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## **Appendix C: Additional Alternative Route Analysis Documentation**

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## **C-1: Line 407 Alternative Route Analysis**

Pacific Gas and Electric Company  
Line 406 and Line 407 Pipeline Project

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**California State Lands Commission Application**

**Line 407 Alternative Route Analysis**

February 6, 2009





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- Attachment A: Alternative Route Maps
- Attachment B: Photo Exhibit
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# 1 INTRODUCTION

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The Pacific Gas and Electric (PG&E) Line 406 and Line 407 Pipeline Project includes installation of approximately 40 miles of new 30-inch diameter natural gas pipeline in Yolo, Sutter, Sacramento, and Placer Counties. The project is designed to provide greater capacity and service reliability to the existing natural gas transmission and distribution system and to extend natural gas service to planned residential and commercial developments in the region. A complete description of project construction and operation activities was provided in the *PG&E Line 406 and 407 Pipeline Project Preliminary Environmental Assessment (PEA)*, which was submitted to the California State Lands Commission on March 8, 2007, with a supplemental filing submitted on October 17, 2007.

This supplement provides additional information regarding pipeline route alternatives to address issues raised by the Placer Vineyards Development Group regarding three sites that have been identified in the Placer Vineyards Specific Plan for the construction of schools in the Center Unified School District.

## 1.1 BACKGROUND

PG&E's alignment of Line 407 in southwestern Placer County follows along the north side of Base Line Road. The Placer Vineyards Specific Plan outlines development of over 5,000 acres generally to the south of Base Line Road, including the construction of three schools in the vicinity of PG&E's pipeline project. Although PG&E had previously provided information regarding the location of its pipeline, Placer Vineyards has moved forward with its development plans and has asked the California State Lands Commission to consider alternatives that could eliminate potential land use conflicts. In response to that request, PG&E has met with the Center Unified School District regarding potential conflicts at the following three sites:

**1. Sierra Vista School.** The existing alignment along Base Line Road is outside of the 1,500-foot buffer that has been established for this site, and as such, no additional action is proposed by PG&E.

**2. Placer Vineyards Proposed School Site – ES3 (East of Palladay Road).** The existing alignment along Base Line Road is within the 1,500-foot buffer that has been established for this school site. PG&E is considering a route approximately 0.4-mile-long (Alternative Route M) to the north of the 1,500-foot buffer zone. This route is offset approximately 100 feet to the north of the buffer around the school site and is within the study area for the original route along Base Line Road. It would pass through annual grassland and cross seasonal wetlands and a vernal swale. A vernal pool would be crossed for approximately 150 feet along the western part of the alternative route. Further analysis and design is required to confirm that the re-route is feasible. The reroute complicates the currently planned HDD that was proposed to avoid an environmental feature. The HDD would need to be shortened or relocated to intercept the alternative alignment on the western boundary of the buffer zone. Another alternative that PG&E is considering would include a horizontal directional drill through a portion of this buffer zone along Base Line Road. Based upon the discovery of the 1,500-ft buffer zone, PG&E would propose an Applicant Proposed Mitigation Measure (APM) be introduced to extend the

directional drill approximately 1,000 feet to the east. Installation via directional drill will increase the cover through the buffer zone to approximately 35-ft. The added cover, will likely result in sufficiently reducing risk to the school given that the pipeline is very near the edge of the buffer zone. PG&E further proposes that the APM include provisions for a risk analysis to be performed in accordance with the California Education Code Section 17213, Proximity to Pressurized Gas, Gasoline, or Sewer Pipeline, which reads:

*Education Code*, Section 17213, prohibits the acquisition of a school site by a school district if the site "contains one or more pipelines, situated underground or aboveground, which carries hazardous substances, acutely hazardous materials, or hazardous wastes, unless the pipeline is a natural gas line which is used only to supply natural gas to that school or neighborhood."

*Public Resources Code*, Section 21151.8, uses the same language with reference to approval of environmental impact reports or negative declarations (see California Code of Regulations (CCR), Title 5, Section 14010(h).)

CCR, Title 5, Section 14010(h) states:

(h) The site shall not be located near an above-ground water or fuel storage tank or within 1500 feet of the easement of an above ground or underground pipeline that can pose a safety hazard as determined by a risk analysis study, conducted by a competent professional, which may include certification from a local public utility commission.

**3. Placer Vineyards Proposed School Site - HS1 (West of Palladay Road).** PG&E is considering two alternatives to avoid the proposed high school site west of Palladay Road between South Brewer Road and Country Acres Lane, north of Base Line Road in Township 11N, Range 5E, Sections 31-33 (see Attachment A). Alternative Routes K and L are outside of the 1,500-foot buffer. This document is an analysis of these two alternatives. Two other routes, I and J, were rejected because they were within the 1,500-foot buffer. The following report outlines the setting of each of the proposed route alternatives and discusses potential impacts related to each alternative.

Several issues were raised during public comments on the draft Environmental Impact Report (EIR) of the Placer Vineyards Specific Plan relating to water supply, sewage treatment, stormwater/flood control, traffic, and biological resources. PG&E's proposed pipeline alternatives would have no effect on any of the main concerns raised by comments on Placer Vineyards Specific Plan relating to water supply, sewage treatment, stormwater/flood control, traffic, and biological resources. Pipeline construction will not create additional demand for water or sewage services and would not impact stormwater or flood control infrastructure. Additionally, while there may be potential impacts to vernal pools related to construction along some of the route alternatives, these impacts will be avoided to the extent feasible or mitigated to the full extent of the law and any applicable conservation plans.

## 1.2 METHODS

Alternative Routes K and L are outside of the study area of the original pipeline route along Base Line Road. Reconnaissance surveys of Routes K and L were conducted on January 13<sup>th</sup>, 2009 by

Madeleine van der Heyden and Okorie Puryear of TRC Solutions, and archaeologists Eric Wohlgemuth and Laura Brink of Far Western Anthropological Research Group, on behalf of PG&E. The survey methods consisted of walking the routes of the proposed alternatives. More detailed surveys to delineate wetlands and other waters were undertaken on January 20<sup>th</sup> and 21<sup>st</sup>, 2008 by Madeleine van der Heyden and Michael Farmer of TRC Solutions. The surveyors focused on raptor habitat, trees that could be used by raptors for nesting; sensitive species and/or evidence of their presence; wetlands and vernal pools; residences and other structures; and land usage. Potential nesting trees and other potential resources were marked on maps (see Attachment A) and photographs were taken of each of the route alternative locations in order to give a representative visual of the settings (see Attachment B). The school site buffer maps for ES3 and Sierra Vista School are provided in Attachment C.

## 2 ROUTE DESCRIPTIONS

The following narratives describe the general setting of each alternative to avoid the HS1 buffer zone. See Table 1 below for a summary of key resource issues for each route alternative discussed. Resource locations are plotted on maps in Attachment A.

**Table 1: Summary of Key Resources for Line 407 Alternatives**

Resource	Route Alternatives	
	Route K	Route L
Wetlands/water bodies crossed (Assuming 100-foot ROW on centerline)	5	5 <sup>1</sup>
Residences within 1000 feet	4	5 <sup>1</sup>
Residences within 500 feet	2	4 <sup>1</sup>
Potential nesting trees within 500 feet	11	13 <sup>1</sup>
Vernal pools within 250 feet	2 <sup>2</sup>	3 <sup>1,2</sup>

<sup>1</sup>Assumes pipeline would be along the east side of Country Acres Lane for the first 900 feet and cross to the west side beyond the developed property, thereby avoiding most seasonal wetlands and swales.

<sup>2</sup>Vernal pools located across Base Line Road have been excluded because harmful effects from runoff associated with project activities are unlikely.

### 2.1 ROUTES K AND L

Routes K and L deviate off of Base Line Road by routing further to the north away from the proposed school site. They differ primarily in how far north they would go before turning east to west. As shown in Map 1 of Attachment A, Routes K and L share similar alignments (although of different lengths) along Country Acres Lane and S. Brewer Road. From the eastern terminus at the corner of Country Acres Lane and Base Line Road, the pipeline would travel north along Country Acres Lane. A residence and partially developed property is located on the west side of Country Acres Lane near Base Line Road, so the pipeline would be routed through pasture / fallow agricultural fields along the east side of the road.

From the western terminus at the corner of S. Brewer Road and Base Line Road, there are also developed residential properties east of S. Brewer Road near Base Line Road; consequently, the pipeline would be routed through annual grasslands along the west side of S. Brewer Road. Further north on S. Brewer Road are scattered wetlands along both sides. Vernal pools are present west of S. Brewer Road.

### **2.1.1 Route K**

From Country Acres Lane, Route K would turn west through rice fields and actively farmed land, crossing Steelhead Creek and two seasonal wetlands before reaching S. Brewer Road.

### **2.1.2 Route L**

From Country Acres Lane, Route L would turn west through the same rice fields as Route K, but further to the north. A residence is located north of the route near this turning point. The route would continue west for approximately 0.5 mile before turning north for approximately 0.1 mile and then turning west again staying along the rice field edge for approximately 0.25 mile. The route would then continue for an additional approximately 0.25 mile through active agricultural land before reaching S. Brewer Road. A residence is located just north of the route at this location and seasonal wetlands are present in the field to the south.

### **3 COMPARISON OF IMPACTS OF ROUTE ALTERNATIVES**

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The following analysis describes the potential impacts resulting from each route alternative to various resources included in the California Environmental Quality Act (CEQA) checklist. Each resource is evaluated with respect to each route alternative individually. If the impacts on the resource are similar for all of the alternatives then they are presented as such. In addition, if impacts related to the alternative are of a similar nature to those already discussed in the 2007 PEA then that document is referenced as a source for the analysis.

#### **3.1 AESTHETICS**

None of the route alternatives would have appreciably different impacts on aesthetics from those that were outlined in the 2007 PEA.

#### **3.2 AGRICULTURAL RESOURCES**

The following is a discussion of the significance criteria, their method of evaluation and analysis of impacts for Routes K and Route L.

##### **3.2.1 Significance Criteria**

According to Section 15002(g) of the California Environmental Quality Act (CEQA) Guidelines, “a significant effect on the environment is defined as a substantial adverse change in the physical conditions which exist in the area affected by the proposed project.” As stated in the Section 15064(b) of the CEQA Guidelines, the significance of an activity may vary with the setting. Standards of significance were derived from Appendix G of the CEQA Guidelines. Impacts to agricultural resources are considered significant if the project:

- converts substantial amounts of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to non-agricultural use;
- substantially conflicts with existing zoning for agricultural use, or a Williamson Act contract; or
- involves other changes in the existing environment, which, due to their location or nature, could result in substantial conversion of Farmland to non-agricultural use.

