Low-Effect Habitat Conservation Plan for the Valley Elderberry Longhorn Beetle for The Offices at Parkshore (APNs 071-0530-17 and 071-0530-18) in Folsom, Sacramento County, California

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EXECUTIVE SUMMARY

Mark III Engineering Contractors has applied for a permit pursuant to Section 10(a)(1)(B) of the Endangered Species Act of 1973 as amended (16 U.S.C. 153101544, 87 Stat. 884), from the U.S. Fish & Wildlife Service (USFWS) for the incidental take of the threatened Valley Elderberry Longhorn beetle (VELB) (*Desmocerus californicus dimorphus*). The potential taking would occur incidental to construction of nine office buildings within a 6.48-acre undeveloped site that is part of the Lake Forest Technical Center located on Parkshore Drive, in Folsom (Sacramento County), CA. This project site consists of two adjacent parcels (APNs 071-0530-17 and 071-0530-17) and is known as The Offices at Parkshore.

The project site was formerly mined and is presently covered with dredge tailings. Grading and construction of the office buildings and parking lots will result in the removal of 39 plants of Blue Elderberry (*Sambucus mexicana*), the food plant of the threatened beetle. These plants (two clonal clusters and a solitary individual) grow in three locations within the boundaries of the project site. Forty-seven stems equal to or greater than 1 inch in basal diameter were identified during the elderberry inventory. Although surveys for adult beetles were not conducted, the beetle is presumed to be present at the site due to the observation of one bona fide emergence hole on a resident elderberry plant. Therefore, Mark III Engineering Contractors has applied for a Section 10(a)(1)(B) permit and proposed to implement the habitat conservation plan (HCP) described herein, which provides for measures for mitigating adverse effects on the VELB for activities associated with the removal of the 39 elderberry plants necessary to construct the office buildings. Mark III Engineering Contractors is requesting issuance of the Section 10(a)(1)(B) permit for a period of five (5) years.

This HCP summarizes information about the project and identifies the responsibilities of the USFWS and Mark III Engineering Contractors for implementing the actions described herein to benefit the VELB. The biological goal of the HCP is to replace the VELB habitat impacted by the construction project at a secure site in perpetuity. Mark III Engineering Contractors has satisfied its mitigation requirements by transplanting the 39 elderberry plants and by purchasing 11 habitat credits for the threatened VELB from a USFWS-approved conservation bank known as the River Ranch Conservation Bank, which is operated by Wildlands, Inc. and is located in Yolo County. If transplanting of the resident elderberry plants cannot be completed during its winter dormant period (November 15th through February 15th), Mark III agrees to purchase 12 additional VELB habitat credits from the conservation bank (i.e., a total of 23 credits). If these credits are not available at the time of permit issuance, Mark III Engineering Contractors will obtain the necessary credits from another USFWS-approved conservation bank. This HCP also describes measures that ensure the elements of the HCP are implemented in a timely manner. Funding sources for implementation of the HCP, actions to be taken for unforeseen events, alternatives to the proposed permit action, and other measures required by the USFWS are also discussed.

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1.0 INTRODUCTION

This Habitat Conservation Plan (HCP) is for the proposed construction of The Offices at Parkshore, a complex of nine office buildings (74,435 ft.^{2} of new office park) located at the Lake Forest Technical Center on Parkshore Drive in Folsom, Sacramento County, California. It has been prepared pursuant to the requirements of Section 10(a) of the Federal Endangered Species Act (ESA). The HCP is intended to provide the basis for issuance of a Section 10(a)(1)(B) permit to Mark III Engineering Contractors, the permit applicant, to authorize incidental take (see Section 6.0) of the Valley Elderberry Longhorn beetle (VELB) (*Desmocerus californicus dimorphus,* Coleoptera: Cerambycidae), a federally listed threatened species, that could potentially result from the grading and construction activities at the 6.48 acre project site. The U.S. Fish & Wildlife Service (USFWS) has concluded that the project site provides potential habitat for this beetle. Mark III Engineering Contractors requests a permit for a period of five (5) years commencing on the date of permit approval.

This HCP provides an assessment of the existing habitat at The Offices at Parkshore project site for the VELB, evaluates the effects of the proposed project on this beetle, and presents a mitigation plan to offset habitat losses and/or direct harm to this beetle that could result from grading and construction activities at the project site. The biological goal of this HCP is to replace the VELB habitat impacted by the development of The Offices at Parkshore at a secure site in perpetuity. Specifically, 11-23 VELB habitat credits have been purchased from a conservation bank approved by the USFWS for VELB mitigation. Also, 39 elderberry plants at the project site, whose basal trunk diameters are greater than 1 inch, will be transplanted to the same conservation bank.

1.1 PROJECT LOCATION

The Offices at Parkshore project site measures approximately 6.48 acres and is located on Parkshore Drive in the Lake Forest Technical Center area of Folsom, California. It lies south of Folsom Lake, and west of the intersection of Folsom Blvd. and Parkshore Drive, on the south side of Parkshore Drive (Figure 1). The site is located within the boundaries of the Folsom 7.5" U.S. Geological Survey (USGS) topographic quadrangle, specifically in Township 9N. and Range 7E. of the Mt. Diablo Meridian. No section numbers are identified in this portion of the topographic quadrangle. Because of the extensive development that has occurred in the City of Folsom since the Folsom quadrangle was printed in 1967, Figure 2 is a street-level, location map.

1.2 PROJECT SITE

The project site is located in an area where dredge tailings from former mining activities were deposited. Most of the project site is characterized by an urban, ruderal plant community, with degraded remnants of scrub and oak woodland vegetation in a few portions of the site.

Blue elderberry (*Sambucus mexicana*: Caprifoliaceae) grows in three locations at the project site, primarily in the northeastern and northwestern portions of the site. It is the sole food plant for the VELB. Because the VELB is recognized as a federally

threatened species, removal of its food plant is interpreted as "take" of the threatened beetle as defined by the ESA.

Dr. Richard Arnold, President of Entomological Consulting Services, Ltd. performed a survey to inventory the elderberry plants resident at the project site on September 7, 2005. The purpose of the inventory was to collect the information required by the USFWS on the resident elderberry plants to identify potential impacts of the proposed development project and to determine appropriate minimization and mitigation measures. Inventory data were collected at this site in accordance with the USFWS conservation guidelines for the VELB (1999).

A total of thirty-nine elderberry plants with 47 stems whose basal diameters equal to or greater than 1 inch were found growing at three locations at the project site. At two locations, the plants grow as clonal clusters with numerous young, solitary stems, while at the third location is a mature, multi-stemmed solitary plant. Forty-seven (47) stems were of sufficient size (i.e., basal stem diameter $\geq$ 1 inch) to be considered habitat for the VELB. Additional information on the findings of the elderberry survey is presented in Section 4 and Table 1.

1.3 HCP HISTORY

An initial inventory of the elderberry plants occurred in October 2004. A site review meeting with biologist Rick Kuyper of the Sacramento office of USFWS occurred on August 11, 2005 to view the project site and discuss the need for an incidental take permit and appropriate mitigation. Other attendees included John Firchau and Kevin Woodbury of Mark III Engineering Contractors and Dr. Richard Arnold of Entomological Consulting Services, Ltd. As a result of the discussions at this meeting, USFWS advised the project applicant that an incidental take permit would be necessary for the proposed project to comply with the Endangered Species Act. However, the USFWS also acknowledged that if a 20-foot protected area was maintained around the dripline of the resident elderberry plants, portions of the project outside of the protective zone could be constructed prior to issuance of the incidental take permit. As a result of this meeting and subsequent communications, the elderberry plants were re-inventoried on September 7, 2005, plus a draft low-effect HCP was prepared and submitted to the Sacramento office of USFWS in September, 2005.

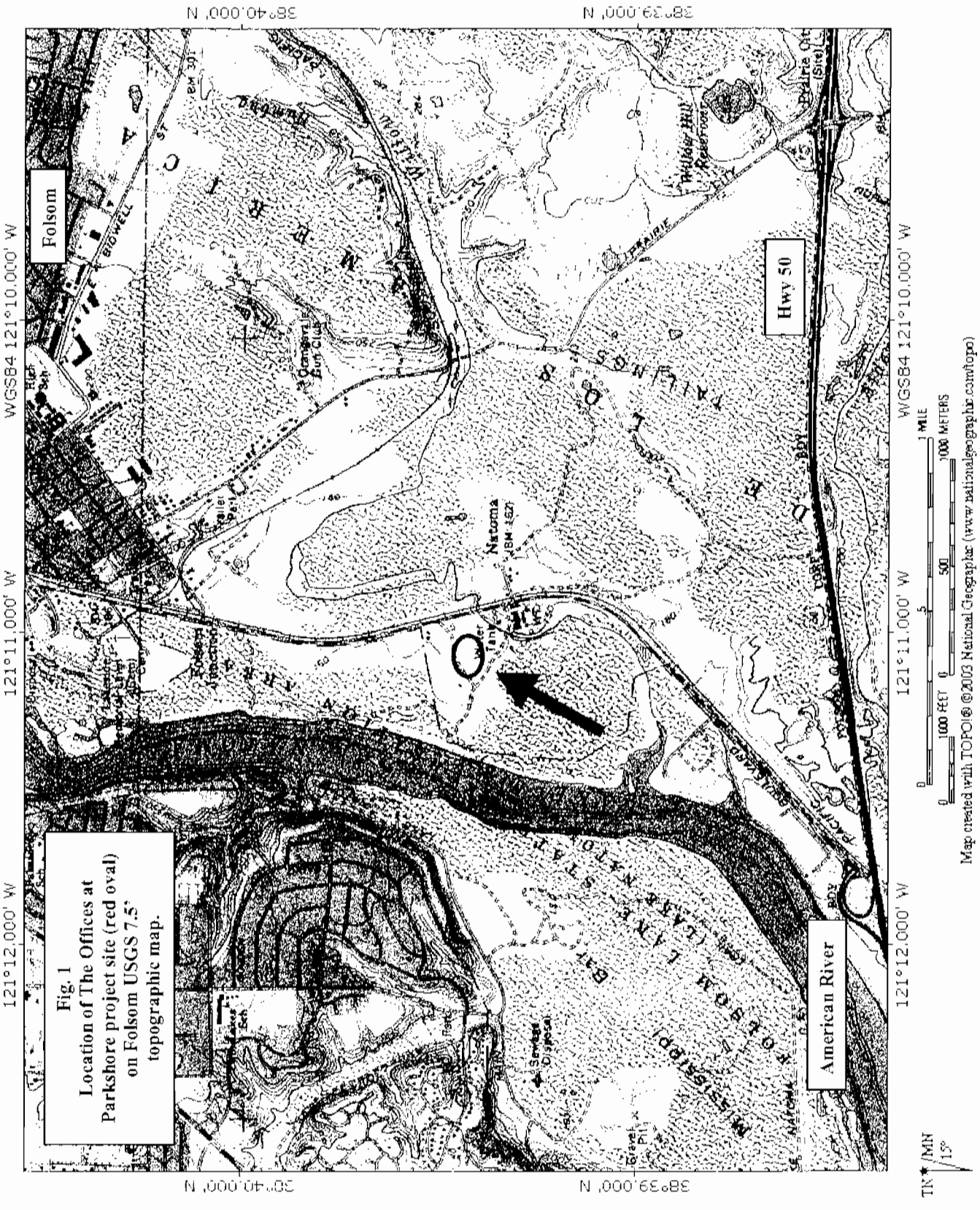

Folsom
Hwy 50
American River
Natoma
Fig. 1
Location of The Offices at
Parkshore project site (red oval)
on Folsom USGS 7.5'
topographic map.
WGS84 121°10.000' W
121°11.000' W
121°12.000' W
38°40.000' N
38°39.000' N
Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)

