Initial Study/Mitigated Negative Declaration

Sanitary Sewer Parallel Trunk Line (Manhole T-0 to T-32)

February 9, 2024

EAST PALO ALTO SANITARY DISTRICT

Prepared by

EMC Planning Group

EAST PALO ALTO SANITARY DISTRICT

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NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

In compliance with the California Environmental Quality Act (CEQA), the East Palo Alto Sanitary District has undertaken environmental review for the proposed Sanitary Sewer Parallel Trunk Line (Manhole T-0 to T-32), and intends to adopt a Mitigated Negative Declaration. The East Palo Alto Sanitary District invites all interested persons and agencies to comment on the proposed Sanitary Sewer Parallel Trunk Line (Manhole T-0 to T-32).

Lead Agency: East Palo Alto Sanitary District

Project Location: North of Embarcadero Road through the Palo Alto Airport site to east of San Francisquito Creek in the City of Palo Alto

Project Description: The East Palo Alto Sanitary District (lead agency) is proposing to construct a new, 18-inch sanitary sewer line, parallel to an existing 24- to 30-inch sanitary sewer line, from manhole T-0 within the Palo Alto Regional Water Quality Control Plant, running north/northwest through the Palo Alto Airport (airport) site to manhole T-32, just east of San Francisquito Creek bridge. The total length is approximately 6,000 linear feet. The proposed improvements are located outside of the district service boundaries and within the City of Palo Alto. The new sanitary sewer line route would begin at manhole T-0 and proceed across Embarcadero Road north through the airport outdoor airplane parking area to manhole T-4 where the route turns northwest and parallels the runway along the east side of the adjacent golf course. At manhole T-10, the route turns southwest and runs between the golf course and the San Francisquito Creek Trail. The route ends at manhole T-32. The capacity improvements that would result from the proposed project, laid out in the sanitary district's 2002 and 2015 Master Plan Updates, are necessary to service the needs of existing users and for servicing the future growth of the City of East Palo Alto as projected in the 2016 Vista 2035 East Palo Alto General Plan.

Construction activities will include survey staking of the pipeline alignment, trench excavations, import and placement of pipes, manholes, and backfill materials, compaction of backfill, and restoration of ground surface to match existing conditions. The width and depth of construction would be 20 feet, and 10 feet, respectively. Delivery of construction materials, a staging area, and traffic patterns on airport property will be coordinated with the Airport. The district will also work with Federal Aviation Administration (FAA) and the airport to determine and implement the steps required to obtain a utility easement through the airport. A construction schedule for the proposed project is not known at this time but could last up to 12 months.

Public Review Period: Begins – Monday, February 12, 2024
Ends – Wednesday, March 13, 2024

Proposed Mitigated Negative Declaration is Available for Public Review at these Locations:	East Palo Alto Sanitary District Office 901 Weeks Street East Palo Alto, CA 94303 https://www.epasd.com/transparency/public-information/development-projects-section-under-public-information
Address Where Written Comments May be Sent:	Akin Okupe, M.B.A., P.E. General Manager/District Engineer East Palo Alto Sanitary District 901 Weeks Street East Palo Alto, CA 94303 aokupe@epasd.com
Public Hearing:	Date: To Be Determined Location: Board Room at the East Palo Alto Sanitary District, 901 Weeks Street, East Palo Alto, CA 94303

PROPOSED MITIGATED NEGATIVE DECLARATION

SANITARY SEWER PARALLEL TRUNK LINE MANHOLE (T-0 TO T-32)

PREPARED FOR

East Palo Alto Sanitary District

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February 9, 2024

PROPOSED MITIGATED NEGATIVE DECLARATION

In Compliance with the California Environmental Quality Act (CEQA)

Project Name	Sanitary Sewer Parallel Trunk Line (Manhole T-0 to T-32)
Lead Agency	East Palo Alto Sanitary District
Project Proponent	East Palo Alto Sanitary District
Project Location	North of Embarcadero Road through the Palo Alto Municipal Airport site to east of San Francisquito Creek in the City of Palo Alto
Project Description	The district is proposing to construct a new, 18-inch sanitary sewer line, parallel to an existing 24- to 30-inch sanitary sewer line, from manhole T-0 within the Palo Alto Regional Water Quality Control Plant, running north/northwest through the Palo Alto Airport (Airport) to manhole T-32, just east of San Francisquito Creek bridge. The total length is approximately 6,000 linear feet. The proposed improvements are located outside of the district service boundaries and within the City of Palo Alto. The new sanitary sewer line route would begin at manhole T-0 and proceed across Embarcadero Road north through the airport outdoor airplane parking area to manhole T-4 where the route turns northwest and parallels the runway along the east side of the adjacent golf course. At manhole T-10, the route turns southwest and runs between the golf course and the San Francisquito Creek Trail. The route ends at manhole T-32. Construction will be conducted in accordance with federal regulations, specifically the *Federal Aviation Administration (FAA) Advisory Circular 150/5370-2G: Operational Safety on Airports During Construction*. An engineered Construction Safety and Phasing Plan will be developed and submitted to FAA for approval. Before

	initiation of each phase of construction, EPASD will request the Airport to issue a Notice to Airmen that alerts pilots to areas of airport that will be temporarily closed or otherwise affected. If required, an Aircraft Parking Plan will be created and implemented for parked planes that are temporarily displaced. Disturbance to airport surfaces by bore pits, pipeline trenches and other construction activities will be restored to FAA specifications for airport surfaces. Construction activities will include survey staking of the pipeline alignment, trench excavations, import and placement of pipes, manholes, and backfill materials, compaction of backfill, and restoration of ground surface to match existing conditions. The width and depth of construction would be 20 feet, and 10 feet, respectively. Delivery of construction materials, a staging area, and traffic patterns on airport property will be coordinated with the Airport. The Airport requires escorts, badges, training, and radio contact with air traffic control for all on-airport access, driving, and deliveries. The district will perform an Obstruction Evaluation/Airport Airspace Analysis, review with the Airport, and submit the analysis to FAA for review. The district will also work with FAA and the Airport to determine and implement the steps required to obtain a utility easement through the airport. A construction schedule for the proposed project is not known at this time but could last up to 12 months.
Public Review Period	February 12, 2024 to March 13, 2024
Written Comments To	Akin Okupe, M.B.A., P.E., General Manager East Palo Alto Sanitary District 901 Weeks Street East Palo Alto, CA 94303
Proposed Findings	The East Palo Alto Sanitary District is the custodian of the documents and other material that constitute the record of proceedings upon which this decision is based.

The initial study indicates that the proposed project has the potential to result in significant adverse environmental impacts. However, the mitigation measures identified in the initial study would reduce the impacts to a less than significant level. There is no substantial evidence, in light of the whole record before the lead agency East Palo Alto Sanitary District that the project, with mitigation measures incorporated, may have a significant effect on the environment. See the following project-specific mitigation measures:

Mitigation Measures

Air Quality

AQ-1 The district will include the following air district basic control measures during construction on all project bid and construction documents. The sewer district will ensure the following measures are undertaken by the contractor during construction:

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

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

3. All visible mud or dirt track-out onto adjacent public roads will 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 will be limited to 15 mph.

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

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

7. All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications. All equipment will 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 sewer district regarding dust complaints. This person will respond and take corrective action within 48 hours. The air district's phone number will also be visible to ensure compliance with applicable regulations.

Biological Resources

BIO-1 Prior to construction staging or ground disturbance, a qualified biologist will develop a Worker Environmental Awareness Program and conduct a training session for all construction personnel. At a minimum, the training will include a description of special-status species potentially occurring in the project vicinity, including Alameda song sparrow, burrowing owl, California black rail, California Ridgway's rail, northern harrier, saltmarsh common yellowthroat, salt-marsh harvest mouse, salt-marsh wandering shrew, hoary bat, pallid bat, and nesting birds and raptors. Their habitats, measures that are being implemented to conserve species as they relate to the project, and the boundaries within which construction activities will occur will be explained. Informational handouts with photographs clearly illustrating the species' appearances will be used in the training session. All new construction personnel will undergo this mandatory environmental awareness training.

The qualified biologist will train biological monitors selected from the construction crew by the construction contractor (typically the project foreman). Before the start of work each day, the monitor will check for animals under any equipment such as vehicles and stored pipes within active construction zones. The monitor will also check all excavated steep-walled holes or trenches greater than one foot deep for trapped animals. If a special-status species is observed within an active construction zone, the qualified biologist will be notified immediately and all work within 50 feet of the individual will be halted and all equipment turned off until the individual has left the construction area.

The East Palo Alto Sanitary District will document evidence of completion of this training prior to ground disturbance.

BIO-2 The district will obtain incidental take authorization from the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) for the disturbance of known California Ridgway's rail and California

black rail habitat. As part of the CDFW Section 2081 Incidental Take Permit application and as part of the request for Section 7 endangered species consultation through the U.S. Army Corps of Engineers (USACE) Nationwide Permit application, the District will include the following information:

a. A detailed description of the action and specific area where the action will occur that will impact California Ridgway's rail and California black rail habitat.

b. A construction noise assessment to determine the level of disturbance to adjacent habitats and what noise- and/or vibration-attenuating measures may minimize impacts to adjacent habitats.

c. Measures to avoid, minimize, and/or mitigate impacts to California Ridgway's rail and California black rail habitat, including, but not limited to, the following:

    1. Determine the presence/absence of California Ridgway's rail and California black rail on or adjacent to the project site. Presence of California Ridgway's rail will be based on data collected by the Invasive Spartina Project, which conducts annual breeding season surveys in the project vicinity.

    2. A permitted biologist will be retained to conduct surveys of appropriate habitat for California Ridgway's rail and California black rail within the work area, including all staging and access routes, no more than seven days prior to initiation of work within suitable habitat. If California Ridgway's rail or and California black rail are observed during this survey, a biologist will conduct an additional survey immediately prior to initiation of construction activities. If California Ridgway's rail or California black rail are observed within or near the work area, a no-disturbance buffer (minimum 50 feet) will be implemented. No work will occur within the buffer until the biologist verifies that California Ridgway's rail or and California black rail individuals have left the area.

    3. To minimize or avoid the loss of California Ridgway's rail and California black rail, activities within or adjacent to salt marsh habitat would not occur within 2 hours before or after extreme high tides (6.5 feet or above, as measured at the Golden Gate Bridge), when the marsh plain is inundated, because protective cover is limited and activities could prevent individuals from reaching available cover.

4. If a California Ridgway's rail or California black rail nest is encountered during any project-related activity, all construction will be halted and the observers would immediately leave the vicinity of the nest.

5. Sound-attenuating blankets will be installed on the perimeter fencing between the project and suitable habitat for California Ridgway's rail and California black rail. Installation of the sound-attenuating blankets will reduce noise traveling to adjacent habitat areas.

BIO-3 The district will obtain incidental take authorization from the California Department of Fish and Wildlife (CDFW) and the U.S Fish and Wildlife Service (USFWS) for impacts to known salt marsh harvest mouse and salt marsh wandering shrew habitat. As part of the CDFW Section 2081 Incidental Take Permit application and as part of the request for Section 7 endangered species consultation through the U.S. Army Corps of Engineers (USACE) Nationwide Permit application, the district will include the following information:

a. A detailed description of the action and specific area where the action will occur that will impact salt marsh harvest mouse and salt marsh wandering shrew habitat.

b. Measures to avoid, minimize, and/or mitigate impacts to salt marsh harvest mouse and salt marsh wandering shrew habitat, including, but not limited to, the following:

1. Immediately prior to any ground disturbance, including vegetation removal as outlined in this measure, a survey for salt marsh harvest mouse and salt marsh wandering shrew will be conducted by a qualified biologist.

2. All vegetation within potential habitat for the salt marsh harvest mouse within the project site and within a 2-foot buffer around the project footprint will be removed by hand using only nonmechanized hand tools (i.e., trowel, hoe, rake, and shovel) prior to the initiation of work within these areas Silt fences will be erected adjacent to construction areas to define and isolate potential mouse habitat. Pickleweed stands will be removed by hand or weedwhacker. Vegetation will be removed to bare ground or stubble no higher than 1 inch. Vegetation will be removed under the supervision of a qualified biologist. Vegetation removal may begin when no mice are observed

and will start at the edge farthest from the salt marsh or the poorest habitat and work its way towards better salt marsh habitat, and from center of project outward.

3. Temporary exclusion fencing will be installed immediately after the hand removal of all vegetation (as described above) from the work area and a 2-foot buffer around the work area. The fence will be made of a heavy plastic sheeting material that does not allow salt marsh harvest mice to pass through or climb, and the bottom will be buried to a depth of 4 inches so that salt marsh harvest mouse cannot crawl under the fence. Fence height will be at least 12 inches higher than the highest adjacent vegetation with a maximum height of 4 feet. All supports for the exclusion fencing will be placed on the inside of the work area. The qualified biologist will have the ability to make field adjustments to the location of the fencing depending on site-specific habitat conditions.

4. Prior to the initiation of work each day, the person(s) designated by the qualified biologist will thoroughly inspect the work area and adjacent habitat areas to determine if salt marsh harvest mouse is present. Any necessary repairs to the exclusion fencing will be completed within 24 hours of the initial observance of the damage. Work will not continue within 300 feet of the damaged exclusion fencing until the fences are repaired.

5. No work will occur within 50 feet of suitable tidal marsh habitat within two hours before and after an extreme high tide event (6.5 feet or higher measured at the Golden Gate Bridge and adjusted to the timing of local high tides) unless salt marsh harvest mouse-proof exclusion fencing has been installed around the work area.

6. Anyone accessing salt marsh harvest mouse habitat will walk carefully through the marsh, avoiding high pickleweed cover and wrack where harvest mice are likely to nest or find cover.

BIO-4 To avoid impacts to nesting birds during the nesting season (January 15 through September 15), all construction activities should be conducted between September 16 and January 14, which is outside of the bird nesting season. If construction must occur during the bird nesting season, then a qualified biologist will conduct a pre-construction survey for nesting birds to ensure that no nests would be disturbed during project construction.

If project-related work is scheduled during the nesting season (February 15 to August 30 for small bird species such as passerines; January 15 to September 15 for owls; and February 15 to September 15 for other raptors), a qualified biologist will conduct nesting bird surveys.

a. Two surveys for active bird nests will occur within 14 days prior to start of construction, with the final survey conducted within 48 hours prior to construction. Appropriate minimum survey radii surrounding each work area are typically 250 feet for passerines, 500 feet for smaller raptors, and 1,000 feet for larger raptors. Surveys will be conducted at the appropriate times of day to observe nesting activities. Locations off the site to which access is not available may be surveyed from within the site or from public areas. If no nesting birds are found, a letter report confirming absence will be prepared and submitted to the East Palo Alto Sanitary District and no further mitigation is required.

b. If the qualified biologist documents active nests within the project site or in nearby surrounding areas, an appropriate buffer between each nest and active construction will be established. The buffer will be clearly marked and maintained until the young have fledged and are foraging independently. Prior to construction, the qualified biologist will conduct baseline monitoring of each nest to characterize "normal" bird behavior and establish a buffer distance, which allows the birds to exhibit normal behavior. The qualified biologist will monitor the nesting birds daily during construction activities and increase the buffer if birds show signs of unusual or distressed behavior (e.g., defensive flights and vocalizations, standing up from a brooding position, and/or flying away from the nest). If buffer establishment is not possible, the qualified biologist or construction foreman will have the authority to cease all construction work in the area until the young have fledged and the nest is no longer active. Once the absence of nesting birds has been confirmed, a letter report will be prepared and submitted to the East Palo Alto Sanitary District.

BIO-5 To avoid/minimize impacts to burrowing owls potentially occurring within the project site, a biologist qualified in ornithology will conduct surveys for burrowing owl. The approved biologist will conduct a two-visit (i.e., morning and evening) presence/absence survey at areas of suitable habitat on and adjacent to the project site boundary no less than 14 days prior to the start of construction or ground disturbance activities. Surveys will be conducted according to the methods for take avoidance described in the *Burrowing Owl Survey Protocol and*

Mitigation Guidelines (California Burrowing Owl Consortium 1993) and the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). If no burrowing owls are found, a letter report confirming absence will be prepared and submitted to the East Palo Alto Sanitary District and no further mitigation is required.

Because burrowing owls occupy habitat year-round, seasonal no-disturbance buffers, as outlined in the *Burrowing Owl Survey Protocol and Mitigation Guidelines* (CBOC 1993) and the *Staff Report on Burrowing Owl* Mitigation (CDFW 2012), will be in place around occupied habitat prior to and during any ground disturbance activities. The following table includes buffer areas based on the time of year and level of disturbance (CDFW 2012), unless a qualified biologist approved by the CDFW verifies through non-invasive measures that either: 1) birds have not begun egg laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

Location	Time of Year	Level of Disturbance Buffers (meters)		
		Low	Med	High
Nesting Sites	April 1 – Aug 15	200 m	500 m	500 m
Nesting Sites	Aug 16 – Oct 15	200 m	200 m	500 m
Nesting Sites	Oct 16 – Mar 31	50 m	100 m	500 m

If burrowing owl is found and avoidance is not possible, burrow exclusion may be conducted by qualified biologists only during the non-breeding season, before breeding behavior is exhibited and after the burrow is confirmed empty through non-invasive methods, such as surveillance. Occupied burrows will be replaced with artificial burrows at a ratio of one collapsed burrow to one constructed artificial burrow (1:1). Evicted burrowing owls may attempt to colonize or re-colonize an area that would be impacted, thus ongoing surveillance during project activities will be conducted at a rate sufficient to detect burrowing owls if they return.

If surveys locate occupied burrows in or near construction areas, consultation with the CDFW will occur to interpret survey results and develop a project-specific avoidance and minimization approach. Once the absence of burrowing owl has been confirmed, a letter report will be prepared and submitted to the East Palo Alto Sanitary District.

BIO-6 Approximately 14 days prior to construction activities, a qualified biologist will conduct a habitat assessment for bats and potential roosting sites in trees within 50 feet of the construction easement. These surveys will include a visual inspection of potential roosting features (bats need not be present) and a search for presence of guano within the project site, construction access routes, and 50

feet around these areas. Cavities, crevices, exfoliating bark, and bark fissures that could provide suitable potential nest or roost habitat for bats will be surveyed. Assumptions can be made on what species is present due to observed visual characteristics along with habitat use, or the bats can be identified to the species level with the use of a bat echolocation detector such as an "Anabat" unit. Potential roosting features found during the survey will be flagged or marked.

If no roosting sites or bats are found, a letter report confirming absence will be prepared and submitted to the East Palo Alto Sanitary District and no further mitigation is required.

If bats or roosting sites are found, bats will not be disturbed without specific notice to and consultation with CDFW.

If bats are found roosting outside of the nursery season (May 1 through October 1), CDFW will be consulted prior to any eviction or other action. If avoidance or postponement is not feasible, a Bat Eviction Plan will be submitted to CDFW for written approval prior to project implementation. A request to evict bats from a roost includes details for excluding bats from the roost site and monitoring to ensure that all bats have exited the roost prior to the start of activity and are unable to re-enter the roost until activity is completed. Any bat eviction will be timed to avoid lactation and young-rearing. If bats are found roosting during the nursery season, they will be monitored to determine if the roost site is a maternal roost. This could occur by either visual inspection of the roost bat pups, if possible, or by monitoring the roost after the adults leave for the night to listen for bat pups. Because bat pups cannot leave the roost until they are mature enough, eviction of a maternal roost cannot occur during the nursery season. Therefore, if a maternal roost is present, a 50-foot buffer zone (or different size if determined in consultation with the CDFW) will be established around the roosting site within which no construction activities including tree removal or structure disturbance will occur until after the nursery season.

BIO-7 Prior to ground disturbance within the project boundary, the East Palo Alto Sanitary District will retain a qualified biologist to determine the extent of potential wetlands and waterways regulated by the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and CDFW.

If wetlands are anticipated to be impacted by the proposed sewer line route, we propose two different options for avoiding or minimizing impacts to wetlands:

Option 1: Avoid direct impacts to wetlands by rerouting the sewer line outside of the wetland area or by horizontal drilling under the wetland area identified.

Option 2: Assume impacts to wetlands and obtain necessary permits.

If the USACE claims jurisdiction, the district will retain a qualified biologist to obtain a Clean Water Act Section 404 Nationwide Permit. If the impacts to the drainage features do not qualify for a Nationwide Permit, the district will proceed with the qualified biologist in obtaining an Individual Permit from the USACE. The district will then retain a qualified biologist to coordinate with the RWQCB to obtain a Clean Water Act Section 401 Water Quality Certification. If necessary, the district will also retain a qualified biologist to coordinate with the CDFW to obtain a Streambed Alteration Agreement.

To compensate for temporary and/or permanent impacts to Waters of the U.S. that would be impacted as a result of the proposed project, mitigation will be provided as required by the regulatory permits. Mitigation would be provided through one of the following mechanisms:

a. A *Wetland Mitigation and Monitoring Plan* will be developed that will outline mitigation and monitoring obligations for temporary impacts to wetlands and other waters as a result of construction activities. The Wetland Mitigation and Monitoring Plan would include thresholds of success, monitoring and reporting requirements, and site-specific plans to compensate for wetland losses resulting from the project. The Wetland Mitigation and Monitoring Plan will be submitted to the appropriate regulatory agencies for review and approval during the permit application process.

b. To compensate for permanent impacts, the purchase and/or dedication of land to provide suitable wetland restoration or creation will ensure a no net loss of wetland values or functions. If restoration is available and feasible, a minimum 1:1 mitigation to impact ratio would apply to projects for which mitigation is provided in advance.

BIO-8 Once project details and impact calculations have been finalized, the district will consult with the Bay Conservation and Development Commission (BCDC) to obtain either a Major Permit or Administrative Permit (Minor Permit). A San Francisco Bay Joint Aquatic Resource Permit Application (JARPA) may also be suitable for this project, a permit process that combines RWQCB, USACE, CDFW, USFWS, and BCDC permits into one application.

Cultural Resources

CR-1 In the event that prehistoric traces (artifacts, concentrations of shell/bone/rock/ash, etc.) are encountered during excavation and/or grading of the site, all activity within a 50-foot radius of the find will be stopped, the East Palo Alto Sanitary District General Manager and the City of Palo Alto (Public Works) will be notified. The General Manager will ensure that a qualified archaeologist will examine the find and make appropriate recommendations prior to continuing construction. Recommendations could include collection, recordation, and analysis of any significant cultural materials. A report of findings documenting any data recovery during monitoring would be submitted to the General Manager.

CR-2 Due to the possibility that Native American human remains may be discovered during project construction activities, the following language will be included in all construction documents.

> "If human remains are found during construction, there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the Santa Clara County Coroner is contacted to determine that no investigation of the cause of death is required.
>
> If the coroner determines the remains to be Native American, then the coroner shall contact the Native American Heritage Commission within 24 hours. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descendent (MLD) from the deceased Native American. The MLD may then make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and associated grave goods as provided in Public Resources Code Section 5097.98.
>
> The landowner or authorized representative will rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further disturbance if: a) the Native American Heritage Commission is unable to identify a MLD or the MLD failed to make a recommendation within 48 hours after being allowed access to the site; b) the descendent identified fails to make a recommendation; or c) the landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner."

Geology & Soils

GEO-1 In order to control runoff, erosion, and sedimentation during construction, the district will prepare and implement a storm water pollution prevention plan (SWPPP) that uses storm water "Best Management Practices (BMPs) in compliance with the NPDES General Construction Permit (2009-0009-DWQ).

GEO-2 Prior to issuance of any grading permits, due to the possibility that unique paleontological resources might be found during construction, the sanitary district will include the following language on all construction documents:

> "In the event that paleontological resources are encountered during excavation and/or grading of the site, all activity within a 50-foot radius of the find will be stopped, the East Palo Alto Sanitary District General Manager will be notified. The General Manager will ensure that a qualified paleontologist will examine the find and make appropriate recommendations prior to continuing construction. Recommendations could include collection, recordation, and analysis of any significant paleontological materials. A report of findings documenting any data recovery during monitoring would be submitted to the General Manager.

Greenhouse Gas Emissions

GHG-1 To reduce construction GHG emissions, the sanitary district will include the following language on all construction documents requiring all contractors to implement the following construction best management practices where feasible:

- Diesel-powered, off-road construction equipment will meet Tier 4 emissions standards, or in the alternative, Tier 2 or 3 engines may be used provided they include particular matter emissions control;
- Use alternative fuel equipment;
- Minimize construction equipment idling time to no more than five minutes;
- Use grid electric power to reduce the use of fuel-powered construction equipment;
- Power portable equipment with electricity or batteries; and
- Implement waste, disposal, and recycling strategies in accordance with Sections 4.408 and 5.408 of the 2016 California Green Building Standards Code (CALGreen Code).

Noise

N-1 The sanitary district will limit construction activities to the hours of 8:00 a.m. to 6:00 p.m. This requirement will be included in construction plans.

INITIAL STUDY

SANITARY SEWER PARALLEL TRUNK LINE (MANHOLE T-0 TO T-32)

PREPARED FOR

East Palo Alto Sanitary District

Akin Okupe, M.B.A., P.E., General Manager

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February 9, 2024

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Appendices

Figures

Tables

A. BACKGROUND

Project Title	Sanitary Sewer Parallel Trunk Line (Manhole T-0 to T-32)
Lead Agency Contact Person and Phone Number	Akin Okupe, M.B.A., P.E., General Manager/District Engineer, 650-325-9021
Date Prepared	February 2024
Study Prepared by	EMC Planning Group Inc. 601 Abrego Street Monterey, CA 93940
Project Location	North of Embarcadero Road through the Palo Alto Airport site to east of San Francisquito Creek in the City of Palo Alto
Project Sponsor Name and Address	East Palo Alto Sanitary District 901 Weeks Street East Palo Alto, CA 94303
General Plan Designation	"Major Institution/Special Facility" and "Public Park" (*City of Palo Alto Comprehensive Plan 2030*)
Zoning	Public Facility "PF(D)" (City of Palo Alto)

Setting

East Palo Alto Sanitary District ("district") is a special district responsible for maintaining the sanitary sewers in a portion of the cities of East Palo Alto and Menlo Park, in San Mateo County. The district's original collection system was built in the 1940s. The collection system carries wastewater from the district's service area along an existing trunk line extending from a connection point at the east end of O'Connor Street in the City of East Palo Alto. The trunk sewer line then travels underneath San Francisquito Creek around the Baylands Golf Links and the Palo Alto Municipal Airport south to the Palo Alto Regional Water Quality Control Plant, located at 2501 Embarcadero Way in the City of Palo Alto, Santa Clara County. The wastewater is treated at the plant operated by the City of Palo Alto and disposed of in a manner that meets federal and state standards. The district's service area is primarily residential with several commercial and industrial parcels. The district's service area encompasses nearly 1,230 acres, or 1.92 square miles. The district's collection system is a gravity system. Approximately 70 percent of the pipelines are 6 inches in diameter. The

larger collector lines range between 8 inches and 24 inches in diameter and contains a siphon beneath San Francisquito Creek (East Palo Alto Sanitary District 2015). The district replaced the siphon with two new, parallel siphons in 2017. A siphon allows the wastewater to flow through a pipe under low lying areas such as a creek, where flow by gravity at these locations is impossible. Figure 1, Regional Location, presents the regional location of the project site. Figure 2, Aerial Photograph, presents the project site and surrounding land uses.

While the sanitary district's service boundary is entirely within the City of East Palo Alto, the project site is located entirely within the City of Palo Alto's city limits. Therefore, the primary regulatory document for the proposed project is the *City of Palo Alto Comprehensive Plan 2030* (Palo Alto general plan), which is utilized in this initial study to identify policies that address and mitigate potential environmental impacts of the proposed project.

Description of Project

The district is proposing to construct a new, 18-inch sanitary sewer line, parallel to an existing 24- to 30-inch sanitary sewer line, from manhole T-0 within the Palo Alto Regional Water Quality Control Plant, running north/northwest through the Palo Alto Airport (Airport) to manhole T-32, just east of San Francisquito Creek bridge. The total length is approximately 6,000 linear feet. The proposed improvements are located outside of the district service boundaries and within the City of Palo Alto. The proposed route is included in Figure 3, Proposed Sanitary Sewer Parallel Trunk Line, which presents the location and extent of the proposed sewer line improvements.

The new sanitary sewer line route would begin at manhole T-0 and proceed across Embarcadero Road north through the airport outdoor airplane parking area to manhole T-4 where the route turns northwest and parallels the runway along the east side of the adjacent golf course. At manhole T-10, the route turns southwest and runs between the golf course and the San Francisquito Creek Trail. The route ends at manhole T-32.

The capacity improvements that would result from the proposed project, laid out in the sanitary district's 2002 and 2015 Master Plan Updates, are necessary to service the needs of existing users and for servicing the future growth of the City of East Palo Alto as projected in the 2016 *Vista 2035 East Palo Alto General Plan* (East Palo Alto general plan). As noted by district consultant Freyer & Laureta, Inc. in *Technical Memorandum re: Addendum to the March 2015 East Palo Alto Sanitary District Master Plan Update* (dated April 28, 2021), total projected total average dry weather flow (ADWF) increase in million gallons per day (MGD) is consistent with the projected increase in water demand in the Year 2040 presented in Section 3 of the City of East Palo Alto's *2015 Urban Water Management Plan* date June 2016.The City of East Palo Alto water supply allocation from the San Francisco Public Utilities Commission was 1.96 MGD and the East Palo Alto general plan projects a maximum demand of 3.03

MGD in the Year 2040 representing an increase of 1.07 MGD in average day demand. The projected total ADWF increase of 1.08 million gallons per day as a result of the proposed project is consistent with the projected additional potable water demand of 1.07 MGD presented in the East Palo Alto general plan (Freyer & Lureta 2021, page 5).

Construction will be conducted in accordance with federal regulations, specifically the Federal Aviation Administration (FAA) *Advisory Circular 150/5370-2G: Operational Safety on Airports During Construction*. An engineered Construction Safety and Phasing Plan will be developed and submitted to FAA for approval. Before initiation of each phase of construction, EPASD will request the Airport to issue a Notice to Airmen that alerts pilots to areas of airport that will be temporarily closed or otherwise affected. If required, an Aircraft Parking Plan will be created and implemented for parked planes that are temporarily displaced. Disturbance to airport surfaces by bore pits, pipeline trenches and other construction activities will be restored to FAA specifications for airport surfaces.

Construction activities will include survey staking of the pipeline alignment, trench excavations, import and placement of pipes, manholes, and backfill materials, compaction of backfill, and restoration of ground surface to match existing conditions. The width and depth of construction would be 20 feet, and 10 feet, respectively.

Delivery of construction materials, a staging area, and traffic patterns on airport property will be coordinated with the Airport. The Airport requires escorts, badges, training, and radio contact with air traffic control for all on-airport access, driving, and deliveries.

The district will perform an Obstruction Evaluation/Airport Airspace Analysis, review with the Airport, and submit the analysis to FAA for review. The district will also work with FAA and the Airport to determine and implement the steps required to obtain a utility easement through the airport.

A construction schedule for the proposed project is not known at this time but could last up to 12 months.

Other Public Agencies Whose Approval is Required

- City of Palo Alto (Encroachment Permit)
- Santa Clara Valley Water District
- Regional Water Quality Control Board
- San Francisco Bay Conservation and Development Commission
- California Department of Fish and Wildlife
- California Department of Transportation (Division of Aeronautics)

- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife
- Federal Aviation Administration (FAA)

Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

On May 28, 2021, the district sent an offer of consultation letter to nine (9) tribal representatives representing the Amah Mutsun Tribal Band of Mission San Juan Bautista, Costanoan Rumsen Carmel Tribe, Indian Canyon Mutsun Band of Costanoan, Muwekma Ohlone Indian Tribe of the SF Bay Area, The Ohlone Indian Tribe, Rusem Am:a Tur:ataj Ohlone, and Tamien Nation, respectively. As of November 30, 2023, the district has not received a response letter and request for consultation from any of these tribal representatives.

