐	1,2
10. Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒	☐	1,2

4.9.2.1 *Hydrology and Drainage Impacts*

The project proposes to construct two data center buildings on the project site. As described in the Great Oaks FEIR, the project would be required to comply with standard permit conditions to reduce impacts to surface water quality during construction and post-construction periods, consistent with Provision C.3.g of the Regional Water Quality Control Board's "Municipal Stormwater NPDES Permit" and City of San José Policy 8-14: Post-Construction Hydromodification Management. The project includes installation of an on-site hydromodification management control basin and bioretention areas to manage stormwater runoff in accordance with these regulatory requirements.

Construction of the proposed data center buildings instead of office uses would not substantially alter the drainage pattern of the site in a manner which could result in erosion, siltation, or flooding offsite. As discussed in the Great Oaks FEIR, while the project site is located in the inundation area for Anderson Dam, the SCVWD's comprehensive dam safety program and emergency action plan ensures public safety. For this reason, the project would not expose people or structures to significant flood or dam inundation hazards.

The project, with the implementation of standard measures consistent with City of San José policies and regulations, would not result in new or greater hydrology and water quality impacts compared to what was evaluated in the Great Oaks FEIR. **[Same Impact as Approved Project (Less Than Significant Impact)]**

4.9.3 Conclusion

The project would not result in new or more significant hydrology and water quality impacts than those addressed in the certified Great Oaks FEIR.

4.10 LAND USE

4.10.1 Setting

4.10.1.1 *Regulatory Framework*

Envision San José 2040 General Plan

The 11.7-acre data center project site is designated as *Combined Industrial/Commercial* in the City's General Plan. The *Combined Industrial/Commercial* designation allows for a floor-area-ratio (FAR) of up to 12.0 (one to 24 stories). Properties with this designation are intended for commercial (including big-box retail), office, or industrial developments or a compatible mix of these uses. The other General Plan land use designations on the 72-acre Great Oaks Mixed Use property include *Mixed Use Neighborhood* and *Urban Residential*

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating land use impacts resulting from planned development within the City. Future development on the project site would be subject to applicable General Plan policies.

San José Zoning Ordinance

The overall 76-acre property, in which the project site is located, is currently zoned *A(PD) – Planned Development* for 260,000 square feet of office uses, 154,000 square feet of commercial uses, and 720 residential units. The Planned Development zoning also has development standards for maximum building height and building setbacks. The portion of the 76-acre property on which the project site is located is approved for 260,000 square feet of office uses.

Edenvale Redevelopment Policy

The City of San José adopted the Edenvale Area Development Policy (EADP) to: 1) manage the traffic congestion associated with near-term development in the Edenvale Redevelopment Area; 2) promote General Plan goals for economic development; and 3) encourage a reverse commute to jobs at southerly locations in San José. The Edenvale Redevelopment Project Area (ERPA) encompasses a total of 451 acres on both sides of U.S. 101 in southeastern San José. The project is located in the Mixed-Use Development Area (Area 5) of the ERPA. A Communities Facilities District was formed to facilitate a number of off-site transportation roadway improvements as mitigation for the entire Area 5 entitlement, including the project site and a number of other properties.

San José Design Guidelines

The City of San José has adopted design guidelines for development in the City. Applicable design guidelines for the proposed project include the Industrial Design Guidelines. The guidelines address design aspects including building setback and height, parking requirements, and landscaping.

4.10.1.2 *Existing Conditions*

The project site is located just north of SR 85 and southwest of Great Oaks Boulevard, the Union Pacific Railroad (UPRR), and Monterey Road. The project site is currently vacant and was formerly used for agricultural purposes. Existing Equinix data centers (SV1 and SV5) border the site to the east. Existing residential land uses are located northeast of Monterey Road and industrial land uses are located to the west, east, and south of the overall 76-acre property. As mentioned above, it should be noted that the remaining areas of the 76-acre property are currently approved for 154,000 square feet of commercial uses and 720 residential units.

4.10.2 Environmental Checklist and Discussion of Impacts

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact Than "Approved Project"	Checklist Source(s)
Would the project:						
1. Physically divide an established community?	☐	☐	☐	☒	☐	1
2. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒	☐	1,2
3. Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒	☐	1,2

4.10.2.1 *Impacts to an Established Community*

As described in the Great Oaks FEIR, the 76-acre property is isolated from adjacent uses by public and private roadways. Therefore, development of the site would not divide an established community. **[Same Impact as Approved Project (Less Than Significant Impact)]**

4.10.2.2 *Consistency with Applicable Plans, Policies, and Regulations*

Envision San José 2040 General Plan

The project site has a General Plan land use designation of *Combined Industrial/Commercial*, which is intended for commercial (including big-box retail), office, or industrial developments or a compatible mix of these uses. The project proposes to replace approved office uses on the project site with two data center buildings. Construction of the two data center buildings would not conflict

with the site's General Plan land use designation. **[Same Impact as Approved Project (Less Than Significant Impact)]**

San José Zoning Ordinance

The overall 76-acre property, in which the project site is located, is currently zoned *A(PD) – Planned Development* for 260,000 square feet of office uses, 154,000 square feet of commercial uses, and 720 residential units. The project proposes to replace the approved office uses with two data center buildings, up to 386,000 square feet in area. The current zoning designation on the site does not allow for data center uses; however, the project proposes to rezone the site to a new *A(PD) – Planned Development* designation that would allow for data center uses. With the rezoning of the site to the new *A(PD) – Planned Development* designation, the proposed project would be consistent with the San José Zoning Ordinance **[Same Impact as Approved Project (Less Than Significant Impact)]**

Edenvale Redevelopment Policy

The purpose of the EADP is to manage traffic congestion, promote economic development, and encourage a reverse commute to jobs in the EADP area of south San José. A project's consistency with the EADP is determined by its consistency with the land use development and traffic assumptions described in the EADP, and its contribution to assessment and community facilities districts to finance infrastructure improvements in the EADP, as appropriate.

Currently, up to 720 residential units, 154,000 square feet of commercial uses, and 260,000 square feet of office uses are approved on the 76-acre property. The project proposes to replace the approved office uses on the project site with two data center buildings. Data centers are compatible with the site's existing *Combined Industrial/Commercial* General Plan land use designation. While employment would be lower than for office uses, development of data center uses would promote economic development in the City of San José. The project would contribute its fair share to assessment and community facilities and would finance infrastructure improvements in the EADP, as appropriate. **[Same Impact as Approved Project (Less Than Significant Impact)]**

San José Design Guidelines

The City's design guidelines provide standards that govern the relationships of projects to their surroundings: existing neighborhoods, public streets, public open spaces, and other new projects. The guidelines are intended to be applied, but alternative measures which meet the objective of the guidelines (e.g., sufficient screening between uses) may be considered. The project proposes to conform to the intent of the City's design guidelines, as adopted and amended by the City Council, to the satisfaction of the Director of the Planning, Building, and Code Enforcement. **[Same Impact as Approved Project (Less Than Significant Impact)]**

Santa Clara Valley Habitat Plan/Natural Community Conservation Plan

The project site is located in Area 4: Urban Development and is designated Fee Zone B (Agricultural and Valley Floor Lands). The site is intended for private development and would not develop land currently being used for grazing or agricultural purposes. Construction of two data center buildings on the project site would not conflict with the Habitat Plan. The project would pay applicable fees,

including the nitrogen deposition fee and fees associated with Fee Zone B, to reduce the project's impact to biological resources to a less than significant impact. **[Same Impact as Approved Project (Less Than Significant Impact)]**

4.10.2.3 *Shade and Shadow Impacts*

As disclosed in the Great Oaks FEIR, the proposed buildings (up to 65 feet in height) would not result in shade and shadow impacts to existing residences, public parks, or open space areas. **[Same Impact as Approved Project (Less Than Significant Impact)]**

4.10.3 Conclusion

The project would not result in new or more significant land use impacts than those addressed in the certified Great Oaks FEIR.

4.11 MINERAL RESOURCES

4.11.1 Setting

The project site is within a developed, urban area. It does not contain any known or designated mineral resources.

4.11.2 Environmental Checklist and Discussion of Impacts

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact than "Approved Project"	Checklist Source(s)
Would the project:						
1. Result in the loss of availability of a known mineral resource that will be of value to the region and the residents of the state?	☐	☐	☐	☒	☐	1
2. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒	☐	1

4.11.2.1 *Impacts to Mineral Resources*

Replacement of the approved office uses with data center buildings would not result in any new or more significant impacts mineral impacts on the project site. **[Same Impact as Approved Project (No Impact)]**

4.11.3 Conclusion

The project would not result in new or more significant impacts to mineral resources than those addressed in the certified Great Oaks FEIR.

4.12 NOISE

The following discussion is based in part on an environmental noise assessment prepared by *Illingworth & Rodkin, Inc*. in August 2015 and an *Acoustical Design Assessment* prepared by Hessler Associates in December 2015. A copies of these reports are included in Appendix C and Appendix D of this Addendum, respectively.

4.12.1 Setting

4.12.1.1 *Background Information*

Noise

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its pitch or its loudness. Pitch is the height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. Loudness is intensity of sound waves combined with the reception characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In addition to the concepts of pitch and loudness, there are several noise measurement scales which are used to describe noise in a particular location. A decibel (dB) is a unit of measurement which indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities.

There are several methods of characterizing sound. The most common in California is the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Representative outdoor and indoor noise levels in units of dBA are shown in Table 4.12-1 on the following page. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This energy-equivalent sound/noise descriptor is called L_{eq}. The most common averaging period is hourly, but L_{eq} can describe any series of noise events of arbitrary duration.

Table 4.12-1: Typical Noise Levels in the Environment

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110 dBA	Rock band
Jet fly-over at 1,000 feet		
	100 dBA	
Gas lawn mower at 3 feet		
	90 dBA	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	80 dBA	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 100 feet	70 dBA	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	60 dBA	
		Large business office
Quiet urban daytime	50 dBA	Dishwasher in next room
Quiet urban nighttime	40 dBA	Theater, large conference room
Quiet suburban nighttime	30 dBA	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	20 dBA	
		Broadcast/recording studio
	10 dBA	
	0 dBA	

Source: Technical Noise Supplement (TeNS), California Department of Transportation, September 2013.