FIGURE 2 (street-level location map)

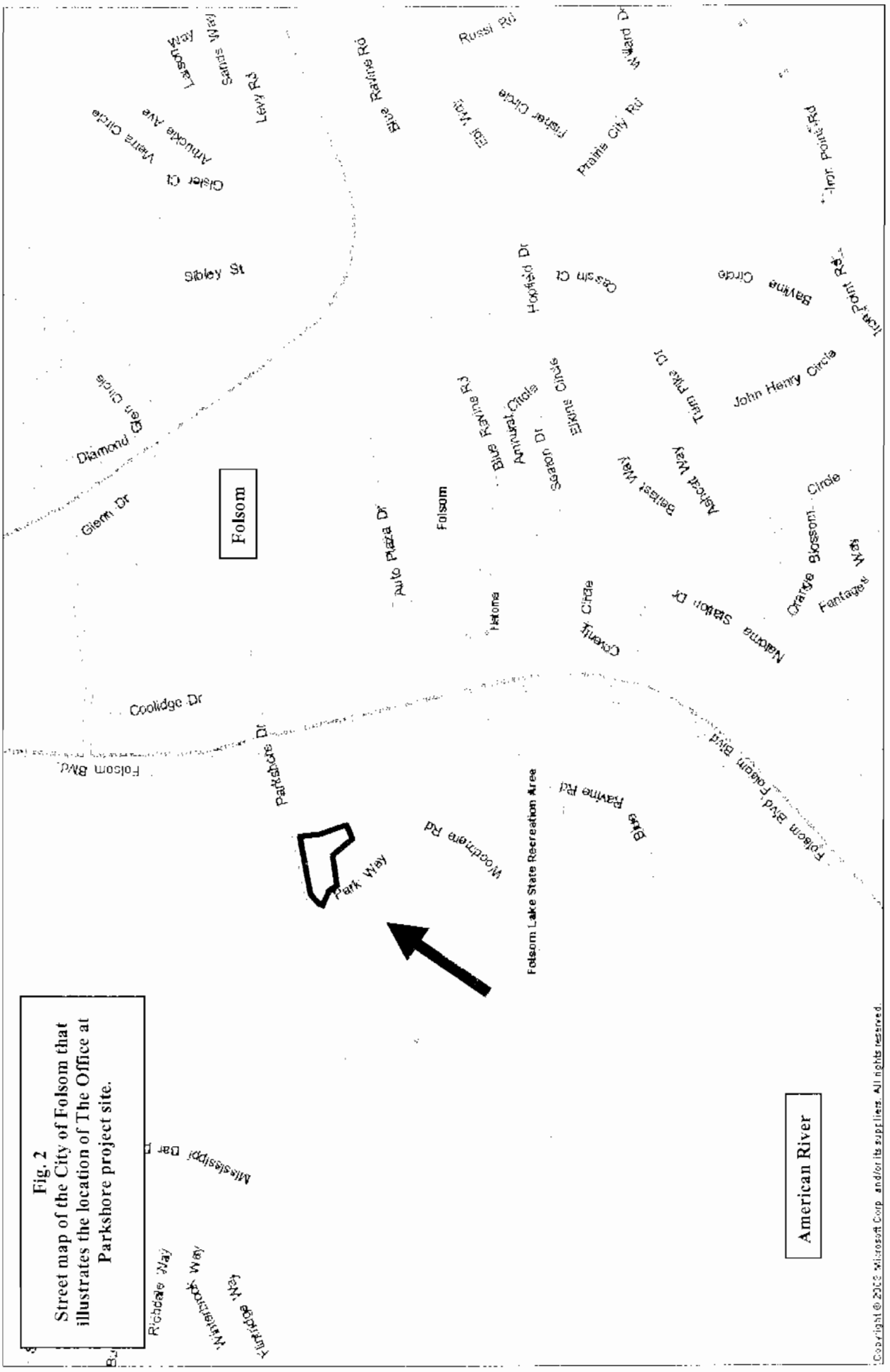


Fig. 2
Street map of the City of Folsom that illustrates the location of The Office at Parkshore project site.

2.0 PROJECT DESCRIPTION

2.1 PROJECT DESCRIPTION

The Offices at Parkshore will consist of eight one-story office buildings and a single two-story office building, which collectively will provide 74,435 ft.^{2} of new office space. The eight single-story buildings will range in size from 2,991 to 4,300 ft.^{2}, while the single two-story building will be 48,422 ft.^{2}. Two vehicular driveways will serve the project site from Parkshore Drive and 377 on-site parking spaces will be provided at the 6.48-acre project site. Additional site improvements will include sidewalks, pedestrian walkways, underground utilities, and landscaping. All resident elderberry trees must be removed to accommodate the new office buildings and associated site improvements. Figure 3 is a site plan for the project. .

2.2 PERMIT HOLDER/PERMIT BOUNDARIES

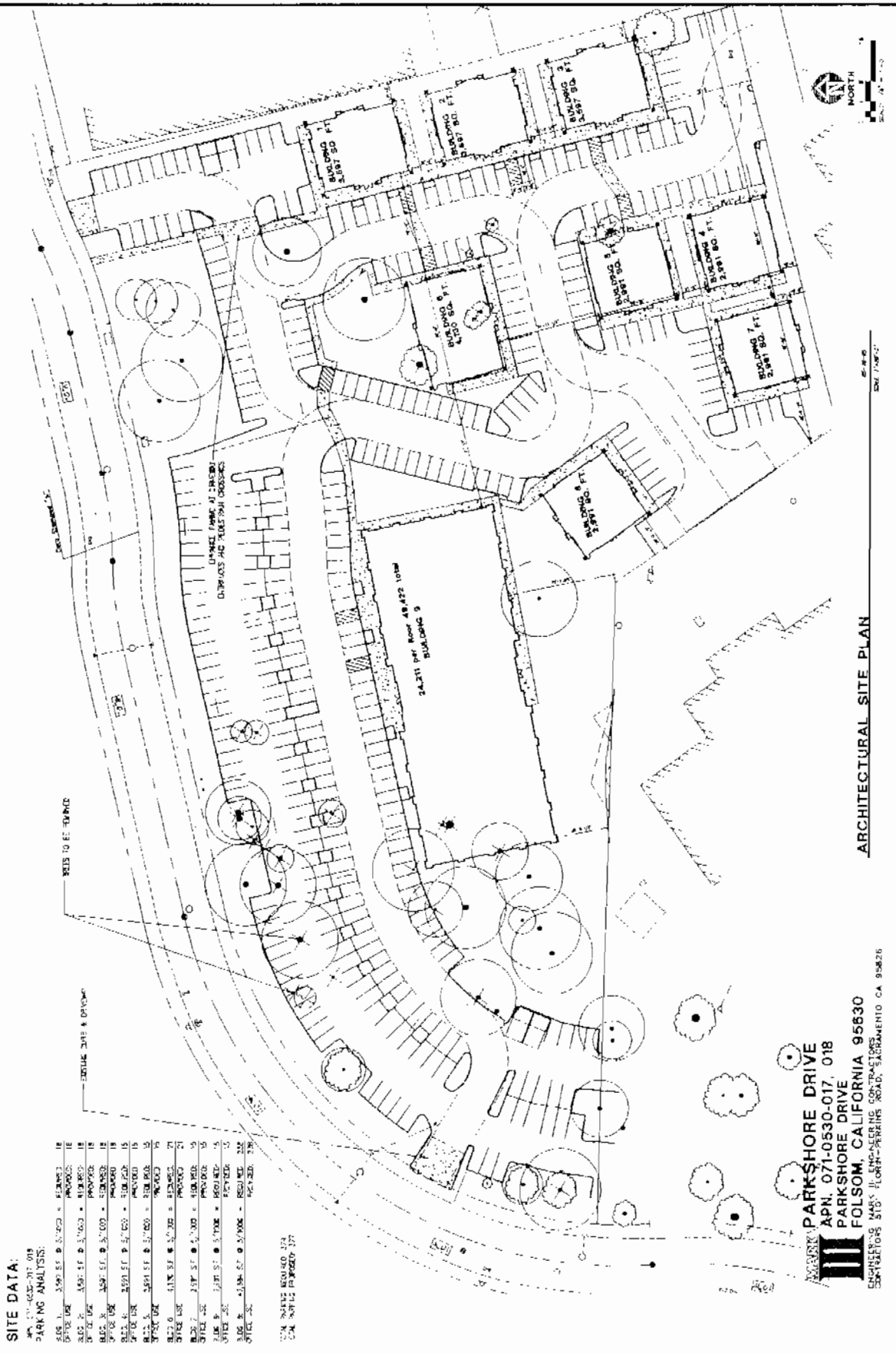
Mark III Engineering Contractors will be the holder of the Section 10(a)(1)(B) permit. Mr. John Firchau, Development Manager, is the contact person at Mark III Engineering Contractors for this HCP. He may be reached via mail at Mark III Engineering Contractors, 5101 Florin-Perkins Road, Sacramento, CA 95826, or via telephone at (916) 381-8080, or via fax at (916) 386-0363, or via email at johnf@markiii.com. Additional contact persons will be reported to the USFWS as necessary.

The entire 6.48-acre project site is included in the permit boundaries. Figure 1 illustrates the location of the project site on the relevant portion of the Folsom USGS topographic quad maps (7.5' series). Figure 2 is a street-level vicinity map that illustrates the location of the project site. Figure 3 is the proposed site plan map that illustrates the boundaries of the project site. The project site for The Offices at Parkshore is bounded on the north and west by Parkshore Drive, a self-storage facility to the east, and a commercial office park to the south. The project site is the last undeveloped portion of the Lake Forest Technical Center.

2.3 ZONING AND SURROUNDING LAND USES

The Offices at Parkshore is zoned M-1, meaning for light industrial uses, and the General Plan land-use designation for the site is IND (Industrial/Office Park). Lands that immediately surround the project site support a mixture of primarily office park and commercial uses. Areas to the west and east of Folsom Blvd. are zoned commercial, industrial (office park), and open space, while areas to the south along Blue Ravine Road are zoned commercial.

Fig. 3
Site plan for The Offices at Parkshore in Folsom, CA.