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

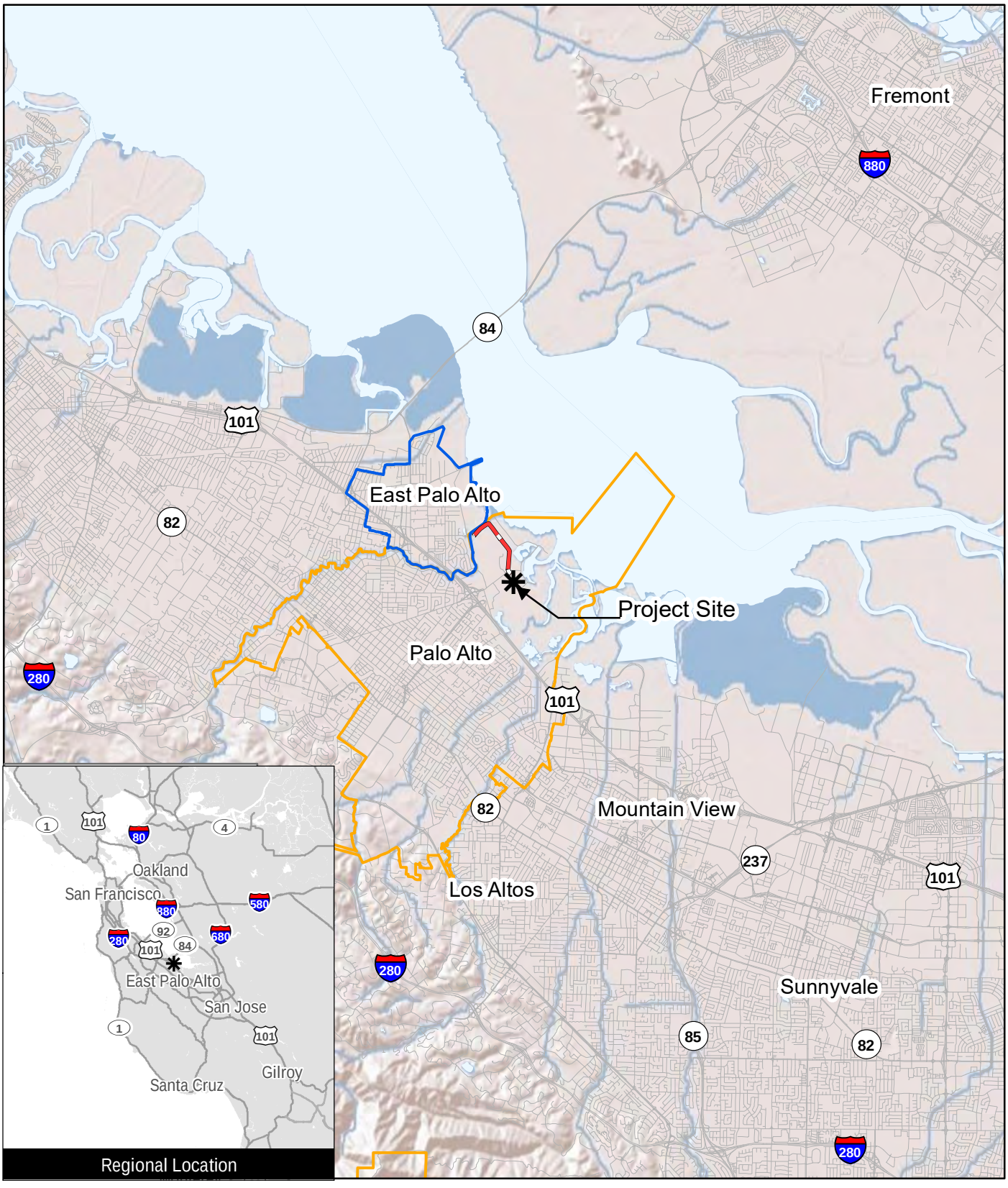

Figure 1

Regional Location

Sanitary Sewer Parallel Trunk Line (Manhole T-0 to T-32) Initial Study

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Source: Google Earth 2023, San Mateo County GIS 2019, Santa Clara County GIS 2018

Figure 2

Aerial Photograph

Sanitary Sewer Parallel Trunk Line (Manhole T-0 to T-32) Initial Study

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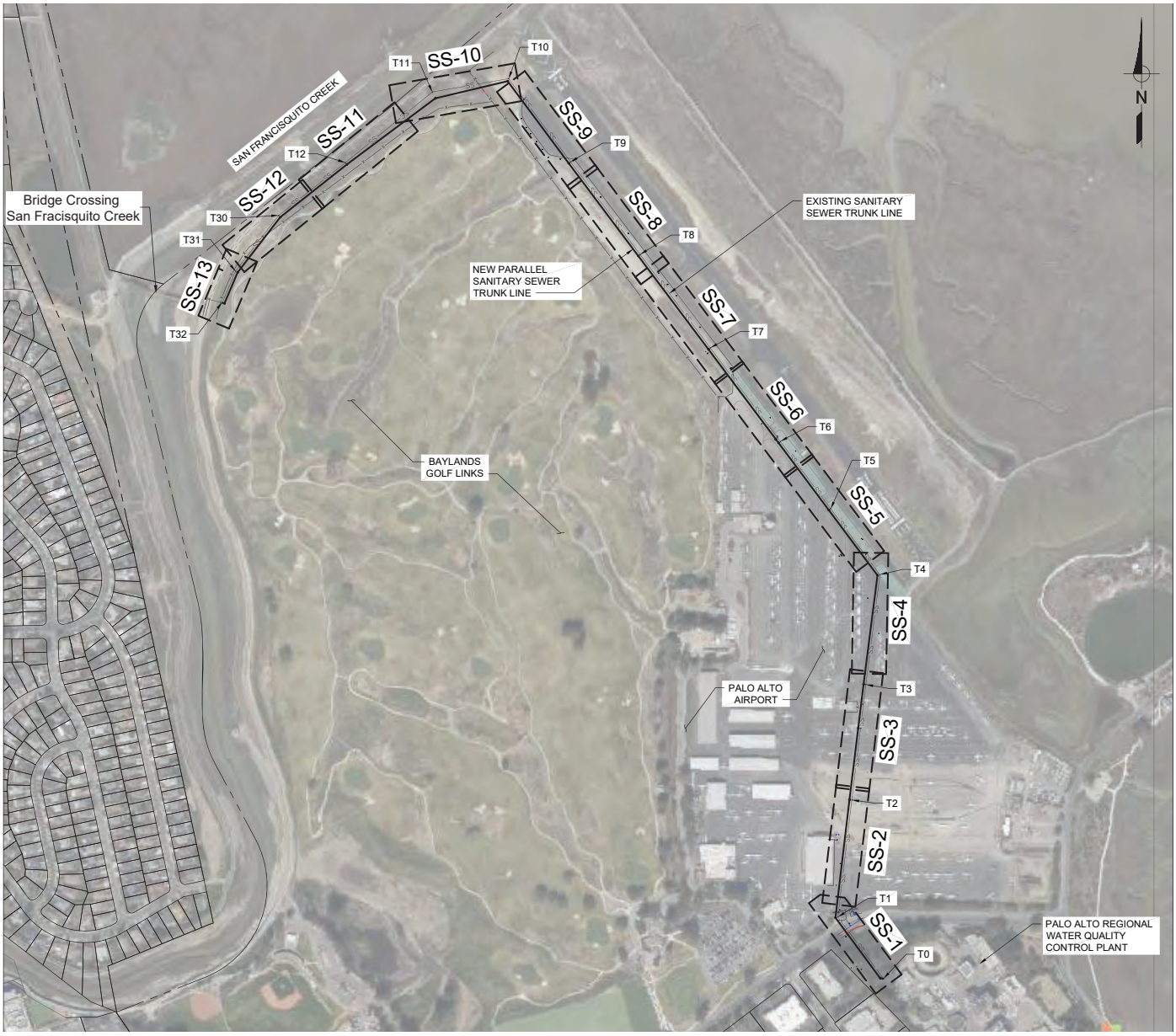

0 500 feet

Source: Sierra West Consultants, Inc. 2023

Figure 3

Proposed Sanitary Sewer Parallel Trunk Line

Sanitary Sewer Parallel Trunk Line (Manhole T-0 to T-32) Initial Study

E M C

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B. Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- ☐ Aesthetics
- ☐ Agriculture and Forestry Resources
- ☐ Air Quality
- ☐ Biological Resources
- ☐ Cultural Resources
- ☐ Energy
- ☐ Geology/Soils
- ☐ Greenhouse Gas Emissions
- ☐ Hazards & Hazardous Materials
- ☐ Hydrology/Water Quality
- ☐ Land Use/Planning
- ☐ Wildfire
- ☐ Mineral Resources
- ☐ Noise
- ☐ Population/Housing
- ☐ Public Services
- ☐ Recreation
- ☐ Transportation
- ☐ Tribal Cultural Resources
- ☐ Utilities/Service Systems
- ☐ Mandatory Findings of Significance

C. 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 (1) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (2) 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.

_____ _____

Akin Okupe, M.B.A., P.E., General Manager Date

D. Evaluation of Environmental Impacts

Notes

1. A brief explanation is provided for all answers except "No Impact" answers that are adequately supported by the information sources cited 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 is 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 a project-specific screening analysis).
2. All answers take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once it has been determined that a particular physical impact may occur, then the checklist answers 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 Impact with Mitigation Measures Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less-Than-Significant Impact." The mitigation measures are described, along with a brief explanation of 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 are used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier document or negative declaration. [Section 15063(c)(3)(D)] In this case, a brief discussion would identify the following:
    a. "Earlier Analysis Used" identifies and states where such document is available for review.
    b. "Impact Adequately Addressed" identifies which effects from the checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and states whether such effects were addressed by mitigation measures based on the earlier analysis.
    c. "Mitigation Measures"—For effects that are "Less-Than-Significant Impact with Mitigation Measures Incorporated," mitigation measures are described which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances, etc.) are incorporated. Each reference to a previously prepared or outside document, where appropriate, includes a reference to the page or pages where the statement is substantiated.
7. "Supporting Information Sources"—A source list is attached, and other sources used or individuals contacted are cited in the discussion.
8. The explanation of each issue identifies:
    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 significant.

1. AESTHETICS

Except as provided in Public Resources Code Section 21099 (Modernization of Transportation Analysis for Transit-Oriented Infill Projects), would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Have a substantial adverse effect on a scenic vista? (1, 2, 3, 4, 5)	☐	☐	☐	☒
b.	Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway? (1, 2, 3, 4, 5, 6)	☐	☐	☐	☒
c.	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? (1, 2, 3, 4, 5, 7)	☐	☐	☐	☒
d.	Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area? (1, 2, 3, 4, 5, 7)	☐	☐	☐	☒

Comments:

a. The project site is located in area designated in the *City of Palo Alto Comprehensive Plan 2030* as within a "Major View Corridor" (Map L-4, City of Palo Alto 2017). However, the parallel sewer trunk line would be entirely underground and would not impact scenic vistas. In addition, construction activities would be temporary and any equipment or vehicles needed for installation of the parallel sewer trunk line would only be onsite when needed and not stored onsite.

b. The project site is not located within or near a state scenic highway. The closest eligible or officially designated state scenic highway is Interstate 280, which is located approximately 5.25 miles to the southwest of the project site (Caltrans 2021). The proposed parallel sewer trunk line would be entirely underground and therefore, would not damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway.

c. The proposed project consists of the installation of a new parallel sewer trunk line along an existing sewer line extending from the City of Palo Alto Regional Water Quality Control Plant to a sewer main located immediately adjacent to San Francisquito Creek, the Bayland Golf Links, and the Palo Alto Airport. These improvements would not degrade the existing visual character or quality of public views of the site and its surroundings.

d. The project would not include any new sources of light or glare. Construction would occur only during daylight hours and there would not be nighttime lighting along the pipeline alignment. Therefore, no impact from light or glare would occur with project implementation.

2. AGRICULTURE AND FOREST RESOURCES

In determining whether impacts on agricultural resources are significant environmental effects and in assessing impacts on agriculture and farmland, 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:

	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
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 nonagricultural use? (4, 5, 8, 9)	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract? (4, 5, 8, 9)	☐	☐	☐	☒
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))? (4, 5, 8, 9)	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to non-forest use? (4, 5, 8, 9)	☐	☐	☐	☒
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use? (4, 5, 8, 9)	☐	☐	☐	☒

Comments:

a-e. The project site is surrounded by a golf course (west), office buildings and a wastewater treatment plant (south), and the Palo Alto Airport (east). There are no Williamson Act contracts on the site, and the site is zoned for public facilities and open space. Therefore, the project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, or conflict with a Williamson Act contract or Agricultural zoning.

There are no lands zoned for forest land or timber production located in Palo Alto. Therefore, the project would have no impact on agricultural or forest land.

3. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Conflict with or obstruct implementation of the applicable air quality plan? (28, 29, 30, 31)	☐	☐	☐	☒
b.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard? (28, 29, 31)	☐	☒	☐	☐
c.	Expose sensitive receptors to substantial pollutant concentrations? (31, 34)	☐	☒	☐	☐
d.	Result in other emissions, such as those leading to odors adversely affecting a substantial number of people? (29)	☐	☐	☒	☐

Comments:

a. The East Palo Alto Sanitary District ("district") project is located in the City of Palo Alto within the San Francisco Bay Area Air Basin, which is administered by the Bay Area Air Quality Management District ("air district"). The air district adopted the current version of the Clean Air Plan in 2017 (Clean Air Plan). Consistency with the Clean Air Plan is based on conformance with air quality control measures presented in the Clean Air Plan. The air district's Air Quality CEQA Guidelines (2017) ("air district CEQA guidelines") Section 9.1 provides guidance on determining if a development project is consistent with the Clean Air Plan. For consistency a project should meet three criteria: 1) support the primary goals of the Clean Air Plan; 2) include applicable Clean Air Plan control measures; and 3) not disrupt or hinder implementation of any Clean Air Plan control measures.

The primary goals of the Clean Air Plan are to attain air quality standards; to reduce population exposure to pollutants and protect public health in the Bay Area; and to reduce greenhouse gas (GHG) emissions and protect the climate. This is considered to have been accomplished if there are no project-level significant impacts, or if significant impacts are mitigated to a less-than-significant level.

Regarding operational activities, the proposed project is a sanitary sewer pipeline project that would be built parallel to the sewer district's existing trunk line over a distance of approximately 6,000 feet within existing rights-of-way. The new parallel trunk line would convey existing peak wastewater flows in tandem with the existing trunk line. The proposed project is an infrastructure improvement that would not result in an increase in population and would not result in new operational emissions (for further discussion of the project's impact on population, see Section D.14, Population and Housing, of this initial study). As discussed in items b and c of this section, the proposed project is a construction project that would generate criteria air pollutant emissions, but not to the extent that significant impacts would occur. The proposed project would generate, and expose sensitive receptors to, toxic air contaminant emissions from equipment exhaust and fine particulates during construction, but also not to the extent that significant impacts would occur.

There are 81 control measures in the Clean Air Plan, many of which are applicable only for industrial or regional implementation. Clean Air Plan control measures potentially applicable to the proposed project are presented below in Table 1, Potentially Applicable Control Measures (Clean Air Plan) along with a brief consistency analysis to determine how the project either does or does not implement the measure.

b. The six most common and widespread air pollutants of concern, or "criteria pollutants," are ground-level ozone, nitrogen dioxide, particulate matter, carbon monoxide, sulfur dioxide, and lead. In addition, reactive organic gases are a key contributor to the criteria air pollutants because they react with other substances to form ground-level ozone. Health effects of criteria air pollutants include asthma, bronchitis, chest pain, coughing, and heart diseases.

The air district is the agency with the primary responsibility for assuring that national and state ambient air quality standards are attained and maintained in the air basin. Depending on whether or not the standards are met or exceeded, the air basin is classified as being in "attainment" or "nonattainment." Table 2, San Francisco Bay Area Air Basin Attainment Status, identifies the current attainment status within the air basin for each criteria pollutant.

Table 1 Potentially Applicable Control Measures (Clean Air Plan)

Control Measure Number and Name	Consistency Analysis
SS36 – Particulate Matter from Trackout	The district will implement the air district's best management practices and dust control measures. Implementation of the measures will address mud and dirt that could be "tracked out" from the project construction site. These measures are included in Mitigation Measure AQ-1.
SS38 – Fugitive Dust	The district will implement the air district's best management practices and dust control measures, consistent with this control measure. These measures are included in Mitigation Measure AQ-1.
SS40 Odors	The proposed project is a short-term linear construction project and would not be a source of substantial odors.
TR16 Indirect Source Review	This control measure reduces emissions of key ozone precursors, ROG and NOx, particulate matter, toxic air contaminants and GHGs by reducing construction and operational emissions associated with new or modified land uses. On-road and off-road mobile emission sources are the main source categories targeted by this measure. This reduces region-wide population exposure to air pollutants and also reduces localized population exposure to air pollution. The proposed project would not emit operational emissions that would exceed air district standards. The potential for sensitive receptor exposures to construction TAC emissions are discussed in item "d" of this section.
TR22 Construction, Freight, and Farming Equipment	Through this control measure, the air district works with local communities and contractors to encourage retrofitting engines with diesel particulate filters or upgrading to equipment with electric or Tier IV off-road engines. The control measure will reduce key ozone precursors, ROG and NOx, and toxic air contaminant emissions such as diesel particulate matter and greenhouse gases through the installation of abatement devices on existing diesel equipment and other financial incentives to replace older equipment. The proposed project may qualify for this program.

SOURCE: BAAQMD 2017a

Table 2 San Francisco Bay Area Air Basin Attainment Status

Criteria Air Pollutants	State Standards	National Standards
Ozone	Non-attainment	Non-attainment
Respirable Particulate Matter	Non-attainment	Unclassified
Fine Particulate Matter	Non-attainment	Non-attainment
Carbon Monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Unclassified/Attainment
Lead	-	Attainment

SOURCE: Bay Area Air Quality Management District 2017a

Although the proposed project would not result in increased operational emissions, installation of the pipeline would generate criteria pollutant emissions during construction. Construction emissions include equipment exhaust emissions, fugitive dust emissions generated during grading, and ozone precursor emissions generated during the application of asphalt paving material.

Criteria air pollutant emissions generated during construction of the proposed project were estimated using the Road Construction Emissions Model (ROADMOD) version 9.0.0. ROADMOD is an emissions modeling program that is used to assess linear projects and is accepted by the air district for evaluation of linear utility projects. Typical equipment used in pipeline projects include backhoes, trenchers, air compressors, forklifts and generators. Variables such as construction duration, project length, total project area and acreage of disturbance (in acres), haul truck trip numbers and trip lengths, worker number and trip lengths, and construction equipment types and number are loaded into the model to produce results. Project-specific construction data inputs and ROADMOD results are included in Appendix A.

The air district has developed thresholds of significance that are used to determine whether or not the proposed project would result in a cumulatively considerable net increase of criteria air pollutants during operations and/or construction. The thresholds of significance for determining air quality impacts are contained in the 2017 CEQA Guidelines and are presented in Table 3, Unmitigated Construction Criteria Air Pollutant Emissions, which summarizes unmitigated criteria air pollutant emissions generated by project construction and compares the emissions to the air district thresholds of significance.

Table 3 Unmitigated Construction Criteria Air Pollutant Emissions

Source	ROG	NO_x	PM_{10}[1,2]	$PM_{2.5}$[1,2]
Air District Thresholds	54	54	82	54
Construction Emissions	2.04	16.07	1.03	0.88
Exceeds Thresholds?	NO	NO	NO	NO

SOURCE: Bay Area Air Quality Management District 2017b

NOTES: Pounds per day. The thresholds of significance for particulate matter emissions from project construction apply to exhaust emissions only. The air district recommends implementation of best management practices to reduce fugitive dust emissions.

The model results show that construction of the proposed project would not result in criteria air emissions that exceed the air district thresholds for criteria air pollutants. However, for all construction projects in the air basin, the air district has determined that significant regional air quality impacts would occur if a project does not

incorporate the air district's basic control measures to control fugitive dust emissions during construction. Construction of the proposed project would not generate criteria air pollutant emissions volumes that would exceed air district standards for single sources. However, project emissions would contribute to significant cumulative air quality impacts for ozone and particulate matter. The air district's basic control measures are found in Table 8-2 of the air district's 2017 CEQA Guidelines and are presented in Mitigation Measure AQ-1. Implementation of Mitigation Measure AQ-1 would ensure that the proposed project's construction emissions would be less than cumulatively considerable with mitigation.

Mitigation Measure

AQ-1 The sewer district will include the following air district basic control measures during construction on all project bid and construction documents. The sewer district will ensure the following measures are undertaken by the contractor during construction:

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

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

3. All visible mud or dirt track-out onto adjacent public roads will 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 will be limited to 15 mph.

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

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

7. All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications. All equipment will 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 sewer district regarding dust complaints. This person will respond and take corrective action within 48 hours. The air district's phone number will also be visible to ensure compliance with applicable regulations.

Implementation of the air district's basic control measures during all phase of construction and ground disturbance would further reduce less than significant fugitive dust emissions volumes during construction. Therefore, no significant impacts to regional air quality would occur and the project's emissions are less than cumulatively considerable with mitigation.

c. Toxic air contaminants (TACs) are pollutants that may be expected to result in an increase in mortality or serious illness or may pose a present or potential hazard to human health. Health effects include cancer, birth defects, neurological damage, damage to the body's natural defense system, and diseases that lead to death. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuels combustion, and commercial operations (e.g., dry cleaners). Diesel exhaust is the predominant TAC in urban air and is estimated to represent about two-thirds of the cancer risk from TACs.

Sensitive receptors are generally defined as any residence including private homes, condominiums, apartments, and living quarters; education resources such as preschools and kindergarten through grade twelve (K-12) schools; daycare centers; and health care facilities such as hospitals or retirement and nursing homes.

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust and fugitive dust ($PM_{2.5}$) that poses health risks for sensitive receptors. Diesel particulate matter (DPM), which is a known TAC, is a component of diesel exhaust. The 2017 Clean Air Plan discussion of control measure TR22 reports that construction, freight and farming equipment contribute approximately 15 percent of the regional inventory of NOx emissions, and five percent of $PM_{2.5}$ emissions. Construction equipment is also a contributor to local exposures of DPM. Criteria pollutant emissions from the engines used in construction, which are primarily diesel, are subject to control under regulations adopted by both CARB and U.S. EPA. U.S. EPA promulgated new emission standards for off-road engines in 1998, with

CARB adopting parallel standards in 2000. In 2004, Tier 4 emission standards were adopted and were phased in for new engines between 2011 and 2014. In 2007 CARB adopted an off-road equipment regulation to accelerate reductions of NO_x and diesel PM from existing off-road engines. Beginning in 2012 and through 2023, the off-road regulation requires operators of older equipment to either install abatement devices, upgrade to Tier 3 and eventually Tier 4 engines, or to retire older equipment. Efforts to reduce diesel PM will reduce exposures of residents and workers in the vicinity of construction projects (BAAQMD 2017, pp TR-96 – TR-98).

The primary community risk impact issues associated with construction emissions are cancer risk (DPM exposures) and exposure to $PM_{2.5}$. The air district requires an analysis of construction emissions exposures when construction activity would occur within 1,000 feet of sensitive receptors, or, when the project site is located within an identified Community-At-Risk in the air district's Community Air Risk Evaluation (CARE) program.

Figure 4, Sensitive Receptors within 1,000 Feet, shows the locations of residential and worker receptors that are within 1,000 feet of construction activity. A 590-foot segment of the project site is located within 1,000 feet of residences in East Palo Alto to the northwest. The nearest residential receptor to the project site is located within 560 feet of the northernmost end of the proposed pipeline. There are no sources of TAC emissions within 1,000 feet of the northern portion of the project site that would contribute to cumulative health risks at the sensitive receptor locations.

Construction health risks from construction of 560 feet of the proposed pipeline were not quantified in this report. The City of East Palo Alto is not identified as a Community-At-Risk in the CARE program, and although sensitive receptors are present and could be exposed to construction emissions from activity near the northern portion of the site, the potential for sensitive receptors' exposures to project construction emissions are limited due to their location upwind, the short duration of emissions-generating construction activity, further reductions of engine exhaust and fugitive dust emissions through implementation of AQ-1.

Emissions that could result in receptor exposures would be generated only during construction activity over a distance of 560 feet at the portion of the site closest to the residential neighborhood in East Palo Alto. Construction in this area would include excavating, pipe installation, and backfilling. Assuming 264 work days in 12 months over a distance of 6,000 feet, daily construction activity would occur at a minimum of about 23 feet per day, which would equate to about 24 working days to construct the 560-foot section. If construction occurs from north to south the distance between receptors and emissions sources would increase daily and the number of receptors

that would be exposed would diminish each day. Additionally, prevailing winds in this location are from the west 90 percent of the year (Weatherspark 2021), and airborne particulates from the project site would generally be transported in a southerly direction, away from the sensitive receptors north of the site. Further, the modeled construction PM_{10} and $PM_{2.5}$ exhaust emissions are substantially below the air district criteria pollutant thresholds (refer to Table 3), and with implementation of Mitigation Measure AQ-1, DPM and fugitive dust emissions would be further reduced by minimizing equipment and other vehicle idling times and requiring equipment checks and maintenance of all construction machinery and vehicles. For these reasons, sensitive receptor exposures to harmful TAC emissions from construction equipment exhaust would be minimized and no significant impacts would occur.

d. Land uses creating objectionable odors typically include heavy industrial and some agricultural practices. The proposed project is a linear pipeline project and therefore, would not create objectionable odors during project operations. Odors may be created during project construction, but this would be short term and would not affect a substantial number of people. Therefore, construction odor impacts would be less than significant.

Figure 4

Sensitive Receptors Within 1,000 Feet

Sanitary Sewer Parallel Trunk Line (Manhole T-0 to T-32) Initial Study

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4. BIOLOGICAL RESOURCES

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
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, regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service? (5, 11 ,35 ,36,46)	☐	☒	☐	☐
b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service? (37 ,38 ,39 ,40 ,41,46)	☐	☒	☐	☐
c.	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.), through direct removal, filing, hydrological interruption, or other means? (42,46)	☐	☒	☐	☐
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? (37, 38, 39)	☐	☐	☒	☐
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? (5, 11, 35, 36)	☐	☒	☐	☐
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? (5, 11 ,35, 36)	☐	☐	☐	☒

Comments:

This section is based on a reconnaissance-level biological field survey conducted by EMC Planning Group biologist Patrick Furtado, M.S., on July 1, 2021 to document existing plant

communities/wildlife habitats and evaluate the potential for special-status species to occur on the project site. Biological resources were documented in field notes, including species observed, dominant plant communities, significant wildlife habitat characteristics, and riparian and wetland habitat. Qualitative estimations of plant cover, structure, and spatial changes in species composition were used to determine plant communities and wildlife habitats. Habitat quality and disturbance levels were also described.

Prior to conducting the survey, Mr. Furtado reviewed site plans, aerial photographs, natural resource database mapping and reports, and other relevant scientific literature. This included searching the U.S. Fish and Wildlife Service (USFWS) Endangered Species Database (USFWS 2021a), California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CDFW 2021), and California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2021) to identify special-status plants, wildlife, and habitats known to occur in the vicinity of the project site. Special-status species in this report are those listed as Endangered, Threatened, or Rare, or as Candidates for listing by the USFWS and/or CDFW; as Species of Special Concern or Fully Protected species by the CDFW; or as Rare Plant Rank 1B or 2B species by the CNPS. A review was also conducted of the National Wetlands Inventory (USFWS 2021b) to identify potential jurisdictional aquatic features on or adjacent to the project site.

Preliminary consultation with Kim Squires, USFWS, and Will Kanz, CDFW, was initiated on September 21, 2021, to discuss potential impacts to listed species and protected habitats (USFWS and CDFW 2021). The permits required and processes needed to obtain permits for impacts to special-status species, their habitat, and protected wetlands and waterways are discussed further below.

Environmental Setting. The project site is located in Santa Clara County on the Mountain View United States Geological Survey (USGS) quadrangle map, with approximate elevations of 13 feet above sea level at the San Francisquito Creek bridge and eight feet above sea level at the water quality control plant.

The reconnaissance-level survey identified three habitat types in the study area: ruderal/non-native grassland, northern coastal salt marsh, and developed. These habitats are described in detail below. Figure 5, Habitat Map, shows the proposed sewer line route and the plant and wildlife habitats present. At Manhole T-32 on the Baylands Golf Links, the sewer line route begins in ruderal/non-native grassland habitat on the edge of the golf course. The habitat here is dominated by non-native grasses such as wild oats (*Avena fatua*), foxtail barley (*Hordeum murinum*), seaside barley (*Hordeum marinum*), and Italian rye grass (*Festuca perennis*). Weedy forbs such as Canada horseweed (*Erigeron canadensis*), bird's foot trefoil (*Lotus corniculatus*), and summer mustard (*Hirschfeldia incana*) are also dominant. Evidence of use of this habitat by small rodents such as Botta's pocket gopher (*Thomomys bottae*) and California ground squirrel (*Otospermophilus beecheyi*) was present.

Google Earth 2023, San Mateo County GIS 2019

Figure 5

Habitat Map

Sanitary Sewer Parallel Trunk Line (Manhole T-0 to T-32) Initial Study

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Common mammal species that could possibly use the ruderal vegetation occur along the sewer route include raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), Virginia opossum (*Didelphis virginiana*), and California ground squirrel (*Spermophilus beecheyi*); common reptiles may include western fence lizard (*Sceloporus occidentalis*) and common garter snake (*Thamnophis sirtalis*). Species of small rodents including mice (*Mus musculus*, *Reithrodontomys megalotis*, and *Peromyscus maniculatus*) and California vole (*Microtus californicus*) may also occur along the sewer line route.

The sewer line route continues parallel to San Francisquito Creek and enters northern coastal salt marsh habitat growing between the creek levee and the golf course. This approximately 960-foot section of salt marsh, exposed to tidal ebbs and flows from the bay, is dominated by pickleweed (*Salicornia pacifica*), alkali heath (*Frankenia salina*), and saltgrass (*Distichlis spicata*). Northern coastal saltmarsh provides habitat to numerous species endemic to the San Francisco Bay.

When the sewer line route reaches the airport and Manhole T-10, it turns sharply southeast and runs parallel to the airport's runway. Here the sewer line route runs under a gravel roadway with ruderal vegetation. Numerous black-tailed jackrabbits (*Lepus californicus*) were flushed out of the ruderal vegetation during the reconnaissance survey. A drainage channel also parallels the sewer line route (from approximately Manholes T-8 to T-4) to the southwest with tidal water and salt marsh vegetation.

At Manhole T-4, the sewer line route turns south and traverses developed/paved airport property, with no plant or wildlife habitat, before reaching Manhole T-1 at the south end of the airport. At Manhole T-1, a small patch of non-native trees and shrubs grow adjacent to the manhole including redgum eucalyptus (*Eucalyptus camaldulensis*), Australian pine (*Casuarina equisetifolia*), and Italian buckthorn (*Rhamnus alaternus*). The sewer line route then passes under Embarcadero Road and enters the Palo Alto Regional Water Pollution Control Plant and a patch of ruderal vegetation and eucalyptus trees surrounding Manhole T0.

a. **Special-Status Species.** A search of the CDFW's California Natural Diversity Database (CNDDB) was conducted for the target USGS quadrangle, Mountain View, and eight surrounding quadrangles: Palo Alto, Redwood Point, Newark, Niles, Milpitas, San Jose West, Cupertino, and Mindego Hill, to generate a list of potentially occurring special-status species in the project vicinity (CDFW 2021). Records of occurrence for special-status plants were also reviewed for all nine USGS quadrangles in the CNPS Inventory of Rare and Endangered Plants (CNPS 2021). A USFWS Endangered Species Program threatened and endangered species list was generated for Santa Clara County (USFWS 2021). Appendix B, Special-Status Species in the Project Vicinity, presents tables with CNDDB results, which lists special-status species documented within the project vicinity, their listing status and suitable habitat description, and their potential to occur on the site. Figure 6, Special-Status Species Known to Occur in the Project Vicinity, presents a map of CNDDB results.

Special-Status Plant Species

Of the special-status plant species with potential to occur on the project site identified in Appendix B, none are expected to occur on the project site due to lack of suitable habitat, historical extirpation from the area, or observed absence during the biological survey.

Special-Status Wildlife Species

Of the special-status wildlife species known to occur in the project vicinity identified in Appendix B, the following species have the potential to occur on the project site: Alameda song sparrow (*Melospiza melodia pusillula*), burrowing owl (*Athene cunicularia*), California black rail (*Laterallus jamaicensis coturniculus*), California Ridgway's rail (*Rallus obsoletus obsoletus*), northern harrier (*Circus hudsonius*), saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*), salt-marsh harvest mouse (*Reithrodontomys raviventris*), salt-marsh wandering shrew (*Sorex vagrans halicoetes*), hoary bat (*Lasiurus cinereus*), and pallid bat (*Antrozous pallidus*). Nesting birds may also occur at the project site.

Loss or harm to special-status wildlife species are considered significant adverse impacts. Implementation of the following general mitigation measure, in conjunction with specific measures identified below, would reduce potentially significant impacts to special-status wildlife species to a less-than-significant level.

Mitigation Measure

BIO-1 Prior to construction staging or ground disturbance, a qualified biologist will develop a Worker Environmental Awareness Program and conduct a training session for all construction personnel. At a minimum, the training will include a description of special-status species potentially occurring in the project vicinity, including Alameda song sparrow, burrowing owl, California black rail, California Ridgway's rail, northern harrier, saltmarsh common yellowthroat, salt-marsh harvest mouse, salt-marsh wandering shrew, hoary bat, pallid bat, and nesting birds and raptors. Their habitats, measures that are being implemented to conserve species as they relate to the project, and the boundaries within which construction activities will occur will be explained. Informational handouts with photographs clearly illustrating the species' appearances will be used in the training session. All new construction personnel will undergo this mandatory environmental awareness training.

Source: ESRI 2021, CDFW CNDDB 2021

Figure 6

Special-Status Species Known to Occur in the Project Vicinity

Sanitary Sewer Parallel Trunk Line (Manhole T-0 to T-32) Initial Study

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The qualified biologist will train biological monitors selected from the construction crew by the construction contractor (typically the project foreman). Before the start of work each day, the monitor will check for animals under any equipment such as vehicles and stored pipes within active construction zones. The monitor will also check all excavated steep-walled holes or trenches greater than one foot deep for trapped animals. If a special-status species is observed within an active construction zone, the qualified biologist will be notified immediately and all work within 50 feet of the individual will be halted and all equipment turned off until the individual has left the construction area.

The East Palo Alto Sanitary District will document evidence of completion of this training prior to ground disturbance.

California Ridgway's Rail and California Black Rail

The California Ridgway's rail, a federal- and state-listed endangered species, is a year-round resident of the salt marshes of San Francisco Bay. California Ridgway's rails are known to nest in Faber Marsh, adjacent to the north of the project site. The California black rail, a state-listed threatened species, is not known to nest in the vicinity of the project site, however it is thought to be a regular winter visitor to the bay marshes. These species are assessed together because the impacts of the proposed project on these special-status bird species would be similar.

A construction schedule for the proposed project is not known at this time but could last up to 12 months, overlapping both breeding and overwintering seasons. Based on preliminary consultation with USFWS and CDFW, the proposed project may directly impact California Ridgway's rail and California black rail through the loss of marsh habitat and cause indirect impacts as a result of construction noise travelling to occupied habitat in Faber Marsh. Construction activities could result in the loss or disturbance of individual animals. This would be a significant adverse environmental impact.

It is anticipated that the proposed project will also impact salt marsh/wetlands under the jurisdiction of the U.S. Army Corp of Engineers (USACE). Impacts to jurisdictional features are discussed further below, however a Nationwide Permit application for impacts to wetlands requires the USACE to consider all direct and indirect impacts to federally-listed species. The USACE becomes the lead federal agency and will request informal (Section 7) consultation with the USFWS. The USFWS will prepare a Biological Opinion containing avoidance, minimization and

mitigation measures to be included in the USACE permit. Compliance with the wetland protection measures contained in the USACE permit and the measures contained in the Biological Opinion then allow for project-related disturbance of wetlands and habitat for federally listed special-status species.

Implementation of mitigation measures BIO-1, which requires a training session on special-status species potentially present on the construction site for all personnel, and BIO-2, which requires obtaining incidental take authorization from both the USFWS and CDFW for the disturbance of known California Ridgway's rail and California black rail habitat, would reduce this potentially significant impact to less-than-significant.

Mitigation Measure

BIO-2 The District will obtain incidental take authorization from the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) for the disturbance of known California Ridgway's rail and California black rail habitat. As part of the CDFW Section 2081 Incidental Take Permit application and as part of the request for Section 7 endangered species consultation through the U.S. Army Corps of Engineers (USACE) Nationwide Permit application, the District will include the following information:

a. A detailed description of the action and specific area where the action will occur that will impact California Ridgway's rail and California black rail habitat.

b. A construction noise assessment to determine the level of disturbance to adjacent habitats and what noise- and/or vibration-attenuating measures may minimize impacts to adjacent habitats.

c. Measures to avoid, minimize, and/or mitigate impacts to California Ridgway's rail and California black rail habitat, including, but not limited to, the following:

1. Determine the presence/absence of California Ridgway's rail and California black rail on or adjacent to the project site. Presence of California Ridgway's rail will be based on data collected by the Invasive Spartina Project, which conducts annual breeding season surveys in the project vicinity.

2. A permitted biologist will be retained to conduct surveys of appropriate habitat for California Ridgway's rail and California black rail within the work area, including all staging and access routes, no more than seven days prior to initiation of work within suitable habitat. If California Ridgway's rail or and California black rail are observed during this survey, a biologist will conduct an additional survey immediately prior to initiation of construction activities. If California Ridgway's rail or California black rail are observed within or near the work area, a no-disturbance buffer (minimum 50 feet) will be implemented. No work will occur within the buffer until the biologist verifies that California Ridgway's rail or and California black rail individuals have left the area.

3. To minimize or avoid the loss of California Ridgway's rail and California black rail, activities within or adjacent to salt marsh habitat would not occur within 2 hours before or after extreme high tides (6.5 feet or above, as measured at the Golden Gate Bridge), when the marsh plain is inundated, because protective cover is limited and activities could prevent individuals from reaching available cover.

4. If a California Ridgway's rail or California black rail nest is encountered during any project-related activity, all construction will be halted and the observers would immediately leave the vicinity of the nest.

5. Sound-attenuating blankets will be installed on the perimeter fencing between the project and suitable habitat for California Ridgway's rail and California black rail. Installation of the sound-attenuating blankets will reduce noise traveling to adjacent habitat areas.

Salt Marsh Harvest Mouse and Salt Marsh Wandering Shrew

The salt marsh harvest mouse, a federal- and state-listed endangered species, is found in the marshes of South San Francisco Bay. The basic habitat of the salt marsh harvest mouse is *Salicornia*-dominated vegetation (USFWS 2013). The salt marsh wandering shrew, a California state species of special concern, also uses *Salicornia*-dominated vegetation and the driftwood that washes up on the edge of this vegetation. Although

the salt marsh wandering shrew's distribution in the South Bay is not well known, this species is presumed to be potentially present in the same locations where the salt marsh harvest mouse may occur. Habitat loss due to human actions is the greatest threat to both the salt marsh harvest mouse and salt marsh wandering shrew. These species are assessed together as their habitat requirements are related and impacts of the proposed project on these special-status species would be similar.