Due to the sensitivity to noise increases during the evening and at night (because excessive noise interferes with the ability to sleep), 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The Community Noise Equivalent Level (CNEL) is a measure of the cumulative noise exposure in a community, with a five (5) dB penalty added to evening (7:00 PM - 10:00 PM) and a 10 dB addition to nocturnal (10:00 PM - 7:00 AM) noise levels. The Day/Night Average Sound Level (L_{dn} or DNL) is essentially the same as CNEL, with the exception that the evening time period is dropped and all occurrences during this three-hour period are grouped into the daytime period.

Vibration

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. Construction activities can cause vibration that varies in intensity depending on several factors. The use of pile driving and vibratory compaction equipment typically generates the highest construction related ground-borne vibration levels.

4.12.1.2 *Regulatory Framework*

Envision San José 2040 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating noise impacts resulting from planned development within the City. Future development on the project site would be subject to applicable General Plan policies, including those listed below.

Envision San José 2040 Relevant Noise Policies

Policies	Description
Policy EC-1.2	Minimize the noise impacts of new development on land uses sensitive to increased noise levels (Categories 1, 2, 3, and 6) by limiting noise generation and by requiring use of noise attenuation measures such as acoustical enclosures and sound barriers, where feasible. The City considers significant noise impacts to occur if a project would: • Cause the DNL at noise sensitive receptors to increase by five dBA DNL or more where the noise levels would remain "Normally Acceptable"; or • Cause the DNL at noise sensitive receptors to increase by three dBA DNL or more where noise levels would equal or exceed the "Normally Acceptable" level.
Policy EC-1.3	Mitigate noise generation of new nonresidential land uses to 55 dBA DNL at the property line when located adjacent to existing or planned noise sensitive residential and public/quasi-public land uses.
Policy EC-1.6	Regulate the effects of operational noise from existing and new industrial and commercial development on adjacent uses through noise standards in the City's Municipal Code.

San José Municipal Code

The City's Municipal Code contains a Zoning Ordinance that limits noise levels at adjacent properties. Chapter 20.30.700 states that sound pressure levels generated by any use or combination of uses on a property shall not exceed 55 dBA at any property line shared with land zoned for residential use, except upon issuance and in compliance with a Conditional Use Permit.

Chapter 20.40.600 states that sound pressure levels generated by any use or combination of uses on a property shall not exceed 60 dBA at any property line shared with land zoned for commercial or other non-residential purposes, except upon issuance and in compliance with a Conditional Use Permit.

The code is not explicit in terms of the acoustical descriptor associated with these noise level limits. A reasonable interpretation of this standard, which is based on similar codes of other Bay Area communities, would identify the ambient base noise level criteria as an average or median noise level (L_{eq}/L_{50}).

4.12.1.3 *Existing Conditions*

The project site is located just north of SR 85 and southwest of Great Oaks Boulevard, the Union Pacific Railroad (UPRR), and Monterey Road. Existing Equinix data centers (SV1 and SV5) border the project site to the east and existing residential land uses are located northeast of Monterey Road, approximately 320 feet from the site at its nearest point.

The predominant sources of noise in the site vicinity include vehicular traffic along SR 85 and Monterey Road, passenger and freight trains on the UPRR, and aircraft flyovers. Day-night average noise levels attributable to transportation-related noise sources are calculated to range from approximately 65 to 75 dBA DNL throughout the site and at the nearest proposed land uses. The testing and operation of standby diesel generators at the two existing Equinix facilities (SV1 and SV5) also contribute to the noise environment in the site vicinity on an intermittent basis.

A noise monitoring survey specific to the operation of the standby diesel generators at the Equinix SV5 data center was completed on August 6, 2015. Noise levels produced by the SV5 generators were documented as part of this analysis because of the similar characteristics in equipment and acoustical shielding common to the existing SV5 and the proposed SV-10 and SV-11 facilities. The noise monitoring survey included attended noise measurements of the generators to quantify source levels at various distances from the equipment. Noise levels were measured on all four sides of a running generator during normal testing loads. At five feet, noise levels from the generator were 89 dBA. At a distance of 25 feet outside of the perforated ribbed metal screen wall (which provides shielding between the generators and the surrounding environment), and approximately 35 feet from the generator, the operational noise level was 68 dBA. The noise level was measured to be 65 dBA at a distance of 145 feet.

The closest existing sensitive receptors to the site include residential uses north of the Monterey Highway (refer to Figure 2.2-3: Aerial Photograph).

4.12.2 Environmental Checklist and Discussion of Impacts

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact Than "Approved Project"	Checklist Source(s)
Would the project result in:						
1. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☒	☐	1,2,6
2. Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒	☐	1,2,6
3. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒	☐	1,2,6
4. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒	☐	1,2,6
5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, will the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒	☐	1
6. For a project within the vicinity of a private airstrip, will the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒	☐	1

Appendix G of the CEQA Guidelines states that a project would normally be considered to result in significant noise impacts if noise levels generated by the project conflict with adopted environmental standards or plans or if ambient noise levels at sensitive receptors would be substantially increased over a permanent, temporary, or periodic basis. Consistent with Appendix G and the analysis in the Great Oaks FEIR, the following applicable criteria were used to evaluate the significance of environmental noise resulting from the project:

- A significant noise impact would be identified if the project would expose persons to or generate noise levels that would exceed applicable noise standards presented in the General Plan or Municipal Code.

- A significant impact would be identified if the project would substantially increase noise levels at sensitive receptors in the vicinity. A substantial increase would occur if: a) the noise level increase is five (5) dBA DNL or greater, with a future noise level of less than 60 dBA DNL, or b) the noise level increase is three (3) dBA DNL or greater, with a future noise level of 60 dBA DNL or greater.

4.12.2.1 *Noise Impacts from the Proposed Project*

Operational Impacts

The proposed data center project would introduce new sources of operational noise closer to residential and industrial/commercial land uses compared to what was approved for the Great Oaks Mixed Use Project. The predominant noise source at the proposed data centers would be the testing and operation of the seven standby diesel generators located adjacent to each proposed data center building; these generators were not previously evaluated in the Great Oaks FEIR as potential sources of operational noise. Other significant sources of mechanical equipment noise, such as cooling towers, are not proposed as part of the project. The remaining pieces of mechanical equipment are proposed on the opposite sides of the data center buildings and away from the nearest proposed receptors (refer to Figure 3.1-1: Conceptual Site Plan).

Power outages in the Bay Area are generally rare and temporary (i.e. an outage is not sustained for multiple days). Therefore, noise impacts from generators are evaluated based on the testing schedule of the generators because that noise is the consistent, operational noise that would result from the project. Each generator would be tested monthly (11 of 12 months) for a period of five minutes at no load and for a period of 60 minutes at full load. An annual four-hour test would be completed during the final month. The total testing time per engine is 16 hours per year. The generators would run continuously during power outages. The seven generators proposed for the SV-11 data center would be located in a mechanical yard northwest of the building and shielded by a 25-foot perforated ribbed metal screen wall. The seven generators for the SV-10 data center would be located in a similar mechanical yard southwest of the building.

Conformance with General Plan Land Use Compatibility Guidelines: The General Plan states that non-residential land uses should mitigate noise generation to meet the 55 dBA DNL guideline at the property line of existing or planned residential land uses. Based upon the initial environmental noise assessment completed by *Illingworth & Rodkin* in August 2015, the DNL resulting from one hour of testing of one standby diesel generator during the daytime (7:00 AM to 10:00 PM) would be 52 dBA at the nearest industrial/commercial land uses. The annual four-hour test would produce a DNL noise level of 58 dBA. On a DNL basis, the testing of one standby diesel generator during the daytime would not substantially increase ambient day-night average noise levels attributable to transportation related noise sources in the project vicinity on a temporary or periodic basis. At the nearest residential land uses, one hour of testing of one standby diesel generator during the daytime would produce a noise level of 54 dBA DNL. The annual four-hour test would produce a DNL noise level of 60 dBA.

The design specifications of acoustical enclosures for each generator and the screen wall enclosing the generator yard were modified subsequent to preparation of the environmental noise assessment by *Illingworth & Rodkin* to provide additional noise attenuation when the generators are running.

Based upon an acoustical design assessment by *HesslerAssociates* in December 2015, a combination of an acoustically lined metal screen wall and acoustical enclosures would further reduce noise levels to conform with City of San José Municipal Code requirements for noise levels at future residential property lines to the west and south of proposed data center SV-10. The final combination of metal screen wall and enclosures to meet the 55 dBA L_{eq} criteria at the future residences includes acoustical enclosures for each generator rated to meet 78 dBA at 23 feet.[9]

As a **permit condition**, verification of sound (exhaust) levels for the Caterpillar 3516C model engine-generator and outdoor cooling equipment will be made prior to installation of the proposed generators, as recommended in an acoustical design study for the project (Appendix D). A copy of the final verification and associated modeling will be provided to the Department of Planning, Building, and Code Enforcement prior to issuance of an occupancy permit.

