CEQA ENVIRONMENTAL CHECKLIST FORM (REVISED)

1.	**Project Title:**	Atria Park of Lafayette – Retrofit of Existing Bridge Retaining Walls & Culvert; County File #CDDP20-03005
2.	**Lead Agency Name and Address:**	Contra Costa County Department of Conservation and Development 30 Muir Rd. Martinez, CA 94553
3.	**Contact Person and Phone Number:**	Syd Sotoodeh, Senior Planner (925) 655-2877 syd.sotoodeh@dcd.cccounty.us
4.	**Project Location:**	1545 Pleasant Hill Road in the unincorporated Lafayette area (Assessor's Parcel Number: 169-090-002)
5.	**Project Sponsor's Name and Address:**	Rich Francis c/o The Olympus Group, Inc. 8850 Greenback Ln., Suite C Orangevale, CA 95662
6.	**General Plan Designation:**	OS – Open Space / CC – Congregate Care
7.	**Zoning:**	P-1 – Planned Unit District

8. Description of Project:

Background: In 1991, a Development Plan was approved to allow a congregate care facility (County File #CDDP88-03007) to be constructed and operated on the subject property. The facility was constructed in 2003 and is currently in operation as the Atria Park of Lafayette assisted living facility. The facility is accessed from Pleasant Hill Road near the intersection of Taylor Boulevard via a two-lane, approximately 250-foot-long driveway. The driveway is supported by two block-type retaining walls that cross a ravine and tributary to "Murderers Creek," which flows through an arch culvert constructed within the retaining wall (bridge) structure. There is evidence of differential displacement of the walls which is causing the bridge to sink which in turn is causing major roadway rutting and potholing. In addition, due to heavy rainfall in the 2022/23 rain season, increased creek flows through the channel caused scouring and significant erosion of the open-bed culvert. Thus, there is now a potential for the culvert footings to be undermined in such a way that they may collapse and cause additional damage to the bridge structure and roadway above. An Initial Study and Draft Mitigated Negative Declaration was published for public comment in January of 2021, after which the applicant proposed a substantial design change and a new methodology for retrofitting the bridge structure including the open-bed channel of the culvert. As such, the Initial Study and Draft Mitigated Negative Declaration for the project has been revised to address the proposed changes as described below.

Project Description: The applicant is requesting approval of a Development Plan modification of County File #CDDP88-03007 to allow construction of a retrofit of two existing retaining walls that form a bridge supporting the primary driveway to a congregate care facility currently operated as the Atria Park of Lafayette assisted living facility, and repairs to an existing culvert within the bridge structure on the subject property.

The project consists of the following elements:

1. Injection of a "Uretek" polymer into the soils under the culvert footings, along the base of both retaining walls, and from the road surface extending approximately 30 feet into the existing engineered walls;
2. Bridge:
    - Excavation and grading (approximately 50 cubic yards, cut) at the base of the walls to set pads for scaffolding;
    - Installation of soil nails and tie rods throughout the surface and underlying soils of both retaining walls;
    - Application of shotcrete to cover the tie rods and soil nails; and,
    - Replacement of the existing roadway surface;
3. Culvert:
    - Excavation and grading (approximately 450 cubic yards, cut) within the culvert;
    - Construction of new footings,
    - Construction of a concrete apron the length of the culvert;
    - Placement of native gravels within the culvert to match the creek flowline; and,
    - Placement of up to 12 inches of rip rap upstream and downstream of the culvert for erosion control.

The applicant estimates that the bridge will need to be closed to non-construction traffic for approximately 6 months due to crane and concrete pump equipment on the roadway during retrofitting work and repaving of the roadway. Thus, the project seeks approval of a temporary modification of COA #4B of file #CDDP88-03007 to allow public access to be detoured to a restricted access driveway via Diablo View Road during construction activities.

Approximately 8,095 square feet of the approximately 16,945-square-foot project area is located within a restricted development area (Grant Deed of Development Rights, 13693OR414, recorded June 8, 1987), therefore, the applicant seeks approval of the County to perform work within the restricted development area.

The applicant also requests approval of a tree permit to allow removal of up to ten (10) code-protected trees (two coast live oak and one valley oak, three coast redwood, one walnut, two blue gum eucalyptus, and one deodar cedar) due to grading and construction activities or poor health and condition, and to allow work within the driplines of approximately seven (7) code-protected trees (three coast live oak, two blue gum eucalyptus, one white alder, and one salix) for required grading and construction activities.

If approved, the retrofitted retaining walls will allow the driveway continued to be used for safe access to the facility and the repaired and retrofitted culvert bed will prevent further erosion of the existing culvert walls and scouring of the culvert apron. No changes to the buildings or congregate care use of the facility are proposed.

9. Surrounding Land Uses and Setting:

The subject property is an approximately 6.4-acre site located east of Taylor Boulevard and north of Pleasant Hill Boulevard within a predominantly residential area in an unincorporated area of Lafayette in Contra Costa County. The subject property is located within two General Plan Land Use Designations. Approximately 3.8 acres of the property and the project site is located within an Open Space (OS) land use designation, while the remaining is within a Congregate Care (CC) land use designation. Properties to the north, northwest, and east of the subject property are within Single-Family Residential land use designations for very low, low, and medium density housing (SV, SL, and SM). The subject property is zoned as a Planned-Unit District (P-1) and the surrounding properties are zoned for residential uses (R-10, R-15, and R-20). A primarily residential area of the City of Lafayette lies west and southwest of the subject property.

The subject property has been developed with a congregate care facility, surface parking lots, landscaping, and amenities for residents in the northern portion of the property since construction in 2003. The facility is currently operated as Atria Park of Lafayette, providing 24/7 assisted living and memory care for older adults in a home-like setting. The southern portion of the property is dominated by a heavily wooded ravine and intermittent seasonal stream known as "Murderers Creek". A bridge structure constructed of block type retaining walls and an arch culvert crosses the ravine for primary access to the assisted living facility from Pleasant Hill Road. Secondary, emergency access to the facility is provided through a gated driveway from Diablo View Road.

10. Other public agencies whose approval is required (e.g., permits, financing, approval, or participation agreement):

- Contra Costa County, Building Inspection Division
- Contra Costa County, Grading Inspection Division
- Contra Costa County Public Works Department, Engineering Services
- Contra Costa County Public Works Department, Flood Control District
- Contra Costa County Fire Protection District (CCCFPD)
- Contra Costa Environmental Health Division (CCEHD)
- Central Contra Costa Sanitary District (Central San)
- California Department of Fish & Wildlife
- San Francisco Bay Regional Water Quality Control Board

11. 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, has consultation begun?

A Notice of Opportunity to Request Consultation was sent on September 18, 2020, to Wilton Rancheria. Wilton Rancheria responded in correspondence dated September 29, 2020, that they have no concern on this project and did not request a consultation. As a courtesy, the County will provide a copy of this environmental document for the Tribe's comments.

Environmental Factors Potentially Affected

The environmental factors checked below would have been potentially affected by this project, but have been mitigated in a manner as to not result in a significant effect on the environment:

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

Environmental Determination

On the basis of this initial evaluation:

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

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

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

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

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

Syd Sotoodeh — June 7, 2024

Syd Sotoodeh
Senior Planner
Contra Costa County
Department of Conservation & Development

Date

ENVIRONMENTAL CHECKLIST

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
1. *AESTHETICS –* *Except as provided in Public Resources Code Section 21099,* **would *the project*:**				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
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?	☐	☒	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

SUMMARY*:*

a) Would the project have a substantial adverse effect on a scenic vista?

Less Than Significant Impact: Figure 9-1, Scenic Ridges & Waterways, of the Contra Costa County General Plan Open Space Element identifies the major scenic resources in the County. Views of these identified scenic resources are considered scenic vistas. The subject property is not located near a scenic ridge, nor is it visible from a scenic ridge, as shown on Figure 9-1. However, the subject property is located adjacent to Taylor Boulevard which has been designated by the County as a Scenic Route (Figure 5-4 of the County's General Plan). Thus, Scenic Route Policies 5-47 through 5-56 are applicable to this project and the potential impacts of future development on this resource must be considered. Specifically, policies 5-47, 5-49, 5-50, 5-55, and 5-56 apply directly to this project.

Approximately 3 acres of the subject property consisting of the ravine and creek area is restricted to development through a grant deed of development rights (scenic easement) with the intention of maintaining it as a natural, open space. Approximately 8,200 square feet of the project area to be disturbed during construction activities is located within the scenic easement. The subject property is located in a fairly hilly area of the County with heavy tree cover that is developed with primarily residential and congregate care uses. A substantial number of mature Coast Live Oak, California Bay, eucalyptus, and other trees can be found in the ravine area of the subject property as well as other vegetation including non-native grasses, ivy, and native/non-native shrubs. Although the subject property is located adjacent to the Taylor Boulevard scenic route, the project site is more than 320 feet away from the route. In addition, the existing bridge and project site is not visible from Taylor Boulevard due to the fairly heavy cover of mature trees along the boulevard and on the subject property. Although the project proposes removing up to 10 trees for

construction activities, all trees along Taylor Boulevard and in the western portion of the subject property will remain. In addition, the size, height, and appearance of the bridge structure will remain substantially the same after construction. Thus, potential aesthetic impacts are low and the potential for the proposed project to affect views of and from the Taylor Boulevard scenic route is less than significant.

b) *Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

No Impact: The subject property is not located adjacent to or near a state scenic highway. Thus, the project site is not visible from any state designated scenic highway. Therefore, although up to ten trees would be removed for the project, the proposed project to retrofit the existing bridge, repair the access driveway, and repair the creek culvert will have no impact on scenic resources within a state scenic highway.

c) *In non-urbanized areas, would the project 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?*

Less Than Significant Impact With Mitigation: The subject property is located in an urbanized area of the County on a lot designated for congregate care uses and has been developed with an assisted living/memory care facility and associated driveway and parking areas, patios, fences and landscaping since 2003. The bridge and creek culvert retrofitting project site is located in the southern portion of the property, providing access to the facility from Pleasant Hill Road. The bridge crosses a heavily wooded ravine and a tributary of "Murderers Creek." As discussed above, the bridge structure is not visible from or to Taylor Boulevard, a scenic route as designated in the County's General Plan, due to many existing mature trees and shrubs between the boulevard and the project site. However, the existing bridge and project site is visible from Pleasant Hill Road. All of the work to repair the culvert will be in its existing footprint and will not be visible to the public. As mitigated, the retrofitted walls of the bridge will be constructed of materials that blend in with their natural surroundings and reduce glare, which will in turn reduce any visual impacts. Additionally, staff will recommend that the project be conditioned to require the planting of trees as restitution for those that are to be removed.

Potential Impact: The project has the potential to conflict with applicable regulations governing scenic quality of Taylor Boulevard and public views from the Pleasant Hill Road right-of way.

Implementation of the following mitigation measures would bring potential project-related impacts on public views of the site and regulations governing the quality of scenic routes to less than significant levels:

AES-1: **At least 15 days prior to Community Development Division (CDD) stamp-approval of plans for building permit**, the applicant shall submit a materials and color board to the CDD for review and approval. Materials used for the retaining wall are required to have a non-reflective, natural finish to minimize contrast with the natural landscape features of the site. Those portions of the wall that are metal shall be painted to match the adjacent portions of the wall.