Based on preliminary consultation with USFWS and CDFW, the proposed project may impact known salt marsh harvest mouse and salt marsh wandering shrew habitat. Construction activities could result in the loss or disturbance of individual animals. This would be a significant adverse environmental impact.

As discussed above, it is anticipated that the proposed project will also impact salt marsh/wetlands under the jurisdiction of the U.S. Army Corp of Engineers (USACE). Impacts to jurisdictional features are discussed further below, however a Nationwide Permit application for impacts to wetlands requires the USACE to consider all direct and indirect impacts to federally-listed species. The USACE becomes the lead federal agency and will request informal (Section 7) consultation with the USFWS. The USFWS will prepare a Biological Opinion containing avoidance, minimization and mitigation measures to be included in the USACE permit. Compliance with the wetland protection measures contained in the USACE permit and the measures contained in the Biological Opinion then allow for project-related disturbance of wetlands and habitat for federally listed special-status species.

Implementation of mitigation measures BIO-1, which requires a training session on special-status species potentially present on the construction site for all personnel, and BIO-3, which requires obtaining incidental take authorization from both the USFWS and CDFW for the disturbance of known salt marsh harvest mouse and salt marsh wandering shrew habitat, would reduce this potentially significant impact to less-than-significant.

Mitigation Measure

BIO-3 The District will obtain incidental take authorization from the California Department of Fish and Wildlife (CDFW) and the U.S Fish and Wildlife Service (USFWS) for impacts to known salt marsh harvest mouse and salt marsh wandering shrew habitat. As part of the CDFW Section 2081 Incidental Take Permit application and as part of the request for Section 7 endangered species consultation through the U.S. Army Corps of Engineers (USACE) Nationwide Permit application, the District will include the following information:

a. A detailed description of the action and specific area where the action will occur that will impact salt marsh harvest mouse and salt marsh wandering shrew habitat.

b. Measures to avoid, minimize, and/or mitigate impacts to salt marsh harvest mouse and salt marsh wandering shrew habitat, including, but not limited to, the following:

    1. Immediately prior to any ground disturbance, including vegetation removal as outlined in this measure, a survey for salt marsh harvest mouse and salt marsh wandering shrew will be conducted by a qualified biologist.

    2. All vegetation within potential habitat for the salt marsh harvest mouse within the project site and within a 2-foot buffer around the project footprint will be removed by hand using only nonmechanized hand tools (i.e., trowel, hoe, rake, and shovel) prior to the initiation of work within these areas Silt fences will be erected adjacent to construction areas to define and isolate potential mouse habitat. Pickleweed stands will be removed by hand or weedwhacker. Vegetation will be removed to bare ground or stubble no higher than 1 inch. Vegetation will be removed under the supervision of a qualified biologist. Vegetation removal may begin when no mice are observed and will start at the edge farthest from the salt marsh or the poorest habitat and work its way towards better salt marsh habitat, and from center of project outward.

    3. Temporary exclusion fencing will be installed immediately after the hand removal of all vegetation (as described above) from the work area and a 2-foot buffer around the work area. The fence will be made of a heavy plastic sheeting material that does not allow salt marsh harvest mice to pass through or climb, and the bottom will be buried to a depth of 4 inches so that salt marsh harvest mouse cannot crawl under the fence. Fence height will be at least 12 inches higher than the highest adjacent vegetation with a maximum height of 4 feet. All supports for the exclusion fencing will be placed on the inside of the work area. The qualified biologist will have the ability to make field adjustments to the location of the fencing depending on site-specific habitat conditions.

4. Prior to the initiation of work each day, the person(s) designated by the qualified biologist will thoroughly inspect the work area and adjacent habitat areas to determine if salt marsh harvest mouse is present. Any necessary repairs to the exclusion fencing will be completed within 24 hours of the initial observance of the damage. Work will not continue within 300 feet of the damaged exclusion fencing until the fences are repaired.

5. No work will occur within 50 feet of suitable tidal marsh habitat within two hours before and after an extreme high tide event (6.5 feet or higher measured at the Golden Gate Bridge and adjusted to the timing of local high tides) unless salt marsh harvest mouse-proof exclusion fencing has been installed around the work area.

6. Anyone accessing salt marsh harvest mouse habitat will walk carefully through the marsh, avoiding high pickleweed cover and wrack where harvest mice are likely to nest or find cover.

Alameda Song Sparrow, Northern Harrier, and Saltmarsh Common Yellowthroat

The Alameda song sparrow, norther harrier, and saltmarsh common yellowthroat, all California Species of Special Concern, are associated with marsh habitats. These species are assessed together as they all have the potential to forage or nest in the salt marsh habitat found on the project site. The proposed project may directly impact Alameda song sparrow, norther harrier, and saltmarsh common yellowthroat through the loss of marsh habitat and cause indirect impacts as a result of construction noise travelling to habitat in Faber Marsh. Construction activities could result in the loss or disturbance of individual animals. This would be a significant adverse environmental impact.

Implementation of mitigation measures BIO-1, which requires a training session on special-status species potentially present on the construction site for all personnel, BIO-2, which requires implementation of protective measures for potential impacts to California Ridgway's rail and California black rail, and BIO- 4 (below) which requires preconstruction surveys if construction is anticipated to occur during the nesting season, would reduce this potentially significant impact to less-than-significant. No additional measures are recommended.

Protected Nesting Birds

Protected nesting bird and raptor species have the potential to nest in buildings or structures, on open ground, or in any type of vegetation, including trees, during the nesting bird season (January 15 through September 15). The project site and surrounding properties contain a variety of trees, shrubs, and open grassland areas suitable for nesting. Construction activities, including ground disturbance, can impact nesting birds protected under the federal Migratory Bird Treaty Act and California Fish and Game Code, should nesting birds be present during construction. If protected bird species are nesting adjacent to the project site during the bird nesting season, then noise-generating construction activities could result in the loss of fertile eggs, nestlings, or otherwise lead to the abandonment of nests. Implementation of mitigation measure BIO-1, presented above, which requires a training session on special-status species potentially present on the construction site for all personnel, and BIO-4 would reduce potential, significant impacts to nesting birds to less-than-significant.

Mitigation Measure

BIO-4 To avoid impacts to nesting birds during the nesting season (January 15 through September 15), all construction activities should be conducted between September 16 and January 14, which is outside of the bird nesting season. If construction must occur during the bird nesting season, then a qualified biologist will conduct a pre-construction survey for nesting birds to ensure that no nests would be disturbed during project construction.

If project-related work is scheduled during the nesting season (February 15 to August 30 for small bird species such as passerines; January 15 to September 15 for owls; and February 15 to September 15 for other raptors), a qualified biologist will conduct nesting bird surveys.

a. Two surveys for active bird nests will occur within 14 days prior to start of construction, with the final survey conducted within 48 hours prior to construction. Appropriate minimum survey radii surrounding each work area are typically 250 feet for passerines, 500 feet for smaller raptors, and 1,000 feet for larger raptors. Surveys will be conducted at the appropriate times of day to observe nesting activities. Locations off the site to which access is not available may be surveyed from within the site or from public

areas. If no nesting birds are found, a letter report confirming absence will be prepared and submitted to the East Palo Alto Sanitary District and no further mitigation is required.

b. If the qualified biologist documents active nests within the project site or in nearby surrounding areas, an appropriate buffer between each nest and active construction will be established. The buffer will be clearly marked and maintained until the young have fledged and are foraging independently. Prior to construction, the qualified biologist will conduct baseline monitoring of each nest to characterize "normal" bird behavior and establish a buffer distance, which allows the birds to exhibit normal behavior. The qualified biologist will monitor the nesting birds daily during construction activities and increase the buffer if birds show signs of unusual or distressed behavior (e.g., defensive flights and vocalizations, standing up from a brooding position, and/or flying away from the nest). If buffer establishment is not possible, the qualified biologist or construction foreman will have the authority to cease all construction work in the area until the young have fledged and the nest is no longer active. Once the absence of nesting birds has been confirmed, a letter report will be prepared and submitted to the East Palo Alto Sanitary District.

Burrowing Owl. Burrowing owl is a California Species of Special Concern. Burrowing owls live and breed in burrows in the ground, especially in abandoned California ground squirrel burrows. Optimal habitat conditions include large open, dry and nearly level grasslands or prairies with short to moderate vegetation height and cover, areas of bare ground, and populations of burrowing mammals. This species has been known to occur on the project site near the northwest end of the Palo Alto Airport (Occurrence No. 27, CNDDB 2021). The project site's non-native grassland/ruderal vegetation provides marginally suitable foraging habitat for burrowing owl, and a few scattered small mammal burrows on the site could be utilized for nesting habitat, but burrowing owl has low potential to occur on the site. If burrowing owl is present on or adjacent to the project site, construction activities could result in the loss or disturbance of individual animals. This would be a significant adverse environmental impact. Implementation of mitigation measures BIO-1, presented earlier, which requires a training session on special-status species potentially present on the construction site for all personnel, and implementation of measure BIO-5 would reduce this potentially significant impact to less than significant.

Mitigation Measure

BIO-5 To avoid/minimize impacts to burrowing owls potentially occurring within the project site, a biologist qualified in ornithology will conduct surveys for burrowing owl. The approved biologist will conduct a two-visit (i.e., morning and evening) presence/absence survey at areas of suitable habitat on and adjacent to the project site boundary no less than 14 days prior to the start of construction or ground disturbance activities. Surveys will be conducted according to the methods for take avoidance described in the *Burrowing Owl Survey Protocol and Mitigation Guidelines* (California Burrowing Owl Consortium 1993) and the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). If no burrowing owls are found, a letter report confirming absence will be prepared and submitted to the East Palo Alto Sanitary District and no further mitigation is required.

Because burrowing owls occupy habitat year-round, seasonal no-disturbance buffers, as outlined in the *Burrowing Owl Survey Protocol and Mitigation Guidelines* (CBOC 1993) and the *Staff Report on Burrowing Owl* Mitigation (CDFW 2012), will be in place around occupied habitat prior to and during any ground disturbance activities. The following table includes buffer areas based on the time of year and level of disturbance (CDFW 2012), unless a qualified biologist approved by the CDFW verifies through non-invasive measures that either: 1) birds have not begun egg laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

Location	Time of Year	Level of Disturbance Buffers (meters)		
		Low	Med	High
Nesting Sites	April 1 – Aug 15	200 m	500 m	500 m
Nesting Sites	Aug 16 – Oct 15	200 m	200 m	500 m
Nesting Sites	Oct 16 – Mar 31	50 m	100 m	500 m

If burrowing owl is found and avoidance is not possible, burrow exclusion may be conducted by qualified biologists only during the non-breeding season, before breeding behavior is exhibited and after the burrow is confirmed empty through non-invasive methods, such as surveillance. Occupied burrows will be replaced with artificial burrows at a ratio of one collapsed burrow to one constructed artificial burrow (1:1). Evicted burrowing owls may attempt to colonize or re-

colonize an area that would be impacted, thus ongoing surveillance during project activities will be conducted at a rate sufficient to detect burrowing owls if they return.

If surveys locate occupied burrows in or near construction areas, consultation with the CDFW will occur to interpret survey results and develop a project-specific avoidance and minimization approach. Once the absence of burrowing owl has been confirmed, a letter report will be prepared and submitted to the East Palo Alto Sanitary District.

Bats

Trees on or adjacent to the project site could provide roosting habitat for state-listed species of special concern hoary bat (*Lasiurus cinereus*), pallid bat (*Antrozous pallidus*), and Townsend's big-eared bat (*Corynorhinus townsendii*). All three species are known to occur in the project region, however recent survey data is limited. The nearest observation of the hoary bat was recorded in 1990 approximately four miles south of the project site (Occurrence No. 95, CNDDB 2021). The nearest observation of pallid bat was recorded in 1951 approximately 2.6 miles southwest of the project site (Occurrence No. 249, CNDDB 2021). The nearest observation of Townsend's big-eared bat was recorded in 1946 approximately 4.3 miles south of the project site (Occurrence No. 428, CNDDB 2021).

If special-status bats are present on the site, construction activities and noise could result in disturbance to individual animals. This would be a significant adverse environmental impact. Implementation of the following mitigation measures would reduce the potential impact to a less-than-significant level.

Mitigation Measure

BIO-6 Approximately 14 days prior to construction activities, a qualified biologist will conduct a habitat assessment for bats and potential roosting sites in trees within 50 feet of the construction easement. These surveys will include a visual inspection of potential roosting features (bats need not be present) and a search for presence of guano within the project site, construction access routes, and 50 feet around these areas. Cavities, crevices, exfoliating bark, and bark fissures that could provide suitable potential nest or roost habitat for bats will be surveyed. Assumptions can be made on what species is present due to observed visual characteristics along with habitat use, or the bats can

be identified to the species level with the use of a bat echolocation detector such as an "Anabat" unit. Potential roosting features found during the survey will be flagged or marked.

If no roosting sites or bats are found, a letter report confirming absence will be prepared and submitted to the East Palo Alto Sanitary District and no further mitigation is required.

If bats or roosting sites are found, bats will not be disturbed without specific notice to and consultation with CDFW.

If bats are found roosting outside of the nursery season (May 1 through October 1), CDFW will be consulted prior to any eviction or other action. If avoidance or postponement is not feasible, a Bat Eviction Plan will be submitted to CDFW for written approval prior to project implementation. A request to evict bats from a roost includes details for excluding bats from the roost site and monitoring to ensure that all bats have exited the roost prior to the start of activity and are unable to re-enter the roost until activity is completed. Any bat eviction will be timed to avoid lactation and young-rearing. If bats are found roosting during the nursery season, they will be monitored to determine if the roost site is a maternal roost. This could occur by either visual inspection of the roost bat pups, if possible, or by monitoring the roost after the adults leave for the night to listen for bat pups. Because bat pups cannot leave the roost until they are mature enough, eviction of a maternal roost cannot occur during the nursery season. Therefore, if a maternal roost is present, a 50-foot buffer zone (or different size if determined in consultation with the CDFW) will be established around the roosting site within which no construction activities including tree removal or structure disturbance will occur until after the nursery season.

b. **Riparian Habitat or Sensitive Natural Communities**. Riparian habitat does not occur on the project site. The lower section of San Francisquito Creek, adjacent to the project site, is salt marsh habitat.

Natural Communities are California vegetation types ranked by their rarity and threat by CDFW. Natural Communities with ranks of S1-S3 are considered Sensitive Natural Communities to be addressed in the environmental review process of CEQA.

Northern coastal salt marsh (G3/S3.2), a sensitive natural plant community, is present on the project site. Species classified as G3/S3 are considered vulnerable on a both a global and state scale, as they carry a moderate risk of extinction or elimination due to a restricted range, relatively few populations, recent and widespread declines, or other factors. The "0.2" designation indicates that a habitat is moderately threatened (CNDDB 2021). Northern coastal salt marsh occurs along sheltered inland margins of bays, often co-dominated by pickleweed, cordgrass, and salt grass.

c. Wetlands and Waters of the U.S. A review of the National Wetlands Inventory (NWI) online database was conducted to identify the closest jurisdictional aquatic features on or adjacent to the project site (USFWS 2021). The NWI identifies the estuarine wetland habitat adjacent to the project site to the north of San Francisquito Creek and to the northeast of the airport. The NWI does not identify the wetland areas directly on the project site.

The reconnaissance biological survey identified two wetland areas on the project site. One area runs parallel to San Francisquito Creek between the levee and the golf course (approximately from Manholes T-30 to T-11). As discussed above, this wetland consists of northern coastal salt marsh and is approximately 960 feet long by 40 feet in width. The proposed sewer line route travels down the center of this wetland.

The second wetland area is a drainage channel with salt marsh vegetation running parallel to the sewer line route along the airport runway (Manholes T-8 to T-4). This wetland area can likely be avoided by project construction.

Impacts to jurisdictional wetland and waterway features are considered significant adverse environmental impacts. The following mitigation measure would assure that this potentially significant impact is reduced to less-than-significant.

Mitigation Measure

BIO-7 Prior to ground disturbance within the project boundary, the East Palo Alto Sanitary District will retain a qualified biologist to determine the extent of potential wetlands and waterways regulated by the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and CDFW.

If wetlands are anticipated to be impacted by the proposed sewer line route, we propose two different options for avoiding or minimizing impacts to wetlands:

Option 1: Avoid direct impacts to wetlands by rerouting the sewer line outside of the wetland area or by horizontal drilling under the wetland area identified.

Option 2: Assume impacts to wetlands and obtain necessary permits.

If the USACE claims jurisdiction, the district will retain a qualified biologist to obtain a Clean Water Act Section 404 Nationwide Permit. If the impacts to the drainage features do not qualify for a Nationwide Permit, the District will proceed with the qualified biologist in obtaining an Individual Permit from the USACE. The District will then retain a qualified biologist to coordinate with the RWQCB to obtain a Clean Water Act Section 401 Water Quality Certification. If necessary, the district will also retain a qualified biologist to coordinate with the CDFW to obtain a Streambed Alteration Agreement.

To compensate for temporary and/or permanent impacts to Waters of the U.S. that would be impacted as a result of the proposed project, mitigation will be provided as required by the regulatory permits. Mitigation would be provided through one of the following mechanisms:

a. A *Wetland Mitigation and Monitoring Plan* will be developed that will outline mitigation and monitoring obligations for temporary impacts to wetlands and other waters as a result of construction activities. The Wetland Mitigation and Monitoring Plan would include thresholds of success, monitoring and reporting requirements, and site-specific plans to compensate for wetland losses resulting from the project. The Wetland Mitigation and Monitoring Plan will be submitted to the appropriate regulatory agencies for review and approval during the permit application process.

b. To compensate for permanent impacts, the purchase and/or dedication of land to provide suitable wetland restoration or creation will ensure a no net loss of wetland values or functions. If restoration is available and feasible, a minimum 1:1 mitigation to impact ratio would apply to projects for which mitigation is provided in advance.

d. **Wildlife Movement.** Terrestrial species must navigate a habitat landscape that meets their needs for breeding, feeding and shelter. Natural and semi-natural components of the landscape must be large enough and connected enough to meet the needs of all species that use them. Wildlife movement corridors provide connectivity between habitat areas, enhancing species richness and diversity, and usually also provide cover, water, food, and breeding sites.

The project site is not located along a major wildlife movement corridor. As such, the proposed project would have a less-than-significant impact on wildlife movement.

e. **Local Biological Resource Policies/Ordinances.**

San Francisco Bay Conservation and Development Commission (BCDC)

The BCDC was established by the California legislature in 1965 as the management and regulatory agency for the San Francisco Bay and Delta. A permit must be obtained from the BCDC for shoreline projects subject to tidal action including the salt marsh habitat on the project site adjacent to San Francisquito Creek.

City of Palo Alto

While the sanitary district's service boundary is entirely within the City of East Palo Alto, the project site is located entirely within the City of Palo Alto's city limits. Therefore, the primary regulatory document for the proposed project is the *City of Palo Alto Comprehensive Plan 2030*. Other relevant biological regulatory documents include the *City of Palo Alto Baylands Master Plan* and the *City of Palo Alto Baylands Comprehensive Conservation Plan.*

City of Palo Alto Comprehensive Plan 2030

The Comprehensive Plan, the City's general plan, was adopted in 2017 containing goals and policies that reflect conservation priorities, particularly the following Natural Environment Element policies:

- Policy N-1.1: Preserve, protect, and enhance public and private open space and ecosystems.
- Policy N-1.4: Protect special-status species and plant communities.
- Policy N-1.5: Preserve and protect the Bay, marshlands, salt ponds, sloughs, creeks, and other natural water or wetland areas as open space, functioning habitats, and elements of a larger, interconnected wildlife corridor.

City of Palo Alto Baylands Master Plan

The Baylands Master Plan, updated in 2008, includes comprehensive planning goals and policies for the salt marsh habitat within the project site and for the municipal airport and regional water quality control plant. The following policies are specific to the salt marsh vegetation and associated wildlife:

- Policy N-2: Calls for the examination and improvement of management practices for natural habitat and open spaces areas.
- Policy N-8: Specifically calls for the protection of wetlands.

City of Palo Alto Baylands Comprehensive Conservation Plan

The Baylands Comprehensive Plan (BCCP) is under preparation by the City of Palo Alto. Upon completion, the BCCP will become a framework for managing the Palo Alto Baylands for the next 15 years and beyond. The draft goals include the following:

- Natural Resources Management Goal 1: Maintain, protect, and preserve existing functioning native habitats, ecosystem functions, and wildlife corridors.
- Natural Resources Management Goal 2: Manage the Baylands as habitat for native species and the preservation of biodiversity.
- Natural Resources Management Goal 3: Enhance and restore degraded habitats and habitat corridors.
- Public Access and Facilities Goal 4: Promote ecologically sensitive policies for areas at and near the Palo Alto Airport.
- Operations and Management Goal 1: Holistically manage the Baylands to strike the appropriate balance between recreation and natural resource protection, and ensure that existing and proposed activities are compatible with the ecological and physical constraints.
- Operations and Management Goal 2: Strategically phase projects within the Baylands to minimize disturbance to wildlife and visitor use.

Trees

The proposed project does not currently include the removal of any trees; therefore, the proposed project would not conflict with local regulations related to protected trees. If tree trimming or removal is necessary, any tree work will be subject to the City of Palo Alto Municipal Code Chapter 8.10 Tree Preservation and Management Regulations.

It is necessary to obtain a BCDC permit prior to undertaking work in the Bay or within 100 feet of the shoreline, including filling, dredging, dredged sediment disposal, shoreline development and other work. Implementation of the following measure will ensure compliance with BCDC permit requirements.

Mitigation Measure

BIO-8 Once project details and impact calculations have been finalized, the district will consult with the Bay Conservation and Development Commission (BCDC) to obtain either a Major Permit or Administrative Permit (Minor Permit). A San Francisco Bay Joint Aquatic Resource Permit Application (JARPA) may also be suitable for this project, a permit process that combines RWQCB, USACE, CDFW, USFWS, and BCDC permits into one application.

f. **Conservation Plans**. There are no critical habitat boundaries, habitat conservation plans, natural community conservation plans, or other approved local, regional, or state habitat conservation plans applicable to the proposed project site.

5. CULTURAL RESOURCES

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5? (17)	☐	☐	☐	☒
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5? (17)	☐	☒	☐	☐
c.	Disturb any human remains, including those interred outside of dedicated cemeteries? (17)	☐	☒	☐	☐

Comments:

This section is based on the *Cultural Resources Evaluation of the Proposed Sewer Line Project for the East Palo Alto Sanitary District in the County of Santa Clara, California* (cultural resource evaluation) prepared by Archaeological Resource Management, dated July 22, 2021. A field reconnaissance and a study of the maps and a records search were conducted by Archaeological Resource Management to determine if any known archaeological resources were reported in or around the subject area.

a. Archival research reports that one previously recorded historic resource, the former Palo Alto Municipal Golf Course (now known as the Baylands Golf Links), is located adjacent to the proposed route of the sewer line. One additional historic resource, the Palo Alto Airport tower and beacon, is located within a one-quarter mile radius of the proposed project area. These structures are located approximately 500 feet west of the proposed sewer line. No significant historical resources are located with the project site itself; therefore, the proposed project would not have an adverse impact on a historical resource.

b. No previously recorded archaeological resources are located within the proposed project area or within a one-quarter mile radius of the proposed project area and no significant cultural materials or were noted within the proposed project boundaries during surface reconnaissance. However, there remains the possibility sensitive archaeological resources are located within the soils underlying project site area and that trenching activities associated with the proposed project could damage or

destroy these previously undiscovered resources. This would be a significant adverse environmental impact. Implementation of the following mitigation measure would reduce this potential impact to a less-than-significant level.

Mitigation Measure

CR-1 In the event that prehistoric traces (artifacts, concentrations of shell/bone/rock/ash, etc.) are encountered during excavation and/or grading of the site, all activity within a 50-foot radius of the find will be stopped, the East Palo Alto Sanitary District General Manager and the City of Palo Alto (Public Works) will be notified. The General Manager will ensure that a qualified archaeologist will examine the find and make appropriate recommendations prior to continuing construction. Recommendations could include collection, recordation, and analysis of any significant cultural materials. A report of findings documenting any data recovery during monitoring would be submitted to the General Manager.

c. There is always the possibility of an accidental discovery of Native American human remains during soil-disturbing activities. Disturbance of Native American human remains is considered a significant adverse environmental impact. Implementation of the following mitigation measure would reduce this potential, significant impact to a less-than-significant level.

Mitigation Measure

CR-2 Due to the possibility that Native American human remains may be discovered during project construction activities, the following language will be included in all construction documents.

> "If human remains are found during construction, there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the Santa Clara County Coroner is contacted to determine that no investigation of the cause of death is required.
>
> If the coroner determines the remains to be Native American, then the coroner shall contact the Native American Heritage Commission within 24 hours. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descendent (MLD) from the deceased Native American. The MLD may then make recommendations to the landowner or the person responsible for the excavation work, for

means of treating or disposing of, with appropriate dignity, the human remains and associated grave goods as provided in Public Resources Code Section 5097.98.

The landowner or authorized representative will rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further disturbance if: a) the Native American Heritage Commission is unable to identify a MLD or the MLD failed to make a recommendation within 48 hours after being allowed access to the site; b) the descendent identified fails to make a recommendation; or c) the landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner."

6. ENERGY

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? (32)	☐	☐	☒	☐
b.	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? (32)	☐	☐	☐	☒

Comments:

a. The proposed project would create demand for energy during construction, primarily in the form of fuel used in construction equipment. Common construction equipment types such as excavators, backhoes, compactors and haul trucks would be employed. There would be no demand for energy during project operations.

Neither the proposed project, nor the sources of energy demand it creates are unnecessary. Construction equipment fuel use would not be wasteful or inefficient. Existing equipment that conforms to existing applicable regulatory standards would be used and the project is fundamental to providing a basic utility to the customers of the district.

b. The project is a short-term construction activity and does not represent a project type for which long-term electricity demand would be created or inclusion of renewable energy production should be considered. Therefore, the project has no potential to conflict with a policy or plan for renewable energy.

7. GEOLOGY AND SOILS

Would the project:

	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
(1) Rupture of a known 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? (2, 3)	☐	☐	☐	☒
(2) Strong seismic ground shaking? (2, 3)	☐	☐	☐	☒
(3) Seismic-related ground failure, including liquefaction? (2, 3)	☐	☐	☐	☒
(4) Landslides? (2, 3)	☐	☐	☐	☒
b. Result in substantial soil erosion or the loss of topsoil? (1, 2, 3, 4, 5, 10, 11)	☐	☒	☐	☐
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? (1, 2, 3, 4, 5, 10, 11)	☐	☐	☒	☐
d. Be located on expansive soil, creating substantial direct or indirect risks to life or property? (1, 2, 3, 4, 5, 10, 11)	☐	☐	☒	☐
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? (1, 2, 3)	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (1, 2, 3, 4, 5)	☐	☒	☐	☐

Comments:

a. (1-4) The proposed project is a sewer pipeline; therefore, the proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, or landslides.

b. Construction of the proposed project would include excavation activities for the pipeline trench during which the excavated soils would be exposed to wind and water erosion. During construction, sanitary district staff and contractors would be required to comply with the NPDES General Construction Permit (2009-0009-DWQ). The Construction General Permit requires development and implementation of a storm water pollution prevention plan (SWPPP) that uses storm water "Best Management Practices (BMPs)" to control runoff, erosion and sedimentation from the site both during and after construction. Following construction, surfaces would be restored to pre-construction conditions. With implementation of the following mitigation measure, the potential for soil erosion during construction would be less than significant.

Mitigation Measure

GEO-1 In order to control runoff, erosion, and sedimentation during construction, the district will prepare and implement a storm water pollution prevention plan (SWPPP) that uses storm water "Best Management Practices (BMPs) in compliance with the NPDES General Construction Permit (2009-0009-DWQ).

c. The proposed sewer line would be constructed according to current engineering standards and would not include any components or characteristics that would undermine the soils stability. Therefore, the proposed project would not cause the soils to become unstable or potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

d. Expansive soils are generally very fine-grained with a high to very high percentage of clay, typically montmorillonite, smectite, or bentonite clay. Expansive soils can change dramatically in volume depending on moisture content. When wet, these soils can expand; conversely, when dry, they can contract or shrink. Sources of moisture that can trigger this shrink-swell phenomenon can include seasonal rainfall, landscape irrigation, utility leakage, and/or perched groundwater. Expansive soil can exhibit wide cracks in the dry season, and changes in soil volume have the potential to damage concrete slabs, foundations, and pavement. (Palo Alto 2016, p. 4.5-13). The Palo Alto general plan EIR notes that the northeastern area of the city, where the

project site is located, consists of clay-rich soils and "Bay Mud" sediments which are characterized as potentially expansive soils. Compliance with standard building code requirements for structural design and performance criteria would reduce impacts associated with expansive soils to a less-than-significant level. No mitigation is required.

e. The proposed project does not include the use of septic tanks or alternative wastewater disposal systems.

f. The Palo Alto general plan EIR reports that a large mastodon tusk was found in the bank of San Francisquito Creek (Palo Alto 2016, p. 4-4.9), although the location was not identified. Therefore, it is possible to accidentally discover unknown buried paleontological resources during earth-moving activities. Disturbance of unique paleontological resources could be considered a significant adverse environmental impact. Implementation of the following mitigation measure would reduce the potential, significant impact to unique paleontological resources to less than significant.

Mitigation Measure

GEO-2 Prior to issuance of any grading permits, due to the possibility that unique paleontological resources might be found during construction, the sanitary district will include the following language on all construction documents:

> "In the event that paleontological resources are encountered during excavation and/or grading of the site, all activity within a 50-foot radius of the find will be stopped, the East Palo Alto Sanitary District General Manager will be notified. The General Manager will ensure that a qualified paleontologist will examine the find and make appropriate recommendations prior to continuing construction. Recommendations could include collection, recordation, and analysis of any significant paleontological materials. A report of findings documenting any data recovery during monitoring would be submitted to the General Manager.

8. GREENHOUSE GAS EMISSIONS

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? (31, 32)	☐	☐	☒	☐
b.	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? (31, 32)	☐	☐	☐	☒

Comments:

a. The proposed project would generate GHG emissions during the construction process. The project would not generate GHGs during its operation. Construction GHG emissions will be generated primarily by construction equipment, and by haul truck and employee travel and to and from the active work site. Common construction equipment types such as excavators, backhoes, compactors and haul trucks would be used. Minor volumes of soil may be exported via smaller-volume haul trucks. Workers were assumed to travel to the site form an average distance of about 20 miles.

The Road Construction Emissions Model (ROADMOD), was used to quantify construction GHG emissions. ROADMOD is commonly used to model criteria and GHG emissions from linear types of projects, of which pipelines are one type. The model results can be found in Appendix A. Construction emissions are projected at 408.33 MT CO_2e.

The air district's most recent quantified GHG emissions threshold guidance is provided in its *California Environmental Quality Act Air Quality Guidelines* (Bay Area Air Quality Management District 2017). The air district does not provide a threshold of significance for construction GHG emission in that guidance. Rather, it concludes that construction best management practices should be incorporated into construction projects to reduce both their criteria and GHG emissions. To ensure that feasible construction management practices are considered and implemented, mitigation measure GHG-1 will be implemented as part of the construction process.

Mitigation Measure

GHG-1 To reduce construction GHG emissions, the sanitary district will include the following language on all construction documents requiring all contractors to implement the following construction best management practices where feasible:

- Diesel-powered, off-road construction equipment will meet Tier 4 emissions standards, or in the alternative, Tier 2 or 3 engines may be used provided they include particular matter emissions control;
- Use alternative fuel equipment;
- Minimize construction equipment idling time to no more than five minutes;
- Use grid electric power to reduce the use of fuel-powered construction equipment;
- Power portable equipment with electricity or batteries; and
- Implement waste, disposal, and recycling strategies in accordance with Sections 4.408 and 5.408 of the 2016 California Green Building Standards Code (CALGreen Code).

Given that the project would not generate GHG emissions during its operation and the district would require contractors to implement best management practices during construction consistent with mitigation measure GHG-1, the proposed project would have a less-than-significant impact from generating GHG emissions.

b. The proposed project is solely a short-term construction activity and would generate no long-term increase in GHG emissions. As the project would implement construction emissions best management practices as recommended by the air district as described in mitigation measure GHG-1, the project does not conflict with a GHG reduction plan.

9. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (1, 2, 3)	☐	☐	☒	☐
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? (1, 2, 3)	☐	☐	☒	☐
c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (1, 2, 3, 7)	☐	☐	☐	☒
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, create a significant hazard to the public or the environment? (1, 2, 3, 7, 12, 13)	☐	☐	☐	☒
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 a public-use airport, result in a safety hazard or excessive noise for people residing or working in the project area? (1, 2, 3, 7)	☐	☐	☒	☐
f.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (1, 2, 3, 4, 5, 7)	☐	☐	☐	☒
g.	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? (1, 2, 3, 4, 5, 7)	☐	☐	☐	☒

Comments:

a-b. The proposed project is the installation of sewer trunk line running parallel to an existing sewer line. The proposed project would not result in permanent development that would involve the routine transport, use, or disposal of hazardous

materials. However, construction activities would require the temporary use of hazardous substances, such as fuel, lubricants, and other petroleum-based products for operation of construction equipment as well as oil, solvents, or paints. As a result, the proposed project could result in the exposure of persons and/or the environment to an adverse environmental impact due to the accidental release of a hazardous material. However, the transportation, use, and handling of hazardous materials would be temporary and would coincide with the short-term project construction activities. Further, these materials would be handled and stored in compliance with all with applicable federal, state, and local requirements, any handling of hazardous materials would be limited to the quantities and concentrations set forth by the manufacturer and/or applicable regulations, and all hazardous materials would be securely stored in a construction staging area or similar designated location within the project site. In addition, the handling, transport, use, and disposal of hazardous materials must comply with all applicable federal, state, and local agencies and regulations, including the Department of Toxic Substances Control; Occupational Health and Safety Administration (OSHA); Caltrans; and the County Health Department. With the compliance with local, state, and federal regulations short-term construction impacts associated with the handling, transport, use, and disposal of hazardous materials would be less than significant.

c. The proposed route is located within proximity an existing school, Los Robles Ronald McNair Academy, located approximately 0.50 miles west of the end point of the proposed project. As discussed under items "a" and "b" the project would not routinely transport, use, or dispose of hazardous materials and any use and handling of hazardous materials during construction and maintenance activities would occur in accordance with applicable federal, state, and local laws and requirements. Therefore, operation of the project does not present a reasonably foreseeable release of hazardous materials in the vicinity of a school.

d. According to the California Department of Toxic Substances Control Envirostor database of hazardous materials release sites, the proposed project is not located on a site identified by the Cortese List (Government Code 65962.5). According to the State Water Resources Control Board (SWRCB) GeoTracker database, the Palo Alto Airport (where the proposed parallel sewer line will be partially placed) had one site designated as a Leaking Underground Storage Tank (LUST) Cleanup Site and one a Cleanup Program Site. Both of these sites cleanup activities have occurred and are now considered closed as of 2014 (State Water Resources Control Board 2021). However, the project is not located on a site that is included on a current list of hazardous materials sites compiled pursuant to Government Code §65962.5.

e. The project site partially falls within the boundaries of the Palo Alto Airport; therefore, the proposed project would be required to implement a FAA-mandated Construction Safety and Phasing Plan which will occur during the Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) to be conducted by the FAA prior to initiating construction activities. With compliance with the Construction Safety and Phasing Plan, the proposed project would not result in impacts associated with safety hazards or excessive noise for people residing or working in the project area would be reduced to a less-than-significant level.

f. The project route does not serve as an emergency evacuation route and does not interfere with an adopted emergency response or evacuation plan.

g. The project includes installation of new underground parallel sewer trunk line and would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

10. HYDROLOGY AND WATER QUALITY

Would the project:

	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? (1, 2, 3, 4, 25)	☐	☐	☐	☒
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? (1, 2, 3, 4, 25)	☐	☐	☐	☒
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(1) Result in substantial erosion or siltation on- or off-site; (1, 2, 3, 4, 25)	☐	☐	☐	☒
(2) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; (1, 2, 3)	☐	☐	☐	☒
(3) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or (1, 2, 3)	☐	☐	☐	☒
(4) Impede or redirect flood flows? (1, 2, 3, 4, 24, 25)	☐	☐	☐	☒
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? (23, 24, 25)	☐	☐	☒	☐
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? (1, 2, 3)	☐	☐	☐	☒

Comments:

a. A short-term increase of sediment discharge may occur during construction that could affect surface water quality. However, underground facilities (Linear Underground Projects) including any conveyance or pipeline affecting more than one acre are subject to the National Pollutant Discharge Elimination System (NPDES) General Construction Permit (Order 2009-0009-DWQ). The Palo Alto Regional Water Quality Control Plant, where the proposed parallel sewer trunk line would originate, operates under Order No. R2-2019-0015 NPDES permit No. CA0037834. Under the Construction General Permit, the contractor for the sanitary district will be required to develop and implement a stormwater pollution prevention plan (SWPPP) that contains Best Management Practices (BMPs) and pollution prevention controls to minimize the discharge of pollutants from stormwater and spilled or leaked materials. Therefore, with implementation of these pollution prevention measures and controls, the proposed project would not substantially degrade water quality during construction and would not cause a violation in water standards or wastewater discharge requirements.

b. The proposed project would not require the use of groundwater resources and would have no effect on groundwater supplies. The parallel sewer trunk line would be installed underground and therefore, it would have no effect on groundwater recharge. Therefore, the proposed project would not decrease groundwater supplies or interfere with groundwater recharge.

c. The proposed project will be underground and therefore, would not alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces.

d. The entirety of the proposed parallel trunk line route is within the Federal Emergency Management Agency (FEMA) 100-year Flood Zone AE or within an area with a one percent annual chance of flooding (FEMA 2021). The section of the project site along the banks of San Francisquito Creek is identified by the California Geologic Survey as being in a tsunami hazard area. (CGS 2021). Implementation of required Best Management Practices, as required by the NPDES General Construction Permit discussed above under checklist question “a”, to control erosion and sediment in storm water discharges from active construction areas would ensure the risk of release of pollutants during a flood or tsunami event would be less than significant.

e. The proposed project would not use groundwater. Therefore, the proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

11. LAND USE AND PLANNING

Would the project:

	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a. Physically divide an established community? (1, 2, 3, 4, 5, 7)	☐	☐	☐	☒
b. Cause any significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? (1, 2, 3, 4, 5, 12, 22)	☐	☐	☐	☒

Comments:

a. The proposed project is an underground sanitary sewer line and therefore, would not physically divide an established community.

b. The City of Palo Alto land use designations for the project site are Major Institution/Special Facility" and "Public Park." The proposed project is an underground sanitary sewer line to serve the City of East Palo Alto, and would not conflict with these land use designations. Significant effects identified in this initial study would be mitigated to a less-than-significant level with implementation of the mitigation measures presented herein. Therefore, the project would not cause a significant environmental impact due to a conflict with applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating environmental effects.

12. MINERAL RESOURCES

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Result in loss of availability of a known mineral resource that would be of value to the region and the residents of the state? (4, 14)	☐	☐	☐	☒
b.	Result in the loss of availability of a locally important mineral resource recovery site delineated in a local general plan, specific plan, or other land-use plan? (4, 14)	☐	☐	☐	☒

Comments:

a-b. The California Geological Survey (CGS) is responsible under the Surface Mining Control and Reclamation Act (SMARA) for classifying land into Mineral Resource Zones (MRZ) based on the known or inferred mineral resource potential of that land. According to the United States Geological Survey (USGS), the majority of City of Palo Also is classified as MRZ-1, MRZ-3, or MRZ-4, meaning that no significant mineral deposits are present or data does not exist to identify the significance of mineral deposits. A small area is classified as MRZ-2 (meaning significant mineral deposits are likely) in the southern portion of the city, adjacent to the San Mateo County/Santa Clara County border north of Foothills Park. However, no mineral extraction operations exist within Palo Alto and the project site is in an area categorized as MRZ-1. Therefore, the project would have no impact on the availability of a known mineral resource.

13. NOISE

Would the project result in:

	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in applicable standards of other agencies? (1, 2, 3, 4, 11)	☐	☒	☐	☐
b. Generation of excessive ground-borne vibration or ground borne noise levels? (1, 2, 3, 4, 11)	☐	☐	☒	☐
c. For a project located within the vicinity of a private airstrip or 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, expose people residing or working in the project area to excessive noise levels? (1, 2, 3, 4, 7, 11, 15, 16)	☐	☐	☐	☒

Comments:

The project area is primarily characterized as having a mix of uses with some light industrial, an airport, a golf course/open space, with commercial (south along U.S. Highway 101) and residential uses (predominately to the west across San Francisquito Creek in the City of East Palo Alto) in proximity to the proposed route. The noise environment of the project area is defined primarily by motor vehicles (e.g., automobiles, trucks, and motorcycles) utilizing the roadways, aircraft taking off from and landing at Palo Alto Airport, as well mechanical noises emanating from the Palo Alto Regional Water Quality Control Plant. Noise-sensitive land uses, or sensitive receptors, are generally defined as locations where people reside or locations where the presence of unwanted sound could adversely affect the use of the land. Noise-sensitive land uses typically include residences, hospitals, schools, libraries, and certain types of recreational uses.

a. Construction activities associated with installation of the new parallel sewer trunk line will be limited. Construction equipment would be brought onto the project site on a daily basis and would not be stored onsite. Construction noise is not considered to be a significant impact if construction is limited to the daytime hours and construction equipment is adequately maintained and muffled. Extraordinary noise-

producing activities (e.g., pile driving) are not anticipated. Construction noise impacts could result in annoyance or sleep disruption for nearby residents if nighttime operations were to occur or if equipment is not properly muffled or maintained. In this case, all project construction activity will be confined to daytime hours in accordance with the City of Palo Alto's construction hours and noise limits (8:00 a.m. to 6:00 p.m.), in accordance with the City of Palo Alto Noise Ordinance (Chapter 9.10) and as presented in the mitigation measure presented below. Compliance with this mitigation measure, would ensure construction-related activities associated with the proposed project would be reduced to a less-than-significant level.

Mitigation Measure

N-1 The sanitary district will limit construction activities to the hours of 8:00 a.m. to 6:00 p.m. This requirement will be included in construction plans.

b. The dominant sources of man-made vibration are sonic booms, blasting, pile driving, pavement breaking, demolition, diesel locomotives, and rail-car coupling. The highest levels of construction-related vibration are typically associated with pile driving and the use of vibratory rollers. While the project would include pavement breaking, project construction would not require pile driving or the use of a vibratory roller. Therefore, the proposed project would not result in exposure of persons to or generation of excessive ground-borne vibration or ground borne noise levels.

c. While the project site partially falls within the boundaries of the Palo Alto Airport, the proposed project would not result in excessive noise for people residing or working in the project area. While sanitary district staff and/or contractors working on the proposed project could be exposed to excessive noise levels due to working either on the airport site or in close proximity to the airport, this exposure would be temporary in nature and the sanitary district and contractors would be required to implement safety measures required under OSHA to protect construction workers from excessive noise in the project area. OSHA requires employers to implement a hearing conservation program when noise exposure is at or above 85 decibels averaged over eight working hours, or an eight-hour time-weighted average (OSHA 2021). The Palo Alto Airport Comprehensive Land Use Plan (2008) shows the highest noise contour level of 70 decibels within the airport site itself. Therefore, construction workers would not be exposed to excessive levels of noise for more than eight working hours consistently. No impact would occur as result of excessive airport-related noise.

14. POPULATION AND HOUSING

Would the project:

	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)? (1, 2, 3, 33)	☐	☐	☐	☒
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? (1, 2, 3, 33)	☐	☐	☐	☒

Comments:

a. The capacity improvements that would result from the proposed project, laid out in the sanitary district's 2002 and 2015 Master Plan Updates, are necessary to service the needs of existing users and for servicing the future growth of the City of East Palo Alto as projected in the East Palo Alto general plan. As noted by Freyer & Laureta in *Technical Memorandum re: Addendum to the March 2015 East Palo Alto Sanitary District Master Plan Update* (dated April 28, 2021), at the time the 2015 Master Plan Update was prepared, the City was beginning the process to update its previous 1999 General Plan and Zoning Ordinance, but the City had not developed a draft general plan update for District's review and comment. Therefore, the 2015 Master Plan Update was based on existing land use information and population projections prior to the City of East Palo Alto's adoption of the 2035 General Plan on October 4, 2016 with the final version being published in March 2017 (2035 General Plan).

   The 2021 technical memorandum concluded that the projected total average dry weather flow (ADWF) increase of 1.08 million gallons per day (MGD) as a result of the proposed project is generally consistent with the projected additional potable water demand of 1.07 MGD presented in the City of East Palo's 2035 General Plan (Freyer & Laureta 2021, page 5). Therefore, the proposed project would not induce substantial unplanned population.

b. The proposed project would not displace existing people or housing.

15. PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of 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 following public services:

	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a. Fire protection? (1, 2, 3)	☐	☐	☐	☒
b. Police protection? (1, 2, 3)	☐	☐	☐	☒
c. Schools? (1, 2, 3)	☐	☐	☐	☒
d. Parks? (1, 2, 3)	☐	☐	☐	☒
e. Other public facilities? (1, 2, 3)	☐	☐	☐	☒

Comments:

a-e. Implementation of the proposed project would not result in the development of new housing, businesses, or other development that would increase demand for fire or police protection or new schools, parks, or other public facilities. Therefore, there would be no physical impacts associated with the provision of 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.

16. RECREATION

	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a. Would the project 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? (1, 2, 3)	☐	☐	☐	☒
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment? (1, 2, 3)	☐	☐	☐	☒

Comments:

a-b. Implementation of the proposed project would not result in the development of new housing, businesses, or other development that would increase the use of existing neighborhood and regional parks or other recreational facilities and would not require the construction or expansion of recreational facilities. Therefore, there would be no impact.

17. TRANSPORTATION

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? (1, 2, 3, 18, 19)	☐	☐	☐	☒
b.	Conflict or be inconsistent with CEQA guidelines section 15064.3, subdivision (b)? (1, 2, 3)	☐	☐	☐	☒
c.	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (1, 2, 3, 18, 19)	☐	☐	☐	☒
d.	Result in inadequate emergency access? (1, 2, 3)	☐	☐	☐	☒

Comments:

a. Project implementation may require temporary partial lane closures within the parallel sewer line route and increased traffic trips associated with construction including equipment and materials hauling to and from the pipeline alignment, construction worker transportation to and from the site, and the hauling of equipment and materials within the project area. Upon completion of construction, the disturbed areas would be restored to existing conditions. Due to the small construction footprint and continued roadway access the proposed project would not conflict within any plans or ordinances addressing the circulation system.

b. CEQA Guidelines Section 15064.3(b) applies to land use and transportation projects that would be expected to increase vehicle miles driven during their operations. A vehicle miles traveled analysis was not necessary because the proposed project would not result in long-term effects on traffic flow, circulation, or traffic congestion. The proposed project would not conflict or be inconsistent with the CEQA Guidelines Section 15064.3, subdivision (b).

c. The project does not include any components that would alter the geometric design features of the roadways along the proposed parallel sewer line route as improvements would be underground. Therefore, the proposed project would not result in inadequate emergency access.

d. The project site does not contain any emergency facilities and does not serve as an emergency evacuation route. The proposed project would not interfere with an adopted emergency response or evacuation plan.

18. TRIBAL CULTURAL RESOURCES

Would the project:

	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
(1) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources code section 5020.1(k), or ()	☐	☐	☐	☒
(2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. ()	☐	☐	☐	☒

Comments:

a. As noted in Section A, "Background," on May 28, 2021, per the requirements of Assembly Bill (AB) 52, the district sent an offer of consultation letter to nine (9) tribal representatives representing the Amah Mutsun Tribal Band of Mission San Juan Bautista, Costanoan Rumsen Carmel Tribe, Indian Canyon Mutsun Band of Costanoan, Muwekma Ohlone Indian Tribe of the SF Bay Area, The Ohlone Indian Tribe, Rusem Am:a Tur:ataj Ohlone, and Tamien Nation, respectively. As of November 30, 2023, the district has not received a response letter and request for consultation from any of these tribal representatives.

19. UTILITIES AND SERVICES SYSTEMS

Would the project:

		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a.	Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? (1, 2, 3)	☐	☐	☐	☒
b.	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? (1, 2, 3)	☐	☐	☐	☒
c.	Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments? (1, 2, 3, 4, 20)	☐	☐	☐	☒
d.	Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? (1, 2, 3, 4)	☐	☐	☐	☒
e.	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? (1, 2, 3)	☐	☐	☐	☒

Comments:

a. The proposed project includes the installation of a new sewer trunk line that would run parallel to an existing sewer line. The proposed project would not require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, Therefore, there would be no impact.

b. The proposed project may require the use of water for construction purposes but would have no effect on long-term water supplies following implementation of the proposed project. Therefore, there would be no impact.

c. According to the City of Palo Alto's 2012 *Long Range Facilities Plan for the Regional Water Quality Control Plan (Final Report)* the City of Palo Alto Regional Water Quality Control Plan is anticipated to have adequate capacity to meet the anticipated growth in the service area, which includes the City of East Palo Alto and the East Palo Alto Sanitary District service area, over the next 50 years (City of Palo Alto 2012, p. 9-1). Therefore, the proposed project would not result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

d-e. Project construction would not be expected to generate significant volumes of solid waste. Negligible volumes of debris would be generated during project construction. Because the materials disposed of in a landfill would be negligible, the proposed project would not generate solid waste in excess of State or local standards or in excess of the landfill's remaining capacity and would not otherwise impair the attainment of solid waste reduction goals. Therefore, there would be no impact.

20. WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a. Substantially impair an adopted emergency response plan or emergency evacuation plan? (4, 20)	☐	☐	☐	☒
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire? (4, 20)	☐	☐	☐	☒
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? (4, 20)	☐	☐	☐	☒
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? (4, 20)	☐	☐	☐	☒

Comments:

a-d. The proposed project site is not located on or near state responsibility areas or lands classified as very high fire hazard severity zones.

21. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Measures Incorporated	Less-Than-Significant Impact	No Impact
a. Does the project have the potential to substantially 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; substantially reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory? (5, 11, 17, 35, 36, 37, 38, 39, 40, 41, 42)	☐	☒	☐	☐
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects) (1, 2, 3, 4, 5, 11, 17, 31, 34, 35, 36, 37, 38, 39, 40, 41, 42)	☐	☒	☐	☐
c. Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly? (1, 2, 3, 4, 11, 31, 34)	☐	☒	☐	☐

Comments:

a. As discussed in Section D.4, Biological Resources, the proposed project has the potential to impact marsh harvest mouse, salt-marsh wandering shrew, Alameda song sparrow, California Ridgway's rail, California black rail, burrowing owl, special-status bats, nesting birds and raptors and wetlands and waters of the United States. Implementation of Mitigation Measures BIO-1 through BIO-8 would reduce these impacts to a less-than-significant level.

As described in Section D.5, Cultural Resources, the project site does not contain any known unique important examples of the major periods of California history or

prehistory (i.e. significant historic resources or unique archaeological resources). However, it is possible that such resources could be accidentally uncovered during earth-moving activities. In the event this should occur, Mitigation Measures CR-1 and CR-2 would ensure that the potential impacts would not be significant.

b. The proposed project has the potential to result in cumulatively considerable impacts in the areas of: air quality (construction), biology (potential impacts to special status species and wetlands and waters of the United States), cultural resources (accidental discovery of sensitive cultural resources and the accidental discovery of Native American human remains), geology and soils (soil erosion and accidental discovery of paleontological resources), and noise (construction-related impacts). However, with the implementation of identified mitigation measures, impacts of the proposed project would not be cumulatively considerable.

c. The proposed project has the potential to result in adverse environmental effects that could cause substantial adverse effects on human beings from the following: toxic air contaminants (TACs) pollutants that may be expected to result in an increase in mortality or serious illness or may pose a present or potential hazard to human health and construction-related noise at nearby sensitive receptors that exceed noise thresholds. Implementation of mitigation measures AQ-1 and N-1 would reduce potential impacts to a less-than-significant level.

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46. USFWS and CDFW. 2021. Preliminary consultation with EMC Planning Group. September 21, 2021.

47. U.S. Department of Transportation, Federal Aviation Administration (FAA). December 13, 2017. *Advisory Circular 150/5370-G*. https://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5370-2G.pdf

APPENDIX A

PROJECT PLANS (PREPARED BY SIERRA WEST CONSULTANTS, INC., DATED OCTOBER 3, 2023)

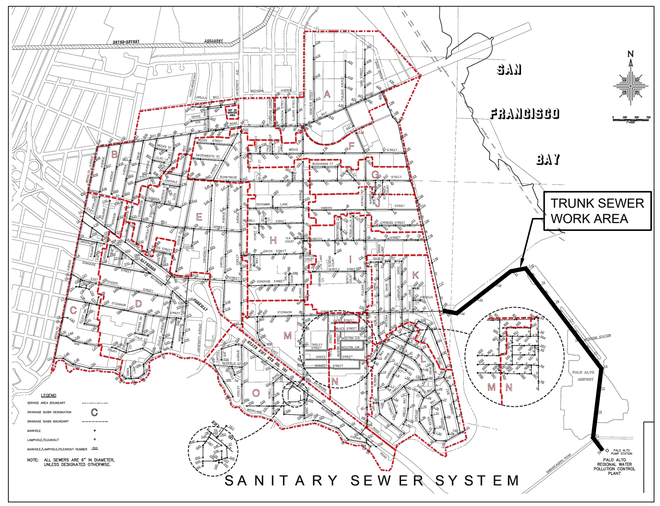
EAST PALO ALTO SANITARY DISTRICT

TRUNK SEWER EXPANSION PROJECT

SEPTEMBER 2023

LOCATION MAP

NTS



VICINITY MAP

NTS

EPASD EAST PALO ALTO SANITARY DISTRICT

EPASD BOARD OF DIRECTORS

DENNIS SCHERZER	PRESIDENT
MARTHA STRYKER	VICE PRESIDENT
GLENDA SAVAGE	SECRETARY
BETHZABE YANEZ	DIRECTOR
OFELIA BELLO	DIRECTOR

CONTACTS

EPASD GENERAL MANAGER
AKIN OKUPE
(650) 325-9021

SIERRA WEST CONSULTANTS
JEFF BENSCH, P.E.
(906) 863-3220

SHEET INDEX

GENERAL NOTES:

1. CONTRACTOR SHALL PERFORM ALL WORK IN CONNECTION WITH, AND INCIDENTAL TO, THE WORK REQUIRED BY THESE DRAWINGS AND ASSOCIATED SPECIFICATIONS. WORK INVOLVES CONSTRUCTION OF NEW SANITARY SEWER PIPELINE PARALLEL TO EXISTING SANITARY SEWER PIPELINES.
2. CONTRACTOR SHALL BE FAMILIAR WITH ALL INDUSTRY STANDARDS, CODES, REGULATIONS, AND LOCAL ORDINANCES HAVING JURISDICTION OVER THIS PROJECT AND SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH ANY WORK AFFECTED BY THE DISCREPANCY.
3. CONTRACTOR SHALL HAVE SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT APPLIES CONTINUOUSLY DURING WORK AND NON-WORK HOURS, 24 HOURS PER DAY.
4. CONTRACTOR SHALL EMPLOY AND COORDINATE SUBCONTRACTORS AS MAY BE NEEDED TO EXECUTE ALL WORK REQUIRED BY THESE DRAWINGS AND ASSOCIATED SPECIFICATIONS.
5. CONTRACTOR SHALL OBTAIN ENCROACHMENT PERMITS AND PERFORM ALL WORK IN ACCORDANCE WITH ALL PERMIT PROVISIONS.
6. CONTRACTOR SHALL COMPLY WITH ALL FEDERAL AVIATION ADMINISTRATION AND CITY OF PALO ALTO AIRPORT REQUIREMENTS.
7. CONTRACTOR SHALL FIELD VERIFY ALL PERTINENT DIMENSIONS SHOWN ON THE DRAWINGS AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
8. LOCATIONS AND TYPES OF EXISTING UTILITIES ARE SHOWN BASED ON AVAILABLE INFORMATION AT THE TIME OF DESIGN. CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES. CONTRACTOR SHALL CONTACT UNDERGROUND SERVICES ALERT (USA) TO LOCATE BURIED UTILITIES AND MARK IN THE FIELD A MINIMUM OF 5 DAYS PRIOR TO BEGINNING ANY EXCAVATION ACTIVITIES.
9. CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS IN THE VICINITY OF WORK ACTIVITIES INCLUDING, BUT NOT LIMITED TO, EMBANKMENTS, RUNWAYS, CURB AND GUTTER, SIDEWALKS, LANDSCAPING, CULVERTS, DRAINS, PAVING, STRIPING, UTILITIES, SERVICE LATERALS, AND FENCES. ALL EXISTING IMPROVEMENTS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR BETTER WITHOUT ADDITIONAL COST TO THE PROJECT.
10. CONTRACTOR SHALL CONDUCT WORK TO MINIMIZE OBSTRUCTION AND INCONVENIENCE TO THE PUBLIC AND AIRPORT OPERATIONS, INCLUDING BUT NOT LIMITED TO PROVIDING AND MAINTAINING SUITABLE AND SAFE CROSSINGS OVER TRENCHES, DRIVEWAY ACCESS, AND CARE FOR PEDESTRIAN TRAFFIC. ROADWAYS AND RUNWAYS SHALL BE MADE SAFE AND PASSABLE AT THE END OF EACH WORKDAY. NO TRENCH SHALL BE LEFT IN AN UNSAFE CONDITION AND SHALL BE CLOSED OR PLATE COVERED WHEN WORK IS NOT OCCURRING IN THE TRENCH.
11. CONTRACTOR SHALL PROVIDE 72-HOUR WRITTEN NOTIFICATION TO CITY OF PALO ALTO PRIOR TO INITIATING CONSTRUCTION. IF PARKING OR TRAVEL PATHS ARE RESTRICTED DURING CONSTRUCTION, CONTRACTOR SHALL PROVIDE SIGNAGE WHERE THE PROPOSED RESTRICTION ARE TO OCCUR A MINIMUM OF 48-HOURS IN ADVANCE.
12. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE OSHA RULES, REGULATIONS, AND ORDERS ESTABLISHED BY FEDERAL AND STATE AGENCIES BEFORE ENTERING ANY TRENCH EXCAVATION, VAULT, OR MANHOLE.
13. PRIOR TO THE START OF SEWER CONSTRUCTION, THE CONTRACTOR SHALL PERFORM BYPASS PUMPING OPERATIONS. CONSTRUCTION CAN NOT BEGIN UNTIL CONTRACTOR DEMONSTRATES ACCEPTABLE BYPASS PUMPING OPERATIONS.
14. CONTRACTOR RESPONSIBLE FOR DEWATERING OF TRENCH EXCAVATIONS. NO PIPE OR CONCRETE SHALL BE INSTALLED UNDER SUBMERGED CONDITIONS. CONTRACTOR SHALL MAINTAIN DRY TRENCH CONDITIONS WHEN REMOVING OR INSTALLING PIPELINES, GROUT, OR CONCRETE.
15. CONTRACTOR TO PREPARE TRAFFIC MANAGEMENT PLAN THAT SHALL INCLUDE AT A MINIMUM PROPOSED LANE AND ROAD CLOSURES, SIGNS, FLAG PERSONS, BARRIERS, AND DETOURS THAT ALSO INCORPORATE WORK IN AIRPORT AND SAN FRANCISQUITA CREEK TRAIL.
16. CONSTRUCTION IS LIMITED TO WEEKDAYS FROM 8:00 AM TO 5:00 PM WITHIN THE PUBLIC RIGHT OF WAY. NO WORK ON WEEKENDS OR HOLIDAYS.
17. NO STOCKPILING OF MATERIALS IS ALLOWED WITHIN THE PUBLIC RIGHT OF WAY UNLESS APPROVED BY EAST PALO ALTO SANITARY DISTRICT AND THE CITY OF EAST PALO ALTO.

DRAFT - NOT FOR CONSTRUCTION

NO.	DATE	REVISIONS	BY	CHK

DRAWN: MAH | PROJECT NO:
ENGINEER: JCB | SCALE:
CHECKED: JCB | APPROVED:
DATE: 10/3/23 | DATE:

WARNING
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AT FULL SCALE
(IF BAR IS NOT 1" - SCALE ACCORDINGLY)

SIERRA WEST CONSULTANTS, INC.
4227 Sunrise Boulevard, Suite 220
Fair Oaks, California 95628
Ph: (916) 863-3220 Fax: (916) 863-3225

PREPARED FOR:
EPASD EAST PALO ALTO SANITARY DISTRICT
901 WEEKS STREET
EAST PALO ALTO, CA 94303

REGISTERED PROFESSIONAL ENGINEER
JEFFREY C. BENSCH
No. 0043803
Exp. 6/30/25
CIVIL
STATE OF CALIFORNIA

EAST PALO ALTO SANITARY DISTRICT
TRUNK SEWER EXPANSION PROJECT

SHEET NO: G-1

TITLE SHEET, GENERAL NOTES, LOCATION MAP, VICINITY MAP AND SHEET INDEX

1 / 18

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LEGEND

- .....FOUND MONUMENT AS DESCRIBED
- .....FOUND MONUMENT IN WELL AS DESCRIBED
- .....FOUND CUT "X" AS DESCRIBED
- .....DIMENSION POINT-NOTHING FOUND OR SET
- .....STORM DRAIN MANHOLE
- .....STORM DRAIN INLET
- .....STORM DRAIN CLEAN OUT
- .....SEWER MANHOLE
- .....SEWER CLEAN OUT
- .....FIRE HYDRANT
- .....FIRE DEPARTMENT CONNECTION
- .....WATER VALVE
- .....WATER BOX OR METER
- .....WATER VALVE ASSEMBLY
- .....WATER MANHOLE
- .....GROUND WATER MONITORING WELL
- .....ELECTRIC BOX OR VAULT
- .....PULL BOX
- .....TRANSFORMER
- .....UTILITY POLE
- .....LIGHT
- .....TRAFFIC SIGNAL
- .....ELECTRIC MANHOLE
- .....TELEPHONE\COMMUNICATION BOX
- .....TELEPHONE MANHOLE
- .....TELEVISION BOX
- .....TELEVISION MANHOLE
- .....GAS VALVE
- .....GAS METER
- .....SIGN
- .....ACCESSIBLE PARKING OR RAMP
- .....PARKING METER
- .....VAULT\BOX UNKNOWN
- .....MANHOLE UNKNOWN
- .....BOLLARD

ABBREVIATIONS

AC	ASPHALTIC CONCRETE
BK	BOOK
CL	CENTERLINE
CONC	CONCRETE
CP	CONCRETE PIPE
DI	DRAIN INLET
EL	ELEVATION
EX, (E)	EXISTING
FC	FACE OF CURB
FL	FLOW LINE
LA	LANDSCAPE AREA
MH	MANHOLE
(N)	NEW
O.R.	OFFICIAL RECORDS
PE	POLYETHYLENE PIPE
PG	PAGE
POB	POINT OF BEGINNING
PL	PROPERTY LINE
PLN	PLANTER
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE PIPE
RIM	MANHOLE RIM
ROW	RIGHT OF WAY
SSL	SEWER SERVICE LATERAL
TBC	TOP BACK OF CURB
TBRC	TOP BACK ROLLED CURB
TE	TRASH ENCLOSURE
TYP	TYPICAL

LINETYPES

- PROPERTY LINE
- RIGHT-OF-WAY
- CENTERLINE
- LOT LINE
- EASEMENT
- FENCE-CYCLONE
- FENCE-WOOD
- CURB & GUTTER
- EDGE OF PAVEMENT

UTILITIES

- UG-SD
- UG-SS
- UG-H2O
- UG-GAS
- UG-TV
- UG-TEL
- UG-E
- UNKNOWN
- OVERHEAD

OVERALL KEY MAP

1"=250'

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REGISTERED PROFESSIONAL ENGINEER JEFFREY C. BENSON No. 0043803 Exp. 6/30/25 CIVIL STATE OF CALIFORNIA

EAST PALO ALTO SANITARY DISTRICT
TRUNK SEWER EXPANSION PROJECT

SHEET NO: G-2

LEGEND, ABBREVIATIONS, SYMBOLS, AND OVERALL KEY MAP

2 / 18

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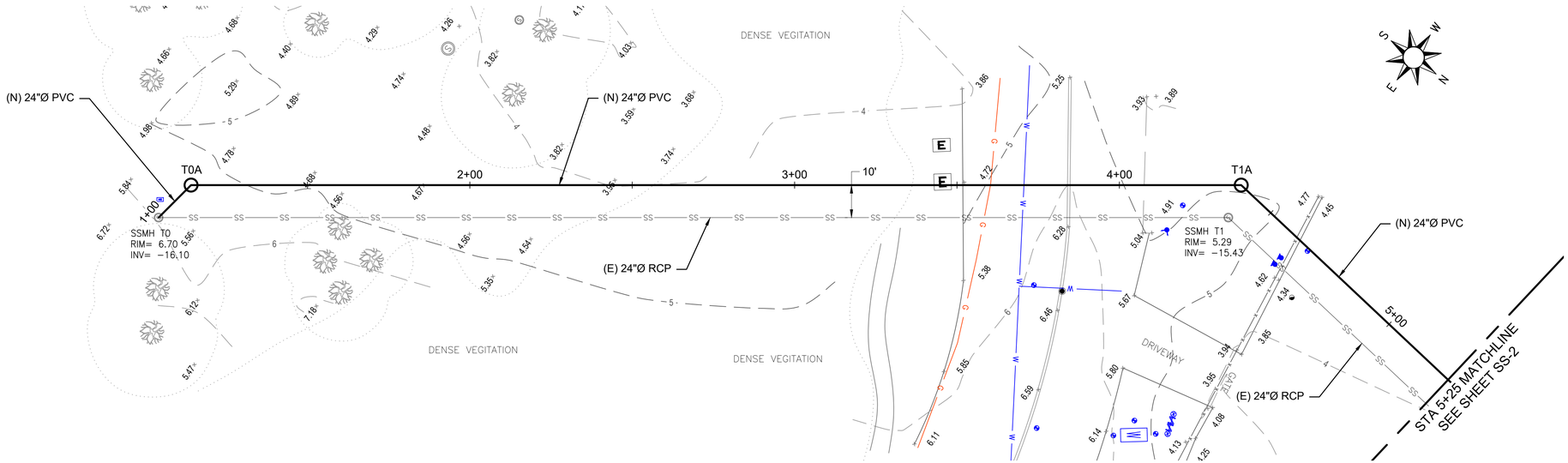
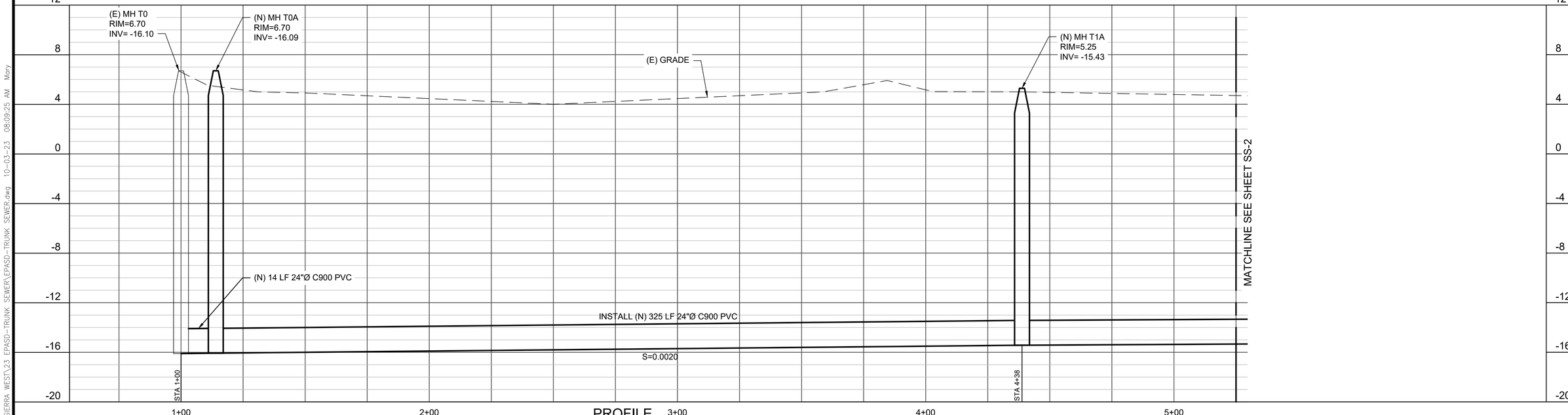


PLAN
1"=20'

GENERAL NOTES:

1. INSTALL (N) SANITARY SEWER PIPES PIPES BY OPEN TRENCH METHODS UNLESS NOTED OTHERWISE.
2. CONTRACTOR SHALL MAINTAIN UN-INTERRUPTED SEWER SERVICE AT ALL TIMES.
3. CONTRACTOR SHALL NOTE THE CLOSE PROXIMITY OF UTILITIES TO PROPOSED PIPELINES, AND CONTRACTOR SHALL UNDERSTAND THE TOLERANCE LIMITS OF SUCH UTILITY LOCATES. CONTRACTOR IS RESPONSIBLE TO FIELD LOCATE, PROTECT, AND WORK AROUND ALL BURIED UTILITIES.