With implementation of design features included in the project, testing of the proposed generators would not result in noise impacts to adjacent, future sensitive uses. Testing of the proposed generators would occur for a brief period of time during daytime hours on a monthly basis. Noise associated with testing of the generators, as proposed, would be within the limits established by the San José General Plan and the project's proposed zoning standards. **[Same Impact as Proposed Project (Less Than Significant Impact)]**

Construction Noise Impacts

The project proposes to implement standard construction measures identified in the Great Oaks FEIR. These measures include limiting construction hours, use of power equipment with noise shielding and muffling devises, locating stationary noise generating equipment as far as possible form sensitive receptors, and implementation of a construction noise logistics plan approved by the Director of Planning, Building and Code Enforcement. These measures would minimize potential effects on sensitive uses and construction noise is anticipated to be below ambient noise levels generated by traffic and railroad trains in the area. [**Same Impact as Approved Project (Less Than Significant Impact)**

4.12.2.2 *Other Noise and Vibration Impacts*

Noise and vibration impacts related to the compatibility of the proposed land use with the on-site environment (i.e. impacts to the proposed project)**,** and temporary construction noise and vibration were addressed in the Great Oaks FEIR. The surrounding conditions have not substantially changed and the proposed project would not result in new or more significant impacts than previously identified; therefore, these impacts are not discussed further. The project site is not located within an airport land use plan, within two miles from a public airport, or in the vicinity of a private airstrip. Therefore, these impacts are not discussed further. **[Same Impact as Approved Project (Less Than Significant Impact)]**

[9] Specifications and site details for SV-10 Data Center provided by Carla Domingues, SPARCH, February 3, 2016.

4.12.3 Conclusion

The project would not result in new or more significant noise and vibration impacts than those identified in the certified Great Oaks FEIR.

4.13 POPULATION AND HOUSING

4.13.1 Setting

As described in the Great Oaks FEIR, there are currently no occupied residential land uses on-site.

4.13.2 Environmental Checklist and Discussion of Impacts

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact Than "Approved Project"	Checklist Source(s)
Would the project:						
1. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒	☐	1,2
2. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	☐	1,2
3. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	☐	1,2

4.13.2.1 *Population and Housing Impacts*

The project proposes to construct two data center buildings on the project site. Replacement of the approved office uses with data center buildings on undeveloped land would not displace housing or people from the project site. Data centers primarily serve businesses in the region and the employment intensity of data centers are relatively low; therefore, the project would not induce substantial population growth in the City of San José. Implementation of the proposed project would result in the same less than significant population and housing impacts as identified in the Great Oaks FEIR. **[Same Impact as Approved Project (Less Than Significant Impact)]**

4.13.3 Conclusion

Implementation of the project would not result in new or more significant housing and population impacts than those addressed in the certified Great Oaks FEIR.

4.14 PUBLIC SERVICES

4.14.1 Setting

Fire Protection

Fire protection in the project area is provided by the San José Fire Department (SJFD). The nearest fire station to the project site is Station 35 located at Cottle Road and Poughkeepsie Road. Station 27 located at 6027 San Ignacio Road serves Edenvale Area 2.

Police Protection

Police protection is provided by the City of San José Police Department (SJPD). Officers patrolling the project area are dispatched from police headquarters, located at 201 West Mission Street. The recently constructed police substation adjacent to the west of the project site (which is currently unoccupied) will have various components/services including: office of the chief, bureau of administration, technical services, investigations, and field operations, community services, victim witness, and rape crisis, locker rooms, fitness facilities, and other related city department offices.

Schools

The project site is located in the Oak Grove School District and the East Side Union High School District. Oak Grove School District is comprised of 16 elementary schools and three intermediate (middle) schools. East Side Union High School District is comprised of 11 high schools.

Parks

The City of San José manages a total of 3,435 acres of regional and neighborhood/community serving parkland.[10] Other recreational facilities within the City include community centers, senior centers, youth centers, skate parks, and trails. Parks within approximately 0.5 miles or less of the project site include the Raleigh Linear Green and Charlotte Common parks west of the site, a dog park on Miyuki Drive southwest of the site, Doctor George Page park just south of the dog park, and Silver Leaf park north of the site.

Libraries

The San José Public Library System consists of one main library and 18 open branch libraries. The libraries nearest the project site include the Edenvale Library located on Branham Lane west of the site, Pearl Avenue Library located on Pearl Avenue southwest of the site, and Santa Teresa Library on International Circle southwest of the site.

[10] Only existing parks are included in the above acreage. Secured or potential parks, which total approximately 118 acres, are not included in the acreage total. Source: *Greenprint 2009 Update for Parks, Recreation Facilities and Trails*. December 2009.

4.14.2 Environmental Checklist and Discussion of Impacts

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact Than "Approved Project"	Checklist Source(s)
1. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	☐	☐	☐	☒	☐	1,2
Fire Protection?	☐	☐	☐	☒	☐	1,2
Police Protection?	☐	☐	☐	☒	☐	1,2
Schools?	☐	☐	☐	☒	☐	1,2
Parks?	☐	☐	☐	☒	☐	1,2
Other Public Facilities?						

4.14.2.1 *Impacts to Public Services*

The project proposes to construct two data center buildings on the project site. The proposed data centers would not generate new residents on-site, expand the service area of fire and police protection services, or replace existing recreational facilities. Replacement of the approved office uses with two data center buildings on the project site would not result in new or greater impacts to public services compared to what was evaluated in the Great Oaks FEIR. **[Same Impact as Approved Project (Less Than Significant Impact)]**

4.14.3 Conclusion

The project would not result in new or more significant impacts to public services than those addressed in the certified Great Oaks FEIR.

4.15 RECREATION

4.15.1 Setting

The City of San José manages a total of 3,435 acres of regional and neighborhood/community serving parkland.[11] Other recreational facilities within the City include community centers, senior centers, youth centers, skate parks, and trails. Parks within approximately 0.5 miles or less of the project site include the Raleigh Linear Green and Charlotte Common parks west of the site, a dog park on Miyuki Drive southwest of the site, Doctor George Page Park just south of the dog park, and Silver Leaf Park north of the site.

4.15.2 Environmental Checklist and Discussion of Impacts

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact Than "Approved Project"	Checklist Source(s)
1. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility will occur or be accelerated?	☐	☐	☐	☒	☐	1,2
2. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒	☐	1,2

4.15.2.1 *Impacts to Recreation*

The project proposes to construct two data center buildings. The project would not add to the permanent population that could use existing neighborhood and regional parks and other recreational facilities. The proposed project does not include recreational facilities, nor require the construction or expansion of recreational facilities. Replacement of the approved office uses with two data center buildings on the project site would not result in new or greater impacts to recreation compared to what was evaluated in the Great Oaks FEIR. **[Same Impact as Approved Project (Less Than Significant Impact)]**

4.15.3 Conclusion

The project would not result in new or more significant recreational impacts than those addressed in the certified Great Oaks FEIR.

[11] Only existing parks are included in the above acreage. Secured or potential parks, which total approximately 118 acres, are not included in the acreage total. Source: *Greenprint 2009 Update for Parks, Recreation Facilities and Trails*. December 2009.

4.16 TRANSPORTATION

4.16.1 Setting

Existing Roadway Network

The existing roadway network serving the project area includes regional facilities (US Highway 101, SR 85, and SR 82) and local roadways. Currently, public street access to the project site is provided via Great Oaks Boulevard.

Pedestrian and Bicycle Facilities

Sidewalks and Class II bicycle lanes are provided on most roadways in the project area. Crosswalks with pedestrian signal heads and push buttons are located at all signalized intersections in the study area. Other pedestrian facilities include a pedestrian bridge (Xander's Crossing) located on the south side of the Monterey Road/Blossom Hill Road interchange; Xander's Crossing provides a safe way to cross the railroad tracks and Monterey Road.

Transit Service

Bus and Light Rail Transit (LRT) service in Santa Clara County is operated by the Santa Clara Valley Transportation Agency (VTA). Six bus lines currently provide service to and from the Santa Teresa LRT station, which is located approximately 0.50 miles south of the project site: Bus Routes 27, 42, 66, 68, Express Routes 102, 122, 168, and 182, and Limited Stop Route 304.

Commuter rail service (Caltrain) from San Francisco to Gilroy is operated by the Peninsula Corridor Joint Powers Board (PCJPB). The Blossom Hill Caltrain station is located at the Monterey Highway/Ford Road intersection, approximately one mile walking distance from the project site.

4.16.2 Environmental Checklist and Discussion of Impacts

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact Than "Approved Project"	Checklist Source(s)
Would the project:						
1. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☐	☐	☒	1,2
2. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒	☐	1,2
3. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒	☐	1,2
4. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible land uses (e.g., farm equipment)?	☐	☐	☐	☒	☐	1,2
5. Result in inadequate emergency access?	☐	☐	☐	☒	☐	1,2
6. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒	☐	1,2

4.16.2.1 *Transportation Impacts*

The project proposes to construct two data center buildings, 160 parking spaces, and six loading dock spaces for delivery trucks on the project site. Each building would include approximately 161,000 square feet for data center uses (servers and equipment areas) and an office component ranging from approximately 16,550 to 24,000 square feet in area.

Based upon employment and client visit data for a similarly sized data center (SV-5) operated by the project applicant, there would be an estimated 19 employees and 66 clients at each building on a daily basis.[12] For the two data center buildings this would total about 38 employees and 132 clients who would travel to and from each data center building daily.

The Great Oaks FEIR estimated that the approved office uses would generate approximately 2,860 daily trips. The proposed data center uses would generate more traffic than under existing conditions, but would generate far less traffic to and from the project site compared to the approved office uses, as data centers generally have far fewer employees (and therefore less vehicular traffic) than office uses (refer to Table 4.16-1, below).

Table 4.16-1: Trip Generation Comparison

Land Use	Size	Weekday		AM Peak Hour		PM Peak Hour	
		Rate[1]	Trips	Rate[1]	Total	Rate[1]	Total
Office[1,2]	260 ksf	11.0	2,860	1.54	400	1.54	400
Datacenter (ITE Data Center 160 Rate)[3]	386 ksf	0.99	382	0.09	35	0.09	35

Notes:
[1]Trip rates based on "General Office Building" rates contained in the San José Traffic Impact Analysis Handbook, August 2008.[9]
[2]As disclosed in the Great Oaks FEIR (Table 2.2-6), net projected trip generation for offices uses would be slightly lower than shown above. A 3% residential/office mixed-use trip reduction was applied to the project per the Santa Clara VTA TIA Guidelines, March 2009. The 3% trip reduction was first applied to the smaller trip generator (office in AM and PM). The same number of trips were then subtracted from the larger trip generator (residential) to account for both trip ends. The reduction applied totals wer 172 weekday trips, with 24 trips during the AM Peak Hour and 24 trips during the PM Peak Hour. A similar trip reduction would not apply to the data center uses.
[3]The ITE Trip Generation Manual (9th Edition) notes that the rates for Data Centers (Land Use 160) are based on limited data and that it is important to include information on the number of tenants and employees. Driveway surveys for a data center in the City of Santa Clara found a peak hour trip rate of 0.15 per 1,000 square feet (Hexagon Transportation Consultants, *CoreSite Trip Generation and Operations Analysis*, October 2013). Peak hour trips (58 trips during each peak hour) using this rate would still be much lower for the proposed data center uses than the previously approved office use.