##### **3.2.2 Potential Impacts**

###### **3.2.2.1 Construction**

As there would be no aboveground structures associated with this section of the pipeline, the project area would be returned to its previous uses after construction in accordance with all pre-arranged landowner requirements, and there would be no conversion of farmland to non-agricultural use.

#### 3.2.2.1.1 Temporary Impacts

Where the routes traverse agricultural lands, the pipeline would be constructed at a sufficient depth that the land use conversion would only be temporary. The top of the pipeline would need to be deeper than any potential discing or deep-ripping activities that could subsequently occur over the pipeline right-of-way (ROW). Therefore, PG&E would install the pipeline with at least 5 feet of cover in agricultural lands. PG&E would remove, stockpile, and replace topsoil on all affected agricultural land as needed during excavation for re-use over the pipeline, which would allow any prior existing agricultural land use to continue after the pipeline is constructed.

Within the agriculture areas, the maximum impacts would occur to the crops in the construction ROW and to those fields that are flood-irrigated and bisected by the ROW. Impacts may include temporary loss of farmable land, and potentially a partial loss of crop if the fields have already been planted. In flood-irrigated fields that are bisected by the ROW, impacts may include a loss of the portion of the field downstream of the ROW and potentially a loss of that entire side of the crop if the fields have already been planted. The remainder of the crop would not be affected and could be harvested. Row crops would temporarily be precluded for one month within the ROW. Farmers would be compensated for any loss of crop, so no significant impacts would result.

Direct impacts to crop-related land uses would primarily be temporary. There would be no permanent conversion of agricultural lands; as such the potential impact to Important Farmlands from these routes is negligible.

#### 3.2.2.1.2 Permanent Impacts

The route alternatives would not conflict with existing zoning for agriculture or parcels under the Williamson Act contract. Additionally, as all disturbed areas would be returned to pre-existing conditions, permanent impacts would be less than significant.

#### **3.2.2.2 *Operation and Maintenance***

Permanent restrictions on agricultural land use within the 50-foot-wide permanent pipeline easement are necessary for the safe operation of the pipeline. Easement documents may restrict development within the easement area and also stipulate that the landowners may not diminish or substantially add to the cover over the pipe. However, the minimum 5 feet of cover over the pipeline in agricultural areas would preclude impacts to the plowing, ripping, or minor field-leveling practices of existing agricultural uses. Major field-leveling, such as the conversion of contour rice fields to leveled fields, could adversely affect the necessary cover over the pipe, increasing the possibility for agricultural contact with the pipe, and leading to pipeline damage and potential failure. To minimize this possibility, PG&E regularly patrols the pipelines to monitor land uses and activities such as grading that may affect the safe operation of the pipeline.

### **3.3 AIR QUALITY**

None of the route alternatives would result in appreciably different impacts on air quality from those impacts outlined in the 2007 PEA.

### **3.4 BIOLOGICAL RESOURCES**

Each of the route alternatives would have varying levels of potential impact on biological resources. Biological resources are similar to those previously described in the 2007 PEA, and no additional species or habitats were identified. A complete description of vegetation communities, habitats, and sensitive species is included in the 2007 PEA. See Attachment A for maps depicting the location of biological resources near each route alternative. The following discussion outlines the significance criteria used to evaluate the impacts related to each route alternative followed by a discussion of the potential impacts.

#### **3.4.1 Significance Criteria**

According to Section 15002(g) of the California Environmental Quality Act (CEQA) Guidelines, “a significant effect on the environment is defined as a substantial adverse change in the physical conditions which exist in the area affected by the proposed project.” As stated in the Section 15064(b) of the CEQA Guidelines, the significance of an activity may vary with the setting. Standards of significance were derived from Appendix G of the CEQA Guidelines. Impacts to biological resources are considered significant if the project:

- causes a substantial adverse effect on designated species either directly or through substantial habitat modifications;
- substantially diminishes the amount or habitat value of riparian habitat or other state- or federally recognized sensitive natural communities through physical modification to such areas;
- directly removes, fills, or causes hydrologic interruption to wetlands such that wetland area functions and/or values are substantially reduced or diminished;
- interferes substantially with the movement of native resident or migratory fish and wildlife species, or with established migration corridors through the removal, obstruction, or physical modification of corridors so as to substantially diminish use;
- substantially obstructs access or diminishes the quantity or quality of native nursery habitat;
- substantially conflicts with applicable local policies or ordinances protecting biological resources; or
- hinders the implementation of an applicable Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved applicable habitat conservation plan.

## **3.4.2 Potential Impacts**

### **3.4.2.1 Construction**

#### **3.4.2.1.1 Temporary Impacts**

Construction of Routes K and L would require temporary disturbance to an approximate 100-foot-wide ROW. In certain areas, the ROW would need to be narrowed to avoid impacts to habitats and special-status species. Potential temporary construction impacts may result in loss of foraging and/or nesting habitat, disturbance of nesting sites, habitat fragmentation, and direct mortality. However, with the exception of direct mortality, these impacts would be temporary in nature as the ROW would be restored following construction. Temporary impacts resulting from construction would be reduced to less than significant levels by the implementation of the mitigation measures outlined in the 2007 PEA.

#### **3.4.2.1.1.1 Habitat Types**

##### **Agricultural Lands**

A large portion of the routes run through agricultural lands. Construction of Route K or L would directly impact approximately 18.5 or 16 acres of active agricultural lands, respectively, that may be utilized by numerous special-status species including rice fields that may represent habitat for giant garter snake, although there have been no confirmed sightings of a giant garter snake in this area. PG&E would implement the mitigation measures outlined in previously prepared CEQA document to minimize potential temporary construction impacts to agricultural habitat. Because the pipeline would be buried upon completion of construction and the ROW will be restored to its pre-construction uses, and due to the large amount of surrounding agricultural lands, impacts to agricultural lands would be less than significant.

##### **Annual Grasslands**

Grassland habitat exists on the western side of S. Brewer Road. Construction of Route K or L will directly impact approximately 5 or 7 acres of grassland habitat, respectively. PG&E will implement the mitigation measures outlined in the previously prepared CEQA document to minimize potential temporary construction impacts to annual grassland habitat. Because the pipeline will be buried upon completion of construction and the ROW will be restored to its preconstruction grade and reseeded as necessary, temporary impacts to annual grasslands would be less than significant.

##### **Canal/Freshwater Emergent Wetland**

Routes K and L would require crossing of several drainages and other waters. Crossings could be bored or trenched. Those features which cannot be bored would be trenched and restored to preconstruction conditions. As such it is expected that impacts to canals/freshwater emergent wetlands would be less than significant.

##### **Seasonal Wetlands, Swales, and Vernal Pools**

Seasonal wetlands and swales in the project area, including vernal pools, could be impacted by vegetation removal and/or grading and trenching activities. There are several seasonal wetland features located along these routes (refer to Table 1). In addition, several lengths of the routes as currently depicted are within 250 feet of a delineated vernal pool. However, PG&E would avoid

vernal pools and other seasonal wetlands during construction to the maximum extent feasible by narrowing the ROW, adjusting the route, or drilling under these features. Given the large diameter of the pipeline, HDD may not be feasible for all features. PG&E would avoid wetlands to the maximum extent practicable and would implement compensatory mitigation as necessary. Impacts to seasonal wetlands resulting from construction of the project would be mitigated based on the proper mitigation ratios developed in coordination with the U.S. Army Corps of Engineers and U.S. Fish and Wildlife Services, and mitigation would likely include a combination of restoration of impacted wetlands and creation of new wetlands. With implementation of the planned mitigation, impacts to seasonal wetlands would be less than significant.

#### **3.4.2.1.1.2 Special-Status Species**

No occurrences of rare plant species were found in the survey of Routes K and L or in CNDDDB records. Thus, no impacts to special-status plant species would be anticipated as a result from construction.

While there were no special status species observed during the most recent field visit, the impacts associated with construction of the alternatives would be similar to those for the rest of the project. As such, direct mortality of special-status wildlife species could occur during construction as a result of increased vehicular and foot traffic, use of heavy construction equipment, excavation, and other project activities. In addition, a limited amount of wildlife habitat would be temporarily lost due to excavation of the trench.

##### Vernal Pool Invertebrates

Vernal pool fairy shrimp (*Branchinecta lynchi*) and California fairy shrimp (*Lindieriella occidentalis*) have the potential to occur in vernal pools found in the study area.

##### Fish

Central Valley steelhead (*Oncorhynchus mykiss*) and Central Valley fall- and late-fall-run Chinook salmon (*Oncorhynchus tshawytscha*) may occur in Steelhead Creek during times of suitable flows. Steelhead Creek would be crossed by Routes K and L. Suitable flows and/or habitat were not observed in Steelhead Creek during fisheries surveys conducted in 2007 or during the 2008 reconnaissance surveys, and thus the creek was determined to be highly unlikely to support these species in the project area during the dry months when construction would be scheduled. Suitable spawning or juvenile rearing habitat was likewise not observed in the upper reaches of Steelhead Creek.

##### Giant Garter Snake

Giant garter snake (*Thamnophis gigas*) has the potential to occur in rice fields crossed by Routes K and L. Giant garter snake have low potential to occur in the area as there are no records for this species east of the Natomas East Main Drainage Canal.

##### Swainson's Hawk

Nesting activity of Swainson's hawks and other raptors could be disrupted by construction noise and activities. Several large trees that are suitable for nesting are present within a half mile of

Routes K and L. Eleven and thirteen potential nesting trees are within 500 feet of Routes K and L respectively.

#### 3.4.2.1.2 Permanent Impacts

There would not be permanent impacts to biological resources as a result of construction activities associated with Routes K and L.

#### 3.4.2.2 *Operation and Maintenance*

Operation and maintenance would not have significant impacts to sensitive habitats or special-status species. There would be no aboveground facilities associated with Routes K and L, and any maintenance impacts would be temporary in nature.

### 3.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

This chapter addresses the existing cultural and paleontological resources in the vicinity of the project, and analyzes potential impacts to known and undocumented resources from construction and operation of the project. Complete cultural and paleontological resource surveys and reports were prepared in 2007 for Line 406 and Line 407 and summarized in the *PG&E Line 406 and 407 Pipeline Project Preliminary Environmental Assessment*, referred to below as the 2007 PEA.

Construction activities will comply with all applicable federal, state, and local regulatory requirements. Mitigation measures are recommended, where applicable. With implementation of the recommended mitigation measures, impacts to cultural and paleontological resources as a result of construction and operation of the project will be less than significant.