3.0 REGULATORY FRAMEWORK

3.1 FEDERAL REGULATIONS

3.1.1 Endangered Species Act of 1973

The Endangered Species Act of 1973 (ESA), 15 United States Code (U.S.C.) Section 1531 *et seq.*, provides for the protection and conservation of various species of fish, wildlife, and plants that have been federally listed as threatened or endangered. Section 9 of the ESA prohibits the "take" of any fish or wildlife species that is listed as endangered under the ESA unless such take is otherwise specifically authorized pursuant to either Section 7 or Section 10(a)(l)(B) of the Act. Pursuant to the implementing regulations of the ESA, the take of fish or wildlife species listed as threatened is also prohibited unless otherwise authorized by the USFWS.

"Take" is defined in the ESA as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Federal regulation 50 CFR 17.3 further defines the term "harm" in the "take" definition to mean any act that actually kills or injures a federally listed species, including significant habitat modification or degradation. Activities otherwise prohibited under ESA Section 9 and subject to the civil and criminal enforcement provisions under ESA Section 11 may be authorized under ESA Section 7 for actions by Federal agencies and under ESA Section 10 for nonfederal entities.

Section 10(a) of the ESA establishes a process for obtaining an "incidental take permit," which authorizes nonfederal entities to incidentally take federally listed wildlife or fish subject to certain conditions. "Incidental take" is defined by the ESA as take that is "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity." Preparation of a conservation plan, generally referred to as a habitat conservation plan or HCP, is required for all Section 10(a) permit applications. The USFWS and the National Marine Fisheries Service (NMFS) have joint authority under the ESA for administering the incidental take program. NMFS has jurisdiction for anadromous fish species and the USFWS has jurisdiction for all other fish and wildlife species.

Section 7 of the Endangered Species Act requires all Federal agencies to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any species listed under the ESA or result in the destruction or adverse modification of its habitat. Technically, the issuance of an incidental take permit is an authorization for take by a Federal agency; in conjunction with issuing a permit, USFWS must conduct an internal Section 7 consultation on the proposed HCP. The internal consultation is conducted after an HCP is developed by a nonfederal entity (e.g., Mark III Engineering Contractors) and submitted for formal processing and review. Provisions of Sections 7 and 10 of the ESA are similar, but Section 7 requires consideration of several factors not explicitly required by Section 10. Specifically, Section 7 requires consideration of the indirect effects of a project, effects on federally listed plants, and effects on critical habitat. (The ESA requires that USFWS identify critical habitat to the maximum extent that it is prudent and determinable when a species is listed as threatened

or endangered.) The internal consultation results in a Biological Opinion prepared by USFWS regarding whether implementation of the HCP will result in jeopardy to any listed species or adversely modify critical habitat.

The Section 10 process for obtaining an incidental take permit has three primary phases:

1) the HCP development phase;
2) the formal permit processing phase; and
3) the post-issuance phase.

During the HCP development phase, the project applicant prepares a plan that integrates the proposed project or activity with the protection of listed species. An HCP submitted in support of an incidental take permit application must include the following information:

- impacts likely to result from the proposed taking of the species for which permit coverage is requested;
- measures that will be implemented to monitor, mitigate for, and minimize impacts;
- funding that will be made available to undertake such measures;
- procedures to deal with unforeseen circumstances;
- alternative actions considered that would minimize or not result in take; and
- additional measures the USFWS may require as necessary or appropriate for purposes of the plan.

The HCP development phase concludes and the permit-processing phase begins when a complete application package is submitted to the appropriate permit-issuing office of USFWS. The complete application package for a low-effect HCP consists of:

1) an HCP;
2) a completed permit application; and
3) a $100 permit fee from the applicant.

The USFWS must publish a "Notice of Availability" of the draft HCP in the Federal Register; prepare a Section 7 Intra-Service Biological Opinion; prepare a Set of Findings that evaluates the Section 10(a)(1)(B) permit application in the context of permit issuance criteria (see below); and prepare an Environmental Action Statement, a brief document that serves as the USFWS's record of compliance with NEPA for categorically excluded actions (see below). An implementing agreement is not required for a low-effect HCP. A Section 10 incidental take permit is granted upon determination by

USFWS that all requirements for permit issuance have been met. Statutory criteria for issuance of the permit are as follows:

- the taking will be incidental;
- the impacts of incidental take will be minimized and mitigated to the maximum extent practicable;
- adequate funding for the HCP and procedures to handle unforeseen circumstances will be provided;
- the taking will not appreciably reduce the likelihood of survival and recovery of the species in the wild;
- the applicant will provide additional measures that USFWS requires as being necessary or appropriate; and
- USFWS has received assurances, as may be required, that the HCP will be implemented.

After receipt of a complete application, an HCP and permit application is typically processed within several months. This schedule includes the Federal Register notice and public comment.

During the post-issuance phase, the permittee and other responsible entities implement the HCP and the USFWS monitors the permittee's compliance with the HCP and the long-term progress and success of the HCP. The public is notified of permit issuance through publication in the Federal Register.

3.1.2 National Environmental Policy Act of 1969

The National Environmental Policy Act of 1969, as amended (NEPA), requires that Federal agencies analyze the environmental impacts of their proposed actions (i.e., issuance of an incidental take permit) and include public participation in the planning and implementation of their actions. Although Section 10 of the Endangered Species Act and NEPA requirements overlap considerably, the scope of NEPA also considers the impacts of the proposed action on non-biological resources, such as water quality, air quality, and cultural resources. Depending upon the scope and impact of the HCP, NEPA compliance is obtained through one of three actions:

1) preparation of an environmental impact statement (generally prepared for high-effect HCPs);
2) preparation of an Environmental Assessment (generally prepared for moderate-effect HCPs); or
3) a categorical exclusion (allowed for low-effect HCPs).

The NEPA process helps Federal agencies make informed decisions with respect to the

environmental consequences of their actions and ensures that measures to protect, restore, and enhance the environment are included, as necessary, as a component of their actions. Low-effect HCPs, as defined in the USFWS's (1996b) Habitat Conservation Planning Handbook, are categorically excluded under NEPA, as defined by the Department of Interior Manual 516DM2, Appendix 1, and Manual 516DM6, Appendix 1.

3.2 CALIFORNIA REGULATIONS

3.2.1 California Environmental Quality Act

In many ways, the California Environmental Quality Act, commonly known as CEQA (Public Resources Code Section 21000 *et seq.*), is analogous at the state level as NEPA is to the federal level. CEQA applies to projects that require approval by state and local public agencies. It requires that such agencies disclose a project's significant environmental effects and provide mitigation whenever feasible. This environmental law covers a broad range of environmental resources. With regard to wildlife and plants, those that are already listed by any state or federal governmental agency are presumed to be endangered for the purposes of CEQA and impacts to such species and their habitats may be considered significant.

The City of Folsom has been the lead agency for CEQA review for The Offices at Parkshore project. As part of complying with CEQA, Folsom prepared and certified a Mitigated Negative Declaration for The Offices at Parkshore project on August 5, 2005. A copy is attached as Appendix A.

3.3 CITY OF FOLSOM REGULATIONS

Title 17 of the Folsom Municipal Code is the Folsom Zoning Ordinance. Chapter 17.98 of the Zoning Ordinance relates to Wetland and Riparian Habitat Management. Its provisions include a requirement for resource protection where properties contain sensitive habitat. Sensitive habitat is further defined by the chapter to include "habitats of rare or endangered species or subspecies of animals or plants as defined by Section 15380 of the State of California Environmental Quality Act (CEQA) Guidelines (14 Cal. Admin. Code section 15000 et seq.)." According to that CEQA Guidelines section, a species is "rare" if it may be considered threatened as defined in the federal Endangered Species Act. Since VELB is federally listed as threatened, its habitat appears to meet the requirement for consideration under Chapter 17.98. Applicable discretionary entitlements to which Chapter 17.98 applies include planned development permits. As approved, The Offices at Parkshore includes a condition that satisfies the substantive requirements of Chapter 17.98 by requiring coordination with and approval by the USFWS before commencing activities within 100 feet of any elderberry shrub on the site. During the site review meeting with Rick Kuyper of the U.S. Fish & Wildlife Service, Mr. Kuyper agreed that the buffer could be reduced to only 20 feet around the dripline of any resident elderberry plants.

4.0 BIOLOGY

4.1 HABITAT TYPES

The Offices at Parkshore project site lies south of Folsom Lake and east of the American River in an area that historically supported riparian, floodplain, and upland habitats. More recently, all of the project site and much of the surrounding area has been covered by dredge tailings and subsequently converted to urban uses.

Most of the project site is characterized by ruderal grassland plant community, with scattered individuals or small stands of Coast Live Oaks (*Quercus agrifolia*), Poison Oak (*Rhus toxicodendron*), Coyote Brush (*Baccharis pilularis*), Tree of Heaven (*Ailanthus*), Himalayan blackberry (*Rubus discolor*), and Blue Elderberry (*Sambucus mexicana*) in a few portions of the site. Disturbed openings are dominated by ruderal grasses and weedy herbaceous taxa such as *Bromus diandrus*, *Lolium*, *Vicia*, *Centaurea solstitialis*, *Cirsium vulgare*, and *Sonchus oleraceus*.

4.2 COVERED SPECIES: Valley Elderberry Longhorn Beetle

The species addressed in this HCP and covered by the HCP's associated Section 10(a)(1)(B) permit includes one federally listed species, the threatened VELB, which is known to occur at the project site. It is the only federally listed species that will be incidentally taken by the proposed project.

4.2.1 Conservation Status

In 1978, the USFWS (1978) proposed to recognize the VELB as a threatened species with critical habitat. In 1980, the USFWS listed the VELB as a threatened species and designated two areas along the American River in the city of Sacramento as critical habitat (USFWS 1980).

In 1984, the USFWS published a recovery plan for the VELB (USFWS 1984), summarizing information about the beetle's taxonomy, biology, distribution, and habitat, and population decline. It also identified conservation measures to protect the beetle's habitat and manage its populations.

The California Natural Diversity Data Base (CNDDB) recognizes the beetle as a G3T2S2 taxon (California Department of Fish and Game 2005). Although the state designation does not afford the VELB any legal protection, the VELB qualifies as a rare species under CEQA.

4.2.2 Taxonomy and Description

The VELB is a member of the longhorn beetle family known as Cerambycidae. Adults range in length from about 15 to 25 millimeters and are red and black. The common name longhorn beetle refers to the long antennae, which extend to at least the middle of the abdomen.

Desmocerus californicus was described by Horn in 1881 from a specimen collected in Southern California. The VELB was originally described as a separate

species, *Desmocerus dimorphus* by Fisher (1921) based on the coloration of the adult males. The city of Sacramento was designated as the type locality. Subsequently, Linsley and Chemsak (1972) treated the two as subspecies and designated the latter as *Desmocerus californicus dimorphus* Fisher.

