C. SUSTAINABLE SITES

1.0 Site Selection

Sustainable Sites Credit 1.0: 1 (one) point

Objective: To avoid development of inappropriate sites and reduce the environmental impact from the location of a building on a site.

Narrative: To ensure minimum environmental impact, the selected site for the Agency's headquarters had to meet the following requirements:

Prime Farmland

According to the American Farmland Trust and the Division of Land Resource Protection, prime farmland is defined as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber and oilseed crops, and is available for these uses. Attachment 'A' presents the 1996 prime farmland classified by the Division of Land Resource Protection in the vicinity of the new headquarters facility. As illustrated in this attachment, the project site was not classified as prime farmland at the time of purchase in 1996.

100-Year Flood Elevation

Since the Federal Emergency Management Agency (FEMA) has classified the project as "areas in which flood hazards are undetermined," the Agency has looked to other regulatory agencies (Army Corps of Engineers and the United States Department of Interior Geologic Survey) to establish the 100-year flood elevation. In November 2001, the Army Corps of Engineers (ACOE) prepared a Supplemental Final Impact Statement / Environmental Impact Report for the Prado Basin and Vicinity, which established the 100-year flood elevation to be 541.1 (see Attachment 'B'). Attachment 'C' depicts the project location to be between elevation 570 and 580, which is greater than 30 feet above the 100-year flood elevation established by ACOE. In addition, the United States Department of Interior Geological Survey (USGS) established the 100-year flood elevation to be 543, which differs from the elevation established by the ACOE by 2 feet. This difference is insignificant since the project site is greater than 30 feet above both elevations.

Local Habitat and Wetlands Proximity

In May 1999, as part of the Program Environmental Impact Report, a Biological Resources Impact Analysis was conducted for the project site and vicinity. This analysis evaluated threatened and endangered species and jurisdictional wetlands. It was determined that no state or federal endangered or threatened species were found within the project site. Two wetlands were found at two distinct locations in the vicinity of the project site, of which the closest is more than 900 feet away.

Land Designation

In December 1995, prior to the purchase of the project site, the Agency contracted the services of a consulting appraiser to prepare a General Appraisal Report of the project site and vicinity. This certified report identified the project site was used for the purpose of agriculture (dairy farming) not public parkland.

Projects and Activities: To ensure that the project site did not meet any of the prohibited criteria, project was sited on the Division of Land Resources Protection Farmland Map and it was not classified as a prime farmland at the time of purchase. Based on the Federal Emergency Management Agency Flood Insurance Rate Map, the Army Corps of Engineers (ACOE) Supplemental Final Impact Statement/Environmental Impact Report for the Prado Basin and Vicinity, the project area was classified as "areas in which flood hazards are undetermined." A Biological Resources Impact Analysis conducted within the project site as part of the Program Environmental Impact Report showed that there were no state or federal endangered or threatened species within the area. A General Appraisal Report identified the project area to be earmarked for agriculture (dairy farming).

2.0 Alternative Transportation, Bicycle Friendly

Sustainable Sites Credit 4.2: 1 (one) point

Objective: To reduce pollution and land development impacts from automobile use.

Narrative: Bicycle racks and shower/changing facilities were provided to reduce pollution and land development impacts from automobile use.

Projects and Activities: The facility has a total of 14 bicycle racks and 10 shower/changing facilities.

The table below provides information on products used and a list of companies that supply these products. **Please note**: this list should not be considered as a recommendation. Individuals/organizations using this information are responsible for researching the products and companies prior to engaging in any business agreement.

Product Used	Company	Address	Phone	Fax	Web Site
"Swerve" Standard Bike Rack	American Bicycle Security Company	PO Box 7359 Ventura, CA 93006	800-245-3723 805-933-3688	805-933-1865	www.americanbike.com

Bicycle Racks

3.0 Alternative Transportation, Alternative Fuel Refueling Stations

Sustainable Sites Credit 4.3: 1 (one) point

Objective: To reduce pollution and land development impacts from automobile use.

