INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION

BURLINGAME HILLS SEWER MAINTENANCE DISTRICT
SANITARY SEWER CAPACITY IMPROVEMENTS PROJECT

ADELINE DRIVE AND CANYON ROAD

County of San Mateo, California

June 2013

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Chapter 1. Background Information

PROJECT DATA

1. **Project Title:** Burlingame Hills Sewer Maintenance District Sanitary Sewer Capacity Improvements Project - Adeline Drive and Canyon Road

2. **Lead Agency Name and Address:** County of San Mateo Department of Public Works, 555 County Center, 5th Floor, Redwood City, CA 94063

3. **Project Proponent:** County of San Mateo Department of Public Works, 555 County Center, 5th Floor, Redwood City, CA 94063 Contact: Mark Chow, Principal Civil Engineer (650) 599-1489

4. **Project Location:** Along portions of Adeline Drive and Canyon Road in the unincorporated area west of the City of Burlingame.

5. **Project Description:** Replacement of existing sanitary sewer lines with new sewer lines and related appurtenances, generally within portions of Adeline Drive and Canyon Road.

Chapter 2. Project Description

2.1 INTRODUCTION

This Initial Study has been prepared pursuant to the requirements of the California Environmental Quality Act (CEQA). The purpose of an Initial Study is to determine whether the proposed project could significantly affect the environment, requiring the preparation and distribution of an Environmental Impact Report. Based on the following analysis, it appears that the environmental impacts of the project would be less-than-significant with proposed mitigation, and that the project is eligible for a Mitigated Negative Declaration.

2.2 PROJECT LOCATION

The San Mateo County Department of Public Works operates several sanitation and/or sewer maintenance districts, including the Burlingame Hills Sewer Maintenance District (BHSMD or District). The BHSMD provides wastewater collection service for an unincorporated area west and south of the City of Burlingame. The BHSMD comprises approximately 161 acres of primarily residential uses, and is almost entirely surrounded by the City of Burlingame and the Town of Hillsborough. The irregularly shaped BHSMD is roughly bounded by Hillside Drive and Adeline Drive to the north, Canyon Road and Summit Drive to the south, Skyline Boulevard to the west, and Alvarado Avenue to the east.

The subject of this Initial Study is the proposed improvements to the sanitary sewer lines in the vicinity of Adeline Drive and Canyon Road within the BHSMD (refer to Figures 1 and 2). The proposed sanitary sewer line improvements are located in hilly residential areas. Surrounding uses are primarily single-family residential development and yards, with heavier vegetation on slopes within the adjacent easements.

2.3 BACKGROUND

The BHSMD collects and transmits wastewater from District residential customers as well as residences in small portions of the City of Burlingame and the Town of Hillsborough. The BHSMD operates and maintains approximately 6.6 miles of six- and eight-inch diameter pipelines. Wastewater is transmitted via three principal gravity-flow mains to the wastewater collection and transmission system operated by the City of Burlingame.

A 1999 Sewer Master Plan (SMP) evaluated the BHSMD facilities, finding that certain portions had inadequate flow capacity and structural deficiencies, were subject to excessive inflow and infiltration, would require ongoing and increasingly costly maintenance to prevent future failure, and would potentially be subject to overflows (Brown and Caldwell, 1999). The SMP recommended that seven sections of the wastewater collection system pipelines be improved as Capital Improvement Projects. San Mateo County Department of Public Works is proposing improvements to the two most critical of the seven sections in the BHSMD, located along Adeline Drive and lower Canyon Road.[1] A System Performance Evaluation and Capacity Assurance Plan completed in April 2011 for the District confirmed that pipe hydraulic restrictions in these pipelines exist and increasing the pipe diameters would eliminate the hydraulic restrictions.

The BHSMD intends to apply for a California Clean Water State Revolving Fund (SRF) loan through the State Water Resources Control Board (SWB) for the project. As a result, CEQA Plus review is required,

[1] Four sections of the Canyon Road main were identified in the 1999 SMP; the current project involves the lower two segments referred to as Canyon Road #3 and #4.

which incorporates federal (NEPA) cross-cutting environmental regulations in addition to the standard CEQA requirements[2]. The project must, therefore, comply with the following federal environmental laws: Endangered Species Act; National Historic Preservation Act; Clean Air Act; Clean Water Act; Wetland Protection Executive Order 11990; Farmland Protection Act; Coastal Zone Management Act; Wild and Scenic Rivers Act; Floodplain Management EO 11988; and Source Water Protection Act. Conformance of the project with these requirements is summarized in the Federal Cross-cutting Environmental Regulations Evaluation Form (San Mateo County, June 2013).

2.4 PROJECT DESCRIPTION

The project consists of improvements to two segments of sanitary sewer pipeline located along Adeline Drive and lower Canyon Road. The Adeline Drive segment is approximately 1,920 linear feet (LF) and the Canyon Road segment is approximately 2,927 LF. Project plans are presented in Appendix A. Since the project is limited to the replacement of existing sewer lines in their current alignments, the Area of Potential Effects (APE) is narrowly drawn along the pipeline alignments, encompassing all excavation, launching and receiving pits of pipe bursting, and manholes.[3] The staging and storage areas for the project are assumed to occur in existing streets or previously disturbed areas. A description of the proposed improvements is provided below.

2.4.1 Proposed Pipeline Alignments

Adeline Drive Segment. The existing pipeline in the Adeline Drive segment is mostly eight-inch in diameter. The existing pipe will be replaced by larger pipe, primarily by open trenching. Beginning at the west end, the project will replace existing six-inch asbestos cement pipe (ACP) with 10-inch high-density polyethylene (HDPE) pipe; six-inch vitrified clay pipe (VCP) with 10-inch polyvinyl chloride (PVC) pipe; eight-inch VCP with 12-inch PVC pipe; eight-inch ductile iron pipe (DIP) with 12-inch PVC pipe; eight-inch ACP with 12-inch PVC pipe; 10-inch VCP with 12-inch PVC pipe; and finally eight-inch PVC with 12-inch PVC pipe at the project terminus at the intersection with Alvarado Avenue.

The initial 85 LF and another 111 LF section will be installed using the pipe bursting construction method (pipe burst), with the rest installed by the open trench construction method (open trench). A short 18-foot section that crosses a small ephemeral watercourse in the upper portion will consist of a new 12-inch PVC encased in 18-inch steel pipe anchored on each end by concrete blocks. Existing laterals will be reconnected to the new pipe in the new trench with new fittings for a typical length of up to five-feet in length. Improvements also include the replacement of 14 existing brick sanitary sewer manholes with concrete manholes and construction of one new concrete manhole.

Excavation for the insertion and receiving pits will be required for the pipe bursting method, typically about 10-feet by 15-feet for the insertion pit and about half that size for the receiving pit, both slightly deeper than the existing pipe. Each lateral reconnection will also be excavated. The maximum depth of excavations along the Adeline segment will be about 16 feet below the existing surface. Trenches will typically be 24-inches wide except where existing manholes are to be replaced or new manholes are built. Upper portions of the project off Adeline Drive will traverse heavily vegetated slopes above the south bank of Mills Creek, through oak trees and thick underbrush.

[2] The SRF loan program is partially funded by the U.S. Environmental Protection Agency and, therefore, subject to federal environmental regulations.

[3] The vertical APE was assumed to be roughly one foot below anticipated excavations. Based on County excavation and base fill standards and geotechnical requirements, general engineering practices, past experience with similar projects, and the maximum depth of potential impacts determined.

Canyon Road Segment. The Canyon Road segment runs entirely within the roadway, with the exception of a short section near El Prado Road that runs under roadside vegetation. The upper 442 LF of the existing six-inch VCP will be replaced with eight-inch HDPE pipe using pipe bursting. A 151 LF downstream section of the six-inch VCP will be replaced by open trenching with eight-inch PVC. The remaining 2,015 LF eight-inch VCP section of the Canyon Road segment is proposed to be replaced with 950 LF of eight-inch HDPE and 1,065 LF of 10-inch HDPE by the pipe bursting method. Other improvements include the replacement of 18 brick manholes with new concrete manholes, which will require spot excavations. The maximum depth of excavations along the Canyon Road segment will be about eight or nine feet, including pipe bursting pits. Existing laterals will be reconnected to the new pipe in the new trench with new fittings for a typical length of up to five feet. Excavation for the insertion and receiving pits will be required for the pipe bursting method, typically about 10 feet by 15 feet for the insertion pit and about half that size for the receiving pit, both just slightly deeper than the existing pipe.

2.4.2 Project Purpose

The primary purpose of this sanitary sewer improvement project is to replace existing pipes with insufficient capacity to accommodate the anticipated flows, with the secondary purpose of addressing other issues such as excessive maintenance and/or structural deficiencies. The improvements are proposed in order to reduce inflow and infiltration, and avoid the potential for overflows associated with blockages due to root intrusion or structural defects.

2.4.3 Staging Areas

Staging areas for equipment and materials storage will be located on existing streets or convenient open locations adjacent to the streets where available (most of both segments are lined by residences and landscaped yards not available for such use). The Contractor shall confirm available staging area locations with the District. Although the staging areas have not been identified at this time, they will be limited to the identified APE. Any staging areas not on paved streets will be located in previously disturbed areas.

2.4.4 Excavation and Backfill

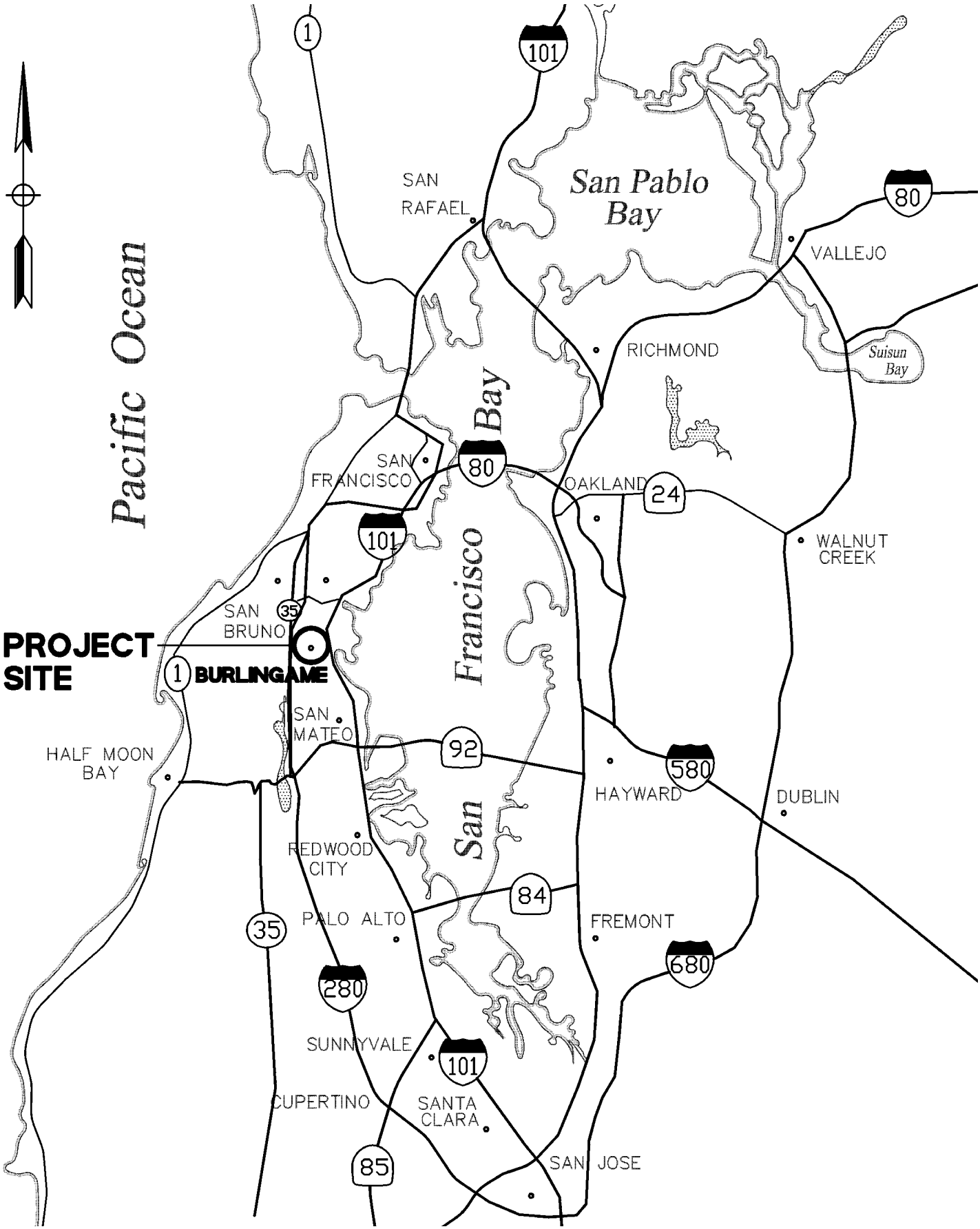
The proposed project will involve excavation and backfill activities. Excavations will be required at pipe bursting access pits, lateral reconnections, and at open trench locations. Materials excavated as part of this project will either be used on-site during construction or disposed of at a certified landfill. A geotechnical investigation performed by BAGG Engineers in January 2013 concluded that the on-site soils can be used for backfill. However, imported aggregate base material, asphalt concrete, and Portland Cement concrete will be needed to replace existing roadway structural section, pavement and concrete curb, gutter or sidewalk. Excavated material will remain on-site and will be stored in accordance with Best Management Practices (BMPs) until it is used for backfill after pipe and manhole installation.

2.4.5 Construction Schedule and Equipment

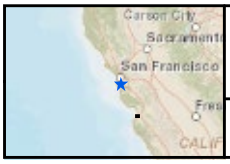
Construction of the proposed project is expected to occur over a period of six months, beginning in April 2014 and ending in September 2014. Construction will typically be limited to weekdays between the hours of 8 AM to 5 PM.

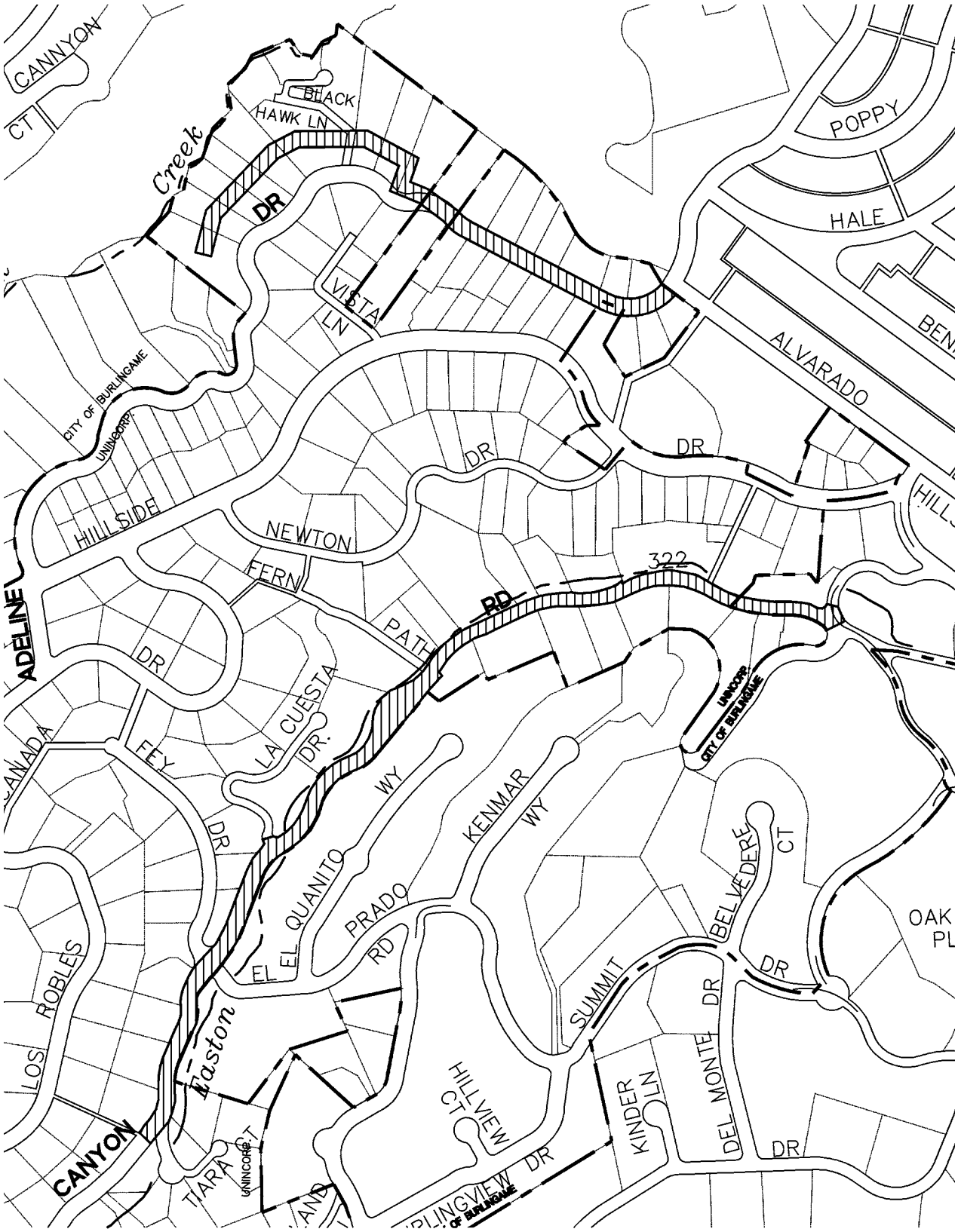
In support of these activities and for the assumptions for this environmental analysis, the types of equipment that may be used at any one time during construction may include, but not be limited to:

- Excavator
- Backhoe
- Dump Truck
- Compactors
- Delivery Truck
- Water Truck
- Winch/Pulling Unit and Cable with Bursting Head
- Slurry Separation Unit
- Asphalt Paver



Source: County of San Mateo Public Works, 2013

	Title: Vicinity Map File: Fig 1 - Vicinity Map.pdf	Date: 03-22-13 Scale: 1 inch = 0.38 miles Project: 2013-10 BHSMD	Monterey | San Jose **Denise Duffy and Associates, Inc.** Environmental Consultants Resource Planners 947 Cass Street, Suite 5 Monterey, CA 93940 (831) 373-4341	Figure 1



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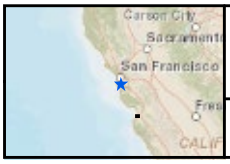	Title: **Location Map** File: Fig 2 - Location Map.pdf	Date: 03-22-13 Scale: 1 inch = 0.38 miles Project: 2013-10 BHSMD	Monterey | San Jose **Denise Duffy and Associates, Inc.** Environmental Consultants Resource Planners 947 Cass Street, Suite 5 Monterey, CA 93940 (831) 373-4341	Figure 2

Photo 1. Adeline Drive. Several overhanging trees and dense shrubs may provide bird nesting habitat.

Photo 2. Adeline Drive. Drainage adjacent to 2888 Adeline Drive draining towards Mills Creek 500 feet below.

Photo 3. Canyon Road #3. Easton Creek Crosses Canyon Road downstream of La Cuesta Drive (as indicated by dashed arrow).

Photo 4. Canyon Road #4 near 2865 Canyon Road. Easton Creek runs parallel to Canyon Road on the left side of the photo.

	Title: Site Photos File: Fig 3A - Site Photos	Date: 03-22-2013 Scale: N/A Project: 2013-10 BHSMD	DD&A	Monterey | Truckee | San Jose **Denise Duffy and Associates, Inc.** Environmental Consultants Resource Planners 947 Cass Street, Suite 5 Monterey, CA 93940 (831) 373-4341	Figure 3A

Photo 5. Typical view of easement areas for Adeline Drive.

Photo 6. Typical view of easement areas for Adeline Drive.

Photo 7. Typical view of easement areas for Adeline Drive.

Photo 8. Typical view of easement areas for Adeline Drive.

	Title: Site Photos File: Fig 3B - Site Photos	Date: 06-10-2013 Scale: N/A Project: 2013-10 BHSMD	Monterey | Truckee | San Jose **Denise Duffy and Associates, Inc.** Environmental Consultants Resource Planners 947 Cass Street, Suite 5 Monterey, CA 93940 (831) 373-4341	Figure 3B

Chapter 3. Environmental Evaluation

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors identified below are discussed within Chapter 3. Environmental Setting and Impacts. Sources used for analysis of environmental effects are cited in the checklist and listed in Chapter 4 References.

☒ Aesthetics	☐ Agricultural Resources	☒ Air Quality
☒ Biological Resources	☒ Cultural Resources	☒ Geology/Soils
☒ Hazards/Hazardous Materials	☒ Hydrology/Water Quality	☐ Land Use/Planning
☐ Mineral Resources	☒ Noise	☐ Population/Housing
☐ Public Services	☐ Recreation	☒ Transportation/Traffic
☒ Utilities/Service Systems	☒ Mandatory Findings of Significance	

DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Mark Chow — Signature

6/20/2013 — date

Mark Chow, Principal Civil Engineer — Printed Name

Burlingame Hills Sewer Mainenance District — for

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on project-specific screening analysis).

2. All answers must take into account the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

a) Earlier Analysis Used. Identify and state where they are available for review.
b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures, which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

a) The significance criteria or threshold, if any, used to evaluate each question; and
b) The mitigation measure identified, if any, to reduce the impact to less than significance.

ENVIRONMENTAL SETTING AND IMPACTS

The following section describes the environmental setting and identifies the environmental impacts anticipated from implementation of the proposed project. The criteria provided in the CEQA environmental checklist was used to identify potentially significant environmental impacts associated with the project. Sources used for the environmental analysis are cited in the checklist and listed in Chapter 4 of this Initial Study.

A. AESTHETICS

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS		Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
1.	AESTHETICS. Would the project:					
a)	Have a substantial adverse effect on a scenic vista?				X	1, 2
b)	Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?			X		1, 2
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?			X		1, 2
d)	Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?				X	1, 2

Explanation

a) **No Impact**. The project segments are not located within any designated scenic routes. Proposed pipelines will be placed underground and will not adversely affect any scenic vistas.

b) **Less-than-Significant Impact**. The open trench method will be used for some sections of pipes within the easement areas of Adeline Drive, which may require the removal of shrubs and trees. However, the proposed pipeline installation will not substantially impact scenic resources, including trees, rock outcroppings, and historic buildings.

c) **Less-than-Significant Impact**. Proposed pipeline installation will not substantially degrade the visual character of the subject areas, since the ground surface will be restored to its existing condition upon completion. See also b) above.

d) **No Impact**. No new permanent exterior lighting is proposed as part of the project.

B. AGRICULTURAL AND FOREST RESOURCES

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Source(s)
2. AGRICULTURAL AND FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X	3
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X	2
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)?				X	2
d) Result in the loss of forest land or conversion of forest land to non-forest uses?				X	2
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?				X	2

Explanation

a) **No Impact**. The pipeline segments are located in residential areas within the public right-of-way or public easements and are not located near existing or historical agricultural areas. No areas of prime farmland, unique farmland, or farmland of statewide importance will be affected.

b) **No Impact**. The pipeline segments are not located on land zoned for agricultural use or land under Williamson Act contract; no conflicts with agricultural uses will occur.

c) **No Impact**. No other changes to the environment will occur from the proposed improvements that will result in conversion of farmland to non-agricultural uses.

d) **No Impact**. The project will not impact forest resources since the proposed pipeline improvements are located in relatively urban areas and do not contain forest land as defined in Public Resources Code section 12220(g), timberland as defined by Public Resources Code section 4526, or property zoned for Timberland Production as defined by Government Code section 51104(g).

e) **No Impact**. As per the discussion above, the proposed improvements will not result in conversion of farmland or agricultural land.

C. AIR QUALITY

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS		Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
3.	AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:					
a)	Conflict with or obstruct implementation of the applicable air quality plan?				X	1, 4
b)	Violate any air quality standard or contribute to an existing or projected air quality violation?			X		1, 4
c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?				X	1, 4
d)	Expose sensitive receptors to substantial pollutant concentrations?			X		1, 4
e)	Create objectionable odors affecting a substantial number of people?				X	1, 4

Explanation

a) **No Impact**. The project proposes replacement of existing sanitary sewer lines with larger diameter pipes for the purpose of eliminating pipe hydraulic restrictions and reducing the occurrence of sanitary sewer overflows during peak wet weather flow conditions. The project will not increase system capacity (i.e., to accommodate future growth). The project, therefore, will not obstruct implementation of an air quality plan.

b) **Less-than-Significant Impact**. The project is located within the San Francisco Bay Area Air Basin. The BAAQMD is the local agency authorized to regulate stationary air quality sources in the Bay Area. The Federal Clean Air Act and the California Clean Air Act mandate the control and reduction of specific air pollutants. Under these Acts, the U.S. Environmental Protection Agency and the California Air Resources Board have established ambient air quality standards for specific "criteria" pollutants, designed to protect public health and welfare. Primary criteria pollutants include carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxides (NOX), particulate matter (PM_{10}), sulfur dioxide (SO2), and lead (Pb). Secondary criteria pollutants include ozone (O3), and fine particulate matter ($PM_{2.5}$).

The Bay Area as a whole does not meet either federal or state air quality standard for ground level O3 and PM_{10}, or the state standard for PM_{10}. For O3, the entire Bay Area is designated as non-attainment at both the federal and state levels. Under the Federal Clean Air Act, the EPA has designated the region as marginally non-attainment for the 8-hour O3 standard. The Bay Area does attain the annual federal standard for $PM_{2.5}$. The EPA designated the Bay Area Air Basin as “nonattainment” for the federal 2006 24-hour $PM_{2.5}$ standard. Most $PM_{2.5}$ nonattainment areas have until 2015 to attain the standards, with some extensions to 2020 if necessary. The Bay Area has met the federal CO standards for over a decade and is classified as attainment by the EPA.

The EPA grades the region as attainment or unclassified for all other air pollutants, which include PM_{10}, NO2, SO2, and lead.

At the state level, the region is non-attainment for ground level O3, because monitoring in the region show exceedances of the 1-hour and 8-hour state standards. The region is required to adopt plans on a triennial basis that show progress towards meeting the state O3 standard. The region is also designated non-attainment for PM_{10} and PM2.5 by the state. Although the region is designated nonattainment for PM2.5 based on the state standard, recent monitoring data indicate that the standard is currently being met (note that the state standards only address annual PM2.5 concentrations.) The area is considered attainment or unclassified for all other state regulated air pollutants.

Short-term air pollution emissions will be generated by the project during construction activities, including excavation for the proposed pipelines. Construction activities for the project would result in emissions of particulate matter (including PM_{10}, and $PM_{2.5}$) from fugitive dust associated with grading and excavation activities. Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known Toxic Air Contaminant and contains PM_{10}, and $PM_{2.5}$. Diesel exhaust poses both a health and nuisance impact to nearby sensitive receptors. Diesel exhaust is also a substantial source of NOx emissions that affect regional ozone levels. These construction activities would occur near sensitive receptors (existing residences) along the subject roadways, but would have a short duration that typically avoids or minimizes risks to nearby sensitive receptors.

On March 5, 2012, the Alameda County Superior Court issued a judgment finding that the Bay Area Air Quality Management District (BAAQMD) had failed to comply with CEQA when it adopted the thresholds contained in the BAAQMD's 2010 CEQA Guidelines (BAAQMD website, accessed July 2012). As such, lead agencies need to determine appropriate air quality thresholds of significance based on substantial evidence in the record. Lead agencies may rely on the BAAQMD's CEQA Guidelines (updated May 2011) for assistance in calculating air pollution emissions, obtaining information regarding the health impacts of air pollutants, and identifying potential mitigation measures. However, the BAAQMD was ordered to set aside the thresholds and no longer recommends these thresholds. Lead agencies may also rely on the Air District's 1999 Thresholds of Significance and to make determinations regarding the significance of an individual project's air quality impacts based on substantial evidence in the record for that project.

For this IS/MND, the significance thresholds published in the BAAQMD's May 2011 CEQA Guidelines were determined to be the most appropriate thresholds for establishing the significance of the project's air quality impacts. These thresholds have been used in other County of San Mateo CEQA documents and would be consistent with these documents. In addition, the 2011 BAAQMD thresholds are lower and more conservative than the 1999 BAAQMD thresholds. Finally, these thresholds are based on and supported by substantial evidence as set forth in the May 2011 Guidelines and supporting documentation.