AES-2: Disturbance or removal of vegetation shall not exceed the minimum necessary to complete construction of the retrofitted retaining walls as is shown on the approved project plans. Restoration shall include the revegetation of stripped or exposed areas. **At least 15 days prior to Community Development Division (CDD) stamp-approval of plans for building permit**, a revegetation plan for all disturbed areas which incorporates native grasses and shrubs, or which otherwise complies with the County's Water Efficient Landscape Ordinance, shall be submitted to the CDD for review and approval.

d) *Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

No Impact: The proposed project consists of repairing a creek culvert and retrofitting an existing bridge supporting an existing driveway to an assisted living facility, in operation since the year 2003. No additional lighting for the roadway is proposed as part of the project. In addition, compliance with mitigation measures AES-1 requiring materials and finishes in a non-reflective natural finish reduces the potential for the retrofitted walls of the bridge structure to be a significant source of glare due to reflection. Thus, the proposed project will have no impact due to new sources of substantial light or glare which would adversely affect day or nighttime views in the area.

Sources of Information

Contra Costa County Code. "Title 8 – Zoning." Accessed in 2020. https://library.municode.com/ca/contra_costa_county/codes/ordinance_code?nodeId=TIT8ZO.

Contra Costa County General Plan. "Chapter 5: Transportation and Circulation Element." 2005-2020. http://www.co.contra-costa.ca.us/DocumentCenter/View/30915/Ch5-Transportation-and-Circulation-Element?bidId=.

Contra Costa County General Plan. "Chapter 9: Open Space Element." 2005-2020. http://www.co.contra-costa.ca.us/DocumentCenter/View/30919/Ch9-Open-Space-Element?bidId=.

Revised Project Plans, received on 17 January 2024.

Staff Site Visit, 18 December 2019.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
2. *AGRICULTURAL AND FOREST RESOURCES – Would the project:*				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
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)?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment, which due to their location or nature, could result in conversion of farmland, to non-agricultural use?	☐	☐	☐	☒

***SUMMARY**:*

a - e) **No Impact**: The project site, located in the P-1 Planned Unit zoning district and the Congregate Care (CC) General Plan Land use designation, is within an "Urban and Built-Up Land" area as shown on the California Department of Conservation's *Contra Costa County Important Farmland 2016* map. Neither the subject property, nor those in the vicinity, are zoned for agricultural use. The site is not under a Williamson Act contract with the County. Additionally, although the project site is heavily wooded, the project site is not considered forest land as defined by California Public Resources Code Section 12220(g) or timberland as defined by California Public Resources Code Section 4526. Development of the proposed retaining wall retrofit project would not involve substantial changes to the existing urban environment. Therefore, the project will have no impact on agricultural or forest resources.

Sources of Information

Contra Costa County Code. "Title 8 – Zoning." Accessed in 2020. https://library.municode.com/ca/contra_costa_county/codes/ordinance_code?nodeId=TIT8ZO.

California Department of Conservation. "California Important Farmland Finder." Accessed in 2020. https://maps.conservation.ca.gov/DLRP/CIFF/.

California Public Resources Code. Accessed in 2020

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
3. *AIR QUALITY – Would the project:*				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

***SUMMARY**:*

a) *Would the project conflict with or obstruct implementation of the applicable air quality plan?*

Less Than Significant Impact: Contra Costa County is within the San Francisco Bay air basin, which is regulated by the Bay Area Air Quality Management District (BAAQMD) pursuant to the *Spare the Air, Cool the Climate Final 2017 Clean Air Plan*. The purpose of the *Clean Air Plan* is to bring the air basin into compliance with the requirements of Federal and State air quality standards. BAAQMD has prepared CEQA Guidelines to assist lead agencies in air quality analysis, as well as to promote sustainable development in the region. The CEQA Guidelines support lead agencies in analyzing air quality impacts. If, after analysis, the project's air quality impacts are found to be below the significance thresholds, then the air quality impacts may be considered less than significant.

The proposed project consists of retrofitting an existing bridge and repairing an existing culvert within the bridge structure. The two-lane driveway would then be resurfaced and would continue to be used as the primary means of ingress and egress to the assisted living facility which has been in operation since 2003. The retrofitting project is necessary to slow the failure of the retaining walls of the bridge structure due to the poor design and construction of the original walls. Potential impacts of the project on air quality would be related to the construction portion of the project (e.g., the running of internal combustion engines) and would be temporary in nature. Implementation of mitigation measures **AIR-1** through **AIR-9** as identified in paragraph (c) of this section during construction would ensure that potential construction-related impacts have a less than significant impact. Once constructed, there is no element of the proposed project that has the potential for impacting air quality any more than the current, everyday use of the existing driveway. Thus, the proposed project would not conflict with the Clean Air Plan or obstruct its implementation.

b) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less Than Significant Impact: As mentioned in the response to question (a), the only element of the proposed project that has the potential for impacting air quality is the temporary running of, e.g., internal combustion engines of the construction equipment. The emissions generated from the construction activities is negligible and will be lessened by the implementation of typical best management practices that will be required as conditions of the entitlement should it be approved. Therefore, the project would not cause a violation of any air quality standard and would not result in a considerable net increase of any criteria pollutant and would have a less than significant impact upon existing or projected air quality standards.

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant With Mitigation Incorporated: The nearest sensitive receptors to the project site include residents of the assisted living facility on the subject property and single-family residences in the area. The project site is approximately 80 feet from the nearest sensitive receptor. Although the existing two-lane driveway will be resurfaced once the supporting bridge is retrofitted, no part of the project will increase the width of the roadway for additional vehicle access. Thus, operation of the driveway is not expected to expose sensitive receptors to substantial pollutant concentrations beyond the current, everyday use of the driveway.

However, construction activities would result in localized emissions of dust and diesel exhaust that could result in temporary impacts to sensitive receptors (e.g., nearby residences, schools) from the project site. Construction and grading activities would produce combustion emissions from various sources, including heavy equipment engines and motor vehicles used by the construction workers. The project would occur within an approximately 17,250-square-foot area of the 3-acre subject property. Dust would be generated during site clearing, grading, and construction activities. The amount of dust generated would be highly variable and would be dependent on the size of the area disturbed, amount of activity, soil conditions, and meteorological conditions.

Potential Impact: Grading and construction activities could have a potentially significant adverse, if temporary, environmental impact on sensitive receptors during project construction. Implementation of the following Basic Construction Mitigation Measures during construction, as recommended by BAAQMD, will reduce construction dust and exhaust impacts. In addition, staff recommends implementing a mitigation measure which would restrict trucks to utilizing main roads to the best extent possible to reduce impacts on residential neighborhoods.

The following mitigations shall be included on all construction plans:

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

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

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

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

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

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

AIR-7: All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.

AIR-8: The property owner or site contractor shall post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

AIR-9: All haul trucks transporting soil, sand, or other loose materials shall be limited to travel on main routes to the best extent possible to avoid residential neighborhoods. The project applicant shall submit a proposed haul route **prior to the issuance of a grading permit**.

Implementation of these mitigation measures would reduce the impact on the sensitive receptors during project construction to a less than significant level.

d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant Impact: The proposed project will retrofit existing bridge supporting the main driveway to an assisted living facility that has been in operation for more than 20 years. In addition, the project will repair a culvert within the bridge structure. There is no aspect of the project that has the potential to result in other emissions, such as those leading to odors, that would impact air quality beyond the existing, everyday use of the driveway. Therefore, the project will have a less than significant impact adversely affecting a substantial number of people.

Sources of Information

Bay Area Air Quality Management District. "California Environmental Quality Act, Air Quality Guidelines." May 2017. http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en

Bay Area Air Quality Management District. "Spare the Air, Cool the Climate Final, 2017 Clean Air Plan." Adopted 19 April 2017. http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
4. *BIOLOGICAL RESOURCES – Would the project:*				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
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, filling, hydrological interruption, or other means?	☐	☒	☐	☐
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 wildlife nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
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?	☐	☐	☐	☒

SUMMARY:

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less Than Significant Impact With Mitigation Incorporated: A Biological Resources Assessment (Assessment) was prepared by Bargas Environmental Consulting (Bargas, dated November 2000) for the project site. Preparation of this report included a review of pertinent data sources and literature on relevant background information and habitat characteristics of the project area. In addition, a field survey was conducted to assess the current site conditions, to characterize and document plant and wildlife species observed on the site, and to identify the presence of pre-existing bird or raptor nests and habitat that could potentially support special-status species.

The Assessment found that four species of special status plants potentially occur in the project area, including Diablo helianthella, Bent-flowered fiddleneck, Western leatherwood, and Mt. Diablo fairy lantern. The presence of these plant species could not be definitively determined in the time period in which the biological field survey was conducted, therefore, although the probability of one or more of the species to occur in the project area is low, there is a potential for special status plants to be adversely impacted by implementation of the project. In addition to special species plants, animal species of special concern are known to occur in the vicinity of the site and for which suitable nesting habitat may be present, including the Hoary Bat and the Pallid Bat. Although neither were observed during the biological field survey, there is a potential for the Hoary Bat to utilize the foliage of trees for its preferred day roost, and for the Pallid Bat to utilize the existing culvert as its habitat. Finally, trees and shrubs on and adjacent to the project site could provide nesting habitat for native and/or migratory birds. As birds are present in nearly all natural and anthropogenic environments, the proposed project has the potential to adversely affect nesting birds that are protected by the Migratory Bird Treaty Act and Fish and Game Code.

In order to rule out potential presence of special status or rare plants, Bargas recommends that a preconstruction survey be performed within 100 feet of all project work by a qualified biologist during the appropriate period of time when such plants may occur, likely in early- to -mid-spring. Bargas further recommends conducting a visual and acoustic preconstruction survey within and immediately adjacent to the construction footprint, including the pre-cast cement arch culvert, for roosting bats by a qualified, agency-approved bat biologist. Finally, to comply with the Migratory Bird Treaty Act, Bargas recommends that preconstruction surveys for nesting birds by a qualified biologist be conducted within 300 feet of all project work areas no more than one week before construction activities begin.

Potential Impact: According to the Assessment prepared by Bargas, the potential for the proposed project to have a substantial adverse effect on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations by the California Department of Fish and Wildlife or US Fish and Wildlife Service is unlikely or of low probability. However, in the case of potentially occurring special status plants, bats, and nesting birds, any potential effects would be minimized through the implementation of proposed mitigation measures.

Thus, implementation of the following mitigation measures would bring potential project-related impacts on biological resources to less than significant levels:

BIO-1: If project construction-related activities take place during blooming periods (January 1 through June 30), preconstruction surveys for special status plants within 100 feet of the project site work areas shall be conducted by a qualified biologist **no more than 14 days prior to the commencement of site grading or construction activities**. If special status plants are found and located in area where potential impacts may occur, the survey report shall identify the plant or plants, the potential impacts that could occur to those plants, and measures (such as avoidance, relocation, etc.) to minimize potential impacts as agreed upon by the California Department of Fish and Wildlife. Once the blooming season for the special status plant(s) has ended, the project can proceed without further regard to the plant site(s).

BIO-2: Nesting Bird Surveys:

Nesting Birds: If project related activities take place during the nesting season (February 1 through September 30), preconstruction habitat assessment and nesting surveys for nesting passerine birds and raptors (birds of prey) shall be conducted by a qualified biologist **no more than five (5) days prior to the commencement of project related activities, including, but not limited to staging, tree removal, site grading, or construction activities, whichever occurs first**. Surveys shall be conducted in all potential habitat located at the project site, including staging and storage areas. The minimum survey radii surrounding the project site footprint shall be 250 feet for passerines and 1,000 feet for raptors. The qualified biologist conducting the surveys shall be familiar with the breeding behaviors and nest structures for birds known to nest in the project vicinity. Surveys shall be conducted during periods of peak activity in the early morning and at dusk and shall be of sufficient duration to observe movement patterns. Survey results, including a description of timing, duration and methods used, shall be submitted to CDFW for review and a copy submitted to CDD 48 hours prior to the initiation of any project related activities. **If a lapse in project related activities of seven (7) days or longer occurs, another focused survey will be required before project activities can be reinitiated.** If an active nest is found, the applicant shall consult with CDFW regarding appropriate action to comply with the Fish and Game Code of California. CDFW reserves the right to provide additional provisions designed to protect nesting birds.