PROFILE
H: = 1"=20'
V. = 1"=4'

DRAFT - NOT FOR CONSTRUCTION

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Exp. 6/30/25
CIVIL
STATE OF CALIFORNIA

EAST PALO ALTO SANITARY DISTRICT
TRUNK SEWER EXPANSION PROJECT

SHEET NO: SS-1

PLAN AND PROFILE
STA 1+00 - STA 5+25

3 / 18

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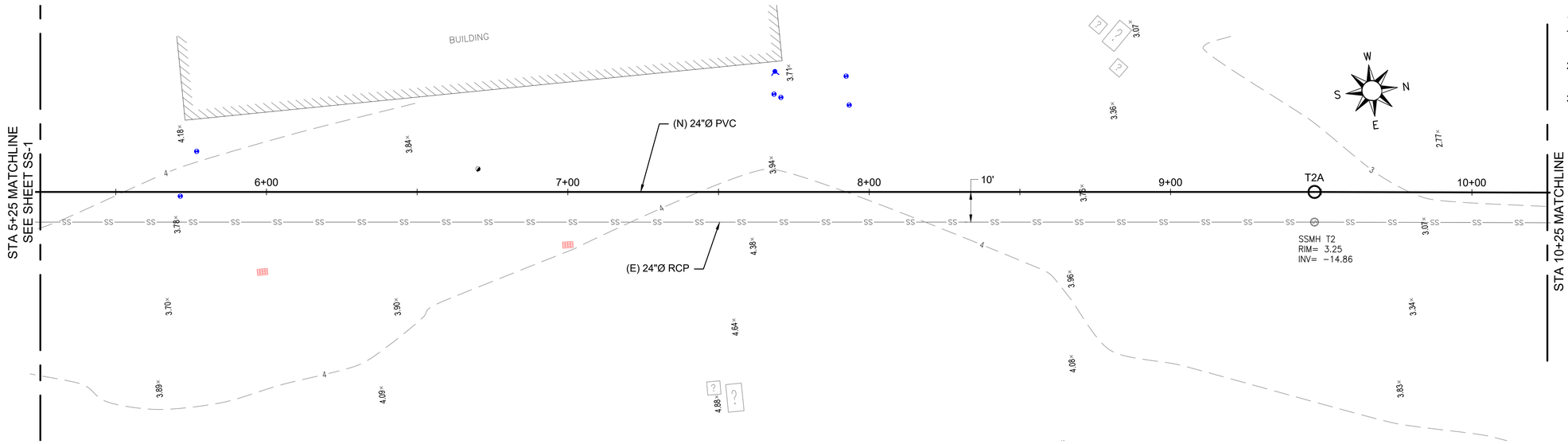
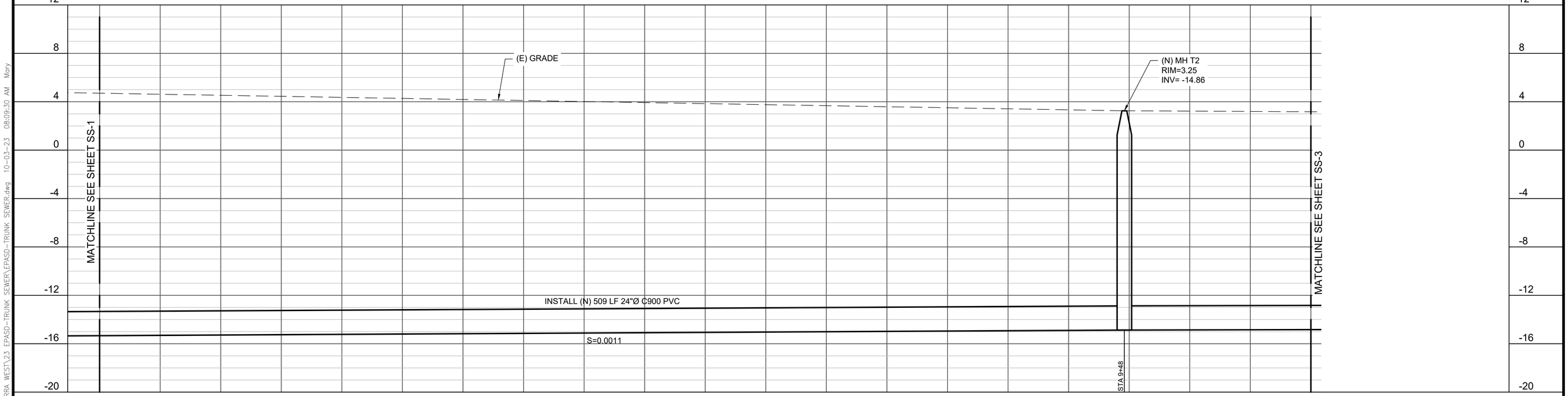


PLAN
1"=20'



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REGISTERED PROFESSIONAL ENGINEER
JEFFREY C. BENSON
No. 0043803
Exp. 6/30/25
CIVIL
STATE OF CALIFORNIA

EAST PALO ALTO SANITARY DISTRICT
TRUNK SEWER EXPANSION PROJECT

SHEET NO: SS-2

PLAN AND PROFILE
STA 5+25 - STA 10+25

4 / 18

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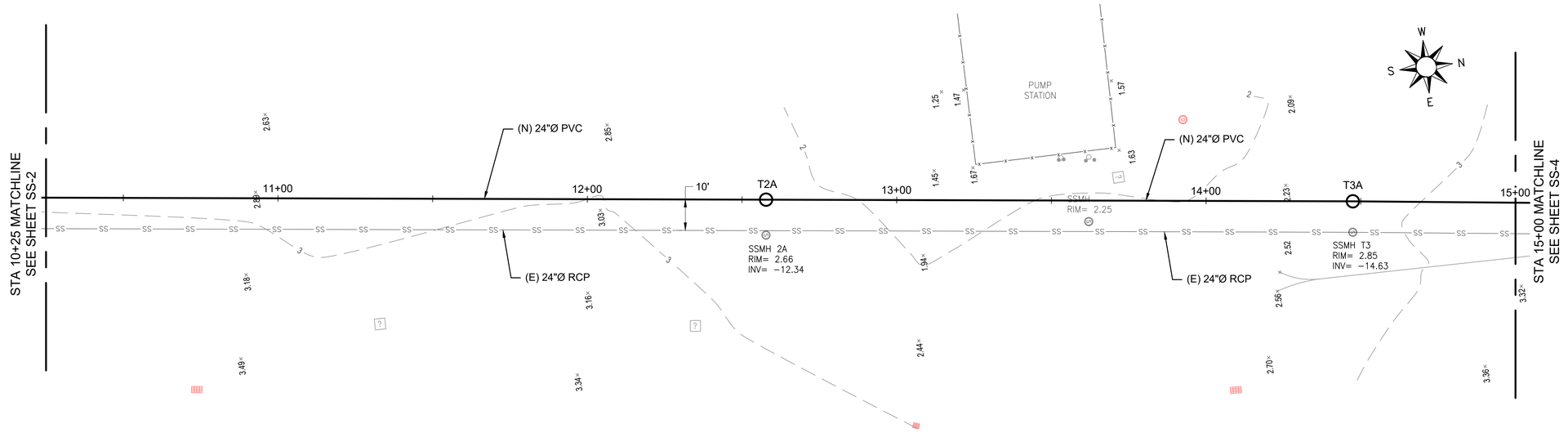

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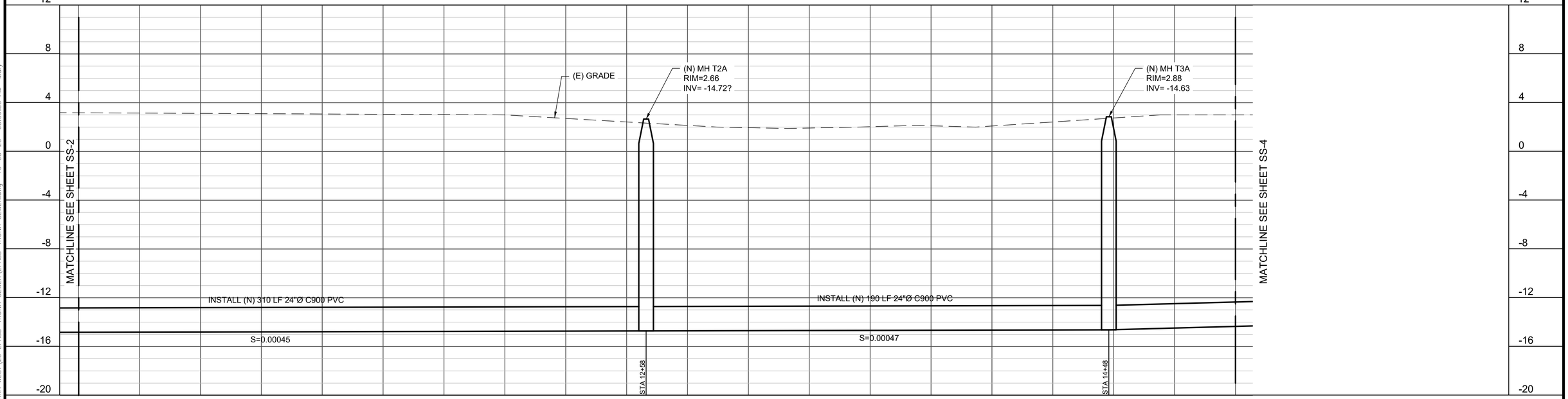

PROFILE
H: = 1"=20'
V. = 1"=4'

DRAFT - NOT FOR CONSTRUCTION

NO.	DATE	REVISIONS	BY	CHK

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ENGINEER: JCB	SCALE:	
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EAST PALO ALTO, CA 94303

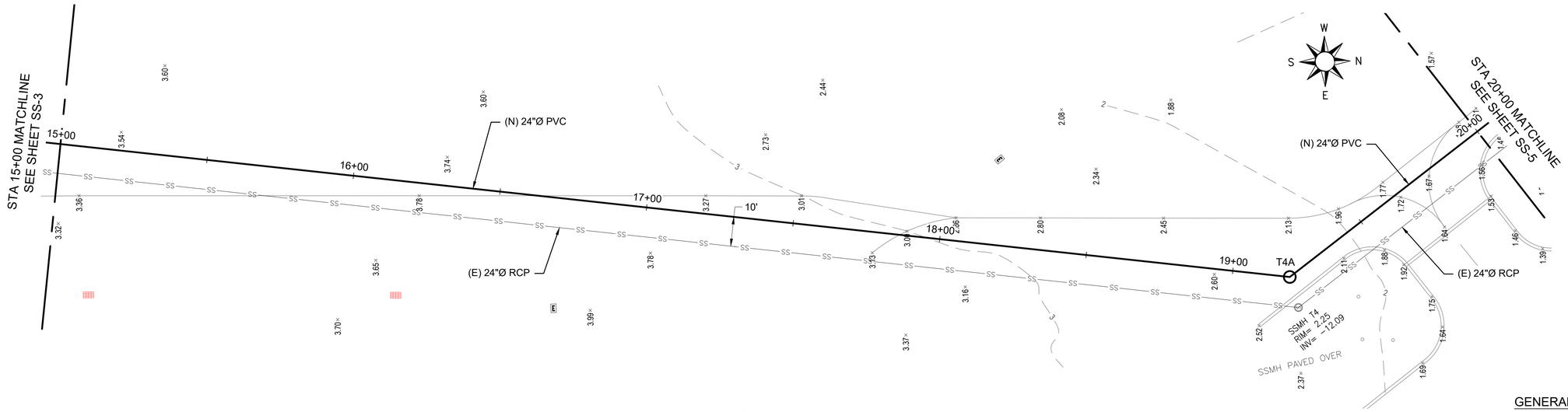
REGISTERED PROFESSIONAL ENGINEER
JEFFREY C. BENSON
No. 0043803
Exp. 6/30/25
CIVIL
STATE OF CALIFORNIA

EAST PALO ALTO SANITARY DISTRICT
TRUNK SEWER EXPANSION PROJECT

SHEET NO: SS-3

PLAN AND PROFILE
STA 10+25 - STA 15+00

5 / 18



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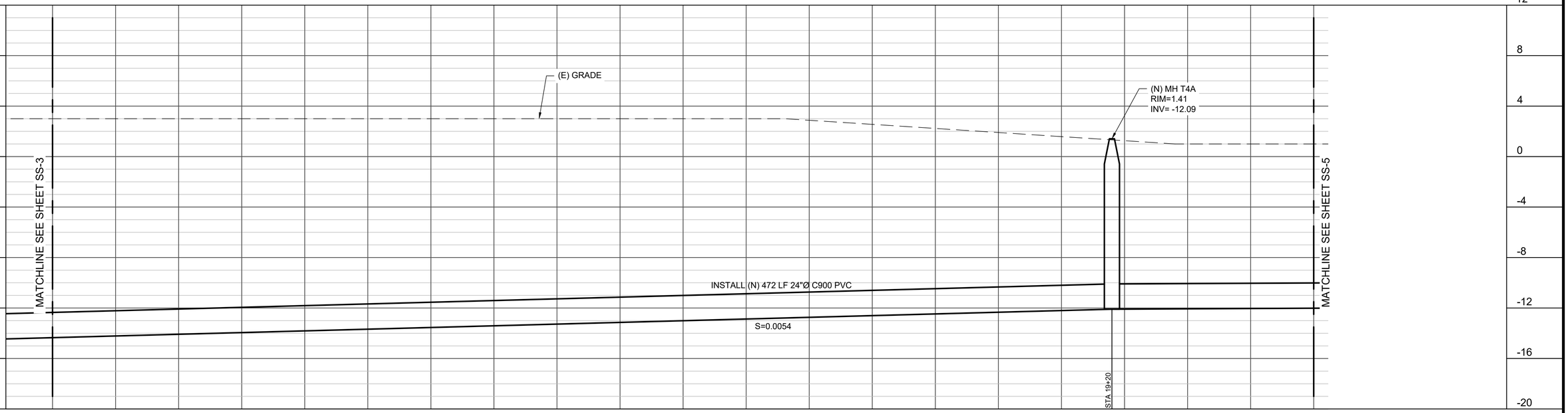

PROFILE
H: = 1"=20'
V. = 1"=4'

DRAFT - NOT FOR CONSTRUCTION

NO.	DATE	REVISIONS	BY	CHK

DRAWN: MAH | PROJECT NO:
ENGINEER: JCB | SCALE:
CHECKED: JCB | APPROVED:
DATE: 10/3/23 | DATE:

WARNING
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AT FULL SCALE
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Fair Oaks, California 95628
Ph: (916) 863-3220 Fax: (916) 863-3225

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901 WEEKS STREET
EAST PALO ALTO, CA 94303

REGISTERED PROFESSIONAL ENGINEER JEFFREY C. BENSON No. 0043803 Exp. 6/30/25 CIVIL STATE OF CALIFORNIA

EAST PALO ALTO SANITARY DISTRICT
TRUNK SEWER EXPANSION PROJECT

SHEET NO: SS-4

PLAN AND PROFILE
STA 15+00 - STA 20+00

6 / 18

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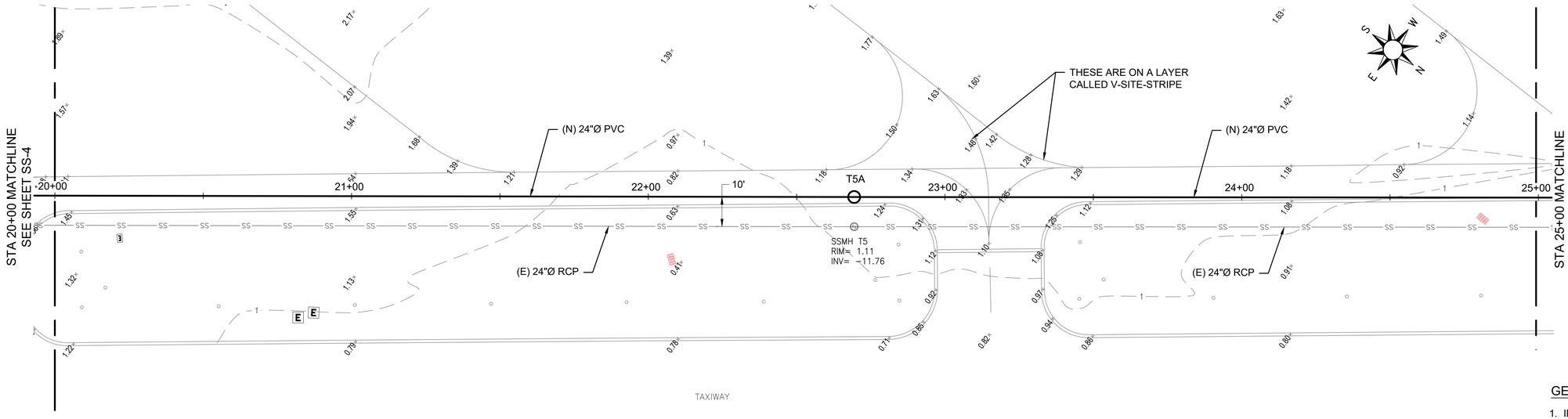

PLAN
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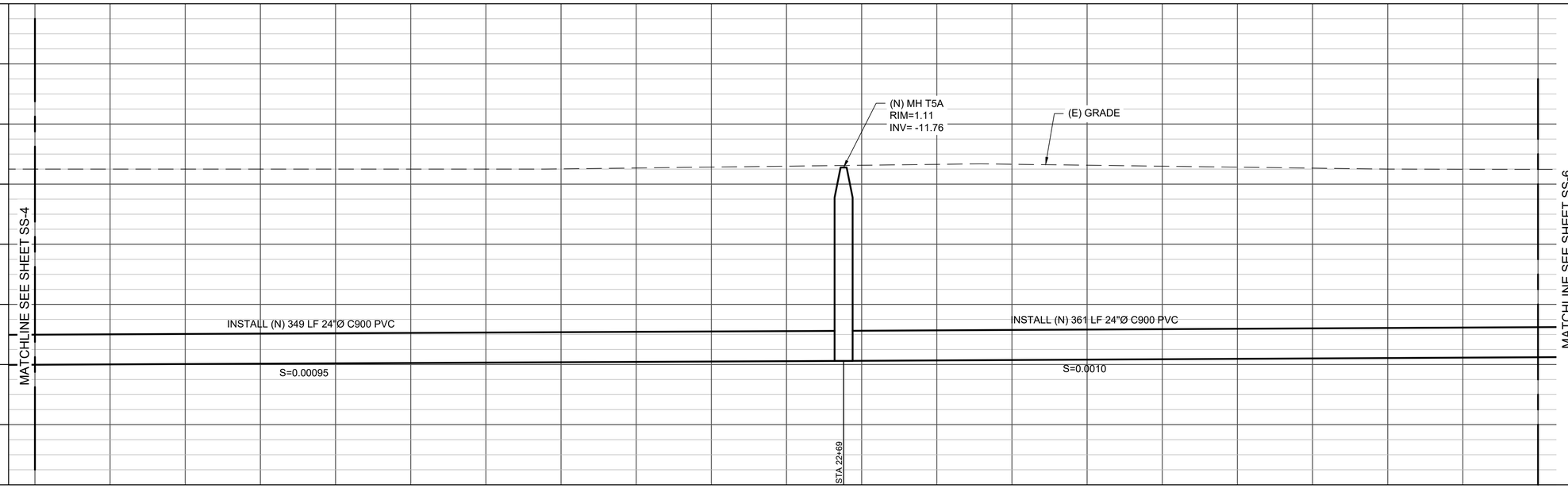

PROFILE
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DRAFT - NOT FOR CONSTRUCTION

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DRAWN: MAH | PROJECT NO:
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WARNING
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EAST PALO ALTO SANITARY DISTRICT
TRUNK SEWER EXPANSION PROJECT

SHEET NO: SS-5

PLAN AND PROFILE
STA 20+00 - STA 25+00

7 / 18

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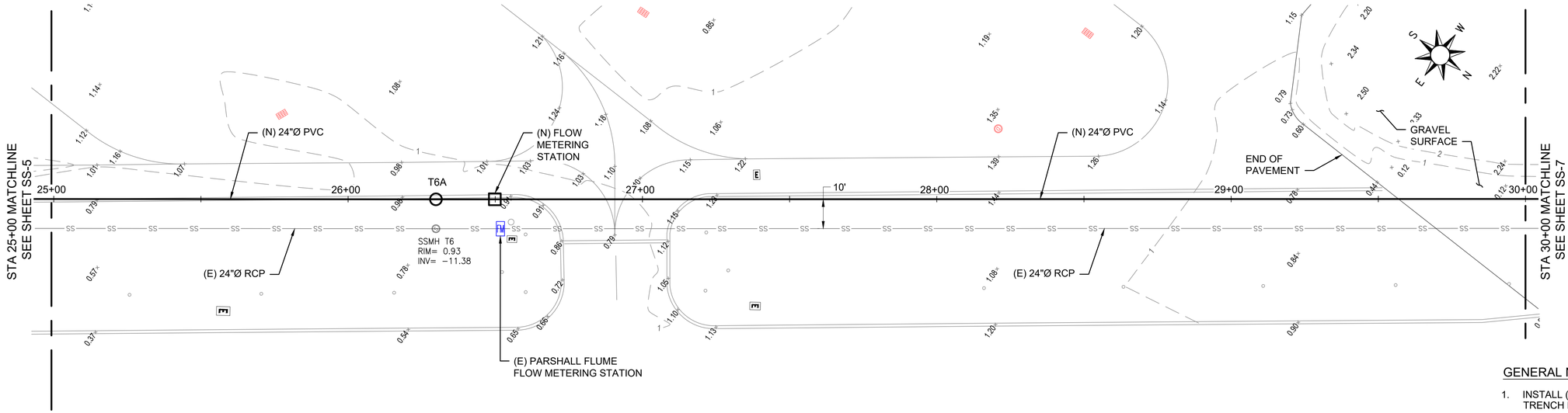

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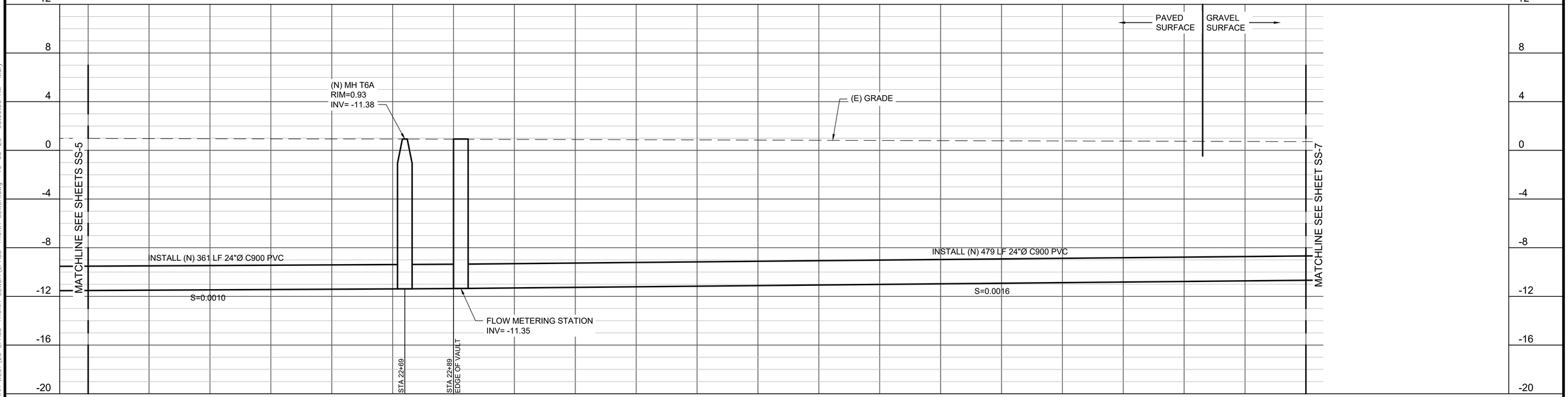

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Exp. 6/30/25
CIVIL
STATE OF CALIFORNIA

EAST PALO ALTO SANITARY DISTRICT
TRUNK SEWER EXPANSION PROJECT

SHEET NO: SS-6

PLAN AND PROFILE
STA 25+00 - STA 30+00

8 / 18

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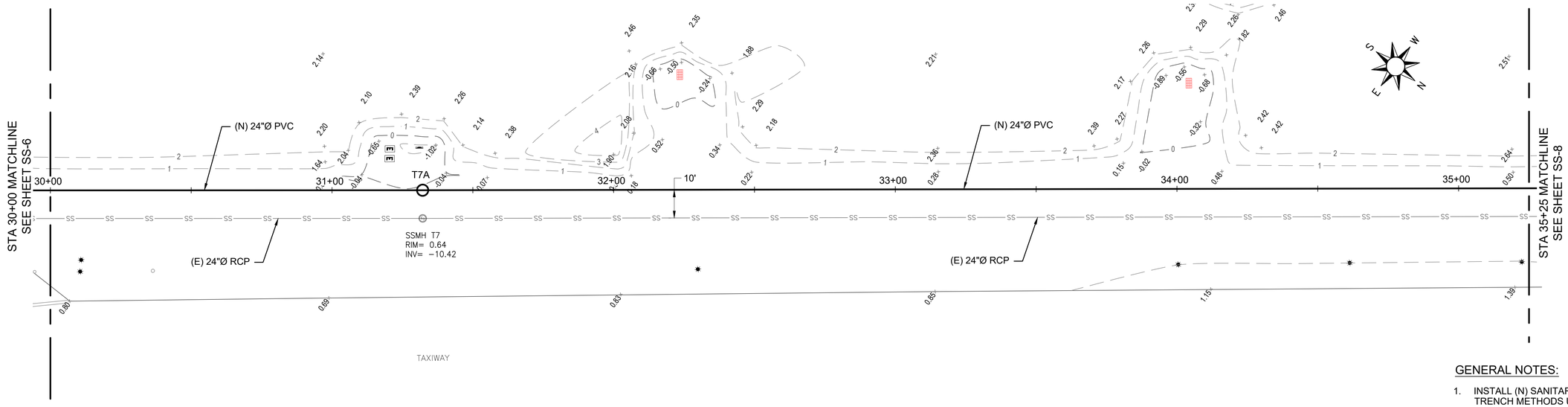
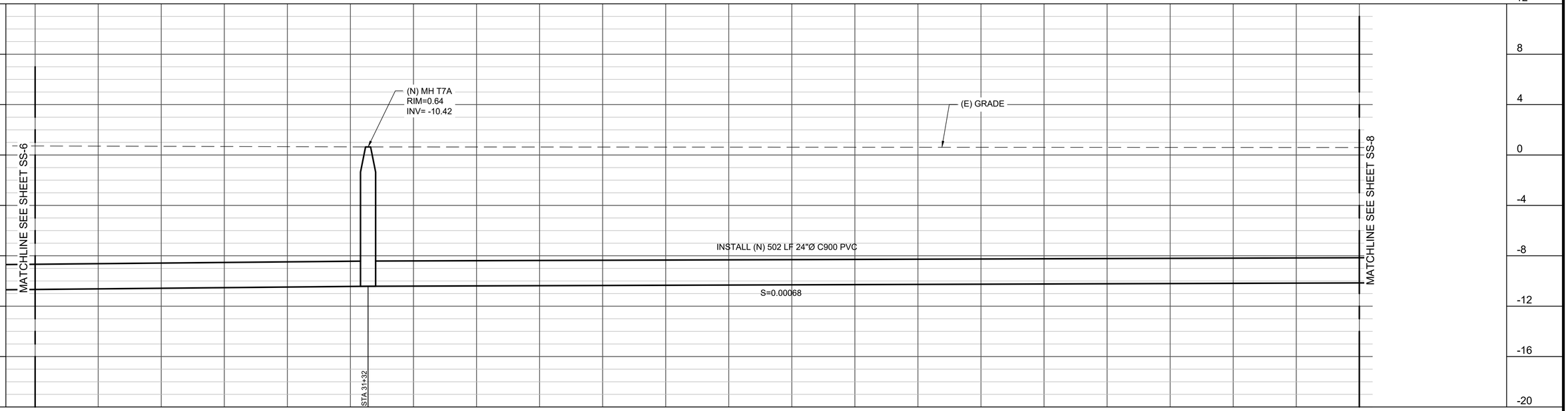


PLAN
1"=20'

GENERAL NOTES:

1. INSTALL (N) SANITARY SEWER PIPES PIPES BY OPEN TRENCH METHODS UNLESS NOTED OTHERWISE.
2. CONTRACTOR SHALL MAINTAIN UN-INTERRUPTED SEWER SERVICE AT ALL TIMES.
3. CONTRACTOR SHALL NOTE THE CLOSE PROXIMITY OF UTILITIES TO PROPOSED PIPELINES, AND CONTRACTOR SHALL UNDERSTAND THE TOLERANCE LIMITS OF SUCH UTILITY LOCATES. CONTRACTOR IS RESPONSIBLE TO FIELD LOCATE, PROTECT, AND WORK AROUND ALL BURIED UTILITIES.



PROFILE
H: = 1"=20'
V. = 1"=4'

DRAFT - NOT FOR CONSTRUCTION

NO.	DATE	REVISIONS	BY	CHK

DRAWN:	MAH	PROJECT NO:	
ENGINEER:	JCB	SCALE:	
CHECKED:	JCB	APPROVED:	
DATE:	10/3/23	DATE:	

WARNING
0 1"
AT FULL SCALE
(IF BAR IS NOT 1" - SCALE ACCORDINGLY)

SIERRA WEST CONSULTANTS, INC.
4227 Sunrise Boulevard, Suite 220
Fair Oaks, California 95628
Ph: (916) 863-3220 Fax: (916) 863-3225

PREPARED FOR:
EPASD EAST PALO ALTO SANITARY DISTRICT
901 WEEKS STREET
EAST PALO ALTO, CA 94303

REGISTERED PROFESSIONAL ENGINEER
JEFFREY C. BENSON
No. 0043803
Exp. 6/30/25
CIVIL
STATE OF CALIFORNIA

EAST PALO ALTO SANITARY DISTRICT
TRUNK SEWER EXPANSION PROJECT

SHEET NO: SS-7

PLAN AND PROFILE
STA 30+00 - STA 35+25

9 / 18

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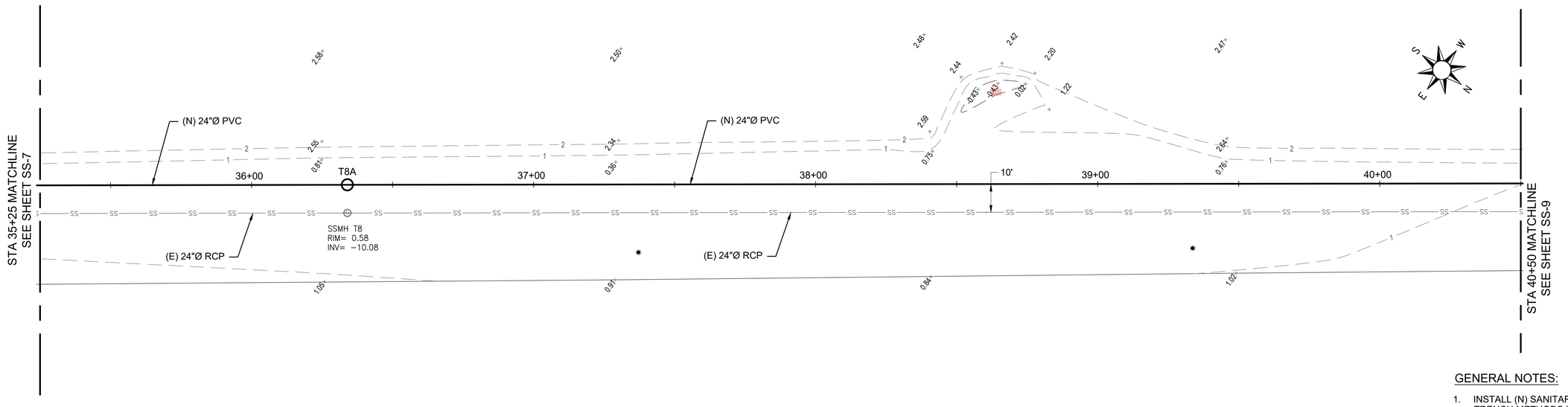

PLAN
1"=20'

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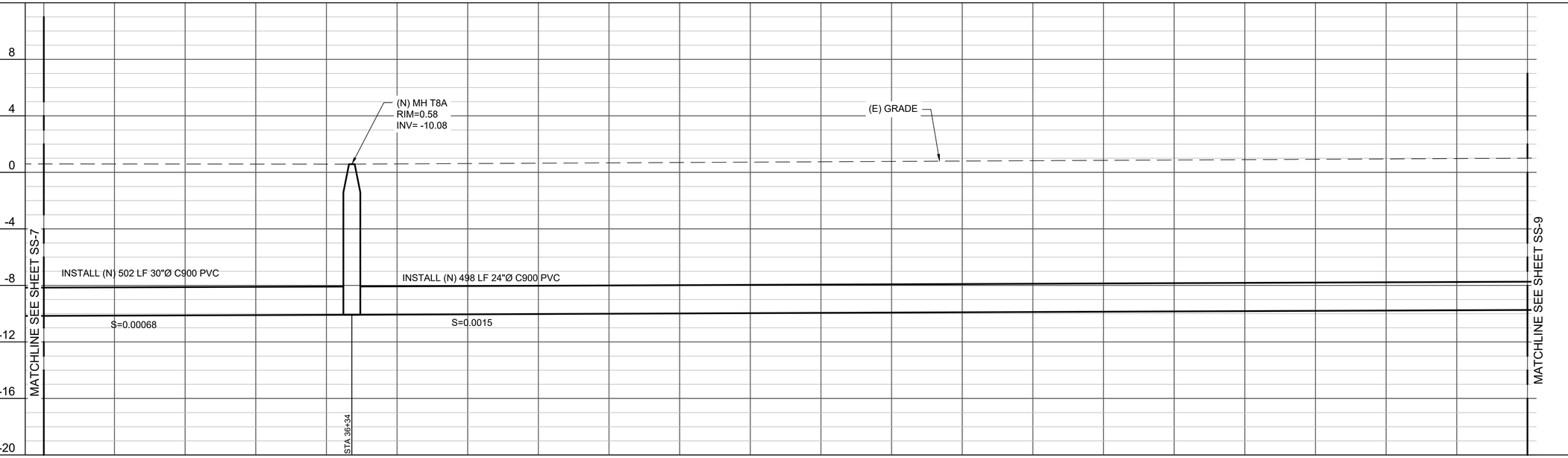

PROFILE
H: = 1"=20'
V. = 1"=4'

DRAFT - NOT FOR CONSTRUCTION

NO.	DATE	REVISIONS	BY	CHK

DRAWN: MAH | PROJECT NO:
ENGINEER: JCB | SCALE:
CHECKED: JCB | APPROVED:
DATE: 10/3/23 | DATE:

WARNING
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EAST PALO ALTO SANITARY DISTRICT
TRUNK SEWER EXPANSION PROJECT

SHEET NO: SS-8

PLAN AND PROFILE
STA 35+25 - STA 40+50

10 / 18

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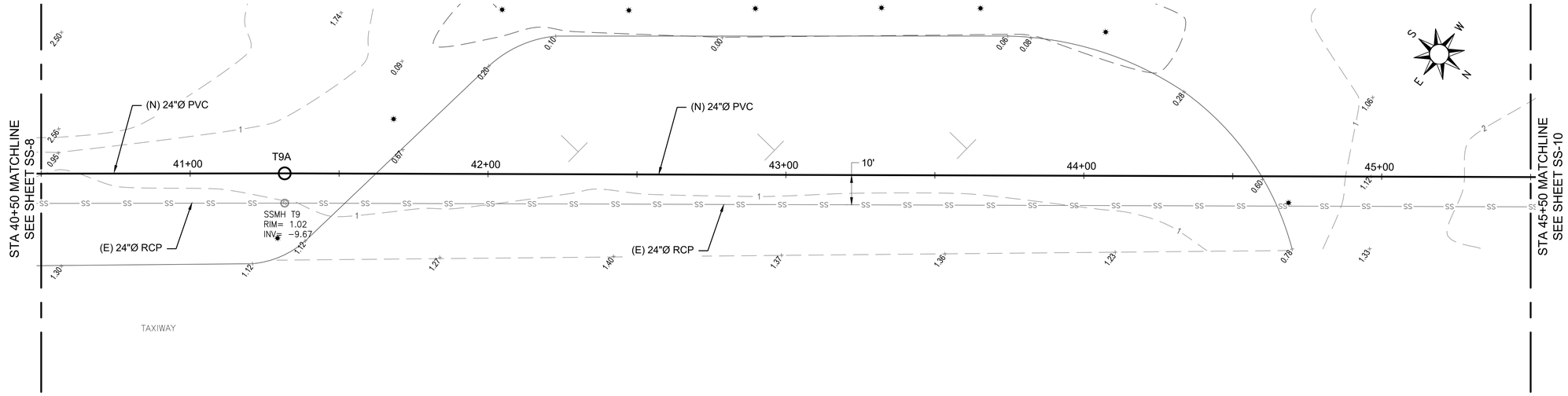