The two subspecies can be distinguished on the basis of the color pattern of the male elytra (first pair of wings) and hairs on the antenna. Nearly the entire elytra of males of *californicus* are dark, while the dark color on the elytra of *dimorphus* is usually reduced to four oblong spots. Hairs on the basal antennal segments of *californicus* are dark, while those on *dimorphus* are pale. A small percentage of *dimorphus* males also exhibit the elytral color pattern of the nominate subspecies.

4.2.3 Geographic Distribution

The VELB was recognized as a threatened species because of loss and alteration of its riparian habitat and because it naturally occurs at low population densities. In the Central Valley, the VELB is generally found along waterways and in floodplains that support remnant stands of riparian vegetation. In particular, elderberry must be present, as both larvae and adults feed on this shrub or small tree. More recently, the VELB has also been observed in the Sierra foothills, particularly in Fresno, Madera, and Placer Counties, at elevations up to about 3,000 feet (USFWS 1996a). At these foothill locations, the VELB and its elderberry food plant are not always restricted to riparian habitats, but may also occur in foothill woodland and scrub communities.

The historical distribution of the VELB is not well documented, but it is assumed to have occurred throughout much of the Central Valley in association with riparian habitats. However, the substantial loss and alteration of riparian vegetation in the Central Valley during the past 150 years suggests that the beetle's range has similarly been reduced, overall population numbers have declined, and that remaining populations are now discontinuous (USFWS 1984).

Linsley and Chemsak (1972) reported the geographic range of the VELB as the lower Sacramento Valley and upper San Joaquin Valley. Surveys conducted after the beetle's recognition as a threatened species have demonstrated that the VELB is more widespread than originally believed. At this time, the VELB is known from widely scattered localities in the Central Valley. Adult specimens have been collected in locations ranging from the Kaweah River in Tulare County by Halstead (1991) to Red Bluff in Tehama County by Jones & Stokes Associates, Inc. (Jones & Stokes Associates, Inc. 1987). Exit holes have been observed in elderberries growing as far north as the Shasta-Tehama county line (Barr 1991) and as far south as Caliente Creek in Kern County (Shields 1990a and 1990b).

The VELB is known from numerous locations within and near the City of Folsom, including several locations within 10 miles of the project site for The Offices at Parkshore. It has been reported from various locations near Folsom Lake, and from Nimbus Flat to Goethe Park along the American River (CNDDB maintained by California Department of Fish and Game; BUGGY Database maintained by

Entomological Consulting Services, Ltd.). The closest known location is southeast of the intersection of Folsom Blvd. and Blue Ravine Drive, about 0.25 mi. from The Offices at Parkshore. Two locations, one west of the Radisson Hotel complex between Highway 160 and the north side of the American River, and a second location in the vicinity of Goethe Park were designated as critical habitat for the VELB by USFWS (1980).

4.2.4 Ecology and Habitats

Although the VELB's life history has not been formally described in the entomological literature, it is assumed to follow a sequence of events similar to those of related taxa whose life histories are better known (Burke 1921 and Craighead 1923). The adult activity period generally coincides with the peak flowering period of the elderberry, typically in April and May. Female beetles deposit eggs in crevices in the bark of living elderberry plants. The eggs hatch within a few days after they are laid and the larvae bore into the pith of the trunk, stem, or roots. Larvae of the VELB feed internally on the pith of the trunk and larger branches, as well as the roots, while adult beetles appear to feed externally only on elderberry flowers and foliage. Larvae complete their development in 1 to 2 years. Prior to metamorphosing into the adult life stage, VELB larvae chew an emergence or exit hole in the trunk of the elderberry, through which the adult beetle later exits the plant. Davis and Comstock (1924) illustrate the larval and pupal stages.

The VELB's exit hole is about the diameter of a standard wooden pencil and somewhat oval in shape. Often there is some swelling on the trunk where the exit hole is found. Exit holes in the lower trunk of elderberries are characteristic of past VELB infestations. Several studies (cited in USFWS 1984 and Barr 1991) have found that exit holes generally occur between ground level and about 6 to 10 feet in height. Similar appearing holes in the upper trunk and branches may be due to other wood-feeding insects. However, Halstead (1991) has observed bona fide VELB exit holes as high as 25 feet in an elderberry. Fresh exit holes have been observed on stems whose diameters ranged from slightly less than 1 inch to about 8 inches.

Exit holes remain in the trunks of the elderberries even after the VELB has ceased to use a particular elderberry. For this reason, the exit hole can be used as an indicator of past infestation. Most exit holes that are observed on elderberries are older and difficult to date. However, recent holes can be readily distinguished based on the presence of larval frass or a pupal case of the VELB, fresh wood shavings, and nonoxidized wood. Unfortunately, these signs usually disappear within a few weeks after a VELB leaves the elderberry. As such, recent exit holes are detected rather infrequently. Several other types of insects usually live in the tunnels created by the VELB larvae. These invading insects and insect-feeding birds often enlarge or modify older VELB exit holes to feed on these secondary insect inhabitants in the VELB tunnels.

Adult VELBs can fly, but their dispersal capabilities may be somewhat limited, especially compared to migratory insects. Although the dispersal capabilities of the VELB are not well known, it is likely that they follow drainage courses where elderberries most commonly grow.

Throughout most of its geographic range, the VELB is closely associated with blue elderberry, *Sambucus mexicana* Presl. (Caprifoliaceae), which is the primary food plant for beetle larvae. *S. glauca* Nutt. and *S. caerulea* Raf. may also be used as food plants by the beetle, but taxonomic problems in the genus *Sambucus* due to phenotypic variability and hybridization between species often complicates accurate identification of elderberries.

Blue elderberry is a common riparian shrub (Roberts *et al.* 1977, Katibah *et al.* 1984, Warner 1984) in California that typically grows in a variety of riparian habitat types and elderberry savanna (Holland 1986), which borders riparian forests in some locations. USFWS (1996a) considers the best quality VELB habitat to be where there is a mixture of associated riparian shrubs and trees growing with the elderberries. In a study of Sacramento Valley riparian vegetation, Conard *et al.* (1977) found that blue elderberry occurs mainly at an intermediate level in the floodplain in association with box elder *(Acer negundo)* and buttonbush *(Cephalanthus occidentalis).* In another study conducted along the Sacramento River (Jones & Stokes Associates, Inc. 1987), elderberries were found with VELB emergence holes in four types of overstory situations:

- young-growth riparian stands of young cotton woods and willows on the lower terrace;
- stands of mature and senescent cottonwoods on the lower terrace;
- mature riparian stands of mixed tree species, including cottonwood, box elder, northern California walnut *(Juglans hindsii),* or valley oak *(Quercus lobata),* on the higher terrace; and
- sites without an overstory in both higher and lower terrace areas.

In a study along the lower American River (Jones & Stokes Associates, Inc. 1995), elderberries were found with VELB emergence holes in vegetation types characterized as montane riparian, south-slope oak woodland, grassland, and rocky ruderal.

4.2.5 Occurrence at the Project Site

Entomological Consulting Services, Ltd. visited The Offices at Parkshore site on September 7, 2005, to inventory the resident elderberry plants. This inventory of the resident elderberries was conducted in accordance with the USFWS's Conservation Guidelines for VELB (USFWS 1999). During this survey a single, bona fide VELB exit hole was observed near the base of one of the resident elderberry plants.

During this inventory survey, elderberries were found growing at three locations within the project site, clustered near the northeastern and northwestern boundaries of the site and identified as A, B, and C in Figure 4. The Offices at Parkshore project site supports a mixture of primarily young (i.e., seedlings and saplings) and a few mature elderberry plants, which indicates that natural regeneration is occurring. Thirty-nine of

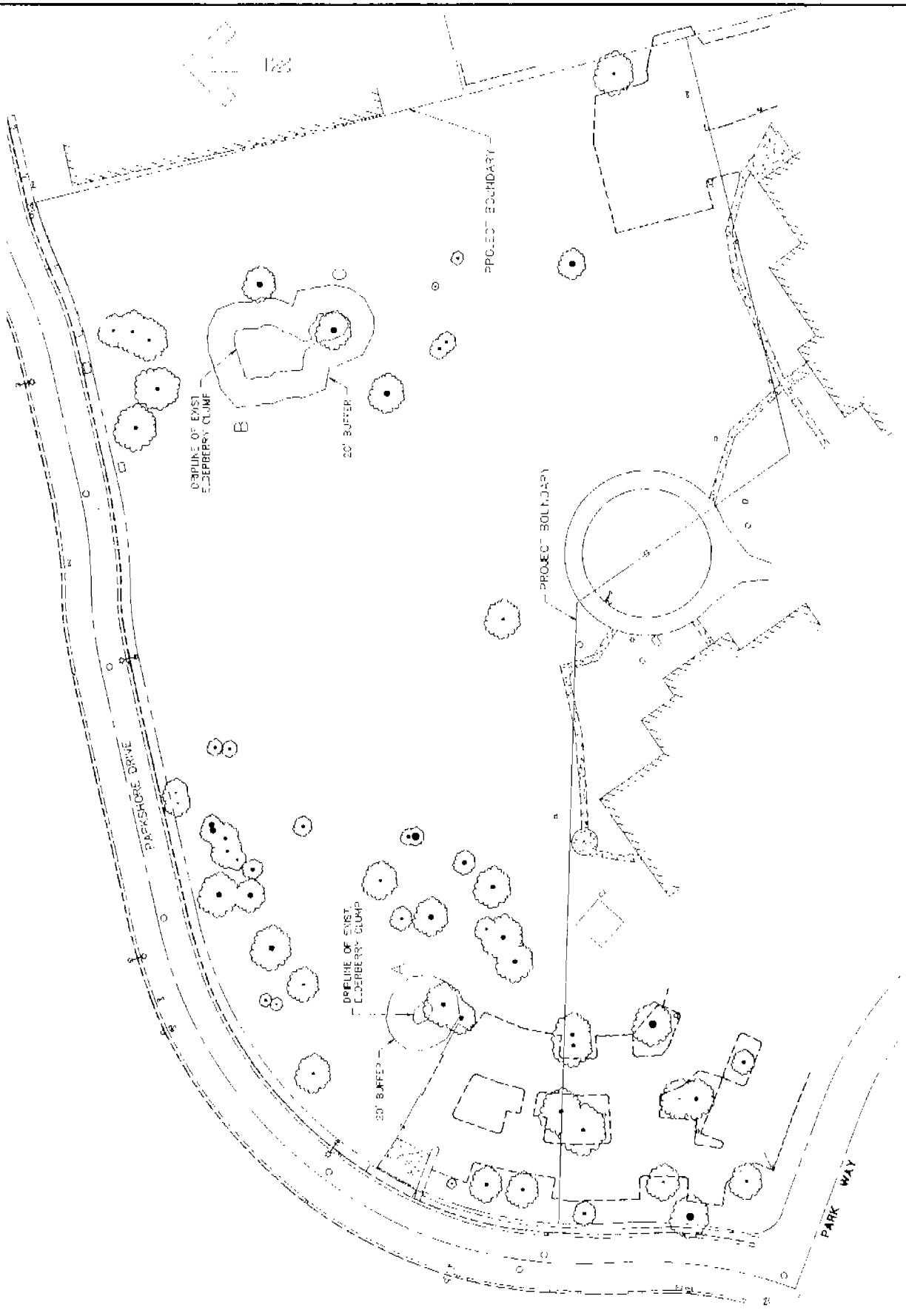
the elderberry plants exhibited 47 trunks whose basal diameters were ≥ 1 inch (**Stem Numbers** in Table 1), a size considered to be habitat for the federally threatened VELB. A single, multi-stem plant grows at location A (Figure 4), while clonal clumps grow at locations B and C (Figure 4). At these latter two locations, the majority of plants consist of solitary stems, with a few multi-stem plants. More than 100 additional stems, whose basal diameters are less than 1 inch in diameter, grow at locations B and C. Other characteristics of the resident elderberries growing at these locations are summarized in Table 1.