Active Nests: The qualified biologist shall observe any identified active nests prior to the start of any project related activities to establish a behavioral baseline of the adults and any nestlings. Once the project commences, all active nests should be continuously monitored by the qualified biologist to detect any signs of disturbance and behavioral changes as a result of the Project. In addition to direct impacts, such as nest destruction, nesting birds might be affected by noise, vibration, odors and movement of workers or equipment. **If signs of disturbance and behavioral changes are observed, the qualified biologist shall cease project activities causing such changes and shall contact CDFW for guidance.**

Active Nest Buffers: If any bird listed under the Migratory Bird Treaty Act is found to be nesting within 250 feet for passerines and 1,000 feet for raptors of the project work site (area of influence), an adequate protective buffer zone shall be established by a qualified biologist to protect the nesting site. The qualified biologist shall determine the necessary buffer, in consultation with CDFW, to protect nesting birds based on existing site conditions, such as project activity and line of sight, and shall increase buffers as needed to provide sufficient protection of nesting birds and their natural behaviors. Buffers shall be approved in writing by CDFW prior to the continuation of project activities. Active nest sites and protective buffer zones shall be designated as "Ecologically Sensitive Areas" where no project related activities or personnel may enter, that are protected (while occupied) during project activities, and be delineated by the establishment of a fence, barrier, or flagging surrounding the nest site. The applicant or representatives of the applicant shall not disturb or destroy the nests or eggs of any bird as per Fish and Game Code § 3503." Once the young have fledged and are flying

well enough to avoid project construction zones (typically by August), the project can proceed without further regard to the nest site(s).

BIO-3: To avoid potential impacts to special status bats, **no more than 14 days prior to the commencement of tree removal, site grading, or construction activities, whichever occurs first**, a visual and acoustic preconstruction survey for roosting bats shall be conducted by a qualified, agency-approved bat biologist within and immediately adjacent to the construction footprint, including the pre-cast cement arch culvert. A minimum of one day and one evening shall be included in the visual preconstruction survey. The biologist shall contact CDFW if any occupied day roosts or maternity colonies / nurseries are identified within or immediately adjacent to the construction footprint, as appropriate. The biologist shall submit a memorandum, on a weekly basis or at other appropriate intervals, to CDFW to document compliance with this measure.

BIO-4: During ground-disturbing activities, if active non-maternity (bat) colony / nursery roosts are found, the Contractor will avoid them, if feasible, for the period of activity. If avoidance of the active day roost is not feasible, the agency approved bat biologist shall prepare a relocation plan and coordinate the construction of an alternative bat roost with CDFW. The agency-approved bat biologist shall implement the Bat Roost Relocation Plan before the commencement of construction activities. The agency-approved bat biologist shall remove roosts with approval from CDFW before bats may be triggered to go into torpor by night-time low temperatures dipping below 50°F (October 15), or after young are flying (September 1), using exclusion and deterrence techniques described below. The timeline to remove roosts is between September 1 and October 15. All efforts to avoid disturbance to maternity roosts shall be made during construction activities. The biologist shall submit a memorandum, on a weekly basis or at other appropriate intervals, to CDFW to document compliance with this measure.

BIO-5: During ground-disturbing activities, if non-maternity or non-torpor/hibernating individuals or groups of bats are found within the construction footprint, the agency-approved bat biologist shall work with CDFW and direct the Contractor to safely exclude the bats by either opening the roosting area to change the lighting and air-flow conditions or installing one-way doors or other appropriate methods specified by CDFW. The Contractor shall leave the roost undisturbed by project activities for a minimum of one (1) week after implementing exclusion and/or eviction activities. The Contractor shall not implement exclusion measures to evict bats from established maternity roosts or occupied torpor/hibernation roosts. The biologist shall submit a memorandum, on a weekly basis or at other appropriate intervals, to CDFW to document compliance with this measure.

BIO-6: If bats are found to be present, pruning or removal of living trees / large shrubs or snags shall NOT occur during the maternity season between April 1 and September 1 to minimize the disturbance of young that may be present and unable to fly. The pruning or removal of living trees or snags must occur between the hours of 12:00 pm and sunset on days after nights when low temperatures were 50°F or warmer to minimize impacting bats that may be present in deep torpor. Sunset times shall be obtained from https://www.timeanddate.com/sun/@7174212 and temperatures for prior-work nights shall be obtained from http://www.wunderground.com/history/. When it is necessary to

perform crown reduction on trees over 12" diameter breast height or remove entire trees or branches over six inches in diameter, there shall be preliminary pruning of small branches less than 2" in diameter performed the day before in order to minimize the probability that bats would choose to roost in those trees the night before the work is performed. The trees/large shrubs or snags that are to be removed shall then be left on-site for a minimum of 24 hours to allow for any remaining bats to escape prior to breaking down, chipping, or removing the remains of the trees or snags.

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less Than Significant Impact With Mitigation Incorporated: Pursuant to Figure 8-1 (Significant Ecological Area and Selected Locations of Protected Wildlife and Plans Species Areas) of the County General Plan, the subject property is located approximately 1.25 miles east of the Briones Hills significant resource area. This significant resource area consists of grasslands, oak woodlands, riparian areas, and creeks which may contain habitat for newts, western pond turtle, northern brown skink, ornate shrew, prairie falcon, mountain lion, and possibly Alameda whipsnake, grasshopper sparrow, golden eagle, badger, ringtail and bobcat. The Mount Diablo fairy lantern and Diablo helianthella (both discussed above) are also known and suspected to occur here, respectively. Additionally, the subject bridge structure on the property crosses a ravine, and a tributary of "Murderers Creek" that is an intermittent/seasonal stream flows through the existing culvert within the bridge structure.

As shown on the proposed project design plans, although the existing arch culvert is to remain in-place, the project proposes repairs to the open-bed of culvert involving excavation, construction of new footings, and construction of a concrete apron. The project proposes placing native gravel within the culvert to match the creek flowline in addition to rip rap upstream and downstream and adjacent to the bridge structure for erosion control. The project would also add shotcrete to the exterior surfaces of the retaining walls forming the bridge structure. However, neither the culvert repairs nor the bridge structure retrofit would increase the width or footprint of the structure. As proposed, an approximately 3,600-square-foot, up to 15-foot-wide area adjacent to and west of the retaining walls will be cleared of small brush and plants to provide access for workers and equipment to perform grading and repairs of the culvert, and retrofitting work. According to the Assessment, the project proponent may be required to obtain a permit from the USACE San Francisco District, a water quality certification from the San Francisco Bay Regional Water Quality Control Board, and a Streambed Alteration Agreement with the California Department of Fish & Wildlife (CDFW) prior to commencing with construction activities or preparing the project site by removing trees or other riparian vegetation. Bargas recommends implementing mitigation measures to avoid conducting construction activities during wet or high-flow conditions and ensuring that construction personnel, equipment, and materials remain outside of the stream channel during retaining retrofitting work in addition to installing the appropriate erosion and sediment control in relation to best management practices.

Although Bargas recommends mitigations to avoid the potential of construction personnel, equipment, and materials entering the stream channel, there would be temporary impacts to the riparian ecology of the subject property during construction activities. Based on the project plans and the temporary access/staging plan, and as discussed above, approximately 0.11 acres of

riparian area would be impacted due to construction and staging activities. In their comments on the Initial Study for the original project design (received March 22, 2021), staff of the CDFW recommended compensatory mitigations for temporary and permanent impacts due to alteration of the riparian ecology in addition to the mitigations recommended by Bargas. Since those comments were received, the project has been redesigned with no expansion of the existing footprint of either the culvert or the retaining wall/bridge structure. Therefore, permanent impacts to the riparian ecology are not anticipated.

In their comments on the Initial Study for the original project design (received February 22, 2021), staff of the San Francisco Bay Regional Water Quality Control Board indicated concerns about the loss of riparian trees and recommended onsite mitigation in the form of riparian plantings as the preferred method of compensating for project impacts to the stream habitat and riparian functions. As part of the proposed, revised project and discussed in subsection-e below, the applicant has requested approval of a tree permit pursuant to the Contra Costa County Tree Protection and Preservation Ordinance. If approved, the tree permit would allow removal of up to ten (10) code-protected trees and alteration of approximately seven (7) code-protected trees due to construction or grading work within their drip lines. Of the seventeen trees proposed for removal or alteration, ten are included in Contra Costa County's list of indigenous trees. Approval of the proposed project would include conditions of approval for the restitution of any tree approved for removal or potentially harmed by construction activities within drip lines, including planting replacement trees. Staff will recommend that the tree permit approval be conditioned to require replacement trees to be native species or species that are typically found in riparian habitats in this area of California.

Potential Impacts: According to the Assessment prepared by Bargas, the proposed Project is not expected to have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service. However, as discussed above in paragraph (a), in the case of potentially occurring special status plants, or any species which may be found in a riparian habitat or other sensitive community, any potential effects would be minimized through the implementation of proposed mitigation measures.

In addition to the implementation of mitigation measures **BIO-1** through **BIO-6**, implementation of the following mitigation measures would bring potential project-related impacts on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service to less than significant levels:

BIO-7: **Prior to issuance of grading or building permits or the removal of trees, whichever occurs first**, the applicant shall submit proof that any permits required by the following agencies for work in the Murderers Creek tributary have been applied for or obtained, or show verification that no permits are required:

- Streambed Alteration Agreement from the Bay Delta Region (3) of CDFW
- 1010 Flood Permit from the Contra Costa County Department of Public Works, Flood Control District.
- CWA Section 404 Permit from the USACE San Francisco District

- CWA Section 401 Water Quality Certification from the San Francisco Regional Water Quality Control Board

BIO-8: **Prior to the removal of trees, or the issuance of grading or building permits, whichever occurs first**, the applicant shall provide to the CDD and CDFW proof of compensatory measures including restoring, or protecting in perpetuity, areas within the same watershed that are in-kind stream or riparian habitats as that disturbed by the project temporarily or permanently. Compensatory mitigation shall be, in terms of acreage, calculated at a ratio of 1.1:1 (conserved habitat to impacted habitat) for temporary impacts and at a ratio of 3:1 (conserved habitat to impacted habitat) for permanent impacts, or at appropriate ratios as determined by the qualified biologist through consultation and agreement with CDFW as part of the Streambed Alteration Agreement. These ratios shall be calculated after surveying and verifying the total area of disturbance caused by the project.

BIO-9: During site preparation and construction activities, the following shall be implemented for avoidance and minimizations of direct effects to the seasonal stream, including but not limited to, those listed below:

- Construction activities near the seasonal stream and within the arch culvert shall only occur during low flow or dry conditions.
- The contractor shall ensure that construction personnel, equipment, and materials avoid entering the stream channel.
- Prior to any ground disturbance, the appropriate best management practices for erosion and sediment control including, but not limited to, a silt construction fence and/or straw bales, shall be installed around the construction site in strategic locations.

c) Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less Than Significant Impact: The U.S. Army Corp of Engineers (USACE) and the U.S. Environmental Protection Agency (EPA) are two of the primary Federal agencies which enforce the Clean Water Act and administer the associated permitting program. As such, these agencies define wetland as areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. A single intermittent/seasonal stream was observed and mapped within the Biological Study Area (BSA), with approximately 0.011 acres and 100 linear feet located within the Project boundary and area of direct impacts. However, the project biologist found no obvious wetland indicators relating to seasonal ponding and no obvious ponding areas where seasonal waters had historically been present on the subject property.

Although there is no obvious state or federally protected wetland on the subject property, as an intermittent stream “Murderer’s Creek” may seasonally support flora and fauna that may be found in a wetland. However, implementation of mitigation measures **BIO-1** through **BIO-9** would reduce potential project-related impacts on state or federally protected wetlands to less than significant levels.

d) Would the project 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 wildlife nursery sites?