Based on the BAAQMD thresholds, the project would result in a significant impact if emissions would exceed any of the following thresholds:

- 54 pounds per day of ROG
- 54 pounds per day of NOx

- 82 pounds per day of PM_{10}
- 54 pounds per day of $PM_{2.5}$

The proposed pipelines would not generate operational emissions. Emissions would only be generated during construction activities. Construction emissions for the project were calculated based on details in the project description and standard defaults within the URBEMIS v9.2.4 model (see Appendix B).[4] The results are presented in Table 1 below. These results indicate that the project would have a less-than-significant air quality impact since none of the applicable thresholds would be exceeded.

Table 1
Summary of Project Construction Emissions

Pollutant	ROG	NOx	PM_{10} Dust	PM_{10} Exhaust	$PM_{2.5}$ Dust	$PM_{2.5}$ Exhaust	CO_2
Emissions (lbs/day)	6.25	44.42	0.34	2.70	0.07	2.48	6,157.58
BAAQMD Construction Threshold (lbs/day)	54	54	Implement BMPs (Note 2)	82	Implement BMPs (Note 2)	54	None

Note 1: Modeling assumed paving, mass grading, and trenching would all occur on the worst-case day. Additional assumptions are in the URBEMIS2007 output file in Appendix B.
Note 2: Assumes that the BAAQMD's Basic Construction Mitigation Measures will be implemented.

The project proponent will implement the following BAAQMD's Basic Construction Mitigation Measures to further minimize emissions associated with construction activities:

1. Any exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

4. All vehicle speeds on unpaved roads shall be limited to 15 mph.

5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

[4] The modeling of construction emissions used total acreage of disturbance (URBEMIS default). This typically represents a conservatively high estimate of air pollutant emissions.

7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

c) **No Impact**. The proposed pipeline improvements will not generate substantial new permanent vehicle trips or otherwise result in long-term air quality impacts that would contribute to a cumulatively considerable increase of any air pollutant.

d) **Less-than-Significant Impact**. Project-related construction and operations would not result in emissions of ROG, NO_X, PM_{10}, $PM_{2.5}$, or local carbon monoxide emissions that would result in or contribute substantially to an air quality violation. Fugitive dust emissions associated with construction-related ground disturbance would be less-than-significant as discussed in item b) above. Construction activities generating emissions would occur at different locations throughout the project area and would not continue at any single location for an extended. Therefore, project-related emissions would not expose sensitive receptors to substantial concentrations of criteria air pollutants.

Off-road heavy-duty diesel equipment and vehicles would be used for pipeline trenching and pipe bursting pits, many of which would be located within 20 feet of residences. These vehicles and equipment would emit diesel particulate matter in their exhaust during grading, excavation, clearing, site preparation, paving, trucks delivering and removing materials from construction sites, and other miscellaneous activities. Construction at any one location would be limited to a few weeks, resulting in negligible exposure to pollutants in relation to a lifetime exposure analysis. According to the California Air Resources Board (CARB), the potential cancer risk from the inhalation of diesel particulate matter is a more serious risk than the potential non-cancer health impacts (CARB, 2003). Thus, for the purposes of this analysis, the discussion below focuses on cancer rather than non-cancer risks.

The dose of exposure is the primary factor used to determine health risk (i.e., potential exposure to Toxic Air Contaminants (TAC) emission levels that exceed applicable standards). Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher level of exposure to an individual. In other words, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period. According to the Office of Environmental Health Hazard Assessment, Health Risk Assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the duration of exposure. The use of mobilized equipment for construction activities would be temporary at any one location, and would dissipate with increasing distance from the source. In addition, all construction equipment would not operate at the same time or location and, therefore, not expose the same nearby receptors to increased levels of diesel particulate matter during the entire construction period. As shown in Table 1 above, average daily emissions of $PM_{2.5}$ exhaust would not exceed the relevant threshold of significance of 54 lb/day. For these reasons, and because of the highly dispersive properties of diesel particulates, short-term construction-generated TAC emissions would not expose sensitive receptors to an incremental increase in cancer risk that exceeds 10 in one million or a Hazard Index greater than 1.0 of the maximally exposed individual

or result in an incremental increase in the annual average concentration of $PM_{2.5}$ concentrations greater than 0.3 micrograms per cubic meter. This impact would, therefore, be less-than-significant.

The site is not located within an area identified as containing naturally occurring asbestos (NOA). NOA was identified as a TAC in 1986 by CARB. NOA is located in many parts of California, including the Bay Area. Exposure to asbestos may result in inhalation or ingestion of asbestos fibers, which over time may result in damage to the lungs or membranes that cover the lungs, leading to illness or death. According to the *General Location Guide for Ultramafic Rocks in California—Areas More Likely to Contain Naturally Occurring Asbestos*, the project site is not located in areas that are more likely to contain NOA (California Geological Survey 2007, California Department of Conservation 2000). The nearest location of serpentine soil is found outside the project area and extends roughly adjacent to Highway 280 west of Polhemus Creek along Pulgas Ridge (U.S. Geological Survey, 1983, U.S. Department of the Interior).

The project will involve the removal of the existing asbestos cement pipe material during open trench construction. Mitigation is identified in H. Hazards and Hazardous Materials to avoid release of asbestos during construction activities associated with removal of the pipe material.

e) **No Impact**. The proposed pipeline installations will not create any new sources of odor.

D. BIOLOGICAL RESOURCES

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
4. BIOLOGICAL RESOURCES. Would the project:					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X			5
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X			5
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		X			5
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X	5
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X		1

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?				X	1

Explanation

Biological surveys were conducted for the project by County biologists between April 13 and July 1, 2010 and by contract biologists in February 2013. The surveys documented biological resources, identified the presence or potential presence of special-status species and potential habitat, characterized adjacent habitats, and determined the potential for project-related impacts. Subsequently, a biological report was prepared that assessed the environmental conditions of the site and its surroundings, and evaluated the general habitat features and environmental constraints on the site and in the local vicinity to provide a basis for recommendations to avoid, minimize, and mitigate potential impacts (April 2011, see Appendix C)

The proposed sanitary sewer line improvements are located in residential areas along Adeline Drive and Canyon Road that are dominated by residential landscaping and ruderal vegetation adjacent to the roadway. A discussion of the potential sensitive habitats and species in the project area(s) is provided below.

Sensitive Habitats

The project site was surveyed for sensitive habitats. Sensitive habitats include riparian corridors, wetlands, habitats for legally protected species, areas of high biological diversity, areas supporting rare or special-status wildlife habitat, and unusual or regionally restricted habitat types. Habitat types considered sensitive include those listed on the California Department of Fish and Wildlife's (CDFW's) California Natural Diversity Database (CNDDB) working list of high priority and rare natural communities, i.e., those habitats that are Rare or Endangered within California per the CDFW (2012), those that are defined as Critical Habitat for species listed under the federal Endangered Species Act (ESA) or are critical habitat in accordance with ESA, and those that are defined as Environmentally Sensitive Habitat Areas (ESHA) under the California Coastal Act. Sensitive habitats are regulated under federal regulations (such as the CWA and Executive Order 11990 – Protection of Wetlands), state regulations (such as CEQA and the CDFW Streambed Alteration Program), or local ordinances or policies (such as City or County tree ordinances, Habitat Management Plan habitat reserve areas, and General Plan elements).

No sensitive habitats were identified within the project site. The project site is not within areas designated as ESHA or Critical Habitat for federally listed species and no sensitive habitats listed in the CNDDB as high priority or rare natural communities were observed. Aquatic habitats present in the project area occur in Easton Creek along Canyon Road and Mills Creek located approximately 500 feet downslope of Hillside Drive. These drainages were flowing during the June 2010 surveys. BMPs shall be implemented to ensure that adjacent aquatic habitats and water quality are not impacted by the proposed project.

Special-Status Species

Special-status species are those plants and animals that have been formally listed or proposed for listing as Endangered or Threatened, or are Candidates for such listing under the ESA or the California Endangered Species Act (CESA). Listed species are afforded legal protection under the ESA and CESA. Species that meet the definition of Rare or Endangered under the CEQA Section 15380 are also considered special-status species. Animals on the CDFW's list of "species of special concern" (most of which are species whose breeding populations in California may face extirpation if current population trends continue) meet this definition and are typically provided management consideration through the CEQA process, although they are not legally protected under the ESA or CESA. Additionally, the CDFW includes some animal species that are not assigned any of the other status designations in the CNDDB "Special Animals" list. The CDFW considers the taxa on this list to be those of greatest conservation need, regardless of their legal or protection status.

Plants listed as rare under the California Native Plant Protection Act or on the California Native Plant Society (CNPS) lists are also treated as special-status species. In general, the CDFW considers plant species on List 1 (List 1A [Plants Presumed Extinct in California] and List 1B [Plants Rare, Threatened, or Endangered in California and Elsewhere]) or List 2 (Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere) of the CNPS *Inventory of Rare and Endangered Vascular Plants of California* (CNPS, 2012) as qualifying for legal protection under this CEQA provision.[5] In addition, species of vascular plants, bryophytes, and lichens listed as having special-status by CDFW are considered special-status plant species (CDFW, 2012).

Raptors (e.g., eagles, hawks, and owls) and their nests are protected under both federal and state laws and regulations. The federal Migratory Bird Treaty Act (MBTA) of 1918 and CSFW Code Section 3513 prohibit killing, possessing, or trading migratory birds except in accordance with regulation prescribed by the Secretary of the Interior. Birds of prey are protected in California under CDFW Code Section 3503.5. Section 3503.5 states that it is "unlawful to take, possess, or destroy the nest or eggs of any such bird except otherwise provided by this code or any regulation adopted pursuant thereto." In addition, fully protected species under the CDFW Code Section 3511 (birds), Section 4700 (mammals), Section 5515 (fish), and Section 5050 (reptiles and amphibians) are also considered special-status animal species. Species with no formal special-status designation but thought by experts to be rare or in serious decline are also considered special-status animal species (CDFW, 2012).

Special-Status Plants. Special-status plant species were evaluated for their known and/or potential presence in the project area. These species were selected by comparing historical occurrence data and range to the habitat conditions within the project site. A list of special-status plant species known or which have the potential to occur in the vicinity of the project, along with their legal status, habitat requirements, and brief statement of the likelihood to occur, is presented in Appendix C. This list was developed using the CNDDB data for the USGS San Mateo 7.5' quadrangle and the Service's species list website.

No special-status plant species were observed during the site survey. All impacts associated with the project are confined to the existing paved roadways except the easement areas. The habitat conditions within these easements are unlikely to support any special-status plants with the potential to occur in the vicinity of the project site. Therefore, no special-status plants are expected to be affected by the project.

[5] Species on CNPS List 3 (Plants About Which We Need More Information - A Review List) and List 4 (Plants of Limited Distribution - A Watch List) may, but generally do not, qualify for protection under this provision.

Special-Status Wildlife. Special-status wildlife species were evaluated for their known and/or potential presence in the project area. These species were selected by comparing historical occurrence data and range to the habitat conditions within the project site. A list of special-status wildlife species known or which have the potential to occur in the vicinity of the proposed pipeline alignment, along with their legal status, habitat requirements, and brief statement of the likelihood to occur, is presented in Appendix C. This list was developed using the CNDDB data for the USGS San Mateo 7.5' quadrangle and the Service's species list website. Sensitive wildlife species that have been documented within a ½ mile radius of the BHSMD area include San Francisco garter snake (*Thamnophis sirtalis tetrataenia*), pallid bat (*Antrozous pallidus*), and San Francisco duskyfooted woodrat (*Neotomafuscipes annectens*) (CNDDB, 2010).

The San Francisco garter snake is listed as an endangered species under the Endangered Species Act and as a fully protected species by CDFW. Although San Francisco garter snake have been documented within a ½ mile radius of the BHSMD area, none were observed during site surveys. The documented CNDDB occurrence of San Francisco garter snake within a ½ mile radius of the project area was associated with a tributary to Crystal Springs Reservoir west of Interstate Highway 280, with no connecting drainages to the project area. Additionally, there is no habitat for San Francisco garter snake in the immediate project area.

Pallid bat is listed by CDFW as a California Species of Concern. The documented CNDDB occurrence of pallid bat within a ½ mile radius of the project area was from specimens collected in an unknown location in the vicinity of the City of Millbrae in 1947. There is some potential for pallid bats to reside within the project vicinity; however, no large trees or other potential roosting sites will be disturbed during construction to avoid impacts.

The San Francisco duskyfooted woodrat is listed by CDFW as a California Species of Special Concern. Woodrat nests were abundant in the wooded area directly adjacent to Fey Drive within five feet of the roadway. The project includes construction along Canyon Road at Fey Drive. Construction on Canyon Road will be limited to within the existing edges of pavement.

Nesting Raptors and other Avian Species. Raptors, other nesting avian species, and their nests are protected under CDFW Code and the MBTA; some are further designated as California species of special concern. Stands of live oak, riparian, deciduous, or other forest habitats, as well as open grasslands are used most frequently for nesting. Species that have the potential to nest at the project site and the immediate vicinity include, but are not limited to, California quail (*Callipepla californica*), American robin (*Turdus migratorius*), western scrub jay (*Aphelocoma californica*), chestnut-backed chickadee (*Poecile rufescens*), bushtit (*Psaltriparus minimus*), dark-eyed junco (*Junco hyemalis*), tree swallow (*Tachycineta bicolor*), red-tailed hawk (*Buteo jamaicensis*), and red-shouldered hawk (*B. lineatus*). Impacts to this species may include direct mortality of individuals and destruction of nests as a result of construction activities. This is considered a potentially significant impact that can be reduced to a less-than-significant level with implementation of mitigation measures identified below.

a) **Less-than-Significant Impact with Mitigation**. The potential effects of the project on biological resources were evaluated in the biological investigation prepared by County staff (County of San Mateo Wastewater Collection System Capital Improvement Project Biological Report, April 2011) and summarized above. The results of this study indicate that installation of the proposed improvements could impact biological resources, including special-status species. Potential special-status species affected by the project include San Francisco dusky-footed woodrat and nesting birds (including raptors). Mitigation is identified in the biological report and presented below to avoid/minimize impacts to special-status species.

Mitigation

BIO1 The project shall implement the following avoidance and minimization measures to reduce potential negative effects to special-status species to a less-than-significant level:

1. The construction area shall be confined to the minimum area necessary to complete the work.

2. Prior to construction activities, the project proponent shall retain a qualified biologist to conduct a Worker's Education Training Program for the construction crew and County staff. The biologist shall meet with the construction crew and County staff at the Project site at the onset of construction to educate the crew and staff on the following: 1) a review of the project boundaries; 2) the special-status species that may be present, their habitat, and proper identification; 3) the specific avoidance and minimization measures that will be incorporated into the construction effort, 4) the general provisions and protections afforded to these species; and 5) the proper procedures if a Listed species is encountered within the project site. All onsite construction managers must attend and are responsible making sure that all personnel that will be onsite, including all new workers and subcontractors, attend a Worker's Education Training Program. All personnel must sign and date their attendance to the Worker's Education Training Program.

3. For locations with the potential for nesting migratory birds, migratory bird surveys shall be performed by a qualified biologist within five days prior to any project-related activity if construction is scheduled during the typical bird nesting season (February 1 to August 15). To avoid potential impacts to nesting birds, 50-foot buffers will be maintained around active migratory bird nests, and 200-foot buffers will be maintained around active raptor nests. The 50-foot and 200-foot buffers are adequate based on CDFW conditions stated in Streambed Alteration Agreement previously issued for County of San Mateo projects. The CDFW conditions further requires that if active nests are found, the biologist shall consult with CDFW and USFWS regarding appropriate actions.

4. In locations where San Francisco dusty-footed woodrat nests are present, a 10-foot buffer from all woodrat nests shall be maintained to avoid disturbance. If a less than 10-foot buffer is required due to the close proximity of the woodrat nest to the sewer line, the nest will be monitored by a qualified biologist during construction.

b) **Less-than-Significant Impact with Mitigation**. The biological investigation reported riparian habitat adjacent to portions of the project area and potential indirect impacts from the project associated with erosion/sedimentation during construction activities. Mitigation is identified in the biological report and presented below to avoid/minimize potential impacts to riparian habitat.

Mitigation

BIO2 The project shall implement BMPs and protective measures listed below to avoid indirect impacts to riparian areas within the vicinity of improvements. (See also mitigation for special status species above.)

1. All storm drain inlets and culvert inlets and outlets shall be protected (e.g., filter fabric, straw wattles, and/or silt fencing) in order to prevent debris or construction materials from entering in these areas. At the end of project construction, all materials trapped by the barriers and excess materials such as dirt, rock, asphalt and concrete pavement, or debris shall be collected

using dry sweep methods and removed from the project locations. No materials shall be allowed to enter into aquatic resources within the vicinity.

2. A litter control program shall be instituted at each project location. All workers will ensure that food scraps, paper wrappers, food containers, cans, bottles, and other trash from the project area are deposited in covered or closed trash containers. The trash containers shall be removed from the area at the end of each working day.

3. All leaks, drips and spills shall be immediately cleaned up to prevent entry into aquatic resources within the vicinity. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

4. All work shall be conducted in accordance with the County of San Mateo Watershed Protection Program's Maintenance Standards and the guidelines set forth by the San Mateo Countywide Water Pollution Prevention Program. These documents provide guidelines on minimization and avoidance, project timing, containment, equipment maintenance and fueling, traffic control, erosion control and street sweeping, storm water pollution prevention, and asphalt removal and recycling.

c) **Less-than-Significant Impact with Mitigation**. The biological investigation reported drainage/creek areas adjacent to portions of the project area and identified potential indirect impacts to these areas from erosion/sedimentation during construction activities. None of the drainages are located within active project limits. Avoidance/minimization measures will be implemented during project construction to mitigate potential indirect impacts to drainage areas. The mitigation measures identified above for potential indirect impacts to sensitive habitats will also avoid potential indirect impacts to potential wetlands and Waters of the U.S.

d) **No Impact**. The project proposes improvements to underground pipelines and will not impact native resident or migratory wildlife corridors or nursery sites or interfere substantially with the movement of any native resident or migratory fish or wildlife species.

e) **Less-than-Significant Impact.** The open trench method will be used for some sections of pipes within the easement areas of Adeline Drive, which may require the removal of trees. The County has established a Significant Tree Ordinance that requires a permit for cutting and/or removal of trees 38 inches or more in circumference (at 4 ½ feet above the ground). The project will comply with the Significant Tree Ordinance as required, considering the project's purpose of maintaining the public sanitary sewer system. The project is not expected to conflict with this or other local policies or ordinances protecting biological resources.

f) **No Impact**. The proposed improvement sites are not located within any HCPs or NCCPs.

E. CULTURAL RESOURCES

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
5. CULTURAL RESOURCES. Would the project:					
a) Cause a substantial adverse change in the significance of a historical resource as defined in CEQA 15064.5?				X	6
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA 15064.5?			X		6
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X	1
d) Disturb any human remains, including those interred outside of formal cemeteries?			X		1

Explanation

A cultural resources evaluation was prepared for the proposed improvements to evaluate the potential for historic properties and archaeological resources that may be affected by the proposed wastewater collection system improvements along Adeline Drive and Canyon Road (*NHPA Section 106 Historic Properties Inventory and Compliance Plan for the Adeline Drive and Canyon Road Capacity Improvement Project, Burlingame Hills Sewer Maintenance District, San Mateo County Department of Public Works Wastewater CIP*, Holman & Associates, March 2013). This report is contained in Appendix D. This evaluation was completed in accordance with the National Historic Preservation Act, specifically the requirements of NHPA Section 106.[6] The following tasks were performed as part of the Section 106 evaluation for the two pipeline segments:

- Analysis of the nature, locations, and construction methods for each project element
- Designation of the Area of Potential Effects (APE)
- Project-specific archival research to assess sensitivity for resources, including search at the at the Northwest Information Center of the California Historical Resources Information System at Sonoma State University
- Review of prehistoric and historic archaeological records and data
- Native American consultation
- Surface reconnaissance of the APE
- Assessment of the project's impact on historic resources

The Section 106 evaluation concluded that the project has a very low to no potential to encounter or affect historic properties (i.e., archaeological and historical resources) as defined by Section 106 regulations and no additional work was recommended. See additional discussion below.

[6] The Section 106 evaluation is required because the County is applying for a SRF loan through the SWB for the project; the SRF loan program is partially funded by the U.S. EPA and subject to federal environmental review.

a) **No Impact**. The proposed replacement pipelines will be placed underground and the ground surface returned to its existing condition; therefore, any excavations required will not adversely affect any historical resources.

b) **Less-than-Significant Impact**. Both segments, except the portion of Adeline Drive in the easement, are located in roads lined by residential development and the slopes have been altered by development. No recorded resources are recorded within or near the Project APEs, nor were any archaeological resources or evidence detected during the field survey.

Research completed for the Section 106 evaluation for the project determined that all components have very low to no potential to encounter or affect historic properties as defined by Section 106 regulations, and a finding of "no historic properties affected" was made. Nevertheless, a procedure must be in place in the unlikely event of resource discovery during construction, in accordance with Section 106 regulations. The County will implement the following requirements in the unlikely event that potential archaeogical resources are encountered during construction in order to avoid impacts to cultural resources:

- Should any resources be encountered during construction, the County and/or construction supervisors shall immediately stop work in the vicinity of the archaeological discovery (within 33 feet), and immediately notify a qualified archaeologist. The archaeologist shall evaluate the find and notify the State Water Board (SWB) Section 106 Compliance Officer. A record shall be kept of all such notifications and evaluations regardless of outcome. If the discovery is a potential resource, the SWB, the County, and qualified archaeologist shall consult and agree on appropriate treatment measures.

c) **No Impact**. The project will not impact any known paleontological resources.

d) **Less-than-Significant Impact**. Though unlikely, human remains could be encountered during excavation activities. In the event that human remains are discovered during construction, the contractor would cease all excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The San Mateo County Coroner shall be notified and shall make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his authority, Coroner shall notify the Native American Heritage Commission to identify descendants of the deceased Native American.

F. GEOLOGY AND SOILS

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
6. GEOLOGY AND SOILS. Would the project:					
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:					

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
i) Rupture of a know earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?				X	1, 2
ii) Strong seismic ground shaking?			X		1, 2
iii) Seismic-related ground failure, including liquefaction?			X		1, 2
iv) Landslides?			X		1, 2
b) Result in substantial soil erosion or the loss of topsoil?			X		1, 2
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X		1, 2
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X		1, 2
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X	1, 2

Explanation

ai) **No Impact**. Surface rupture occurs along lines of previous faulting. The majority of the pipeline segments are not located on any faults and are not subject to rupture.

aii) **Less-than-Significant Impact**. Due to its location in a seismically active region, proposed pipelines may be subject to strong seismic ground shaking during their design life in the event of a major earthquake on any of the region's active faults. Seismic impacts will be minimized by using standard engineering and construction techniques in compliance with the requirements of the Uniform Building Code (UBC) and California and Uniform Building Code (CBC) for Seismic Zone 4.

aiii) **Less-than-Significant Impact**. As described above, the proposed pipelines may be subject to strong ground shaking in the event of a major earthquake. Impacts associated with these hazards will be minimized by using standard engineering and construction techniques in compliance with the requirements of the UBC and CBC for Seismic Zone 4. See also c) below.

aiv) **Less-than-Significant Impact**. Many of the pipeline segments are located on steep slopes and have been in place since the 1940's. The proposed improvements would involve replacing the existing piplines in their existing location using standard engineering and construction techniques to mimimize land disturbance resulting in a less-than-significant impact.

b) **Less-than-Significant Impact**. The proposed pipelines will require excavation where open trenching is proposed as well as where launching/receiving pits are needed for pipe bursting. These site disturbance activities may result in a temporary increase in erosion; however, the

project proponent/contractor will be required to conform to all regulatory requirements for preventing erosion and sedimentation to protect water quality. This includes preparation of a Storm Water Pollution Protection Plan and use of BMPs. Refer also to the discussion in I. Hydrology and Water Quality of this Initial Study.

c) **Less-than-Significant Impact**. Some of the pipeline areas may be subject to landslide, lateral spreading, liquefaction, subsidence, or collapse. The proposed improvements would involve replacing the existing piplines in their existing location using standard engineering and construction techniques to mimimize land disturbance resulting in a less-than-significant impact. See also aiv) above.

d) **Less-than-Significant Impact**. Some of the pipeline areas may be subject to soil hazards such as weak soils, expansive soils, and/or settlement. The proposed improvements would involve replacing the existing piplines in their existing location using standard engineering and construction techniques to mimimize land disturbance resulting in a less-than-significant impact. See also aiv) above.

e) **No Impact**. The project does not involve any septic systems.

G. GREENHOUSE GAS EMISSIONS

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS		Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Source(s)
7.	GREENHOUSE GAS EMISSIONS. Would the project:					
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X		1, 4
b)	Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X		1, 4

Explanation

a) **Less-than-Significant Impact**. Given that the proposed sanitary sewer line improvements are a repair and replacement project with no expansion in wastewater services, it would not generate substantial greenhouse gas (GHG) emissions.

b) **Less-than-Significant Impact**. There are currently no BAAQMD thresholds for GHG emissions associated with project construction. GHG emissions were calculated for the project based on URBEMIS v9.2.4 output results and standard CO_2e (equivalency) conversion provided by the BAAQMD Bay Area GHG Model (see Appendix B). As shown in Table 2, the total construction GHG emissions of approximately 385.25 metric tons is far less than the proposed GHG emission thresholds for operations of 1,100 metric tons per year. The table also shows amount of CO_2e emissions from construction amortized throughout the average life of a project is also well below the yearly operational thresholds for CO_2e emissions. Since there is no potential for additional GHG emissions attributed to continued wastewater collection operations with the project implementation, the project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

Table2 Summary of CO_2 and CO_2e Emissions (metric tons/year)					
CO_2 Construction	**CO_2 Operations**	**CO_2 Area Source**	**Total CO_2**	**Total CO_2e**	**30 Year Amortized CO_2e**
365.99	None	None	365.99	385.25	12.84
Note: The CO_2e factor is based on the BGM Greenhouse Gas Calculator version 1.1.9.					

H. HAZARDS AND HAZARDOUS MATERIALS

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS		Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
7.	HAZARDS AND HAZARDOUS MATERIALS. Would the project:					
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?		X			1, 2
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X		1, 2
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?			X		1, 2
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			X		1, 2
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X	1, 2
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X	1
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X	1
h)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X	1

Explanation

a) **Less-than-Significant Impact with Mitigation**. The project does not involve the routine transport, use, or disposal of hazardous materials. The proposed pipeline segments are located in hilly and often steep residential areas that do not appear to have been historically used for agricultural, industrial, or other uses that would involve hazardous materials.

During construction, the project will require the removal of the existing asbestos cement pipe material during open trench construction. The possible release of asbestos-containing materials during construction represents a potentially significant impact that will be reduced to a less-than-significant level with the following mitigation.

Mitigation

HAZ1 The project proponent shall ensure that a certified hazardous materials contractor or subcontractor be retained to handle and manage asbestos-containing materials during construction in accordance with BAAQMD requirements to avoid release of asbestos during construction activities.

b) **Less-than-Significant Impact**. See response a) above.

c) **Less-than-Significant Impact.** The project is located near several schools; however, the proposed improvements would not result in the release of hazardous materials affecting schools.

d) **Less-than-Significant Impact**. Refer to discussion in a) above.

e) **No Impact**. The project sites are not located within two miles of any airports and the proposed improvements will not otherwise create a safety hazard for people in the project area.

f) **No Impact**. The project sites are not located near an airstrip.

g) **No Impact**. The project will not adversely affect emergency response or evacuation plans.

h) **No Impact**. The project will not expose people or structures to risk from wildland fires.