The data center buildings would be accessible via Great Oaks Boulevard and Raleigh Road. The main delivery truck driveway for access to the loading dock areas would be located on Great Oaks Boulevard at the existing driveway serving the existing data centers adjacent to the project site; secondary truck access would be available from the future Raleigh Road roundabout. Each access point would be gated and electronically secured. Implementation of the proposed project would not

[12] Source: Employees and average daily client visits (24 hours) from Jun 26-July 16, 2015 for data center building SV-5, as listed on SV-10 Data Center Site Plan, Sheet A100, dated December 23, 2015.

result in inadequate emergency access, increase site hazards, or conflict with applicable plans, policies, or regulations.

The Great Oaks FEIR determined that implementation of the project would result in significant impacts, including two significant and unavoidable transportation impacts. Office uses contributed about one third of AM peak hour trips and one-sixth of PM peak hour trips. Significant transportation impacts identified in the Great Oaks FEIR include:

Intersection Level of Service

- U.S. 101 and Blossom Hill Road (West) [Significant and Unavoidable] (temporary)
- San Ignacio Avenue and Great Oaks Boulevard [Less Than Significant Impact with Mitigation Incorporated]
- Santa Teresa Boulevard and Bernal Road [Less Than Significant Impact with Mitigation Incorporated]

Freeway Segments (AM Peak Hour) [Significant and Unavoidable]

- Northbound U.S. 101 between Silver Creek Valley Road and Hellyer Avenue (AM Peak Hour)
- Northbound U.S. 101 between Hellyer Avenue and Yerba Buena Road (AM Peak Hour)

Replacement of the approved office uses with two data center buildings on-site, however, would reduce the traffic trips to and from the site; therefore, the project would result in less trip generation than the approved project evaluated in the Great Oaks FEIR. **[Less Impact Than Approved Project (Less Than Significant Impact/Significant and Unavoidable Impact)**

4.16.3 Conclusion

The project would not result in new or substantially more severe significant transportation impacts than those addressed in the certified Great Oaks FEIR.

4.17 UTILITIES AND SERVICE SYSTEMS

4.17.1 Setting

Water Service

Water service to the project site is supplied by the Great Oaks Water Company, which serves over 20,000 customers over an approximately 14 square mile area. Currently, there are no existing water lines serving the site. Existing Great Oaks Water Company facilities in proximity to the site include 12-inch water mains in Great Oaks Boulevard and Via del Oro. The project site is currently vacant and, therefore, there is little (if any) water being used on-site.

Wastewater Treatment/Sanitary Sewer

Wastewater treatment service for the project site is provided by the City of San José through the San José-Santa Clara Regional Wastewater Facility. The Regional Wastewater Facility is located in Alviso and serves over 1,500,000 people in San José, Santa Clara, Milpitas, Campbell, Cupertino, Los Gatos, Saratoga, and Monte Sereno. Sanitary sewer lines in the project area are owned and maintained by the City of San José. There is an existing 12-inch sanitary sewer main in Great Oaks Boulevard along the project site frontage that connects to an existing 18-inch sewer main, which increases to 21 inches, in an easement across the adjacent HGST Campus and flows south under SR 85.

Storm Drainage System

The City of San José owns and maintains municipal storm drainage facilities throughout the City. Storm drain lines are inspected and maintained by the Department of Transportation and are installed, rehabilitated, or replaced by the Department of Public Works. The project area is served by a 24-inch diameter storm drain in Great Oaks Boulevard.

Solid Waste and Recycling Services

Commercial solid waste and recycling (including green waste) collection services are provided by Republic Services of Santa Clara County (previously Allied Waste of Santa Clara County). The City of San José has an existing contract with Newby Island Sanitary Landfill (NISL) through December 31, 2020 with the option to extend the contract as long as the landfill is open.

4.17.2 Environmental Checklist and Discussion of Impacts

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact Than "Approved Project"	Checklist Source(s)
Would the project:						
1. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒	☐	1,2

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact Than "Approved Project"	Checklist Source(s)
Would the project:						
2. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒	☐	1,2
3. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒	☐	1,2
4. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒	☐	1,2
5. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒	☐	1,2
6. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒	☐	1,2
7. Comply with federal, state and local statutes and regulations related to solid waste?	☐	☐	☐	☒	☐	1,2

4.17.2.1 *Impacts to Utility and Service Systems*

The project proposes to construct two data center buildings on the project site. As part of the approved Great Oaks Mixed Use project, a new 12-inch diameter water main and six- to eight-inch sanitary sewer line will be constructed in Raleigh Road to serve future development within the 76-acre property. As discussed in *Section 4.9 Hydrology and Water Quality*, a hydromodification management control basin would be constructed on-site to manage stormwater runoff. In addition, bioretention areas and landscaping would be installed.

The proposed data center uses would generate fewer employees on-site and would not result in new or greater demands to water, wastewater, storm drainage, or solid waste systems. For these reasons,

the proposed project would not result in new or greater utility and service system impacts compared to what was evaluated in the Great Oaks FEIR. **[Same Impact as Approved Project (Less Than Significant Impact)**

4.17.3 Conclusion

The project would not result in new or more significant impacts to utility and service systems than those addressed in the certified Great Oaks FEIR.

4.18 ENERGY

The Great Oaks FEIR included a discussion of energy prepared pursuant to CEQA Guidelines Section 15126(C) and Appendix F (Energy Conservation of the Guidelines). These sections of the CEQA Guidelines require that EIRs include a discussion of potential energy impacts of proposed projects with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

Because the proposed data center buildings would have a greater electrical demand than the approved office uses, an updated evaluation of energy use related to the proposed modifications is provided.

4.18.1 Setting

4.18.1.1 *Regulatory Framework*

Many federal, state, and local statutes and policies address energy conservation. At the federal level, energy standards apply to numerous products (e.g., the *EnergyStar*™ program) and transportation (fuel efficiency standards). At the state level, Title 24 of the California Administrative Code sets forth energy standards for buildings, rebates/tax credits are provided for installation of renewable energy systems, and the *Flex Your Power* program promotes conservation in multiple areas. On January 1, 2014, the 2013 California Green Building Standards Code (CALGreen) that establishes mandatory green building standards for all buildings in California went into effect. The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and indoor environmental quality. These standards include a mandatory set of minimum guidelines, as well as more rigorous voluntary measures, for new construction projects to achieve specific green building performance levels.

Envision San José 2040 General Plan and Greenhouse Gas Reduction Strategy

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating energy impacts resulting from planned development within the City. Future development on the project site would be subject to applicable General Plan policies and requirements under the City's Greenhouse Gas Reduction Strategy, as described in *Section 4.7 Greenhouse Gas Emissions*. These include measures related to energy efficiency, reduced water use, and vehicle trip reduction.

San José Municipal Code

The City's Municipal Code includes regulations associated with energy efficiency and energy use. City regulations include a Green Building Ordinance (Chapter 17.84) to foster practices to minimize the use and waste of energy, water and other resources in the City of San José, Water Efficient Landscape Standards for New and Rehabilitated Landscaping (Chapter 15.10), and a Construction and Demolition Diversion Deposit Program that fosters recycling of construction and demolition materials (Chapter 9.10).

Private Sector Green Building Policy (6-32)

In October 2008, the City adopted the Private Sector Green Building Policy (6-32) that establishes baseline green building standards for private sector new construction and provides a framework for the implementation of these standards. This policy requires that applicable projects achieve minimum green building performance levels using the Council adopted standards. The proposed project is a commercial/industrial development and would be required to achieve a minimum of LEED Silver.

4.18.1.3 *Existing Conditions*

Electricity and Natural Gas

Electricity supply in California involves a complex grid of power plants and transmission lines located in the Western United States, Canada, and Mexico. In 2013, approximately 16,573 gigawatt-hour (GWh) of electricity were consumed in Santa Clara County.[13] It is estimated that Californians will consume up to approximately 321,374 GWh of electricity in 2024.[14]

PG&E transmits and delivers electricity and natural gas to residents and businesses in the City of San José. The project site is undeveloped and, therefore, no electricity or natural gas is currently used on the 11.15-acre data center site.

Fuel Supply and Demand

The project site is currently undeveloped. Fuel use associated with the site (if any), would include vehicles traveling to and from the project site for maintenance purposes.

4.18.2 Energy Impacts

4.18.2.1 *Thresholds of Significance*

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact Than "Approved Project"	Checklist Source(s)
1. Would the project result in a wasteful, inefficient, and unnecessary consumption of energy?	☐	☐	☐	☒	☐	1,2,5
2. Would the project result in a substantial increase in demand upon energy resources in relation to projected supplies?	☐	☐	☒	☐	☐	1,2,5

[13] California Energy Commission. "Electricity Consumption by County." Accessed August 20, 2015. Available at: http://www.ecdms.energy.ca.gov/elecbycounty.aspx.
[14] California Energy Commission. 2013 Integrated Energy Policy Report. 2013. Page 118.

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact Than "Approved Project"	Checklist Source(s)
3. Would the project result in longer overall distances between jobs and housing?	☐	☐	☐	☒	☐	1

4.18.2.2 *Overview of Project Energy Consumption*

The project proposes to replace approved office uses with two data center buildings. Energy would be consumed during both the construction and operational phases of the proposed project. Energy requirements throughout the construction phase include energy for the manufacturing and transportation of building materials, preparation of the site, and operation of construction equipment. The operation of the project would consume electricity for building equipment power, lighting, air conditioning, and cooling.