Less Than Significant Impact With Mitigation Incorporated: Pursuant to the biological Assessment prepared by Bargas, and as discussed above in sections a) and c), given the existing and significant anthropogenic development present in the Project area, there is not expected to be significant wildlife movement in the project area's present state except, potentially, through the arch culvert present under the existing roadway. While repairs will be made to the culvert as part of the proposed project, this should not have a significant adverse effect on any wildlife movement through it. Therefore, the proposed development is expected to have a less than significant impact on the movement of any native resident, migratory fish, or wildlife species, or with established native resident or migratory wildlife corridors, or the use of nursery sites. Furthermore, implementation of mitigation measures **BIO-1** through **BIO-9** would further reduce potential project-related impacts on wildlife movement to less than significant levels.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact: The Contra Costa County Tree Protection and Preservation Ordinance provides for the protection of certain trees by regulating tree removal while allowing for reasonable development of private property. On any property proposed for development approval, the Ordinance requires tree alteration or removal to be considered as part of the project application. Due to the anticipated construction activities as part of the proposed project and the poor health and structure of trees near the project site, a request for approval of a tree permit for the removal of up to ten (10) code-protected trees and for the alteration of approximately seven (7) code-protected trees, is included with this proposed project. As such, approval of the proposed project would include conditions of approval for the restitution of any tree approved for removal or potentially harmed by construction activities within drip lines, protection of remaining trees where work may occur within the drip lines of the trees, and implementation of all of the tree protection measures from the project's arborist report. Additional trees that are less than 6.5-inches in diameter may also be removed for construction or maintenance of the property, however, these immature trees are not protected pursuant to the Tree Ordinance. As a result of CDD staff applying the Tree Protection and Preservation Ordinance to the proposed project, there would be no conflict with the Ordinance.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact: There is one adopted habitat conservation plan in Contra Costa County, the East Contra Costa County Habitat Conservation Plan / Natural Community Conservation Plan (HCP/NCCP), which was approved in May 2007 by the East Contra Costa County Habitat Conservancy, comprised of the cities of Brentwood, Clayton, Oakley, and Pittsburg, and Contra Costa County. The HCP/NCCP establishes a coordinated process for permitting and mitigating the incidental take of endangered species in eastern Contra Costa County. The Lafayette area is outside of the covered area for the HCP/NCCP, and therefore, the proposed project would not conflict with the provisions of the adopted HCP/NCCP. In addition, according to the Assessment

prepared by Bargas, no other approved local, regional, or state habitat conservation plans are in effect for the project area.

Sources of Information

Bargas Environmental Consulting. "Biological Resources Assessment – Atria Park of Lafayette Main Road Retrofit." Dated November 2020.

California Department of Fish & Wildlife. "Atria Lafayette – Repair of Existing Roadway Retaining Wall, County File #CDDP20-03005, Initial Study/Mitigated Negative Declaration, SCH No. 2021020227, Contra Costa County." 22 March 2021.

Contra Costa County General Plan. "Chapter 8: Conservation Element." 2005-2020. http://www.co.contra-costa.ca.us/DocumentCenter/View/30918/Ch8-Conservation-Element?bidId=

Contra Costa County Code. "Chapter 816-6 - Tree Protection and Preservation." Accessed in 2020. https://library.municode.com/ca/contra_costa_county/codes/ordinance_code?nodeId=TIT8ZO_DIV816TR_CH816-6TRPRPR.

East Contra Costa County Habitat Conservancy. "East Contra Costa County Habitat Conservancy Website." Accessed in 2020. https://www.contracosta.ca.gov/depart/cd/water/HCP/

National Wetlands Inventory, U.S. Fish and Wildlife Service (FWS). Website. Accessed in 2020. https://www.fws.gov/wetlands/

Hart, Katie. San Francisco Bay Regional Water Quality Board. "Atria Lafayette – Repair of Existing Roadway Retaining Wall." Comments on IS/MND, Email. Received 22 February 2021.

McNeil Arboriculture Consultants LLC. Todd McNeil, Certified Arborist. "Report on trees at 1545 Pleasant Hill Road, Lafayette, their condition, proposed repair of an existing roadway and bridge, with expected resulting impacts and measures to reduce impacts on those trees." Dated 10 October 2023.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
5. *CULTURAL RESOURCES – Would the project:*				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

SUMMARY:

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to California Environmental Quality Act Guidelines Section 15064.5?

No Impact: The California Public Resources code defines a historical resource as a resource that has been listed or is eligible for listing on the California Historical Register of Historical Resources, a resource included in a local register of historical resources or identified as significant in a historical survey meeting the requirements of the Public Resources Code. Neither the subject property nor any of the existing structures on the subject property are listed on Contra Costa County's Historic Resources Inventory (updated through 2019).

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to California Environmental Quality Act Guidelines Section 15064.5?

Less Than Significant With Mitigation Incorporated: Pursuant to Figure 9-2 (Archaeological Sensitivity Map) of the Contra Costa County General Plan Open Space Element, the project vicinity is within a largely urbanized area that was excluded from the archeological sensitivity survey, but it is noted that there are also significant archeological resources within this area.

Potential Impact: Subsurface construction activities have the potential to damage or destroy previously undiscovered historic and prehistoric resources.

Implementation of the following mitigation measures would reduce the potential impacts on archeological resources to less than significant levels:

CUL-1: If deposits of prehistoric or historical archaeological materials are encountered during ground disturbance activities, all work within 50 feet of the discovery shall be redirected. A qualified archaeologist certified by the Society for California Archaeology (SCA) and/or the Society of Professional Archaeology (SOPA), and the Native American Tribe that has requested consultation and/or demonstrated interest in the project shall be contacted to evaluate the significance of the finds and suggest appropriate mitigation(s) if deemed necessary.

CUL-2: If the deposits are not eligible, avoidance is not necessary. If the deposits are eligible, they will need to be avoided by impacts or such impacts must be mitigated. Upon completion of the archaeological assessment, a report should be prepared documenting the methods, results, and recommendations. The report should be submitted to the Northwest Information Center and appropriate Contra Costa County agencies.

Prehistoric materials can include flake-stone tools (e.g., projectile points, knives, choppers) or obsidian, chert, or quartzite tool-making debris; culturally darkened soil (i.e., midden soil often containing heat-affected rock, ash and charcoal, shellfish remains, and cultural materials); and stone milling equipment (e.g., mortars, pestles, handstones). Historical materials can include wood, stone, concrete, or adobe footings, walls and other structural remains; debris-filled wells or privies; and deposits of wood, glass ceramics, and other refuse.

c) Would the project disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant With Mitigation Incorporated: The project record does not have any prior cultural resource studies being conducted at the subject property which indicates that human remains exist at the subject property.

Potential Impact: Nevertheless, there is a possibility that human remains could be present, and that accidental discovery could occur.

Implementation of the following mitigation measure would reduce the potential to disturb any human remains, including those outside of formal cemeteries, to a less than significant level:

CUL-3: Should human remains be uncovered during grading, trenching, or other on-site excavation(s), earthwork within 30 yards of these materials shall be stopped until the County coroner has had an opportunity to evaluate the significance of the human remains and determine the proper treatment and disposition of the remains. Pursuant to California Health and Safety Code Section 7050.5, if the coroner determines the remains may those of a Native American, the coroner is responsible for contacting the Native American Heritage Commission (NAHC) by telephone within 24 hours. Pursuant to California Public Resources Code Section 5097.98, the NAHC will then determine a Most Likely Descendant (MLD) tribe and contact them. The MLD tribe has 48 hours from the time they are given access to the site to make recommendations to the land owner for treatment and disposition of the ancestor's remains. The land owner shall follow the requirements of Public Resources Code Section 5097.98 for the remains.

Sources of Information

Contra Costa County General Plan. "Chapter 9: Open Space Element." 2005-2020. http://www.co.contra-costa.ca.us/DocumentCenter/View/30919/Ch9-Open-Space-Element?bidId=.

Contra Costa County. "Historic Resources Inventory." Revised 2019. Accessed in 2020. https://www.contracosta.ca.gov/DocumentCenter/View/1116/Historic-Resources-Inventory-HRI?bidId=.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
6. *ENERGY – Would the project:*				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

SUMMARY:

a) Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less Than Significant Impact: The project involves the retrofitting an existing bridge structure, repairing an existing culvert, and resurfacing the primary access driveway for an assisted living

facility which has been in operation for over 20 years. Retrofitting the existing bridge involves the installation of soil nails and tie rods through the retaining wall surfaces and underlying soils and the application of shotcrete over the nails and tie rods. The arch culvert repairs involve excavating the inside the culvert, constructing new footings and a new concrete apron, and placing native gravel within the culvert to match the creek flowline. Health and safety projects such as this generally do not involve the unnecessary consumption of energy resources. Diesel engines will be the primary source of energy as part of the construction phase and no part of the project is expected to lead to an increased use or capacity of the existing, two-lane driveway. In addition, the project will have no impact on the type or quantity of energy required to operate the facility. Thus, the project would have a less than significant impact on the consumption of energy resources.

b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact: The County has adopted a Climate Action Plan (CAP) which generally focuses on countywide policies rather than individual projects. There is no part of the proposed project that would increase the use of energy by the existing assisted living facility. In general, the proposed project would not be associated with high energy use or the production of energy. Therefore, the project will not conflict with a state or local plan for renewable energy or energy efficiency.

Sources of Information

Contra Costa County. "Climate Action Plan." Adopted by the Contra Costa County Board of Supervisors on 15 December 2015. http://www.co.contra-costa.ca.us/DocumentCenter/View/39791/Contra-Costa-County-Climate-Action-Plan?bidId=

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
7. *GEOLOGY AND SOILS – Would the project:*				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:				
i) 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?	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☒	☐	☐
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?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

***SUMMARY**:*

a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:

i) 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?

Less Than Significant Impact: There are no active faults on the subject property. The nearest active fault is the Concord-Green Valley fault, which passes approximately 4 miles northeast of the project site. Consequently, the risk of surface fault rupture within the project area can be considered "low" and a less than significant impact. Further evaluation of fault hazards is not warranted.

ii) Strong seismic ground shaking?

Less Than Significant Impact: Due to the location of the project site with respect to the active San Francisco Bay Region faults, and the proximity of the active Concord-Green Valley fault, strong to violent ground shaking poses a potential hazard to improvements. The vulnerability of structures to damage from earthquake and ground shaking is dependent on the earthquake magnitude, distance to seismic source, and ground conditions of the site. The County has adopted the 2022 California Building Code (CBC), which requires use of seismic parameters that are based on soil profile types and proximity of faults deemed capable of generating strong/violent earthquake shaking. Compliance with the adopted CBC standards is required for all structures requiring building permits. As such, if the CBC is updated prior to issuance of construction permits, the design of the project would be updated to ensure code compliance. There may be some ground shaking associated with the use of heavy equipment for the construction phase of the proposed project. However, the potential

for exposing people or structures to substantial adverse effects because of ground shaking during construction activities is less than significant. Thus, further evaluation of ground shaking hazards is not warranted.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact: Figure 10-5, Liquefaction Potential Map, of the Contra Costa County General Plan Safety Element, divides the County into three categories: “generally high”, “generally moderate to low”, and “generally low”. According to the Liquefaction Potential Map, the subject property is in the “generally low” category. For project sites classified “generally low” liquefaction potential, the expectation for geotechnical evaluation of this hazard is minimal. The soils investigation performed on behalf of the project applicant by Geotecnia (report dated June 8, 2018, supplemental report dated April 16, 2019, and report dated April 24, 2023) logged six boreholes through fill and underlying native soils to refusal in the bedrock and indicated that the soils penetrated by the borings are too cohesive to liquefy. Consequently, the risk of liquification and associated ground failure can be considered less than significant, and further evaluation of liquefaction is not warranted.

iv) Landslides?