I. HYDROLOGY AND WATER QUALITY

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
8. HYDROLOGY AND WATER QUALITY. Would the project:					
a) Violate any water quality standards or waste discharge requirements?			X		1, 2

ENVIRONMENTAL IMPACTS		Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table level (for example, the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				X	1, 2
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.			X		1, 2
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?				X	1, 2
e)	Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?			X		1, 2
f)	Otherwise substantially degrade water quality?				X	1, 2
g)	Place housing within a 100-year flood-hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X	1, 2
h)	Place within a 100-year flood-hazard area structures, which would impede or redirect flood flows?				X	1, 2
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X	1, 2
j)	Inundation by seiche, tsunami, or mudflow?				X	1, 2

Explanation

a) **Less-than-Significant Impact**. The proposed improvements will not violate any water quality standards. Mitigation identified in Section D. Biological Resources would avoid water quality impacts on receiving nearby drainages in the project area. See also c) below.

b) **No Impact**. The proposed improvements will not deplete or otherwise affect groundwater supplies or recharge.

c) **Less-than-Significant Impact**. The replacement of underground pipelines will not modify the existing drainage pattern on the improvement sites. Trenching for the pipelines (including the launching/receiving pits) has the potential to result in a temporary increase in erosion affecting the quality of storm water runoff during construction activities (refer also to F. Geology). Prior to the commencement of any clearing, grading, or excavation, the project will comply with the NPDES Construction General Permit as applicable, which may include filing a Notice of Intent with the SWB and implementation of a Storm Water Pollution Prevention Plan (SWPPP) as needed. The project will incorporate BMPs to control the discharge of storm water pollutants including sediments associated with construction activities.

d) **No Impact**. Installation of replacement pipelines will not increase the amount of impervious surfaces or increase runoff flows upon restoration of the ground surface.

e) **Less-than-Significant Impact**. The project will not create or contribute runoff that will exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.

f) **No Impact**. The project will not substantially degrade water quality, as described in c) above.

g) **No Impact**. The project does not propose the development of any housing.

h) **No Impact**. The project consists of installation of underground pipelines and will not impede or redirect flood flows.

i) **No Impact**. The project will not expose people or structures to a significant risk of loss, injury or death involving flooding as a result of the failure of a levee or dam.

j) **No Impact**. The pipeline improvements are not located in areas subject to significant seiche, tsunami, or mudflow risk.

J. LAND USE

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
9. LAND USE AND PLANNING. Would the project:					
a) Physically divide an established community?				X	1, 2
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X	1
c) Conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan?				X	1

Explanation

a) **No Impact**. The installation of underground pipelines will not physically divide an established community.

b) **No Impact**. The project is consistent with the County's General Plan policies and District goals to provide reliable wastewater collection services to the respective service populations within the County. The project will not conflict with applicable land use plans, policies, or regulations.

c) **No Impact**. The project is not located within the boundaries of any applicable HCP or NCCP.

K. MINERAL RESOURCES

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
10. MINERAL RESOURCES. Would the project:					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X	1
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				X	1

Explanation

a-b) **No Impact**. The project will not adversely affect mineral resources.

L. NOISE AND VIBRATION

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
11. NOISE. Would the project result in					
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?			X		1, 2
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?			X		1, 2
c) Substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X		1, 2
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X		1, 2
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X	1, 2
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X	1, 2

Explanation

a) **Less-than-Significant Impact**. The pipeline segments are located in residential areas along Adeline Drive and Canyon Road. Noise from project construction could impact adjacent existing residential uses. Construction of the project would result in short-term noise increases in the project vicinity. Noise impacts from construction activities depend on the type of construction equipment used, the timing and length of activities, the distance between the noise generating construction activities and receptors, and shielding. Construction activities (i.e., trenching and pipe burst) will occur periodically during an approximately six month period.[7] Construction will be generally be limited to weekdays between the hours of 8 AM and 5 PM. Construction noise represents a significant short-term impact that will be reduced to a less-than-significant level with implementation of standard noise abatement measures. During construction, the project contractor shall implement the following measures to minimize construction noise impacts:

- Choose construction equipment that is of quiet design, has a high-quality muffler system, and is well-maintained.
- Install superior intake and exhaust mufflers and engine enclosure panels wherever possible on gas diesel or pneumatic impact machines.
- Limit construction to 8 AM-5 PM, Monday through Friday.[8]
- Eliminate unnecessary idling of machines when not in use.
- Locate all stationary noise-generating construction equipment, such as portable power generators, as far as possible from existing residences.

b) **Less-than-Significant Impact.** See a) above. The project will not involve any permanent sources of ground borne vibration or ground borne noise. Some temporary, minor localized vibration may occur during construction activities.

c) **Less-than-Significant Impact.** See a) and b) above. Temporary noise would occur during construction of the project. The project will not result in a substantial permanent increase in ambient noise levels.

d) **Less-than-Significant Impact**. Construction of the project will result in short-term noise increases in the project vicinity. See a) above.

e) **No Impact**. The project is not located within an airport land use plan or near any public airports.

f) **No Impact.** The project is not located near any private airstrips.

[7] Project construction will occur from April - September 2014.

[8] This is consistent with the County's Noise Ordinance that restricts construction activities to 7 AM – 6 PM Monday through Friday and AM – 5 PM on Saturdays).

M. POPULATION AND HOUSING

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
12. POPULATION AND HOUSING. Would the project:					
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X	1
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X	1
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X	1

Explanation

a) **No Impact**. The project consists of installing pipelines and other improvements to assure reliable wastewater collection service and does not include an expansion in use or services that will directly or indirectly facilitate growth.

b)–c) **No Impact**. The project will not displace any housing or people.

N. PUBLIC SERVICES

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
13. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:					
a) Fire protection?				X	1, 2
b) Police protection?				X	1, 2
c) Schools?				X	1
d) Parks?				X	1
e) Other public facilities?				X	1, 2

Explanation

a)–e) **No Impact**. The project consists of wastewater collection system improvements (i.e., pipeline replacements). The maintenance requirements after the completion of the improvements are expected to be reduced and conducted as part of the standard operations of the BHSMD. The project will not impact fire, police, school, park, or other public services.

O. RECREATION

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
14. RECREATION. Would the project:					
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X	1
b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?				X	1

Explanation

a)–b) **No Impact**. The project will not increase demands on or otherwise impact recreational facilities.

P. TRANSPORTATION

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
15. TRANSPORTATION/TRAFFIC. Would the project:					
a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (for example, result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?				X	1
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?				X	1
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X	1
d) Substantially increase hazards due to a design feature (for example, sharp curves or dangerous intersections) or incompatible uses (for example, farm equipment)?			X		1

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
e) Result in inadequate emergency access?				X	1
f) Result in inadequate parking capacity?				X	1
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (for example, bus turnouts, bicycle racks?				X	1

Explanation

a) **No Impact**. The installation of pipelines will not generate a substantial amount of vehicle trips nor result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections that would impact traffic conditions or facilities. See also d) below.

b) **No Impact**. See a) above.

c) **No Impact**. The proposed improvements will not result in any change to air traffic patterns.

d) **Less-than-Significant Impact**. The project will not increase traffic hazards due to any design features or incompatible uses. However, construction activities during installation could result in short-term traffic disruptions where proposed in roadway right-of-way. These disruptions will be minimized by developing and implementing a Traffic Control Plan (by the project contractor) for all phases of work in accordance with County requirements to assure access is maintained during construction.

e) **No Impact**. The proposed improvements will not affect emergency access.

f) **No Impact**. The proposed improvements will not generate parking demand.

g) **No Impact**. The proposed improvements will not conflict with any alternative transportation plans.

Q. UTILITIES AND SERVICE SYSTEMS

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
16. UTILITIES AND SERVICE SYSTEMS. Would the project:					
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X	1, 2
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction or which could cause significant environmental effects?			X		1, 2

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X	1, 2
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X	1
e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X		1
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				X	1
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X	1

Explanation

a) **No Impact**. The project will not exceed wastewater treatment requirements.

b) **Less-than-Significant Impact**. The project does not propose development of housing nor does it include an expansion in use or services. Construction of the proposed improvements has the potential to temporarily affect the environment, as addressed in this Initial Study. Mitigation and standard practices have been identified to reduce all temporary construction impacts to less-than-significant levels.

c) **No Impact**. The project will not result in the construction of new storm water drainage facilities or expansion of existing facilities. BMPs are proposed during construction to avoid temporary impacts to water quality.

d) **No Impact**. Construction of the project may require some water for dust suppression during construction activities. This is not considered a substantial impact.

e) **Less-than-Significant Impact**. See a) and c) above.

f)-g) **No Impact**. The project will not generate substantial solid waste that would adversely affect landfills.

R. MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
17. MANDATORY FINDINGS OF SIGNIFICANCE. Does the project:					
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X			1, 2, 5, 6
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of the past projects, the effects of other current projects, and the effects of probable future projects.		X			1, 2
c) Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?		X			1

Explanation

a) **Less-than-Significant Impact with Mitigation**. Based on the analysis provided in this Initial Study, the proposed wastewater collection system improvements may result in significant impacts on the environment in the area of biological resources. Mitigation and standard practices have been identified to reduce this impact to a less-than-signficant level.

b)-c) **Less-than-Significant Impact with Mitigation**. Based on the analysis provided in this Initial Study, the proposed wastewater collection system improvements would not have significant cumulative impacts. The only environmental impacts from the proposed improvements are temporary construction effects that will be reduced to a less-than-significant level with measures and standard practices identified herein, and eliminated upon project completion.

Chapter 4. References

LEAD AGENCY

San Mateo County Department of Public Works
Mark Chow, Principal Civil Engineer

REPORT PREPARATION

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Environmental Consultant
Leianne Humble, Project Manager/Senior Planner
Jami Davis, Environmental Scientist
Michael Gonzales, Assistant Planner

PERSONS CONTACTED

Matthew Clark, Holman & Associates
Julie Casagrande, San Mateo County Department of Public Works

BIBLIOGRAPHY

Brown and Caldwell, BHSMD Wastewater Collection System Capacity Assurance Plan and Master Plan Update, June 2011.

San Mateo County Adeline Drive and Canyon Road Capacity Improvement Project, 90% Submittal, January 29, 2013

BAGG Engineers, *Geotechnical Engineering Investigation New Sanitary Sewer Mains Canyon Road and Adeline Drive Unincorporated San Mateo County, Burlingame, California*, February 2013.

Bay Area Air Quality Management District, *BAAQMD CEQA Guidelines*, 2012.

Holman & Associates, *NHPA Section 106 Historic Properties Inventory and Compliance Plan for the Adeline Drive and Canyon Road Capacity Improvement Project, Burlingame Hills Sewer Maintenance District, San Mateo County Department of Public Works Wastewater CIP*, Holman & Associates, March 2013.

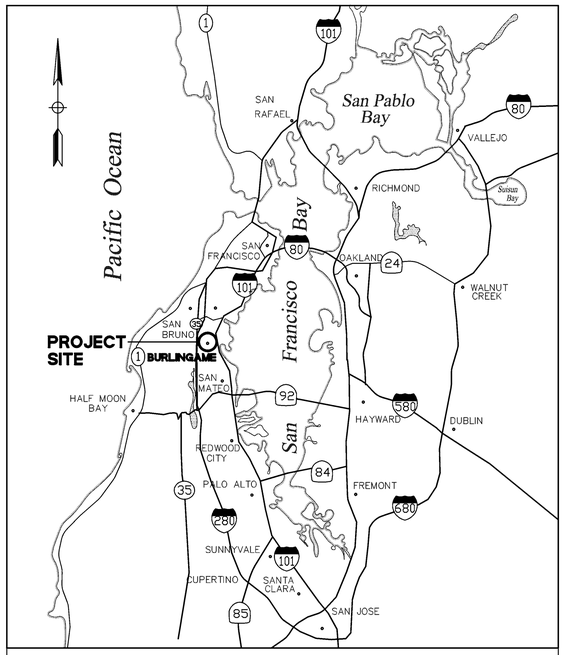
San Mateo County Department of Public Works, *County of San Mateo Wastewater Collection System Capital Improvement Project Biological Report*, April 2011

CHECKLIST SOURCES

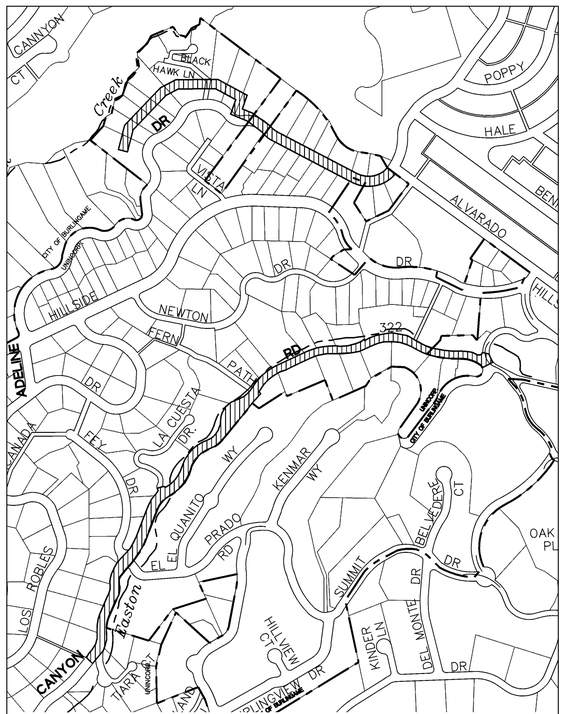
1. CEQA Guidelines and professional expertise of consultant
2. Project Plan and Site Review
3. Important Farmlands Map
4. BAAQMD CEQA Guidelines, 2011
5. Biological Investigation, 2011 and 2013
6. Section 106 Evaluation, 2013

APPENDIX A

PROJECT PLANS & AREA OF POTENTIAL EFFECTS (APE)



VICINITY MAP
NO SCALE



LIMITS OF WORK
COUNTY LIMITS

LOCATION MAP
NO SCALE

SAN MATEO COUNTY

ADELINE DRIVE AND CANYON ROAD CAPACITY IMPROVEMENT PROJECT

IN THE BURLINGAME HILLS SEWER MAINTENANCE DISTRICT

TO BE SUPPLEMENTED BY STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS DATED MAY 2006 AND ADOPTED BY SAN MATEO COUNTY, NOVEMBER 14, 2006, BY RESOLUTION NO. 068389

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/13
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: _____

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2013

ABBREVIATIONS:

AC	ASPHALT CONCRETE	FH	FIRE HYDRANT	RT	RIGHT
ACP	ASBESTOS CEMENT PIPE	FL	FLOW LINE	S	SLOPE
BHSMD	BURLINGAME HILLS SEWER MAINTENANCE DISTRICT	G	GAS	SD	STORM DRAIN
CB	CATCH BASIN	GV	GAS VALVE	SDMH	STORM DRAIN MANHOLE
CC	CENTER-TO-CENTER	GM	GAS METER	SMC	SAN MATEO COUNTY
CI	CAST IRON	GND	GROUND	SS	SANITARY SEWER
CLF	CHAIN LINK FENCE	HDPE	HIGH DENSITY POLYETHYLENE	SSCO	SANITARY SEWER CLEAN OUT
CMP	CORRUGATED METAL PIPE	HORIZ	HORIZONTAL	SSLH	SANITARY SEWER LAMPHOLE
CONC	CONCRETE	INV	INVERT	SSMH	SANITARY SEWER MANHOLE
DI	DRAIN INLET	IRR	IRRIGATION	STA	STATION
DIA	DIAMETER	JP	JOINT POLE	SW	SIDEWALK
DIP	DUCTILE IRON PIPE	LAT	LATERAL	T	THICKNESS
(E), EX	EXISTING	LF	LINEAR FEET	TC	TOP OF CURB
E&T	ELECTRICAL AND TELECOM	LG	LIP OF GUTTER	TYP	TYPICAL
E BOX	ELECTRICAL BOX	LT	LEFT	U.G.	UNDERGROUND
ELEC	ELECTRIC	MH	MANHOLE	VCP	VITRIFIED CLAY PIPE
EL, ELEV	ELEVATION	(N)	NEW	VERT	VERTICAL
EP	EDGE OF PAVEMENT	NTS	NOT TO SCALE	V.I.F.	VERIFY IN FIELD
EV	ELECTRIC VAULT	(P), PR	PROPOSED	W	WATER
FC	FACE OF CURB	PVC	POLYVINYL CHLORIDE	WM	WATER METER
FG	FINISH GRADE	RCP	REINFORCED CONCRETE PIPE	WV	WATER VALVE

LEGEND:

- SS — (N) SANITARY SEWER LINE
- SS — (E) SANITARY SEWER LINE
- LATERAL — (N) SANITARY SEWER LATERAL
- LATERAL — (E) SANITARY SEWER LATERAL
- (N) SS MANHOLE
- (E) SS MANHOLE
- (E) SS CLEANOUT OR FLUSHING INLET
- SD — (E) STORM DRAIN
- ROADWAY CENTERLINE
- E — (E) ELECTRICAL
- T — (E) TELECOM
- OH — (E) OVERHEAD LINE
- W — (E) WATER MAIN
- GAS — (E) GAS LINE
- EDGE OF GRAVEL ROAD OR PAVEMENT
- RIGHT OF WAY
- EASEMENT
- SHRUB
- TREE
- FENCE
- MARKER
- (E) ELECTRICAL STRUCTURE

SHEET INDEX:

FIELD BOOKS:

741-2 BURLINGAME HILLS SEWER MAINT. DIST.

BENCH MARK LOCATION and ELEVATION (NGVD DATUM):

CROSS ON TOP OF THE MOST WESTLY CORNER OF CONCRETE BRIDGE RAIL – 0.5' FROM NORTHERLY CURB RETURN AT EL PRADO ROAD & CANYON ROAD, OPPOSITE FEY DRIVE. ELEVATION = 301.58
(BENCH LEVELS: SEPT. 1968)

APPROVED DATE:

YOUSEF MORADZADEH, PROJECT MANAGER
BKF ENGINEERS
R.C.E. # 42632 / EXPIRES 3-31-2014

REGISTERED PROFESSIONAL ENGINEER
YOUSEF MORADZADEH
C42632
3/31/14
CIVIL
STATE OF CALIFORNIA

90% SUBMITTAL – NOT FOR CONSTRUCTION

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CT	BURLINGAME HILLS SEWER MAINTENANCE DISTRICT
		CHECKED BY: YM	ADELINE DRIVE AND CANYON ROAD CAPACITY IMPROVEMENT PROJECT
		DRAWN BY: CT	TITLE SHEET

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
SAN MATEO COUNTY

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 1/29/13
FILE NO.: 1/4906

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

1.00
SHEET 1 OF 12

DRAWING NAME: K:\Eng\2\2014\2MO\PLOTTED SHEETS\1.00.dwg
PLOT TIME: 01-29-13

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/13
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: _____

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2013

GENERAL NOTES

1. THE FOLLOWING NOTES ARE ESTABLISHED MERELY TO GUIDE THE CONTRACTOR AS TO THE GENERAL ITEMS OF WORK INVOLVED AND ARE NOT INTENDED TO COVER COMPLETE SCOPE OF WORK. CONTRACTOR SHALL COMPLETE ALL WORK AS PER CONTRACT DOCUMENTS.

2. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR PERSONS AND PROPERTY; THAT IS REQUIREMENT SHALL BE MADE TO APPLE CONTINUOUSLY AND NOT BE AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONJUNCTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.

3. EXISTING TOPOGRAPHY FOR ADELINE DRIVE IS BASED ON FIELD TOPOGRAPHIC SURVEYS PERFORMED BY BKF ENGINEERS DATED DECEMBER 2012, IN ADDITION TO FIELD VERIFICATION OF SURVEY FOR CANYON ROAD PROVIDED BY COUNTY FROM DECEMBER 2003.

4. THE REPLACEMENT SEWER MAIN SHALL BE CONSTRUCTED AT THE SAME ALIGNMENT AND GRADE OF THE EXISTING SEWER MAIN BY PIPE BURSTING OR OPEN TRENCH METHODS EXCEPT WHERE SHOWN ON PLANS.

5. CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA) 1-800-227-2600 OR 1-800-642-2444 AT LEAST TWO (2) WORKING DAYS IN ADVANCE OF STARTING EXCAVATION TO PROVIDE FOR MARKING OF UTILITIES.

6. THE LOCATIONS AND TYPES OF EXISTING UTILITIES SHOWN ON THE PLANS ARE BASED ON INFORMATION FURNISHED BY SERVICING AGENCIES AND FIELD SURVEY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE POSITION OF AND PROVIDE PROTECTION FOR SUCH UTILITIES AND STRUCTURES, WHETHER SHOWN ON THE PLAN OR NOT.

7. ALL MATERIALS, WORK APPURTENANCES SHALL CONFORM WITH THESE PLANS, THE PROJECT SPECIFICATIONS AND THE LATEST ADOPTED VERSION OF SAN MATEO COUNTY STANDARDS DETAILS.

8. THE CONTRACTOR SHALL AT ALL TIMES COMPLY WITH THE RULES AND REGULATIONS ESTABLISHED BY CAL-OSHA AND OTHER AGENCIES HAVING JURISDICTION OVER THE WORK.

9. THE CONTRACTOR SHALL PROVIDE UNINTERRUPTED SANITARY SEWER SERVICE THROUGHOUT THE LENGTH OF THE PROJECT.

10. LOCATIONS AND QUANTITY OF SANITARY SEWER LATERALS ARE APPROXIMATE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE UTILITIES TO DETERMINE EXACT LOCATIONS AND DEPTH.

11. THE CONTRACTOR SHALL IDENTIFY WHICH LATERAL CONNECTIONS ARE ACTIVE AND WHICH ARE INACTIVE. THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING ACCESS TO THE OWNER'S PROPERTY FOR VERIFICATION OF ACTIVE LATERALS. REINSTATE ACTIVE LATERALS ONLY, PLUG INACTIVE LATERALS WITH CONCRETE AT THE EDGE OF THE TRENCH.

12. PRIOR TO EXCAVATION, PIPE BURSTING OR OTHER METHODS OF PIPELINE CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS SHOWN, INCLUDING THE LENGTH OF MANHOLE TO MANHOLE REACHES AND DISTANCES TO SEWER LATERALS.

13. LOCATIONS AND LENGTHS OF EXISTING SAGS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND REPAIRING ALL THE SAGS IN THE SEWER MAINS.

14. EXISTING FLOWS MUST BE MAINTAINED BY CONTRACTOR AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY RESIDENTS AND/OR BUSINESSES OF ANY INTERRUPTIONS OF SEWER SERVICES PRIOR TO ANY WORK ON EXISTING SEWER PIPES. SEWAGE FLOWS SHALL BE MAINTAINED BY PUMPING OR TEMPORARY CROSS CONNECTION FROM EXISTING MAIN TO NEW MAIN.

15. CONTRACTOR SHALL PROVIDE PUMPS OR OTHER MEANS TO PREVENT SEWER WASTES BACKUP INTO RESIDENTIAL HOUSES AND DUE TO HIS/HER WORK ON THE EXISTING SEWERS. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP AND DAMAGES CAUSED BY HIS/HER NEGLIGENCE.

16. CONTRACTOR IS ADVISED THAT EXISTING UTILITY LINES IN SOME LOCATIONS MAY BE VERY CLOSE TO THE SANITARY SEWER MAIN. CONTRACTOR IS TO SUPPORT THESE UTILITIES DURING CONSTRUCTION AND ANY REQUIRED OR SPECIAL CONSTRUCTION TECHNIQUES PERFORMED BY CONTRACTOR SHALL BE AT NO EXTRA COST TO THE COUNTY. COMPENSATION FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICES PAID FOR THE VARIOUS CONTRACT ITEMS OF WORK, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED THEREFORE.

17. ALL SEWER MAINS REPLACED SHALL BE AIR TESTED PRIOR TO THE CONNECTION OF LATERALS. THESE LINES SHALL BE VIDEO TAPED AFTER COMPLETION OF CONSTRUCTION AND CLEANING OF THE LINES. VIDEO TAPE IN VHS FORMAT AT SP, OR EQUIVALENT, SPEED SHALL BE MADE OF THE INSPECTION AND DELIVERED ALONG WITH A TYPED LOG OF THE INSPECTION TO THE ENGINEER FOR REVIEW AND ACCEPTANCE. SUBMITTED VIDEO TAPES SHALL INCLUDE A CONTINUOUS ON-SCREEN DISPLAY WHICH CONTAINS, AT A MINIMUM, THE DATE OF THE FILMING, IDENTIFICATION OF THE LINE AND SEGMENT (REACH) OF THE LINE BEING VIEWED AND A READOUT, IN FEET, SHOWING THE DISTANCE FROM THE ENTRY POINT. IF, IN THE OPINION OF THE ENGINEER, THE SUBMITTED VIDEO TAPES ARE OF POOR QUALITY, THE ENGINEER MAY REJECT THE VIDEO TAPES AND REQUIRE THE VIDEO INSPECTION TO BE REPEATED AND NEW VIDEO TAPES SUBMITTED TO THE COUNTY FOR REVIEW AND ACCEPTANCE. ALL VIDEO TAPES SHALL BECOME THE PROPERTY OF THE COUNTY.

18. CONTRACTOR SHALL CONFINE HIS OPERATIONS AND ACTIVITIES WITHIN THE PROJECT LIMITS, CONSISTING OF ROAD RIGHT-OF-WAY, UTILITY EASEMENTS, AND/OR PROJECT CONFORMS, AS SHOWN ON THE PLANS.

19. CONTINUOUS DUST CONTROL SHALL BE PROVIDED AS REQUIRED BY SECTION 10 "DUST CONTROL," OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.

20. VEGETATION AND IMPROVEMENTS SHALL BE REMOVED ONLY WHEN DIRECTED IN WRITING BY THE ENGINEER. NO TREES, VEGETATION OR IMPROVEMENTS (INCLUDING FENCES) SHALL BE REMOVED WITHOUT PRIOR WRITTEN CONSENT AND APPROVAL OF THE ENGINEER.

21. CONTRACTOR SHALL EXERCISE CARE WHEN EXCAVATING NEAR TREES AND ROOTS OF TREES TO REMAIN. HAND EXCAVATION, INDICATED ON THE PLANS, SHALL BE PERFORMED ADJACENT TO SPECIFIC TREES.

22. ALL EXISTING IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO LANDSCAPING, FENCES, DRIVEWAYS, CURB, GUTTER, SIDEWALK, CULVERTS, DRAINS, AND MONUMENTS, SHALL BE RESTORED TO THE CONDITION IN WHICH THEY WERE, OR BETTER, BEFORE THE EXCAVATION WAS MADE. SEPARATE PAYMENT FOR RESTORATION OF EXISTING IMPROVEMENTS TO THEIR ORIGINAL CONDITION WILL NOT BE MADE. COMPENSATION FOR THIS TASK SHALL BE CONSIDERED AS INCLUDED IN THE VARIOUS CONTRACT ITEMS OF WORK INVOLVED. NOT ALL EXISTING IMPROVEMENTS ARE SHOWN. CONTRACTOR SHALL INSPECT THE SITE IN ORDER TO SATISFY THEMSELF OF THE ACTUAL CONDITIONS OF THE WORK.

23. THE CONTRACTOR SHALL CONTACT THE DISTRICT AT 363-4100 TWO (2) WORKING DAYS IN ADVANCE OF BEGINNING ANY SANITARY SEWER WORK. THE CONTRACTOR SHALL THEREAFTER KEEP THE INSPECTOR FOR THE DISTRICT INFORMED OF HIS SCHEDULE FOR SANITARY SEWER WORK.

24. ALL SANITARY SEWER WORK CONSTRUCTED WITHOUT INSPECTION BY THE DISTRICT SHALL BE REMOVED AND RECONSTRUCTED WITH INSPECTION.

25. PRIOR TO COMMENCING ANY SANITARY SEWER WORK IN OFF-SITE EASEMENTS THE CONTRACTOR SHALL PROVIDE THE DISTRICT WITH ADEQUATE EVIDENCE THAT ALL AFFECTED PROPERTY OWNERS (AND TENANTS WHERE APPLICABLE) WERE NOTIFIED WELL IN ADVANCE OF THE DATE WORK IN THESE EASEMENTS WAS TO BEGIN AND THAT THEY HAVE UPDATED THAT NOTICE IN A TIMELY MANNER WHEN THOSE DATES HAVE CHANGED.

26. THESE PLANS DO NOT DEPICT SERVICE CONNECTIONS FOR EXISTING WATER AND EXISTING GAS. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION AND PRESERVATION OF ALL SUCH FACILITIES AS THEY MAY CONFLICT WITH THE PROPOSED SEWER LINES. ANY DAMAGE TO EXISTING FACILITIES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY AND/OR AT THE CONTRACTOR'S EXPENSE.

27. EXISTING LIVE LATERAL RECONNECTIONS SHALL BE FIVE (5) FEET MEASURED FROM THE CENTERLINE OF SEWER MAIN AND FIVE (5) FEET FROM THE MANHOLE WALL. LATERAL RECONNECTION SHALL INCLUDE ANGLED FITTINGS, TAPPING PRODUCT, TRANSITION COUPLING, NEW LATERAL PIPE, CONNECTIONS TO MAINLINE PIPE, CONNECTIONS TO EXISTING LATERAL PIPE AND O-RING CONNECTIONS TO MANHOLE.

28. THE CONTRACTOR SHALL FURNISH AND IMPLEMENT A WATER POLLUTION CONTROL PROGRAM FOR ALL PHASES OF WORK IN ACCORDANCE WITH SECTION 11-1, "WATER POLLUTION CONTROL," OF THE SPECIAL PROVISIONS.