#### 3.5.1 Cultural Resources

Far Western Anthropological Research Group conducted the cultural resources study for the school site pipeline alternatives as an addendum to the Line 407 study.

##### 3.5.1.1 *Methodology*

The methods used for the cultural study included archival records searches, Native American consultations, field inventory, and preparation of a technical report.

##### 3.5.1.1.1 Records Search

The records search was carried out at the North Central Information Center (California State University, Sacramento) of the California Historical Resources Information System (CHRIS), an adjunct of the State Office of Historic Preservation. The records search took place in January 2009, and included a review of the following documents:

- site records and reports of previous studies in or adjacent to the project area
- *California Inventory of Historical Resources* (Department of Parks and Recreation 1976)
- California Office of Historic Preservation's *Five Views: An Ethnic Historic Site Survey for California* (Department of Parks and Recreation 1988)

- *California Historical Landmarks* (Department of Parks and Recreation) through August, 2005
- *California Points of Historical Interest* (Department of Parks and Recreation 1992)
- *Historic Properties Directory Listing by City* (Department of Parks and Recreation 2003)
- *Directory of Properties in the Historical Property Data File, Archaeological Determinations of Eligibility, National Register of Historic Places - Listed Properties and Determined Eligible Properties*
- *California Register of Historical Resources.*
- Historic-era 7.5- and 15-minute U.S. Geological Survey (USGS) quadrangles and General Land Office (GLO) plat maps.

#### 3.5.1.1.2 Native American Consultation

In July of 2006, a letter was sent for the Line 407 project to the Native American Heritage Commission (Commission), requesting a review of their Sacred Lands Inventory and a list of local Native American groups and individuals with particular ties to the project area. Letters and project maps were sent in January 2009 to five groups or individuals listed by the Commission for Placer County; and follow-up phone calls were made to all interested parties. No written responses were received; however one individual responded by telephone and was sent a copy of the technical report addendum at her request.

#### 3.5.1.1.3 Field Inventory

The field work took place in January 2009. The survey was conducted by trained archaeologists meeting the Secretary of the Interior's standards. Any previously documented cultural resources within or immediately adjacent to the APE were re-visited during the surveys, to confirm their locations and present status.

### 3.5.1.2 *Existing Conditions*

The preliminary field records search, Native American consultation, and field survey provided the following information on the existing conditions for cultural resources in the project area as of January 2009. For detailed discussions of the prehistoric, ethnographic, and historic-period contexts of the area; and specifics of the Native American consultations, see the public versions of the cultural resources technical reports prepared for the Line 407 study.

#### 3.5.1.2.1 Regional Setting

The 2007 PEA fully describes the regional prehistoric, ethnographic, and historic-era setting for project cultural resources.

#### 3.5.1.2.2 Known or Potential Cultural Resources

The records search for this portion of the project area identified six documented or potential cultural resources, of which five lie within or immediately adjacent to the survey area. One of the five cultural resources (the location of the nineteenth-century Eagle Hotel) is known only from old General Land Office plats.

Survey of the school alternative routes confirmed the location of the five cultural resources identified by the records search in the project area, four of which were identified during field inventory of Line 407. Resources include a small bridge, an historic structure, two rural roads, and the presumed location of the Eagle Hotel. Below each is briefly described.

**Site P-31-002683:** This is a bridge over a small creek on Brewer Road. It was built in 1935. It was determined ineligible to the National Register (and hence the California Register) in a review of historic bridges in California (Caltrans 2008). It could be affected by project alternative Route L, but no further management is necessary.

**Site P-31-002684:** This is a historic-period structure that was recorded in 2002 by JRP Historical Consulting. It is an irregularly shaped Minimal Traditional house with a composition shingle roof, wooden board-and-batten walls with a brick skirt, and an attached garage. It has been recently modified, as evidenced by sliding aluminum windows and aluminum garage doors. The house was built just after World War II. It was recommended ineligible to the National and California Registers by historical archaeologist Mary Maniery. It could be affected by project alternative Routes K or L, but no further management is necessary.

**Site P-31-003306 (Brewer Road):** Brewer Road is a single-lane paved surface patched and maintained for current use. It runs north-south along the western edge of the project area. It has not been evaluated for the California Register. It could be affected by project alternative Routes K or L.

**Site P-31-003308 (Country Acres Road):** Country Acres Road is also a single-lane paved surface patched and maintained for current use. It runs north-south along the eastern edge of the project area. It has not been evaluated for the California Register. It could be affected by project alternative Routes K or L.

**Site P-31-003309 (The Eagle Hotel):** The Eagle Hotel and an adjacent barn are depicted on General Land Office plats from the 1850s. There are no references in either Sacramento or Sutter County history to an Eagle Hotel in this area. No trace of the hotel architecture or artifacts dating to this period could be found on the surface during the Far Western survey. Surface finds did include concrete rubble piles, a refuse pile dating to the 1950s-1970s, a concrete slab with a metal pipe, and planted fruit and shade trees. The only surface feature which may be associated with the Eagle Hotel is an eight-foot-wide, one-foot-deep depression, where recent concrete block fragments have been dumped. With the possible exception of the planted trees, all other artifacts and landscape features appear to date to the early to mid-twentieth century. It is quite possible, however, that subsurface features associated with the hotel (cellar, privies, dumps, wells, etc.) are present on the property. It has not been evaluated for the California Register. It could be affected by project alternative Routes K or L.

#### 3.5.1.2.3 Other Potential Resources

Project area soils are old and shallow and have no potential for buried Native American archaeological sites not visible from the surface. Historic-era buried resources could exist in the

study area, however. Structures in use in the 1800s or early 1900s often had privies, trash dumps, or wells to the rear of the buildings that subsequently were filled in or buried. Such features often contribute to National Register- or California Register-eligibility. Within the survey area the most sensitive location is at P-31-003309, the site of the former Eagle Hotel as noted above.

#### 3.5.1.2.4 Traditional Cultural Properties/Areas of Native American Concern

To date, no Traditional Cultural Properties or specific areas of Native American concern have been identified within the project area. However, consultations with the Commission and the local Native American community continue, and it is possible that traditional cultural properties or other areas of special concern will be identified. If so, they will need to be included in the impacts assessment and mitigation recommendations.

### 3.5.2 Paleontological Resources

Two paleontologically sensitive geologic units were identified in the 2007 PEA as the late Pleistocene Modesto and Riverbank Formations, which underlie a thin veneer of soils and Holocene alluvium in the flat central portion of California's Central Valley within the Line 407 project area. These same geological features underlie each of the route alternatives. None of the route alternatives would have impacts related to paleontological resources appreciably different from those outlined in the 2007 PEA.

### 3.5.3 Significance Criteria

The regulatory framework and methodology for determining impacts to cultural resources associated with the project include compliance with the requirements of the CEQA, as defined in Section 15064.5 of the CEQA Guidelines. CEQA calls for the identification of cultural resources that could be affected by the project, the evaluation of the significance or importance of such resources, an assessment of project impacts to significant or important resources, and the development of a treatment plan to avoid or address adverse effects to significant resources. The criteria for determining potential impacts to cultural resources associated with the project were developed from the CEQA Initial Study Checklist.

Under CEQA, effects to significant resources associated with the project must be considered. According to CEQA, a resource is unique or important if it:

- is associated with an event or person of recognized importance in California or American history or scientific importance in prehistory;
- can provide useful information of demonstrable public interest and is useful in addressing scientifically consequential and reasonable archaeological research questions;
- has a special or particular quality such as oldest, best example, largest, or last surviving example of its kind;
- is at least 100 years old and possesses substantial stratigraphic integrity; and/or
- involves important research questions that historical research has shown can only be answered with archaeological methods.

Construction related subsurface and surface disturbances could result in a loss of integrity of cultural deposits, a loss of scientific information, and the alteration of archaeological site setting. Potential indirect impacts, primarily vandalism, can result from increased access and use of the general area during construction and long-term maintenance and operational activities. There is also the potential for the inadvertent discovery of buried or masked archaeological materials during construction activities.

Impacts to cultural resources are considered significant if the project:

- causes a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the CEQA Guidelines;
- causes a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines; and/or
- disturbs any human remains, including those interred outside of formal cemeteries.

“Substantial adverse change” means demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired. Section 21084.1 stipulates that any resource listed in, or eligible for listing in, the California Register of Historical Resources (CRHR) is presumed to be historically or culturally significant. Section 21084.1 of the CEQA Guidelines requires treatment of any substantial adverse change in the significance of an historical resource listed in, or eligible to be listed in, the CRHR as a significant effect on the environment.

For the proposed project, a cultural resource impact would be considered significant if it:

- would cause damage to, disrupt, or adversely affect an important archaeological resource such that its integrity could be compromised or eligibility for future listing on the NRHP/CRHP diminished; or,
- would cause damage to or diminish the significance of an important historic resource such that its integrity could be compromised or eligibility for future listing on the NRHP/CRHP diminished (see CEQA Guidelines/36 CFR Part 800).

### **3.5.4 Potential Impacts**

#### ***3.5.4.1 Construction***

Routes K and L all similarly deviate off of Base Line Road by routing further to the north away from the proposed school site, and thus similarly impact documented and potential cultural and paleontological resources. Temporary and permanent impacts associated with construction along alternative Routes K and L could cause destruction, damage, alteration, or neglect to Sites P-31-002684 (historic structure), P-31-003306 (Brewer Road), P-31-003308 (Country Acres Road), and P-31-003309 (the Eagle Hotel). Route L could also cause damage to Site P-31-002683 (small bridge). These impacts would be reduced to less than significant levels with implementation of the mitigation measures listed in section 3.5.6 of this report.

Project ground-disturbing activities associated with construction of alternative Routes K and L could affect geologic units underlying the project area, some of which have elevated sensitivity for paleontological resources. Additionally, project construction could directly or indirectly destroy unique paleontological resources, sites, or unique geological features. Potential impacts from construction would be reduced to less-than-significant through mitigation.

#### **3.5.4.2 Operation and Maintenance**

Provided that all operation and maintenance are limited to the current project area of impacts (and mitigation), they will not create additional impacts to cultural or paleontological resources. As a result, impacts from operation and maintenance of the pipeline will be less-than-significant.

### **3.5.5 Mitigation Measures**

#### **3.5.5.1 Cultural Resources**

Impacts to significant or potentially significant cultural resources as a result of project construction and/or operations and maintenance will be reduced to a less-than-significant level with the adoption of the following mitigation measures.