Table 1. Elderberry Inventory Results for The Offices at Parkshore on Sept. 7, 2005 (for elderberry locations A, B, and C see Figure 4)

Elderberry Location and Number	Stem Numbers ≥ 1" to ≤ 3" diameter	Stem Numbers > 3" to < 5" diameter	Stem Numbers ≥ 5" diameter	VELB Exit Hole	Notes
A-# 1	2	1	1	No	Overgrown by blackberry
B-# 2	1	0	0	No	
B-# 3	1	0	0	No	
B-# 4	1	0	0	No	
B-# 5	1	0	0	No	
B-# 6	1	0	0	No	
B-#7	1	0	0	No	
B-#8	1	0	0	No	
B-#9	1	0	0	No	
B-#10	1	0	0	No	
B-#11	1	0	0	No	
B-#12	1	0	0	No	
B-#13	1	0	0	No	
B-#14	1	0	0	No	
B-#15	2	1	0	No	
B-#16	1	0	0	No	
B-#17	1	0	0	No	
B-#18	1	0	0	No	
B-#19	1	0	0	No	
B-#20	1	0	0	No	
B-#21	1	0	0	No	
B-#22	1	0	0	No	
B-#23	1	0	0	No	
B-#24	2	0	0	No	
B-#25	1	0	0	No	
B-#26	1	0	0	No	
B-#27	1	0	0	No	
B-#28	1	0	0	No	
B-#29	1	0	0	No	
B-#30	1	0	0	No	
B-#31	2	0	0	No	
B-#32	1	0	0	No	
B-#33	2	0	0	Yes	2.5" dia. stem

Elderberry Location and Number	Stem Numbers ≥ 1" to ≤ 3" diameter	Stem Numbers > 3" to < 5" diameter	Stem Numbers ≥ 5" diameter	VELB Exit Hole	Notes
B-#34	1	0	0	No	
B-#35	1	0	0	No	
C-#36	1	0	0	No	
C-#37	1	0	0	No	
C-#38	1	0	0	No	
C-#39	1	0	0	No	
TOTALS	**44**	**2**	**1**		

Fig. 4
Elderberry location map (A, B, and C) for The Offices at Parkshore.



5.0 IMPACTS AND ENVIRONMENTAL COMPLIANCE

5.1 IMPACT ASSESSMENT

As discussed in the previous section, elderberry plants characterized by stems ≥ 1 inch in basal diameter are considered to be of sufficient size to provide habitat for the VELB. Even though the project site supports numerous elderberry plants (i.e., primarily suckers with basal stem diameters <1 inch), this assessment only addresses impacts to the 39 elderberry plants with stems ≥ 1 inch in basal diameter. The proposed construction project will result in the permanent loss of 39 elderberry plants supporting 47 stems ≥ 1 inch in basal diameter. A single VELB exit hole was observed in one plant at The Offices at Parkshore project site.

Historically, the site of The Offices at Parkshore was mined as evidenced by the extensive dredge tailings. This prior land use may have discouraged the establishment of most of the resident elderberries until recently. All of the elderberries observed during the inventory appear to have colonized the project site after the former mining activities at the site ceased. The vast majority of resident elderberry plants are young, with stems less than 1 inch in basal diameter.

Even though some elderberry plants of sufficient size to support the VELB now grow at the project site, the overall habitat conditions are poor due to the absence of associated native plants normally associated with elderberries in riparian habitats and because of the prevalence of invasive non-native vegetation. Few native plants still grow at the project site. As noted by USFWS (1999), the VELB is more abundant at sites characterized by dense native plant communities with a mature overstory and a mixed understory, habitat conditions that are lacking at The Offices at Parkshore. Furthermore, the prevalence of non-native vegetation in the understory limits the potential for further elderberry establishment as the annual grasses and herbs can overgrow any elderberry seedlings and cause mortality due to powdery mildew and other factors.

Due to recent, extensive commercial development of surrounding properties in the City of Folsom, the site is now surrounded by development on three sides and no elderberry plants were observed growing on accessible neighboring properties. Elderberries undoubtedly grow somewhere in the nearby Folsom Lake Recreation Area, but this area was not explored. Also, the portion of the recreation area nearest to the project site is characterized by willows and cottonwoods, which live in wetter riparian habitats than elderberries usually prefer. Thus, elderberries at The Offices at Parkshore are somewhat more isolated from any nearby locations that support the VELB.

Development of the project site will necessitate removal of the resident elderberries. Mark III Engineering Contractors will transplant all resident elderberry plants growing at the project site and with basal trunk diameters ≥ 1 inch to a USFWS-approved conservation bank, as per the conservation guidelines for the VELB (USFWS 1999). This minimization measure will be implemented to reduce potential impacts to the VELB.

The Offices at Parkshore project site is not located within designated critical habitat for the VELB. Because the 39 elderberry plants containing stems ≥ 1 inch in basal diameter do not represent essential or critical habitat for VELB and native habitat at the site has been severely degraded by prior land uses, the potential effect of any take due to their removal is considered minor to negligible.

No temporary impacts to the VELB or its habitat are anticipated as a result of the proposed development of The Offices at Parkshore.

5.2 DIRECT AND INDIRECT EFFECTS

Direct and indirect impacts to the VELB, its elderberry food plant, and its preferred habitat (i.e., elderberry plants containing stems ≥ 1 inch in basal diameter) are expected to be minimal. Only one of the 39 elderberry plants containing stems ≥ 1 inch in basal diameter exhibited evidence of VELB infestation. Although the project site is located in a geographic area known to support the VELB and elderberry, it is immediately surrounded by existing commercial and light industrial developments. Given the VELB's limited flight range, and its usual occurrence at low density, the majority of existing elderberries at The Offices at Parkshore are unlikely to provide significant habitat for the beetle. In addition, habitat quality for the VELB throughout most of The Offices at Parkshore is quite poor due to the absence of most riparian plants that normally grow in association with the elderberry and the prevalence of various ornamental or weedy trees, shrubs, forbs, and grasses.

5.3 CUMULATIVE EFFECTS

Even though 39 elderberry plants containing stems ≥ 1 inch in basal diameter will be permanently removed along with a limited number of VELBs, these losses are not expected to affect the survival of the VELB or its elderberry food plant due to the occurrence and abundance of elderberries at other locations in the greater Folsom-Sacramento area, and elsewhere throughout the VELB's entire geographic range.

5.4 EFFECTS ON CRITICAL HABITAT

Although critical habitat has been designated for the VELB, no areas of its critical habitat will be affected by the proposed development of The Offices at Parkshore project.

6.0 TAKE OF THE COVERED SPECIES

Because VELBs spend most of their lives within the elderberry plant and are rarely encountered even as adults, it is not possible to quantify the exact number of individual beetles that could be taken by the removal of the 39 elderberry plants and their associated 47 stems with basal diameters of one inch or greater. For these reasons, the level of incidental take of VELB is expressed as the number (39) of elderberries being removed. Thus, the incidental take permit associated with this HCP will authorize all such take of VELB due to the removal of 39 elderberry plants containing stems with basal diameters of one inch or greater at The Offices at Parkshore project site in Folsom, CA.

Surveys conducted at other parcels in the greater Folsom-Sacramento area (results in the California Natural Diversity Data Base 2005) have found numerous elderberries growing at these locations. Thus, the level of take of the VELB at The Offices at Parkshore, as described above, is expected to have negligible effects on the species' overall survival. This is because the actual number of animals incidentally taken will be very low, the percentage of the species habitat relative to the species entire geographic range is very small, and its relative importance to the species, both regionally and throughout its range, is thought to be minor. For these reasons, the amount of take of the VELB and its elderberry food plant at The Offices at Parkshore is considered negligible.

The maximum levels of take of the VELB anticipated to occur under the HCP, and hereby authorized by its associated Section 10(a)(1)(B) permit, are as follows:

> any VELB that may be taken (killed, injured, harmed, or harassed) within the boundaries of the 6.48-acre project site during the following covered activities;
>
> 1) any grading and construction operations including, but not limited to use of equipment, vegetation removal, trampling of vegetation, compaction of soils, ground disturbance, grading, or creation of dust;
> 2) any permanent loss of habitat as a result of development of infrastructure including, but not limited to buildings, sidewalks, roads, installation of utilities, drainage, and irrigation systems;
> 3) any activities to manage or enhance habitat including but not limited to leveling ground, creating bare ground, planting vegetation, watering vegetation, or removal of exotic plant species; and
> 4) pruning (prior to transplant) and transplanting of resident elderberry plants to the conservation bank.

These incidental take limits are subject to full implementation of all mitigation measures, as described in Section 7.0. If any of these take limits are exceeded, Mark III Engineering Contractors shall cease all grading and construction operations and contact the USFWS immediately.

7.0 MITIGATION MEASURES

7.1 USFWS CONSERVATION GUIDELINES

The USFWS (1999) has established guidelines and accepted procedures for mitigating impacts to the VELB and its habitat. First, information from the elderberry inventory is used to characterize the elderberries resident at The Offices at Parkshore. These inventory data are presented in Table 1. Then, the inventory data are interpreted in conjunction with the criteria in the conservation guidelines to determine the types and amount of mitigation necessary to compensate for project-related impacts to the VELB.

All of the measures outlined from the VELB conservation guidelines (USFWS 1999) will be followed in mitigating impacts from The Offices at Parkshore project; however, the following points from these guidelines were particularly relevant for determining the mitigation requirements for this project:

- each elderberry stem with a basal diameter of 1.0 inch or greater that is directly or indirectly impacted should be transplanted;

- each elderberry stem with a basal diameter of 1.0 inch or greater that is impacted will be replaced with seedling elderberry plants using a minimal replacement ratio between 2:1 to 8:1, and this ratio depends upon the type of habitat, basal stem diameters of affected elderberries, and the presence of VELB exit holes in the affected plants;

- representative native tree and shrub species that grow in association with the elderberries will be planted at a ratio of one or two specimens for every replacement elderberry seedling (1:1 or 2:1 ratios);

- 1800 square feet should be provided for every five replacement elderberry seedlings and five associated natives;

- a mitigation site, which will serve as habitat for the VELB in perpetuity, must be secured for the transplants and replacement plantings, and the size of the site is determined by the total planting square footage required for all transplanted and replacement elderberries.