Narrative: The project has provided electric vehicle charging stations to reduce pollution and impacts from automobile use.

Projects and Activities: The facility has nine electric vehicle charging stations to accommodate a minimum of 3% of the total project parking capacity. Installed stations are a combination of both inductive and conductive stations to accommodate a wide variety of Electric Vehicle (EV) models. In addition, the Agency has installed a total of 10 charging receptacles for electric service vehicles (Global Electric Motorcars [GEM] and carts). There are a total of 19 charging stations: three conductive chargers, six inductive chargers and ten 110-V GEM-Cart Receptacles.

The table below provides information on products used and a list of companies that supply these products. **Please note**: this list should not be considered as a recommendation. Individuals/organizations using this information are responsible for researching the products and companies prior to engaging in any business agreement.

Product Used	Company	Address	Phone	Fax	Web Site
GEN III (TAL) Inductive Charger	Electric Transportation Engineering Corporation	401 S 2nd Ave. Phoenix, AZ 85003	602-716-9576	602-256-2606	www.etecevs.com
Pedestal for GEN III (TAL) Inductive Charger	Electric Transportation Engineering Corporation	401 S 2nd Ave. Phoenix, AZ 85003	602-716-9576	602-256-2606	www.etecevs.com
EV00700 ICS 200B – Public Conductive Charger	Electric Vehicle Infrastructure Inc.	11839 Industrial Court Auburn, CA 95603	530-823-8077	530-823-0857	www.evii.com
EV00147 BV Parking Only Sign	Electric Vehicle Infrastructure Inc.	11839 Industrial Ct. Auburn, CA 95603	530-823-8077	530-823-0857	www.evii.com
EV00698 Pedestal for EVCD-200B Conductive Charger	Electric Vehicle Infrastructure Inc.	11839 Industrial Ct. Auburn, CA 95603	530-823-8077	530-823-0857	www.evii.com
Toyota TCG 2000, Magne Charge Inductive Charger for RAV4 EV	Clean Fuel Connection, Inc.	127 La Porte Street Unit M Arcadia, CA 91006	888-890-GOEV	626-445-1450	www.cleanfuelconnection.com

Electric Vehicle Charging Station

4.0 Alternative Transportation, Parking Reductions

Sustainable Sites Credit 4.4: 1 (one) point

Objective: To reduce pollution and land development impacts from automobile use.

Narrative: The project is located within the City of Chino and is governed by the City of Chino's Planning Department. During planning approval reviews, the City set the minimum parking requirement for the project at 295 vehicles to accommodate employees, visitors and Agency vehicles.

Projects and Activities: The project has provided 295 on-site parking spaces to meet, but not exceed, the minimum City requirement. Additionally, the Agency has an active rideshare program which provides for carpool participant match-ups, flexible hours to accommodate rideshare needs and social programs with prize incentives to encourage participation in the program. The Agency has designated 10 parking spaces, adjacent to building entries, for carpool parking to serve 5% of the building occupants.

Parking area (east side of the headquarters)

5.0 Reduced Site Disturbance, Protect and Restore Open Space

Sustainable Sites Credit 5.1: 1 (one) point

Objective: To conserve existing natural areas and restore damaged areas to provide habitat and promote biodiversity.

Narrative: Prior to IEUA's purchase of the land, the site was occupied by an operating dairy farm. Due to the environmental problems associated with dairy farm operation, the site is considered to be a degraded site.

Projects and Activities: The project is restoring the open space areas, designated on the attached site plan (see Attachment 'D'), with a California native and California adaptive landscape pallette, with the exception of the event lawn area.

Native Plants at IEUA Headquarters

6.0 Reduced Site Disturbance, Maximize Open Space

Sustainable Sites Credit 5.2: 1 (one) point

Objective: To conserve existing natural areas and restore damaged areas to provide habitat and promote biodiversity.