Mitigation Measure 3.5-1: All significant/eligible resources in the project Area of Potential Effect (APE) will be protected from project impacts. Where impacts cannot be avoided, a Finding of Effect (FOE) will be prepared for each significant/eligible resource. Where the FOE identifies an adverse impact to a significant/eligible resource, the impact(s) will be mitigated through data recovery excavations, archival research, or other means, as appropriate.

Mitigation Measure 3.5-2: The unevaluated rural roads in the project APE will be evaluated for their National Register or California Register eligibility through archival research or other means, as appropriate. Resources determined through evaluation to be ineligible will be dropped from further management; those determined eligible will be subject to Mitigation Measure 3.5-1.

Mitigation Measure 3.5-3: The reported location of the historic Eagle Hotel, identified as sensitive for buried archaeological remains, will be tested prior to construction by backhoe trenching. All trenching will be supervised by a qualified professional historical archaeologist, who will evaluate the site's eligibility to the National Register or California Register.

### **3.6 GEOLOGY**

None of the route alternatives related to geology would have appreciably different impacts from those impacts outlined in the 2007 PEA.

### **3.7 HAZARDS AND HAZARDOUS MATERIALS**

The Environmental Data Resources (EDR) report developed for the previously proposed alignment of Line 407 was consulted and found to be applicable to the current study region. None of the route alternatives would have impacts related to hazards and hazardous materials appreciably different from those outlined in the 2007 PEA.

### 3.8 HYDROLOGY

See Attachment A for maps depicting the location of water and wetland features in the vicinity of each of the alternative routes. Table 2 shows 303(d) waters in vicinity of the route alternatives.

**Table 2: 303(d) Waters Within the Project Area**

<b>303(d)-listed Water</b>	<b>Pollutant</b>	<b>Potential Sources</b>	<b>Miles Affected</b>
Steelhead Creek (Upstream of Arcade Creek)	Polychlorinated biphenyls	Industrial point sources, agriculture, urban runoff/storm sewers	12

#### 3.8.1 Significance Criteria

According to Section 15002(g) of the California Environmental Quality Act (CEQA) Guidelines, “a significant effect on the environment is defined as a substantial adverse change in the physical conditions which exist in the area affected by the proposed project.” As stated in the Section 15064(b) of the CEQA Guidelines, the significance of an activity may vary with the setting. Standards of significance were derived from Appendix G of the CEQA Guidelines. Impacts to hydrological resources are considered significant if the project:

- violates any water quality standards or waste discharge requirements;
- substantially depletes groundwater supplies or interferes substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level;
- substantially alters the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site;
- substantially alters the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increases the rate or amount of surface runoff in a manner that would result in flooding on- or off-site;
- creates or contributes runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provides substantial additional sources of polluted runoff;
- otherwise substantially degrades water quality;

- places housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map;
- places within a 100-year flood hazard area structures that would impede or redirect flood flows;
- exposes people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- causes inundation by seiche, tsunami, or mudflow.

### **3.8.2 Potential Impacts**

#### **3.8.2.1 Construction**

##### **3.8.2.1.1 Temporary Impacts**

Routes K and L would require waterbody crossing over at least one part of Steelhead Creek, a 303(d) designated waterbody. While Steelhead Creek is not 303(d) listed for over-sedimentation, sediment loading can affect the streambed elevation and light penetration and, therefore, indirectly affect temperature and dissolved oxygen. Construction associated with crossing the creek could cause additional impacts on an already stressed ecosystem. In addition each of the routes, as currently planned, would cross or pass within 100 feet of several wetlands (refer to Table 2). As such there is a potential for impacts to surface water quality related to construction along these routes. Implementation of standard Best Management Practices during construction would reduce these impacts to less than significant levels, and restoration of the route to preconstruction conditions would ensure that drainage patterns are not substantially altered.

##### **3.8.2.1.2 Permanent Impacts**

There would be no permanent impacts related to hydrology and water quality as a result of construction along Routes K or L since each of the routes would be restored to preconstruction condition following construction.

#### **3.8.2.2 Operations and Maintenance**

Operation and maintenance would not have significant impacts to hydrological resources. There would be no aboveground facilities associated with Routes K or L, and any maintenance impacts would be temporary in nature.

### **3.9 LAND USE**

The previous impact analysis performed in the 2007 PEA regarding land use found that the project would have less than significant impacts. According to the significance criteria laid out in the CEQA checklist and the review of applicable regulations performed in the 2007 PEA these route alternatives would have similar less than significant impacts on current land usage.

However, there is the potential for future land usage to be limited by the construction of the pipeline. As discussed in the Agricultural Resources section of the 2007 PEA, and in Section 3.1: Agricultural Resources, above, all agricultural land, with the exception of orchards, overlying the pipeline alignment will be returned to preconstruction conditions and the preconstruction land use can continue with some restrictions. Whereas the current alignment was placed along the north side of Base Line Road in order to avoid future conflicts with land use, moving the pipeline further north increases the risk that future land uses could be restricted in the vicinity of the pipeline. Due to restrictions regarding grading and other changes to the land surface and usage, it is possible that future development of these parcels would be impacted by installation of the pipeline along Routes K or L.

### **3.10 NOISE**

Impacts related to noise will vary among the route alternatives being considered. These differences are attributable to the difference in noise profile of a directional drilling operation in contrast to construction noise generated during open trench construction methods and the number of residences that would be in close proximity to the noise sources present during pipeline construction. See Attachment A for maps depicting the location of residences in the vicinity of the route alternatives. The following analysis presents relevant regulations relating to noise and evaluates potential impacts for each of the route alternatives based on these regulations.

#### **3.10.1 Placer County**

Placer County has published a general plan that includes a noise element. The following standards, summarized in Table 3, are applicable to operational noise associated with new projects and include non-transportation noise sources.

The Placer County Municipal Code (Chapter 9 Public Peace, Safety, and Welfare) has an article that pertains to noise (Article 9.36). In this article, sensitive noise receptors are defined as “land uses in which there is a reasonable degree of sensitivity to noise. Such uses include single-family and multi-family residential uses, frequently used outbuildings, schools, hospitals, churches, rest homes, cemeteries, public libraries, and other sensitive uses as determined by the enforcement officer.” The sound-level standards for operational noise for sensitive receptors are summarized in Table 4.

Noise from construction activities is considered exempt from Article 9.36 provided the noise occurs between the hours of 6 a.m. and 8 p.m. Monday through Friday and between the hours of 8 a.m. and 8 p.m. on Saturday and Sunday. For this exemption to be valid, all construction equipment must be fitted with a factory-installed muffling device and maintained in good working order.

The Placer County Municipal Code prohibits any person at any location from creating sound, or allowing the creation of any sound, on property owned, leased, occupied, or otherwise controlled by such person that:

- causes the exterior sound level when measured on the property line of any affected sensitive receptor to exceed the ambient sound level by 5 dBA; or
- exceeds the sound-level standards as set forth in Table 4, whichever is greater.

Placer County allows exceptions for the provisions of this article and the notice of that request for exception must be given to all the properties that would be affected by the exception. Factors considered for construction-related exceptions include but are not limited to the following:

- conformance with the intent of Article 9.36;
- uses of the property and existence of sensitive receptors within the area affected by sound;
- factors related to initiating and completing all remedial work;
- the time of the day or night the exception will occur;
- the duration of the exception; and
- the general public interest, welfare, and safety.

**Table 3: Allowable  $L_{dn}$  Noise Levels within Specified Zone District<sup>1</sup>—Placer County**

<b>Zone District of Receptor</b>	<b>Property Line of Receiving Use</b>	<b>Interior Spaces<sup>2</sup></b>
Residential Adjacent to Industrial <sup>3</sup>	60	45
Other Residential <sup>4</sup>	50	45
Farm	(see footnote 1)	—
Agricultural Exclusive	(see footnote 1)	—

<sup>1</sup> Normally, agricultural uses are noise insensitive and will be treated this way. However, conflicts with agricultural noise emissions can occur where single-family residences exist within agricultural zone districts. Therefore, where effects of agricultural noise upon residences located in these agricultural zones are a concern, a Day-Night Average Level of 70 A-weighted decibels will be considered acceptable outdoor exposure at a residence.

<sup>2</sup> Interior spaces are defined as any locations where some degree of noise-sensitivity exists. Examples include all habitable rooms of residences, and areas where communication and speech intelligibility are essential, such as classrooms and offices.

<sup>3</sup> In recognition of the fact that noise mitigation from industrial operations may be difficult or costly, the exterior noise standards for residential zone districts immediately adjacent to industry-related zone districts have been increased by 10 decibels as compared to residential districts adjacent to other land uses.

<sup>4</sup> Where a residential zone district is located within an –SP combining district, the exterior noise-level standards are applied at the outer boundary of the –SP district. If an existing industrial operation within an -OSP district is expanded or modified, the noise-levels standards at the outer boundary of the –SP district may be increased.

**Table 4: On-site Sound Level Standards For Sensitive Receptors—Placer County**

<b>Sound-Level Descriptor</b>	<b>Daytime (7 a.m. to 10 p.m.)</b>	<b>Nighttime (10 p.m. to 7 a.m.)</b>
Hourly Equivalent Energy Noise Level	55	45
Maximum level, decibels	70	65

### **3.10.2 Significance Criteria**

According to Section 15002(g) of the California Environmental Quality Act (CEQA) Guidelines, “a significant effect on the environment is defined as a substantial adverse change in the physical conditions which exist in the area affected by the proposed project.” As stated in the Section 15064(b) of the CEQA Guidelines, the significance of an activity may vary with the setting. Standards of significance were derived from Appendix G of the CEQA Guidelines. Impacts noise are considered significant if the project:

- expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- expose persons to or generate excessive groundborne vibration or groundborne noise levels;
- cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project; or
- for a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels. For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.

### **3.10.3 Potential Impacts**

Potential impacts resulting from Routes K and L will be discussed together as they share significant portions of their routes and subsequently impacts would be very similar.

#### ***3.10.3.1 Construction***

Refer to the 2007 PEA for a list of potential equipment required and their associated noise ratings.

Considered together each of the routes would pass within less than 500 feet of at least two residences (refer to Table 1 for total number of residences within 500 feet of each alternative). While construction related noise is accepted under Placer County regulations during daylight hours, any overnight or around the clock construction requires approval of affected landowners. Additionally, there are at least two active pastures located along Route K that could be adversely affected by construction noise altering cattle behavior and health.

### ***3.10.3.2 Operations and Maintenance***

There would be no impacts associated with the long term operation and maintenance of this pipeline. There would be no aboveground structures or other potential noise generators and no vibration as a result of pipeline operation.

## **3.11 POPULATION AND HOUSING**

None of the route alternatives would have impacts on population and housing appreciably different from the impacts outlined in the 2007 PEA.