Less Than Significant Impact: Review of published geologic mapping issued by the U.S. Geological Survey (Nilsen, 1975) indicates no evidence of landslides on the project site. The nearest USGS landslide is located on the west side of Taylor Blvd, 250 ft. from the site and does not present a risk to the proposed road improvement project. Moreover, during their investigation, Geotecnia reported that no evidence of landslides was found. The investigation of the project geotechnical engineer indicates there is an on-going ground failure in the project area, involving "slope creep" of expansive soils. Slope creep typically occurs on slopes underlain by expansive clays and can damage structures on shallow foundations that are constructed too near the slope. The downslope movement includes both lateral and vertical components. It is a slow process, involving displacements of a small fraction of an inch per year; however, this movement accumulates and can result in several inches of lateral and vertical movement over the life of a structure.

In their reports, Geotecnia provides recommendations to the applicant for design and reconstruction of the road segment through the area of the creek crossing. As proposed, the slope creep hazard will be mitigated by installing soil nails and tie rods throughout the wall surface and into the underlying soils of both retaining walls, after which the roadway will be replaced. Although there are no known landslides that will impact construction of the improvements, the earthwork and wall installation will be performed within a creek corridor. Due to heavy rainfall amounts in the 2022/2023 rain season, scouring and significant erosion of the low flow channel through the open-bed arch culvert occurred and there is thus a potential for the culvert footings to be undermined in such a way that they may collapse and cause additional damage to the roadway above. The project proposes to retrofit the arch culvert by excavating inside the culvert, constructing new footings, and constructing a new concrete apron within the culvert. As such, it is anticipated that erosion will be reduced below the prevailing condition of the creek banks over the long term. The issue of erosion control is addressed in the following section of this CEQA Checklist.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact: According to the Soil Survey of Contra Costa County, the soils on the site are characterized by medium runoff, and the hazard of erosion is considered moderate on the flatter portions of the Atria Park property. However, the over-steepened creek banks within the project area pose a very high erosion hazard in its existing condition, and the Geotecnia report indicates that the flowline of the creek has been lowered by an estimated 3 feet at the road crossing during the approximately 20 years since the congregate care facility project was developed.

A routine provision for grading permits in Contra Costa County is a requirement for submittal of an Erosion Control Plan. ln this case, project plans prepared by the Olympus Group include an Erosion Control Plan. This plan is subject to technical review by inspectors of the County Grading Section. Normally there are refinements to erosion control plans as the winter rainy season approaches. This occurs during the late summer, when it is known what the status of the project will be on October 1st. Additional detail is provided to the Erosion Control Plan, including such items as provisions for (a) storage of extra erosion control materials on site and (b) monitoring of the performance of disturbed areas on the site during/ immediately following significant rainstorms. If erosion control facilities are damaged or failing to perform as intended, the erosion control measures being implemented on the site are refined to correct the deficiency. Implementation of the Erosion Control Plan is expected to keep erosion to less than significant. No further mitigation is deemed to be necessary.

c) Would the project 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?

Less Than Significant Impact: As discussed in (a)(iii) above, the risk of liquefaction can be considered less than significant. Additionally, as discussed in (a)(iv) above, no landslides have been identified on the proposed site. The investigation of Geotecnia confirms that the native soils on the site overlying the bedrock are too cohesive to liquefy. In addition, structures can be safely constructed at the facility in a manner that is compliant with the applicable building code. The structures associated with the proposed project will be reviewed and permitted by the County Building Inspection Division (BID) and are not likely to cause any significant impacts that would lead to soil instability. Thus, the project's location would not impact these concerns at a significant level.

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less Than Significant Impact With Mitigation Incorporated: Laboratory testing presented in the Geotecnia report confirms that soils on the project site are moderately expansive. Geotecnia also states that, based on their experience from similar projects in the site vicinity, there is potential for lateral and vertical variations in expansion. The proposed project involves the stabilization of the bridge structure utilizing a polymer to strengthen the existing soils between the existing retaining walls and installing soil nails with tie rods. According to Geotecnia, the proposed Uretek Polymer method is an acceptable and key part of mitigating the distress to the bridge structure. With regard to the potential for corrosive soils, the Survey of Contra Costa County considered the soil on the project site to be highly corrosive. Excessive sulfate in the soil (or groundwater) has potential to result in a reaction between cement in concrete and the soil.

Criteria have been developed for evaluation of sulfate levels, and how they relate to cement reactivity with soils and/or groundwater. Testing of soil samples obtained from the project site indicate that water soluble sulfate concentrations are below the standard established for moderately corrosive soil. Similarly, the chloride ion concentrations were below the standard established for iron/steel that is in contact with the ground. To date no testing has been performed to evaluate the potential corrosion hazard. Therefore, no special mitigation of the corrosion potential mitigation was identified by Geotecnia report.

Potential Impact: The presence of moderately expansive soils and the potential presence of highly corrosive soils which may cause an adverse reaction between the cement elements of the project and the soil may cause significant problems for the retaining walls of the bridge structure to withstand lateral and vertical variations in expansion. Therefore, there is a potentially substantial impact on the ability of the proposed project to create a direct or indirect risk to life or property.

Thus, the following Mitigation Measures shall be implemented:

GEO-1: Geotechnical Monitoring – Uretek Polymer. The project geotechnical engineer or their representative shall provide monitoring services during installation of the Uretek polymer. **Following application of the polymer,** the project engineer shall provide sufficient testing to assess the level of ground improvement that has been achieved and provide supplemental recommendations in a letter/report to the CDD for the road and bridge improvement project that responds to the improved foundation conditions.

GEO-2: Expansive Soils. To ensure implementation of the measures proposed by Geotecnia to mitigate the hazard posed by expansive soils, the geotechnical engineer shall provide observation and testing services **during demolition of existing improvements, earthwork, and wall construction**, and to include monitoring of implementing of their recommendations for design of the road section, and approval of any imported granular fill.

GEO-3: Corrosive Soils. **Prior to CDD stamp-approval of plans for issuance of a building or grading permit, whichever is first**, the project proponent shall submit the results of corrosion hazard testing to the CDD for peer review by the County geologist. If the preliminary test results indicate a corrosion hazard, the project proponent shall submit a report prepared by a California Licensed Corrosion Engineer. The Corrosion Engineer shall (a) review the preliminary corrosion hazard test data, (b) determine if additional testing is necessary to complete evaluation of the corrosion potential, (c) perform any additional testing deemed necessary, (d) provide any specific long-term corrosion control design recommendations that are recommended, and (e) document the investigation and findings of the Corrosion Engineer in a letter report that is wet signed and stamped.

GEO-4: Geotechnical Monitoring – Construction Period. Geotechnical observation and testing services are critical to the success of the project. The project geotechnical engineer shall provide monitoring services **during the construction period** to ensure that geotechnical recommendations that were the basis for issuance of the construction permits are properly interpreted by the project proponent and the contractor and are properly implemented during construction. General Notes on all construction plans shall identify the geotechnical reports prepared by Geotecnia as providing geotechnical

standards and criteria to be implemented during project construction. In addition, General Notes on all construction plans shall identify the features to be inspected by the representative of the geotechnical engineer. If there is a significant difference between the actual field conditions and those that were the basis for the geotechnical design recommendations, supplemental recommendations may be required. Any changes to the approved plans shall require review and written approval by the County BID and CDD staff. **Prior to final inspection** of the bridge and culvert improvement project, the geotechnical engineer shall issue a letter to CDD that provides the geotechnical engineer's professional opinion on the compliance of the as-built project with recommendations presented in their report.

e) Would the project 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?

No Impact: The project site is within the area served by the Central Contra Costa Sanitary District (CCCSD). In addition, no part of the proposed project involves the expansion of sanitary services or development of septic tanks/alternative wastewater disposal systems. Therefore, no mitigation measures are warranted.

f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact: The project site is located within an area underlain by Quaternary deposits of inferred Holocene age (i.e., estimated to be the last 11,700 years). These deposits are inferred to be alluvial fan and fluvial deposits. In Contra Costa County there have been relatively few, if any, fossils of significance recovered from these upland sediments. Possible fossils include woody material (e.g., tree limbs) or any bones of the mammals that historically occurred in the California Coast Range prior to the arrival of man (e.g., deer or possibly black bear). Such fossils are very rare and unlikely to be encountered during earthwork. Regardless, mitigation measures **CUL-1**, **CUL-2**, and **CUL-3** are included under the cultural resources section that would mitigate the potential discovery of paleontological resources during the project's construction period.

Unique geologic features are not ordinary rock outcrops. Examples of unique features might include erosional features in sedimentary rock (i.e., natural arches, spires, and balanced rocks). In volcanic terrain, natural curiosities or wonders might include caldera, lava tubes, or exposures of beautifully colored volcanic tuff, or columnar jointed basalt. In desert terrain features that would warrant protection include desert armor, desert crust, desert varnish, etc. It is the opinion of the County Peer Review Geologist that there are no unique paleontological resources or unique geologic features on the project site that warrant protection. Consequently, no mitigation measures are warranted.

Sources of Information

Contra Costa County General Plan. "Chapter 10: Safety Element." 2005-2020. http://www.co.contra-costa.ca.us/DocumentCenter/View/30920/Ch10-Safety-Element?bidId=

Darwin Meyers Associates. "Geologic Peer Review and CEQA Section." 4 April 2020

Darwin Meyers Associates. "Geologic Peer Review, 2nd Letter." 18 December 2023

Geotecnia, Consulting Geotechnical Engineers. "Report, Geotechnical Study, Distressed Entrance Access Road at Atria Park." Prepared for The Olympus Group. 8 June 2018

Geotecnia, Consulting Geotechnical Engineers. "Report, Supplemental Geotechnical Study" Prepared for The Olympus Group. 16 April 2019

Geotecnia, Consulting Geotechnical Engineers. "Opinion re: Uretek Polymer Ground Improvement Method." Letter to The Olympus Group. 15 June 2023

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
8. *GREENHOUSE GAS EMISSIONS – Would the project:*				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

***SUMMARY**:*

a - b) **Less Than Significant Impact**: As discussed in the Air Quality section of this study, the Bay Area Air Quality Management District (BAAQMD) adopted the Bay Area 2017 Clean Air Plan that, in addition to various criteria air pollutants, addresses greenhouse gas (GHG) emissions at a regional scale. In addition to concerns about overall air quality, the proposed project would potentially impact the environment in regards to greenhouse gas emissions during the construction phase. Because no part of the project is expected to lead to an increased use or capacity of the existing, two-lane driveway, the project is expected to have no additional impact on operational greenhouse gas emissions. The retrofitting project is necessary for life safety due to the slow failure of the existing retaining wall which has led to the roadway sinking and creating deep ruts in the roadway. In addition, the project would prevent further erosion of the culvert and potential failure of the culvert footings.

Anticipated construction activities involve preparing the project site (clearing), grading (cut/fill earth movement), installing soil nails and tie rods throughout the surface and underlying soils of the existing walls, and resurfacing the asphalt roadway. Construction activities will also involve excavating inside the culvert, constructing new footings, and constructing a concrete apron within the culvert. Although these activities would be temporary in duration, they result in the generation of criteria air pollutants and GHGs such as carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter (PM_{10} and $PM_{2.5}$), and precursor emissions such as reactive organic gases (ROG) and oxides of nitrogen (NO_X). Sources of these GHGs include exhaust, fugitive dust, and off-gas emissions from on-road (e.g., dump trucks, delivery trucks, worker commute vehicles) and heavy-duty off-road equipment (e.g., bore/drill rigs). Depending on the amount of site preparation and grading needed, these activities could result in a significant amount of truck trips that may increase CO_2 emissions and increase GHG impacts.