29. THE CONTRACTOR SHALL FURNISH AND IMPLEMENT A TRAFFIC CONTROL PLAN FOR ALL PHASES OF WORK IN ACCORDANCE WITH SECTION 12, "MAINTAINING TRAFFIC," OF THE SPECIAL PROVISIONS.

PROJECT DATA

WATER SUPPLY:	BURLINGAME WATER & CITY OF BURLINGAME	650-558-7670
STORM DRAIN:	CITY OF BURLINGAME	650-558-7670
SANITARY SEWER:	SAN MATEO COUNTY PUBLIC WORKS	650-363-4100
GAS & ELECTRIC:	PG&E	650-598-7429
TELEPHONE:	PACIFIC BELL	408-493-7100

APPROVED DATE:

YOUSEF MORADZADEH, PROJECT MANAGER
BKF ENGINEERS
R.C.E. # 42632 / EXPIRES 3-31-2014

REGISTERED PROFESSIONAL ENGINEER
YOUSEF MORADZADEH
C42632
3/31/14
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE

DESIGNED BY: CT
CHECKED BY: YM
DRAWN BY: CT

BURLINGAME HILLS SEWER MAINTENANCE DISTRICT
ADELINE DRIVE AND CANYON ROAD CAPACITY IMPROVEMENT PROJECT
GENERAL NOTES

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
SAN MATEO COUNTY

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: **NO SCALE**
DATE: 1/29/13
FILE NO.: 1/4906

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PLOT TIME: 01-29-13

KEYMAP

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/13 CIVIL STATE OF CALIFORNIA

APPROVED:

DATE: _____

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2013

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BKF ENGINEERS	
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COUNTY OF SAN MATEO PUBLIC WORKS

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		CHECKED BY: YM	ADELINE DRIVE AND CANYON ROAD CAPACITY IMPROVEMENT PROJECT	DATE: 1/29/13
		DRAWN BY: CT	**SHEET INDEX**	FILE NO.: 1/4906
		JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	

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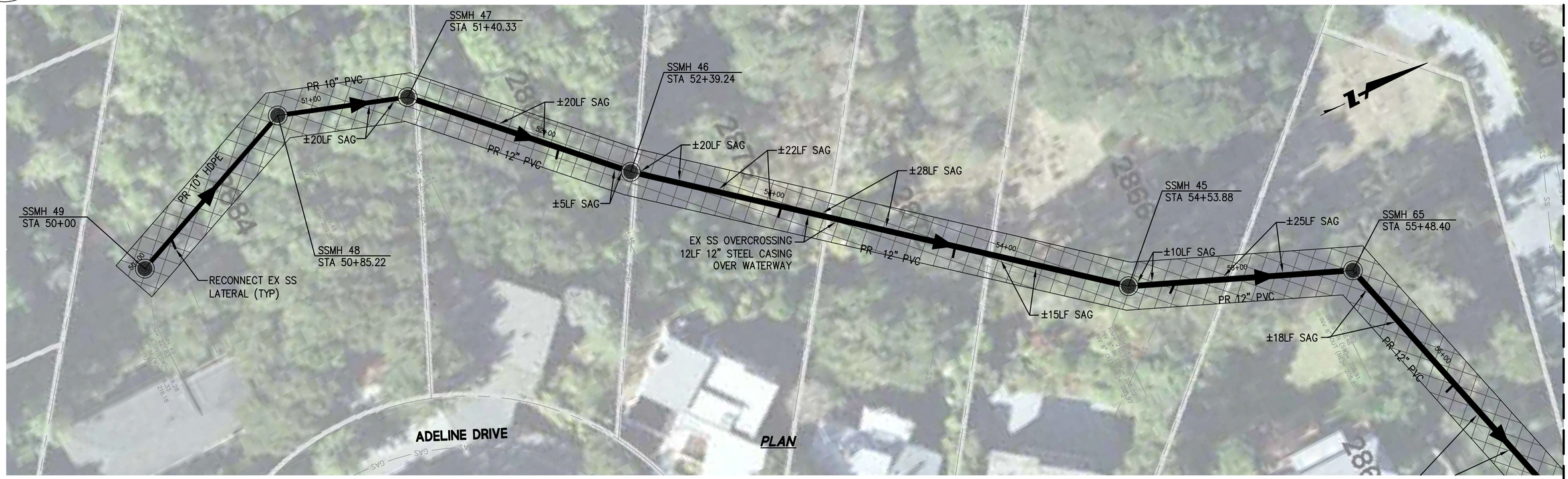

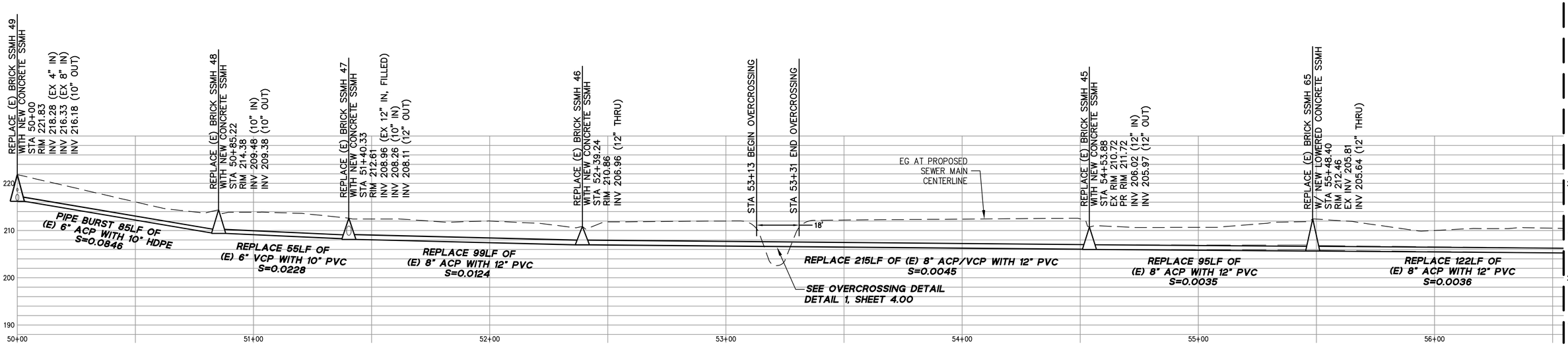

SEWER PROFILE

HOR. 1"=20'
VER. 1"=10'

GRAPHIC SCALE
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LEGEND:

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YOUSEF MORADZADEH, PROJECT MANAGER	REGISTERED PROFESSIONAL ENGINEER YOUSEF MORADZADEH C42632 3/31/14 CIVIL STATE OF CALIFORNIA
BKF ENGINEERS	
R.C.E. # 42632 / EXPIRES 3-31-2014	

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SCALE: AS SHOWN
DATE: 1/29/13
FILE NO.: 1/4906

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YOUSEF MORADZADEH, PROJECT MANAGER
BKF ENGINEERS
R.C.E. # 42632 / EXPIRES 3-31-2014

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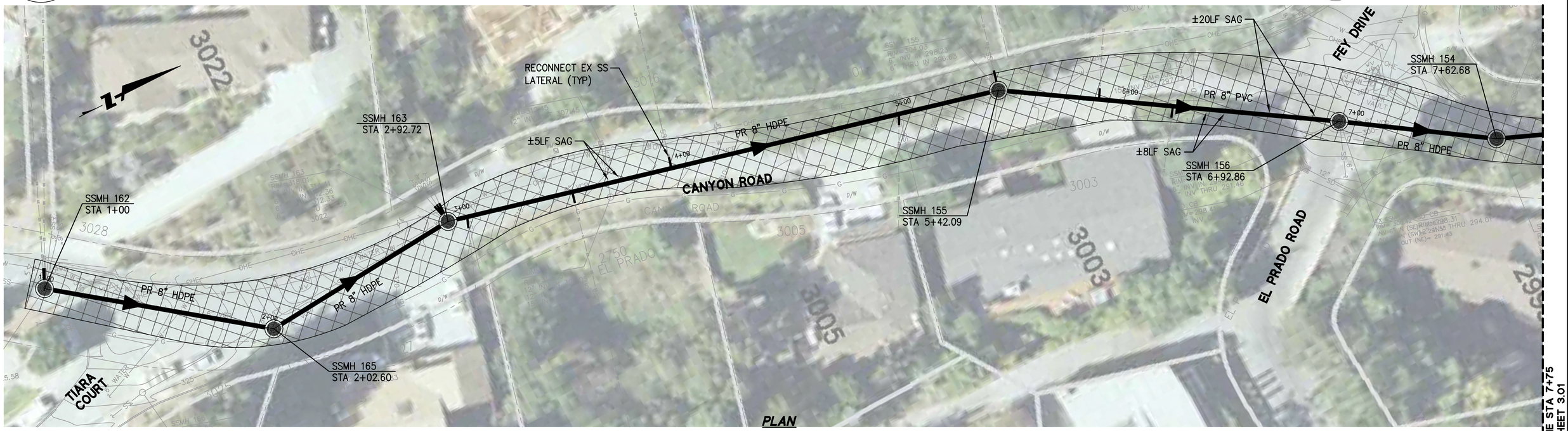

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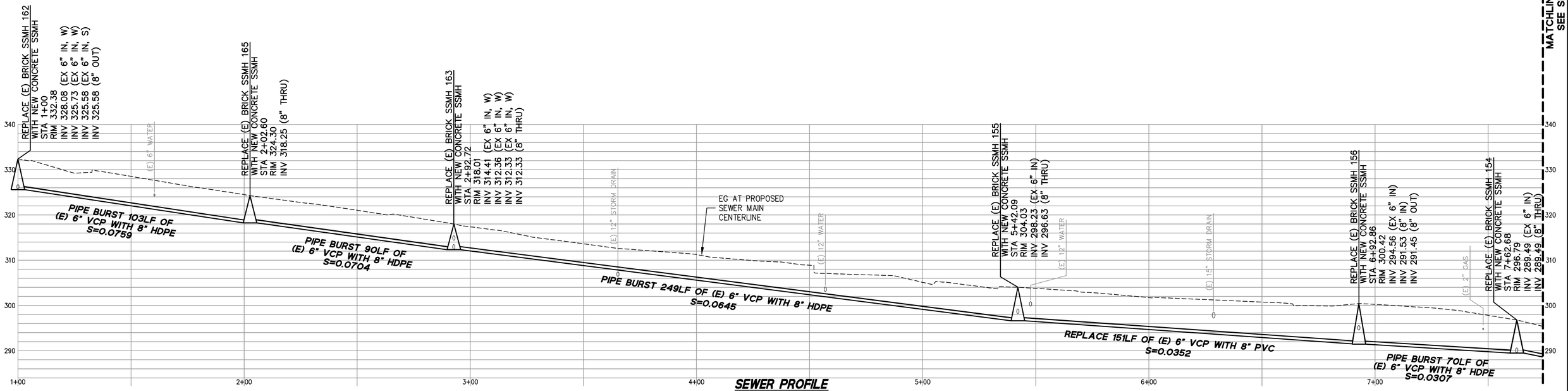

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BKF ENGINEERS
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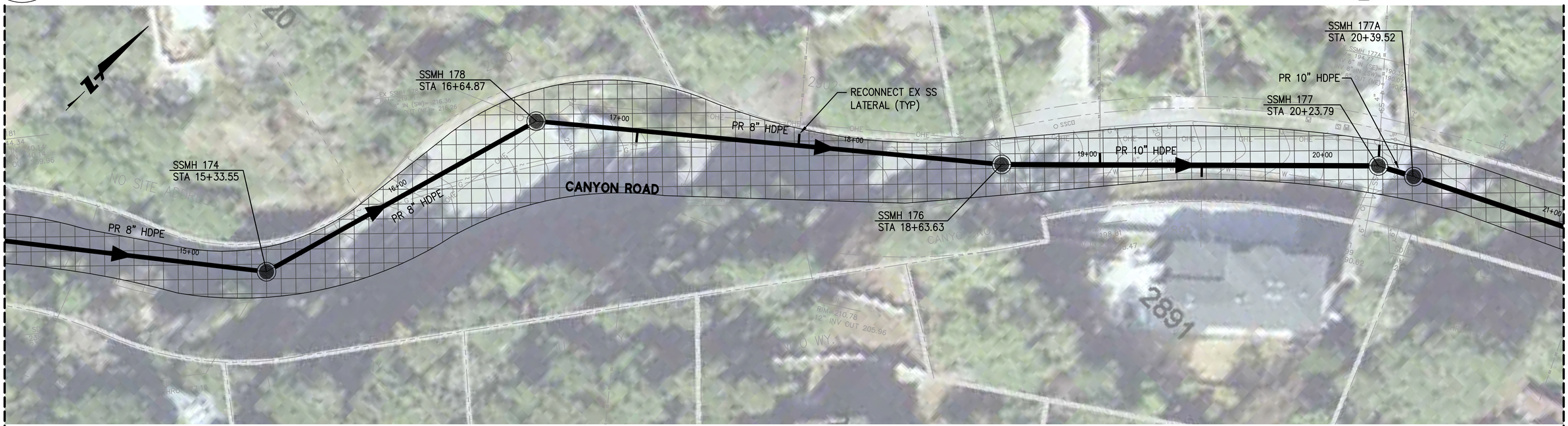

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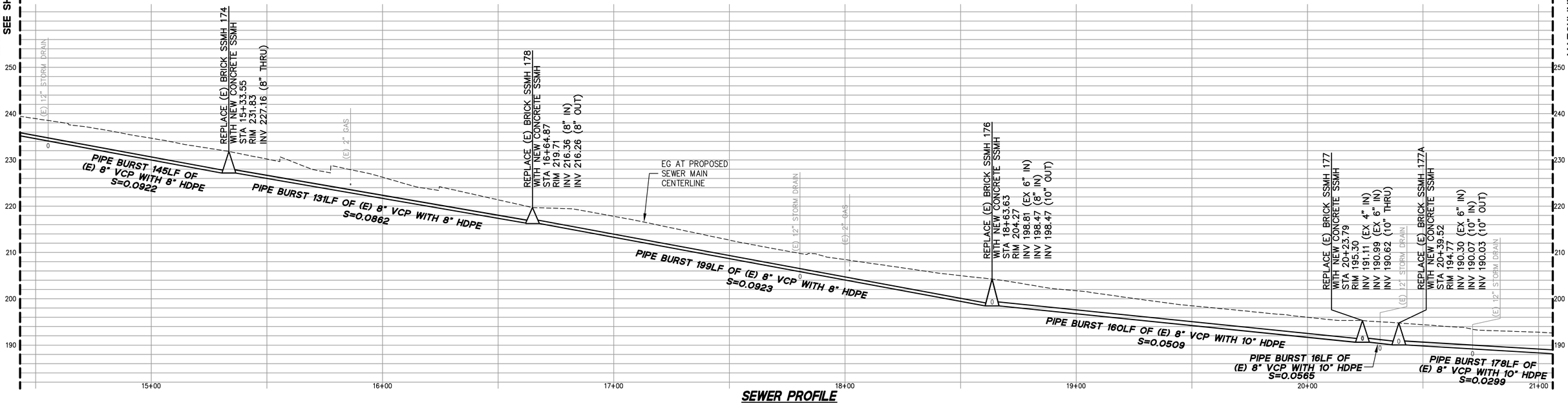

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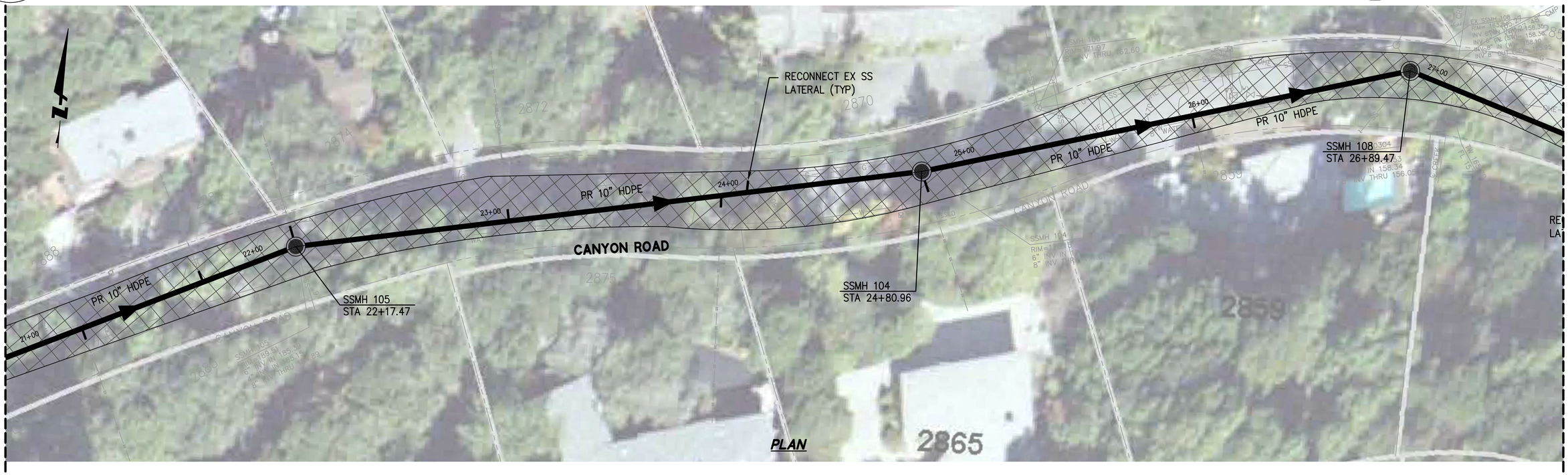

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MATCHLINE STA 27+50
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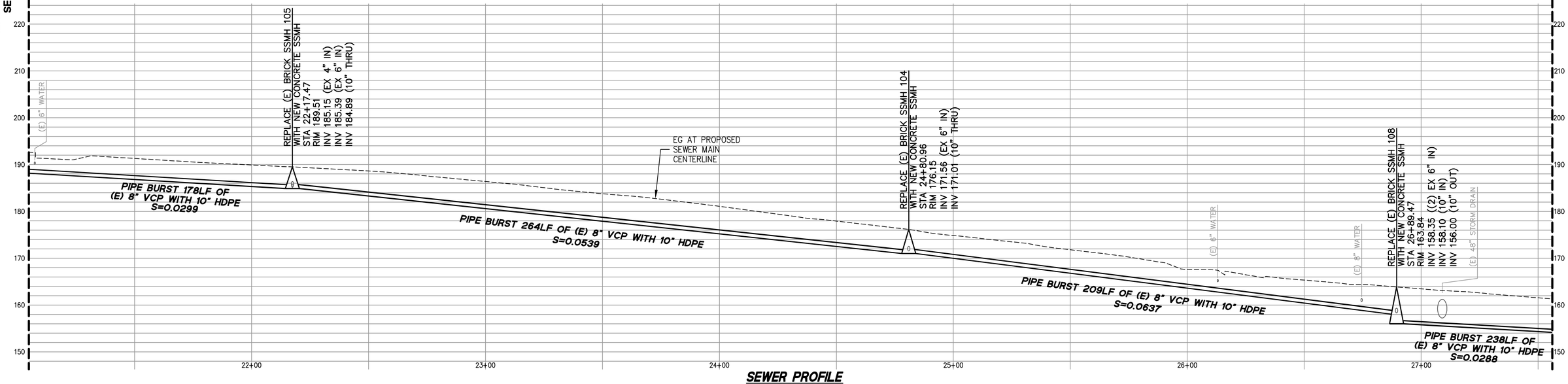

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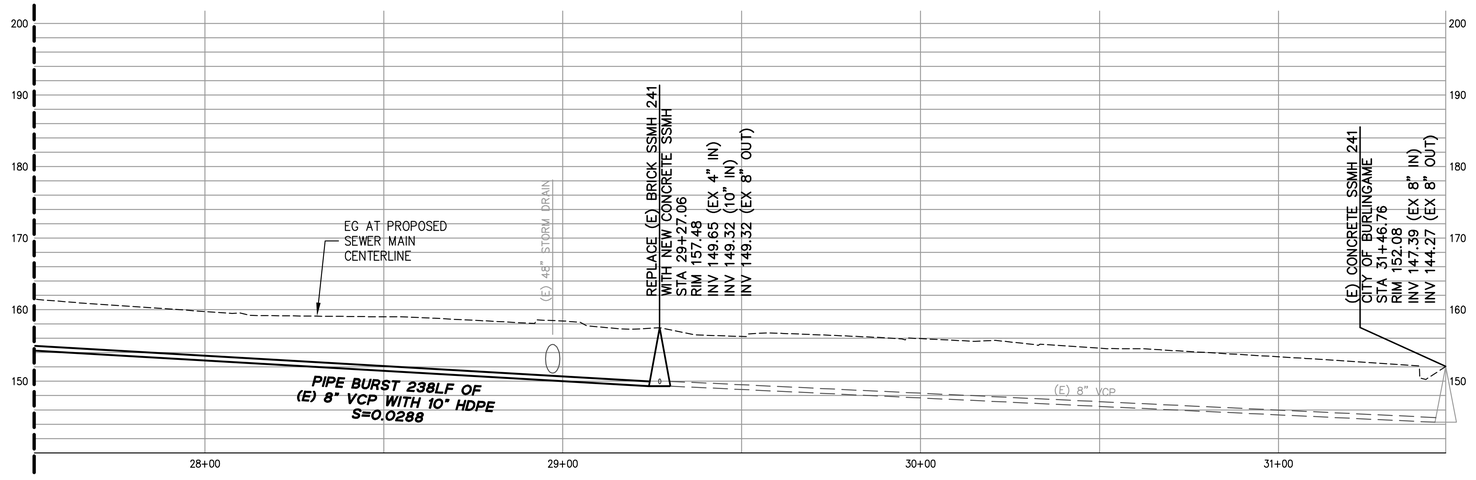

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REGISTERED PROFESSIONAL ENGINEER YOUSEF MORADZADEH C42632 3/31/14 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: CT	BURLINGAME HILLS SEWER MAINTENANCE DISTRICT
		CHECKED BY: YM	ADELINE DRIVE AND CANYON ROAD CAPACITY IMPROVEMENT PROJECT
		DRAWN BY: CT	**CANYON ROAD PLAN AND PROFILE**
		JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: **AS SHOWN**
DATE: 1/29/13
FILE NO.: 1/4906

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

3.04
SHEET **11** OF 12

DRAWING NAME: K:\Engl\12\1014\DWG\PLOTTED SHEETS\PE Exhibits\3.00.dwg
PLOT TIME: 03-20-13

APPENDIX B

AIR QUALITY & GHG CALCULATIONS

3/21/2013 10:24:40 AM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: P:\DDA Current Projects\2013-10 BHSMD\Air Quality\BHSMD DRAFT ISMND.urb924

Project Name: BHSMD

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2014 TOTALS (tons/year unmitigated)	0.41	2.91	1.93	0.00	0.09	0.18	0.27	0.02	0.16	0.18	403.32
2014 TOTALS (tons/year mitigated)	0.41	2.91	1.93	0.00	0.02	0.18	0.20	0.00	0.16	0.17	403.32
Percent Reduction	0.00	0.00	0.00	0.00	76.30	0.00	26.31	75.58	0.00	8.14	0.00

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

2014	0.41	2.91	1.93	0.00	0.09	0.18	0.27	0.02	0.16	0.18	403.32
Asphalt 04/01/2014-09/30/2014	0.13	0.83	0.67	0.00	0.00	0.07	0.07	0.00	0.06	0.06	95.54
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.13	0.83	0.60	0.00	0.00	0.07	0.07	0.00	0.06	0.06	87.13
Paving On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
Paving Worker Trips	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.36
Mass Grading 04/01/2014-09/30/2014	0.09	0.64	0.46	0.00	0.09	0.04	0.13	0.02	0.04	0.06	89.96
Mass Grading Dust	0.00	0.00	0.00	0.00	0.09	0.00	0.09	0.02	0.00	0.02	0.00
Mass Grading Off Road Diesel	0.09	0.64	0.40	0.00	0.00	0.04	0.04	0.00	0.04	0.04	83.27
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.69
Trenching 04/01/2014-09/30/2014	0.19	1.44	0.81	0.00	0.00	0.07	0.07	0.00	0.06	0.06	217.82
Trenching Off Road Diesel	0.19	1.43	0.73	0.00	0.00	0.07	0.07	0.00	0.06	0.06	207.79
Trenching Worker Trips	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.04

Phase Assumptions

Phase: Mass Grading 4/1/2014 - 9/30/2014 - SM Grade and Backfill

Total Acres Disturbed: 0.28

Maximum Daily Acreage Disturbed: 0.07

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Dumpers/Tenders (16 hp) operating at a 0.38 load factor for 8 hours per day

1 Sweepers/Scrubbers (91 hp) operating at a 0.68 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 4/1/2014 - 9/30/2014 - SM Site Trenching

Off-Road Equipment:

1 Dumpers/Tenders (16 hp) operating at a 0.38 load factor for 8 hours per day

1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Off Highway Trucks (479 hp) operating at a 0.57 load factor for 8 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Sweepers/Scrubbers (91 hp) operating at a 0.68 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 4/1/2014 - 9/30/2014 - SM Paving

Acres to be Paved: 0.07

Off-Road Equipment:

1 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Sweepers/Scrubbers (91 hp) operating at a 0.68 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

2014	0.41	2.91	1.93	0.00	0.02	0.18	0.20	0.00	0.16	0.17	403.32
Asphalt 04/01/2014-09/30/2014	0.13	0.83	0.67	0.00	0.00	0.07	0.07	0.00	0.06	0.06	95.54
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.13	0.83	0.60	0.00	0.00	0.07	0.07	0.00	0.06	0.06	87.13
Paving On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
Paving Worker Trips	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.36
Mass Grading 04/01/2014-09/30/2014	0.09	0.64	0.46	0.00	0.02	0.04	0.06	0.00	0.04	0.04	89.96
Mass Grading Dust	0.00	0.00	0.00	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	0.09	0.64	0.40	0.00	0.00	0.04	0.04	0.00	0.04	0.04	83.27
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.69
Trenching 04/01/2014-09/30/2014	0.19	1.44	0.81	0.00	0.00	0.07	0.07	0.00	0.06	0.06	217.82
Trenching Off Road Diesel	0.19	1.43	0.73	0.00	0.00	0.07	0.07	0.00	0.06	0.06	207.79
Trenching Worker Trips	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.04

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 4/1/2014 - 9/30/2014 - SM Grade and Backfill

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Soil Stablizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

3/21/2013 10:23:46 AM

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: P:\DDA Current Projects\2013-10 BHSMD\Air Quality\BHSMD DRAFT ISMND.urb924

Project Name: BHSMD

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2014 TOTALS (lbs/day unmitigated)	6.25	44.42	29.54	0.00	1.42	2.70	4.11	0.30	2.48	2.78	6,157.58
2014 TOTALS (lbs/day mitigated)	6.25	44.42	29.54	0.00	0.34	2.70	3.03	0.07	2.48	2.55	6,157.58

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

Time Slice 4/1/2014-9/30/2014 Active Days: 131	6.25	44.42	29.54	0.00	1.42	2.70	4.11	0.30	2.48	2.78	6,157.58
Asphalt 04/01/2014-09/30/2014	2.00	12.68	10.22	0.00	0.01	1.06	1.06	0.00	0.97	0.97	1,458.58
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.97	12.63	9.17	0.00	0.00	1.05	1.05	0.00	0.97	0.97	1,330.26
Paving On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64
Paving Worker Trips	0.03	0.06	1.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	127.68
Mass Grading 04/01/2014-09/30/2014	1.38	9.77	6.95	0.00	1.40	0.62	2.02	0.29	0.57	0.86	1,373.47
Mass Grading Dust	0.00	0.00	0.00	0.00	1.40	0.00	1.40	0.29	0.00	0.29	0.00
Mass Grading Off Road Diesel	1.36	9.72	6.11	0.00	0.00	0.61	0.61	0.00	0.56	0.56	1,271.33
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.03	0.04	0.84	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.14
Trenching 04/01/2014-09/30/2014	2.86	21.97	12.37	0.00	0.01	1.02	1.03	0.00	0.94	0.94	3,325.53
Trenching Off Road Diesel	2.83	21.90	11.12	0.00	0.00	1.02	1.02	0.00	0.94	0.94	3,172.32
Trenching Worker Trips	0.04	0.07	1.26	0.00	0.01	0.00	0.01	0.00	0.00	0.01	153.22

Phase Assumptions

Phase: Mass Grading 4/1/2014 - 9/30/2014 - SM Grade and Backfill

Total Acres Disturbed: 0.28

Maximum Daily Acreage Disturbed: 0.07

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Dumpers/Tenders (16 hp) operating at a 0.38 load factor for 8 hours per day

1 Sweepers/Scrubbers (91 hp) operating at a 0.68 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

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Phase: Trenching 4/1/2014 - 9/30/2014 - SM Site Trenching

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Phase: Paving 4/1/2014 - 9/30/2014 - SM Paving

Acres to be Paved: 0.07

Off-Road Equipment:

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1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

Time Slice 4/1/2014-9/30/2014 Active Days: 131	6.25	44.42	29.54	0.00	0.34	2.70	3.03	0.07	2.48	2.55	6,157.58
Asphalt 04/01/2014-09/30/2014	2.00	12.68	10.22	0.00	0.01	1.06	1.06	0.00	0.97	0.97	1,458.58
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.97	12.63	9.17	0.00	0.00	1.05	1.05	0.00	0.97	0.97	1,330.26
Paving On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64
Paving Worker Trips	0.03	0.06	1.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	127.68
Mass Grading 04/01/2014-09/30/2014	1.38	9.77	6.95	0.00	0.32	0.62	0.94	0.07	0.57	0.63	1,373.47
Mass Grading Dust	0.00	0.00	0.00	0.00	0.32	0.00	0.32	0.07	0.00	0.07	0.00
Mass Grading Off Road Diesel	1.36	9.72	6.11	0.00	0.00	0.61	0.61	0.00	0.56	0.56	1,271.33
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.03	0.04	0.84	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.14
Trenching 04/01/2014-09/30/2014	2.86	21.97	12.37	0.00	0.01	1.02	1.03	0.00	0.94	0.94	3,325.53
Trenching Off Road Diesel	2.83	21.90	11.12	0.00	0.00	1.02	1.02	0.00	0.94	0.94	3,172.32
Trenching Worker Trips	0.04	0.07	1.26	0.00	0.01	0.00	0.01	0.00	0.00	0.01	153.22

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 4/1/2014 - 9/30/2014 - SM Grade and Backfill

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Soil Stablizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

APPENDIX C

COUNTY OF SAN MATEO
WASTEWATER COLLECTION SYSTEM CIP
BIOLOGICAL REPORT (excerpt)

County of San Mateo
Wastewater Collection System Capital Improvement Project
Biological Report

April 2011

This report summarizes the results of biological surveys that were conducted at various locations for the County of San Mateo Wastewater Collection System Capital Improvement Project (CIP). The proposed CIP is located within nine sewer maintenance/sanitation districts (Districts) that are operated and maintained by the County of San Mateo Department of Public Works (County). The nine Districts include:

1. Burlingame Hills Sewer Maintenance District (BHSMD)
2. Crystal Springs County Sanitation District (CSCSD)
3. Devonshire County Sanitation District (DCSD)
4. Emerald Lake Heights Sewer Maintenance District (ELHSMD)
5. Fair Oaks Sewer Maintenance District (FOSMD)
6. Harbor Industrial Sewer Maintenance District (HISMD)
7. Kensington Square Sewer Maintenance District (KSSMD)
8. Oak Knoll Sewer Maintenance District (OKSMD)
9. Scenic Heights County Sanitation District (SHCSD)

Portions of the collection systems within these nine Districts are in need of rehabilitation due to age, insufficient capacity, structural deficiencies, and excessive maintenance. CIPs were recommended by each District's Sewer Master Plan prepared by Brown and Caldwell in 1999/2000 or subsequently identified through routine maintenance.