PLAN
1"=20'

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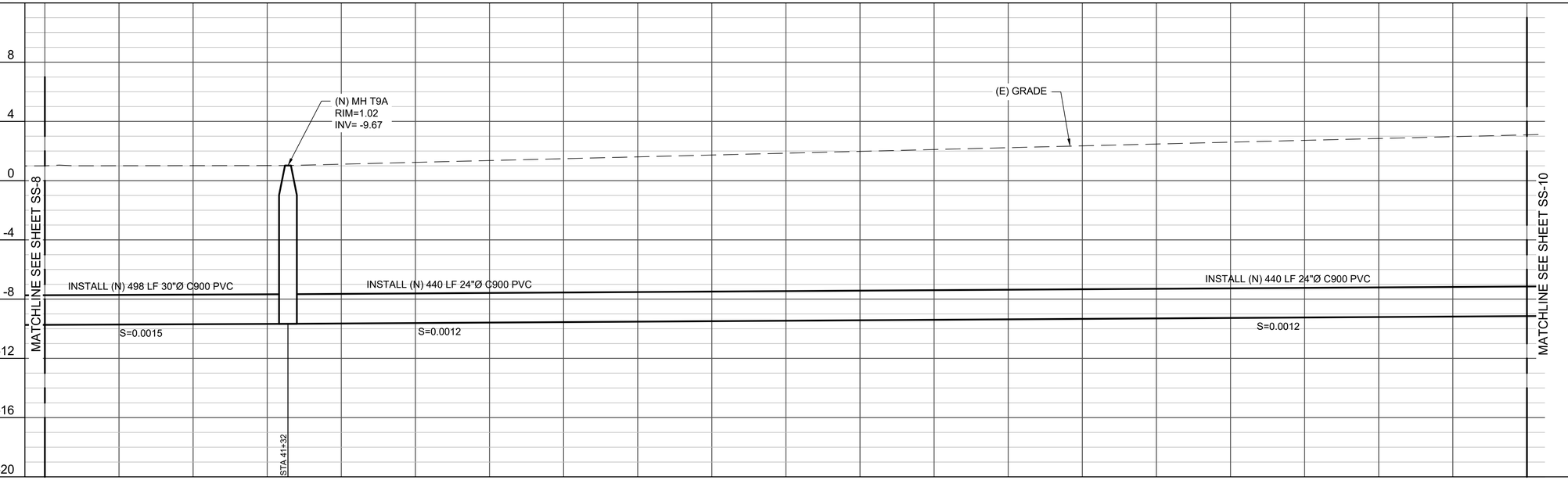

PROFILE
H: = 1"=20'
V. = 1"=4'

DRAFT - NOT FOR CONSTRUCTION

NO.	DATE	REVISIONS	BY	CHK

DRAWN:	MAH	PROJECT NO:	
ENGINEER:	JCB	SCALE:	
CHECKED:	JCB	APPROVED:	
DATE:	10/3/23	DATE:	

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STATE OF CALIFORNIA

EAST PALO ALTO SANITARY DISTRICT
TRUNK SEWER EXPANSION PROJECT

SHEET NO: SS-9

PLAN AND PROFILE
STA 40+50- STA 45+50

11/18

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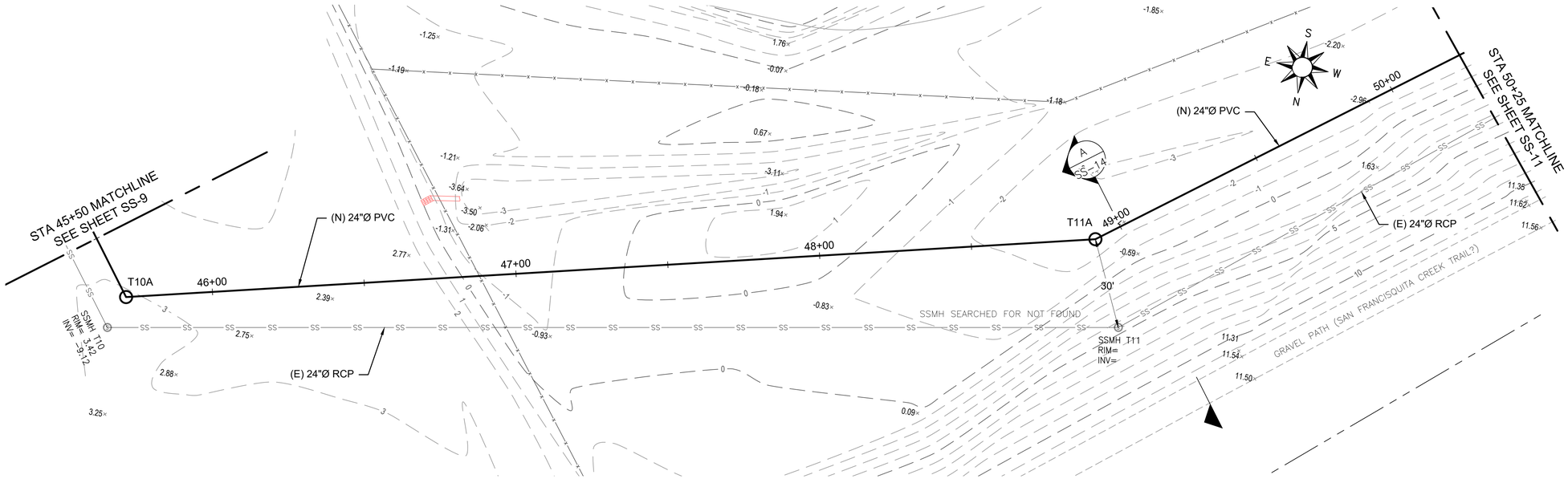

PLAN
1"=20'

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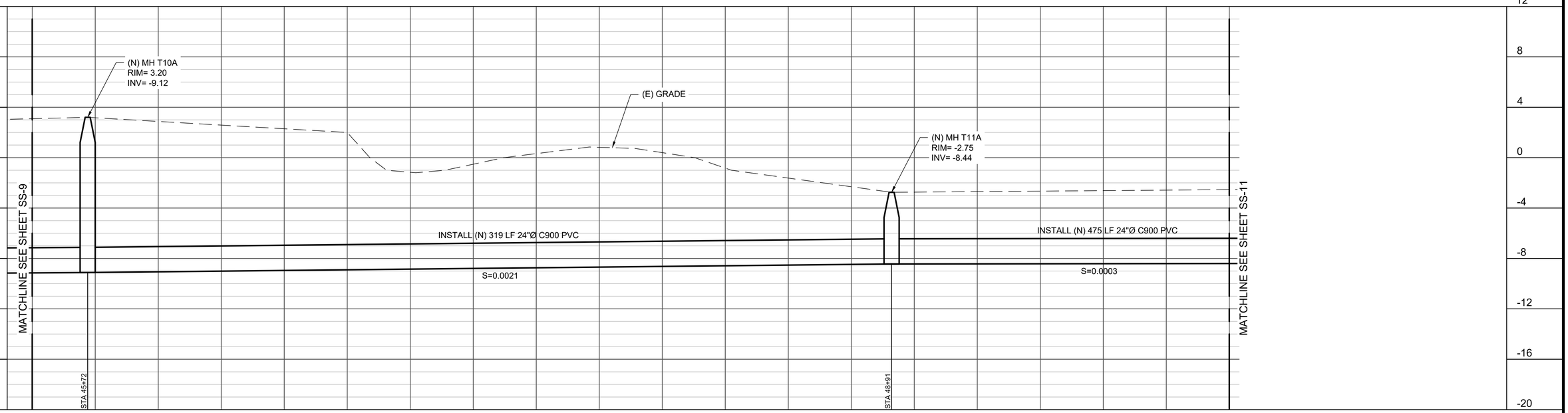

PROFILE
H: = 1"=20'
V. = 1"=4'

DRAFT - NOT FOR CONSTRUCTION

NO.	DATE	REVISIONS	BY	CHK

DRAWN:	MAH	PROJECT NO:	
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CHECKED:	JCB	APPROVED:	
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EAST PALO ALTO SANITARY DISTRICT
TRUNK SEWER EXPANSION PROJECT

SHEET NO: SS-10

PLAN AND PROFILE
STA 45+50 - STA 50+25

12 / 18

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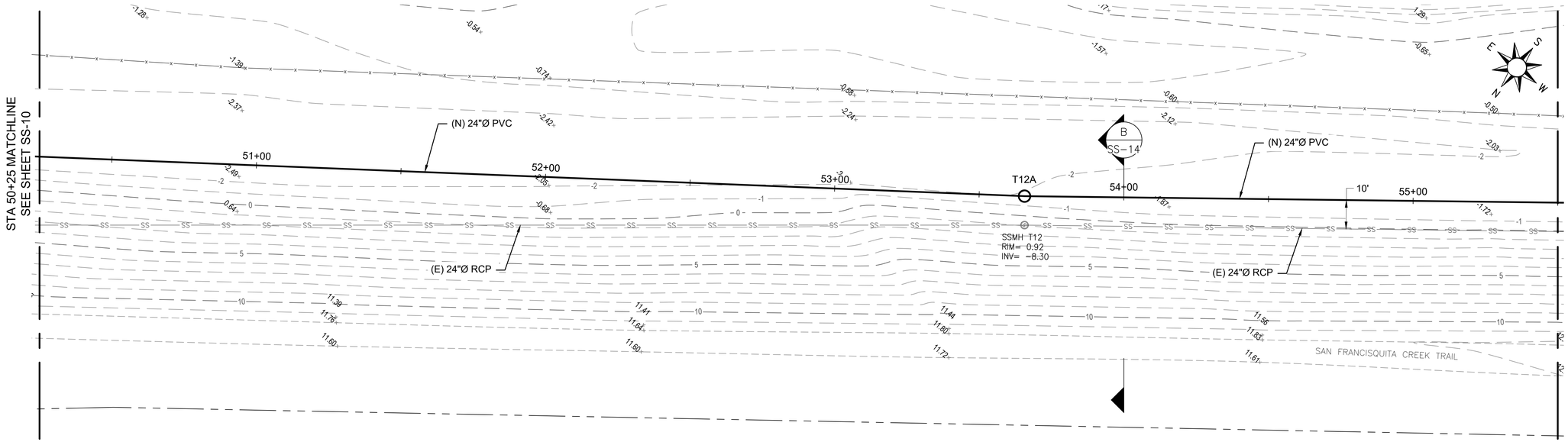
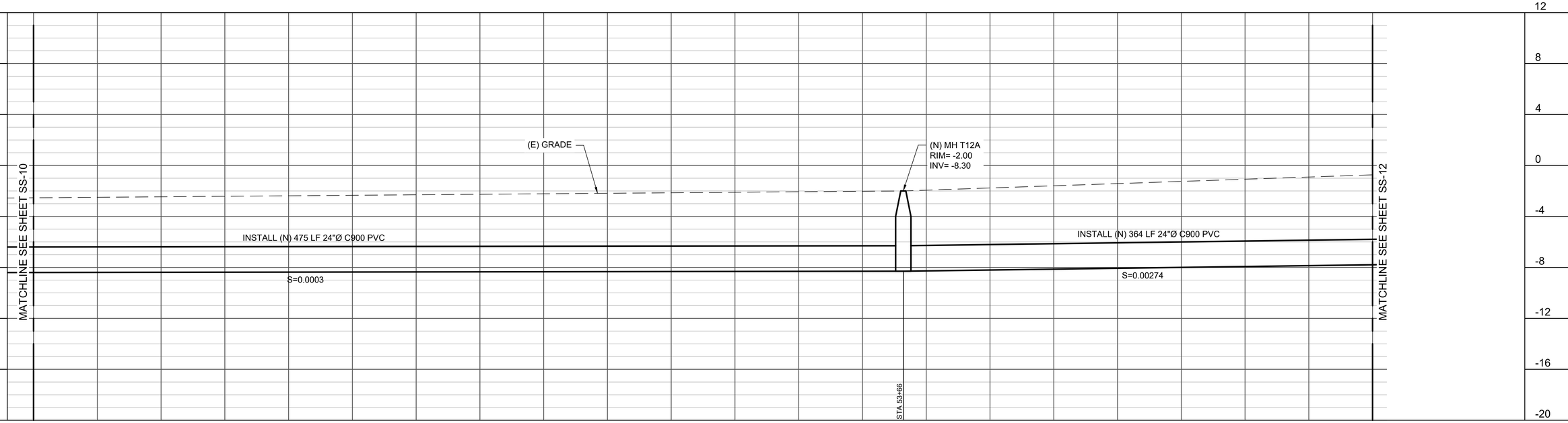


PLAN
1"=20'



PROFILE
H: = 1"=20'
V. = 1"=4'

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ENGINEER: JCB | SCALE:
CHECKED: JCB | APPROVED:
DATE: 10/3/23 | DATE:

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CIVIL
STATE OF CALIFORNIA

EAST PALO ALTO SANITARY DISTRICT
TRUNK SEWER EXPANSION PROJECT

SHEET NO: SS-11

PLAN AND PROFILE
STA 50+25 - STA 55+50

13 / 18

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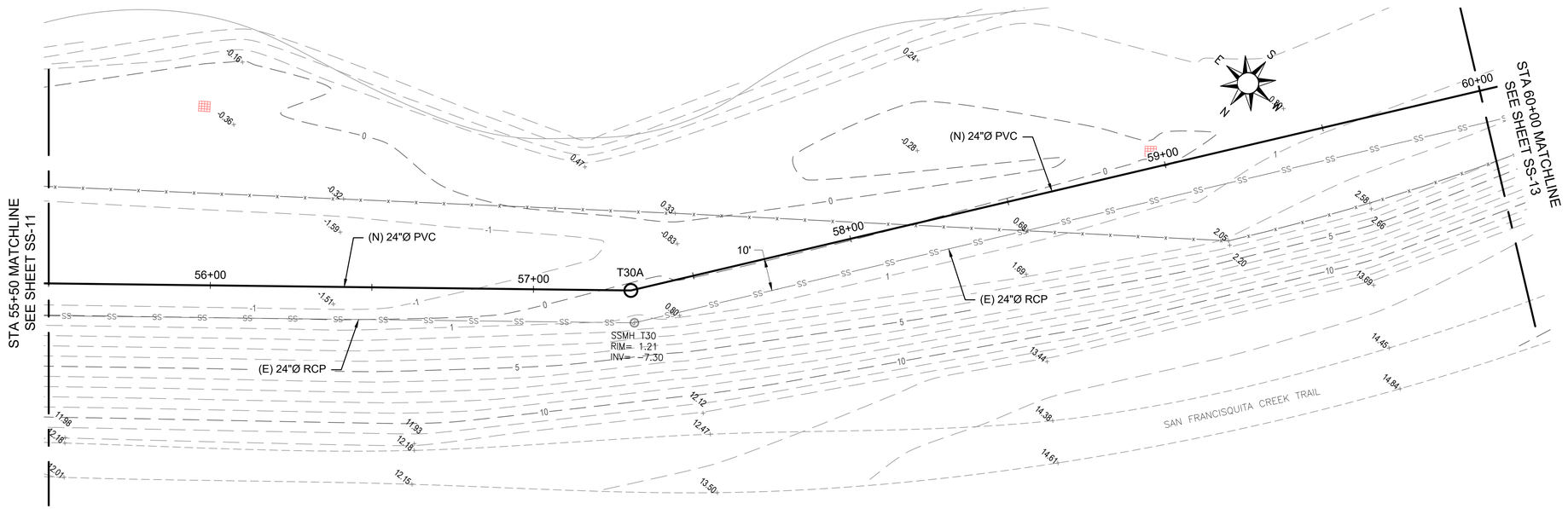
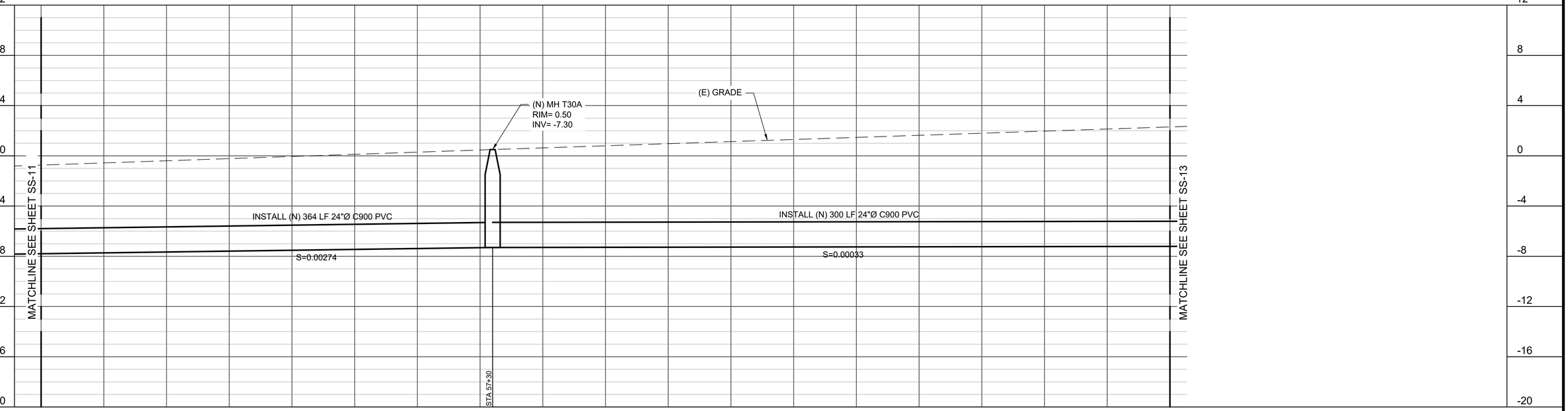


PLAN
1"=20'



PROFILE
H: = 1"=20'
V. = 1"=4'

DRAFT - NOT FOR CONSTRUCTION

NO.	DATE	REVISIONS	BY	CHK

DRAWN: MAH | PROJECT NO:
ENGINEER: JCB | SCALE:
CHECKED: JCB | APPROVED:
DATE: 10/3/23 | DATE:

WARNING
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EAST PALO ALTO, CA 94303

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No. 0043803
Exp. 6/30/25
CIVIL
STATE OF CALIFORNIA

EAST PALO ALTO SANITARY DISTRICT
TRUNK SEWER EXPANSION PROJECT

SHEET NO: SS-12

PLAN AND PROFILE
STA 55+50 - STA 60+00

14
18

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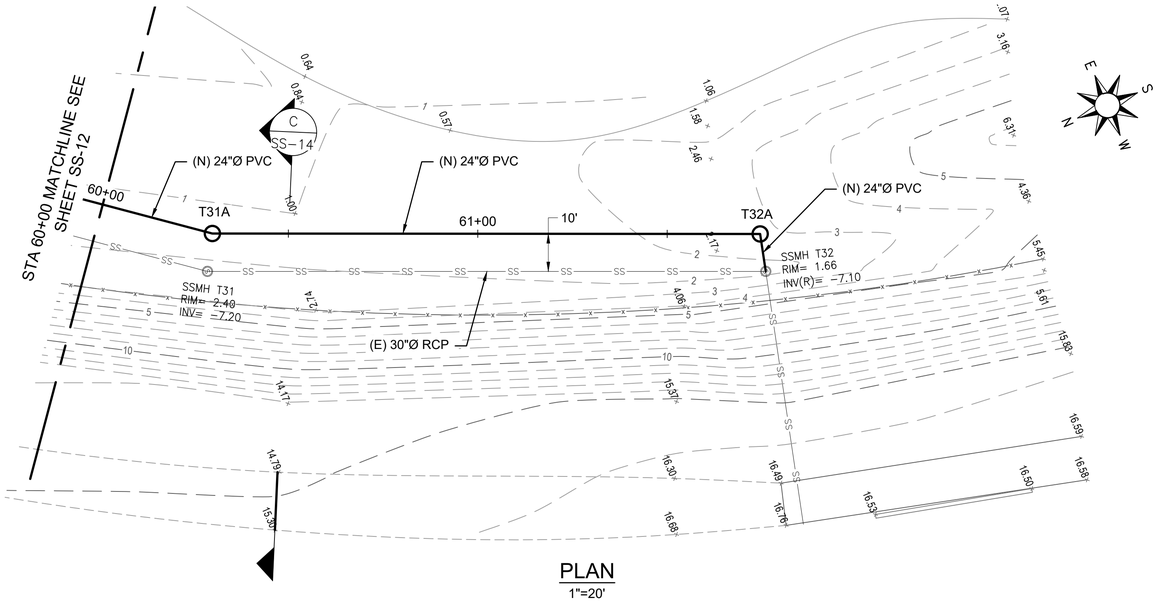

PLAN
1"=20'

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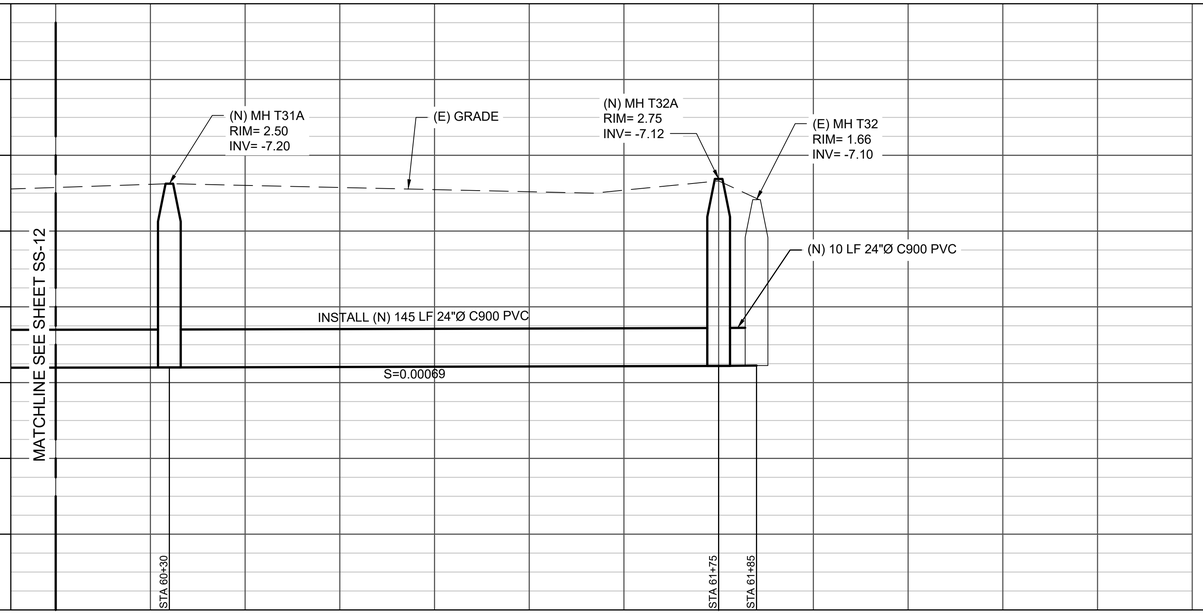

PROFILE
H: = 1"=20'
V. = 1"=4'

DRAFT - NOT FOR CONSTRUCTION

NO.	DATE	REVISIONS	BY	CHK

DRAWN:	MAH	PROJECT NO:	
ENGINEER:	JCB	SCALE:	
CHECKED:	JCB	APPROVED:	
DATE:	10/3/23	DATE:	

WARNING
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CIVIL
STATE OF CALIFORNIA

EAST PALO ALTO SANITARY DISTRICT
TRUNK SEWER EXPANSION PROJECT

SHEET NO: SS-13

PLAN AND PROFILE
STA 60+00 - STA 61+85

15/18

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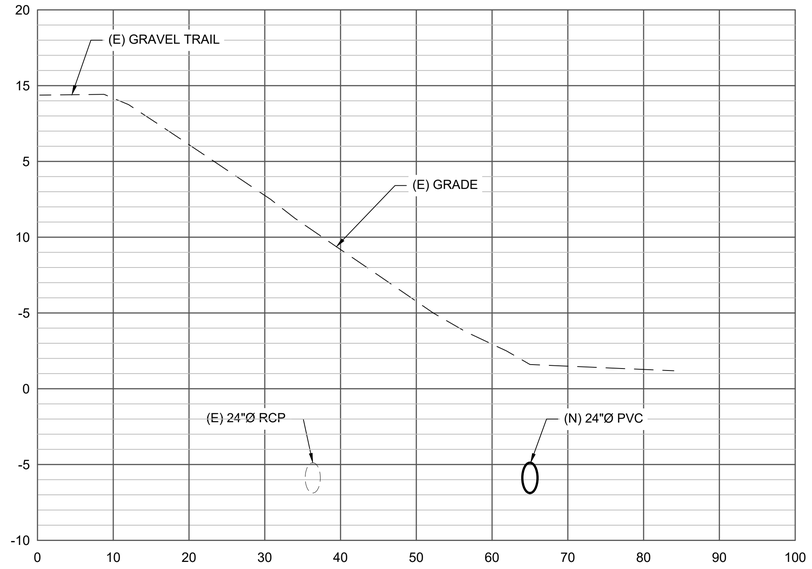
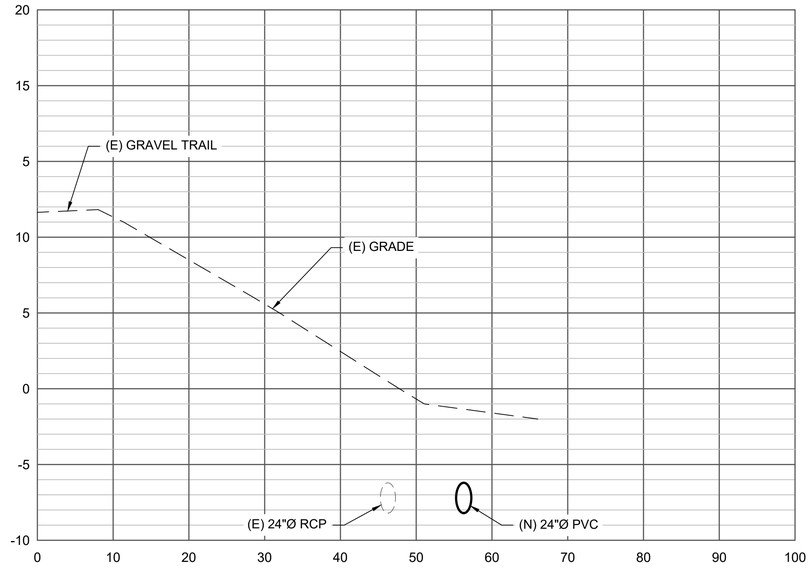


CROSS SECTION 'A' STA 49+00

H: = 1"=10'

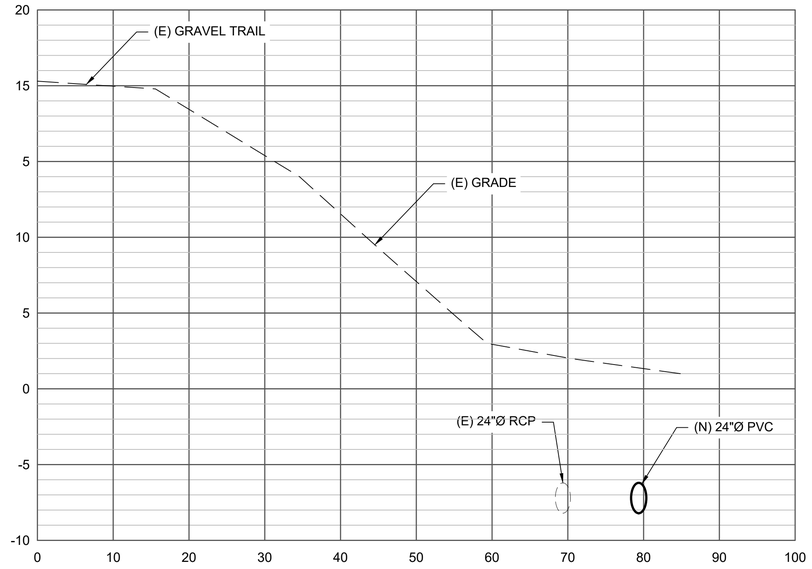
V. = 1"=5'



CROSS SECTION 'B' STA 54+00

H: = 1"=10'

V. = 1"=5'



CROSS SECTION 'C' STA 60+50

H: = 1"=10'

V. = 1"=5'

DRAFT - NOT FOR CONSTRUCTION

NO.	DATE	REVISIONS	BY	CHK

DRAWN: MAH | PROJECT NO:

ENGINEER: JCB | SCALE:

CHECKED: JCB | APPROVED:

DATE: 10/3/23 | DATE:

WARNING

0 1"

AT FULL SCALE

(IF BAR IS NOT 1" - SCALE ACCORDINGLY)

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EAST PALO ALTO SANITARY DISTRICT
TRUNK SEWER EXPANSION PROJECT

SHEET NO: SS-14

CROSS SECTIONS
STA 49+00, STA 54+00, AND STA 60+50

16/18

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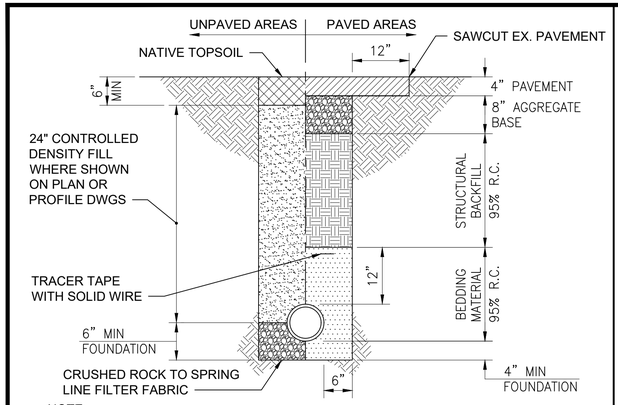


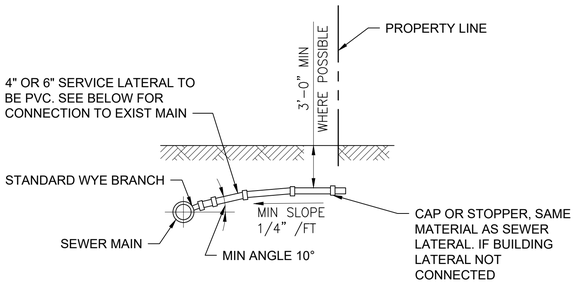
NOTE:

1. PIPE SHALL BE C900/IB PVC PRESSURE PIPE WITH GASKETED INTEGRAL BELL. SHALLOW PIPE INSTALLATIONS WITH PIPE COVER LESS THAN 3' SHALL BE ENCASED IN CONCRETE.
2. PIPE BEDDING AND FOUNDATION SHALL BE IMPORTED CLEAN SAND. 100% PASSING NO. 4 SIEVE AND O% TO 5% PASSING THE NO.200 SIEVE, OR 3/4" WASHED CRUSHED ROCK, UNLESS NOTED OTHERWISE.
3. STRUCTURAL BACKFILL MATERIAL SHALL BE ACCEPTABLE NATIVE MATERIALS OR IMPORTED 3/4" CLASS II MATERIAL (CALTRANS CALIF TEST 202) WITH A MIN SAND EQUIVALENT OF 20.

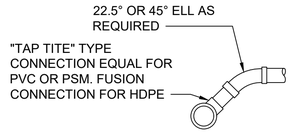
SIEVE SIZES	PERCENTAGE PASSING
1 - 1/2"	100
3/4"	80-100
#4	30-60
#30	5-35
#200	0-12

4. CONTROLLED DENSITY FILL SHALL BE CEMENT SAND SLURRY, MIN 100 LBS/FT3 DENSITY AND MIN 100 PSI COMPRESSIVE STRENGTH.
5. PAVEMENT RESTORATION SHALL BE SECTION OF 4" AC/8" CLASS II AB. AC TO BE PLACED IN TWO 2-INCH LIFTS. AB TO BE COMPACTED TO 95% RELATIVE COMPACTION (RC).
6. BENEATH CONTROLLED DENSITY FILL REQUIRES THE USE OF FILTER FABRIC AND CRUSHED DRAIN ROCK TO ASSURE PROPER FOUNDATION FOR PIPE INSTALLATION.

STANDARD TRENCH DETAIL 1
NTS



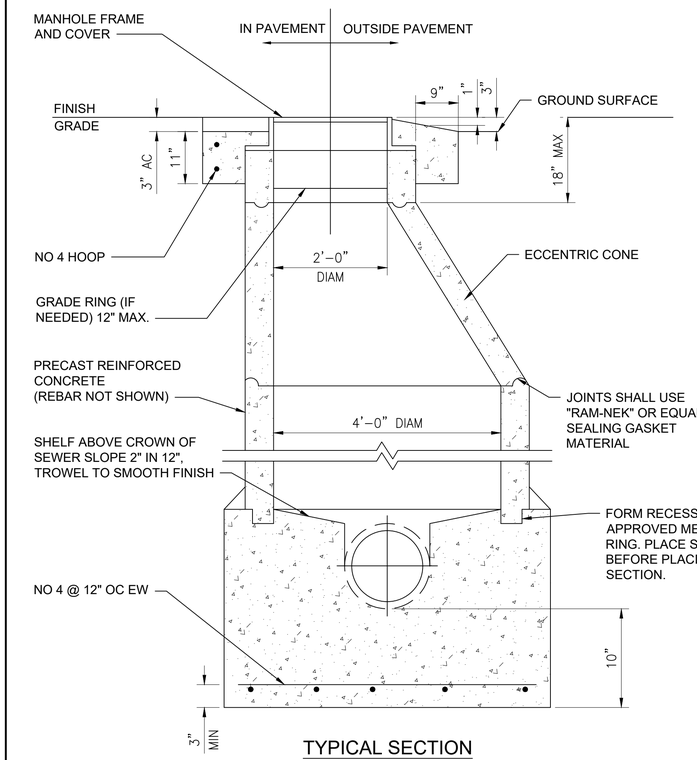
SHALLOW SEWER - 10° AND LESS



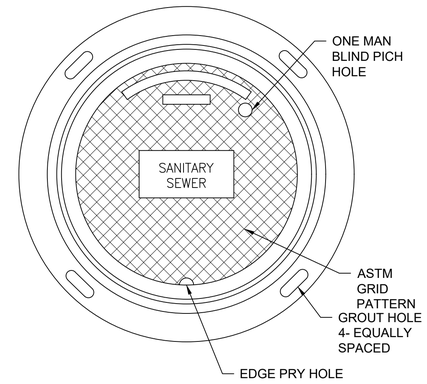
NOTE:
LATERAL MATERIAL SHALL BE PVC, PSM SDR 26 OR HDPE SDR 17

CONNECTION TO EXISTING MAIN

SERVICE LATERAL CONNECTION 2
NTS



TYPICAL SECTION

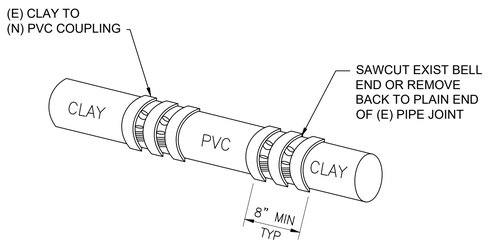


PLAN

NOTES:

1. CAST IRON FRAME AND COVER SHALL BE D+L SUPPLY A-1024M, PHOENIX IRONWORKS P-1090 OR EQUAL.
2. MEET OR EXCEED REQUIREMENTS OF ASSHTO-20 LOADING.
3. LAY PIPE THROUGH MANHOLE WHEN POSSIBLE AND CUT OUT TOP OF PIPE.