Electricity will be the primary form of energy used at the data center buildings. A minimal amount of natural gas may be used for heating the office component of the buildings; however, the amount of natural gas used would not be substantial. While fuel would also be consumed during vehicle trips to and from the project site, the project would not generate a substantial number of vehicle trips during the operational phase of the project, compared to the approved office uses evaluated in the Great Oaks Mixed Use Project EIR.

4.18.2.3 *Proposed Energy Demand and Efficiency Measures*

Maximum Load Demand

The projected maximum load demand for the proposed data center buildings is approximately 19 megawatts (MW).[15] This load includes the power required to operate tenant information technology (IT) equipment as well as mechanical cooling systems, uninterruptible power systems (UPS) and general building lighting and power loads. The project applicant estimates the demand for maximum load anticipated with the proposed site improvements based on the occupancy of the data center buildings with data center uses supported by the proposed mechanical and electrical infrastructure.

Energy and Water Efficiency Measures

Due to heat generated by the data center IT equipment, cooling systems are one of the primary uses of energy in the buildings. In order to reduce greenhouse gas emissions and reduce the use of energy related to building operations, the project proposes to implement a number of efficiency measures related to selection and operation of electrical and mechanical equipment for building cooling. Table 4.18-1 lists the proposed efficiency measures related to mechanical and electrical systems in the buildings. Table 4.18-2 lists additional energy efficiency measures associated with tenant improvements and water use reduction that are proposed. This information is also included in the project description in Tables 3.2-1 and 3.2-2.

[15] Source: Jeremy Mickler, AIA, SPARCH, email communications, January 20, 2016.

Table 4.18-1: Efficiency Features – Project Mechanical and Electrical Systems	
Optimize Energy Performance	g. **Standards** CA Title 24 energy requirements will be exceeded. ASHRAE TC9-9 extended thermal envelope values will be utilized to allow economizer operation during greater periods of the year with A/C compressors operating only during peak load periods. h. **Measurement & Verification** Metering will be provided to validate conservation measures i. **Efficient Equipment** High efficiency (96%+) UPS, indirect evaporative cooling (IDEC) & variable refrigerant flow (VRF) cooling systems. j. **Renewable Energy** Roof-mounted photovoltaic systems (owner-furnished) k. **Enhanced Commissioning** Independent commissioning agent reviews system design and verifies the performance of the installed systems (CAPCOA Best Management Practice; Measure BE-3). l. **Cool Roof**: Reduce Heat Island effect, the roofing materials meet Solar Reflectance Index value (SRI) of at least 78 for low sloped roofs, as well as meeting the following regulations: 3. EnergyStar/Title 24 Requirements for Cool Roofing 4. LEED/Green Globe Requirements for Cool Roofing
Heating, Ventilation & Air Conditioning (HVAC)	c. **High-Efficiency Systems** Indirect Evaporative Cooling (IDEC) systems for data halls and Variable Refrigerant Flow (VRF) systems for office/support areas. Systems designed using ASHRAE TC9-9 extended thermal envelope values (max. 26.5 deg.C/79 deg. F) to allow economizer operation during greater periods of the year with A/C compressors operating only during peak load periods. Scalable cooling systems with only those units required to serve the actual load in operation to improve efficiency. Highly efficient Variable Refrigerant Flow (VRF) cooling systems for office/support areas to reduce fan energy. d. **Airflow Management** Hot aisle containment, separated ceiling plenum to provide physical separation of hot and cool air in data halls. Use of blanking panels and other measures to avoid bypass of cold air into hot aisles.
Lighting	c. **LED Lighting** High-efficiency, low mercury content LED lamping used throughout

Table 4.18-1: Efficiency Features – Project Mechanical and Electrical Systems	
	d. **Lighting Controls** Automatic-off and occupancy based lighting control. Dimming control for all spaces with lighting loads >0.5 watts/sf. Automatic demand-limiting control of lighting per Title 24 requirements.
Electrical	c. High-efficiency (96%+) UPS systems. d. Separate metering of building mechanical and lighting loads to validate compliance and conservation measures.

Table 4.18-2: Efficiency Measures for Tenants and Water Use Reduction

Recycling Program	b. Implementation of LEED guidelines for the storage and collection of recyclables (LEED CS 2009 - Materials and Resources/ Prerequisite 1), intended to facilitate the reduction of waste generated by building occupants that is hauled to and disposed of in landfills. Additionally, the building Owner has implemented the following Exemplary Policies: 1. 30% Recycled Content (LEED CS 2009 – Innovation and Design Process/ Credit 1.4), a 10% increase over LEED CS 2009 - Materials and Resources Credits 4.2. 2. 95% Waste Recycling (LEED CS 2009 – Innovation and Design Process/ Credit 1.5), a 20% increase over LEED CS 2009 - Materials and Resources Credit 2.2.
Operation Practices	b. The building Owner has implemented the LEED policy for Green cleaning (LEED CS 2009 - Innovation & Design Process/ Credit 1.1), intended to reduce the exposure of building occupants and maintenance personnel to potentially hazardous chemical, biological and particulate contaminants, which adversely affect air quality, human health, building finishes, building systems and the environment.
IT Equipment	b. Install Energy Star equipment will be installed where applicable.
Electrical and Lighting	g. High-efficiency (96%+) UPS systems. h. Separate metering of building mechanical and lighting loads to validate compliance and conservation measures. i. High-efficiency, low mercury content LED lamping used throughout j. Automatic-off and occupancy based lighting control k. Dimming control for all spaces with lighting loads >0.5 watts/sf. l. Automatic demand-limiting control of lighting per Title 24 requirements.
Heating, Ventilation & Air Conditioning (HVAC)	f. Indirect Evaporative Cooling (IDEC) systems for data halls and Variable Refrigerant Flow (VRF) systems for office/support areas. g. Systems designed using ASHRAE TC9-9 extended thermal envelope values (max. 26.5 deg.C/79 deg. F) to allow economizer operation during greater periods of the year with A/C compressors operating only during peak load periods. h. Scalable cooling systems with only those units required to serve the actual load in operation to improve efficiency. i. Highly efficient Variable Refrigerant Flow (VRF) cooling systems for office/support areas to reduce fan energy.

Table 4.18-2: Efficiency Measures for Tenants and Water Use Reduction	
	j. Hot aisle containment, separated ceiling plenum to provide physical separation of hot and cool air in data halls. Use of blanking panels and other measures to avoid bypass of cold air into hot aisles.
Materials	c. LEED guidelines for the storage and collection of recyclables have been implemented (LEED CS 2009 - Materials and Resources/ Prerequisite 1), facilitating the reduction of waste generated by building occupants that is hauled to and disposed of in landfills. Additionally, the building Owner has implemented the following Exemplary Policies: 1. 30% Recycled Content (LEED CS 2009 – Innovation and Design Process/ Credit 1.4), a 10% increase over LEED CS 2009 - Materials and Resources Credits 4.2. 2. 95% Waste Recycling (LEED CS 2009 – Innovation and Design Process/ Credit 1.5), a 20% increase over LEED CS 2009 - Materials and Resources Credit 2.2. d. The building Owner has implemented the following LEED policies regarding Materials and Resources: 1. Regional Materials, 20% (LEED CS 2009 - Materials and Resources/ Credits 5.1 and 5.2), ensuring that all building materials or products have been extracted, harvested or recovered, as well as manufactured within a 500 mile (800 kilometer) radius of the project site. 2. Certified Wood (LEED CS 2009 - Materials and Resources/ Credit 6), ensuring that a minimum of 50% (based on cost) of wood-based materials and products that are certified in accordance with the Forest Stewardship Council's principles and criteria, for wood building components.
Indoor Environmental Quality	b. The building Owner has implemented the following LEED policies regarding Indoor Environmental Quality: 4. Outdoor Air Delivery Monitoring (LEED CS 2009 - Indoor Environmental Quality/ Credit 1), ensuring that CO2 concentrations are monitored within all densely occupied spaces. 5. Increased Ventilation (LEED CS 2009 - Indoor Environmental Quality/ Credit 2), Increasing the breathing zone outdoor air ventilation rates to all occupied spaces by at least 30% above the minimum rates required by ASHRAE Standard 62.1-2007.

Table 4.18-2: Efficiency Measures for Tenants and Water Use Reduction

	6. Construction IAQ Management Plan (LEED CS 2009 - Indoor Environmental Quality/ Credit 3), implementing the following strategies: ▪ During construction, meet or exceed the recommended control measures of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guidelines For Occupied Buildings Under Construction, 2nd Edition 2007, ANSI/SMACNA 008-2008 (Chapter 3). ▪ Protect stored on-site and installed absorptive materials from moisture damage. ▪ Providing filtration media at the return air grille of air handlers utilizing filtration media with a Minimum Efficiency Reporting Value (MERV) of 8 as determined by ASHRAE Standard 52.2-1999. 8. Low Emitting Materials: ▪ Adhesives and Sealants (LEED CS 2009 - Indoor Environmental Quality/ Credit 4.1), ensuring that all adhesives and sealants used within the building's weatherproofing system meet the minimum VOC content as prescribed by LEED. ▪ Paints and Coatings (LEED CS 2009 - Indoor Environmental Quality/ Credit 4.2), ensuring that all paints and coatings used inside the building's moisture barrier meet the minimum VOC content as prescribed by LEED. ▪ Flooring Systems (LEED CS 2009 - Indoor Environmental Quality/ Credit 4.3), ensuring that the flooring systems meet the following criteria: o Carpet: Must meet the testing and product requirements of the CRI Green Label Plus program. o Cushion: Must meet the testing and product requirements of the CRI Green Label program. o Adhesive: Must meet the requirements of EQc4.1. o Hard surface flooring must be certified as compliant with the FloorScore standard. o Concrete, wood, bamboo and cork floor finishes such as sealer, stain and finish must