County biologists surveyed the project locations between April 13 and July 1, 2010. The surveys involved documenting biological resources including plant and animal species, the presence of sensitive species, characterizing the adjacent habitat, and determining potential project-related impacts. Additionally, major plant communities and habitat types adjacent to the project locations were identified in order to evaluate the suitability of the habitat for special status species. Prior to the field surveys, a list of special status species with the potential to occur within the project vicinity and documented occurrences within the project vicinity (USGS Montara Mountain, San Mateo, Woodside, and Palo Alto 7.5' quadrangles) was generated using the United States Fish and Wildlife Service species list website (USFWS, 2010) and the California Natural Diversity Database (CNDDB) compiled by the California Department of Fish and Game (DFG, 2010). The CNDDB results were further analyzed and mapped to determine if special status species have been documented within a ½ mile radius of each CIP location. Marine species and species that do not typically occur within the plant communities and habitat that currently exist in the project vicinity were excluded from the results. The results of the field surveys, CNDDB queries, and recommended best management practices (BMPs) are provided below. The USFWS species list and CNDDB sensitive species maps are included as Appendices A and B.

Plant species were generally noted at each project location. Many ruderal broadleaved plants (Table 1), non-native grasses (Table 2), and residential and commercial landscape species (Table 3) were commonly observed in multiple project locations. Native plants, plants that were unique to a project area, and/or tree species that may provide nesting habitat for migratory birds are listed separately in the project area descriptions for individual Districts provided below.

Table 1. Ruderal Vegetation Plant Species Observed at or Adjacent to the Project Locations

Common Name	Scientific Name
Bermuda buttercup*	*Oxalis pes-caprae*
Bird's foot trefoil*	*Lotus corniculatus*
Bristly ox-tongue*	*Picris echioides*
Bull thistle*	*Cirsium vulgare*
California burclover*	*Medicago polymorpha*
Cat's-ear*	*Hypochaeris* sp.
Cut-leaf geranium*	*Geranium dissectum*
Dandelion*	*Taraxacum* sp.
English plantain*	*Plantago lanceolata*
Italian thistle*	*Carduus pycnocephalus*
Mallow*	*Malva* sp.
Milk thistle*	*Silybum marianum*
Morning glory*	*Calystegia* sp.
Mustard*	*Brassica* sp.
Poison hemlock*	*Conium maculatum*
Prickly lettuce*	*Lactuca serriola*
Scarlet pimpernel*	*Anagallis arvensis*
Sweetclover*	*Melilotus indica*
Sow thistle*	*Sonchus* sp.
Storksbill*	*Erodium* sp.
Sweet fennel*	*Foeniculum vulgare*
Teasel*	*Dipsacus* sp.
Vetch*	*Vicia* sp.

Notes:
* Denotes a non-native species

Table 2. Non-native Grass Species Observed at or Adjacent to the Project Locations	
Common Name	**Scientific Name**
Barley*	*Hordeum* sp.
Bermuda grass*	*Cynodon dactylon*
Harding grass*	*Phalaris aquatica*
Italian ryegrass*	*Lolium multiflorum*
Quaking grass*	*Briza maxima*
Ripgut brome*	*Bromus diandrus*
Velvet grass*	*Holcus lanatus*
Wild oat*	*Avena fatua*
Notes: * Denotes a non-native species	

Table 3. Residential or Commercial Landscaping Plant Species Observed at or Adjacent to the Project Locations	
Common Name	**Scientific Name**
Acacia*	*Acacia* spp.
Agapanthas*	*Agapanthus* sp.
Bamboo*	Not identified
Bear's breeches*	*Acanthus mollis*
Birch*	Not identified
Black locust*	*Robinia pseudoacacia*
Blackwood acacia*	*Acacia melanoxylon*
Blue gum eucalyptus*	*Eucalyptus globulus*
Bottlebrush*	*Callistemon* sp.
Broom*	Not identified
Calla lily*	*Zantedeschia aethiopica*
Casuarina*	*Casuarina* sp.
Cedar*	Not identified
Cheesewood*	*Pittosporum* sp.
Cork oak*	*Quercus suber*
Cotoneaster*	*Cotoneaster* sp.
Date palm*	*Phoenix canariensis*
English ivy*	*Hedera helix*
Eucalyptus*	*Eucalyptus* sp.
Fan palm**	*Washingtonia* sp.
Ferns	Not identified
Firethorn*	*Pyracantha* sp.
French broom*	*Genista monspessulana*
Garden nasturtium*	*Tropaeolum majus*

Table 3. Residential or Commercial Landscaping Plant Species Observed at or Adjacent to the Project Locations

Common Name	Scientific Name
Geranium*	Not identified
Giant sequoia**	*Sequoiadendron giganteum*
Heavenly bamboo*	*Nandina domestica*
Himalayan blackberry*	*Rubus discolor*
Iceplant*	*Carpobrotus* sp.
Iris*	Not identified
Japanese maple*	*Acer* sp.
Lavender*	*Lavandula* sp.
Magnolia*	Not identified
Matilija poppy**	*Romneya* sp.
Mexican sage*	*Salvia* sp.
Monterey cypress**	*Cupressus macrocarpa*
Monterey pine**	*Pinus radiata*
Nasturtium*	Not identified
Oleander*	*Nerium oleander*
Olive*	*Olea europaea*
Ornamentals*	Not identified
Ornamental ceanothus	*Ceanothus* sp.
Ornamental fir*	Not identified
Ornamental juniper*	*Juniperus* spp.
Ornamental manzanita	*Arctostaphylos* sp.
Pampas grass*	*Cortaderia selloana*
Periwinkle*	*Vinca major*
Peruvian peppertree*	*Schinus molle*
Plane tree*	*Platanus* sp.
Pride of Madeira*	*Echium* sp.
Rosemary*	*Rosmarinus officinalis*
Scotch broom*	*Cytisus scoparius*
Sweet alyssum*	*Lobularia maritima*
Sweetgum*	*Liquidambar styraciflua*
Tree of heaven*	*Ailanthus altissima*
Weeping willow*	*Salix* sp.

Notes:
* Denotes a non-native species
** Denotes a California species cultivated outside of its native range

Burlingame Hills Sewer Maintenance District (BHSMD)

The BHSMD project area includes the following CIP locations:

- Canyon Road #1
- Canyon Road #2
- Canyon Road #3
- Newton Slide
- Adeline Drive
- Hillside Drive
- Fey Drive

The BHSMD project area is located in a steeply sloped residential area, with patches of oak woodland occurring throughout. Two main drainages, Easton Creek and Mills Creek, run in a general northeasterly direction through the project area. As described below, the BHSMD project area has been divided into four distinct sub-areas based on similar characteristics and locations. The four sub-areas are Hillside and Newton Drives, Adeline Drive, Canyon Road and Fey Drive, and Newton Slide.

The areas immediately adjacent to Hillside Drive and Newton Drive (Figures 1 and 2) are dominated by ruderal vegetation and residential landscaping. Dense shrubs and mature overhanging trees such as coast live oak (*Quercus agrifolia*), coast redwood (*Sequoia sempervirens*), eucalyptus (*Eucalyptus* sp.), pine (*Pinus* sp.), and ornamental juniper (*Juniperus* sp.) may provide nesting habitat for migratory birds. Hillside Drive downhill from Newton Drive is bordered by concrete curb, gutter, and sidewalk on the southern side and curb and gutter on the northern side. Hillside Drive uphill from Newton Drive is bordered by concrete valley gutters. Newton drive is bordered by asphalt concrete (AC) valley gutters on both sides of the roadway. Several storm water catch basins are located along Hillside Drive and likely drain into Easton Creek more than 300 feet away from the roadway.

The areas immediately adjacent to Adeline Drive (Figures 3 and 4) are dominated by ruderal vegetation, residential landscaping, and patches of wooded habitat dominated by native vegetation such as coast live oak, California black oak (*Quercus kelloggii*), California buckeye (*Aesculus californica*), California bay (*Umbellularia californica*), Douglas-fir (*Pseudotsuga menziesii*), toyon (*Heteromeles arbutifolia*), coyote brush (*Baccharis pilularis*), California blackberry (*Rubus ursinus*), poison oak (*Toxicodendron diversilobum*), wild cucumber (*Marah fabaceus*), and miner's lettuce (*Claytonia perfoliata*). Dense shrubs and mature overhanging trees may provide nesting habitat for migratory birds. Adeline Drive is bordered on one or both sides by concrete valley gutters. Storm water catch basins along Adeline Drive likely drain to Mills Creek more than 250 feet away from the roadway.

The areas immediately adjacent to Canyon Road and Fey Drive (Figures 5 through 12) are dominated by ruderal vegetation, residential landscaping, wooded habitats, and riparian habitats. The wooded habitats are densely dominated by coast live oak, California black walnut (*Juglans californica*), coast redwood, California bay, toyon, poison oak, wood strawberry (*Fragaria vesca*), lupine (*Lupinus* sp.), snowberry (*Symphoricarpos albus*), and mugwort (*Artemisia douglasiana*). The riparian habitats are dominated by willow (*Salix* sp.), horsetail (*Equisetum* sp.), nutsedge (*Cyperus* sp.), hedge nettle (*Stachys bullata*),

Himalayan blackberry (*Rubus discolor*), periwinkle (*Vinca major*), and English ivy (*Hedera helix*). Easton Creek originates near the intersection of Canyon Road with Tip Toe Lane and runs immediately adjacent to Canyon Road throughout the project site, often under or immediately adjacent to residences (Figures 5 through 10). Canyon Road is bordered by a mix of AC valley gutters, brick-lined valley gutters, and AC curbs. Storm water catch basins or AC roadway drainage swales along Canyon Road drain directly into Easton Creek. A small, unnamed tributary to Easton Creek runs adjacent to Fey Drive (Figure 11). AC or brick-lined valley gutters bordering Fey Drive drain either directly to the unnamed tributary or to Easton Creek. Dense shrubs and mature overhanging trees may provide nesting habitat for migratory birds (Figure 12).

The sewer line along the Newton Slide CIP location (Figures 13 through 16) runs parallel to a small, steep, unnamed drainage that is a tributary to Easton Creek. The CIP location is accessed from 145 Newton Drive. The riparian habitat is dominated by English ivy, French broom (*Genista monspessulana*), Himalayan blackberry, toyon, wild cucumber, stinging nettle (*Urtica dioica*), snowberry, and ruderal vegetation. A variety of ferns were abundant, including California maidenhair fern (*Adiantum jordanii*), Goldenback fern (*Pentagramma triangularis*), and an unidentified *Polypodium*. These may be escaped landscape ornamentals as residential landscape plants were common, including bottlebrush (*Callistemon* sp.), cotoneaster (*Cotoneaster* sp.), black nightshade (*Solanum nigrum*), and periwinkle. Mature, overhanging trees found along the drainage include California bay, coast live oak, and California buckeye, and may provide nesting habitat for migratory birds.

As shown below in Table 4, sensitive plant species that have been documented within a ½ mile radius of the BHSMD project area include Crystal Springs lessingia (*Lessingia arachnoidea*), western leatherwood (*Dirca occidentalis*), fragrant fritillary (*Fritillaria liliacea*), Franciscan onion (*Allium peninsulare var. franciscanum*), Hillsborough chocolate lily (*Fritillaria biflora var. ineziana*), San Francisco owl's clover (*Triphysaria floribunda*), and San Francisco collinsia (*Collinsia multicolor*) (CNDDB, 2010). The above-mentioned plants were not observed during the surveys and will not be impacted by the proposed project.

Sensitive wildlife species that have been documented within a ½ mile radius of the BHSMD project area include San Francisco garter snake (*Thamnophis sirtalis tetrataenia*) (SFGS) and pallid bat (*Antrozous pallidus*) (CNDDB, 2010). These species were not observed during the surveys and will not be impacted by the proposed project. The only sensitive wildlife evident in the project area is San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*), which is listed by DFG as a California Species of Special Concern (CSC). Woodrat nests were abundant in the wooded area directly adjacent to Fey Drive within 5 feet from the roadway and throughout the Newton Slide area (Figure 16). A 10-foot buffer from all woodrat nests shall be maintained to avoid disturbance. If less than a 10-foot buffer is required due to the close proximity of the woodrat nest to the sewer line, the nest will be monitored by a qualified biologist during construction. Construction on Fey Drive will be confined to within the existing edges of pavement.

The SFGS is listed as an endangered species under the Endangered Species Act and as a fully protected species by DFG. This semi-aquatic species is often found hunting in ponds, slow moving streams, and ephemeral wetlands occupied by their primary prey, Pacific chorus frog (*Pseudacris sierra*) and

California red-legged frog (*Rana aurora draytonii*) (CRLF) (USFWS, 2006). SFGS primarily breed in spring but also breed during fall. Peak mating and foraging activity takes place from spring through late summer/early fall (USFWS, 2006). SFGS utilize upland areas such as grassland/shrub habitat, particularly abandoned rodent burrows, for overwintering (USFWS, 2006). Although SFGS have been documented within a ½ mile radius of the BHSMD project area, SFGS were not observed during the surveys. The documented CNDDB occurrence of SFGS within a ½ mile radius of the BHSMD project area was associated with a tributary to Crystal Springs Reservoir west of Interstate Hwy 280, with no connecting drainages to the BHSMD project area. Additionally, there is no habitat for SFGS in the immediate work area. As a precaution, avoidance and minimization measures including: 1) Confinement of the construction area to the minimum area necessary to complete the work, which will generally be within the existing edges of pavement for sewer lines within the roadway footprint; 2) For work on sewer line easements outside of the existing roadway footprint in wooded, scrub, grassland, or riparian areas, a qualified biologist shall conduct pre-construction surveys and remain on-site to monitor construction activities; 3) Project timing during the dry season (when water is scarce in the project area and SFGS prey source, CRLF and Pacific chorus frog, are less likely to be present); and 4) Pre-construction sensitive species training for construction personnel will be implemented to ensure that the SFGS and their habitat are not impacted by the proposed project.

Pallid bat is listed by DFG as a CSC. This species is found throughout California inhabiting low elevation rocky arid deserts and canyonlands, shrub-steppe grasslands, and higher elevation coniferous forests. Pallid bats roost alone, in small groups (2 to 20 bats), or gregariously (100s of individuals). Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, trees (*e.g.*, basal hollows of coast redwoods, bole cavities of oaks, exfoliating valley oak bark, deciduous trees in riparian areas, fruit trees in orchards), and various human structures. They forage over open shrub-steppe grasslands, oak savannah grasslands, open pine forests, gravel roads, fruit orchards, and vineyards.[1] The documented CNDDB occurrence of pallid bat within a ½ mile radius of the BHSMD project area was from specimens collected in an unknown location in the vicinity of the City of Millbrae in 1947. There is a potential for pallid bats to reside within the project vicinity; however, no large trees or other potential roosting sites will be disturbed during construction.

Other wildlife observed during the site surveys included American robin (*Turdus migratorius*), western scrub-jay (*Aphelocoma californica*), stellar's jay (*Cyanocitta selleri*), Chestnut-backed chickadee (*Poecile rufescens*), bushtit (*Psaltriparus minimus*), hairy woodpecker (*Picoides villosus),* Nuttall's woodpecker (*Picoides nuttallii*), red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), American crow (*Corvus brachyrhynchos*), blackbird (*Euphagus* sp.), spotted towhee (*Pipilo maculates*), mourning dove (*Zenaida macroura*), swallow (not identified), wren (not identified), dark-eyed junco (*Junco hyemalis*), house finch (*Carpodacus mexicanus*), Anna's hummingbird (*Calypte anna*), western gray squirrel (*Sciurus griseus*), eastern fox squirrel (*Sciurus niger*), and California ground squirrel (*Spermophilus beecheyi*). Overhanging trees and dense shrubs present along the roadways or in adjacent wooded areas may provide nesting habitat for birds during the breeding season. If construction occurs during the typical bird nesting season (February 1 to August 15), migratory bird surveys will be performed by a qualified biologist within 5 days prior to any project-related activity. To

[1] Western Bat Working Group. Species Account, Pallid Bat. Accessed July 1, 2010. http://www.wbwg.org/speciesinfo/species_accounts/vespertilonidae/anpa.pdf

avoid potential impacts to nesting birds, 50-foot buffers will be maintained around active migratory bird nests, and 200-foot buffers will be maintained around active raptor nests.

Aquatic habitats present in the BHSMD project area include Easton Creek along Canyon Drive, unnamed tributaries to Easton Creek along Fey Drive and Newton Slide, and Mills Creek located approximately 500 feet downslope of Adeline Drive. The above-mentioned drainages were flowing during the June 2010 surveys. BMPs, detailed at the end of this report, shall be implemented to ensure that the adjacent aquatic habitats and water quality are not impacted by the proposed project.

Figure 1. Hillside Drive. Dense shrubs and overhanging trees may provide bird nesting habitat. Storm water catch basins on Hillside Drive likely drain to Easton Creek.

Figure 2. Newton Drive. Section of sewer line runs downslope from Newton Drive to Hillside Drive. Dense shrubs and overhanging trees may provide bird nesting habitat. Valley gutters drain to Hillside Drive.

Figure 3. Adeline Drive. Several overhanging trees and dense shrubs may provide bird nesting habitat.

Figure 4. Adeline Drive. Drainage adjacent to 2888 Adeline Drive draining towards Mills Creek 500 feet below.

Figure 5. Canyon Road #1 near 3111 Canyon Road. Easton creek begins downslope of photo near the intersection of Canyon Road with Tip Toe Lane.

Figure 6. Canyon Road #2 near intersection of Canyon Road with Tiara Court. Easton Creek runs parallel to Canyon Road on the left side of the photo.

Figure 7. Canyon Road #3. Easton Creek crosses Canyon Road downstream of La Cuesta Drive (as indicated by dashed arrow).

Figure 8. Canyon Road #4 near 2865 Canyon Road. Easton Creek runs parallel to Canyon Road on the left side of the photo.

Figure 9. Easton Creek drainage adjacent to Canyon Road. Some intact riparian vegetation present along Easton Creek. The majority of Easton Creek is highly degraded and runs under or adjacent to several residences along Canyon Road.

Figure 10. Easton Creek under 3003 Canyon Road. Easton Creek runs under or adjacent to several residences along Canyon Road. Catch basins along Canyon Road drain directly to Easton Creek.

Figure 11. Fey Drive. Small, unnamed tributary to Easton Creek occurs downslope of Fey drive to the right of the photo.

Figure 12. Fey Drive. Sewer line runs through a wooded area upslope of Fey Drive between residences. Shrubs and overhanging trees may provide bird nesting habitat.

Figure 13. Newton Slide. Sewer line runs along a small, intermittent stream drainage within 25 feet from the active channel. Drainage is dominated by non-native understory vegetation such as English ivy and Himalayan blackberry. Mature, overhanging native trees run the length of the project site.

Figure 14. Newton Slide. Displaced manhole and sewer line due to slide activity required installation of temporary 6-inch pipe, running approximately 110 feet downslope to a downstream manhole.

Figure 15. Newton Slide. Junction of temporary 4-inch spur line from 119 Los Robles drive to the temporary 6-inch main pipe.

Figure 16. Newton Slide. Woodrat nests abundant along sewer line. Arrow indicates woodrat nest at base of tree located within 5 feet of temporary sewer line. Buffers will be placed around all nests, pre-construction sensitive species training for construction personnel will be implemented, and a qualified biologist will monitor all construction activities within 10 feet of nests.

Table 4. CNDDB Special Status Species Occurrences near Burlingame Hill Sewer Maintenance District Project Area

Common Name *Scientific Name*	Federal Status	State Status	CNPS Status[2]	Habitat Description	Species Observed at CIP Locations (Y/N)	CNDDB[1] Occurrence within ½ Mile of CIP Locations (Y/N)	Likelihood of Species Impacted by Project
Plants							
Crystal Springs lessingia *Lessingia arachnoidea*	None	None	1B	Found in cismontane woodland, coastal scrub, and grasslands often on serpentinite and roadsides	N	Y	None – Plant not observed at the CIP locations.
Davidson's bush mallow *Malacothamnus davidsonii*	None	None	1B	Found in chaparral, cismontane woodland, coastal scrub, and riparian woodland	N	N	None – Plant not observed at the CIP locations.
Fragrant fritillary *Fritillaria liliacea*	None	None	1B	Found in cismontane woodland, coastal prairie, coastal scrub, and grasslands often in serpentinite	N	Y	None – Plant not observed at the CIP locations.
Franciscan onion *Allium peninsulare var. franciscanum*	None	None	1B	Found in cismontane woodland and grasslands often in serpentinite	N	Y	None – Plant not observed at the CIP locations.
Hall's bush mallow *Malacothamnus hallii*	None	None	1B	Found in chaparral and coastal scrub	N	N	None – Plant not observed at the CIP locations.
Hillsborough chocolate lily *Fritillaria biflora var. ineziana*	None	None	1B	Found in cismontane woodland and valley and foothill grassland often in serpentinite	N	Y	None – Plant not observed at the CIP locations.
Indian Valley bush mallow *Malacothamnus aboriginum*	None	None	1B	Found in chaparral and cismontane woodland	N	N	None – Plant not observed at the CIP locations.
Oregon polemonium *Polemonium carneum*	None	None	2	Found in coastal prairie, coastal scrub, and lower montane coniferous forest.	N	N	None – Plant not observed at the CIP locations.
San Francisco collinsia *Collinsia multicolor*	None	None	1B	Found in closed-cone coniferous forest and coastal scrub	N	Y	None – Plant not observed at the CIP locations.

Table 4. CNDDB Special Status Species Occurrences near Burlingame Hill Sewer Maintenance District Project Area

Common Name *Scientific Name*	Federal Status	State Status	CNPS Status[2]	Habitat Description	Species Observed at CIP Locations (Y/N)	CNDDB[1] Occurrence within ½ Mile of CIP Locations (Y/N)	Likelihood of Species Impacted by Project
San Francisco owl's clover *Triphysaria floribunda*	None	None	1B	Found in coastal prairie, coastal scrub, and valley and foothill grassland	N	Y	None – Plant not observed at the CIP locations.
Western leatherwood *Dirca occidentalis*	None	None	1B	Found in broadleaved upland forest, chaparral, cismontane woodland, coniferous forest, and riparian forest and woodland	N	Y	None – Plant not observed at the CIP locations.
White-rayed pentachaeta *Pentachaeta bellidiflora*	E	E	1B	Found in grasslands often in serpentinite	N	N	None – Plant not observed at the CIP locations.
Mammals							
Pallid bat *Antrozous pallidus*	None	CSC	N/A	Found in grassland, desert, shrub, woodland, and forest habitats; roosts in rock crevices, caves, hollow trees, and abandoned structures	N	Y	None – No potential roosting sites will be disturbed.
San Francisco dusky-footed woodrat *Neotoma fuscipes annectens*	None	CSC	N/A	Found in chaparral and forest habitats	Y	N	None –A 10-foot buffer zone will be maintained around all woodrat nests detected in the project area. Nests closer than 10 feet to the work area will be monitored by a qualified biologist during construction.
Amphibians							

Table 4. CNDDB Special Status Species Occurrences near Burlingame Hill Sewer Maintenance District Project Area

Common Name *Scientific Name*	Federal Status	State Status	CNPS Status[2]	Habitat Description	Species Observed at CIP Locations (Y/N)	CNDDB[1] Occurrence within ½ Mile of CIP Locations (Y/N)	Likelihood of Species Impacted by Project
California red-legged frog *Rana aurora draytonii*	T, X	CSC	N/A	Marshes, ponds, and slow water sections of streams	N	N	None – No suitable habitat present in immediate work area and construction will not extend into adjacent aquatic habitat. Appropriate BMPs and avoidance measures will be implemented.
Reptiles							
San Francisco garter snake *Thamnophis sirtalis tetrataenia*	E	E	N/A	Near freshwater marshes, ponds, and slow moving streams; often use upland small mammal burrows for cover	N	Y	None – No suitable habitat present in immediate work area and construction will not extend into adjacent aquatic habitat. Appropriate BMPs and avoidance measures will be implemented.
Western pond turtle *Emys (=Clemmys) marmorata*	None	CSC	N/A	Slow moving streams or ponds; reproduce in nearby upland areas	N	N	None – No suitable habitat present in immediate work area and construction will not extend into adjacent aquatic habitat. Appropriate BMPs and avoidance measures will be implemented.
Invertebrates							
Mission blue butterfly *Icaricia icarioides missionensis*	E	None	N/A	Typically found in coastal chaparral and grasslands. Primary host plant – lupine (*Lupinus albifrons*, *L. formosus*, and *L. variicolor*), golden aster (*Chrysopsis villosa*), wild hyacinth (*Brodiaea pulchella*), and coast buckwheat (*Eriogonum latifolium*)	N	N	None – No suitable habitat present in immediate work area. Larval host plants not observed at the CIP locations.