## **3.12 TRANSPORTATION AND TRAFFIC**

None of the route alternatives would have impacts to transportation and traffic appreciably different from the impacts outlined in the 2007 PEA.

## **3.13 UTILITIES AND SERVICE SYSTEMS**

None of the route alternatives would have impacts on utilities and service systems appreciably different from the impacts outlined in the 2007 PEA.

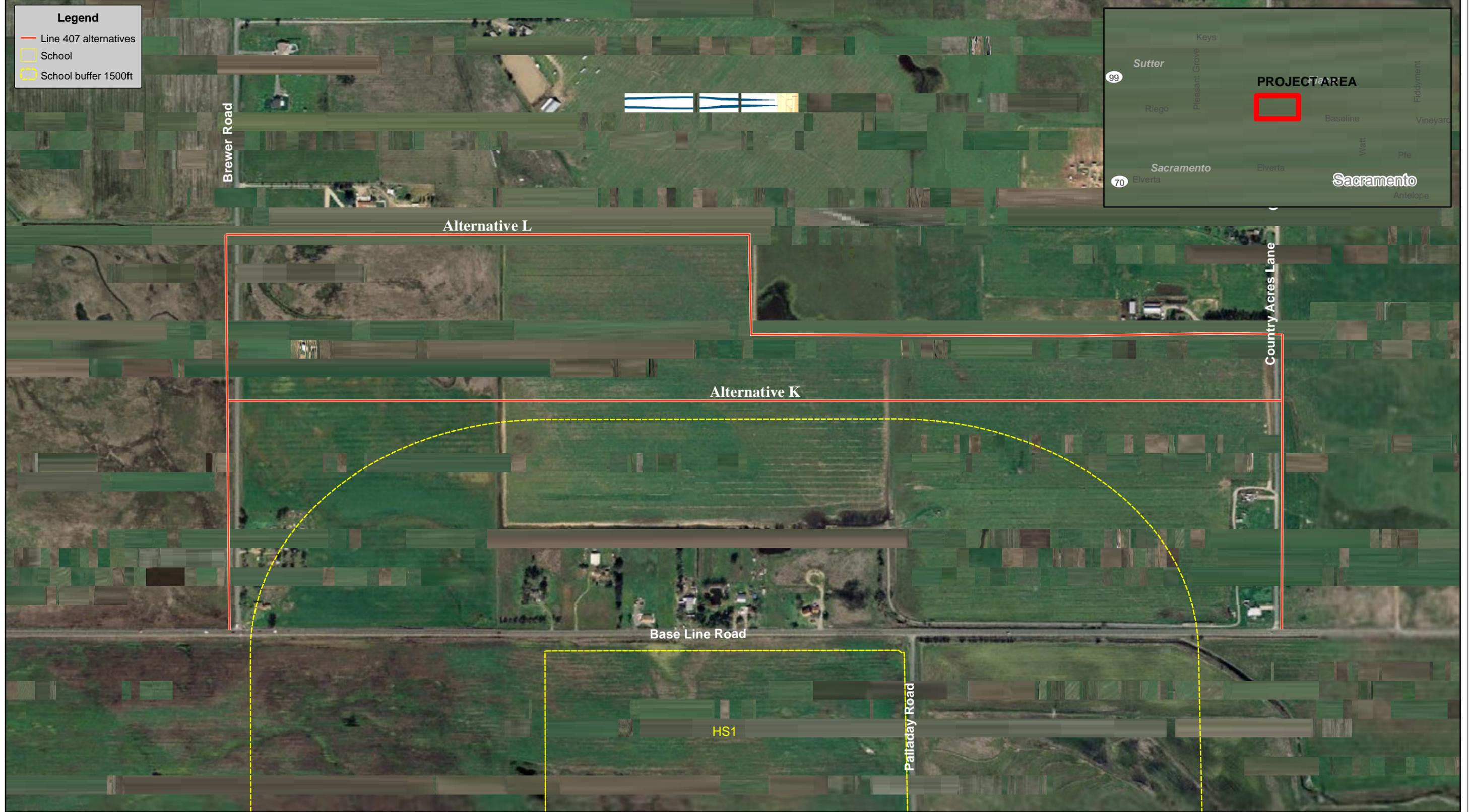
## **3.14 CUMULATIVE IMPACTS**

None of the route alternatives will create cumulative impacts in the region. The project is being undertaken in order to meet projected demand in the region due to increased development in the Sacramento region. The pipeline's construction would not precipitate any additional projects nor would it be occurring at the same time as any other construction project that could potentially create significant impacts. Reference the 2007 PEA for additional analysis of cumulative impacts related to the pipeline construction.

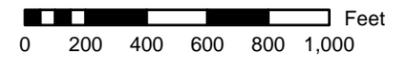
## **Attachment A: Alternative Route Maps**



# PG&E Line 407 Route Alternatives

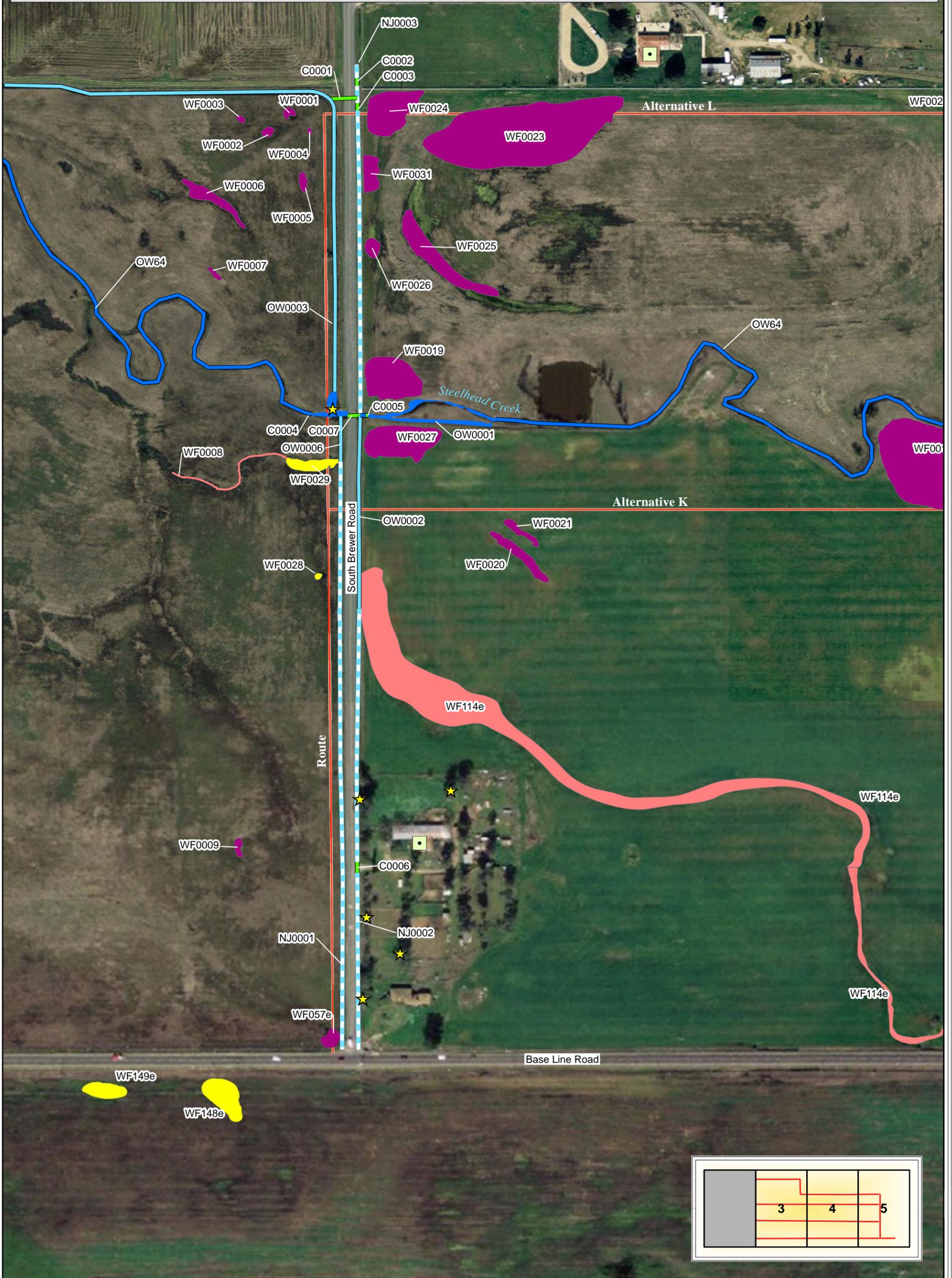


Survey area derived from PG&E  
School locations from MacKay and Soms  
Aerial: 6/15/2006 Map Date: 2/4/2009.

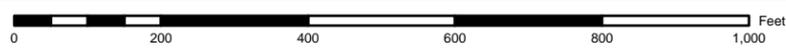




Line 407 alternatives	Potentially Non-Juris. Feats. - NJ#	Other Waters of the U.S. - OW#	Wetland Features - WF#
★ Potential Raptor Nest Tree	NON-JURISDICTIONAL ROADSIDE DITCH	NRPW	Riparian
□ Residence	NON-JURISDICTIONAL AGRICULTURAL DITCH	RPW	Seasonal Swale
□ Rice field	Culvert - C#	Pond	Seasonal Wetland
	Agricultural pond		Vernal Pool