Table 4.18-2: Efficiency Measures for Tenants and Water Use Reduction	
	meet the requirements of South Coast Air Quality o Management District (SCAQMD) Rule 1113, Architectural Coatings, rules in effect on January 1, 2004. o Tile setting adhesives and grout must meet South Coast Air Quality Management District (SCAQMD) Rule 1168. VOC limits correspond to an effective date of July 1, 2005 and rule amendment date of January 7, 2005. ▪ Composite Wood & Agrifiber Products (LEED CS 2009 - Indoor Environmental Quality/ Credit 4.4), ensuring that all composite wood and agrifiber products contain no added ureaformaldehyde. Additionally, all laminating adhesives used to fabricate on-site and shop applied composite wood and agrifiber assemblies must not contain added urea-formaldehyde. 5. Indoor Chemical and Pollutant Source Control (LEED CS 2009 - Indoor Environmental Quality/ Credit 5), ensuring that MERV filtration ratings of at least 13 are provided. 6. Thermal Comfort (LEED CS 2009 - Indoor Environmental Quality/ Credit 7), ensuring the heating, ventilating and air conditioning (HVAC) systems and the building envelope meet ASHRAE Standard 55-2004.
Water Use Reduction	b. Ultra low flow toilets and faucets will be used throughout

Power Usage Effectiveness During Operation

Power Usage Effectiveness (PUE) is a metric used to compare the operating efficiency of data center facilities. PUE is defined as the ratio of total power use of a facility to the power used strictly by the information technology (IT) equipment (e.g. PUE=Total Facility Power/IT Equipment Power). For example, with a PUE of 2.0 a data center would use (2) watts of total power for every (1) watt of power used by the IT equipment.

Equinix, the project applicant, builds and operates multi-tenant data centers. Their business model is to provide the infrastructure to house, power, cool and deliver data connectivity for critical IT equipment of their tenants. Computing equipment is provided by the tenants. Unlike an individual company-owned and operated enterprise data center, Equinix does not control the specifications and operation of its tenants' IT equipment.

As described above, the project includes a variety of measures to minimize total power usage of the data center buildings. It is projected that these measures will result in a facility PUE of approximately 1.25 on an average annualized basis and 1.40 under peak conditions of outdoor temperature/humidity.

Conclusion Regarding Data Center Building Energy Efficiency

Although the project would use a substantial amount of energy compared to what was evaluated in the Great Oaks FEIR, the project would comply with the CALGreen Building Code, Envision San José 2040 General Plan and Greenhouse Gas Reductions Strategy, San José Municipal Code, and Private Sector Green Building Policy, as well as implement measures that exceed these requirements in some areas (refer to Table 4.18-1). For these reasons, the project would not consume energy in a manner that is wasteful, inefficient, or unnecessary. **[Same Impact as Approved Project (Less Than Significant Impact)]**

4.18.2.3 *Project Demand Upon Energy Resources*

According to the 2013 Integrated Energy Policy Report and as described in the Great Oaks FEIR, in order to meet future energy demand, the state needs sufficient, reliable, and safe energy infrastructure. This includes:

- Improving energy efficiency in California's existing buildings;
- Achieving 10-year energy efficiency targets;
- Inclusion of zero-net-energy buildings in state building standards;
- Overcoming challenges to increased use of geothermal heat and procurement of biomethane;
- Using demand response to meet California's energy needs;
- Integrating renewable technologies;
- Developing bioenergy; and
- Evaluating the need for and developing new electricity, natural gas, and transportation fuel infrastructure to maintain energy reliability and support clean energy policies.

Replacing the approved office uses with two data center buildings would increase the demand on existing energy resources compared to what was evaluated in the Great Oaks FEIR, as data centers use more energy than typical office uses. Whereas the approved office uses were estimated to use 3,502,980 kilowatt hour (kWh) of electricity per year, the proposed data center buildings would use approximately 307,673,000 kWh of electricity per year.[16,17]

However, as previously discussed, the project would be required to comply with applicable State and City regulations and policies to ensure a more efficient use of energy. Furthermore, improvements in energy efficiency and production capabilities is anticipated to help mitigate statewide impacts resulting from increased demand.[18] The project would be served by existing and planned (and approved) Statewide energy infrastructure; no new energy infrastructure would be required to be

[16] Personal Communications with James Reyff, Senior Consultant of Illingworth & Rodkin, Inc.
[17] Illingworth & Rodkin, Inc. *Great Oaks Mixed-Use Project – Draft Air Quality and Greenhouse Gas Emissions Assessment*. Attachment 1: CalEEMod Input and Output. June 20, 2013.
[18] California Energy Commission. *2013 Integrated Energy Policy Report*. 2013.

constructed to serve the proposed project. Thus, while implementation of the proposed project would result in a substantial increase in energy use at this location compared to the approved office uses, the project would not substantially increase demand on statewide energy resources in relation to projected supplies. **(New Less Than Significant Impact)**

4.18.2.4 *Impact to Overall Distances between Jobs and Housing*

The project is an urban, infill site that is served by existing transit, bicycle, and pedestrian facilities. Replacement of the approved office uses with data center buildings would reduce the number of industrial employees on the site and would not result in an increase in overall distances between job and housing. **[Same Impact as Approved Project (Less Than Significant Impact)]**

4.18.3 Conclusion

Implementation of the project would not result in new or more significant energy impacts than those addressed in the certified Great Oaks FEIR.

4.19 MANDATORY FINDINGS OF SIGNIFICANCE

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact than "Approved Project"	Checklist Source(s)
1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☒	☐	Pg. 1-94
2. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	☒	☐	Pg. 1-94
3. Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?	☐	☐	☐	☒	☐	Pg. 1-94
4. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒	☐	Pg. 1-94

4.19.1 Project Impacts

As discussed in the respective sections, the proposed project would not degrade the quality of the environment, pertaining to aesthetics, agricultural and forest resources, biological resources, cultural resources, geology and soils, greenhouse gas, hazards and hazardous materials, hydrology and water quality, land use, mineral resources, population and housing, public services, recreation, transportation, and utilities and services systems, to a greater degree than was previously identified in the Great Oaks FEIR. Mitigation measures would be incorporated, as necessary, to reduce

potentially significant environmental impacts to a less than significant level. With implementation of the measures outlined in the respective sections, the project would not result in new significant air quality or noise impacts. **[Same Impact as Approved Project (Less Than Significant Impact)]**

4.19.2 Cumulative Impacts

Under Section 15065(a)(3) of the CEQA Guidelines, a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that a project has potential environmental effects "that are individually limited, but cumulatively considerable." As defined in Section 15065(a)(3) of the CEQA Guidelines, cumulatively considerable means "that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of current projects, and the effects of probable future projects." In addition, under Section 15152(f) of the CEQA Guidelines, where a lead agency has determined that a cumulative effect has been adequately addressed in a prior EIR, the effect is not treated as significant for purposes of later environmental review and need not be discussed in detail.

The Great Oaks FEIR determined that development of the project would result in significant and unavoidable cumulative aesthetic, air quality, and transportation impacts. As discussed in *Section 4.3 Aesthetics* and *Section 4.16 Transportation*, replacement of the approved office uses with two data center buildings would not result in new or greater aesthetic or transportation impacts and would, therefore, not result in new cumulative impacts either. As discussed in *Section 4.3 Air Quality*, the project would not result in new or significant cumulative impacts to air quality. **[Same Impact as Approved Project (Less Than Significant Impact)]**

4.19.3 Short-term Environmental Goals vs. Long-term Environmental Goals

The 11.15-acre project site, located within the 76-acre property, is currently undeveloped. The project proposes to develop the site with two data center buildings. Construction of the project would result in the temporary disturbance of developed land as well as an irreversible and irretrievable commitment of resources and energy during construction. The operational phase of the project would also consume energy for multiple purposes, including building heating and cooling, lighting, appliances, and electronics.

As described in the respective sections, the project, with the implementation of standard measures and mitigation measures, would not result in new or more significant impacts compared to the Great Oaks FEIR and General Plan SPEIR. Therefore, the proposed project would not hinder long-term environmental goals in favor of short-term environmental goals. **[Same Impact as Approved Project (Less Than Significant Impact)]**

4.19.4 Direct or Indirect Adverse Effects on Human Beings

Consistent with Section 15065(a)(4) of the CEQA Guidelines, a lead agency shall find that a project may have a significant effect on the environment where there is a substantial evidence that the project has the potential to cause substantial adverse effects on human beings, either directly or indirectly. Under this standard, a change to the physical environment that might otherwise be minor must be treated as significant if people would significantly be affected. This factor relates to adverse changes to the environment of human beings generally, and not to effects on particular individuals.

While changes to the environment that could indirectly affect human beings would be represented by all of the designated CEQA issue areas, those that could directly affect human beings include air pollutants, geological hazards, hazardous materials, and noise and vibration. Implementation of identified mitigation measures would reduce potential air quality, geological, hazardous material, and noise and vibration impacts to human beings to a less than significant level. The project would not result in new or greater impacts to human beings than identified in the Great Oaks FEIR and General Plan SPEIR. **[Same Impact as Approved Project (Less Than Significant Impact)]**

Checklist Sources

1. Professional judgement and expertise of the environmental specialist preparing this assessment, based upon a review of the site and surrounding conditions, as well as review of project plans.

2. City of San José. *Great Oaks Mixed Use Project Draft Environmental Impact Report*. May 2014.

3. City of San José. *Envision San José 2040 General Plan Supplemental EIR*. December 2015.

4. California Environmental Protection Agency. Air Resources Board. *First Update to the AB 32 Scoping Plan*. Accessed 18 June 2014. Available here: http://www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm

5. Illingworth & Rodkin, Inc. *Air Quality and GHG Emissions Assessment*. January 15, 2016.

6. Illingworth & Rodkin, Inc. *Noise Assessment*. August 28, 2015.

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Santa Clara Valley Water District. *Anderson Dam EAP 2003 Flood Inundation Map*. Sheet 5. March 2003.