Table 4. CNDDB Special Status Species Occurrences near Burlingame Hill Sewer Maintenance District Project Area

Common Name *Scientific Name*	Federal Status	State Status	CNPS Status[2]	Habitat Description	Species Observed at CIP Locations (Y/N)	CNDDB[1] Occurrence within ½ Mile of CIP Locations (Y/N)	Likelihood of Species Impacted by Project

Notes:
[1] California Natural Diversity Database, Wildlife & Habitat Data Analysis Branch, Department of Fish and Game, Government Version - Information dated February 28, 2010.
[2] California Native Plant Society. Inventory of Rare and Endangered Plants. Online edition, v7-10a 1-19-10. Accessed from http://www.cnps.org/inventory
Species Status Abbreviations:
(E) Endangered
(T) Threatened
(R) Rare
(P) Proposed
(X) Critical Habitat designated for this species
(CSC) California Special Concern Species
CNPS Status Abbreviations:
1B Rare, threatened, or endangered in California and elsewhere
2 Rare, threatened, or endangered in California but more common elsewhere
3 Plants about which we need more information – a review list
4 Limited distribution

U.S. Fish & Wildlife Service

Sacramento Fish & Wildlife Office

Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Counties and/or U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 100526041147

Database Last Updated: April 29, 2010

Quad Lists

Listed Species

Invertebrates

Euphydryas editha bayensis

bay checkerspot butterfly (T)

Critical habitat, bay checkerspot butterfly (X)

Haliotes cracherodii

black abalone (E) (NMFS)

Haliotes sorenseni

white abalone (E) (NMFS)

Icaricia icarioides missionensis

mission blue butterfly (E)

Speyeria zerene myrtleae

Myrtle's silverspot butterfly (E)

Fish

Acipenser medirostris

green sturgeon (T) (NMFS)

Eucyclogobius newberryi

tidewater goby (E)

Hypomesus transpacificus

delta smelt (T)

Oncorhynchus kisutch

coho salmon - central CA coast (E) (NMFS)

Oncorhynchus mykiss

Central California Coastal steelhead (T) (NMFS)

Central Valley steelhead (T) (NMFS)

Critical habitat, Central California coastal steelhead (X) (NMFS)

Oncorhynchus tshawytscha

Central Valley spring-run chinook salmon (T) (NMFS)

winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense

California tiger salamander, central population (T)

Rana draytonii

California red-legged frog (T)

Critical habitat, California red-legged frog (X)

Reptiles

Caretta caretta

loggerhead turtle (T) (NMFS)

Chelonia mydas (incl. agassizi)
green turtle (T) (NMFS)

Dermochelys coriacea
leatherback turtle (E) (NMFS)

Lepidochelys olivacea
olive (=Pacific) ridley sea turtle (T) (NMFS)

Thamnophis sirtalis tetrataenia
San Francisco garter snake (E)

Birds

Brachyramphus marmoratus
Critical habitat, marbled murrelet (X)
marbled murrelet (T)

Charadrius alexandrinus nivosus
western snowy plover (T)

Diomedea albatrus
short-tailed albatross (E)

Pelecanus occidentalis californicus
California brown pelican (E)

Rallus longirostris obsoletus
California clapper rail (E)

Sternula antillarum (=Sterna, =albifrons) browni
California least tern (E)

Mammals

Arctocephalus townsendi
Guadalupe fur seal (T) (NMFS)

Balaenoptera borealis
sei whale (E) (NMFS)

Balaenoptera musculus
blue whale (E) (NMFS)

Balaenoptera physalus
finback (=fin) whale (E) (NMFS)

Enhydra lutris nereis
southern sea otter (T)

Eubalaena (=Balaena) glacialis
right whale (E) (NMFS)

Eumetopias jubatus
Steller (=northern) sea-lion (T) (NMFS)

Physeter catodon (=macrocephalus)
sperm whale (E) (NMFS)

Reithrodontomys raviventris
salt marsh harvest mouse (E)

Plants

Acanthomintha duttonii
San Mateo thornmint (E)

Cirsium fontinale var. fontinale
fountain thistle (E)

Eriophyllum latilobum

San Mateo woolly sunflower (E)

Hesperolinon congestum

Marin dwarf-flax (=western flax) (T)

Pentachaeta bellidiflora

white-rayed pentachaeta (E)

Potentilla hickmanii

Hickman's potentilla (=cinquefoil) (E)

Proposed Species

Amphibians

Rana draytonii

Critical habitat, California red-legged frog (PX)

Quads Containing Listed, Proposed or Candidate Species:

PALO ALTO (428B)

WOODSIDE (429A)

MONTARA MOUNTAIN (448C)

SAN MATEO (448D)

County Lists

No county species lists requested.

Key:

(E) *Endangered* - Listed as being in danger of extinction.

(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.

(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.

(NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.

Critical Habitat - Area essential to the conservation of a species.

(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.

(C) *Candidate* - Candidate to become a proposed species.

(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

(X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online Inventory of Rare and Endangered Plants.

Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our Protocol and Recovery Permits pages.

For plant surveys, we recommend using the Guidelines for Conducting and Reporting Botanical Inventories. The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

> Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal consultation with the Service.

  During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

  Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our Map Room page.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. More info

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be August 24, 2010.

APPENDIX D

NHPA SECTION 106
HISTORIC PROPERTIES INVENTORY AND COMPLIANCE PLAN

NHPA Section 106 Historic Properties Inventory and Compliance Plan for the Adeline Drive and Canyon Road Capacity Improvement Project, Burlingame Hills Sewer Maintenance District, San Mateo County Department of Public Works Wastewater CIP

by

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Registered Professional Archaeologist

March 2013

Report Prepared For

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CONTENTS

INTRODUCTION

Project Status and Regulatory Context

San Mateo County's Department of Public Works (DPW) operates several sanitation and/or sewer maintenance districts, including the Burlingame Hills Sewer Maintenance District (BHSMD), which provides wastewater collection service for an unincorporated hilly area west and south of the City of Burlingame. Except at the south, the BHSMD is entirely surrounded by the City and encompasses approximately 161 acres, all developed for residential use. The irregularly shaped BHSMD is roughly bounded by Hillside Drive and Adeline Drive to the north, Canyon Drive and Summit Drive to the south, Skyline Boulevard to the west, and Alvarado Avenue to the east (Maps 1 and 2).

The BHSMD collects and transmits wastewater from District residential customers as well as residences in small portions of the City of Burlingame and the Town of Hillsborough, operating and maintaining about 6.6 miles of six- and eight-inch ceramic pipelines (VCP). Wastewater is transmitted via three principal gravity-flow mains to the wastewater collection and transmission system operated by the City. A 1999 Sewer Master Plan (SMP) evaluated BHSMD facilities, finding that certain portions provided inadequate flow due to capacity and structural deficiencies, were subject to excessive inflow and infiltration (I&I), would require ongoing and increasingly costly maintenance to prevent future failure, and would potentially be subject to overflows (Brown and Caldwell 1999). The SMP recommended seven sections of wastewater collection and transmission system (WCS) pipelines be improved as Capital Improvement Projects (CIPs). The San Mateo County DPW is proposing improvements for the two most critical of those seven areas in the BHSMD, addressed in this report, the Adeline Drive and lower Canyon Road Capacity Improvement Project (Project). Four sections of the Canyon Road wastewater main were called out in the 1999 SMP; the current project involves the lower two segments, now treated as one, Canyon Road #3 and #4. The Project contains two segments totaling approximately 4,847 lineal feet (LF) or 0.92 miles/1.48 km; the Adeline Drive work covers 1,920 LF/585 m and Canyon Road extends 2,927 LF/892 m (Map 2 and APE maps).

The State Water Board (SWB) will fund some County DPW CIPs through the State Revolving Fund (SRF), partially funded by the Federal Environmental Protection Agency. SRF-funded projects involving Federal funds or permits come under the National Historic Preservation Act (NHPA; 1966 et seq.), specifically the requirements of NHPA Section 106; 106 regulations are set forth in 36 CFR Part 800 ("106 Regulations"). Section 106 compliance responsibility is delegated by the Federal government to the SWB and will be overseen by the SWB Section 106 Compliance Officer in Sacramento as part of SWB "CEQA-Plus" procedures, and concurrence that compliance has been completed will be sought from the State Historic Preservation Office (SHPO).

Holman & Associates Archaeological Consultants (H&A) has teamed and contracted with Denise Duffy & Associates, Inc., (DDA) to provide archaeological and historic properties research for Section 106 compliance for four physically separate San Mateo County districts and projects,

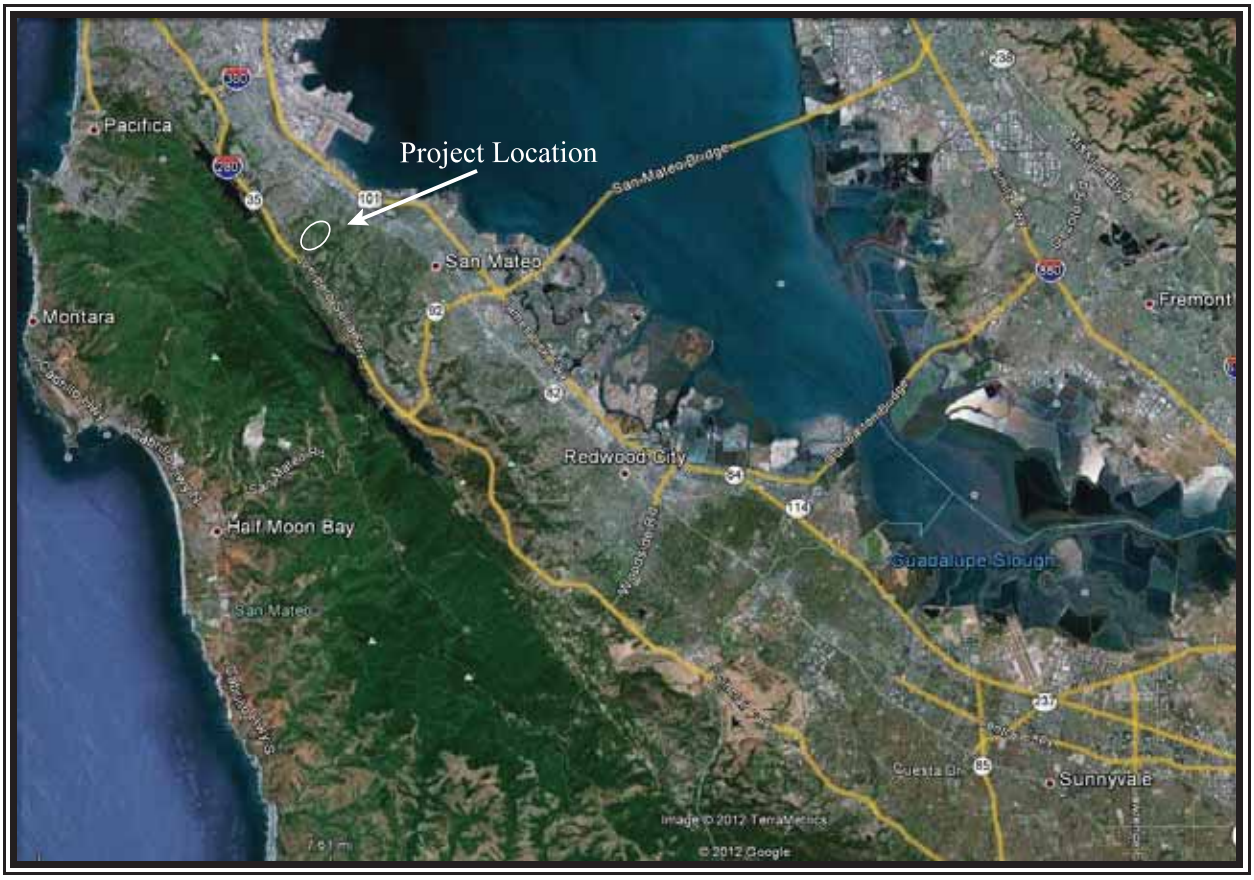
including the BHSMD. Initial Section 106 compliance efforts and strategy were presented in an April 2012 memorandum to DDA, ***re: San Mateo County Wastewater Collection System CIP Project*** (Clark 2012). That report set the stage for this Section 106 compliance report specifically on the two BHSMD projects. Presented here are the Project Description and potential impacts; project context; APE designation; status of Native American consultation; historical resources records search and focused archival research; field survey methods and results; evaluation of project potential to affect historic properties, and recommendations for Section 106 compliance for the Adeline Drive and Canyon Road segments.

BHSMD Project Research Summary

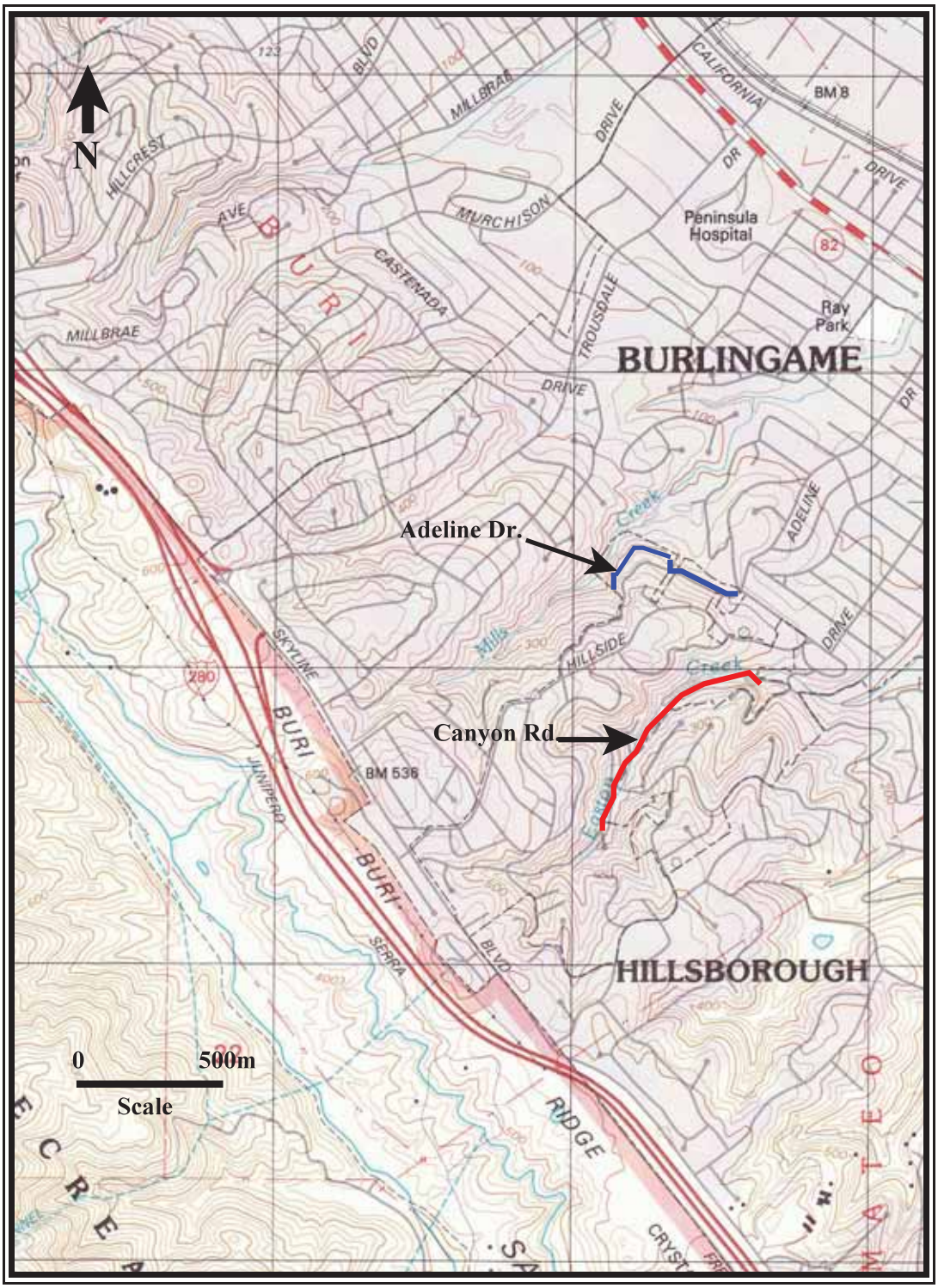
For the two separate BHSMD CIP Project segments, Adeline Drive and Canyon Road, the following tasks were completed:

- the nature, locations, probable and construction methods and effects of each element were analyzed;
- the Area of Potential Effects (APE) for each element was designated based on the first task and the County DPW was advised on how to map the APEs;
- project-specific archival research was completed to assess sensitivity for historic resources;
- prehistoric and historic archaeological records, data and work in the area was reviewed;
- surface reconnaissance was completed;
- the overall and specific elements' potential to affect historic properties was assessed to determine whether additional Section 106 compliance efforts are appropriate.

Research completed for Section 106 compliance for the BHSMD Adeline and Canyon Road Project has determined that all Project elements have very low to no potential to encounter or affect "historic properties" as defined by 106 Regulations (36 CFR §800.16), hence a Finding of "No Historic Properties Affected" is made, and therefore no additional 106 compliance work is recommended, but a procedure should be in place in the event of "surprise discoveries" as per Section 106 Regulations (§800.13(a)(2)), re "Post-review Discoveries"). Adherence to and completion of these recommendations will ensure compliance with both the intent and goals of NHPA Section 106.



Map 1: Burlingame Hills Sewer Maintenance District Project Regional Location.
(Source: Google Earth 2012)



Map 2: Burlingame Hills Sewer Maintenance District Project Location.
(USGS "Montara Mountain" 7.5 min. quadrangle, 1993)

PROJECT DESCRIPTIONS

The two BHSMD Project segments are improvements to the District's wastewater collection and transmission system (WCS). The following is drawn primarily from the County's Project Description, as reviewed and revised by BKF Engineers and provided by DDA in 2012, and from January 29, 2013 90 percent plans furnished by San Mateo County Public Works.

Adeline Drive Segment: Existing pipeline in the is mostly eight-inch diameter; existing pipe will be replaced by larger pipe, almost entirely (about 90 percent) by open trenching. From project start at the west, the project will replace existing six-inch asbestos cement pipe (ACP) with 10-inch high-density polyethylene (HDPE) pipe; six-inch vitrified clay pipe (VCP) with 10-inch polyvinyl chloride (PVC); eight-inch VCP with 12-inch PVC; eight-inch ductile iron (DIP) with 12-inch PVC; eight-inch ACP with 12-inch PVC; 10-inch VCP with 12-inch PVC; and finally eight-inch PVC with 12-inch PVC to the project end at the intersection with Alvarado Avenue.

Only the initial 85 LF and another 111 LF section will be pipe-burst, with the rest of the 1,920 LF open trenched. A short 18 foot section over a small ephemeral watercourse in the upper portion will be crossed by new 12-inch PVC encased in 18-inch steel pipe anchored on each end by concrete blocks. Existing laterals will be reconnected to the new pipe in the new trench with short more-or-less perpendicular trenches five feet long. Fourteen existing brick sanitary sewer manholes (SSMHs) will also be replaced with concrete manholes; three existing concrete SSMHs will remain; one new concrete SSMH will be constructed. Large excavations will be needed for the pipe-bursting technique, typically about 10 by 15 feet for the insertion pit and about half that size for the receiving pit, both just slightly deeper than the existing pipe. Each lateral reconnection will also be excavated. Excavations probably slightly larger than previously existing manholes will be dug into previously disturbed matrix to replace the brick manholes. Maximum depth of excavations along the Adeline segment will be about 16 feet below existing surface. Trenches would typically be 24-inches wide except where new SSMHs are constructed. Upper portions of the project route off Adeline Drive will traverse heavily vegetated steep slopes above the south bank of Mills Creek, through oak trees and thick underbrush.

Canyon Road Segment: The segment runs entirely in that roadway, with the exception of a short section near El Prado Road that runs under roadside vegetation. The upper 442 LF will replace six-inch VCP with eight-inch HDPE pipe by pipe-bursting; next a 151 LF section of the same VCP will be replaced with eight-inch PVC by open trenching. Below that, the entire route will be pipe-burst, needing only work pits but no open trenches; 95 percent of the total length will be pipe-burst. A long section of eight-inch VCP (950 LF) will be replaced with the same size HDPE and the lowest section (1,065 LF) will replace eight-inch VCP with 10-inch HDPE. Eighteen older brick SSMHs will be replaced with concrete; these 18 locations will require spot excavations; no new manholes are shown. The one length of trench would typically be 24-inches wide, except where new SSMHs are constructed. Excavations probably slightly larger than existing manholes will be dug into previously disturbed matrix to replace the brick manholes. Maximum depth of excavations along the Canyon Road segment will be about eight or nine feet, including pipe-bursting pits. Existing laterals will be

reconnected to the new pipe with short more-or-less perpendicular trenches typically up to five feet long. Large excavations will be needed for the pipe-bursting technique, typically about 10 by 15 feet for the insertion pit and about half that size for the receiving pit, both just slightly deeper than existing pipe.

Staging areas: Areas for equipment and materials storage will be on existing streets or convenient open locations adjacent to the streets where available (most of both segments are lined by residential landscaped yards not available for such use). Staging areas not on paved streets are unlikely due to the narrowness of the streets and encroaching residential yards. Although specific staging areas have not yet been designated, no effects to historic resources are anticipated as no resources were found either by archival research or field survey along the roads and easement.

POTENTIAL PROJECT IMPACTS

Total length of excavation work for the subject Project segments combined is about 4,847 LF/1,480 m, plus excavations off the trenches to locate and reconnect laterals and excavations slightly wider than the trenches, typically, for reconstructed SSMHs. As per the Project Descriptions, the large majority of pipeline replacement/enlargement will be accomplished by pipe-bursting. Nearly 90 percent of Adeline Drive will be open-trenched (1,724 of 1,920 LF) and about 95 percent of Canyon Road (2,776 of 2,927 LF) will be pipe-burst; in all, more than 61 percent of the work will not require trench excavation (at least as planned). The number of work pits required is not specified, but clearly excavations will affect only small percentages of the total length of work; many element segments are short and straight and do not traverse contours requiring more than one work pit at each end. These excavations could affect subsurface historical resources, if present.

The Project Description also addresses backfilling, where native material–i.e., disturbed material from existing trenches as well as undisturbed material along the trenches where work pits, lateral reconnection pits, and SSMH pits will be at least slightly outside previous trenches–will be utilized as normal procedure:

> The proposed project will involve excavation and backfill activities. Excavations will be required at pipe bursting access pits, lateral reconnections, and at open trench locations. Materials excavated ... will either be used on-site during construction or disposed of at a certified landfill. The use of imported soil is not anticipated, unless contaminated soil is discovered, in which case the contaminated soil will be disposed of ... and backfill will be imported as required. Excavated material will remain on-site and will be stored in accordance with Best Management Practices until it is used for backfill after pipe and manhole installation.

As per SWB guidelines, surface areas to be used for equipment and materials storage, staging, or other uses that could be affected would also be included in the APE. For the BHSMD Project, these areas are not considered to have potential effects on subsurface resources because all potential impacts will be on the surface of the built environment (paved streets) or at previously disturbed zones not known to contain historic resources, and so no surface APEs are designated here.

Current SWB procedures designate pipeline replacement or enlargement by the pipe bursting technique as having no potential effect as any resulting compaction would typically be within previously excavated and backfilled trenches. This is a quite reasonable expectation for relatively small expansions, as for this Project where most replacements will be eight-, 10-, or 12-inch pipe burst through existing six to eight-inch. Based on the need for excavated pipe bursting pits, SSMH pits, and lateral reconnections, it may be realistically estimated that approximately 55 percent of the APE will not be subject to effects that could encounter or alter historic properties. Furthermore, there is no evidence such properties are present or likely in any segment APE. However, the entire length of all pipelines to be improved was included in the APE because of the SSMH and lateral connection pits, and because unexpected difficulties can lead to additional work pits for pipe bursting at any location.

AREA OF POTENTIAL EFFECTS (APE) DETERMINATIONS

Resource inventory should be commensurate with potential impacts, utilizing any previously developed information including "..past planning, research and studies ... and the likely nature and location of historic properties within the area of potential effects" (§800.4(b)(1)) to appropriately scope the "reasonable and good faith [resource inventory] effort" required under 106 regulations (§800.4(b)). This effort is confined to the designated APE but level of effort can vary within the APE depending on specific project elements, such as anticipated effects, slope, prior ground disturbance, geotechnical data, prior archaeological research, etc. To begin the inventory effort, the Advisory Council on Historic Preservation (ACHP) advises four steps in sequence or simultaneously: "(1) determining and documenting the area of potential effects; (2) reviewing existing information about historic properties; (3) seeking information from parties likely to have knowledge of or concerns about the area; and (4) gathering information from Indian tribes ... about properties to which they attached religious or cultural significance..." (ACHP Section 106 Regulations Flow Chart Explanatory Materials 2001: 4). Based on these guidelines, a specific APE was determined for specific Project elements as appropriate.

The APE "means the geographical area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties" (§800.16 (d)). The SWB Section 106 Compliance Officer confirms that definition of the APE must be based on complete (or very nearly so) design plans for specific projects. For the BHSMD Project, involving only replacement or enlargement of existing wastewater pipelines, the APE can be restricted to consideration of archaeological resources, because impacts will be below the surface in streets or on District easements, and when completed the projects will be literally invisible and will not affect other sorts of historic properties.

The APEs, particularly for linear projects such as WCS lines, should not assume large zones around potential impact areas from incomplete plans, because that would require much more identification effort than necessary or supportable. For specific BHSMD Project segments the APE for archaeological resources can be restricted to likely or definite areas of actual physical impacts,

covering all reasonable alternatives; at the current development level of the plans for each element, no alternatives are proposed, so the APEs are easily designated.

Potential locations of excavations or other impacts required to be within the Project APEs include the routes of all trenches and other excavations, and staging and materials/equipment storage areas where the surface may be impacted. As the Project elements involve replacement of existing lines, the pipe bursting, pipe bursting work pits, lateral reconnections, and SSMH pits will run along previous trenches on exactly the alignments shown on the plans. Therefore, the APEs are narrowly drawn along those trenches, encompassing work pits, SSMHs, and existing laterals reconnections. Finally, no surface APEs are designated because the staging and storage areas for the Project will all be in existing streets or previously disturbed areas with no evidence nor record of archaeological resources.

As Project effects are defined as from the surface down and could affect archaeological resources, the APE must also be defined vertically. As per the ACHP Archaeology Guidance,

> Since an undertaking's effects are not restricted to the surface.... the APE is three dimensional, [so] agencies should consider how the undertaking might impact historic properties on the surface, above it, and below it. ... In setting the APE's lower limits, the federal agency should rely on scientific and engineering analyses to define a depth beyond which alteration to any ... archaeological site, if present, is not reasonably expected to occur. ...[and] would not be effected through changes in soil compaction or soil chemistry, for example. The challenge is to determine a vertical limit below which a knowledgeable person can reasonably say there will be no effect to the integrity of a site, should one be present [ACHP 2009:17].

To define the APEs for the BHSMD Project vertically, plans and profiles were examined (i.e, the Plan Sheets used for the attached APE maps), County excavation and base fill standards and geotechnical requirements appraised, general engineering standards and practices considered, past experience with similar projects factored in, and the maximum depth of potential impacts determined. The APE/Plan maps/90 percent plan and profile sheets show the depths of existing pipelines, which will be replicated, as well as SSMHs, laterals, or excavations, so using the factors cited, a general guideline of the vertical APE extending 12-inches/30 cm below anticipated excavations was adopted. Given the low archaeological sensitivity of the two Project segments, subsurface reconnaissance was not warranted and only the surface APE and environs were field inspected.

Under the SWB CEQA-Plus approach, surface areas that could be affected, such as for materials and equipment storage, staging areas, field offices, etc., are also included within the APE. For these projects, the County will direct the awarded contractors to use the streets and adjacent areas along the work routes for those purposes, along with the construction firms' own corporate yards. As noted, potential staging areas off the streets or easements have been researched and none appear archaeologically sensitive. Contractors will develop staging areas at locations best suited for each work site and are currently unknown. Appended APE maps therefore do not include such surface areas along the work routes within the APEs. Locations of corporate yards is unknown and would

not be appropriate additions to the APEs. Should this setup change, amended APE maps will be drawn and submitted for approval.

PROJECT CONTEXT

Cultural resources and/or historic properties likely to exist in the Project Area are products of the interaction of human behaviors with the physical environment; i.e, adaptations to utilize resources to allow human use and occupation of the location. To find, understand the genesis and uses, and interpret the meanings of cultural resources in the Project Area, knowing the past and present environmental and cultural context is essential. Following is a basic description of the natural setting, current conditions, and cultural past of the BHSMD Project vicinity.

Location and Setting

The two BHSMD Project segments are named for the primary streets in which the pipeline improvements are proposed. The Project is found on the U.S. Geological Survey "Montara Mountain" 7.5 minute topographic quadrangle map, a portion of which is reproduced here as Map 2. This area is not surveyed into the township & range survey system, being within the *Rancho Buri Buri* Mexican-era land grant, granted in 1835. The Project would be located in Township 4 South/Range 5 West. Both segments are outside but either cross or abut the limits of the City of Burlingame.