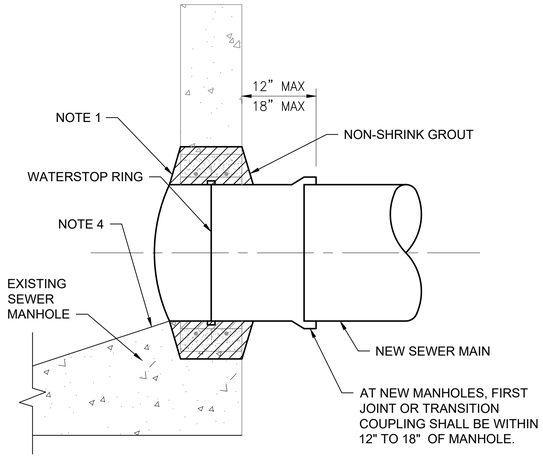
NEW MANHOLE 3
NTS



NOTE:

1. SEE SPECIFICATIONS FOR COUPLING MATERIAL REQUIREMENTS.
2. REMOVE EXISTING DAMAGED PIPE TO THE NEXT JOINT.
3. SAWCUT EXISTING BELL ENDS.

PIPE REPAIR ON EXISTING MAIN 4
NTS UNLESS PLAIN END AT EXISTING JOINT



NOTES:

1. BROKEN EDGES SHALL BE SMOOTHED AND WATER-TIGHT CONNECTION COMPLETED WITH NON-SHRINK GROUT.
2. EXISTING MANHOLE PIPE PENETRATIONS SHALL BE DRILLED LARGER WHERE NECESSARY.
3. MATCH INVERT ELEVATIONS.
4. REBUILD OR MODIFY MANHOLE TROUGH AND SHELF TO ACCOMMODATE NEW PIPE.

PIPELINE CONNECTION TO MANHOLES 5
NTS

DRAFT - NOT FOR CONSTRUCTION

NO.	DATE	REVISIONS	BY	CHK

DRAWN: MAH
ENGINEER: JCB
CHECKED: JCB
DATE: 10/3/23
PROJECT NO:
SCALE:
APPROVED:
DATE:

WARNING
0 1"
AT FULL SCALE
(IF BAR IS NOT 1" - SCALE ACCORDINGLY)

SIERRA WEST CONSULTANTS, INC.
4227 Sunrise Boulevard, Suite 220
Fair Oaks, California 95628
Ph: (916) 863-3220 Fax: (916) 863-3225

PREPARED FOR:
EPASD EAST PALO ALTO SANITARY DISTRICT
901 WEEKS STREET
EAST PALO ALTO, CA 94303

REGISTERED PROFESSIONAL ENGINEER JEFFREY C. BENSON No. 0043803 Exp. 6/30/25 CIVIL STATE OF CALIFORNIA

EAST PALO ALTO SANITARY DISTRICT
TRUNK SEWER EXPANSION PROJECT

DETAILS

SHEET NO: D-1
17/18

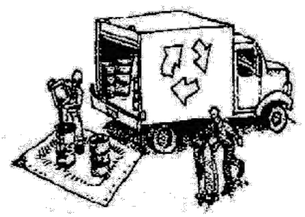
C:\Users\Mary\Dropbox\WORK\SIERRA WEST\23 EPASD-TRUNK SEWER\EPASD-TRUNK SEWER.dwg 10-03-23 08:10:35 AM Mary

SAN MATEO COUNTYWIDE
Water Pollution Prevention Program
Clean Water. Healthy Community.

Construction Best Management Practices (BMPs)

Construction projects are required to implement the stormwater best management practices (BMP) on this page, as they apply to your project, all year long.

Materials & Waste Management



Non-Hazardous Materials

- ❑ Berm and cover stockpiles of sand, dirt or other construction material with tarps when rain is forecast or if not actively being used within 14 days.
- ❑ Use (but don't overuse) reclaimed water for dust control.

Hazardous Materials

- ❑ Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, county, state and federal regulations.
- ❑ Store hazardous materials and wastes in water tight containers, store in appropriate secondary containment, and cover them at the end of every work day or during wet weather or when rain is forecast.
- ❑ Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours.
- ❑ Arrange for appropriate disposal of all hazardous wastes.

Waste Management

- ❑ Cover waste disposal containers securely with tarps at the end of every work day and during wet weather.
- ❑ Check waste disposal containers frequently for leaks and to make sure they are not overfilled. Never hose down a dumpster on the construction site.
- ❑ Clean or replace portable toilets, and inspect them frequently for leaks and spills.
- ❑ Dispose of all wastes and debris properly. Recycle materials and wastes that can be recycled (such as asphalt, concrete, aggregate base materials, wood, gyp board, pipe, etc.)
- ❑ Dispose of liquid residues from paints, thinners, solvents, glues, and cleaning fluids as hazardous waste.

Construction Entrances and Perimeter

- ❑ Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
- ❑ Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking. Never hose down streets to clean up tracking.

Equipment Management & Spill Control

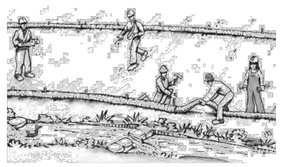
Maintenance and Parking

- ❑ Designate an area, fitted with appropriate BMPs, for vehicle and equipment parking and storage.
- ❑ Perform major maintenance, repair jobs, and vehicle and equipment washing off site.
- ❑ If refueling or vehicle maintenance must be done onsite, work in a bermed area away from storm drains and over a drip pan or drop cloths big enough to collect fluids. Recycle or dispose of fluids as hazardous waste.
- ❑ If vehicle or equipment cleaning must be done onsite, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or surface waters.
- ❑ Do not clean vehicle or equipment onsite using soaps, solvents, degreasers, or steam cleaning equipment.

Spill Prevention and Control

- ❑ Keep spill cleanup materials (e.g., rags, absorbents and cat litter) available at the construction site at all times.
- ❑ Inspect vehicles and equipment frequently for and repair leaks promptly. Use drip pans to catch leaks until repairs are made.
- ❑ Clean up spills or leaks immediately and dispose of cleanup materials properly.
- ❑ Do not hose down surfaces where fluids have spilled. Use dry cleanup methods (absorbent materials, cat litter, and/or rags).
- ❑ Sweep up spilled dry materials immediately. Do not try to wash them away with water, or bury them.
- ❑ Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.
- ❑ Report significant spills immediately. You are required by law to report all significant releases of hazardous materials, including oil. To report a spill: 1) Dial 911 or your local emergency response number, 2) Call the Governor's Office of Emergency Services Warning Center, (800) 852-7550 (24 hours).

Earthmoving



- ❑ Schedule grading and excavation work during dry weather.
- ❑ Stabilize all denuded areas, install and maintain temporary erosion controls (such as erosion control fabric or bonded fiber matrix) until vegetation is established.
- ❑ Remove existing vegetation only when absolutely necessary, and seed or plant vegetation for erosion control on slopes or where construction is not immediately planned.
- ❑ Prevent sediment from migrating offsite and protect storm drain inlets, gutters, ditches, and drainage courses by installing and maintaining appropriate BMPs, such as fiber rolls, silt fences, sediment basins, gravel bags, berms, etc.
- ❑ Keep excavated soil on site and transfer it to dump trucks on site, not in the streets.

Contaminated Soils

- ❑ If any of the following conditions are observed, test for contamination and contact the Regional Water Quality Control Board:
  - Unusual soil conditions, discoloration, or odor.
  - Abandoned underground tanks.
  - Abandoned wells
  - Buried barrels, debris, or trash.

Paving/Asphalt Work

- ❑ Avoid paving and seal coating in wet weather or when rain is forecast, to prevent materials that have not cured from contacting stormwater runoff.
- ❑ Cover storm drain inlets and manholes when applying seal coat, tack coat, slurry seal, fog seal, etc.
- ❑ Collect and recycle or appropriately dispose of excess abrasive gravel or sand. Do NOT sweep or wash it into gutters.
- ❑ Do not use water to wash down fresh asphalt concrete pavement.

Sawcutting & Asphalt/Concrete Removal

- ❑ Protect nearby storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters, or gravel bags to keep slurry out of the storm drain system.
- ❑ Shovel, absorb, or vacuum saw-cut slurry and dispose of all waste as soon as you are finished in one location or at the end of each work day (whichever is sooner!).
- ❑ If sawcut slurry enters a catch basin, clean it up immediately.

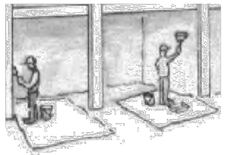
Concrete, Grout & Mortar Application

- ❑ Store concrete, grout, and mortar away from storm drains or waterways, and on pallets under cover to protect them from rain, runoff, and wind.
- ❑ Wash out concrete equipment/trucks offsite or in a designated washout area, where the water will flow into a temporary waste pit, and in a manner that will prevent leaching into the underlying soil or onto surrounding areas. Let concrete harden and dispose of as garbage.
- ❑ When washing exposed aggregate, prevent washwater from entering storm drains. Block any inlets and vacuum gutters, hose washwater onto dirt areas, or drain onto a bermed surface to be pumped and disposed of properly.

Landscaping

- ❑ Protect stockpiled landscaping materials from wind and rain by storing them under tarps all year-round.
- ❑ Stack bagged material on pallets and under cover.
- ❑ Discontinue application of any erodible landscape material within 2 days before a forecast rain event or during wet weather.

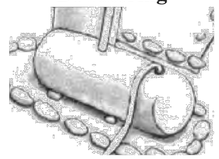
Painting & Paint Removal



Painting Cleanup and Removal

- ❑ Never clean brushes or rinse paint containers into a street, gutter, storm drain, or stream.
- ❑ For water-based paints, paint out brushes to the extent possible, and rinse into a drain that goes to the sanitary sewer. Never pour paint down a storm drain.
- ❑ For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of excess liquids as hazardous waste.
- ❑ Paint chips and dust from non-hazardous dry stripping and sand blasting may be swept up or collected in plastic drop cloths and disposed of as trash.
- ❑ Chemical paint stripping residue and chips and dust from marine paints or paints containing lead, mercury, or tributyltin must be disposed of as hazardous waste. Lead based paint removal requires a state-certified contractor.

Dewatering



- ❑ Discharges of groundwater or captured runoff from dewatering operations must be properly managed and disposed. When possible send dewatering discharge to landscaped area or sanitary sewer. If discharging to the sanitary sewer call your local wastewater treatment plant.
- ❑ Divert run-on water from offsite away from all disturbed areas.
- ❑ When dewatering, notify and obtain approval from the local municipality before discharging water to a street gutter or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- ❑ In areas of known or suspected contamination, call your local agency to determine whether the ground water must be tested. Pumped groundwater may need to be collected and hauled off-site for treatment and proper disposal.

Storm drain polluters may be liable for fines of up to $10,000 per day!

DRAFT - NOT FOR CONSTRUCTION

NO.	DATE	REVISIONS	BY	CHK

DRAWN: MAH | PROJECT NO:
ENGINEER: JCB | SCALE:
CHECKED: JCB | APPROVED:
DATE: 10/3/23 | DATE:

WARNING
0 1"
AT FULL SCALE
(IF BAR IS NOT 1" - SCALE ACCORDINGLY)

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PREPARED FOR:
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901 WEEKS STREET
EAST PALO ALTO, CA 94303

REGISTERED PROFESSIONAL ENGINEER
JEFFREY C. BENSON
No. 0043803
Exp. 6/30/25
CIVIL
STATE OF CALIFORNIA

EAST PALO ALTO SANITARY DISTRICT
TRUNK SEWER EXPANSION PROJECT

SHEET NO: D-2

CONSTRUCTION BMPS

18 / 18

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APPENDIX B

AIR QUALITY MODELING RESULTS

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for -> Sanitary Sewer Trunk Line				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust					
Project Phases (Pounds)	**ROG (lbs/day)**	**CO (lbs/day)**	**NOx (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**SOx (lbs/day)**	**CO2 (lbs/day)**	**CH4 (lbs/day)**	**N2O (lbs/day)**	**CO2e (lbs/day)**
Grubbing/Land Clearing	1.22	8.96	9.78	0.38	0.38	0.00	0.35	0.35	0.00	0.03	2,897.76	0.92	0.03	2,930.35
Grading/Excavation	1.06	13.18	7.63	0.93	0.63	0.30	0.54	0.47	0.06	0.03	2,785.91	0.40	0.08	2,819.59
Drainage/Utilities/Sub-Grade	2.04	23.50	16.07	1.03	1.03	0.00	0.88	0.88	0.00	0.04	4,360.18	0.51	0.07	4,393.39
Paving	0.39	5.44	3.90	0.19	0.19	0.00	0.17	0.17	0.00	0.01	888.25	0.27	0.01	899.22
Maximum (pounds/day)	2.04	23.50	16.07	1.03	1.03	0.30	0.88	0.88	0.06	0.04	4,360.18	0.92	0.08	4,393.39
Total (tons/construction project)	0.17	2.01	1.35	0.11	0.09	0.02	0.08	0.07	0.00	0.00	404.37	0.06	0.01	408.33

Notes:

Project Start Year ->	2022
Project Length (months) ->	12
Total Project Area (acres) ->	3
Maximum Area Disturbed/Day (acres) ->	0
Water Truck Used? ->	Yes

	Total Material Imported/Exported Volume (yd^3/day)		Daily VMT (miles/day)			
Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	0	10
Grading/Excavation	5	0	40	0	2,000	10
Drainage/Utilities/Sub-Grade	0	0	0	0	2,000	10
Paving	0	0	0	0	0	10

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Sanitary Sewer Trunk Line

Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.02	0.12	0.13	0.01	0.01	0.00	0.00	0.00	0.00	0.00	38.25	0.01	0.00	35.09
Grading/Excavation	0.06	0.70	0.40	0.05	0.03	0.02	0.03	0.02	0.00	0.00	147.10	0.02	0.00	135.06
Drainage/Utilities/Sub-Grade	0.09	1.09	0.74	0.05	0.05	0.00	0.04	0.04	0.00	0.00	201.44	0.02	0.00	184.14
Paving	0.01	0.11	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.59	0.01	0.00	16.15
Maximum (tons/phase)	0.09	1.09	0.74	0.05	0.05	0.02	0.04	0.04	0.00	0.00	201.44	0.02	0.00	184.14
Total (tons/construction project)	0.17	2.01	1.35	0.11	0.09	0.02	0.08	0.07	0.00	0.00	404.37	0.06	0.01	370.44

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

Road Construction Emissions Model
Data Entry Worksheet

Version 9.0.0

Note: Required data input sections have a yellow backgrounc
Optional data input sections have a blue background. Only areas with a
yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells D10 through D24, E28 through G35, and D38 through D41 for all project types
Please use "Clear Data Input & User Overrides" button first before changing the Project Type or begin a new projec

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Input Type

Project Name	Sanitary Sewer Trunk Line	
Construction Start Year	2022	Enter a Year between 2014 and 2040 (inclusive)
Project Type For 4: Other Linear Project Type, please provide project specific off-road equipment population and vehicle trip data	4	1) New Road Construction : Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway 2) Road Widening : Project to add a new lane to an existing roadway 3) Bridge/Overpass Construction : Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane 4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee constructio
Project Construction Time	12.00	months
Working Days per Month	22.00	days (assume 22 if unknown)
Predominant Soil/Site Type: Enter 1, 2, or 3 (for project within "Sacramento County", follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)	1	1) Sand Gravel : Use for quaternary deposits (Delta/West County) 2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the Ione formation (Scott Road, Rancho Murieta) 3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)
Project Length	1.14	miles
Total Project Area	2.75	acres
Maximum Area Disturbed/Day	0.03	acres
Water Trucks Used?	1	1. Yes 2. No

Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County.

http://www.conservation.ca.gov/cgs/information/geologic_mapping/Pa
ges/googlemaps.aspx#regionalseries

Material Hauling Quantity Input

Material Type	Phase	Haul Truck Capacity (yd^3) (assume 20 if unknown)	Import Volume (yd^3/day)	Export Volume (yd^3/day)
Soil	Grubbing/Land Clearing			
	Grading/Excavation	9.00		5.00
	Drainage/Utilities/Sub-Grade			
	Paving			
Asphalt	Grubbing/Land Clearing			
	Grading/Excavation			
	Drainage/Utilities/Sub-Grade			
	Paving			

Mitigation Options

On-road Fleet Emissions Mitigation	2010 and Newer On-road Vehicles Fleet	Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer
Off-road Equipment Emissions Mitigation	No Mitigation	Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure (http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/Mitigation). Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standar

The remaining sections of this sheet contain areas that require modification when 'Other Project Type' is selected.

Note: The program's estimates of construction period phase length can be overridden in cells D50 through D53, and F50 through F5

Construction Periods	User Override of Construction Months	Program Calculated Months	User Override of Phase Starting Date	Program Default Phase Starting Date
Grubbing/Land Clearing		1.20		1/1/2022
Grading/Excavation		4.80		2/7/2022
Drainage/Utilities/Sub-Grade		4.20		7/3/2022
Paving		1.80		11/8/2022
Totals (Months)		12		

Note: Soil Hauling emission default values can be overridden in cells D61 through D64, and F61 through F64

Soil Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing	0.00			0	0.00
Miles/round trip: Grading/Excavation	40.00			1	40.00
Miles/round trip: Drainage/Utilities/Sub-Grade	0.00			0	0.00
Miles/round trip: Paving	0.00			0	0.00

2010+ Model Year Mitigation Option Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.04	0.42	3.08	0.11	0.05	0.02	1,748.57	0.00	0.27	1,830.52
Grading/Excavation (grams/mile)	0.04	0.42	3.08	0.11	0.05	0.02	1,748.57	0.00	0.27	1,830.52
Draining/Utilities/Sub-Grade (grams/mile)	0.04	0.42	3.08	0.11	0.05	0.02	1,748.57	0.00	0.27	1,830.52
Paving (grams/mile)	0.04	0.42	3.08	0.11	0.05	0.02	1,747.50	0.00	0.27	1,829.40
Grubbing/Land Clearing (grams/trip)	0.00	0.00	3.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip	0.00	0.00	3.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	3.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.04	0.28	0.01	0.00	0.00	154.20	0.00	0.02	161.42
Tons per const. Period - Grading/Excavation	0.00	0.00	0.01	0.00	0.00	0.00	8.14	0.00	0.00	8.52
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.01	0.00	0.00	0.00	8.14	0.00	0.00	8.52

Note: Asphalt Hauling emission default values can be overridden in cells D91 through D94, and F91 through F94

Asphalt Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing	0.00			0	0.00
Miles/round trip: Grading/Excavation	0.00			0	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade	0.00			0	0.00
Miles/round trip: Paving	0.00			0	0.00

2010+ Model Year Mitigation Option Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.04	0.42	3.08	0.11	0.05	0.02	1,748.57	0.00	0.27	1,830.52
Grading/Excavation (grams/mile)	0.04	0.42	3.08	0.11	0.05	0.02	1,748.57	0.00	0.27	1,830.52
Draining/Utilities/Sub-Grade (grams/mile)	0.04	0.42	3.08	0.11	0.05	0.02	1,748.57	0.00	0.27	1,830.52
Paving (grams/mile)	0.04	0.42	3.08	0.11	0.05	0.02	1,747.50	0.00	0.27	1,829.40
Grubbing/Land Clearing (grams/trip)	0.00	0.00	3.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip	0.00	0.00	3.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	3.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Worker commute default values can be overridden in cells D121 through D126

Worker Commute Emissions User Input	User Override of Worker Commute Default Values	Default Values	Calculated Daily Trips	Calculated Daily VMT
Miles/ one-way trip	20			
One-way trips/day	20			
No. of employees: Grubbing/Land Clearing	0		0	0.00
No. of employees: Grading/Excavation	5		100	2,000.00
No. of employees: Drainage/Utilities/Sub-Grade	5		100	2,000.00
No. of employees: Paving	0		0	0.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.02	1.00	0.08	0.05	0.02	0.00	328.72	0.00	0.01	330.96
Grading/Excavation (grams/mile)	0.02	1.00	0.08	0.05	0.02	0.00	328.72	0.00	0.01	330.96
Draining/Utilities/Sub-Grade (grams/mile)	0.02	1.00	0.08	0.05	0.02	0.00	328.72	0.00	0.01	330.96
Paving (grams/mile)	0.02	1.00	0.08	0.05	0.02	0.00	328.37	0.00	0.01	330.60
Grubbing/Land Clearing (grams/trip)	1.11	2.85	0.32	0.00	0.00	0.00	70.54	0.08	0.03	82.43
Grading/Excavation (grams/trip	1.11	2.85	0.32	0.00	0.00	0.00	70.54	0.08	0.03	82.43
Draining/Utilities/Sub-Grade (grams/trip)	1.11	2.85	0.32	0.00	0.00	0.00	70.54	0.08	0.03	82.43
Paving (grams/trip)	1.10	2.84	0.32	0.00	0.00	0.00	70.46	0.08	0.03	82.34
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.32	5.04	0.44	0.20	0.09	0.01	1,464.96	0.04	0.04	1,477.45
Tons per const. Period - Grading/Excavation	0.02	0.27	0.02	0.01	0.00	0.00	77.35	0.00	0.00	78.01
Pounds per day - Drainage/Utilities/Sub-Grade	0.32	5.04	0.44	0.20	0.09	0.01	1,464.96	0.04	0.04	1,477.45
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.01	0.23	0.02	0.01	0.00	0.00	67.68	0.00	0.00	68.26
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.03	0.50	0.04	0.02	0.01	0.00	145.03	0.00	0.00	146.27

Note: Water Truck default values can be overridden in cells D153 through D156, I153 through I156, and F153 through F156.

Water Truck Emissions User Input	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Round Trips/Vehicle/Day	Default Values Round Trips/Vehicle/Day	Calculated Trips/day	User Override of Miles/Round Trip	Default Values Miles/Round Trip	Calculated Daily VMT
Grubbing/Land Clearing - Exhaust	1		1.00			10.00		10.00
Grading/Excavation - Exhaust	1		1.00			10.00		10.00
Drainage/Utilities/Subgrade	1		1.00			10.00		10.00
Paving	1		1.00			10.00		10.00

2010+ Model Year Mitigation Option Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.04	0.42	3.08	0.11	0.05	0.02	1,748.57	0.00	0.27	1,830.52
Grading/Excavation (grams/mile)	0.04	0.42	3.08	0.11	0.05	0.02	1,748.57	0.00	0.27	1,830.52
Draining/Utilities/Sub-Grade (grams/mile)	0.04	0.42	3.08	0.11	0.05	0.02	1,748.57	0.00	0.27	1,830.52
Paving (grams/mile)	0.04	0.42	3.08	0.11	0.05	0.02	1,747.50	0.00	0.27	1,829.40
Grubbing/Land Clearing (grams/trip)	0.00	0.00	3.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip	0.00	0.00	3.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	3.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.01	0.08	0.00	0.00	0.00	38.55	0.00	0.01	40.36
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.53
Pounds per day - Grading/Excavation	0.00	0.01	0.08	0.00	0.00	0.00	38.55	0.00	0.01	40.36
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	2.04	0.00	0.00	2.13
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.01	0.08	0.00	0.00	0.00	38.55	0.00	0.01	40.36
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	1.78	0.00	0.00	1.86
Pounds per day - Paving	0.00	0.01	0.08	0.00	0.00	0.00	38.53	0.00	0.01	40.33
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.00	0.00	0.80
Total tons per construction project	0.00	0.00	0.01	0.00	0.00	0.00	5.09	0.00	0.00	5.33

Note: Fugitive dust default values can be overridden in cells D183 through D185.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing	0.00		0.00	0.00	0.00	0.00
Fugitive Dust - Grading/Excavation	0.03		0.30	0.02	0.06	0.00
Fugitive Dust - Drainage/Utilities/Subgrade	0.00		0.00	0.00	0.00	0.00

Values in cells D195 through D228, D246 through D279, D297 through D330, and D348 through D381 are required when 'Other Project Type' is selected

Off-Road Equipment Emissions

Grubbing/Land Clearing

Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option: Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.00			Model Default Tier	Off-Highway Trucks	1.06	6.72	8.03	0.29	0.27	0.03	2,557.97	0.83	0.02	2,585.51
0.00			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Tractors/Loaders/Backhoes	0.16	2.24	1.68	0.09	0.08	0.00	301.24	0.10	0.00	304.48
0.00			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment

If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' ta

Number of Vehicles	Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing	pounds per day	1.22	8.96	9.70	0.38	0.35	0.03	2,859.21	0.92	0.03	2,889.99
Grubbing/Land Clearing	tons per phase	0.02	0.12	0.13	0.01	0.00	0.00	37.74	0.01	0.00	38.15

Grading/Excavation	Default Number of Vehicles	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Override of Default Number of Vehicles	*Program-estimate*				pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
0.00			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Excavators	0.20	3.26	1.78	0.09	0.08	0.01	500.02	0.16	0.00	505.41
0.00			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Other Material Handling Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Tractors/Loaders/Backhoes	0.16	2.24	1.68	0.09	0.08	0.00	301.24	0.10	0.00	304.48
1.00			Model Default Tier	Trenchers	0.36	2.60	3.38	0.24	0.22	0.00	326.95	0.11	0.00	330.47
0.00			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' ta

Number of Vehicles	Equipment Tier	Type		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
				pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grading/Excavatior	pounds per day	0.73	8.09	6.83	0.42	0.38	0.01	1,128.20	0.36	0.01	1,140.36
Grading/Excavatior	tons per phase	0.04	0.43	0.36	0.02	0.02	0.00	59.57	0.02	0.00	60.21

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Air Compressors	0.27	2.42	1.88	0.11	0.11	0.00	375.26	0.02	0.00	376.72
0.00			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Forklifts	0.11	1.15	1.05	0.07	0.06	0.00	148.03	0.05	0.00	149.63
1.00			Model Default Tier	Generator Sets	0.33	3.68	2.93	0.15	0.15	0.01	623.04	0.03	0.00	625.17
0.00			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Other Construction Equipment	0.38	4.02	3.82	0.20	0.18	0.01	598.33	0.19	0.01	604.79
0.00			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Other Material Handling Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Plate Compactors	0.04	0.21	0.25	0.01	0.01	0.00	34.48	0.00	0.00	34.65
0.00			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Pumps	0.35	3.73	2.97	0.16	0.16	0.01	623.04	0.03	0.00	625.23
1.00			Model Default Tier	Rollers	0.17	1.86	1.73	0.10	0.09	0.00	254.10	0.08	0.00	256.84
0.00			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Skid Steer Loaders	0.07	1.39	0.93	0.03	0.03	0.00	200.39	0.06	0.00	202.55
0.00			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' ta

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Drainage/Utilities/Sub-Grade	pounds per day	1.72	18.46	15.55	0.82	0.79	0.03	2,856.67	0.48	0.02	2,875.58
Drainage/Utilities/Sub-Grade	tons per phase	0.08	0.85	0.72	0.04	0.04	0.00	131.98	0.02	0.00	132.85

Paving	Default Number of Vehicles	Mitigation Option Override of	Default		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Override of Default Number of Vehicles	*Program-estimate*	Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
0.00			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Other Material Handling Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Pavers	0.21	2.88	2.09	0.10	0.09	0.00	455.26	0.15	0.00	460.16
1.00			Model Default Tier	Paving Equipment	0.18	2.55	1.73	0.08	0.08	0.00	394.47	0.13	0.00	398.73
0.00			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User-Defined Off-road Equipment	If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' ta				ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Number of Vehicles			Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
0.00			N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Paving			pounds per day	0.38	5.43	3.83	0.18	0.17	0.01	849.73	0.27	0.01	858.89
	Paving			tons per phase	0.01	0.11	0.08	0.00	0.00	0.00	16.82	0.01	0.00	17.01
Total Emissions all Phases (tons per construction period) =>					0.14	1.51	1.28	0.07	0.06	0.00	246.11	0.06	0.00	248.22

Equipment default values for horsepower and hours/day can be overridden in cells D403 through D436 and F403 through F436

Equipment	User Override of Horsepower	Default Values Horsepower	User Override of Hours/day	Default Values Hours/day
Aerial Lifts	63	63		8
Air Compressors	78	78		8
Bore/Drill Rigs	221	221		8
Cement and Mortar Mixers	9	9		8
Concrete/Industrial Saws	81	81		8
Cranes	231	231		8
Crawler Tractors	212	212		8
Crushing/Proc. Equipment	85	85		8
Excavators	158	158		8
Forklifts	89	89		8
Generator Sets	84	84		8
Graders	187	187		8
Off-Highway Tractors	124	124		8
Off-Highway Trucks	402	402		8
Other Construction Equipment	172	172		8
Other General Industrial Equipment	88	88		8
Other Material Handling Equipment	168	168		8
Pavers	130	130		8
Paving Equipment	132	132		8
Plate Compactors	8	8		8
Pressure Washers	13	13		8
Pumps	84	84		8
Rollers	80	80		8
Rough Terrain Forklifts	100	100		8
Rubber Tired Dozers	247	247		8
Rubber Tired Loaders	203	203		8
Scrapers	367	367		8
Signal Boards	6	6		8
Skid Steer Loaders	65	65		8
Surfacing Equipment	263	263		8
Sweepers/Scrubbers	64	64		8
Tractors/Loaders/Backhoes	97	97		8
Trenchers	78	78		8
Welders	46	46		8

END OF DATA ENTRY SHEET

Grubbing/Land Clearing

Equipment Type	Number of Vehicles	Tier	HP	Load Factor (%)	Hours Per Day	Emission Factor (g/bhp-hr) ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	Emission Factor Data Source

Grading/Excavation

Equipment Type	Number of Vehicles	Tier	HP	Load Factor (%)	Hours Per Day	Emission Factor (g/bhp-hr) ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	Emission Factor Data Source

Drainage/Utilities/Subgrade

Equipment Type	Number of Vehicles	Tier	HP	Load Factor (%)	Hours Per Day	Emission Factor (g/bhp-hr) ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	Emission Factor Data Source

Paving

Equipment Type	Number of Vehicles	Tier	HP	Load Factor (%)	Hours Per Day	Emission Factor (g/bhp-hr) ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	Emission Factor Data Source

Year	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
2014	0.0704	-	-	-	-	2.5553	-	-	-	-	0.2855
2015	0.0597	-	-	-	-	2.2699	-	-	-	-	0.2490
2016	0.0491	-	-	-	-	1.9702	-	-	-	-	0.2095
2017	0.0405	-	-	-	-	1.7329	-	-	-	-	0.1791
2018	0.0335	-	-	-	-	1.5296	-	-	-	-	0.1530
2019	0.0279	-	-	-	-	1.3662	-	-	-	-	0.1307
2020	0.0236	-	-	-	-	1.2220	-	-	-	-	0.1123
2021	0.0204	-	-	-	-	1.1018	-	-	-	-	0.0968
2022	0.0178	0.0178	0.0178	0.0178	0.0172	1.0001	1.0001	1.0001	1.0001	0.9682	0.0838
2023	0.0154	-	-	-	0.0005	0.9126	-	-	-	0.0292	0.0726
2024	0.0134	-	-	-	-	0.8386	-	-	-	-	0.0632
2025	0.0117	-	-	-	-	0.7754	-	-	-	-	0.0554
2026	0.0103	-	-	-	-	0.7225	-	-	-	-	0.0491
2027	0.0091	-	-	-	-	0.6774	-	-	-	-	0.0437
2028	0.0081	-	-	-	-	0.6398	-	-	-	-	0.0393
2029	0.0072	-	-	-	-	0.6075	-	-	-	-	0.0355
2030	0.0065	-	-	-	-	0.5801	-	-	-	-	0.0324
2031	0.0059	-	-	-	-	0.5565	-	-	-	-	0.0297
2032	0.0053	-	-	-	-	0.5366	-	-	-	-	0.0275
2033	0.0048	-	-	-	-	0.5196	-	-	-	-	0.0257
2034	0.0044	-	-	-	-	0.5049	-	-	-	-	0.0242
2035	0.0041	-	-	-	-	0.4922	-	-	-	-	0.0229
2036	0.0037	-	-	-	-	0.4811	-	-	-	-	0.0219
2037	0.0035	-	-	-	-	0.4719	-	-	-	-	0.0211
2038	0.0033	-	-	-	-	0.4637	-	-	-	-	0.0203
2039	0.0030	-	-	-	-	0.4566	-	-	-	-	0.0197
2040	0.0029	-	-	-	-	0.4506	-	-	-	-	0.0191
2041	0.0027					0.4452					0.0187
2042	0.0026					0.4404					0.0183
2043	0.0025					0.4367					0.0180
2044	0.0024					0.4339					0.0178
2045	0.0023					0.4317					0.0177
2046	0.0023					0.4300					0.0176
2047	0.0023					0.4286					0.0175
2048	0.0023					0.4274					0.0174
2049	0.0022					0.4268					0.0174
2050	0.0022					0.4264					0.0174
Total		0.0178	0.0178	0.0178	0.0177		1.0001	1.0001	1.0001	0.9973	

Heavy-Heavy Duty Diesel Truck

Water Truck Commute Emissions (EMFAC2017 - web 1.0.2, T7 Single Unit Construction Truck)

Year	ROG	Weighted-Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted-Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
2014	1.8521	-	-	-	-	4.0026	-	-	-	-	15.4709
2015	1.5946	-	-	-	-	3.4621	-	-	-	-	13.7491
2016	1.2921	-	-	-	-	2.8379	-	-	-	-	11.7429
2017	1.0636	-	-	-	-	2.3588	-	-	-	-	10.5229
2018	0.9069	-	-	-	-	2.0416	-	-	-	-	9.6970
2019	0.7863	-	-	-	-	1.7985	-	-	-	-	9.0623
2020	0.5270	-	-	-	-	1.2976	-	-	-	-	7.5546
2021	0.4260	-	-	-	-	1.1373	-	-	-	-	6.4922
2022	0.1785	0.1785	0.1785	0.1785	0.1728	0.6644	0.6644	0.6644	0.6644	0.6432	4.7102
2023	0.0441	-	-	-	0.0014	0.4262	-	-	-	0.0136	3.5373
2024	0.0423	-	-	-	-	0.4266	-	-	-	-	3.4943
2025	0.0406	-	-	-	-	0.4273	-	-	-	-	3.4600
2026	0.0391	-	-	-	-	0.4279	-	-	-	-	3.4290
2027	0.0378	-	-	-	-	0.4281	-	-	-	-	3.4003
2028	0.0367	-	-	-	-	0.4288	-	-	-	-	3.3809
2029	0.0359	-	-	-	-	0.4297	-	-	-	-	3.3699
2030	0.0351	-	-	-	-	0.4306	-	-	-	-	3.3633
2031	0.0345	-	-	-	-	0.4315	-	-	-	-	3.3580
2032	0.0339	-	-	-	-	0.4322	-	-	-	-	3.3517
2033	0.0334	-	-	-	-	0.4325	-	-	-	-	3.3446
2034	0.0330	-	-	-	-	0.4325	-	-	-	-	3.3345
2035	0.0326	-	-	-	-	0.4321	-	-	-	-	3.3228
2036	0.0323	-	-	-	-	0.4320	-	-	-	-	3.3141
2037	0.0321	-	-	-	-	0.4317	-	-	-	-	3.3050
2038	0.0319	-	-	-	-	0.4314	-	-	-	-	3.2967
2039	0.0317	-	-	-	-	0.4312	-	-	-	-	3.2899
2040	0.0315	-	-	-	-	0.4308	-	-	-	-	3.2821
2041	0.0314					0.4305					3.2754
2042	0.0313					0.4302					3.2703
2043	0.0312					0.4300					3.2653
2044	0.0311					0.4298					3.2610
2045	0.0310					0.4296					3.2578
2046	0.0309					0.4295					3.2551
2047	0.0309					0.4294					3.2533
2048	0.0309					0.4293					3.2519
2049	0.0309					0.4292					3.2510
2050	0.0308					0.4292					3.2504
Total		0.1785	0.1785	0.1785	0.1742		0.6644	0.6644	0.6644	0.6568	