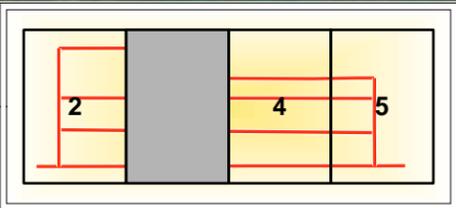
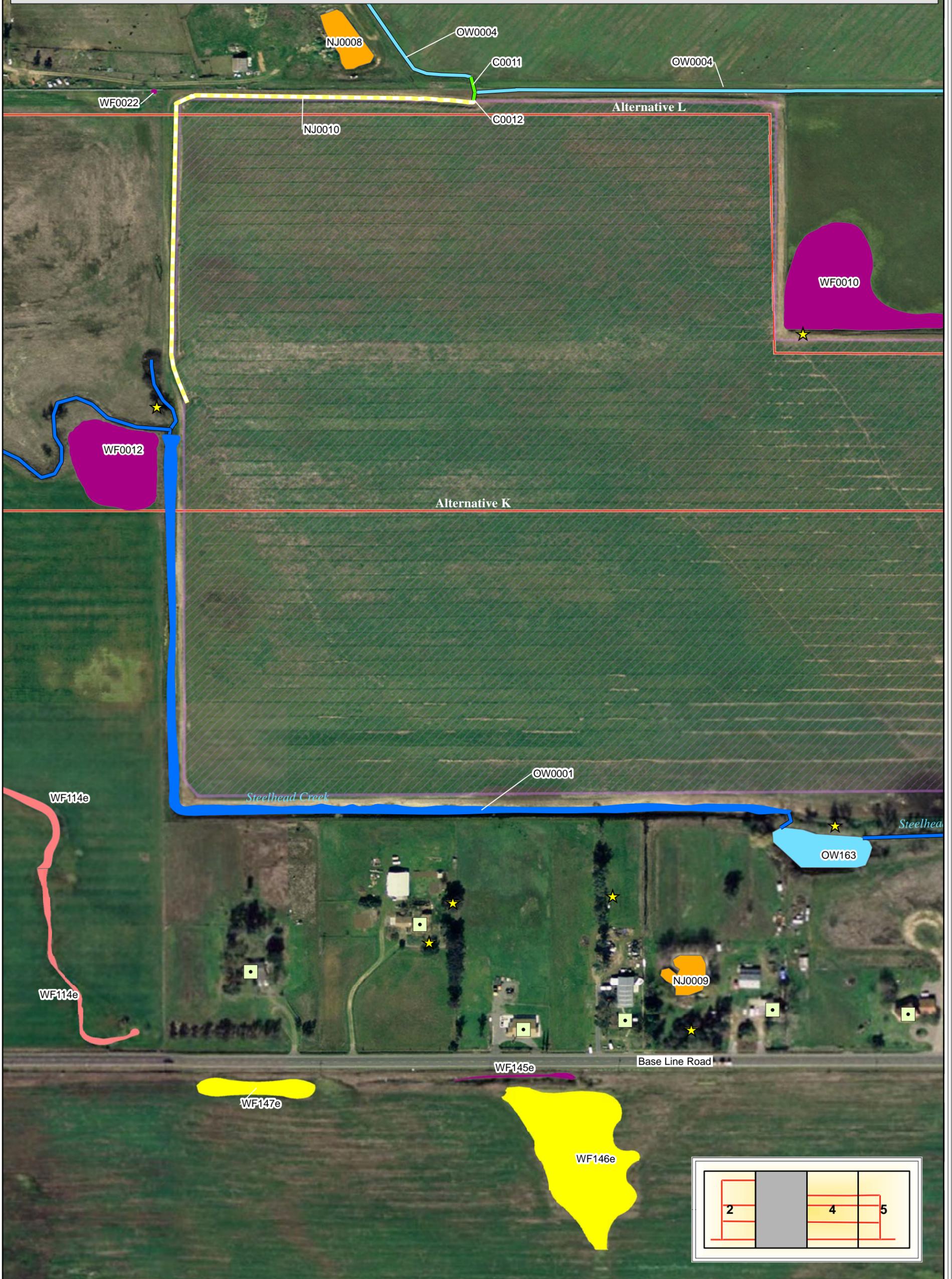


All features to remain preliminary until written verification from the USACE.  
 Survey area derived from PG&E  
 Surveyors: Madeleine van der Heyden, Mike Farmer  
 Aerial: 6/15/2006 Map Date: 2/4/2009





- |  |  |   |   |
|--|--|---|---|
| <ul style="list-style-type: none"> <li><span style="color: red;">—</span> Line 407 alternatives</li> <li><span style="color: yellow;">★</span> Potential Raptor Nest Tree</li> <li><span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Residence</li> <li><span style="border: 1px solid purple; display: inline-block; width: 10px; height: 10px;"></span> Rice field</li> </ul> | <b>Potentially Non-Juris. Feats. - NJ#</b> <ul style="list-style-type: none"> <li><span style="border-bottom: 1px dashed blue; width: 20px; display: inline-block;"></span> NON-JURISDICTIONAL ROADSIDE DITCH</li> <li><span style="border-bottom: 1px dashed yellow; width: 20px; display: inline-block;"></span> NON-JURISDICTIONAL AGRICULTURAL DITCH</li> <li><span style="border-bottom: 1px solid green; width: 20px; display: inline-block;"></span> Culvert - C#</li> <li><span style="background-color: orange; width: 20px; height: 10px; display: inline-block;"></span> Agricultural pond</li> </ul> | <b>Other Waters of the U.S. - OW#</b> <ul style="list-style-type: none"> <li><span style="border-bottom: 1px solid lightblue; width: 20px; display: inline-block;"></span> NRPW</li> <li><span style="border-bottom: 1px solid blue; width: 20px; display: inline-block;"></span> RPW</li> <li><span style="background-color: lightblue; width: 20px; height: 10px; display: inline-block;"></span> Pond</li> </ul> | <b>Wetland Features - WF#</b> <ul style="list-style-type: none"> <li><span style="background-color: lightgreen; width: 20px; height: 10px; display: inline-block;"></span> Riparian</li> <li><span style="background-color: pink; width: 20px; height: 10px; display: inline-block;"></span> Seasonal Swale</li> <li><span style="background-color: purple; width: 20px; height: 10px; display: inline-block;"></span> Seasonal Wetland</li> <li><span style="background-color: yellow; width: 20px; height: 10px; display: inline-block;"></span> Vernal Pool</li> </ul> |
|--|--|---|---|

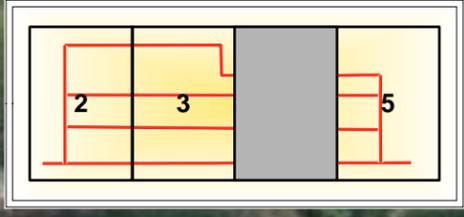
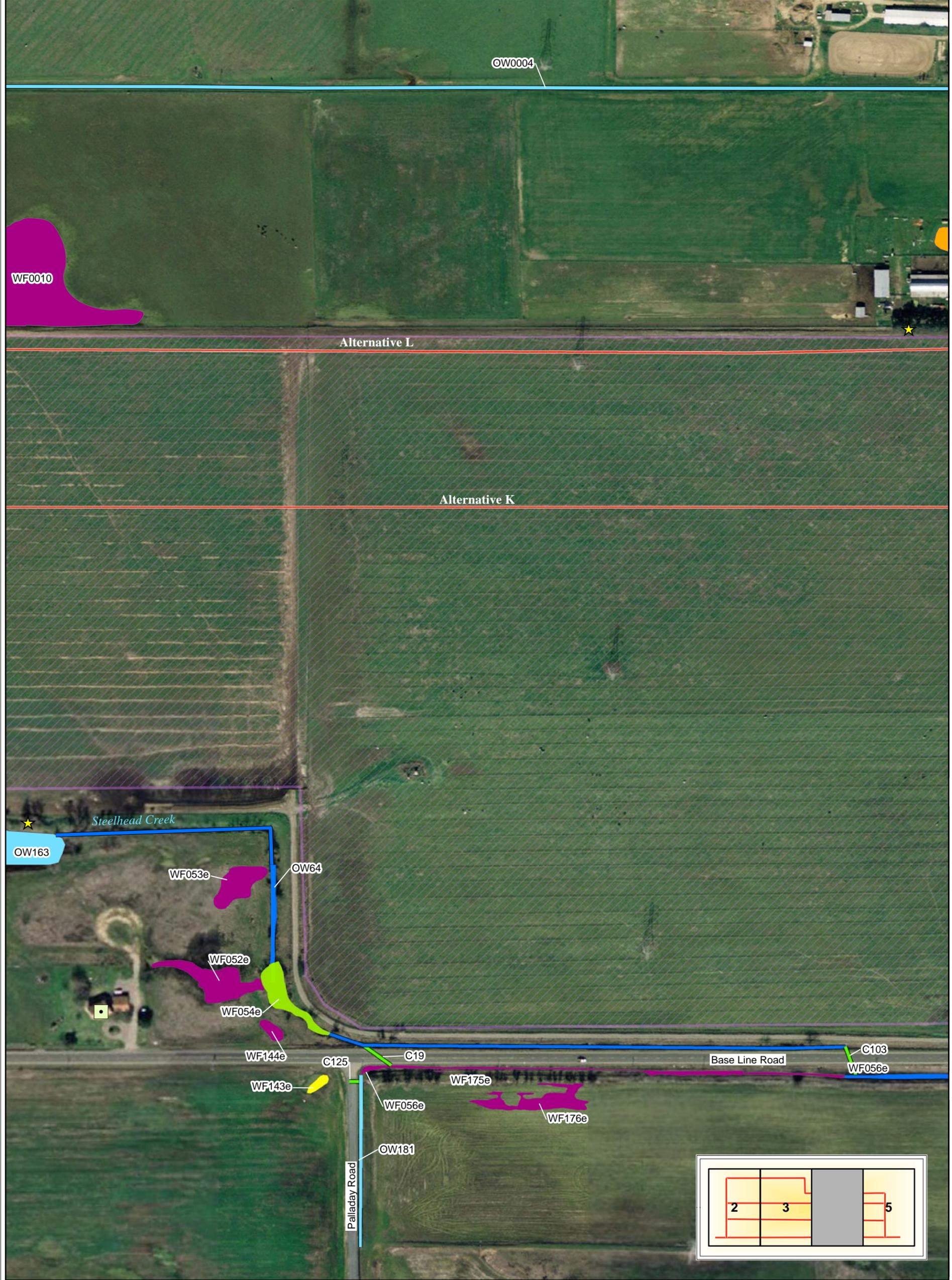


All features to remain preliminary until written verification from the USACE.  
 Survey area derived from PG&E  
 Surveyors: Madeleine van der Heyden, Mike Farmer  
 Aerial: 6/15/2006 Map Date: 2/4/2009

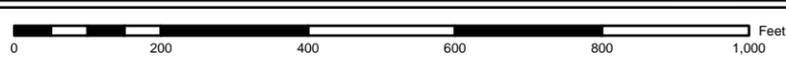




Line 407 alternatives	Potentially Non-Juris. Feats. - NJ#	Other Waters of the U.S. - OW#	Wetland Features - WF#
— Line 407 alternatives	NON-JURISDICTIONAL ROADSIDE DITCH	NRPW	Riparian
★ Potential Raptor Nest Tree	NON-JURISDICTIONAL AGRICULTURAL DITCH	RPW	Seasonal Swale
■ Residence	Culvert - C#	Pond	Seasonal Wetland
□ Rice field	Agricultural pond		Vernal Pool