The BHSMD is on the upper east-facing slope of the San Francisco Peninsula, facing San Francisco Bay, a region of numerous small drainages and streams, once and partially still covered by mixed hardwood forest with riparian tree species like willows, California Bay Laurel, and Redwoods crowding the steeply cut watercourses. The area of the District is developed as single-family residences usually on sloping lots, with unbuildable steep slopes leaving areas still covered by native vegetation. Topography in the BHSMD generally slopes, often steeply, to the east toward the Bay, but is also quite irregular, creating for wastewater collection purposes three "drainage basins" separated by ridges (Brown and Caldwell 2011). The northern portion of the District is drained by Mills Creek and the southern by Easton Creek, small but perennial streams flowing northeastward to the Bay; several seasonal or ephemeral streams also occur, including a mapped historical stream between Mills and Easton (Tillery, Sowers, and Pearce 2006). The topography allows wastewater collection and transmission systems to function by gravity, but also requires that system pipelines be arranged by drainage basins such that no single main gathers all outflow to connect to the Burlingame system.

Elevation at the northwest project start of the Adeline Drive project is about 218 feet and at the project end about 180 feet; the 1,920 LF main pipeline achieves a more regular, gradual downward slope than the more undulating surrounding terrain. The lower half of the Adeline segment runs in the road, with homes on both sides; the upper half diverges off the road to the north through backyards, crosses Blackhawk Lane, and then turns southwest to run behind residences in the steep slope above Mills Creek. The Canyon Road main starts near the intersection with Tiara Court at

about 326 feet elevation and runs entirely in Canyon Road generally eastward for 2,927 LF to the northeast District boundary at about 150 feet elevation. Because the Canyon Road segment is in the graded roadway, the downward slope parallels the contours of the road and runs at a more consistent depth of six to 10 feet below surface. The Canyon Road runs in the ravine of upper Easton Creek, closely paralleling or on the creek in places and crossing it at one point, the ravine walls rising steeply to north and south.

The general settings of the two segments prior to development were probably quite similar, except Canyon Road is in the ravine of Easton Creek while Adeline Drive runs on the hillsides above Mills Creek. Much of the Canyon Road segment is right next to the creek, which is "channelized" in portions in the sense of being constrained by retaining walls, rip-rap, and a few short stretches of concrete channel, but it follows the natural stream course. The ravine displays areas of serpentine rock and derived soils of medium to dark grey-brown rocky clay, with many stream deposits of rounded gravel to cobbles. The steep, rocky Easton Creek ravine supports upper story vegetation of Live Oaks, Tanoak, Bay Laurels, Buckeye, Elderberry, Big Leaf Maple, and several species of willows, with typical lower story natives of Toyon, poison oak, wild blackberry, ferns, wild cucumber, nettles. Particularly on the lower portion, where the ravine is very narrow and homes encroach closely on the stream, bank erosion control and landscaping often extends literally over the creek banks. Numerous homes also are reached by bridge driveways over the creek.

The Adeline Drive segment was probably more open prior to development, likely an oak grassland hillside, with increasing variety and density of trees and lower plants approaching Mills Creek, where the project route runs across quite a steep hillside/upper bank. Generally this segment also runs through mixed forest, with oaks and Bay near the creek. The portion running in the paved road passes through completely developed zone with single-family homes on both sides. The homes are built on pads cut into the slopes and/or supported by piles and braces on the lower side. Except for the upper portion off the road, all adjacent areas are landscaped, but some native oaks and other trees are present. The hillside/bank near and running south from Blackhawk Lane is thickly vegetated, nearly impenetrable, with viny ground covers and escapees like English Ivy mixing with the native blackberry and wild cucumber.

During aboriginal times, the steep, windswept hillsides of the Adeline Drive segment would have been grasslands with occasional stands of oaks where the faulted substrata brought water near the surface. Such areas would have not been attractive for habitation or much else for prehistoric populations other than acorn gathering and hunting; even bedrock mortars next to the stream are unlikely due to the ruggedness and poor suitability of the bedrock for mortars. The narrow ravine of upper Easton Creek, where vegetation would have lined the riparian corridor and water was available, would have attracted prehistoric use if not habitation, but no sites are recorded along the upper creek. Easton Creek has only minor seasonal tributaries and runs directly into San Francisco Bay from a small watershed, but the ravine could have served as a route to San Andreas Valley to the west and ultimately to the ocean coast. The upper creek corridor where the project is proposed appears to have no significant flat and level spots where prehistoric sites would be likely; modern flats and developed residential lots are all graded into the steep ravine and hillsides. Both APEs would be considered of low archaeological sensitivity.

Ethnographic Setting

The Native Americans who owned the San Francisco Bay region, Santa Cruz Mountains and East Bay Hills, and the Monterey Bay area at the time of 1769 Spanish invasion, from the Golden Gate approximately to the northern slopes of Mount Diablo, out to Altamont Pass, down roughly the middle of the Diablo Range and southward to approximately the Panoche Valley, then westward to the coast some kilometers south of Point Lobos, are now most commonly known as "Ohlones," a Spanish transcription of the name of a coastal village between Santa Cruz and Half Moon Bay. Archaeological evidence indicates the ancestral Ohlones arrived in the San Francisco Bay region–depending on location–somewhere around A.D. 500 (Moratto 1984), possibly earlier and probably from the lower Sacramento Valley/Delta, and got to the Santa Cruz/Monterey Bay region somewhat later, displacing earlier populations. Anthropologists and the Federal Government labeled these people "Costanoans," from the Spanish "costanos" or coast-dwellers, a linguistic term coined to describe groups speaking related languages, occupying the coast from the Golden Gate to Point Sur and inland to about the crest of the Diablo Range. Some Indian descendants of these people still prefer the term "Costanoan," while others prefer "Ohlone" or more readily identify with more specific tribelet names such as Chochenyo, Amah, Mutsun, or Rumsen/Rumsien.

Currently the best available information indicates that, at the Spanish arrival, the *Ssalson* (pronounced roughly "Shalsohn" or "Shalshón") tribelet of Ohlones/Costanoans probably held the general Project vicinity. The Ssalson were centered along the San Mateo Creek watershed and into "What was probably the most heavily populated spot of any in the County in aboriginal times [San Andreas Valley] is now under water behind Crystal Springs Dam. ... In this valley were at least five inhabited sites ... [and] along the perennially flowing branches of San Mateo Creek" (Brown 1973: 9). Spanish Mission records provide the best information on locations of various Ohlone groups, and though definitively specific locations remain rare, some locations for Ssalson villages are known.

> The Ssalsons lived in at least three main villages along San Mateo Creek, near the west shore of San Francisco Bay and in the San Andreas Valley ... The villages of Altagmu, Aleitac, and Uturbe were said to be along the branches of the Arroyo of San Matheo in numerous baptismal entries ... Tribe members were baptized at Mission San Francisco from 1780 through 1793 [Milliken 1995:255].
>
> Twice in his baptismal records Palou remarked that the *Shalshónes* from all these settlements "dwell indifferently sometimes on the branches of San Mateo River, sometimes at *Olestura* village as well as *Sicca*, and come as far as *Wuriwuri* and San Bruno" [then a spot on upper Colma Creek, not the modern city of that name].
>
> ... Beginning about this time [March 1786], the name San Mateo seems to be used in the mission records more often to mean the area up in the hills, rather than along the Bayshore (as it does today). Only two native names, *Olestura* and *Malsáitac*, places which were apparently unimportant as settlements, may be located near the Bay. However, the enormous shell mounds along lower San Mateo Creek and in Burlingame, surveyed and recorded by Jerome Hamilton forty years ago, proved how important to the natives was the easily accessible stretch of shore running out toward Coyote Point [Brown 1973:9-12].

Brown appears to think it possible the Ssalsons controlled farther north on the Peninsula as well in the late eighteenth century, into the modern San Bruno and Rancho Buri Buri Land Grant area: "It is possible that this northern area belonged to the San Francisco tribelet before the *Shalshónes* defeated them in their 'war' of 1776 [presuming the Ssalsons took possession of that land], in which case *Wuriwuri* [Buri Buri] might have been abandoned at that time" (Brown 1973:11). But it is possible the Buri Buri or Ureburi might have held the more northern Adeline Drive area or both the segments. More recent and thorough research by Milliken indicates the "*Ureburi*" (another of at least four spellings attempting to convert the varying Spanish transliterations) were a separate political group: "The people of the San Bruno Creek area just south of San Bruno Mountain on the San Francisco Peninsula seem to have been a single village group. ...the place called by the natives Siplichiquin'" (Milliken 1995:258-259). If the Ureburi held the San Bruno Creek watershed only, probably the Ssalson controlled the project vicinity, as four small but perennial named creeks are found between Adeline Drive and the San Bruno Creek watershed.

Based on topography, availability of resources, and these historic sources, it is likely the San Mateo Creek watershed and environs was the northernmost portion of the Peninsula capable of supporting relatively large permanent habitation, compared to the very sparsely populated north Peninsula. While historic sources and archaeological research demonstrate the north Peninsula was also occupied for millennia, and population along the Bay side may have been both continuous and relatively numerous, the dune-covered, windswept coast and interior of San Francisco and northern San Mateo County were less benign. Clearly the Project vicinity was permanently occupied, probably supporting both permanent and seasonally occupied villages, and very likely had been for several millennia. The Project vicinity certainly was used aboriginally for habitation and for specific tasks, such as gathering and processing food resources, and the banks of permanent and seasonal streams in this region could contain nearly continuous archaeological sites, so much of the Project vicinity should be considered sensitive for prehistoric archaeological resources. But, topography also dictates usability, and the steep hillsides of the northern segment and narrow ravine of the southern would have precluded major village sites and promoted transitional uses.

Natural resources of their home areas provided nearly all the needs of aboriginal Ohlone populations. The prehistoric Ohlones were "hunters and gatherers," a term that may connote a transient, unstable, and "primitive" life, materially poor, constantly fending off starvation; it should not. While undoubtedly recurrent lack of resources and cultural strife did not make life perpetually easy, in many ways the Indians of Central California, without agriculture, practiced a lifestyle similar to contemporary agricultural peoples elsewhere. The Ohlones had adapted to and managed their abundant local environment so well that some places were continuously occupied for literally thousands of years. Compared to modern standards, population density always remained quite low, but the Ohlone area, especially around Monterey and San Francisco Bays, was one of the most densely lived-in areas of prehistoric California for centuries. The Ohlones had perfected living in and managing myriad slightly differing environments, varying with location, some rich enough to allow large permanent villages of "collectors" to exist (such as around the Bay and the Santa Clara Valley), others less abundant and more encouraging of a more mobile "forager" way of life (such as west of the crest of the Santa Cruz Mountains in San Mateo and Santa Cruz Counties). Littoral (shoreline) and riparian environments had more resources, were obviously more productive, and

were therefore most sought out, most intensively utilized and occupied, and most jealously defined and guarded. Uplands and redwood areas were less productive and less intensively used and occupied than the ocean and Bay coasts and riparian corridors. As throughout Central California, the acorn was the dietary staple of the Ohlones, with Black, Coast Live, and Tanoak most favored, but a huge number of floral and faunal resources were utilized. Like other native Californians, the Ohlone managed their environment to improve it for their use; for example, by burning grass and brush lands annually or more often to improve forage for deer and rabbits, keep the land open and more safe from predators and their neighbors, and improve productivity of many resources they used.

The basic unit of Ohlone society was the "tribelet," a small independent group of usually related families occupying a specific territory and speaking the same language or dialect. An incredible diversity of languages had evolved in Central California, evidence of centuries of in-place divergence of very small social groups. Early linguists recorded some groups of only 50-100 people speaking distinct languages sometimes but not generally wholly unintelligible to their neighbors. Inter-tribelet relationships were socially and economically necessary however, to supply both marriage partners and goods and services not available locally. Trade and marriage patterns were usually but not always dictated by proximity; traditional enemies were usually also defined by proximity. Regional festivals and religious dances would bring wider often kin-related groups together during periods of suspended hostilities. At other times, hostilities between neighboring groups were the norm.

Traditional trade patterns thousands of years old were operating when the Spanish invaded. Trade supplied the Ohlones with products from sources sometimes several hundred kilometers distant and allowed export of products unique to their region. Historically, Ohlone groups traded most with each other, but also exchanged regularly with the Bay, Plains and Coast Miwok, Yokuts, Salinans and Esselens to the south, and North Coast Ranges groups such as the Pomo. Of particular interest archaeologically are imported obsidian and exported marine mollusk shell beads and ornaments. Obsidian has the fortuitous property of each source having a unique chemical "fingerprint" so obsidian artifacts can be sourced to a specific locality of origin, as well as being datable by technical methods (“hydration”). Obsidian was obtained by the Ohlones from the North Coast Ranges and Sierran sources, in patterns that changed through time. By 1769, some Ohlones had been trading for or buying finished obsidian arrowheads of specific forms, manufactured by North Coast Range tribes, for hundreds of years.

Shell beads and ornaments, a major export from the Ohlone regions, were made primarily from the shells of abalone (*Haliotis*), Purple Olive Snail (*Olivella*), and Washington Clam (*Saxidomus*), all ocean coast species. Shell beads and ornaments evolved through many different and definable types through the millennia, allowing chronological typing of these common artifacts to serve as a key to the age and relative cultural position of archaeological complexes. These beads were traded for thousands of years, and have been found in prehistoric sites up and down California and many kilometers east, all the way into the Great Basin, showing that coastal prehistoric peoples were tied into an "international" system of trade. At the time of the Spanish invasion, some Central Californians had developed a system of exchange currency or "money" based on clam shell disk beads; the extent to which the Ohlones related to that system is unknown.

The small tribelet groups were at once independent and interdependent. Trade with neighbors in goods, and wives, is strongly attested in both the archaeological record and ethnographic accounts. These relationships often moved both goods–particularly foods, obsidian and shell beads–and sometimes individuals long distances, though again proximity was always the key factor in intensity of interaction (Milliken 1995). As noted, control of territory and resources was jealously guarded. Such interaction also included a significant component of interpersonal and intergroup violence, from individual disputes and clan feuds up to a level reasonably described as warfare (with the goal of displacing neighbors and laying claim to their desirable resources). The most typical weapons were the short thrusting spear and the bow and arrow, and archaeological evidence of use of both on human victims is not lacking. The Spanish also reported ongoing multi-generational feuds or warfare in Ohlone territory. Such violence was accorded social approval and prestige, as exemplified by the practice of dismembering dead foes, taking and displaying trophy heads, and composing powerful "songs of insult or vengeance" toward one's enemies (Kroeber 1925:468-469). Postmortem dismemberment of human remains has been documented at numerous Ohlone area sites (Wiberg 1993, 2002, 2010; Grady et al. 2001; Hylkema 2002). The too-common stereotype of Central California natives as altogether peaceable and passive in the face of threats–such as the Spanish invasion–is contradicted by both historic and archaeological evidence. As everywhere, the struggle for resources and territory, as well as individual disputes, often led to violence in the Ohlone tribelets. The Spanish reported such conflicts involving the Ssalsons, first with villages to the south and then with villages to the north:

> Some kind of war was going on in the spring of 1776 on the San Francisco Peninsula, possibly between the Lamchin [southerly neighbors of the Ssalson] and the Ssalson, for at Laurel Creek (in the present town of Belmont) Font wrote:
>
> We went still a little farther and came to a small village, from which came out several Indian men and women. The commander presented them with glass beads, and were stopped a little while with them. One of them was wounded in the leg by an arrow, and another stood with his bow and arrows making signs and gestures as if he were fighting, and pointing out the wound. From this we inferred that he was telling us how they were at war with other villages ahead, and was trying to persuade us not to go there because they were very warlike (Font [1776] 1930:328) [Milliken 1995:52-53].
>
> In 1776, at the moment when the missionaries and settlers had just arrived and camped in order to begin the founding of San Francisco Mission, some forty warriors of the *Shalshón* (San Mateo) tribelet "from the San Andrés Valley," appeared one morning at the site. In a friendly way they explained to the Spaniards that they had come to avenge the San Francisco Indians' wounding of one of their men. A small war followed, in which the northerners' villages were burnt and the inhabitants were driven to islands in the Bay, where they remained for several months (Brown 1973:7].

Absolute and relative dating of archaeological sites, the linguistic diversity, and demonstrably ancient trade patterns all indicate that the Ohlones and other Central California groups had reached a state of demographic and social stability unimaginable to modern city-dwellers–a state in which the same family groups occupied the same location continuously for hundreds or even thousands of years with few and very slow if any changes in population size or profile. This long term stability

is reflected in the homogeneity of archaeological sites spanning wide geographic and temporal ranges, and allows correlation between numbers and types of sites changing at roughly the same times over similarly wide ranges and climatic changes driving those relocations.

Brief Historical Background

Unlike the San Mateo Creek watershed to the south, the BHSMD Project vicinity was not developed early in the American period, nor is there evidence of specific use during the Spanish and Mexican eras. The steep hillsides undoubtedly were the chief reason the Project residential subdivisions were developed relatively late in the history of the Peninsula. The BHSMD was not subdivided into residential parcels until the 1950s or 1960s and likely was developed during that later decade.

The earliest maps of the Peninsula, the Spanish and Mexican *diseños* defining the land grants, do not show any indications of development or use of the BHSMD. The boundary between Ranchos San Mateo and Buri Buri was a straight line, with both Easton and Mills Creeks in Rancho Buri Buri. The 1868 Official County Map of San Mateo County shows the Mills Creek watershed and Adeline Drive area held by D.O. Mills as open land, no roads or buildings present, while the Easton Creek area is held by A.L. Easton and is similarly blank (Easton 1868). The 1877 map is the same, though the owner of the Easton Creek drainage is now A.M. Easton; the street pattern of Burlingame appears to the south (Cloud 1877). By 1894 the Mills Estate appears to have expanded southward, covering both segment vicinities, but still no development is shown (Bromfield 1894). The 1897 USGS topographic quadrangle also shows no roads into the area. By 1909, residential subdivisions have expanded north of Burlingame near the Bay, but still no development nor roads are evident near the project segments (Neumann 1909). The 1915 USGS topographic map is exactly the same as the 1897 version in this area, but shows a road leading from El Camino Real into the Mills property. The 1927 County Map shows less detail than either topographic quadrangle, with the north area still owned by Mills, but the development of Burlingame expanding to the northwest and a road following or perhaps paralleling lower Easton Creek to the south (Kneese 1927). The 1939 USGS topo map shows a road from near the Bay running between Mills and Easton Creeks, bifurcating west of the two segments, the southerly road roughly on the alignment of Adeline Drive but no development as high as that segment. The 1949 USGS map is the same as 1939 for this area. The 1950 County Map shows Mills Creek labeled “Blackhawk Creek” and the road pattern of the “Burlingame Hills” residential area is place, Adeline Drive and Canyon Road on their current alignments, the latter closely following Easton Creek (Grant 1950).

Though divided into parcels as by 1950–or at least having the modern roads in place, the BHSMD area does not appear to have been developed until later in the 1950s. By 1968, the USGS map shows the current development pattern but does not spot individual buildings. So, some of these roads and residential development are therefore older than the 50 year qualifying criteria, but the likelihood that historic resources are present in the roads or easements of either segment appears to be very low to virtually zero because the roads appear before any indication of residential or other developments.

Historical Resources Records Search

A historical resources records search was requested for the San Mateo County CIP projects on 07 October and completed on 15 November 2011 by the staff of the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) at Sonoma State University. The records search covered within 250 m of each segment of each Project, which allowed overlap as the resulting 500 m wide areas blanketed almost all the areas surrounding the APEs. This overlap covered nearly all of the BHSMD.

The records search showed no portions of the specific BHSMD Project segments had been previously surveyed for historical resources, and only one survey within 250 m of the eastern end of the Adeline Drive segment, which recorded the historic Kohl Mansion property (Montgomery 1981); a historic buildings survey of the Town of Hillsborough came within 250 m of the north end of the Canyon Road segment, but this was not an archaeological survey (Baird et al. 1990). No historical or prehistoric archaeological sites are recorded within 250 m of either Project segment APE or anywhere within the BHSMD.

The CHRIS NWIC records search for the Project is File No. 11-0423. A copy of this report will be sent to the NWIC for inclusion in the permanent CHRIS archives, as required by the State.

Prehistoric Archaeological Resources and Sensitivity

The two BHSMD Project segments are located on steep hillsides (Adeline) or, in the case of Canyon Road, run in a narrow, steep ravine. The steep hillsides are not accommodating of human habitation or use except perhaps to gather specific resources. Further, the Project segments other than the upper Adeline route in an easement, are in roads graded into the steep terrain or ravine walls and creek bed. The steep hillsides would not be expected to contain detectable archaeological resources, and the thin soil was undoubted entirely removed during roadbed preparation. The Easton Creek ravine might be expected to contain evidence of prehistoric use, but the roadbed for Canyon Road would have destroyed such evidence and none was found off the roadway. Finally, numerous archaeological surveys conducted in the wider Project vicinity have generally only found prehistoric sites on flats near watercourses or rarely on slopes or ridges where specific resources attracted human use (again, bedrock outcrops, also springs). Sensitivity for prehistoric archaeological resources in the Project APEs may therefore be evaluated as low to very low.

Historical Resources and Sensitivity

As noted, with the exception of the portion of Adeline Drive off the road in the easement crossing Blackhawk Lane, the Project segments were graded into steep hillsides or ridge lines lacking evidence of any historic structures, features, or other use that would have created archaeological resources. The likelihood that historical archaeological deposits or features could exist under these roads is very low to nonexistent, and the easement section of Adeline is even steeper than the roadways.

STATUS OF SECTION 106 CONSULTATION

NATIVE AMERICAN CONSULTATION

As per Section 106 regulations (§800.2 (c)(2)(b)), the mandatory consultation with interested parties and with other potentially interested parties was conducted for the BHSMD Project (all four San Mateo County CIP Projects were done simultaneously). Recognized Native American tribes and individual representatives were solicited for information and comments on the Project. The California Native American Heritage Commission (NAHC) was contacted by letter dated 07 October 2011, with the USGS topographic quadrangle portion marked with the Project route provided, and requested to conduct a search of the Sacred Lands files and provide the current list of Ohlone/Costanoan "Native American Contacts" for San Mateo County (see Appendix A). The NAHC responded in a letter dated 13 October 2011 that "A record search of the sacred land file has failed to indicated the presence of Native American cultural resources in the immediate project area" for all four CIP Projects. A list of eight Native American representative individuals and groups affiliated with the Ohlone/Costanoan was provided. These were contacted by letter sent via First Class Certified Mail on 28 October 2011, providing the topographic/project element routes map and a very succinct project description; no summary of records search results was provided because those results had not yet been received. Consultation documents are provided in Appendix A.

Native American representatives were asked to participate in the consultation process: "We invite your participation in the consultation process. The NAHC has searched the Sacred Lands files for properties of importance to Native Americans, finding none in or near these Projects. Please review the enclosed maps to locate any Native American cultural resources not identified but known to you, or anyone you may know, that may be affected by the Project. Please notify us if you have any information, recommendations, or concerns." Contact information was provided for responses in writing by mail, fax, or email, as well as for responses by telephone. All letters were delivered to intended recipients between 29 October and 04 November. Not all were actually picked up, or in one case two notices of delivery were left and no other information is available, as confirmed by USPS records.

The following Native American contacts were sent letters:

Rosemary Cambra, Muwekma Ohlone Tribe of the San Francisco Bay Area, Milpitas, CA; notice of attempted delivery confirmed 29 October and 17 November 2011; never picked up and returned to sender 19 November.

Jean-Marie Feyling, Amah/Mutsun Tribal Band, Redding, CA; notice left 04 November and delivery confirmed 08 November 2011.

Jakki Kehl, Ohlone/Costanoan, Patterson, CA; notice of attempted delivery confirmed 31 October and delivery confirmed 05 November 2011.

Andrew Galvan, The Ohlone Indian Tribe, Inc., Ohlone/Costanoan, Bay Miwok, Plains Miwok, Patwin, Fremont, CA; delivery confirmed 31 October 2011.

Ramona Garibay, Ohlone/Costanoan, Bay Miwok, Plains Miwok, Patwin, Union City, CA; delivery confirmed 29 October 2011.

Ann Marie Sayers, Indian Canyon Mutsun Band of Costanoan, Hollister, CA; delivery confirmed 03 November 2011.

Irenne Zwierlein, Amah/Mutsun Tribal Band, Woodside, CA; delivery confirmed 29 October 2011.

Linda Yamane, Ohlone/Costanoan, Seaside, CA; delivery confirmed 29 October 2011.

Ultimately four responses were received between 14 November 2011 and 02 March 2012. Summaries of the responses and actual written responses sent as email are provided in Appendix A.

Jakki Kehl called on 14 November, stating that 1) there are likely to be archaeologically sensitive areas in some of the projects' elements, 2) she would like to see the records search results to make recommendations, and, 3) asking for more specifics on the projects. A response email was sent by the author that same day, and an email response from Kehl also received (copies in the Appendix). A summary of the records search results was furnished in January 2012; no subsequent contact from Mrs. Kehl has been received regarding this project.

Jean-Marie Feyling emailed a response on 15 November, expressing general concerns about the San Mateo County CIP Projects, and that "I am very interested in project and the areas involved. ...this [area] contains many sites some documented and some not." After receiving the records search summary, Mrs. Feyling sent additional response emails in January 2012, requesting more information and recommended that "any of these project areas that are near the creeks, surrounding flat and any known site area (1/4 mile of site) be monitored by an archaeologist and by Native American Monitors that are familiar with these areas." Feyling's sister, Irenne Zwierlein, called the author that same day, 15 November, and sent an email the next day pointing out examples of sensitive areas of which she had personal knowledge and other concerns that resources could be adversely effected. In a subsequent discussion in person with Ms. Zwierlein (while on another project) the author informed her that field survey found no archaeological sites and very low sensitivity for the BHSMD Project.

The first three Ohlone respondents were sent a summary of the records search results (see Appendix A) via email on 21 January 2012, and asking again that any additional feedback they might wish to contribute be sent in writing by email.

Ann Marie Sayers phoned the author on 02 March 2012, leaving a message asking whether it was too late to consult on the project. The author called back the following day, got no answer nor message machine, and responded by email 06 March with the answer that was it was not too late until the (this) report was written. The author also provided the summary of the records search to

Ms. Sayers that day, explained that field survey had validated the apparent low archaeological sensitivity as no recorded sites are near the APEs, and asked that she respond to the email; no subsequent contact has been received from Ms. Sayers.

The Native American consultation conducted included all four of the San Mateo County Wastewater CIP Projects. For the BHSMD Project, each segment is in a topographic setting where archaeological sensitivity would be low to very low (i.e., on steep slopes at Adeline and a steep, narrow watercourse ravine on Canyon Road); the records search found no recorded sites in or adjacent to the APEs; no indications of archaeological resources were found by field survey; and, grading for streets and residential construction on the roadways has removed the original surface soils. Consultation was therefore closed as all respondents were clear in only being concerned with effects on or near known sites.

FIELD RESEARCH

SURFACE RECONNAISSANCE

Given the terrain and location of the Project segments, in streets and an easement on steep slopes, and the state of development in and around the APEs, which combine into low or very low archaeological sensitivity, surface reconnaissance was not expected to discover archaeological evidence. No evidence of resources was found by surface reconnaissance. The main usefulness of the exercise was to confirm or disconfirm the utility of surface reconnaissance to develop a meaningful inventory of resources. A "Lineal Cultural Resources Survey Record" form was filled out after walking each Project segment.

Both segments of the project were walked; in streets, where pavement covers the actual APEs, this meant a transect along each edge of road or sidewalk to examine what soil may have been visible in the mostly landscaped edges off the APEs. Surface visibility along the roadsides varied from great to nonexistent, but most of the areas that could be examined were either landscaped, paved, or clearly disturbed and usually missing the native topsoil. The easement portion of the Adeline Drive segment was difficult to reach, being steep and partially behind fences; other parts were accessible where backyard fences were above the route, not on parcel lines. Surface reconnaissance on the easement section was nearly impossible, all of it was steep; east of Blackhawk Lane the hillside surface was covered by thick grass, imported species such as English Ivy, or trees surrounded by duff; west of the lane, thick tree cover with even thicker lower story vegetation, often spiny or toxic, also made the surface invisible. Along Canyon Road, the upper side revealed mostly the road cut, the lower side had some small patches of open soil above the creek. The creek banks were visible in some places but were usually rocky and bare; both ad hoc and more formal flow and erosion controls were commonly covering all but the bed of the creek.

CONCLUSIONS AND RECOMMENDATION

The Burlingame Hills Sewer Maintenance District CIP Project segments would only potentially affect archaeological resources due to the nature of the work involved, so surface features and standing historical structures were not considered sensitive to effects (and there were no such resources anyway). Both Project segments are located in topography of low to very low archaeological sensitivity. Both segments except the portion of Adeline Drive in the easement are also located in roads lined by residential development, the slopes altered during development. No recorded resources are recorded within or near the Project APEs, nor were any archaeological resources or evidence detected by field survey.