Thirty-nine of the resident elderberry plants (including 47 stems greater than one inch in basal diameter) at The Offices at Parkshore will be transplanted to the River Ranch Conservation Bank or another USFWS-approved conservation bank. The bank's operator, Wildlands, Inc., will transplant these elderberries. Prior to transplanting, Wildlands, Inc. will advise the USFWS in writing of the transplant methods and duration of transport to the mitigation plant.

During the elderberry inventory, elderberries were observed growing at three locations at the project site. Thirty-nine of the plants exhibited 47 stems $\geq$1 inch, which

provide the baseline for determining replacement elderberry numbers. Table 2 presents the baseline mitigation requirements for The Offices at Parkshore project.

Table 2. Mitigation Requirements for The Offices at Parkshore Project (all elderberries grow in non-riparian habitat)

Impacted Stem Size Class	Number of Stems	VELB Exit Holes	Elderberry Seedling Ratio	Number of Mitigated Elderberries	Associated Natives Ratio	Number of Associated Natives
Number of Stems ≥ 1" to ≤ 3"	42	N	1:1	42	1:1	42
	2	Y	2:1	4	2:1	8
Number of Stems > 3" to < 5"	2	N	2:1	4	1:1	4
	0	Y	4:1	0	2:1	0
Number of Stems ≥ 5"	1	N	3:1	3	1:1	3
	0	Y	6:1	0	2:1	0
Totals	**47**	**1 exit hole**		**53**		**57**

The number of replacement elderberries necessary to compensate for the loss of 47 stems is 53 plants. In addition, 57 specimens of associated native species will need to be planted at the conservation bank. The required mitigation acreage for the replacement plantings is 19,800 ft.^{2}, or 0.45 acres. Eleven elderberry mitigation units, consisting of 5 elderberry seedlings, 5 or 6 associated natives (to accommodate the 2 extra associated natives), and 1 transplant will be planted together. The remaining 28 transplants will be planted at the protected mitigation site.

The conservation guidelines (USFWS 1999) further state that transplanting of impacted elderberries at the project site should occur when they are dormant, between November 15th and February 15th. In the unlikely event that the incidental take permit is issued during a period of the year when transplanting is not advisable, Mark III agrees to increase the mitigation based upon the transplanting period. If transplantation occurs between February 16th and November 14th, Mark III will increase the number of seedlings to be planted from 53 elderberry seedlings and 57 native plant seedlings to 106 elderberry seedlings and 114 native plant seedlings (23 habitat conservation credits), unless otherwise approved by the USFWS.

7.2 MITIGATION PLAN

Mark III Engineering Contractors will compensate for VELB habitat that will be eliminated due to development of The Offices at Parkshore. This compensation can be accomplished in one of two ways:

1) by acquiring and protecting in perpetuity a suitable mitigation site, approved by the USFWS, and by transplanting 39 elderberries from the project site to the secure mitigation site measuring at least 0.45 acres, along with 53 mitigation elderberry seedlings and 57 associated native plants; or
2) by purchasing 11-23 VELB mitigation credits from a conservation bank approved by the USFWS, such as River Ranch Conservation Bank operated by Wildlands, Inc.

After evaluating these alternatives, Mark III Engineering Contractors has satisfied its mitigation requirements by purchasing 11 VELB credits from the River Ranch Conservation Bank, a USFWS-approved VELB conservation bank, and transplanting the 39 resident elderberries to the bank. If the permit is issued outside of the elderberry's dormant period (November 15th through February 15th), Mark III agrees to purchase 12 additional conservation credits, i.e., a total of 23. If at the time of permit issuance these credits are not available from River Ranch Conservation Bank, Mark III Engineering Contractors will obtain the necessary credits from another USFWS-approved conservation bank. The River Ranch Conservation Bank operated by Wildlands, Inc. is located in Yolo County. A map illustrating its location and its service territory can be viewed at http://www.fws.gov/pacific/sacramento/es/banks/river_ranch.service.pdf. A copy of the sales agreement between Mark III Engineering Contractors and Wildlands, Inc. is attached to this HCP as Appendix B.

7.3 MINIMIZATION MEASURES

Grading and construction activities will likely begin at the project site prior to issuance of the incidental take permit. After the site review meeting on August 11, 2005, USFWS biologist Rick Kuyper indicated in an email that Mark III Engineering Contractors could protect the existing on-site elderberries with a 20-foot buffer zone around the periphery of the dripline of these plants. Figure 4 illustrates this 20-foot buffer, which will be demarcated by orange construction fencing. Signs warning workers about the sensitivity of the elderberry plants will be placed around the perimeter of this protective fencing. In addition, all workers will participate in a tailboard session to learn about the VELB, its habitat, reasons for endangerment, and the need to protect the fenced areas during all construction activities. Mark III Engineering Contractors also agree to implement appropriate dust control measures throughout the site grading and construction activities to prevent dust from accumulating on these elderberries. A biological monitor will inspect the fencing and condition of the elderberries at a frequency of at least once per week throughout the grading and construction activities, until all elderberries have been transplanted from the project site.

8.0 PLAN IMPLEMENTATION

8.1 BIOLOGICAL GOALS AND OBJECTIVES

The biological goals of this HCP are:

1) to minimize and mitigate to the maximum extent feasible the impacts of the proposed project to VELB; and

2) to contribute to regional preserve design to benefit the VELB through contribution to a USFWS-approved conservation bank.

The objectives of this HCP are:

1) to transplant 39 elderberry shrubs to the River Ranch Conservation Bank;

2) to plant 53 elderberry seedlings and 57 native riparian plant seedlings through the purchase of 11 VELB credits at the River Ranch Conservation Bank (note: 23 VELB credits will be purchased if the permit is issued outside of the elderberry's winter dormant period); and

3) to meet, at a minimum, a 60 percent success criterion for the establishment of the transplanted elderberry shrubs and seedlings and native plant seedlings during the 10-year monitoring period.

8.2 RESPONSIBILITIES

As specified in the USFWS Habitat Conservation Planning Handbook (1996b), an Implementing Agreement (IA) is not required for low-effect HCPs unless requested by the permit applicant. Mark III Engineering Contractors understands that it is responsible for implementing this HCP in accordance with the specifications for mitigation and funding.

Mark III Engineering Contractors will purchase VELB habitat credits, ranging from 11 to 23 depending upon the time of transplanting, from Wildlands, Inc., a USFWS-approved conservation bank for VELB mitigation. If the permit is issued outside of the elderberry's winter dormant period, Mark III will purchase 12 additional VELB credits from a USFWS-approved conservation bank for a total of 23 conservation credits. The remaining portion of its responsibilities is the transplanting of the 39 elderberry shrubs to the conservation bank. Wildlands, Inc. will send a letter to USFWS once the take permit is issued and all resident elderberry plants at the project site have been transplanted to the River Ranch Conservation Bank.

Wildlands, Inc. will assume all responsibilities for annual monitoring, replacement planting, maintenance, and reporting, as described herein and in the VELB conservation guidelines (USFWS 1999) and will complete all obligations assigned to it within the Section 10 permit and the HCP. Mark III Engineering Contractors' responsibilities will end when all plants have been transplanted and documentation is provided to the USFWS that the required mitigation credits have been paid in full. A copy of the completed sales agreement is in Appendix B.

8.3 SCOPE

The project area is The Offices at Parkshore project site, as described in Section

2.0 of this HCP. The mitigation site is the River Ranch Conservation Bank, which is operated by Wildlands, Inc. and is located near the confluence of the Feather and Sacramento Rivers about 40 miles west of the project site in Yolo County, CA. This HCP covers activities only within the 6.48-acre project site for The Offices at Parkshore, as Wildlands, Inc. is a USFWS-approved conservation bank operator for the VELB.

8.4 PLAN DURATION

Mark III Engineering Contractors seeks a five (5) year permit from the USFWS to cover those activities associated with removal of 39 elderberry plants containing 47 stems of 1 inch or greater basal diameter from the project site for The Offices at Parkshore. The 5-year permit term is requested to accommodate any unforeseen delays in scheduling. Since 11-23 VELB habitat credits have been purchased from Wildlands, Inc., the operator of the conservation bank will assume all responsibilities for implementation of the required mitigation. The permit will expire once Mark III Engineering Contractors has fulfilled all of its responsibilities as described in Section 8.2.

8.5 MONITORING

Mark III Engineering Contractors has purchased 11-23 VELB mitigation credits at a conservation bank approved by USFWS and 39 on-site elderberries will be transplanted to the conservation bank. The conservation bank operator will provide a report to USFWS detailing the results of transplanting the 39 elderberry plants. Annual monitoring of the transplants, propagated elderberries, and associated native plants will be performed by the conservation bank operator for a period 10 years after the credits are purchased and transplanting has occurred. Throughout this period, annual monitoring reports will be furnished to the USFWS.

As described in the VELB conservation guidelines, the monitoring activities shall include:

- Surveys to detect any adult beetles present, including the number of beetles observed and their condition, behavior, and precise locations. Visual counts, rather than other types of census estimation methods, will be used to avoid the need to capture or otherwise harass the adult beetles.

- Surveys to detect beetle emergence holes in elderberry stems, including their precise locations and estimated ages.

- An evaluation of the elderberry shrubs on the mitigation site, including the number of plants and their size and condition.

- An evaluation of the adequacy of signs and weed control measures at the conservation bank site.

- A general assessment of the habitat, including any actual or potential threats to the beetle and its host plants, such as erosion, fire, vandalism, or excessive weed growth.

8.5.1 Performance and Success Criteria

Since Mark III Engineering Contractors' mitigation requirements have been satisfied by the purchase of VELB credits from Wildlands, Inc. and transplanting of existing elderberries to the conservation bank, the following performance and success criteria will apply. It will be the responsibility of the conservation bank operator to insure that the performance criteria are successfully achieved. If necessary, the conservation bank operator will employ appropriate adaptive management strategies to meet the biological goals and objectives of this HCP.

Pursuant to the USFWS (1999) VELB conservation guidelines, a minimum survival rate of 60% of the original number of replacement plantings must be maintained throughout the 10-year maintenance period. In other words, a minimum of 32 elderberry plants and 34 associated native plants must be alive at the end of the 10-year period. Within one year of discovering that the survival rate has dropped below 60%, the conservation bank operator must replace failed plantings and bring the survival rate above this level.

8.5.2 Reporting.

Two types of reports are needed to fulfill the responsibilities of this HCP. One is a report on the transplanting of the 39 elderberry plants that occur at the project site to the conservation bank. This report will be prepared by Wildlands, Inc. and submitted to the USFWS' Sacramento office (address below).