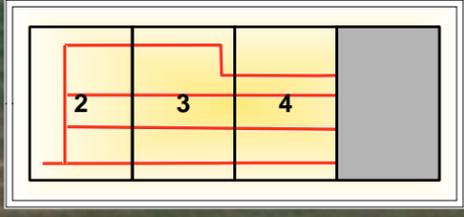
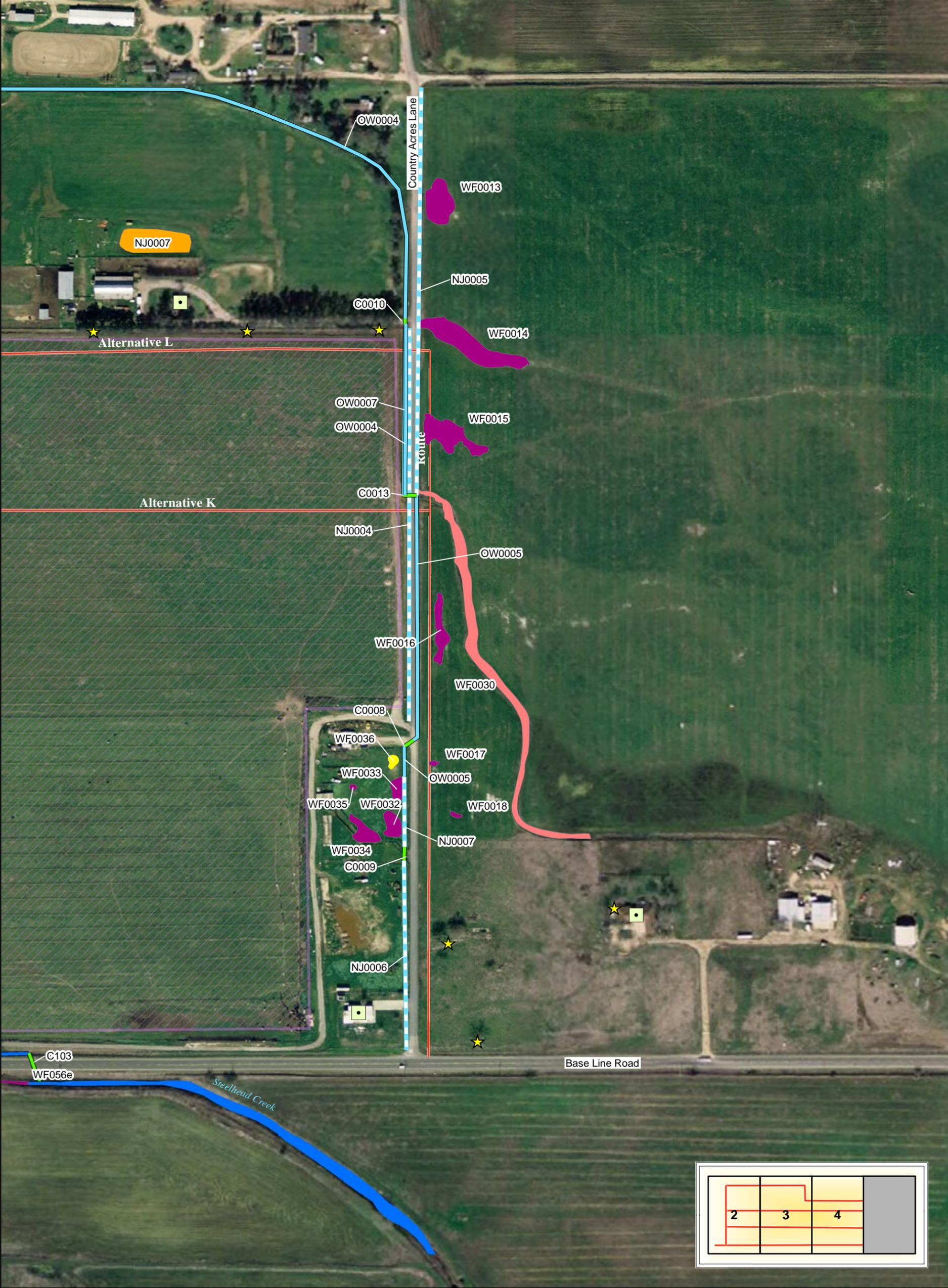


All features to remain preliminary until written verification from the USACE.  
 Survey area derived from PG&E  
 Surveyors: Madeleine van der Heyden, Mike Farmer  
 Aerial: 6/15/2006 Map Date: 2/4/2009





<ul style="list-style-type: none"> <li>Line 407 alternatives</li> <li>Potential Raptor Nest Tree</li> <li>Residence</li> <li>Rice field</li> </ul>	<b>Potentially Non-Juris. Feats. - NJ#</b> <ul style="list-style-type: none"> <li>NON-JURISDICTIONAL ROADSIDE DITCH</li> <li>NON-JURISDICTIONAL AGRICULTURAL DITCH</li> <li>Culvert - C#</li> <li>Agricultural pond</li> </ul>	<b>Other Waters of the U.S. - OW#</b> <ul style="list-style-type: none"> <li>NRPW</li> <li>RPW</li> <li>Pond</li> </ul>	<b>Wetland Features - WF#</b> <ul style="list-style-type: none"> <li>Riparian</li> <li>Seasonal Swale</li> <li>Seasonal Wetland</li> <li>Vernal Pool</li> </ul>
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## **Attachment B: Photo Exhibit**





Shared alignment along west side of S. Brewer Road 0.5 mile north of Base Line Road, facing east.



Shared alignment along west side of S. Brewer Road 0.4 mile north of Base Line Road, facing northwest.



Vernal pool west of S. Brewer Road 0.25 mile north of Base Line Road, facing west.



Shared alignment along west side of S. Brewer Road 0.5 mile north of Base Line Road, facing southeast.



Shared alignment along west side of S. Brewer Road 0.3 mile north of Base Line Road near Route K intersection, facing east.



Shared alignment along west side of S. Brewer Road north of Base Line Road, facing north.



Route K directly east of S. Brewer Road, facing east.



Tree with hawk nest north of Route K, 0.25 mile east of S. Brewer Road, facing north.



Drainage crossing Route K, 0.25 mile east of S. Brewer Road, facing south.



Route K 0.25 mile east of S. Brewer Road, facing north.



North side of Route L survey area, 0.3 mile west of Country Acres Lane, facing east.



North side of Route L survey area, 0.3 mile west of Country Acres Lane, facing west.



North of Route L survey area, 0.5 mile east of S. Brewer Road, facing southwest.



North of Route L survey area, 0.5 mile east of S. Brewer Road, facing west.



Route L survey area, 0.35 mile of east of S. Brewer Rd., facing east.



North of Route L survey area, 400 feet west of Country Acres Lane south of trees, facing east.



North of Route L survey area, 400 feet of west of Country Acres Lane south of trees, facing west.



Country Acres Lane

Shared alignment along east side of Country Acres Lane, 0.3 mile north of Base Line Road, facing east.



Roadside ditch east of the shared alignment along west side of Country Acres Lane 0.3 mile north of Base Line Road, facing west.



Drainage east of and crossing the shared alignment on the east side of Country Acres Lane, 0.3 mile north of Base Line Road, facing southeast.



Shared alignment along east side of Country Acres Lane 0.3 mile north of Base Line Road, facing southwest.



Drainage crossing the shared alignment along east side of Country Acres Lane 0.2 mile north of Base Line Road, facing north.



Shared alignment along east side of Country Acres Lane, 0.12 mile north of Base Line Road, facing north.



Shared alignment along east side of Country Acres Lane and north of Base Line Road, facing north.



Route K and L with two options for the shared alignment along the east and west side of Country Acres Lane and 0.35 mile north of Base Line Road, facing south.

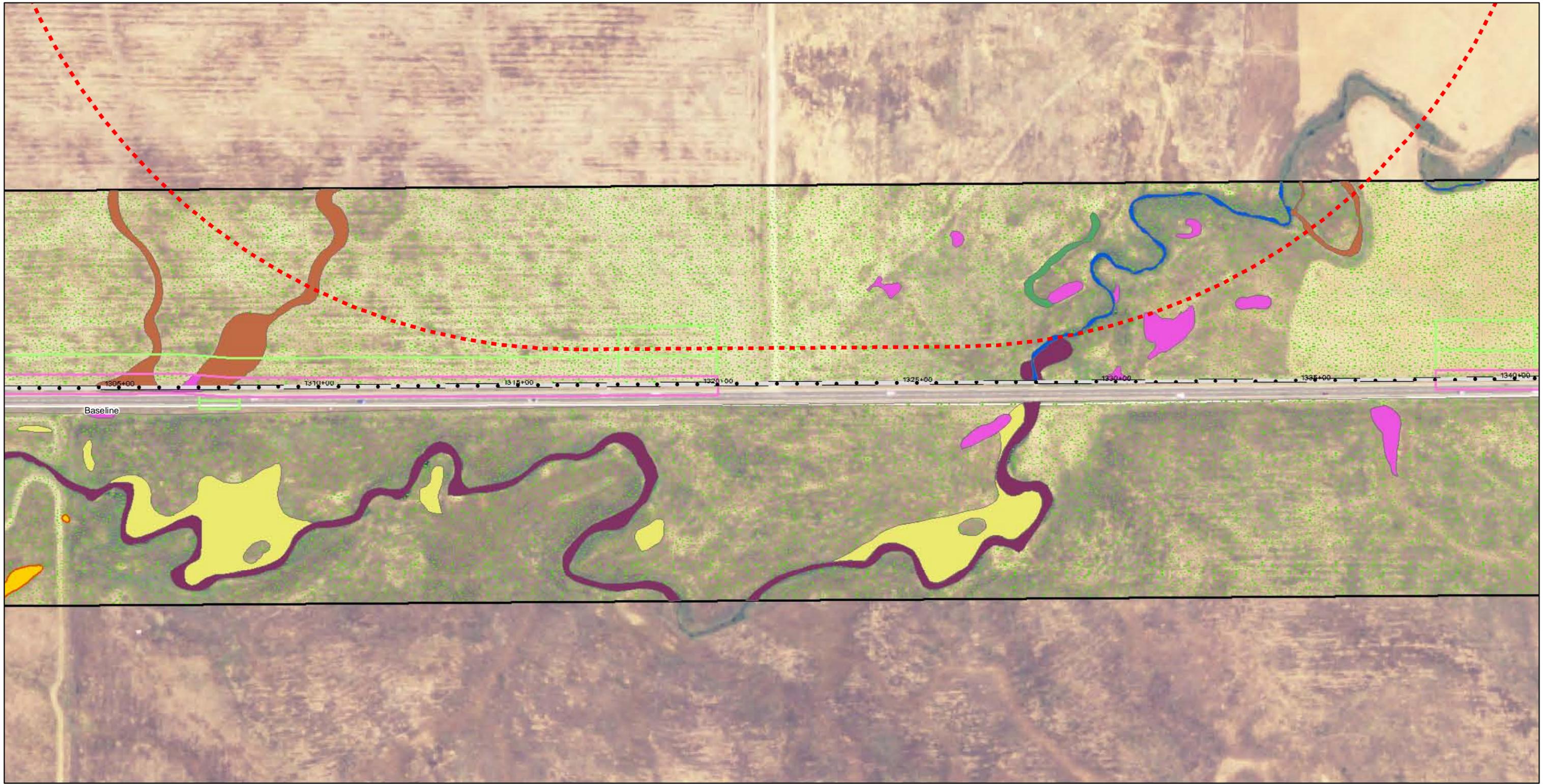


Shared alignment along west side of Country Acres Lane and Route K near vernal pool and seasonal wetlands, facing southwest.