The Project can proceed with very low to zero chance of encountering or affecting historic properties as defined by the Section 106 regulations, therefore a Finding of "No Historic Properties Affected" is appropriate (§800.4(d)(1)). No additional research or effort for 106 compliance is warranted or recommended and the required 106 compliance effort is considered completed, with the exception of the recommendation below.

Recommendation

Section 106 Regulations stipulate re "Post-Review Discoveries," that "When ... identification efforts ... indicate that historic properties are likely to be discovered ... and no programmatic agreement has been developed ... the agency official shall include in any finding of no adverse effect or memorandum of agreement a process to resolve any adverse effect upon such properties" (§800.13(a)(2)). Although surprise discoveries are very unlikely during the BHSMD Project, it is possible, so a process should be in place to notify County DPW and the SWB if the unexpected happens. This process should require the County and/or construction supervisors to immediately stop work in the vicinity of archaeological discoveries (within 10 m/33 feet), and immediately notify a qualified archaeologist, who should visit the location as soon as possible to evaluate the find, as well as notify the SWB 106 Compliance Officer. The archaeologist would evaluate the find and notify the SWB 106 Compliance Officer immediately if the discovery is a potential historic property. A record should be kept of all such notifications and evaluations regardless of outcome. If the discovery is a potential historic property, the SWB, the County DPW, and qualified archaeologists should consult and agree on appropriate treatment measures.

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APPENDIX:

SECTION 106 NATIVE AMERICAN CONSULTATION RECORD

BURLINGAME HILLS SEWER MAINTENANCE DISTRICT

CAPITAL IMPROVEMENTS PROJECT,

SAN MATEO COUNTY DEPARTMENT OF PUBLIC WORKS

NATIVE AMERICAN CONSULTATION

As per Section 106 regulations (§800.2 (c)(2)(b)), the mandatory consultation with interested parties and with other potentially interested parties was conducted for the BHSMD Project. Recognized Native American tribes and individual representatives were solicited for information and comments on the Project. The California Native American Heritage Commission (NAHC) was contacted by letter dated 07 October 2011, with the USGS topographic quadrangle portion marked with the Project route provided (see example map of one of the four projects below), and requested to conduct a search of the Sacred Lands files and provide the current list of Ohlone/Costanoan "Native American Contacts" for San Mateo County (see Appendix A). The NAHC responded in a letter dated 13 October 2011 that "A record search of the sacred land file has failed to indicated the presence of Native American cultural resources in the immediate project area." A list of eight Native American representative individuals and groups affiliated with the Ohlone/Costanoan was provided. These were contacted by letter sent via First Class Certified Mail on 28 October 2011, providing the topographic/project element routes map and a very succinct project description; no summary of records search results was provided however, because those results had not yet been received. Consultation documents are provided below

Native American representatives were asked to participate in the consultation process. Contact information was provided for responses in writing by mail, fax, or email, as well as for responses by telephone. All letters were delivered to intended recipients between 29 October and 04 November. Not all were actually picked up, or in one case two notices of delivery were left and no other information is available, as confirmed by USPS records.

The following Native American contacts were sent letters:

Rosemary Cambra, Muwekma Ohlone Tribe of the San Francisco Bay Area, Milpitas, CA; notice of attempted delivery confirmed 29 October and 17 November 2011; never picked up and returned to sender 19 November.
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Andrew Galvan, The Ohlone Indian Tribe, Inc., Ohlone/Costanoan, Bay Miwok, Plains Miwok, Patwin, Fremont, CA; delivery confirmed 31 October 2011.
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Ann Marie Sayers, Indian Canyon Mutsun Band of Costanoan, Hollister, CA; delivery confirmed 03 November 2011.
Irenne Zwierlein, Amah/Mutsun Tribal Band, Woodside, CA; delivery confirmed 29 October 2011.
Linda Yamane, Ohlone/Costanoan, Seaside, CA; delivery confirmed 29 October 2011.

Ultimately four responses were received between 14 November 2011 and 02 March 2012. Summaries of the responses and actual written responses sent as email are provided in the main report and below.

holman & ASSOCIATES
Archaeological Consultants
"SINCE THE BEGINNING"
3615 FOLSOM ST. SAN FRANCISCO, CALIFORNIA 94110 415/550-7286

Debbie Pilas-Treadway
Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, CA 95814

07 October 2011

Dear Ms. Pilas-Treadway,

Holman & Associates is conducting consultation with Native Americans for the "San Mateo Count Wastewater Collection System CIP Project" at various locations in San Mateo County. The Projects are linear WCS pipelines as shown on the enclosed maps. The Project vicinities are not sectioned, but are in the Rancho Buri Buri (BHSMD, Montara Mtn. quad), and Rancho Pulgas (CSCSD, San Mateo quad; DCSD, Woodside quad, and FOSMD, Woodside and Palo Alto quads) Land Grants (see Maps). The Projects are found on the USGS "Montara Mountain," "Woodside," "San Mateo," and "Palo Alto" 7.5 minute topographic quadrangles, portions of which are supplied. The archaeological records search has not been completed, but it is likely Native American sites are recorded in or within 250 m of the Projects, particularly along the creeks. Please review the Sacred Lands File for any Native American cultural resources that may be within or adjacent to the study area. Please notify us if you have any information or concerns.

We also request the **current list of Native American representatives, individuals, and groups** who are recognized representatives of the Costanoan/Ohlones who wish to be contacted regarding cultural resources in **San Mateo County.** To reach me, please call or fax to my home office number (650-726-6269) or use email to MRCCRM@comcast,net, not the main office number (above), unless you can't reach me or would like to talk to Miley about the project.

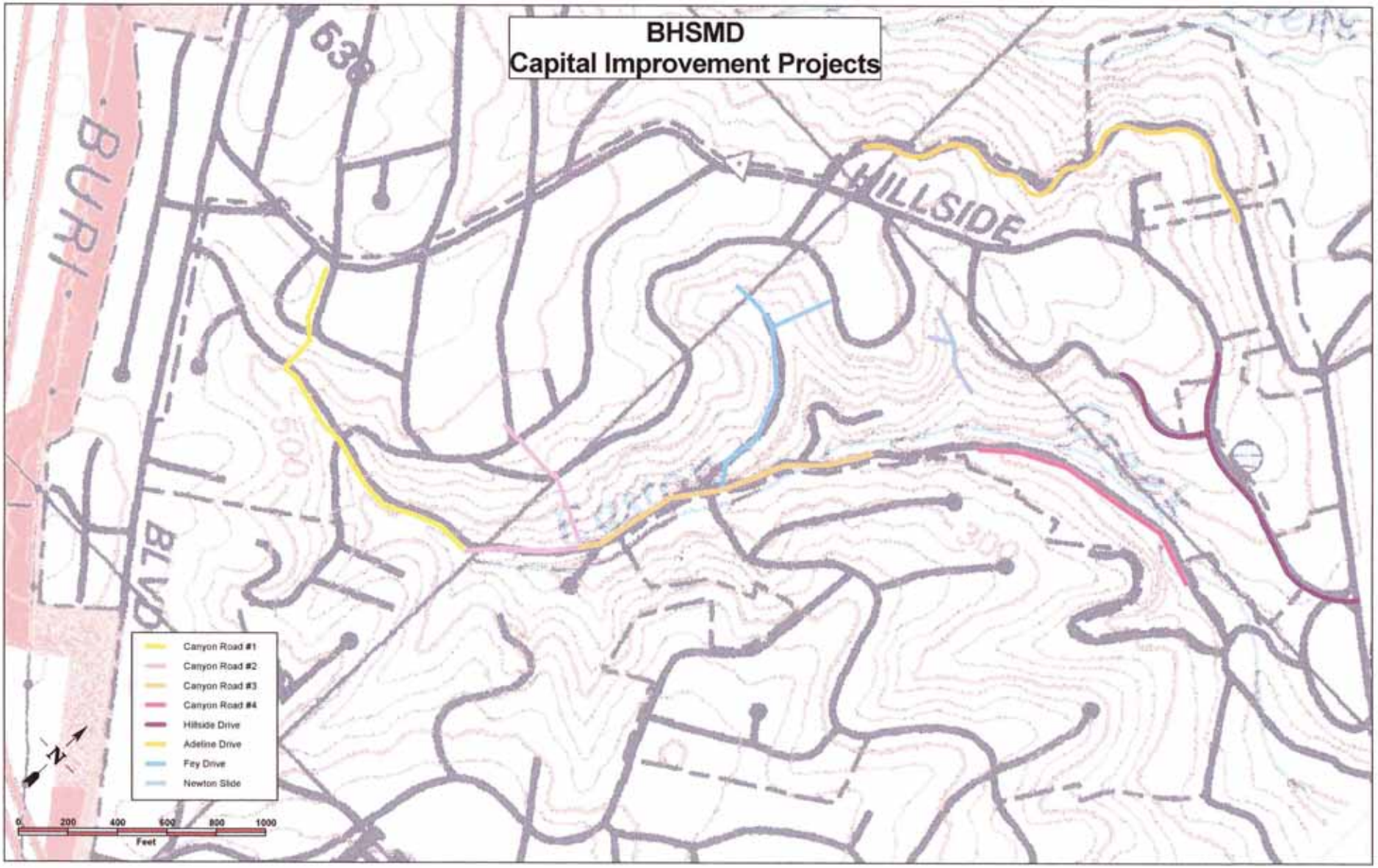
PLEASE FAX RESULTS TO: 650-726-6269. This is a voice/fax line, so just send the fax when the outgoing message comes on and it will go through.

We look forward to hearing from you. Thank you.

Cordially yours,

Matthew R. Clark, RPA
Senior Associate

enc: Montara Mtn., Palo Alto, San Mateo, Woodside 7.5 min. topos w/ Projects



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STATE OF CALIFORNIA Edmund G. Brown Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
Fax (916) 657-5390
Web Site www.nahc.ca.gov

October 13, 2011

Matthew R. Clark
Holman & Associates
3615 Folsom Street
San Francisco, CA 94110

Sent by Fax: 650-726-6269
Number of Pages: 2

Re: Proposed San Mateo Count Wastewater Collections System CIP Project, San Mateo County.

Dear Mr. Clark:

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-4038.

Sincerely,

Debbie Pilas-Treadway
Environmental Specialist III

Native American Contacts
San Mateo County
October 13, 2011

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Ohlone/Costanoan

s list is current only as of the date of this document.

tribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and ety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code

s list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Mateo Count Wastewater Collections System CIP project, San Mateo County

holman & ASSOCIATES
Archaeological Consultants
"SINCE THE BEGINNING"
3615 FOLSOM ST. SAN FRANCISCO,
CALIFORNIA 94110 415/550-7286

Rosemary Cambra, Chairperson
Muwekma Ohlone Indian Tribe of the San Francisco Bay Area
2574 Seaboard Avenue
San Jose, CA 95131

27 October 2011

Dear Ms. Cambra,

Holman & Associates is conducting consultation with Native Americans for four "San Mateo County Wastewater Collection System (WCS) Projects" at various locations in San Mateo County. The Projects are linear WCS pipelines as shown on the enclosed maps. The Project vicinities are not sectioned, but are in the Rancho Buri Buri (Burlingame Hills Sewer Maintenance District, Montara Mtn. quad), and Rancho Las Pulgas (Crystal Springs County Sanitation District, San Mateo quad; Devonshire CSD, Woodside quad, and Fair Oaks SMD, Woodside and Palo Alto quads) Land Grants (see Maps). The Projects are found on the USGS "Montara Mountain," "Woodside," "San Mateo," and "Palo Alto" 7.5 minute topographic quadrangles, portions of which are supplied. The archaeological records search has not been completed, but it is possible Native American sites are recorded in or within 250 m of the Projects, particularly along the creeks.

We are contacting you and other Ohlone representatives designated for San Mateo County by the NAHC. We invite your participation in the consultation process. The NAHC has searched the Sacred Lands files for properties of importance to Native Americans, finding none in or near these Projects. Please review the enclosed maps to locate any Native American cultural resources not identified but known to you, or anyone you may know, that may be affected by the Project. Please notify us if you have any information, recommendations, or concerns.

Your input and any recommendations you make will be given due consideration. We request that you address this matter and provide a written response within 15 days of receipt of this letter, which we will incorporate into our documentation.

To reach us, please call or fax to my home office number (650-726-6269) or use my email (mrccrm@comcast.net), not the main office number, unless you can't reach me or would like to talk to Miley about the project. Please send your written response by mail to the address above.

We look forward to hearing from you.

Cordially yours,

Matthew R. Clark, RPA
Senior Associate

enc: Montara Mtn., Palo Alto, San Mateo, Woodside 7.5 min. topos w/ Projects

Subject: San Mateo County CIP Project Consultation--four wastewater pipeline projects at various locations
From: Matthew Clark <mrccrm@comcast.net>
Date: 11/14/2011 1:48 PM
To: Jakki@bigvalley.net, Miley <Holman.Assoc@comcast.net>, Leianne Humble <lhumble@DDAPlanning.com>

Hi Jakki Kehl--

Got your phone message left about 11 AM today. To summarize what you said: you agree that there are likely to be archaeologically sensitive spots and/or sites at some of the many locations for these four projects. You'd like to see the records search results (so would I; it's been over a month and it hasn't come back yet) so you can make some recommendations. You'd like more specifics on the projects, size of pipelines, locations, etc. You want to know what sites they're going through. You assume this is a 106 project [that's correct]. You'd like to be involved in the project but you'd like more information.

I'd like to have been able to summarize the records search too, but as I say, it was sent on 10-07 and hasn't been completed yet. It's easy to see why; there are so many locations marked on the four quads. When the records search does come back, I'll write up a summary, noting the elements of the projects, if any, that go through sites and any that are within 250 meters of recorded sites. If you'd like I can scan the site records and send them to you. I will assume you're not interested in project elements that show nothing in the records search.

I don't really have more specifics yet as to pipe or trench sizes, depths, etc., however the routes for all proposed pipelines are shown on the four topo quads I sent. We should assume the APE will include the entire streets or easements as shown. No other work has been proposed, no pump stations or new lines, these are all upgrades to existing.

To keep the record of consultation accurate, clean, and complete, please respond in writing either by email or regular mail. If you are satisfied with the above and want to wait until I get the records information to you, you need not reply to this email.

Thanks,
--
Matthew R. Clark, RPA

HOME Office Phone & Fax: 650-726-6269
MY Email: MRCCRM@comcast.net

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3615 Folsom Street
San Francisco, CA 94110
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Holman.Assoc@comcast.net

Subject: Re: San Mateo County CIP Project Consultation--four wastewater pipelineprojects at various locations
From: Matthew Clark <mrccrm@comcast.net>
Date: 11/14/2011 3:28 PM
To: jakki@bigvalley.net, Leianne Humble <lhumble@DDAPlanning.com>, Miley <Holman.Assoc@comcast.net>

Jakki--

OK, I'll send the records when they arrive. Could be a lot of material, so I hope gmail or this address accepts many megabyte attachments.

The SRF loan that puts this into the 106 process is administered by the State Water Resources Control Board, which has delegated Federal responsiblity for 106 compliance, so they're the lead on 106 (I hear they now want to be known as the State Water Board or SWB).

As for schedule, I don't know that. Sometime next year? It's a long process just getting clearance and then the loan money.

Matthew

On 11/14/2011 2:51 PM, jakki@bigvalley.net wrote:

> Hi Matt
> yes I would like the records so I can review and consult on this
> project. My new email address is jakkikehl@gmail.com
>
> When do they plan on doing this project and who is the Federal lead
> agency.
> Thanks Jakki
>
> Dial Broadband has arrived Nationwide! Up to 5 times faster than traditional
> dialup connections from $13.33/month! See the demo for yourself at <a
> href="http://www.BigValley.net">www.BigValley.net

Subject: Re: San Mateo County Wastewater Collection System Projects
From: Matthew Clark <mrccrm@comcast.net>
Date: 11/16/2011 10:37 AM
To: Jean-Marie <jmfgmc@sbcglobal.net>, Irenne Zwierlein <amah_mutsun@yahoo.com>

Thank you, Jean-Marie,

I will add you concerns to the Native American consultation record. I am still waiting for the archaeological records search to be completed, but got word yesterday that it would go out in today's mail. As you can see from the maps, there are a great many elements in the four different San Mateo County-run sanitary districts. I will go through the search results and provide you with a summary of where recorded sites are within or near possible impact zones amd what I'm going to recommend.

In the middle of writing this, SMA Co Pub Works called, returning my call about the other Ohlone who responded. I recommended to them that they contact Irenne as she's the only rep living in the County and make her the main contact for NA input, so I will provide the same materials directly to Irenne too. The County people would be willing to write a letter saying they have recognized Irenne as the most logical NA rep to be involved--I didn't know you have a house in RW City; don't you live in Redding? Anyway, probably you both should become involved, the better to keep the consultation local with people who know about local sites and have lots of experience.

The San Lorenzo Valley Water District/Olympia Water Project Area of Potential Effects contains no recorded sites. I surveyed the zone and found no indications. I don't think the landform or vegetation (it used to be all redwood forest before logging) make the area sensitive, so I won't be recommending any further work except the standard warning to call if they find anything.

Thanks again for responding,

Matthew R. Clark, RPA

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MY Email: MRCCRM@comcast.net

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On 11/15/2011 8:26 PM, Jean-Marie wrote:

> &nb
> sp; ; Matthew, I am writing in response to your letter on SCS Projects. I am very interested in this project and the areas involved. As Miley and you know that this contains many sites some documented and some not. Irenne and I have worked in these areas before. Irenne is my sister and recommended contacting you, I have been away on business and I am sorry I did not respond earlier. Irenne and I grew up in the area we are familiar with the region. If you need our assistance please let Irenne know. I have a home in Redwood City and my phone number is 650-207-4685.
>
> As for the **San Lorenzo Valley Water District Olympia Water District Acquistion and Project.** I do not know any information on this area.
>
> Jean-Marie Feyling

Subject: October 27, 2011 Captial Improvements project
From: Irenne Zwierlein <amah_mutsun@yahoo.com>
Date: 11/16/2011 2:36 AM
To: Matthew Clark <MRCCRM@comcast.net>
CC: Matthew Clark <MRCCRM@COMCAST.NET>

November 16, 2011
Holman & Associates
Matthew
In regards to your inquires on your project San Mateo County Wastewater Collections Project.
The few items I can recall are (Woodside, Winding Way
sensitive area Artifact on the Ellison Project, San Mateo, El Cerrito Road is very close "Burials", Montara, several creeks, Redwood City, burial on 9th and Fair Oaks
I do have a few other concerns on this project I will give you a call, when I get a a little time
Meanwhile if there is anyway we can assist you, feel free to give us a call.

Thanks for the update.

Irenne Zwierlein

Subject: Re: San Mateo CIP 4 sewer projects: Records search summary
From: Matthew Clark <mrccrm@comcast.net>
Date: 1/24/2012 11:14 AM
To: Jean-Marie <jmfgmc@sbcglobal.net>

Hi Jean-Marie--

Do you still have the maps I sent with the consultation letter? If so, the one labeled "DCSD Capital Improvement Projects" is the critical one. At the left side, where the orange line for Devonshire Blvd and the pink line for Chesham Avenue are right above the large print "Pulgas" might be the locations of sites Nelson recorded in 1909 or so. The current site records do not have any maps and the exact location of these is uncertain. I'll be checking it out when I get over there--they are "shell heaps" and so should be easy to see if they are there. That's in San Carlos hills but I know it's difficult to tell where it is from this scale map.

On the map labeled "CSCSD Capital Improvement Projects" at the yellow line for Polhemus Road, there's a site on the same side of the creek as the road right above the 'ree' in Creek, which I don't think will be found under the road as it was likely wiped out when the road went in and then got expanded (all the sewer work will be in the road). Down the road to the left/west, see the number 270? there's a site on the other side of the creek from the road across from the 270; it's outside the APE and won't be affected by sewer work either.

On the map labeled FOSMD "Capital Improvement Projects" there's a site about three blocks west of the 6th Street improvements, which is one of the blue lines at the upper right. There's another recorded site by the Eleanor Drive line, the green one down near the bottom center; it's on the other side of Woodside Road. I don't think either of these sites could be affected by the projects.

In case you don't have those maps anymore, I've attached all the topographic maps. This is a big file so I hope you can get it because it's the only format I have for this file right now. There are also several maps in it that are no longer parts of the overall project. The only projects now under consideration are BHSMD, CSCSD, DCSD, and FOSMD, the ones I addressed in the summary I sent.

After I go surface survey these sites I will be making recommendations to discover if any are really in the areas to be effected by the projects.

Matthew R. Clark, RPA

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Holman.Assoc@comcast.net

On 1/21/2012 4:53 PM, Jean-Marie wrote:

Matthew thank you for the information, would you please send a map with the area that has the known sites and the site you will be working.

Thank you, Jean-Marie

From: Matthew Clark <mrccrm@comcast.net>
To: Irenne Zwierlein <amah_mutsun@yahoo.com>; Jean-Marie <jmfgmc@sbcglobal.net>; Jakki <jakkikehl@gmail.com>
Sent: Sat, January 21, 2012 3:25:58 PM
Subject: San Mateo CIP 4 sewer projects: Records search summary

Hi Irenne, Jean-Marie, Jakki--

Attached is a single-page PDF file summarizing the records search information for the four sanitary district improvements projects being done by San Mateo County. Most of these lines have never been examined for archaeology--of course, most run in paved roads in urban areas too, so field survey may not be much use. One location, the upper portion of the Devenshire CSD may encounter sites and parts of that are not in roads, so I'll be checking that one most carefully, but the actual locations of those sites are hardly known, nor whether they still exist.

If you can't print this file and want to, let me know and I'll plug the info into the body of an email.

If you want to provide any more feedback on this, please use email. It will take some time to respond as I am very busy, and also it would be best for me to not provide more information until I get a chance to get out and walk all the APEs.

Thanks,

--

Matthew R. Clark, RPA

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San Mateo County CIP: Four County Sanitary District Improvement Projects
Summary of Historical Resources Records Search

1. Burlingame Hills Sewer Maintenance District (BHSMD)

There are no recorded prehistoric sites on or near the APEs. There is one recorded historic resource, the Kohl Mansion, within 250 m of the APE.

There are no recorded surveys that cover or are adjacent to the APEs. There are five recorded surveys within 250 m of one or more of the APEs.

2. Crystal Springs County Sanitation District (CSCSD)

There are two prehistoric sites recorded within 250 m of the APE. SMA-311 is adjacent to Polhemus Road, which is a project APE; reported as almost entirely destroyed in 1990. SMA-339 is recorded on the other side of Polhemus Creek from all the APEs; it was "badly disturbed" in 1993.

Sixteen resource studies are recorded within 250 m of one or more of the APEs; one was a general survey of the City of San Mateo that did not record any sites near the Project APEs. Two lineal or point surveys were not in or adjacent to the APEs. Five areal surveys were not within or adjacent to any APEs. The other eight studies were either records searches with no field survey, Caltrans general or bridge surveys, or historic building surveys.

3. Devonshire County Sanitation District (DCSD)

There are four prehistoric sites possibly near or in the APEs; all are poorly mapped possible Nelson 1909 sites; SMA-24 is listed as Nelson 358?; SMA-25 as Nelson 359; SMA-26 as Nelson 360; SMA-27 as Nelson 361; none of the site records contain maps. Three (SMA-24, -26, -27) are "approximately located" on the records search map. Site SMA-25 is not mapped at all. Field survey will be needed to confirm or disconfirm these locations.

There are no recorded surveys or other studies within 250 of any APEs.

4. Fair Oaks Sewer Maintenance District (FOSMD)

There are two prehistoric sites recorded within 250 m of two APEs; neither is within or adjacent to the APE. SMA-83 is ~200 m east of the 6th Avenue APE. The site was originally recorded as between an SPRR right-of-way and the Hetch Hetchy Aqueduct (1953), later as between the railroad and the aqueduct route (1984), then as south of and right on the aqueduct (1991) but not on the RR line and as having very poor integrity, and then again as between the railroad and aqueduct but extending onto both (2008). None of the recordings indicate it is closer than 2½ blocks from the APE; field survey needed to confirm. SMA-276 is located on the opposite side of Woodside Road of the Eleanor Road APE, ~250 m away, and is cut through by two roads; field survey needed to confirm. No other sites recorded within 250 m of any APEs.

Nineteen resource studies or surveys are recorded within 250 m of one or more APEs. Numerous studies overlap. Ten of these are lineal surveys on roads or utility corridors; two of these cross or include parts of two APEs. Five studies are point reports (single cell tower sites for example. The other four are areal surveys, three Caltrans or others focused on intersections and road corridors, two are specific parcel surveys. One is just a records search; two others are general studies with no fieldwork apparent.

01-21-2012

Matthew, growing up and living in Redwood City all my life I know these areas very well. Just because sites are not recorded does not mean that there are not burials or villages that have been disturbed. Most of this area has old infrastructure that was done in the 50's and before. *The SFPUC is finding this out the hard way.* At that time there were no laws to protect anything from anyone. We are finding burials every month on the peninsula in residential areas not previously recorded. I hope that the San Mateo County Board of Supervisors and all the departments involved understand that 90% of these areas included in these maps are potential hot spots. I hope that they fully understand what we will do if they hit something if they do not listen to the Native American Community on these projects.
I highly recommend that any of these project areas that are near the creeks, surrounding flat and any known site areas (1/4 of a mile of site) be monitored by and archaeologist and by Native American Monitors that are familiar with these areas. This will insure that our Cultural Resources be protected as well as our rights to protect them under the law.

Jean-Marie Feyling
650-207-4685
530-243-1633

Subject: San Mateo County Sewer Projects Consultation
From: Matthew Clark <mrccrm@comcast.net>
Date: 3/6/2012 4:55 PM
To: Ann Marie Sayer <ams@garlic.com>

Hi Ann Marie--

Good to hear from you. Sorry I haven't replied to your Friday message, and now it's in writing. For the consultation record, I have to have everything in writing.

In answer to your question, I consider "too late" to be when the report has been written and submitted, which it has not, so I will incorporate your concerns into the record. The message got cut off, but I think I got it. You said you think there ought to be Native American monitoring for sensitive spots. I will also forward you a summary of the records search information I sent to the other respondents, but ...

The records seemed to show some very sensitive areas with recorded sites. I've now field surveyed every element of every project, and the recorded sites are nowhere near any of the work. The Devonshire District records show four shell mounds recorded by Nelson in 1909 right in the project, but I didn't see a single speck of shell and the area is extremely steep going up from the creek--the roads and modern houses are carved into the hillsides. There sure are no shell middens up there, so the sites are mislocated.

All the project locations except some in the Fair Oaks District are like that, on steep hillsides, house pads and roads cut into the hillsides. Where there are creeks, they are small, seasonal, very steep narrow canyons. There will be work right next to one in Burlingame Hills, but I carefully looked at the area and saw nothing of concern.

I will forward you that other email. Please respond to this one so I know you got this. And if you have any other concerns, please let me know.

Thanks,
--
Matthew R. Clark, RPA

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San Francisco, CA 94110
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Subject: Fwd: San Mateo CIP 4 sewer projects: Records search summary
From: Matthew Clark <mrccrm@comcast.net>
Date: 3/6/2012 4:57 PM
To: Ann Marie Sayer <ams@garlic.com>

-------- Original Message --------
Subject: San Mateo CIP 4 sewer projects: Records search summary
Date: Sat, 21 Jan 2012 15:25:58 -0800
From: Matthew Clark <mrccrm@comcast.net>
To: Irenne Zwierlein <amah_mutsun@yahoo.com>, Jean-Marie <jmfgmc@sbcglobal.net>, Jakki <jakkikehl@gmail.com>

Hi Irenne, Jean-Marie, Jakki--

Attached is a single-page PDF file summarizing the records search information for the four sanitary district improvements projects being done by San Mateo County. Most of these lines have never been examined for archaeology--of course, most run in paved roads in urban areas too, so field survey may not be much use. One location, the upper portion of the Devenshire CSD may encounter sites and parts of that are not in roads, so I'll be checking that one most carefully, but the actual locations of those sites are hardly known, nor whether they still exist.

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If you want to provide any more feedback on this, please use email. It will take some time to respond as I am very busy, and also it would be best for me to not provide more information until I get a chance to get out and walk all the APEs.

Thanks,
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Matthew R. Clark, RPA

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Holman.Assoc@comcast.net

Attachments:

Summary of Records Search.pdf	10.8 KB