SECTION 6.0 AUTHORS AND CONSULTANTS

6.1 LEAD AGENCY

City of San José

Department of Planning, Building, and Code Enforcement
Harry Freitas, *Director*
Jason Rogers, *Division Manager*
David Keyon, *Planner*

6.2 CONSULTANTS

David J. Powers & Associates, Inc.

John Schwarz, *Principal*
Nora Monette, *Principal*
Julie Wright, *Project Manager*
Ryan Shum, *Assistant Project Manager*
Zach Dill, *Graphic Artist*

Illingworth & Rodkin, Inc.

Michael Thill, *Principal*
James Reyff, *Principal*
William Popenuck, *Consultant*

MITIGATIONS	MONITORING AND REPORTING PROGRAM					
	Documentation of Compliance [Applicant/Proponent Responsibility]			Documentation of Compliance [Lead Agency Responsibility]		
Adopted Mitigation Measures	**Responsibility for Implementation**	**Method of Compliance Or Mitigation Action**	**Timing of Compliance**	**Monitoring Reporting Responsibility**	**Actions/ Reports**	**Monitoring Timing or Schedule**
Biological Resources						
MM BIO-1.1: Prior to approval of a Planned Development permit for any phase of development on the Project site, an updated tree survey shall be prepared by a certified arborist or licensed landscape architect that identifies the number of orchard and non-orchard trees on the site for the parcels being developed. The tree survey shall also include the preservation suitability of trees onsite based on Project plans. The site design and Planned Development permit approval shall incorporate preservation of existing trees to the maximum extent practicable, to the satisfaction of the Director of PBCE. In locations where preservation of existing trees is not feasible due to site constraints, relocation and replanting of significant existing trees (especially native species) shall be incorporated into the Project, where feasible and appropriate, to the satisfaction of the Director of PBCE.	The project applicant	Preparation of an updated tree survey to identify the number of orchard and non-orchard trees on-site	Tree survey shall be submitted to the PBCE's Environmental Review Division Supervising Planner prior to the issuance of grading permits and grading on-site	PBCE Environmental Review Division Supervising Planner	An updated tree survey	The measure shall be implemented prior to grading and construction activities

<table>
<tr>
<td>MM BIO-1.2: Replacement trees, with species and size, shall be shown on landscape plans submitted at the Planned Development permit stage. Trees to be removed as part of the Project shall be replaced at the following ratios:

<table>
<tr><th rowspan="2">Diameter of Tree to be Removed</th><th colspan="3">Type of Tree to be Removed</th><th rowspan="2">Minimum Size of Each Replacement Tree</th></tr>
<tr><th>Native</th><th>Non-Native</th><th>Orchard</th></tr>
<tr><td>18 inches or greater</td><td>5:1</td><td>4:1</td><td>3:1</td><td>24-inch box</td></tr>
<tr><td>12-18 inches</td><td>3:1</td><td>2:1</td><td>None</td><td>24-inch box</td></tr>
<tr><td>Less than 12 inches</td><td>1:1</td><td>1:1</td><td>None</td><td>15-gallon container</td></tr>
<tr><td colspan="5">Notes: X:X = tree replacement to tree loss ratio
Trees greater than 18-inches in diameter shall not be removed unless a Tree Removal Permit, or equivalent, has been approved for the removal of such trees.</td></tr>
</table>
</td>
<td>The project applicant</td>
<td>A landscape plan showing the replacement trees shall be prepared</td>
<td>The landscape plan shall be submitted for review and approval at the Planned Development Permit stage. A copy of the landscape plan shall be provided to the PBCE’s Supervising Environmental Planner.</td>
<td>Supervising Environmental Planner of the Department of PBCE</td>
<td>The landscape plan showing the replacement trees at the appropriate size and ratios</td>
<td>The landscape plan shall be reviewed and approved during the Planned Development stage, and shall be implemented during site construction</td>
</tr>
<tr>
<td>MM BIO-1.3: The species and exact number of trees to be planted on the site shall be determined in consultation with the City Arborist and to the satisfaction of the Director of PBCE. In the event the sites do not have sufficient area to accommodate the required tree mitigation, one or more of the following measures shall be implemented at the Planned Development permit stage:

• The size of a 15-gallon replacement tree may be increased to 24-inch box and count as two replacement trees.
• An alternative site(s) will be identified for additional tree planting. Alternative sites may include local parks or schools, or installation of trees on adjacent properties for screening purposes, to the satisfaction of the Director of PBCE.
• A donation equal to the replacement/installation cost per replacement tree will be made to Our City Forest or a similar organization for in-lieu off-site tree planting in the community. These funds will be used for tree planting and maintenance of planted trees for approximately three years. A donation receipt for off-site tree planting will be provided to the Planning Project Manager prior to issuance of a development permit.</td>
<td>The project applicant</td>
<td>A landscape plan showing the number and type of replacement trees to be planted shall be prepared</td>
<td>The landscape plan shall be submitted for review and approval at the Planned Development Permit stage. A copy of the landscape plan shall be provided to the PBCE’s Supervising Environmental Planner.</td>
<td>Supervising Environmental Planner of the Department of PBCE</td>
<td>A landscape plan showing the number and type of replacement trees to be planted; or, a donation receipt for off-site tree planting will be provided to the Planning Project Manager and the Supervising Environmental Planner of</td>
<td>Prior to issuance of a development permit</td>
</tr>
</table>

					the Department of PBCE prior to issuance of a PD Permit.	
MM BIO-1.4: The following tree protection measures shall also be included in the project in order to protect trees to be retained during construction: <u>Design Applications</u> • Design efforts shall focus on preserving trees on-site identified as having preservation suitability, per the 2008 and 2013 HortScience tree surveys and as updated in the tree survey completed under MM BIO-1.1. The 2008 report identified trees #164-200 located along the southern boundary of the site for preservation and the 2013 report identified trees #6, 44-46, 49, 51-55, 57-59, 61, 62, **67-69, 70-74**, 77-82, 87, 89, 93-96, 99, and 100 for preservation. **(trees in bold are on or adjacent to the Equinix project site)** • Plot the vertical and horizontal elevations of trees to be preserved on all plans. • Establish a Tree Protection Zone (TPZ) around each tree to be preserved. For design purposes, the TPZ shall be the edge of the dripline. • Underground services including utilities, sub-drains, water or sewer shall be routed outside the TPZ. • Any herbicides placed under paving materials must be safe for use around trees and labeled for that use. • Irrigation systems must be designed so that no trenching occurs within the TPZ. <u>Pre-construction and Demolition Treatments</u> • The project proponent shall retain a certified consulting arborist. The construction superintendent shall meet with the consulting arborist before beginning work to discuss work procedures and tree protection. • Fence all trees to be preserved to completely enclose the TPZ prior to demolition, grubbing, or grading. Fences shall be six-foot chain link or equivalent as approved by the consulting arborist. • Trees to be preserved may require pruning to clean the crown of dead, dying, diseased, and otherwise structurally unsound limbs	The project applicant	Landscape plans for the Planned Development permit(s) shall include landscape plans showing compliance with MM BIO-1.2 and MM BIO-1.3. Pre-construction and construction measures shall be printed on applicable contracts and approved grading and building permit plans	Landscape Plans shall be submitted for review and approval prior to issuance of Planned Development Permits. Pre-construction and construction measures shall be printed on applicable contracts and approved grading and building permit plans	Supervising Environmental Planning of the Department of PBCE	Landscape plans shall be submitted for review and approval prior to issuance of PD Permits. Pre-construction and construction measures shall be printed on applicable contracts and approved grading and building permit plans	For the duration of construction activities

as well as to provide clearance for construction. All pruning shall be completed by an ISA Certified Arborist or Tree Worker and adhere to the most recent edition of the American National Standard Institute's A300 and Z133 publications and the Best Management Practices for Pruning of the International Society of Arboriculture. • Ensure that the irrigation system within the TPZ is intact and operational. <u>Tree Protection During Construction</u> • Prior to beginning work, contractors working in the vicinity of trees to be preserved are required to meet with the consulting arborist at the site to review all work procedures, access routes, storage areas, and tree protection measures. • Any grading, construction, demolition or other work that is expected to encounter tree roots shall be monitored by the consulting arborist. • If injury should occur to any tree during construction, it shall be evaluated as soon as possible by the consulting arborist so that appropriate treatments can be applied. • Fences shall be erected to protect trees to be preserved. Fences define a specific TPZ for each tree or group of trees. Fences are to remain until all site work has been completed. Fences may not be relocated or removed without permission of the consulting arborist. • Construction trailers, traffic, and storage areas must remain outside fenced areas at all times. • Prior to grading, pad preparation, excavation for foundations/footings/walls, trenching, root pruning outside the TPZ may be required. Roots shall be cut by manually digging a trench and cutting exposed roots with a saw, vibrating knife, rock saw, narrow trencher with sharp blades, or other approved root pruning equipment. The consulting arborist shall identify where root pruning is required. • All underground utilities drain lines or irrigation lines shall be routed outside the TPZ. If lines must traverse through the protection area, they shall be tunneled or bored under the tree as directed by the consulting arborist. • No materials, equipment, spoil, waste or wash-out water may be deposited, stored, or parked within the TPZ (fenced area). • Any additional tree pruning needed for clearance during construction must be performed by a qualified arborist and not by construction personnel.						