Year	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
2014	0.0055	-	-	-	-	0.5214	-	-	-	-	0.0236
2015	0.0055	-	-	-	-	0.5173	-	-	-	-	0.0237
2016	0.0055	-	-	-	-	0.5163	-	-	-	-	0.0238
2017	0.0056	-	-	-	-	0.5153	-	-	-	-	0.0239
2018	0.0056	-	-	-	-	0.5147	-	-	-	-	0.0239
2019	0.0055	-	-	-	-	0.5170	-	-	-	-	0.0236
2020	0.0054	-	-	-	-	0.5158	-	-	-	-	0.0232
2021	0.0052	-	-	-	-	0.5136	-	-	-	-	0.0226
2022	0.0051	0.0051	0.0051	0.0051	0.0049	0.5106	0.5106	0.5106	0.5106	0.4943	0.0220
2023	0.0049	-	-	-	0.0002	0.5066	-	-	-	0.0162	0.0213
2024	0.0047	-	-	-	-	0.5012	-	-	-	-	0.0205
2025	0.0044	-	-	-	-	0.4942	-	-	-	-	0.0199
2026	0.0042	-	-	-	-	0.4875	-	-	-	-	0.0193
2027	0.0040	-	-	-	-	0.4813	-	-	-	-	0.0188
2028	0.0038	-	-	-	-	0.4755	-	-	-	-	0.0184
2029	0.0036	-	-	-	-	0.4701	-	-	-	-	0.0181
2030	0.0035	-	-	-	-	0.4650	-	-	-	-	0.0178
2031	0.0033	-	-	-	-	0.4603	-	-	-	-	0.0175
2032	0.0032	-	-	-	-	0.4560	-	-	-	-	0.0174
2033	0.0030	-	-	-	-	0.4521	-	-	-	-	0.0172
2034	0.0029	-	-	-	-	0.4485	-	-	-	-	0.0171
2035	0.0028	-	-	-	-	0.4452	-	-	-	-	0.0171
2036	0.0027	-	-	-	-	0.4423	-	-	-	-	0.0170
2037	0.0026	-	-	-	-	0.4397	-	-	-	-	0.0170
2038	0.0026	-	-	-	-	0.4375	-	-	-	-	0.0171
2039	0.0025	-	-	-	-	0.4355	-	-	-	-	0.0171
2040	0.0024	-	-	-	-	0.4338	-	-	-	-	0.0171
2041	0.0024					0.4323					0.0171
2042	0.0024					0.4310					0.0172
2043	0.0023					0.4300					0.0172
2044	0.0023					0.4291					0.0173
2045	0.0023					0.4283					0.0173
2046	0.0023					0.4277					0.0173
2047	0.0023					0.4272					0.0174
2048	0.0022					0.4268					0.0174
2049	0.0022					0.4265					0.0174
2050	0.0022					0.4262					0.0174
Total		0.0051	0.0051	0.0051	0.0051		0.5106	0.5106	0.5106	0.5104	

Heavy-Heavy Duty Diesel Truck

Water Truck Commute Emissions (EMFAC2017 - web 1.0.2, T7 Single Unit Construction Truck)

Year	ROG	Weighted-Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted-Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
2014	0.0583	-	-	-	-	0.4129	-	-	-	-	2.9101
2015	0.0529	-	-	-	-	0.4082	-	-	-	-	2.8491
2016	0.0508	-	-	-	-	0.4094	-	-	-	-	2.8549
2017	0.0476	-	-	-	-	0.4102	-	-	-	-	2.8769
2018	0.0457	-	-	-	-	0.4130	-	-	-	-	2.9175
2019	0.0444	-	-	-	-	0.4157	-	-	-	-	2.9546
2020	0.0425	-	-	-	-	0.4199	-	-	-	-	3.0272
2021	0.0418	-	-	-	-	0.4228	-	-	-	-	3.0635
2022	0.0402	0.0402	0.0402	0.0402	0.0389	0.4233	0.4233	0.4233	0.4233	0.4098	3.0792
2023	0.0291	-	-	-	0.0009	0.4046	-	-	-	0.0129	2.9826
2024	0.0294	-	-	-	-	0.4082	-	-	-	-	3.0228
2025	0.0296	-	-	-	-	0.4118	-	-	-	-	3.0634
2026	0.0298	-	-	-	-	0.4149	-	-	-	-	3.0980
2027	0.0300	-	-	-	-	0.4172	-	-	-	-	3.1232
2028	0.0302	-	-	-	-	0.4197	-	-	-	-	3.1503
2029	0.0303	-	-	-	-	0.4221	-	-	-	-	3.1777
2030	0.0305	-	-	-	-	0.4243	-	-	-	-	3.2028
2031	0.0306	-	-	-	-	0.4263	-	-	-	-	3.2255
2032	0.0307	-	-	-	-	0.4279	-	-	-	-	3.2430
2033	0.0308	-	-	-	-	0.4291	-	-	-	-	3.2559
2034	0.0309	-	-	-	-	0.4297	-	-	-	-	3.2619
2035	0.0309	-	-	-	-	0.4299	-	-	-	-	3.2635
2036	0.0309	-	-	-	-	0.4301	-	-	-	-	3.2652
2037	0.0309	-	-	-	-	0.4302	-	-	-	-	3.2648
2038	0.0309	-	-	-	-	0.4301	-	-	-	-	3.2639
2039	0.0309	-	-	-	-	0.4301	-	-	-	-	3.2635
2040	0.0309	-	-	-	-	0.4300	-	-	-	-	3.2612
2041	0.0309					0.4298					3.2588
2042	0.0309					0.4297					3.2571
2043	0.0308					0.4295					3.2551
2044	0.0308					0.4294					3.2535
2045	0.0308					0.4294					3.2526
2046	0.0308					0.4293					3.2514
2047	0.0308					0.4292					3.2507
2048	0.0308					0.4292					3.2500
2049	0.0308					0.4291					3.2496
2050	0.0308					0.4291					3.2496
Total		0.0402	0.0402	0.0402	0.0399		0.4233	0.4233	0.4233	0.4227	

Emissions (g/bhp-hr)		ROG	ROG	ROG	ROG		CO	CO	CO	CO		NOx	NOx	NOx	NOx		PM10	PM10	PM10	PM10
Aerial Lifts	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	0.2023	-	-	-	-	3.2195	-	-	-	-	3.3728	-	-	-	-	0.1608	-	-	-	-
2015	0.1906	-	-	-	-	3.2178	-	-	-	-	3.1134	-	-	-	-	0.1431	-	-	-	-
2016	0.1655	-	-	-	-	3.2010	-	-	-	-	2.7222	-	-	-	-	0.1119	-	-	-	-
2017	0.1427	-	-	-	-	3.1843	-	-	-	-	2.3637	-	-	-	-	0.0834	-	-	-	-
2018	0.1219	-	-	-	-	3.1669	-	-	-	-	2.0636	-	-	-	-	0.0571	-	-	-	-
2019	0.1182	-	-	-	-	3.1725	-	-	-	-	1.9766	-	-	-	-	0.0485	-	-	-	-
2020	0.1149	-	-	-	-	3.1768	-	-	-	-	1.8686	-	-	-	-	0.0416	-	-	-	-
2021	0.1088	-	-	-	-	3.1762	-	-	-	-	1.7437	-	-	-	-	0.0333	-	-	-	-
2022	0.1047	0.1047	0.1047	0.1047	0.1014	3.1760	3.1760	3.1760	3.1760	3.0745	1.6266	1.6266	1.6266	1.6266	1.5746	0.0302	0.0302	0.0302	0.0302	0.0292
2023	0.1005	-	-	-	0.0032	3.1703	-	-	-	0.1013	1.5481	-	-	-	0.0495	0.0267	-	-	-	0.0009
2024	0.1005	-	-	-	-	3.1726	-	-	-	-	1.5279	-	-	-	-	0.0265	-	-	-	-
2025	0.0988	-	-	-	-	3.1674	-	-	-	-	1.5108	-	-	-	-	0.0259	-	-	-	-
2026	0.0988	-	-	-	-	3.1674	-	-	-	-	1.5108	-	-	-	-	0.0259	-	-	-	-
2027	0.0988	-	-	-	-	3.1674	-	-	-	-	1.5108	-	-	-	-	0.0259	-	-	-	-
2028	0.0988	-	-	-	-	3.1674	-	-	-	-	1.5108	-	-	-	-	0.0259	-	-	-	-
2029	0.0988	-	-	-	-	3.1674	-	-	-	-	1.5108	-	-	-	-	0.0259	-	-	-	-
2030	0.1880	-	-	-	-	3.3520	-	-	-	-	1.6570	-	-	-	-	0.0360	-	-	-	-
2031	0.1880	-	-	-	-	3.3520	-	-	-	-	1.6570	-	-	-	-	0.0360	-	-	-	-
2032	0.1880	-	-	-	-	3.3520	-	-	-	-	1.6570	-	-	-	-	0.0360	-	-	-	-
2033	0.1880	-	-	-	-	3.3520	-	-	-	-	1.6570	-	-	-	-	0.0360	-	-	-	-
2034	0.1880	-	-	-	-	3.3520	-	-	-	-	1.6570	-	-	-	-	0.0360	-	-	-	-
2035	0.1660	-	-	-	-	3.3450	-	-	-	-	1.4660	-	-	-	-	0.0170	-	-	-	-
2036	0.1660	-	-	-	-	3.3450	-	-	-	-	1.4660	-	-	-	-	0.0170	-	-	-	-
2037	0.1660	-	-	-	-	3.3450	-	-	-	-	1.4660	-	-	-	-	0.0170	-	-	-	-
2038	0.1660	-	-	-	-	3.3450	-	-	-	-	1.4660	-	-	-	-	0.0170	-	-	-	-
2039	0.1660	-	-	-	-	3.3450	-	-	-	-	1.4660	-	-	-	-	0.0170	-	-	-	-
2040	0.1610	-	-	-	-	3.3440	-	-	-	-	1.4070	-	-	-	-	0.0120	-	-	-	-
Aerial Lifts Total		0.1047	0.1047	0.1047	0.1046		3.1760	3.1760	3.1760	3.1758		1.6266	1.6266	1.6266	1.6241		0.0302	0.0302	0.0302	0.0301

Default Horsepower and Load Factor

OFFROAD Equipment Type	Horsepower	Load Factor
Aerial Lifts	63	0.31
Air Compressors	78	0.48
Bore/Drill Rigs	221	0.5
Cement and Mortar Mixers	9	0.56
Concrete/Industrial Saws	81	0.73
Cranes	231	0.29
Crawler Tractors	212	0.43
Crushing/Proc. Equipment	85	0.78
Excavators	158	0.38
Forklifts	89	0.2
Generator Sets	84	0.74
Graders	187	0.41
Off-Highway Tractors	124	0.44
Off-Highway Trucks	402	0.38
Other Construction Equipment	172	0.42
Other General Industrial Equipment	88	0.34
Other Material Handling Equipment	168	0.4
Pavers	130	0.42
Paving Equipment	132	0.36
Plate Compactors	8	0.43
Pressure Washers	13	0.3
Pumps	84	0.74
Rollers	80	0.38
Rough Terrain Forklifts	100	0.4
Rubber Tired Dozers	247	0.4
Rubber Tired Loaders	203	0.36
Scrapers	367	0.48
Signal Boards	6	0.82
Skid Steer Loaders	65	0.37
Surfacing Equipment	263	0.3
Sweepers/Scrubbers	64	0.46
Tractors/Loaders/Backhoes	97	0.37
Trenchers	78	0.5
Welders	46	0.45

Default Horsepower and Load Factor from CalEEMod2016 Appendix D: Table 3.3

APPENDIX C

SPECIAL STATUS SPECIES IN THE PROJECT VICINITY

Table 1-1 Special-Status Plant Species with Potential to Occur in the Project Vicinity

Species	Status (Federal/State/ CNPS)	Suitable Habitat Description	Potential to Occur on Project Site
Alkali milk-vetch *(Astragalus tener* var. *tener)*	--/--/1B.2	Alkaline sites in playas, valley and foothill grassland (on adobe clay), and vernal pools; elevation 1-60m. Blooming Period: March – June.	Not expected. No suitable habitat found at the project site.
Arcuate bush-mallow *(Malacothamnus arcuatus)*	--/--/1B.2	Chaparral, in gravelly alluvium; elevation 80-355m. Blooming Period: April – September.	Not expected. No suitable habitat found at the project site.
Bent-flowered fiddleneck *(Amsinckia lunaris)*	--/--/1B.2	Coastal bluff scrub, cismontane woodland, and valley and foothill grassland, on decomposed shale soils; elevation 3-500m. Blooming Period: March – June.	Not expected. No suitable habitat found at the project site.
Brittlescale *(Atriplex depressa)*	--/--/1B.2	Chenopod scrub, meadows, playas, valley and foothill grassland, and vernal pools. Usually in alkali scalds or alkali clay in meadows or annual grassland; rarely associated with riparian, marshes or vernal pools; elevation 1-320m. Blooming Period: May – October.	Not expected. No suitable habitat found at the project site.
California alkali grass *(Puccinellia simplex)*	--/--/1B.2	Meadows and seeps, chenopod scrub, valley and foothill grasslands, vernal pools. Alkaline, vernally mesic. Sinks, flats, and lake margins; elevation 1-915m. Blooming Period: March – May.	Not expected. No suitable habitat found at the project site.
California seablite *(Suaeda californica)*	FE/--/1B.1	Marshes and swamps; margins of coastal salt marshes; elevation 0-5m. Blooming Period: July – October.	Not expected. Not observed during biological survey. Natural populations are believed to be extirpated from San Francisco Bay.
Chaparral harebell *(Campanula exigua)*	--/--/1B.2	Chaparral (rocky, usually serpentine); elevation 275-1250m. Blooming Period: May – June.	Not expected. No suitable habitat found at the project site.
Chaparral ragwort *(Senecio aphanactis)*	--/--/2B.2	Cismontane woodland and coastal scrub. Prefers drying alkaline flats; elevation 20-575m. Blooming Period: January – April.	Not expected. No suitable habitat found at the project site.
Choris' popcorn-flower *(Plagiobothrys chorisianus* var. *chorisianus)*	--/--/1B.2	Chaparral, coastal scrub, coastal prairie, mesic sites; elevation 15-100m. Blooming Period: March – June.	Not expected. No suitable habitat found at the project site.
Congdon's tarplant *(Centromadia parryi* spp. *congdonii)*	--/--/1B.1	Valley and foothill grassland (alkaline); elevation 1-230m. Known to occur on various substrates, and in disturbed and ruderal (weedy) areas. Blooming Period: June – November.	Not expected. Not observed during biological survey.
Contra Costa goldfields *(Lasthenia conjugens)*	FE/--/1B.1	Wet areas in cismontane woodland, playas (alkaline), valley and foothill grassland, and vernal pools; elevation 0-470m. Blooming Period: March – June.	Not expected. No suitable habitat found at the project site.
Fountain thistle (*Cirsium fontinale* var. *fontinale*)	FE/SE/1B.1	Valley and foothill grassland, chaparral, cismontane woodland, meadows and seeps. Serpentine seeps and grassland. 45-185 m.	Not expected. No suitable habitat found at the project site.

Species	Status (Federal/State/ CNPS)	Suitable Habitat Description	Potential to Occur on Project Site
Fragrant fritillary *(Fritillaria liliacea)*	--/--/1B.2	Coastal scrub, valley and foothill grassland, and coastal prairie. Often on serpentine; various soils reported though usually clay in grassland; elevation 3-410m. Blooming Period: February – April.	Not expected. No suitable habitat found at the project site.
Franciscan onion (*Allium peninsulare* var. *franciscanum*)	--/--/1B.2	Cismontane woodland, valley and foothill grassland. Clay soils; often on serpentine; sometimes on volcanics. Dry hillsides. 5-320 m. Blooming Period: May – June.	Not expected. No suitable habitat found at the project site.
Hall's bush-mallow *(Malacothamnus hallii)*	--/--/1B.2	Chaparral, some populations on serpentine; elevation 10-550m. Blooming Period: May – September.	Not expected. No suitable habitat found at the project site.
Hoover's button-celery *(Eryngium aristulatum* var. *hooveri)*	--/--/1B.1	Vernal pools. Alkaline depressions, roadside ditches, and other wet places near the coast; elevation 5-45m. Blooming Period: July.	Not expected. No suitable habitat found at the project site.
Jepson's coyote-thistle (*Eryngium jepsonii*)	--/--/1B.2	Vernal pools, valley and foothill grassland. Clay. 3-305 m. Blooming Period: April – August.	Not expected. No suitable habitat found at the project site.
Kings Mountain manzanita *(Arctostaphylos regismontana)*	--/--/1B.2	Broadleaved upland forest, chaparral, North Coast coniferous forest. Granitic or sandstone outcrops; elevation 305-730m. Blooming Period: January – April.	Not expected. No suitable habitat found at the project site.
Legenere *(Legenere limosa)*	--/--/1B.1	In beds of vernal pools; elevation 1-880m. Blooming Period: April – June.	Not expected. No suitable habitat found at the project site.
Lesser saltscale *(Atriplex minuscula)*	--/--/1B.1	Chenopod scrub, playas, and valley and foothill grassland. In alkali sinks in sandy, alkaline soils; elevation 20-100m. Blooming Period: May – October.	Not expected. No suitable habitat found at the project site.
Loma Prieta hoita *(Hoita strobilina)*	--/--/1B.1	Wet areas on serpentine substrate in chaparral, cismontane woodland, and riparian woodland; elevation 30-860m. Blooming Period: May – October.	Not expected. No suitable habitat found at the project site.
Long-styled sand-spurrey (*Spergularia macrotheca* var. *longistyla*)	--/--/1B.2	Marshes and swamps, meadows and seeps. Alkaline. 0-220 m. Blooming Period: February – May.	Not expected. No suitable habitat found at the project site.
Marin western flax (*Hesperolinon congestum*)	FT/ST/1B.1	Chaparral, valley and foothill grassland. In serpentine barrens and in serpentine grassland and chaparral. 60-400 m. Blooming Period: April – July.	Not expected. No suitable habitat found at the project site.
Minute pocket moss *(Fissidens pauperculus)*	--/--/1B.2	North coast coniferous forest. Moss growing on damp soil along the coast; elevation 10-100m. Evergreen.	Not expected. No suitable habitat found at the project site.
Most beautiful jewel-flower *(Streptanthus albidus* ssp. *peramoenus)*	--/--/1B.2	Chaparral, valley and foothill grassland, and cismontane woodland; serpentine outcrops, on ridges and slopes; elevation 120-730m. Blooming Period: April – June.	Not expected. No suitable habitat found at the project site.
Northern slender pondweed (*Stuckenia filiformis* ssp. *alpina*)	--/--/2B.2	Marshes and swamps. Shallow, clear water of lakes and drainage channels. 5-2325 m. Blooming Period: May – July.	Not expected. No suitable habitat found at the project site.

Species	Status (Federal/State/ CNPS)	Suitable Habitat Description	Potential to Occur on Project Site
Point Reyes bird's-beak *(Chloropyron maritimum* ssp. *palustre)*	--/--/1B.2	Coastal salt marshes, usually with *Salicornia, Distichlis, Jaumea,* and *Spartina*; elevation 0-15m. Blooming Period: June – October.	Not expected. Not observed during biological survey. This species was documented in an unspecified area within the project site and was last seen in 1987 (Occurrence No. 19, CDFW 2021). However, this occurrence is listed as "possibly extirpated" by the CNDDB.
Prostrate vernal pool navarretia *(Navarretia prostrata)*	--/--/1B.1	Coastal scrub, valley and foothill grassland, and vernal pools. Alkaline soils in grassland, or in vernal pools; elevation 15-700m. Blooming Period: April – July.	Not expected. No suitable habitat found at the project site.
Robust spineflower *(Chorizanthe robusta* var. *robusta)*	FE/--/1B.1	Sandy or gravelly openings in cismontane woodland, coastal dunes, and coastal scrub; prefers sandy terraces and bluffs or loose sand; elevation 3-300m. Blooming Period: April – July.	Not expected. No suitable habitat found at the project site.
Round-headed Chinese-houses (*Collinsia corymbosa*)	--/--/1B.2	Coastal dunes. 0-30 m. Blooming Period: April – June.	Not expected. No suitable habitat found at the project site.
Saline clover *(Trifolium hydrophilum)*	--/--/1B.2	Marshes and swamps, valley and foothill grassland, and vernal pools. Prefers wet, alkaline sites; elevation 0-300m. Blooming Period: April – June.	Not expected. Presumed extirpated. The closest documented occurrence was recorded in 1886 approximately nine miles northwest of the project site
San Francisco collinsia *(Collinsia multicolor)*	--/--/1B.2	Serpentine sites in closed cone coniferous forest and coastal scrub. Prefers decomposed shale (mudstone) mixed with humus; elevation 30-250m. Blooming Period: March – May.	Not expected. No suitable habitat found at the project site.
San Joaquin spearscale *(Atriplex joaquinana)*	--/--/1B.2	Alkaline sites in chenopod scrub, meadows and seeps, playas, and valley and foothill grassland; elevation 1-320m. Blooming Period: April – October.	Not expected. No suitable habitat found at the project site.
San Mateo thorn-mint (*Acanthomintha duttonii*)	FE/SE/1B.1	Chaparral, valley and foothill grassland. Uncommon serpentinite vertisol clays; in relatively open areas. 50-185 m. Blooming Period: April – June.	Not expected. No suitable habitat found at the project site.
San Mateo woolly sunflower (*Eriophyllum latilobum*)	FE/SE/1B.1	Cismontane woodland, coastal scrub, lower montane coniferous forest. Often on roadcuts; found on and off of serpentine. 30-610 m. Blooming Period: May – June.	Not expected. No suitable habitat found at the project site.
Two-fork clover *(Trifolium amoenum)*	--/--/1B.1	Coastal bluff scrub, valley and foothill grassland, sometimes serpentinite; elevation 5-415m. Blooming Period: April – June.	Not expected. No suitable habitat found at the project site.
Western leatherwood *(Dirca occidentalis)*	--/--/1B.2	Broadleaf upland forest, chaparral, closed cone coniferous forest, cismontane woodland, North Coast coniferous forest, riparian forest, and riparian woodland. Found on brushy slopes, in mesic sites, mostly in mixed evergreen and foothill woodland communities; elevation 30-550m. Blooming Period: January – April.	Not expected. No suitable habitat found at the project site.

Species	Status (Federal/State/ CNPS)	Suitable Habitat Description	Potential to Occur on Project Site
White-flowered rein orchid *(Piperia candida)*	--/--/1B.2	Broadleaf upland forest, lower montane coniferous forest, and North Coast coniferous forest; sometimes serpentine; elevation 30-1310m. Blooming Period: May – September.	Not expected. No suitable habitat found at the project site.
Woodland woollythreads *(Monolopia gracilens)*	--/--/1B.2	Serpentine, open sites in broadleaved upland forest, chaparral, cismontane woodland, North Coast coniferous forest, and valley and foothill grassland; elevation 100-1200m. Blooming Period: March – July.	Not expected. No suitable habitat found at the project site.

SOURCE: CDFW 2021, CNPS 2021

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FE: Listed as Endangered under the Federal Endangered Species Act.

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State (CDFW)

SE: Listed as Endangered under the California Endangered Species Act.

ST: Listed as Threatened under the California Endangered Species Act.

SR: Listed as Rare under the California Endangered Species Act.

SC: A Candidate for listing as Threatened or Endangered under the California Endangered Species Act.

SSC: Species of Special Concern.

SFP: Fully Protected species under the California Fish and Game Code.

SD: Delisted under the California Endangered Species Act.

CNPS Rare Plant Ranks and Threat Code Extensions

1B: Plants that are considered Rare, Threatened, or Endangered in California and elsewhere.

2B: Plants that are considered Rare, Threatened, or Endangered in California, but more common elsewhere.

.1: Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat).

.2: Fairly endangered in California (20-80% occurrences threatened).

.3: Not very endangered in California (<20% of occurrences threatened or no current threats known).

Table 1-2 Special-Status Wildlife Species with Potential to Occur in the Project Vicinity

Species	Status (Federal/State)	Suitable Habitat Description	Potential to Occur on Project Site
Alameda song sparrow *(Melospiza melodia pusillula)*	--/SSC	Resident of salt marshes bordering south arm of San Francisco Bay. Inhabits *Salicornia* marshes; nests low in *Grindelia* bushes (high enough to escape high tides) and in *Salicornia*.	Low Potential. Species known to occur within one mile of the project site.
Alameda whipsnake *(Masticophis lateralis euryxanthus)*	FT/ST	Typically found in chaparral and scrub habitats, but will also use adjacent grassland, oak savannah, and woodland habitats. Found mostly on south-facing slopes and ravines with rock outcrops, deep crevices, or abundant rodent burrows.	Unlikely. Suitable habitat not found at the project site.
American badger *(Taxidea taxus)*	--/SSC	Most abundant in drier, open stages of most shrub, forest, and herbaceous habitats. Need sufficient food and open, uncultivated ground with friable soils to dig burrows. Prey on burrowing rodents.	Unlikely. Suitable habitat not found at the project site.
American peregrine falcon *(Falco peregrinus anatum)*	FD/SD,SFP	Occurs near wetlands, lakes, rivers, or other waters on cliffs, banks, dunes, mounds, and human-made structures. Nest consists of a scrape on a depression or ledge in an open site.	Unlikely. Suitable habitat not found at the project site.
Bald eagle *(Haliaeetus leucocephalus)*	FD/SE	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within one mile of water. Nests in large, old-growth, or dominant live tree with open branches.	Unlikely. Suitable habitat not found at the project site.
Bank swallow *(Riparia riparia)*	--/ST	Highly colonial species that nests in alluvial soils along rivers, streams, lakes, and ocean coasts. Nesting colonies only occur in vertical banks or bluffs of friable soils at least one meter tall, suitable for burrowing with some predator deterrence values. Breeding colony present in Salinas River.	Unlikely. Suitable habitat not found at the project site.
Bay checkerspot butterfly *(Euphydryas editha bayensis)*	FT/--	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. *Plantago erecta* is the primary host plant; *Castilleja densiflora* and *C. exserta* are secondary host plants.	Unlikely. Suitable habitat not found at the project site.
Burrowing owl *(Athene cunicularia)*	--/SSC	Open, dry, annual or perennial grasslands, desert, or scrubland, with available small mammal burrows.	Low Potential. Species known to occur within one mile of the project site.
California black rail *(Laterallus jamaicensis coturniculus)*	--/ST	Inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays. Needs water depth of about 1 inch that does not fluctuate during the year and dense vegetation for nesting.	Low Potential. Species known to occur within one mile of the project site.
California giant salamander *(Anodonta californiensis)*	--/SSC	Known from wet coastal forests near streams ad seeps from Mendocino County south to Monterey County and east to Napa County. Aquatic larvae found in cold, clear streams, occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes.	Unlikely. Suitable habitat not found at the project site.

Species	Status (Federal/State)	Suitable Habitat Description	Potential to Occur on Project Site
California least tern *(Sternula antillarum browni)*	FE/SE	Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates (sand beaches, alkali flats, landfills, or paved areas).	Unlikely. Suitable habitat not found at the project site.
California linderiella *(Linderiella occidentalis)*	FSC/--	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools typically has very low alkalinity, conductivity, and total dissolved solids.	Unlikely. Suitable habitat not found at the project site.
California red-legged frog *(Rana draytonii)*	FT/SSC	Rivers, creeks, and stock ponds with pools and overhanging vegetation. Requires dense, shrubby or emergent riparian vegetation, and prefers short riffles and pools with slow-moving, well-oxygenated water. Needs upland habitat to aestivate (remain dormant during dry months) in small mammal burrows, cracks in the soil, or moist leaf litter.	Unlikely. Suitable habitat not found at the project site.
California Ridgway's rail *(Rallus obsoletus obsoletus)*	FE/SE	Found in saltwater and brackish marshes, traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickleweed, but feeds away from cover on invertebrates from mud-bottomed sloughs.	Low Potential. Species known to occur within one mile of the project site.
California tiger salamander *(Ambystoma californiense)*	FT/ST	Grasslands and oak woodlands near seasonal pools and stock ponds in central and coastal California. Needs upland habitat to aestivate (remain dormant during dry months) in small mammal burrows, cracks in the soil, or moist leaf litter. Requires seasonal water sources that persist into late March for breeding habitat.	Unlikely. Suitable habitat not found at the project site.
Cooper's hawk *(Accipter cooperii)*	--/SSC	Oak or riparian woodlands.	Unlikely. Suitable habitat not found at the project site.
Foothill yellow-legged frog *(Rana boylii)*	--/SSC	Partly shaded, shallow streams and riffles with rocky substrate in a variety of habitats. Requires at least some cobble-sized substrate for egg-laying and 15 weeks of available water to attain metamorphosis.	Unlikely. Suitable habitat not found at the project site.
Golden eagle *(Aquila chrysaetos)*	--/SFP	Rolling foothill mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range. Also uses large trees in open areas.	Unlikely. Suitable habitat not found at the project site.
Hoary bat *(Lasiurus cinereus)*	--/SSC	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	Low Potential. Species known to occur within three miles of the project site.

Species	Status (Federal/State)	Suitable Habitat Description	Potential to Occur on Project Site
Long-eared owl *(Asio otus)*	--/SSC	Riparian bottomlands grown to tall willows and cottonwoods. Also prefers belts of live oak paralleling stream courses. Requires adjacent open land productive with mice and the presence of old nests of crows, hawks, or magpies for breeding.	Unlikely. Suitable habitat not found at the project site.
Longfin smelt *(Spirinchus thaleichthys)*	FC/SE	Euryhaline, nektonic and anadromous fish found in open waters of estuaries, mostly in middle or bottom of water column. Prefers salinities of 15-30 ppt, but can be found in completely freshwater to almost pure seawater.	Unlikely. Suitable habitat not found at the project site.
Marbled murrelet *(Brachyramphus marmoratus)*	FT/SE	Feeds near shore, and nests up to six miles inland from coast from Half Moon Bay to Santa Cruz in old-growth redwood forests, often in Douglas fir trees.	Unlikely. Suitable habitat not found at the project site.
Monarch butterfly *(Danaus plexippus)*	--/--	Winter roost sites. Wind protected tree groves (Eucalyptus, Monterey pine, cypress) with nectar and water sources nearby.	Unlikely. Suitable habitat not found at the project site.
Northern California legless lizard *(Anniella pulchra)*	--/SSC	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.	Unlikely. Suitable habitat not found at the project site.
Northern harrier *(Circus cyaneus)*	--/SSC	Found near coastal salt and freshwater marshes. Nests and forages in grasslands. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	Low Potential. Species known to occur within one mile of the project site.
Pallid bat *(Antrozous pallidus)*	--/SSC	Deserts, grasslands, scrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures.	Low Potential. Species known to occur within three miles of the project site.
Saltmarsh common yellowthroat *(Geothlypis trichas sinuosa)*	--/SSC	Fresh and saltwater marshes; requires thick continuous cover down to water surface for foraging, tall grasses, tule patches, and willows for nesting.	Low Potential. Species known to occur within one mile of the project site.
Salt-marsh harvest mouse *(Reithrodontomys raviventris)*	FE/SE	Found only in the saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed is the primariy habitat. Species does not burrow, but builds loosely organized nests. Requires higher areas for flood escape.	Low Potential. Species known to occur within one mile of the project site.
Salt-marsh wandering shrew *(Sorex vagrans halicoetes)*	--/SSC	Salt marshes of the southern arm of San Francisco Bay. Found in medium high marsh, 6-8 feet above sea level where abundant driftwood is scattered among *Salicornia*.	Low Potential. Habitat occurs on the project site.
San Francisco dusky-footed woodrat *(Neotoma fuscipes annectens)*	--/SSC	Forest habitats of moderate canopy and moderate to dense understory. Constructs nest of shredded grass, leaves, and other materials.	Unlikely. Suitable habitat not found at the project site.

Species	Status (Federal/State)	Suitable Habitat Description	Potential to Occur on Project Site
Santa Cruz black salamander *(Aneides flavipunctatus niger)*	--/SSC	Mixed deciduous and coniferous woodlands and coastal grasslands in San Mateo, Santa Cruz, and Santa Clara Counties. Adults found under rocks, talus, and damp woody debris.	Unlikely. Suitable habitat not found at the project site.
Short-eared owl *(Asio flammeus)*	--/SSC	(Nesting) Found in swamp lands, both fresh and salt; lowland meadows; irrigated alfalfa fields. Tule patches/tall grass needed for nesting/daytime seclusion. Nests on dry ground in depression concealed in vegetation.	Unlikely. Suitable habitat not found at the project site.
Snowy egret *(Egretta thula)*	--/--	(Nesting) Colonial nester with nest sites situated in protected beds of dense tules. Rookery sites situated close to foraging areas, including marshes, tidal flats, streams, wet meadows, and borders of lakes.	Unlikely. Suitable habitat not found at the project site.
Steelhead *(Oncorhynchus mykiss irideus)*	FT/--	Coastal stream with clean spawning gravel. Requires cool water and pools. Needs migratory access between natal stream and ocean.	Unlikely. Suitable habitat not found at the project site.
Swainson's hawk *(Buteo swainsoni)*	--/ST	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas, such as grasslands or agricultural fields supporting rodent populations.	Unlikely. Suitable habitat not found at the project site.
Townsend's big-eared bat *(Corynorhinus townsendii)*	--/SSC	Inhabits a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	Low Potential. Species known to occur within four miles of the project site.
Tricolored blackbird *(Agelaius tricolor)*	--/SE	Areas adjacent to open water with protected nesting substrate, which typically consists of dense, emergent freshwater marsh vegetation.	Unlikely. Suitable habitat not found at the project site.
Western pond turtle *(Emys marmorata)*	--/SSC	Ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Needs basking sites (such as rocks or partially submerged logs) and suitable upland habitat for egg-laying (sandy banks or grassy open fields).	Unlikely. Suitable habitat not found at the project site.
Western snowy plover *(Charadrius alexandrinus nivosus)*	FT/SSC	Sandy beaches, salt pond levees, shores of large alkali lakes; sandy, gravelly, or friable soils for nesting.	Unlikely. Suitable habitat not found at the project site.
Western yellow-billed cuckoo *(Coccyzus americanus)*	FC/SE	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	Unlikely. Suitable habitat not found at the project site.

Species	Status (Federal/State)	Suitable Habitat Description	Potential to Occur on Project Site
White-tailed kite *(Elanus leucurus)*	--/SFP	Rolling foothills and valley margins with scattered oaks, and river bottomlands or marshes next to deciduous woodlands. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	Unlikely. Suitable habitat not found at the project site.
Yellow rail *(Corturnicops noveboracensis)*	--/SSC	Summer resident in eastern Sierra Nevadas, prefers freshwater marshlands.	Unlikely. Suitable habitat not found at the project site.
Yuma myotis *(Myotis yumanensis)*	--/--	Optimal habitats are open forests and woodlands with sources of water over which to feed. Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings, or crevices.	Unlikely. Suitable habitat not found at the project site.

SOURCE: CDFW 2021

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