The project anticipates 500 cubic yards of total grading, which includes cutting approximately 450 cubic yards of soil from beneath the existing culvert and minor grading along the wall to

create a flat surface for staging and performing soil nail/tie rod drilling. The CalEEMod modeling tool was utilized for the analysis of anticipated project-related impacts to determine the significance of construction-related criteria air pollutants and precursors. The anticipated daily average emissions reported through the CalEEMod tool was then compared to the Thresholds of Significance for Construction-Related Criteria Air Pollutants and Precursors as shown below:

Thresholds of Significance for Construction-Related Criteria Air Pollutants and Precursors			
BAAQMD Table 2-4 CEQA Guidelines, 2022		**CalEEMod Project-Related Analysis (Unmitigated Construction)**	
Pollutant/Precursor	*Daily Average Emissions (lb./day)*	*Anticipated Daily Average Emissions (summer) (lb./day)*	*Anticipated Daily Average Emissions (winter) (lb./day)*
ROG	54	1.3414	1.3415
NOX	54	9.8639	9.9319
PM_{10}	82 (exhaust)*	1.6085*	1.6087*
$PM_{2.5}$	54 (exhaust)*	0.8209*	0.8211*

*Applies to construction exhaust emissions only.

As shown in the table above, the construction-related activities of the proposed bridge and culvert repairs project are below the thresholds of significance, and therefore would have a less than significant impact from criteria air pollutant and precursor emissions. The BAAQMD has not adopted thresholds of significance for construction related GHG emissions and encourages Lead Agencies to incorporate best management practices to reduce GHG emissions during construction. In addition, given that the project does not meet or exceed any of the criteria air pollutant and precursor emissions thresholds, it is assumed that the project would not have a significant impact due to the temporary construction related GHG emissions.

Whether or not construction-related emissions exceed the applicable thresholds of significance, BAAQMD recommends that projects implement basic best management practices for construction to reduce environmental impacts especially due to exhaust from diesel and other fossil-fuel burning engines, the release of dust from the project, and improperly operating equipment. Implementation of mitigation measures **AIR-1** through **AIR-9** would ensure that these construction-related best management practices are followed. Thus, there may be some increase in greenhouse gases due to the construction phase of the project, but they would be considered less than significant due to the temporary nature of construction activities. Therefore, upon implementation of the best practice mitigation measures, the proposed facility will have a less than significant impact on the generation of greenhouse gas emissions. In addition, the proposed project would not conflict with any applicable plan, policy, or regulation pertaining to the reduction of GHG.

Sources of Information

California Emission Estimator Model (CalEEMod). 2016

Bay Area Air Quality Management District. "California Environmental Quality Act, Air Quality Guidelines." 2022. https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines.

Bay Area Air Quality Management District. "Spare the Air, Cool the Climate Final, 2017 Clean Air Plan." Adopted 19 April 2017. http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en.

Contra Costa County. "Climate Action Plan." Adopted by the Contra Costa County Board of Supervisors on 15 December 2015. http://www.co.contra-costa.ca.us/DocumentCenter/View/39791/Contra-Costa-County-Climate-Action-Plan?bidId=.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
9. *HAZARDS AND HAZARDOUS MATERIALS – Would the project:*				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

SUMMARY:

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less Than Significant Impact: Temporary transportation of fueling and other construction-related materials may cause less than significant impacts to the environment during construction of the proposed project, which involves retrofitting an existing bridge structure, repairing an

existing driveway, and repairing an existing creek culvert. Although small quantities of commercially available hazardous materials may potentially be used for landscape maintenance once construction is completed and the landscape has been restored, these materials would not be used in sufficient quantities to pose a threat to human or environmental health. Therefore, the potential for impacts associated with handling, storing, and dispensing of hazardous materials from project operation would be less than significant.

b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?

Less Than Significant Impact: Although the driveway may be used for the routine transport or disposal of hazardous materials used during the operation of the existing assisted living facility, the materials would not be in sufficient quantities to pose a threat to human or environmental health. The temporary transportation of fuel and other construction-related materials during the construction phase has a less than significant impact for the accidental release of hazardous materials into the environment.

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact: There are no schools located within a quarter mile of the project site. The nearest schools are Pleasant Hill Elementary, located approximately 0.8-mile northeast of the project site and Contra Costa Christian Schools, located approximately 0.8-mile southeast of the site. Additionally, there is no anticipated use of significant quantities of hazardous materials for either the construction or operation of the project. Therefore, the project will have no impact in this respect.

d) Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact: According to the Hazardous Waste and Substances Site List (Cortese List) maintained by the California Environmental Protection Agency, the subject property is not identified as a hazardous materials site.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact: The subject property is not located within two miles of any airport and the project will not conflict with any airport land use plan. The nearest airport facility to the project site is the Buchanan Field Airport, which is approximately 4.25 miles northeast of the project site. Thus, the proposed project would not present any safety hazard to airports or excessive noise for people residing or working in the project area.

f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact: The County Emergency Operations Plan (EOP) outlines general procedures in the event of emergency crises. The EOP includes policies and information regarding evacuations and shelter-in-place orders. The main arterial in the project vicinity is Pleasant Hill Road with secondary roads including Diablo View Road. The proposed project will be located completely within the boundaries of the subject property and will not interfere with transport or access along any roadways or waterways that may be part of an emergency response or evacuation plan. Furthermore, project construction would occur onsite and would not require closure of public roads, nor would it change the alignment of existing roads. Although the primary driveway access from Pleasant Hill Road would be temporarily closed during construction for approximately 6 months, a secondary gated driveway into the Atria Park of Lafayette assisted living facility from Diablo View Road exists. As the Conditions of Approval for County File #CDDP88-03007 restrict residents, staff, and visitors from accessing the facility through Diablo View Road, the applicant is requesting approval to temporarily use the secondary driveway during construction. Staff will recommend that the permit be conditioned to require a fully detailed traffic and detour plan, including for emergency vehicle access, to be developed prior to issuance of a building permit, and notification of the CDD and the Dispatch Center prior to bridge closure. Once completed, the proposed project to retrofit the existing bridge structure and repair the existing two-lane driveway would provide significantly improved life safety access for residents and employees of the facility. Thus, the project will benefit existing emergency response and/or evacuation plans by improving evacuation access in the area during operation of the facility. Accordingly, the project would have a less than significant impact on an adopted emergency response and emergency evacuation plan.

g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Less Than Significant Impact: According to the California Fire Hazard Severity Zone map, the subject property is located outside, but approximately 250 feet east, of lands classified as very high fire hazard severity zone. The project site is located within the service area of the Contra Costa County Fire Protection District. The Department of Conservation and Development, Community Development Division (CDD) generally refers requests for new discretionary permits to the respective fire district for review and comment to ensure that the proposed project meets applicable fire codes. Such was done for the proposed project, and there was no indication from the Fire District that the proposed project would pose a significant fire risk. The project was revised since the Fire District's initial review and comments and the applicant now anticipates that the driveway from Pleasant Hill Boulevard will be closed for up to 6 months during construction. In their updated comments, the Fire District advised that due to the bridge closure, access to the rear entrance off of Diablo View Road is to remain open at all times during construction to allow for emergency vehicle access, and that the project proponent is to notify the Fire District Dispatch Center prior to the main driveway closure and when the project is complete. The Fire District further advised that the applicant will be required to contact the District to do a field inspection of the temporary access to the Atria facility prior to the bridge being closed to traffic. Additionally, the project plans submitted for building permits would need to comply with the minimum code requirements related to fire and life safety. Thus, by complying with the requirements of the Fire District, any potential for exposure of people or structures to a significant risk of loss, injury or death involving wildland fires is reduced to a less than significant level.

Sources of Information

California Department of Toxic Substances Control. "Hazardous Waste and Substances Site List (Cortese)." Accessed in 2020. https://www.envirostor.dtsc.ca.gov/public/search?cmd=search&reporttype=CORTESE&site_type=CSITES,FUDS&status=ACT,BKLG,COM&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST+%28CORTESE%29

California State Geoportal. "California Fire Hazard Severity Zone Viewer." Accessed in 2020. https://gis.data.ca.gov/datasets/789d5286736248f69c4515c04f58f414

Contra Costa County. "Airport Land Use Compatibility Plan." 13 December 2000. http://www.cccounty.us/DocumentCenter/View/851/Cover-Introduction-and-County-wide-Policies?bidId=

Contra Costa County. "Emergency Operations Plan." 29 November 2000. https://www.cocosheriff.org/home/showpublisheddocument/600/638422043796770000

Contra Costa County Fire Protection District. "Atria Road Bridge Repair, 1545 Pleasant Hill Road, Lafayette, DP20-3005, CCCFPD Project No.: P-2024-000342." 2 February 2024. Agency Comment Response Letter.

Contra Costa County General Plan. "Chapter 5: "Transportation and Circulation Element." 2005-2020. http://www.co.contra-costa.ca.us/DocumentCenter/View/30915/Ch5-Transportation-and-Circulation-Element?bidId=

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
10. *HYDROLOGY AND WATER QUALITY – Would the project:*				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of 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:	☐	☒	☐	☐
i) Result in substantial erosion or siltation on- or off-site?	☐	☒	☐	☐
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☒	☐	☐

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☒	☐	☐
iv) Impede or redirect flood flows?	☐	☒	☐	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

***SUMMARY**:*

a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant Impact: Once repaired, neither the daily operation of the existing driveway nor the culvert within the bridge structure will involve commercial, manufacturing, or processing activities that would have the potential for generating byproducts or other waste which would pose a significant risk for violating waste discharge requirements or impacting water quality at the property if not disposed of correctly.

During construction, the proposed project to retrofit the existing bridge, repave the existing driveway, and repair the existing culvert through which Murderer's Creek flows could contribute sediment, oils and greases, nutrients, and pesticides into the storm drain. These pollutants have the potential to degrade the receiving waters. Staff will recommend conditions of approval addressing the pouring of fuels, paints, etc. in soil during construction to address any potential soil pollution from the construction phase. In addition, the proposed project must comply with applicable Contra Costa County C.3 requirements. In November 2015, the Regional Water Quality Control Board for the San Francisco Bay Region (RWQCB) reissued the National Pollutant Discharge Elimination System (NPDES) Municipal Regional Permit, which regulates discharges from municipal storm drains. Provision C.3 of the Municipal Regional Permit places requirements for site design to minimize the creation of impervious surfaces and control storm water runoff. The County has the authority to enforce compliance with its Municipal Regional Permit authority in its adopted C.3 requirements and the applicant may be required to submit a Stormwater Control Plan (SWCP) with the building permit application. With implementation of the recommended conditions of approval during the construction phase and practicable storm water controls, the project would have a less than significant impact on water quality.

b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less Than Significant Impact: The subject property is located in the service area of the East Bay Municipal Utility District (water service provider). There is no part of the project which will

increase the water demand of the existing assisted living facility. The project will repair an existing open-bed culvert beneath the retaining wall/bridge structure through which Murderer's Creek flows. A new concrete apron will be constructed once the heavily eroded bed is excavated without expanding the length, width, or height of the culvert. After the new apron is constructed, the project will place native gravels within the culvert with the intent of matching the creek's existing flowline, in addition to placing rip rap on both sides of the culvert for erosion control. Thus, the culvert repair will not change the nature of the project site or the flow of the creek. Thus, there is no potential for the proposed project to substantially deplete groundwater supplies and the project's potential for interfering with groundwater recharge is less than significant.

c) *Would the project substantially alter the existing drainage pattern of the 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:*

i) Result in substantial erosion or siltation on- or off-site?
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?
iv) Impede or redirect flood flows?