The project proposes to implement the following mitigation measures to reduce impacts to nesting birds/raptors to a less than significant level: **MM BIO-2.1:** The project shall implement one of the following two measures to reduce impacts to nesting birds and raptors to a less than significant level: • Avoidance. Construction shall be scheduled to avoid the nesting season to the extent feasible. In the South San Francisco Bay area, most raptors breed from January through August. If construction can be scheduled to occur between September and December, the nesting season would be avoided, and no impacts to nesting birds/raptors would be expected. -OR- • Preconstruction/Pre-disturbance Surveys. If it is not feasible to schedule construction between September and December, preconstruction surveys for nesting raptors shall be conducted by a qualified ornithologist to ensure that no active nests will be disturbed or destroyed during project implementation. Preconstruction surveys for nesting birds/raptors should be conducted no more than 14 days prior to the initiation of construction activities during the early part of the breeding season (January through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). During this survey, the ornithologist would inspect the ground in open fields, as well as all trees in and immediately adjacent to the impact areas for nesting birds and raptor. If an active nest is found close enough to the construction area to be disturbed by these activities, the ornithologist, in consultation with CDFG, would determine the extent of a construction-free buffer zone (typically 250 feet) to be established around the nest. **MM BIO-2.2:** Inhibit Nesting. If vegetation is to be removed by the project and all necessary approvals have been obtained, potential nesting substrate (e.g., bushes, trees, grass, burrows) that will be removed by the project shall be removed before the start of the nesting season (January), if feasible, to help preclude nesting. Removal of vegetation or structures to be removed by the project shall be completed outside of the nesting season, which extends from January through August.	The project applicant	Avoidance of construction activities during nesting seasons. If not possible, pre-construction surveys shall be conducted by a qualified ornithologist, and a report with recommendation shall be submitted to the Planning Department.	If pre-construction surveys necessary, ornithologist report must be submitted prior to the issuance of a grading permit.	Supervising Environmental Planner of the Department of PBCE	A report indicating the results of the survey (or any other environmental investigation reports, if applicable) and any designated buffer zones.	Surveys shall be conducted prior to issuance of grading permits.

MM BIO-2.3: A final report on nesting birds and raptors, including any protection measures, shall be submitted to the Environmental Principal Planner, and be completed to the satisfaction of the Director of PBCE prior to start of grading.						
The project proposes to implement the following measures to reduce impacts to pallid bats to a less than significant level: **MM BIO-3.1:** Construction activities involving potential roost sites shall be conducted after the maternity roost season. The maternity roost season begins as early as March 1 and the young are volant (fly off on their own) by July 31. **MM BIO-3.2:** Pre-demolition and pre-construction surveys for roosting bats shall be conducted by a qualified bat biologist after the maternity season and before the wet season (i.e., between August 15 and October 15) and no more than 14 days prior to any removal of buildings or removal of trees greater than 12 inches in diameter. No activities that would result in disturbance to active roosts shall proceed prior to the completed surveys. If no active roosts are found, then no further action shall be warranted. If a maternity roost is present, a qualified bat biologist shall determine the extent of construction-free zones around active nurseries located during surveys. CDFG shall also be notified of any active nurseries within the construction zone. Initial surveys can be conducted any time prior to the pre-demolition surveys to establish if a particular location has supported, or supports, roosting bats. A survey for indications of nursery roosts would be conducted prior to March 1. If indications of a maternity roost are present, the structure cannot be removed or modified before a maternity roost becomes reestablished. **MM BIO-3.3:** If indications of a maternity roost are present, bats can be excluded from the building or tree after July 31 and before March 1 to prevent the formation of maternity colonies. Such non-breeding bats can be safely evicted, under the direction of a qualified bat biologist, by sealing crevices and providing them one-way exclusion doors. Such a device would be employed in all expansion joints during dark hours as a temporary device to prevent the	The project applicant	Avoidance of construction activities during nesting seasons. If not possible, pre-construction surveys shall be conducted by a qualified bat biologist, and a report with recommendation shall be submitted to the Planning Department.	If pre-construction surveys necessary, the bat biologists' report must be submitted prior to the issuance of a grading permit.	Supervising Environmental Planner of the Department of PBCE	A report indicating the results of the survey (or any other environmental investigation reports, if applicable) and any designated buffer zones	Surveys shall be conducted prior to issuance of grading permits.

formation of a maternity colony. In order not to exclude all potential maternity roost habitat at once, only one half of the expansion joints would be sealed at any one given time during the maternity colony-nesting season. This action would allow bats to leave during dark hours, thus increasing their chance of finding new roosts with a minimum of potential predation during daylight. **MM BIO-3.4**: A final report of pallid bats, including any protection measures, shall be submitted to the Director of PBCE prior to start of grading.						
Cultural Resources						
The project proposes to implement the following mitigation measures to reduce the project's impact to unknown prehistoric and historic archaeological resources to a less than significant level: **MM CUL-1.1:** The project proponent shall have a qualified archaeologist present on the site to monitor subsurface construction excavation activities into native soils during future development on the site. The frequency and duration of the monitoring shall be at the discretion of the archaeologist and dependent on his/her subsurface observations during construction operations. **MM CUL-1.2:** Construction personnel involved in the site clearing and subsequent grading and trenching shall be warned that there is a potential for the discovery of archaeological materials. Indicators of archaeological site deposits include, but are not limited to, the following: darker than surrounding soils, evidence of fire (ash, fire altered rock and earth, carbon flecks), concentrations of stone, bone and shellfish, artifacts of these materials and burials, either animal or human. **MM CUL-1.3:** In the event any unanticipated prehistoric or significant historic era cultural materials are exposed during construction, all grading and/or excavation operations within 50 feet of the find shall be halted, the Director of PBCE shall be notified, and a qualified professional archaeologist shall examine the find and make appropriate recommendations regarding the significance of the find and the appropriate mitigation. The recommendation shall be implemented and could include collection, recordation, and analysis of any significant cultural materials.	The project applicant	During excavation activities, an archaeologist shall monitor excavation activities in accordance with MM CUL-1.1. Results of monitoring shall be presented to the Division Manager of the Environmental Division of PBCE. Prior to start of construction operations, workers shall be briefed per MM CUL-1.2.	All measures shall be implemented for the duration of construction activities	Supervising Environmental Planner of the Department of PBCE	A final report indicating the results and mitigation measures implemented shall be submitted to the Planning Department after completion of excavation and prior to approval of occupancy permits.	The measure shall be implemented prior to and during construction.

MM CUL-1.4: In the event that human remains and/or cultural materials are found, all project-related construction shall cease within a 50-foot radius of the find in order to proceed with the testing and mitigation measures required. Pursuant to Section 7050.5 of the Health and Safety Code and Section 5097.94 of the Public Resources Code of the State of California: • In the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his authority, he shall notify the Native American Heritage Commission who shall attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this State law, then the land owner shall re-inter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance. **MM CUL-1.5**: A final report shall be submitted to the Director of PBCE. This report shall contain a description of the mitigation program that was implemented and its results, including a description of the monitoring and testing program, a list of the resources found, a summary of the resources analysis methodology and conclusion, and a description of the disposition/curation of the resources. The report shall verify completion of the mitigation program to the satisfaction of the Director of PBCE.		Measures shall be printed on all approved grading and building permit plans. A final archeologist report shall be submitted to the Division Manager of the Environmental Review section of PBCE prior to completion of earthwork and excavation activities.				
Hazardous Materials						
The project proposes to implement the following mitigation measures to reduce impacts from hazardous materials that may be found in stockpiled soil or that may be encountered during site development to a less than significant level: **MM HAZ-1.1:** Prior to issuance of any Planned Development Permit, a soil management plan (SMP) shall be developed that identifies management practices for characterizing the stockpiled soil and handling buried structures, wells, burn areas, debris, or impacted soil that may be encountered during site development activities. If, after characterizing the stockpiled soil (or other impacted soil encountered on-site), concentrations of chemicals are found above	The project applicant	A draft of the SMP shall be submitted for review and approval. If remedial action required, evidence of approval from the appropriate	Prior to issuance of any Planned Development Permit	Supervising Environmental Planner of the Department of PBCE	The SMP shall be reviewed and evidence of regulatory agency approval shall be submitted prior to issuance of	The measures shall be implemented prior to demolition and construction activities

residential CHHSLs or other clean up level approved by a regulatory oversight agency, remedial measures are required. Possible remedial measures include: 1) excavation and off-site disposal of the impacted soil at a permitted facility; 2) use of engineering and administrative controls such as consolidation and capping of the soil on-site and land use covenants restricting certain activities/uses; and 3) a combination of the above. The project shall obtain regulatory agency oversight and approval of the remedial measure(s) prior to site development.		regulatory agency shall be provided prior to issuance of PD Permit.			any Planned Development Permit	
Transportation						
The project proposes to implement the following mitigation measure to reduce the project's impact to the intersection of US 101 and Blossom Hill Road (West): **MM TRAN-1.1:** The project proposes to make a fair-share contribution towards the planned Edenvale Area Development Policy improvements at US 101 and Blossom Hill Road (West), which include adding a third right-turn lane to the southbound US 101 off-ramp, adding a third eastbound through lane, and adding a third westbound through lane, and updating pedestrian and bicycle facilities in conformance with the General Plan. These improvements would mitigate the project's impact at US 101 and Blossom Hill Road (West) to a less than significant level. The improvements would require widening the Blossom Hill Road overpass and would improve the intersection level of service from LOS F to LOS B. The project's fair-share contribution shall be made prior to issuance of building permits.	The project applicant	Payment of fair share fees shall be made prior to issuance of building permits. A copy of the receipt shall be submitted to the Supervising Environmental Planner of the Department of PBCE	Prior to issuance of building permits.	Supervising Environmental Planner of the Department of PBCE	A receipt or record indicating that the fair-share contribution has been made	Fees shall be paid prior to the issuance of building permits
Cumulative Impacts						
In compliance with the HCP, the project shall implement the following mitigation measure to reduce its indirect impact to sensitive serpentine habitat to a less than significant level: **MM C-BIO-1.1:** The project shall comply with the HCP/NCCP and pay the applicable nitrogen deposition fee based on the number of new vehicle trips.	The project applicant	The applicant shall submit an HCP applicant form and pay any applicable HCP fees prior to the issuance of grading permits.	Prior to issuance of grading permits.	Supervising Environmental Planner of the Department of PBCE	Submittal of HCP application to the Habitat Agency and a receipt or record indicating that the fee has been paid	The measure shall be implemented prior to issuance of grading permits