Secondly, Wildlands, Inc. must submit an annual monitoring report, describing activities under the HCP, for a period of 10 years after issuance of the permit. Copies of the annual monitoring report will be submitted by December 31 of every year that the monitoring is performed. Copies of the report shall be submitted to:

- USFWS (Assistant Field Supervisor for Endangered Species, Sacramento Field Office, 2800 Cottage Way, Sacramento, CA 95825),
- California Department of Fish and Game (Supervisor, Environmental Services Department of Fish and Game, 1416 Ninth Street, Sacramento, CA 95814);
- California Natural Diversity Data Base, (Staff Zoologist, Department of Fish and Game, 1220 5 Street, Sacramento, CA 95814); and
- Mark III Engineering Contractors, (John Firchau, Development Manager, 5101 Florin-Perkins Road, Sacramento, CA 95826).

The annual report will describe the status and progress of the mitigation plantings, as well as any failings of the mitigation plan and remedial actions taken to correct them. Any observations of beetles or fresh emergence holes will be noted. Copies of the original field notes, raw data, and photographs of the mitigation site will be included in the report. A map of the site vicinity and maps showing where individual adult beetles, if

any, and emergence holes were observed, will be included. Actual and likely future threats will be addressed along with suggested remedies (e.g., limiting access, more frequent removal of invasive nonnative vegetation, etc.).

A copy of the annual monitoring report, along with the original field notes, photographs, correspondence, and all other pertinent material, will be deposited at the California Academy of Sciences (Librarian, California Academy of Sciences, Golden Gate Park, San Francisco, CA 94118) by December 31 of the year that monitoring is performed. A copy of the receipt from the Academy's library, acknowledging receipt of the material, or the library catalog number assigned to it will be provided to USFWS.

8.6 FUNDING

Mark III Engineering Contractors is responsible for the full cost of transplanting the 39 on-site elderberry plants and the purchase of 11-23 VELB mitigation credits as itemized in Table 3. The actual cost of transplanting cannot be determined until this task is actually performed. Mark III Engineering Contractors agrees to pay the full cost of transplanting the 39 elderberry plants. A copy of the sales agreement for the purchase of the 11-23 mitigation credits is attached as Appendix B. Wildlands, Inc. will assume all responsibilities for funding of annual maintenance of the River Ranch Conservation Bank, replacement plantings (if needed), and the fulfillment of all monitoring and reporting activities for the entire 10-year monitoring period.

Table 3. Costs of Minimization and Mitigation Measures for The Offices at Parkshore Project

Mitigation and Minimization Activities	**Unit Cost**	**Total Cost**
Mitigation Activities:		
Transplant 39 elderberry plants	$500/plant	$19,500
Purchase 11 VELB mitigation credits	$3,500/credit	$38,500*
Subtotal Mitigation Costs		**$58,000***
Minimization Activities:		
Biological Monitor		$4,000
Protective Fencing & Signs		$2,000
Dust Control Measures		$2,500
Subtotal Minimization Activities		**$8,500**
	Grand Total Cost	**$66,500**

* **Note:** These amounts will be $80,500 for 23 VELB conservation credits and subtotal of $100,000 if the permit is issued outside of the elderberry's winter dormant period and transplanting does not occur between November 15th and February 15th.

9.0 CHANGED AND UNFORESEEN CIRCUMSTANCES

Section 10 regulations [50 CFR 17.22 (b)(2)(iii)] require that an HCP specify the procedures to be used for dealing with unforeseen circumstances that may arise during the implementation of the HCP. In addition, the Habitat Conservation Plan Assurances ("No Surprises") Rule [50 CFR 17.21 (b)(5)-(6) and 17.22(b)(5)-(6); 63 F.R. 8859] defines "unforeseen circumstances" and "changed circumstances" and describes the obligations of the permittee (Mark III Engineering Contractors) and the USFWS.

The purpose of the Assurances Rule is to provide assurances to nonfederal landowners participating in habitat conservation planning under the ESA that no additional land restrictions or financial compensation will be required for species adequately covered by a properly implemented HCP, in light of unforeseen circumstances, without the consent of the permittee. "Changed circumstances" means changes in circumstances affecting a species or geographic area covered by the conservation plan that can reasonably be anticipated by plan developers and the USFWS and that can be planned for (e.g., the listing of a new species, or fire or other natural catastrophic events in areas prone to such events). The policy defines "unforeseen circumstances" as changes in circumstances that affect a species or geographic area covered by the HCP that could not reasonably be anticipated by plan developers and the USFWS at the time of the plan's negotiation and development and that result in a substantial and adverse change in status of the covered species.

In determining whether any event constitutes an unforeseen circumstance, the USFWS shall consider, but not be limited to, the following factors: size of the current range of the affected species; percentage of range adversely affected by the HCP; percentage of range conserved by the HCP; ecological significance of that portion of the range affected by the HCP; level of knowledge about the affected species and the degree of specificity of the species conservation program under the HCP; and whether failure to adopt additional conservation measures would appreciably reduce the likelihood of survival and recovery of the affected species in the wild.

If the USFWS determines that the unforeseen circumstance will affect the outcome of the HCP, additional conservation and mitigation measures may be necessary. Where the HCP is being properly implemented and an unforeseen circumstance has occurred, the additional measures required of the permittee must be as close as possible to the terms of the original HCP and must be limited to modifications within any conserved habitat area or to adjustments within lands or waters that are already set aside in the HCP's operating conservation program. Additional conservation and mitigation measures shall not involve the commitment of additional land or financial compensation or restrictions on the use of land or other natural resources otherwise available for development or use under the original terms of the HCP without the consent of the permittee. Resolution of the situation shall be documented by letters between the USFWS, Mark III Engineering Contractors, and the conservation bank operator.

Thus, in the event that unforeseen circumstances adversely affecting the VELB

occur during the term of the permit, Mark III Engineering Contractors would not be required to provide additional financial mitigation or implement additional land use restrictions above those measures specified in the HCP, provided that the HCP is being properly implemented. This HCP expressly incorporates by reference the permit assurances set forth in the Habitat Conservation Plan Assurances ("No Surprises") Rule adopted by the USFWS and published in the Federal Register on February 23, 1998 (50 CFR Part 17). Except as otherwise required by law or provided for under the HCP, including those provisions regarding changed circumstances, no further mitigation for the effects of the proposed project on the VELB may be required from a permittee who is properly implementing the terms of the HCP and the permit. The HCP will be properly implemented if the commitments and provisions of the HCP and the permit have been or are being fully implemented by the permittee and the conservation bank operator.

If a new species that is not covered by the HCP but that may be affected by activities covered by the HCP is listed under the ESA during the term of the Section 10 permit, the USFWS may consider this to be a changed circumstance. In such case, the Section 10 permit will be reevaluated by USFWS and the HCP-covered activities may be modified, as necessary, to ensure that the activities covered under the HCP are not likely to jeopardize or result in take or adverse modification of any designated critical habitat of the newly listed species. Mark III Engineering Contractors shall implement the modifications to the HCP covered activities identified by the USFWS as necessary to avoid the likelihood of jeopardy to or take or adverse modification of the designated critical habitat of the newly listed species. Mark III Engineering Contractors shall continue to implement such modifications until such time as they have applied for and USFWS has approved an amendment of the Section 10 permit, in accordance with applicable statutory and regulatory requirements, to cover the newly listed species, or until the USFWS notifies Mark III Engineering Contractors in writing that the modifications to the HCP covered activities are no longer required to avoid the likelihood of jeopardy or adverse modification of designated critical habitat of the newly listed species.

As to other potential changed circumstances (e.g., fire, flood, insect infestation, plant diseases, earthquake or other natural disaster), the short duration of the permit (i.e., five years) makes the occurrence of any such circumstance within the permit period unlikely. Furthermore, it would not be possible to address the problem on site because this HCP contemplates the complete removal of potential habitat, not continued on-site management of the species.

10.0 PERMIT AMENDMENT/RENEWAL PROCESS

10.1 PERMIT AMENDMENTS

At this time there is no reason to expect that an amendment to the take permit will be needed to complete the development of The Offices at Parkshore. However, during the specified permit period an amendment of the Section 10(a) permit for the project would be required for any change in the following:

a) significant revision of the permit area boundary;
b) the listing under the ESA of a new species not currently addressed in the HCP that may be taken by project activities;
c) modification of any important project action or mitigation component under the HCP, including funding, that may significantly affect authorized take levels, effects of the project, or the nature or scope of the mitigation programs; and
d) any other modification of the project likely to result in significant adverse effects to VELB not addressed in the original HCP and permit application.

Amendment of the Section 10(a) permit would be treated in the same manner as an original permit application. Permit amendments typically require a revised HCP, a permit application form and application fee, an Implementing Agreement, a NEPA document, and a 30-day public comment period. However, the specific documentation needed in support of a permit amendment may vary, depending on the nature of the amendment. If the permit amendment qualifies as a low-effect HCP, an Implementing Agreement and NEPA document would not be needed.

10.2 HCP AMENDMENTS

This HCP may, under certain circumstances, be amended without amending the associated permit, provided that such amendments are of a minor or technical nature and that the effect on the species involved and the levels of take resulting from the amendment are not significantly different than those described in the original HCP. Examples of minor amendments to the HCP that would not require permit amendment include, but are not limited to:

- minor revisions to the HCP's plan area or boundaries;
- minor changes to conservation bank planting site(s) and site preparation; and
- minor changes to survey, monitoring, or reporting protocols.

To amend the HCP without amending the permit, Mark III Engineering Contractors must submit to the USFWS, in writing, a description of:

- the proposed amendment;
- an explanation of why the amendment is necessary or desirable; and
- an explanation of why Mark III Engineering Contractors believes the effects of the proposed amendment would not be significantly different than those described in the original HCP.

If the USFWS concurs with Mark III Engineering Contractors' proposal, it shall authorize the HCP amendment in writing and the amendment shall be considered effective upon the date of the USFWS's written authorization.

10.3 PERMIT RENEWAL

Upon expiration, the Section 10(a)(1)(B) permit may be renewed without the issuance of a new permit, provided that the permit is renewable, and that biological circumstances and other pertinent factors affecting VELB are not significantly different than those described in the original HCP. To renew the permit, Mark III Engineering Contractors shall submit to the USFWS, in writing:

- a request to renew the permit;
- reference to the original permit number;
- certification that all statements and information provided in the original HCP and permit application, together with any approved HCP amendments, are still true and correct, and inclusion of a list of changes;
- a description of any take that has occurred under the existing permit; and
- a description of any portions of the project still to be completed, if applicable, or what activities under the original permit the renewal is intended to cover.

If the USFWS concurs with the information provided in the request, it shall renew the permit consistent with permit renewal procedures required by Federal regulation (50 CFR 13.22). If Mark III Engineering Contractors files a renewal request and the request is on file with the issuing USFWS office at least 30 days prior to the permit's expiration, the permit shall remain valid while the renewal is being processed, provided the existing permit is renewable. However, Mark III Engineering Contractors may not take listed species beyond the quantity authorized by the original permit. If Mark III Engineering Contractors fails to file a renewal request within 30 days prior to permit expiration, the permit shall become invalid upon expiration. Mark III Engineering Contractors and the conservation bank operator must have complied with all annual reporting requirements to qualify for a permit renewal.