## **Attachment C: School Site Buffer Maps**





**PG&E Line 407 -  
Sierra Vista School Site**

1:2,800  
0 300 Feet



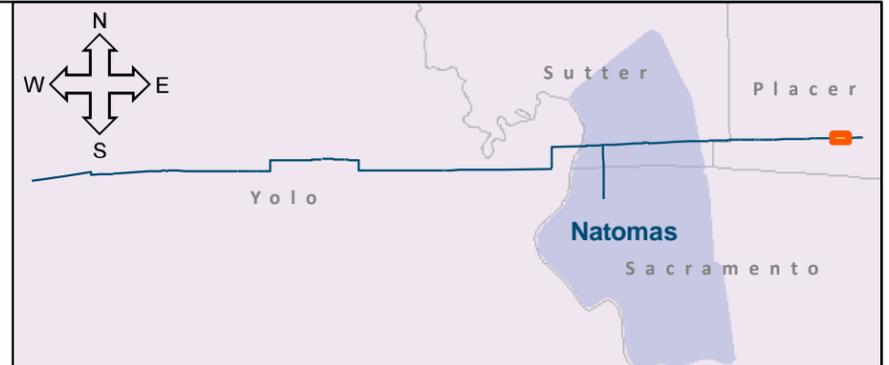
source: school locations - Mackay & Soms

- Stations
- Centerline
- Permanent Easement
- Temporary Workspace
- Survey Boundary
- ▨ Natomas Basin
- ⊞ school buffer 1500ft

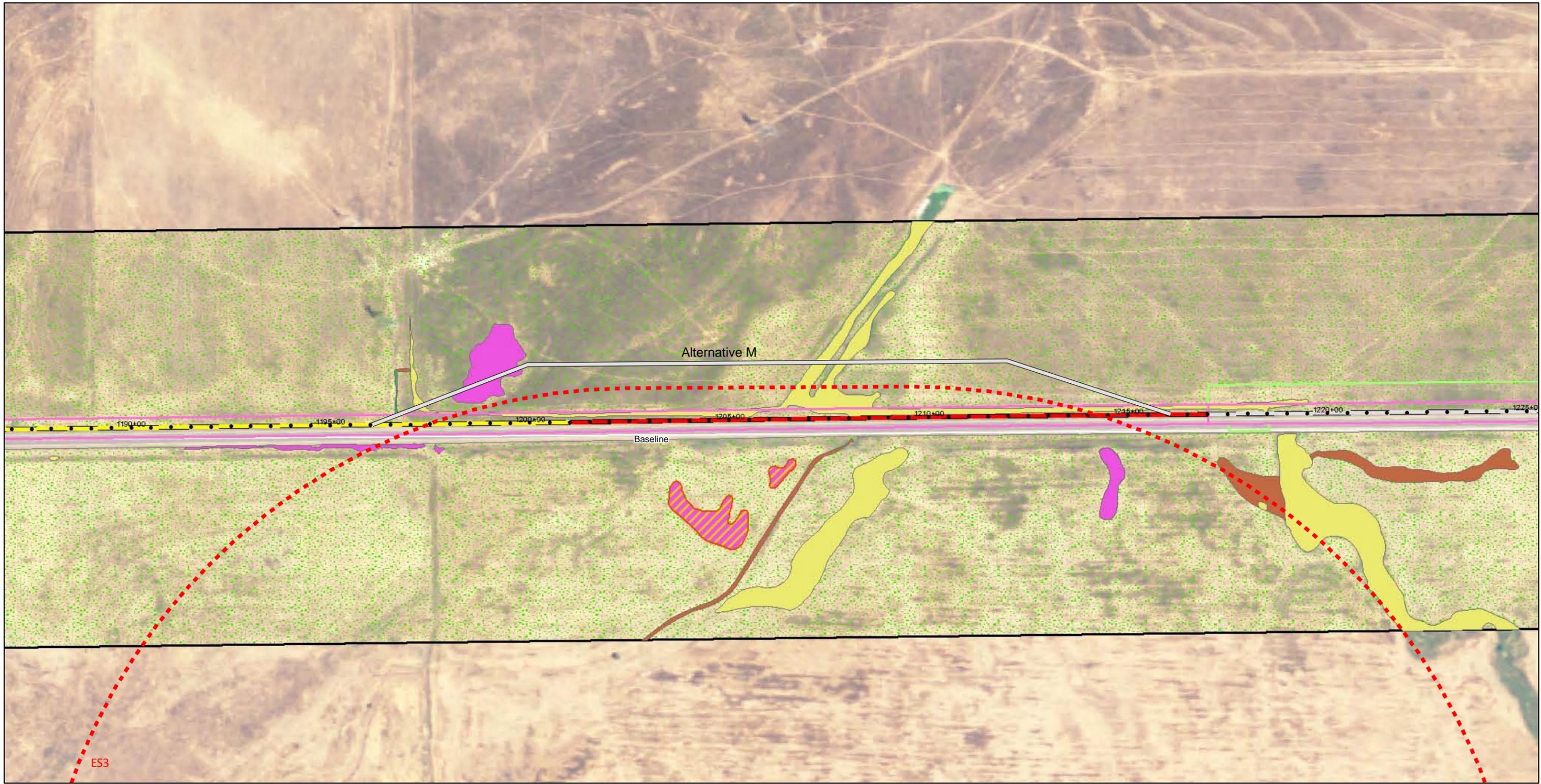
- Habitat**
- ▲ VELB
  - VELB 20' buffer
  - VELB 100' buffer
  - ▨ Annual Grassland
  - Oak Woodlands
  - ▨ Yellow-Billed Cuckoo
  - ▨ GGS Upland

- ▨ GGS Aquatic
- ▨ CTS Upland
- L. occidentalis
- L. occidentalis & B. lynchi

- Wetland & Water Features**
- Fresh Emergent
  - Riparian
  - Seasonal Swale
  - Seasonal Wetland
  - Vernal Pool
  - Vernal Swale
  - Other Waters







**PG&E Line 407 Pipeline - ES3 School Site**

1:2,800  
0 300 Feet



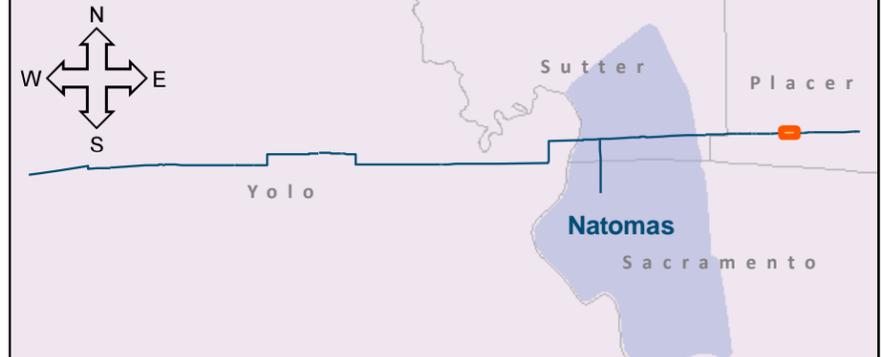
- Stations
- Centerline
- Original HDD
- Extended HDD
- Permanent Easement
- Temporary Workspace
- Survey Boundary
- ⋯ school buffer, 1500ft

source: school locations - Mackay & Soms

- Habitat**
- ▲ VELB
  - VELB 20' buffer
  - VELB 100' buffer
  - Annual Grassland
  - Oak Woodlands
  - ▨ Yellow-Billed Cuckoo
  - ▨ GGS Upland

- ▨ GGS Aquatic
- ▨ CTS Upland
- ▨ L. occidentalis
- ▨ L. occidentalis & B. lynchi

- Wetland & Water Features**
- Fresh Emergent
  - Riparian
  - Seasonal Swale
  - Seasonal Wetland
  - Vernal Pool
  - Vernal Swale
  - Other Waters



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**C-2: Memorandum Regarding  
Line 407 Alternative Route M**



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## Memorandum

**To:** Chris Ellis  
PG&E  
**From:** Mark Cassady  
Project Manager  
**Subject:** Line 407 Alternative Route M  
**Date:** 2/12/09  
**CC:**

**Project No.:** 122078

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PG&E recently submitted a report to the State Lands Commission detailing the potential impacts of route alternatives being considered in order to bring the proposed Line 406/407 pipeline construction project in line with existing regulations regarding buffers for proposed schools. Route alternatives K and L were located outside of the original study area and required additional field work and analysis of impacts associated with their construction. Alternative Route M is a minor deviation from the proposed route and, therefore, would have similar effects.

Alternative Route M is within 150 feet of the proposed pipeline route along Base Line Road and is within the study area conducted for the previous field surveys and research described in the 2007 Preliminary Environmental Assessment (PEA). Based on our review of the previous analysis, potential impacts to aesthetics, agricultural resources, air quality, cultural resources, geology, hazards and hazardous materials, hydrology, land use, noise, population and housing, transportation and traffic, and utilities and service systems as a result of pipeline construction along Alternative Route M would not change. There are no important cultural resources along the route, and there is no potential for buried sites. Potential impacts to biological resources as a result of construction along Alternative Route M would be different due to bisection of a vernal pool, which offers potential habitat for vernal pool fairy shrimp (*Branchinecta lynchi*) and California fairy shrimp (*Lindleriella occidentalis*). While this vernal pool is within 250 ft of the original alignment, it was not physically crossed and was up-gradient. There would be direct impacts to this vernal pool as a result of construction. However, PG&E would incorporate the same mitigation measures outlined in the 2007 PEA regarding vernal pools to ensure that the vernal pool would be avoided, or PG&E will obtain mitigation credits to compensate for the impacts.

Please contact me if you need any additional information.