Narrative: The City of Chino's local zoning requirement for open space requires setbacks only from the front and rear property lines.

Projects and Activities: To conserve existing natural areas, restore damaged areas, provide habitat and promote biodiversity within the vicinity, the Agency reduced the development of its footprints (site area, building footprint, future building expansion, parking lot, water feature and pavement) to exceed the local zoning open space requirement for the site by 25%.

7.0 Storm Water Management, Flow Reduction

Sustainable Sites Credit 6.1: 1 (one) point

Objective: To limit disruption of natural water flows by eliminating storm water runoff, increasing on-site infiltration and eliminating contaminants.

Narrative: Storm water runoff and contamination were eliminated and on-site infiltration was increased by limiting the disruption of natural water flows.

Projects and Activities: The site has been graded in such a way as to create an on-site retention basin with a capacity of 75.9 acre-feet. It was estimated that the site could retain a 25-year storm event with a controlled release of 80 cubic feet per second. The roof drainage system receives and conveys storm water to the existing storm drain system by following a flow pattern that maximizes infiltration and minimizes runoff. All storm drain pipes on-site, discharge into the channel and pond between the buildings. The net imperviousness for the pre-project condition is 49% while the net imperviousness for the post-project calculation is 47%, thus satisfying the requirments described under Sustainable Sites Credit 6.1. The calculations provided in support of the net imperviousness for the pre-project and post-project conditions were based upon Caltrans' methodology (refer to Attachment ‘E’ for California Department of Transportation Highway Design Manual, Figure 819.2A, page 810-17).

Roof Drainage System

Channel

8.0 Storm Water Management, Flow Treatment

Sustainable Sites Credit 6.2: 1 (one) point

Objective: To limit disruption of natural water flows by eliminating storm water runoff, increasing on-site infiltration and eliminating contaminants.

Narrative: Storm water runoff and contamination were eliminated and on-site infiltration was increased by limiting the disruption of natural water flows.

Projects and Activities: The storm water management plan primarily consists of infiltration/retention basins in order to remove pollutants (Total Suspended Solids [TSS] and Total Phosphorus [TP]) from on-site storm runoff produced from an 85th percentile 24-hour storm event ("first flush" storm runoff). Bio-filters and bio-swales are included as pre-treatment for the infiltration/retention basins. A large wet pond is also used as a Best Management Practices (BMP) facility. The majority of the parking areas have permeable surfaces which provide additional stormwater treatment, thus improving water quality and satisfying the requirements described under Sustainable Sites Credit 6.2.

Wet Pond

Bioswales

Biostrips

9.0 Landscape & Exterior Design To Reduce Heat Islands, Non-Roof

Sustainable Sites Credit 7.1: 1 (one) point

Objective: To reduce heat islands (thermal gradient differences between developed and undeveloped areas) to minimize impact on microclimate and human and wildlife habitat.

Narrative: Heat islands were reduced (thermal gradient difference between developed and undeveloped areas) to minimize impact on microclimate and human and wildlife habitat.

Projects and Activities: The project has installed multiple site paving materials, including: natural concrete, porous concrete, amended and unamended decomposed granite, masonry pavers and asphalt. All of the concrete installed on-site is natural color. As there was no specific manufacturer's data available for the paving materials to demonstrate reflectance, IEUA contracted with Atlas Materials Testing to perform reflectance testing of all proposed paving materials. All tests were performed in accordance with American Society for Testing and Materials (ASTM) E903-96 test methods. To provide maximum shade, more than 200 trees were planted in the parking area. This is double the number required for a typical parking lot. The planting of trees has greatly improved the environment especially in mitigating the high temperatures that are typical of this interior region during summer months.

The table below provides information on products considered and a list of companies that supply these products. **Please note**: this list should not be considered as a recommendation. Individuals/organizations using this information are responsible for researching the products and companies prior to engaging in any business agreement.