Less Than Significant Impact With Mitigation Incorporated: Division 914 of the County Ordinance Code requires that all storm water entering and/or originating on this property to be collected and conveyed, without diversion and within an adequate storm drainage system, to an adequate natural watercourse having a definable bed and banks or to an existing adequate public storm drainage system which conveys the storm water to an adequate natural watercourse.

The proposed project to retrofit an existing bridge will be constructed on an already disturbed area of the property. According to the plans, the access driveway has a sag vertical curve, and the stormwater flows to the lowest part of the road which is located approximately at the center span of the road. Since the existing retaining walls of the bridge are beginning to show signs of differential displacement, the project proposes to install soil nails and tie rods throughout the surface of the retaining walls on both sides of the roadway. In addition, the project proposes to repair an existing, open-bed arch culvert through which the intermittent "Murderers Creek" flows during wet conditions. A new concrete apron will be installed after excavating the open bed of the culvert after which native gravels and rip rap will be installed to match the creek's existing flowline and to control further erosion. However, no part of the project proposes to change the flow or geometry of the intermittent stream.

Potential Impact:

Although it is anticipated that the project will not change the flow or geometry of the intermittent stream, any activities associated with grading or construction of the proposed project occurring within the ravine and streambed may have a substantial impact on drainage. Approval from the Contra Costa County Department of Public Works, Flood Control and Water Conservation District prior to performing any construction related to the proposed project would ensure that significant impacts on drainage patterns of the area are reduced to less than significant levels. Other jurisdictional agencies such as the California Department of Fish and Wildlife may have

requirements for approval to work within the streambed, which may restrict equipment operation within the streambed and ensure restoration of any disturbed ravine areas. In addition to the implementation of mitigations measures **BIO-7** and **BIO-9**, implementation of the following mitigation measure would reduce the potential impacts on drainage and drainage patterns of the area to less than significant levels:

HYD-1: **Prior to issuance of grading or building permits or the removal of trees, whichever is first**, the applicant shall apply for and obtain a drainage 1010 permit from the Contra Costa County Flood Control and Water Conservation District. As part of this permit, the applicant shall provide a hydraulic analysis of the culvert excavation and repairs and include the 10-year and 100-year water surface elevation on plan submittals. A geotechnical report for the culvert repairs, including scour analysis, shall also be provided.

d) In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

Less Than Significant Impact: Seiche, tsunami, and mudflow events are generally associated with large bodies or large flows of water. The subject property is not located near any of the County's large water bodies or natural water courses which would increase the potential for a seiche, tsunami, or mudflow event. There is also no proposal to remove or modify any existing dam, levee, or other infrastructure used to divert or otherwise control large volumes of water as part of the project. In addition, the subject property is not located in a known flood hazard zone. Although no part of the project proposes to change the geometry or flow of the intermittent stream, constructing a concrete apron in place of the existing open bed of the culvert may increase the amount of water flow underneath the roadway resulting in a greater potential for flooding. However, implementation of mitigation measure HYD-1, would reduce impacts of the repaired culvert to less than significant levels. Therefore, there is a less than significant impact on the exposure of people or structures to a significant risk of loss, injury, or death involving flooding, seiche, tsunami, or mudflow.

e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact: As part of the proposed project, an existing arch culvert will be repaired due to significant erosion of the open culvert bed during heavy rains in winter of 2022/23. Repairs involve excavating within the culvert, replacing footings, and constructing a concrete apron in addition to placing native gravels on top of the apron to match the existing creek flowline and rip rap upstream and downstream for erosion control. The project does not propose changing the flow or geometry of the intermittent stream. As discussed above, prior to performing any construction activities, the project proponent will be required to obtain a drainage 1010 permit from the County Flood Control and Water Conservation District, in addition to showing compliance with and approval of any other jurisdictional agencies as necessary for work within a watercourse. In addition, the proposed project to retrofit the existing bridge and repair/replace the driveway surface must comply with applicable Contra Costa County C.3 requirements for site design to minimize the creation of impervious surfaces and control storm water runoff. Therefore, based on the mitigations and implementation of the recommended conditions of approval during the construction phase and practicable storm water controls, the project has a less than substantial impact on drainage in the area, and there will be a less than significant conflict with or obstruction

of the implementation of a water quality control plan or sustainable groundwater management plan.

Sources of Information

California Department of Conservation. "Contra Costa County Tsunami Inundation Maps." Accessed in 2020. https://www.conservation.ca.gov/cgs/Pages/Tsunami/Maps/ContraCosta.aspx

Contra Costa County Public Works Department. "Development Plan Permit DP20-3005 Staff Report & Conditions of Approval." Dated 22 September 2020

Contra Costa County Public Works Department. "Atria (CDDP20-03005). Agency Comments Email. Dated 26 February 2024

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
11. *LAND USE AND PLANNING – Would the project:*				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

***SUMMARY**:*

a) Would the project physically divide an established community?

No Impact: The proposed project to retrofit an existing bridge, repair an existing access driveway, and repair an existing arch culvert will be located entirely within the boundaries of the subject property. Therefore, the project will not physically divide any established communities.

b) Would the project cause a significant environmental impact due to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less Than Significant Impact:

Land Use: The subject property is located within a Planned Unit (P-1) zoning district and an area with General Plan Land Use designations for Congregate Care (CC) and Open Space (OS). The purpose of the CC designation is to allow for the development of clustered residential units for senior citizens and assisted living facilities. In general, this specific County General Plan designation is adopted with unique criteria for each site to which it is applied. The OS designation includes privately-owned properties upon which future development rights have been deeded to a public or private agency, including, for example, significant open space areas within planned unit developments or steep, unbuildable portions of subdivisions. The common activities taking place in areas designated for Open Space land uses are, for example, resource management, maintenance of critical habitats, or private recreation for nearby residents.

The proposed project is to perform retrofitting of the existing bridge and repair the existing driveway that has been in operation since the assisted living facility was constructed in 2003. In

addition, the project will repair the existing culvert within the bridge structure. When County File #CDDP88-03007 was approved to allow the facility, the General Plan land use designation for the parcel was Single-Family Residential-Low Density (SL). Thus, a General Plan Amendment was adopted consecutively with the approval of County File #CDDP88-03007 which changed the parcel's land use designation from SL to Congregate Care (CC) (County File #GPA 1-88-CO). Additionally, as part of the conditions of approval for County File #CDDP88-03007, most of the ravine area was recorded as a Restricted Development Area (RDA). Subsequently, a second General Plan Amendment adopted in May of 1991 changed the CC land use designation to two new land use designations for the subject property: Congregate Care (CC) and Open Space (OS) (County File #GPA 1991-2A). Thus, the northern portion of the subject property where the residential units, parking, and outdoor amenities for residents of the assisted living facility are located is designated for CC land uses, while the ravine area, including the extent of the project area, is designated for OS land uses.

Conservation Element: The Conservation Element of the General Plan lists three overall conservation goals:

- *Conservation Goal 8A: To preserve and protect the ecological resources of the County.*
- *Conservation Goal 8B: To conserve the natural resources of the County through control of the direction, extent, and timing of urban growth.*
- *Conservation Goal 8C: To achieve a balance of uses of the County's natural and developed resources to meet the social and economic needs of the County's residents.*

The project site is located within a ravine and the existing bridge and roadway traverse an intermittent stream known as "Murderer's Creek" that flows through the existing culvert. As discussed above in the Biological Resources section, although the area is not known to be ecological sensitive and much of the project site has previously been disturbed, there is a potential for special-status species (e.g., plants, animals, birds) to exist temporarily or seasonally within the project area. However, implementation of mitigation measures **BIO-1** through **BIO-9** would bring potential project-related impacts on the ecological resources of the County to less than significant levels. In addition, the proposed project is consistent with Goal 8B by utilizing existing infrastructure, with existing capacity to accommodate the project, and does not require the extension of public infrastructure. Additionally, mitigation measures to reduce impacts on aesthetics (**AES-1** through **AES-3**), and proposed conditions requiring restoration of any natural areas within the scenic easement area disturbed during construction, would further ensure that project is consistent with Goal 8C. Thus, the project is consistent with the County's overall conservation goals.

Tree Protection and Preservation Ordinance: The Contra Costa County Tree Protection and Preservation Ordinance provides for the protection of certain trees by regulating tree removal or work within the driplines of trees while allowing for reasonable development of private property. On any property proposed for development approval, the Ordinance requires tree alteration or removal to be considered as part of the project application. Due to the anticipated construction activities as part of the proposed project and the poor health or structure of trees near the project site, a request for approval of a tree permit for the removal of up to ten (10) code-protected trees and for the alteration of approximately seven (7) code-protected trees is included with this proposed project. As such, approval of the proposed project would include conditions of approval for the restitution of any tree approved for removal or potentially harmed by construction activities

within drip lines, protection of remaining trees where work may occur within the drip lines of the trees, and implementation of all of the tree protection measures recommended by the project's arborist in their tree report. Additional trees that are less than 6.5-inches in diameter may also be removed for construction or maintenance of the property, however, these immature trees are not protected pursuant to the Tree Ordinance. As a result of CDD staff applying the Tree Protection and Preservation Ordinance to the proposed project, there would be no conflict with the Ordinance.

While the project is substantially consistent with the General Plan CC land use designation and the Planned Unit Development (P-1) zoning for the subject property, permanent structures such as retaining walls and culverts are not expressly identified as the type of development allowed within the General Plan OS land use designation. Given that the project is to retrofit the existing bridge, culvert, and primary access driveway to the Atria Park assisted living facility with no expansion of the use, and is necessary to maintain the safe ingress and egress of residents, employees, visitors, and health and safety responders, staff believes that as conditioned and upon implementation of the mitigation measures within this document, any potential impacts due to conflicts with the General Plan OS land use designation will be less than significant. In addition, upon implementation of the mitigation measures within this document, the proposed project would be consistent with the policies within the County's General Plan Conservation Element, and the policies of the P-1 zoning district and Tree Protection and Preservation Ordinance. Therefore, the project has a less than significant potential for conflict with any applicable land use, policy, General Plan, Specific Plan, or zoning ordinance adopted for the purpose of avoiding or mitigating an environmental effect.

Sources of Information

Contra Costa County General Plan. "Chapter 3: Land Use Element." 2005 – 2020. http://www.co.contra-costa.ca.us/DocumentCenter/View/30913/Ch3-Land-Use-Element?bidId=

Contra Costa County General Plan. "Chapter 8: Conservation Element." 2005-2020. http://www.co.contra-costa.ca.us/DocumentCenter/View/30918/Ch8-Conservation-Element?bidId=

Contra Costa County Code. "Title 8 – Zoning." Accessed in 2020. https://library.municode.com/ca/contra_costa_county/codes/ordinance_code?nodeId=TIT8ZO

Contra Costa County Code. "Chapter 816-6 - Tree Protection and Preservation." Accessed in 2020. https://library.municode.com/ca/contra_costa_county/codes/ordinance_code?nodeId=TIT8ZO_DIV816TR_CH816-6TRPRPR.

McNeil Arboriculture Consultants LLC. Todd McNeil, Certified Arborist. "Report on trees at 1545 Pleasant Hill Road, Lafayette, their condition, proposed repair of an existing roadway and bridge, with expected resulting impacts and measures to reduce impacts on those trees." Dated 10 October 2023.

Revised Project Plans, received on 17 January 2024.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
12. *MINERAL RESOURCES – Would the project:*				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

***SUMMARY**:*

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact: According to Figure 8-4 (Mineral Resource Areas) of the Contra Costa County General Plan, the subject property is not located within an area identified as a significant mineral resource area. The earth materials findings of the soils investigation by Geotecnia (report dated June 8, 2018, and supplemental report dated April 16, 2019) do not indicate the presence of minerals. Staff is unaware of any prior studies done on the subject property that indicate the presence of mineral resources.

b) Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact: The project site is not within an area of known mineral importance according to the Conservation Element of the General Plan; therefore, the project would not impact any mineral resource recovery site.