10.4 PERMIT TRANSFER

Although the sale or transfer of ownership of the property prior to construction of the proposed project is not expected to occur during the life of the permit, should it occur, a new permit application, permit fee, and an Assumption Agreement will be submitted to the USFWS by the new owner(s). The new owner(s) will commit to all requirements regarding the take authorization and mitigation obligations of this HCP unless otherwise specified in the Assumption Agreement and agreed to in advance with the USFWS. Once the elderberries are transplanted and the mitigation credits are purchased, the permit will terminate and the property owner has no further obligations.

11.0 ALTERNATIVES CONSIDERED

11.1 ALTERNATIVE #1: NO-ACTION

Under the No-Action Alternative, development of The Offices at Parkshore would not occur and Mark III Engineering Contractors would not implement a VELB HCP or receive a Section 10(a) incidental take permit from the USFWS. The project site would remain undeveloped and the existing elderberry plants would not be disturbed.

However, potential impacts to the covered species may be greater in the absence of this HCP. Currently, habitat conditions at the 6.48-acre project site are degraded due to the presence and abundance of various non-native plants. Without the HCP, habitat quality would probably continue to decline. Therefore, the No-Action Alternative is concluded to be of lesser conservation value to the covered species than the proposed project and accompanying HCP. It would also result in unnecessary economic burden on the applicant. For these reasons, the No-Action Alternative has been rejected.

11.2 ALTERNATIVE #2: REDUCED TAKE

The Reduced Take Alternative would reduce the size of the proposed office building and parking lots at the project site, thereby allowing some undetermined number of elderberry plants to remain. In general, biological impacts, including loss of VELB habitat, associated with this alternative would still result, but would be reduced in magnitude. Due to the relatively small project site dimensions, however, and the location of the elderberry plants on the site, it would be impossible to implement even a reduced size project consistent with Folsom requirements for street setback, parking and landscaping, and still preserve a 100 foot buffer of impact from the plants.

While some elderberries therefore might remain on site under this alternative, the likelihood of VELB occupancy in the remaining elderberries would become reduced as the area becomes more urbanized. As noted in Sections 2.2 and 2.3, above, the project site is already largely surrounded by developed properties and major city streets. Even though this alternative would avoid impacts to some of the resident elderberry plants, the gains in reduction of take of the covered species and reduced modification of the habitat for the covered species would not be significant; furthermore, this alternative would also result in unnecessary economic burdens to the applicant. For these reasons, the Reduced Take Alternative was rejected.

11.3 ALTERNATIVE #3: PROPOSED ACTION (PERMIT ISSUANCE)

Under the Proposed Action Alternative, Mark III Engineering Contractors would develop The Offices at Parkshore site as described in Section 2.0. The Proposed Action Alternative would require the issuance of a Section 10(a)(1)(B) permit to allow development of the office building. The project would result in the net loss of 39 elderberry plants that are potential habitat for the VELB. Effects to the VELB will be minimal due to the low-quality of onsite habitat and the location of the project site in a developed office park. Therefore, the Proposed Action is the preferred alternative.

12.0 REFERENCES

Barr, C.B. 1991. The distribution, habitat, and status of the Valley Elderberry Longhorn beetle, *Desmocerus californicus dimorphus* Fisher (Insecta: Coleoptera: Cerambycidae). U.S. Fish & Wildlife Service. Sacramento, CA. 133 pp.

Burke, H.E. 1921. Biological notes on *Desmocerus*, a genus of roundhead borers, the species of which infest various elders. Journal of Economic Entomology 14:450-452.

California Department of Fish and Game. 2005. California Natural Diversity Data Base. Special Animals. Sacramento, CA. 28 pp.

Conard, S. G., R. L. MacDonald, and R. F. Holland. 1977. Riparian vegetation and flora of the Sacramento Valley. In A. Sands (ed.), Riparian forests in California: their ecology and conservation. Institute of Ecology, Davis, CA. Pp. 47-55.

Craighead, F.C. 1923. North American cerambycid larvae. A classification and the biology of North American cerambycid larvae. Canada Dept. Agr. Ento. Branch Bull. No. 27. 238 pp. & illustrations.

Davis, A. and J.A. Comstock. 1924. Larva and pupa of *Desmocerus californicus* (Horn). Bull. So. Calif. Acad. Sci. 23:179-181.

Fisher, W.S. 1921. A new cerambycid beetle from California. Proc. Entomol. Soc. of Washington 23:206-208.

Halstead, J.A. 1991. Unpublished manuscript. Kings River Conservation District. Fresno, CA. 47 pp. & figs. (cited in Barr 1991).

Holland, R. 1986. Preliminary descriptions of terrestrial natural communities of California. California Department of Fish and Game. Nongame-Heritage Program. Sacramento, CA. 156 pp.

Jones & Stokes Associates, Inc. 1987. Survey of habitat and populations of the Valley Elderberry Longhorn beetle along the Sacramento River. Sacramento, CA. Final report. 48 pp. + appendices.

Jones & Stokes Associates, Inc. 1995. Biological data report and preliminary Section 7 biological assessment on the valley elderberry longhorn beetle for the American River Watershed Investigation Project - Auburn Canyon Area. Sacramento, CA. Prepared for the U.S. Army Corps of Engineers, Sacramento District.

Katibah, E. F., N.E. Nedeff, and K. J. Drammer. 1984. Summary of riparian vegetation areal and linear extent measurements from the Central Valley Riparian Mapping Project. In R. E. Warner and K. M. Hendrix (eds.), California riparian systems.

University of California Press. Berkeley, CA. Pp. 46-50.

Linsley, E.G. and J. A. Chemsak. 1972. Cerambycidae of North America. Part VI, No. 1. Taxonomy and classification of the subfamily Lepturinae. Univ. of Calif. Publ. in Entomology 69:1-138 & plates.

Roberts, W. G., J. G. Howe, and J. Major. 1977. A survey of riparian forest flora and fauna in California. In A. Sands (ed.), Riparian forests in California: their ecology and conservation. Institute of Ecology, Davis, CA. Pp. 3-16.

Shields, A.O. 1990a. Field investigation of the threatened Valley Elderberry Longhorn beetle (*Desmocerus californicus dimorphus*) habitat in Kern County, California. Draft report prepared for U.S. Fish & Wildlife Service, Endangered Species Office, Sacramento, CA. 4 pp.

Shields, A.O. 1990b. Field investigation of the threatened Valley Elderberry Longhorn beetle (*Desmocerus californicus dimorphus*) habitat in Kern County, California. Final report prepared for U.S. Fish & Wildlife Service, Endangered Species Office, Sacramento, CA. 7 pp.

U.S. Fish & Wildlife Service. 1978. Proposed endangered or threatened status and critical habitat for 10 beetles. Federal Register 43:35636-35643.

U.S. Fish & Wildlife Service. 1980. Listing the Valley Elderberry Longhorn beetle as a threatened species with critical habitat. Federal Register 45:52803-52807.

U.S. Fish & Wildlife Service. 1984. Recovery plan for the valley elderberry longhorn beetle. Portland, OR. 62 pp. (prepared by Richard A. Arnold).

U.S. Fish & Wildlife Service. 1996a. Mitigation guidelines for the Valley Elderberry Longhorn Beetle. Sacramento, CA. 9 pp.

U.S. Fish & Wildlife Service and National Marine Fisheries Service. 1996b. Habitat conservation planning handbook. Washington, DC.

U.S. Fish & Wildlife Service. 1999. Conservation guidelines for the Valley Elderberry Longhorn Beetle. Sacramento, CA. 13 pp.

Warner, R. E. 1984. Structural, floristic and condition inventory of Central Valley riparian systems. In R. E. Warner and K. M. Hendrix (eds.), California riparian systems. University of California Press. Berkeley, CA. Pp. 356-374.

13.0 APPENDIX A

Mitigated negative declaration for

The Offices at Parkshore project

approved by the City of Folsom

CITY OF FOLSOM
MITIGATED NEGATIVE DECLARATION

THE OFFICES AT PARKSHORE REQUEST FOR SITE/ARCHITECTURAL DESIGN REVIEW APPROVAL (PN 04-663)

The Community Development Director of the City of Folsom, California, a Charter City, does prepare, make, declare, and publish this Mitigated Negative Declaration for the following described project on August 5, 2005.

Project Description: The applicant, Mark III, is requesting Site/Architectural Design Review approval to develop the Offices at Parkshore, a 74,435 square foot office park. The Offices at Parkshore will consist of eight single-story office buildings ranging in size from 2,991 square feet to 4,300 square feet, and a 48,422 square foot, two-story office building. The proposed project, which is considered part of the Lake Forest Technical Center, is located on a 6.48-acre site on Parkshore Drive, just west of Folsom Boulevard. The project site is zoned M-1 (Light Industrial District) and the General Plan land-use designation for the site is IND (Industrial/Office Park).

The proposed office buildings will incorporate building materials that are used throughout the Lake Forest Technical Center including brick, stucco, and concrete. The nine office buildings will utilize brick facades with neutral colored stucco insert panels, solar bronze glazing in dark aluminum storefronts, and low sloping rooflines.

Two vehicular driveways are proposed to serve the project site from Parkshore Drive. The westernmost driveway is currently constructed and will provide reciprocal access to the proposed office park and the existing OSI office building. All turning movements will be permitted from both vehicular driveways. Internal vehicular circulation will be provided by drive aisles. Pedestrian circulation is provided by a combination of walkways connecting the office buildings and a sidewalk along Parkshore Drive. The applicant is proposing to provide 377 onsite parking spaces. Additional site improvements include sidewalks, pedestrian walkways, underground utilities, and associated site landscaping.

Location: The 6.48-acre site is bounded by Parkshore Drive to the north and west, a self-storage facility to the east, and a commercial office park to the south. The site naturally slopes from north to south and from east to west towards Lake Natoma. The site includes tailing materials from previous mining activities, the depth of which increases along Parkshore Drive and south towards Park Way. Several oak trees are located on the property along with native trees, shrubs, and grasses. The site is currently undeveloped.

The City of Folsom, Community Development Department has reviewed the proposed project and has determined that the project will not have a significant effect on the environment, based upon a negative declaration. An Environmental Impact Report is not required, pursuant to the California Environmental Quality Act of 1970 (Division 13 of the Public Resources Code of the State of California).

This environmental review process and Mitigated Negative Declaration filing is pursuant to Title 14, Division 6, Chapter 3, Article 6, Sections 15070 and 15071 of the California Administrative Code.

City of Folsom
Michael J. Johnson, AICP
Community Development Director

By: _____
Date: August 5, 2005

14.0 APPENDIX B:

Sales Agreement Between

Mark III Engineering Contractors and

Wildlands, Inc. for 11 VELB Mitigation Credits

(Note: sales agreement will be provided upon actual purchase of these credits)