Product Used	Company	Address	Phone	Fax	Web Site
Hemispherical spectral reflectance and total emmitance test report	Atlas Weathering Services Group	45601 N. 47th Ave. Phoenix, AZ 85087	623-465-7356	623-465-9409	www.atlaswsg.com
Porous Concrete Pavers	Ben F. Smith Inc.	4420 N. Baldwin Ave. El Monte, CA 91731	626-444-2543	626-442-5431	www.benfsmithinc.com
Asphalt	Ben's Asphalt Inc.	2200 S. Yale St. Santa Ana, CA 92704	714-540-1700	714-540-1709	www.bensasphalt.com
Paving Stones	Ackerstone	13296 Temescal Canyon Rd. Corona, CA 92883	909-674-0047	909-674-0477	www.ackerstone.com
Amended and Unamended Granite	Gail Materials	1256 Magnolia Ave. Corona, CA 92879	909-279-1095	909-279-0956	none

Exterior Walkway Pavers

Asphalt & Granite

10.0 Landscape & Exterior Design To Reduce Heat Islands, Roof Surfaces

Sustainable Sites Credit 7.2: 1 (one) point

Objective: To reduce heat islands (thermal gradient differences between developed and undeveloped areas) to minimize impact on microclimate and human and wildlife habitat.

Narrative: Heat islands were reduced (thermal gradient difference between developed and undeveloped areas) to minimize impact on microclimate and human and wildlife habitat.

Projects and Activities: The project has specified and installed Environmental Protection Agency (EPA) Energy Star labeled roofing materials with 0.79 reflectance and 0.90 emissivity values for 89% of the total non-equipment roof surfaces**.**

The table below provides information on products considered and a list of companies that supply these products. **Please note**: this list should not be considered as a recommendation. Individuals/organizations using this information are responsible for researching the products and companies prior to engaging in any business agreement.

Product Used	Company	Address	Phone	Fax	Web Site
Firestone Ultraply TPO	Firestone Building Products Company	525 Congressional Blvd. Camel, IN 46032	800-428-4442	317-575-7100	www.firestonebpco.com

EPA Energy Star labeled Roofing Material

11.0 Light Pollution Reduction

Sustainable Sites Credit 8.0: 1 (one) point

Objective: To eliminate light trespass from the building site, improve night sky access, and reduce development impact on nocturnal environments.

Narrative: Light trespass was eliminated from the building site, night sky access was improved and development impact on nocturnal environments was reduced.

Projects and Activities: The exterior lighting scheme has been designed to prevent light trespass while maintaining a maximum average illuminance of 1.96 footcandles in the parking areas. Walkway areas and other landscape zones have averages well under 0.5 footcandles. The lighting fixtures selected for the project are all classified as full-cutoff fixtures. House side shields were added to fixtures near property boundaries to ensure that direct beam illumination would be constrained to the site. Specified pole heights for parking areas are 15 feet; poles that are located within walkway areas were reduced to 10 feet. These fixture mounting heights were selected to reduce the viewing angle to the minimum possible while maintaining a moderate fixture spacing. See Attachment 'F' for McGraw Edison's lighting brochure.

The net result is an overall exterior lighting plan that eliminates light trespass beyond the site boundaries and provides average lighting levels within the Illuminating Engineering Society of North America (IESNA) Practice Manual recommendations.

The table below provides information on products considered and a list of companies that supply these products. **Please note**: this list should not be considered as a recommendation. Individuals/organizations using this information are responsible for researching the products and companies prior to engaging in any business agreement.

Product Used	Company	Address	Phone	Fax	Web Site
Cooper Lighting McGraw-Edison Credenza Series Luminaries	Cooper Lighting	1121 Highway 74 South Peachtree City, GA 30269	770-486-4800	770-486-4801	www.cooperlighting.com

Outdoor Light Fixtures