Sources of Information

Contra Costa County General Plan. "Chapter 8: Conservation Element." 2005-2020. http://www.co.contra-costa.ca.us/DocumentCenter/View/30918/Ch8-Conservation-Element?bidId=.

Geotecnia, Consulting Geotechnical Engineers. "Report, Geotechnical Study, Distressed Entrance Access Road at Atria Park." Prepared for The Olympus Group. 8 June 2018

Geotecnia, Consulting Geotechnical Engineers. "Report, Supplemental Geotechnical Study" Prepared for The Olympus Group. 16 April 2019

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
13. *NOISE – Would the project result in:*				
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 applicable standards of other agencies?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
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, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

***SUMMARY**:*

a - b) **Less Than Significant With Mitigation Incorporated**:

According to Figure 11-5I of the County General Plan's Noise Element, the subject property is within an area of the County where 2005 DNL and CNEL Noise Levels range between 60 and 65 decibels (dB). Additionally, Table 11-2 of the Noise Element indicates that the typical DNL noise level within 100 feet of Taylor Boulevard is 78dB. Figure 11-6 (Land Use Compatibility for Community Noise Environments) of the County General Plan's Noise Element indicates that noise exposure levels at or below 60 decibels are considered as "Normally Acceptable" for land uses that fall within the "Nursing Homes" and "Residential – Single Family" land use categories. Any noise exposure above 60 decibels is generally considered as "Conditionally Acceptable". Thus, the County's threshold for residential uses is a DNL of 60dB.

The subject property is located approximately 400 feet east of Taylor Boulevard and adjacent to Pleasant Hill Road and is generally surrounded by hilly terrain with lands designated for residential uses. The project site is located approximately 75 feet from the nearest residential building of the assisted living facility on the subject property, and approximately 175 to 300 feet from the nearest single-family residences in the area.

The purpose of the project is to repair the existing, failing retaining walls that form a bridge across a ravine and support the existing main access driveway for the Atria Park of Lafayette assisted living facility. Retrofitting the existing retaining walls involves the installation of soil nails and tie rods throughout the wall surface and into the underlying soils of both walls after which shotcrete would be applied to cover the soil nails. Although temporary in nature, the use of cranes, drills, and other equipment for the installation of the soil nails and the application of the shotcrete material during construction has the potential for a substantial temporary increase in noise levels. However, due to the hilly topography, the soil type at the construction site, and the presence of substantial vegetation (e.g., shrubs, trees) and ground cover (e.g., grasses) present between the

project site and nearby single-family residences, there is potential for the ground to absorb noise energy and lessen the impacts of temporary construction noise.

Once improvements to the bridge and culvert have been completed, there is very little chance of the improved driveway resulting in excessive ground borne vibration as a result of the daily use and operation of the driveway. Any ground borne vibration or ground borne noise that may be created as part of the project would be produced during the construction phase. Therefore, any possible ground borne vibrations or noise would be temporary in nature and would be limited to the restricted construction hours as typically conditioned for development permits approved by the County.

Potential Impact: Any production of noise levels or ground borne vibrations in excess of established standards would be associated with the construction phase of the proposed project. However, the noise and ground borne vibrations produced during these aspects of the proposed project would be temporary in nature and mitigations exist to reduce these temporary impacts on area residents.

Therefore, implementation of the following mitigation measures would reduce the impact of temporary noise levels and ground borne vibrations to a less than significant level:

NOI-1: **Prior to CDD stamp-approval of plans for issuance of building or grading permits or any ground disturbance**, **whichever occurs first**, the applicant shall submit a noise assessment by a licensed, qualified acoustician or other certified professional, for review by the CDD. The report shall at minimum identify anticipated construction noise and ground borne vibration levels based on proposed equipment and methods of construction, and provide any necessary mitigation measures (e.g., noise shrouds, curtains, alternative equipment) to reduce the impacts of noise and vibration on nearby sensitive receptors (i.e., nearby residences, facility residents) as much as possible.

NOI-2: The applicant shall notify neighbors within 300 feet of the subject property at least one week in advance of grading and construction activities.

NOI-3: The applicant shall designate a construction noise coordinator who will be responsible for implementing the noise control measures and responding to complaints. This person's name and contact information shall be posted clearly on a sign at the project site and shall also be included in the notification to properties within 300 feet of the project site. The construction noise coordinator shall be available during all construction activities and shall maintain a log of complaints, which shall be available for review by County staff upon request.

NOI-4: The following construction restrictions shall be implemented during project construction and shall be included on all construction plans.

1. The applicant shall make a good faith effort to minimize project-related disruptions to adjacent properties, and to other uses on the site. This shall be communicated to project-related contractors.

2. The applicant shall require their contractors and subcontractors to fit all internal combustion engines with mufflers which are in good condition and shall locate

stationary noise-generating equipment such as air compressors as far away from existing residences as possible.

3. Large trucks and heavy equipment are subject to the same restrictions that are imposed on construction activities, except the hours for transportation to and from the site are limited to 9:00 am to 4:00 pm.

4. All construction activities shall be limited to the hours of 8:00 am to 5:00 pm, Monday through Friday, and are prohibited on state and federal holidays on the calendar dates that these holidays are observed by the state or federal government as listed below:

    - New Year's Day (State and Federal)
    - Birthday of Martin Luther King, Jr. (State and Federal)
    - Washington's Birthday (Federal)
    - Lincoln's Birthday (State)
    - President's Day (State and Federal)
    - Cesar Chavez Day (State)
    - Memorial Day (State and Federal)
    - Independence Day (State and Federal)
    - Juneteenth National Independence Day (Federal)
    - Labor Day (State and Federal)
    - Columbus Day (State and Federal)
    - Veterans Day (State and Federal)
    - Thanksgiving Day (State and Federal)
    - Day after Thanksgiving (State)
    - Christmas Day (State and Federal)

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, would the project expose people residing or working in the project area to excessive noise levels?*

No Impact: The project site is not located within two miles of a public airport or private airstrip, nor is it located within an area covered by the County's Airport Land Use Compatibility Plan. The nearest airport facility is Buchanan Field Airport, approximately 4.25 miles northeast of the project site. Thus, the proposed project would not expose people to excessive noise levels from either Buchanan Field or a private airstrip and there is no impact.

Sources of Information

Contra Costa County General Plan. "Chapter 11: Noise Element." 2005-2020. http://www.co.contra-costa.ca.us/DocumentCenter/View/30921/Ch11-Noise-Element?bidId=.

Revised Project Plans, received on 17 January 2024.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
14. *POPULATION AND HOUSING – Would the project:*				
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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

***SUMMARY**:*

a) Would the project 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)?

No Impact: The proposed project consists of retrofitting an existing bridge structure and repairing an existing creek culvert for the Atria Park of Lafayette assisted living facility, which has been in operation since approximately 2003. Once resurfaced, the existing two-lane driveway will remain the primary ingress and egress for residents, staff, delivery, and emergency personnel to the assisted living facility. Pursuant to the drawings submitted with the Development Plan application, there is no planned expansion of the driveway or other associated infrastructure. Thus, the proposed project will not directly or indirectly cause a substantial increase in population.

b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact: The proposed project is located on a parcel of land that is developed for congregate care residential uses. The project will retrofit the existing bridge structure which provides access to an existing assisted living facility on the subject property. As such, the proposed project is not the type of improvement that will directly or indirectly displace any existing housing, nor necessitate the construction of replacement housing elsewhere.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
15. *PUBLIC SERVICES – Would the project* *result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*				
a) Fire Protection?	☐	☐	☐	☒
b) Police Protection?	☐	☐	☐	☒
c) Schools?	☐	☐	☐	☒
d) Parks?	☐	☐	☐	☒
e) Other public facilities?	☐	☐	☐	☒

SUMMARY*:*

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a) *Fire Protection?*

No Impact: The proposed project consists of retrofitting an existing bridge structure for an existing assisted living facility on the subject property. Compliance with the applicable Building and Fire Codes implies that any construction or operation of the bridge and primary driveway would result in no impact related to increased fire protection needs and no impact on the size or level of fire protection needed to protect the existing facility. In addition, the project would provide for improved fire emergency response in the event of a fire or other emergency at the subject property.

b) *Police Protection?*

No Impact: The project related to an existing assisted living facility does not include the establishment of any additional uses that require the additional services of any police facility. Therefore, there is no potential for the need to add new police facilities or to modify any existing police facilities.

c) *Schools?*

No Impact: The project related to an existing assisted living facility does not include the establishment of any additional uses that require the additional services of any school facility. Therefore, there is no potential for the need to add new school facilities or to modify any existing school facilities.

d) *Parks?*

No Impact: The project related to an existing assisted living facility does not include the establishment of additional uses that require the additional services of any park facility. Therefore, there is no potential for the need to add new park facilities or to modify any existing park facilities.

e) Other public facilities?

No Impact: The project is related to an existing assisted living facility and does not include the establishment of additional uses that require the other additional services such as libraries or health facilities. Therefore, there is no potential for the need to add other new public facilities, or to modify any other existing public facilities.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
16. *RECREATION*				
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

***SUMMARY**:*

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?

No Impact: The deterioration, daily use, and demand for neighborhood parks and other recreational resources is largely dependent on the number of people in the surrounding area and the frequency in which they utilize those resources. As discussed in the Population and Housing Section of this study, the proposed project will not result in a population increase in the County. In addition, the project to retrofit an existing bridge structure for an assisted living facility that has been in operation since 2003 is not of the type that would otherwise result in the increased use of recreational areas within the County. Therefore, there is no potential for the proposed project causing substantial physical deterioration to recreational facilities in a manner that would have an adverse physical effect on the environment.

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?

No Impact: The proposed project consists of retrofitting an existing bridge structure for an existing assisted living facility on the subject property. The project does not include the construction or the expansion of recreational facilities. Thus, there is no potential for the proposed project causing an adverse physical effect on the environment through the construction or expansion of recreational facilities.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
17. *TRANSPORTATION – Would the project:*				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☐	☒
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3(b)?	☐	☐	☐	☒
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

***SUMMARY**:*

a) Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

No Impact: The proposed project will retrofit an existing bridge structure and repair a driveway for an existing assisted living facility, which has been in operation for more than 20 years pursuant to County File #CDDP88-03007. The driveway is accessed from Pleasant Hill Road and is the primary means of ingress and egress to the assisted living facility for residents, employees, visitors, and health and safety responders. As shown on the project plans, the project does not propose expanding the two-lane driveway nor will it alter the capacity or type of services provided at the existing facility; thus, any increase in trips to and from the property would not be as a result of the project. Therefore, the proposed project has no potential for exceeding the capacity of the existing circulation system or conflicting with an applicable congestion management program.

b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3(b)?

No Impact: CEQA provides guidelines for analyzing transportation impacts relating to vehicle miles travelled (VMT) resulting from the project. The proposed project will retrofit the existing retaining walls that support the primary access driveway from Pleasant Hill Road to an assisted living facility that has been in operation for more than 20 years. The retaining walls of the bridge structure are failing. Once the retrofit work is completed, the driveway could be repaired, which would allow continued, safe access to the facility from Pleasant Hill Road. As shown on project plans, the project does not propose expanding the two-lane driveway nor will it alter the capacity or type of services provided at the existing facility. In addition, no part of the proposed project involves the expansion of the congregate care uses on the subject property as allowed. Thus, because the amount in which the driveway is used is based upon the activities and residential capacity provided at the facility, the proposed project has no potential for increasing vehicle miles travelled as a result of the driveway repairs. Therefore, the project can be expected to have no impact on traffic, would not require further VMT analysis, and does not conflict with CEQA guidelines section 15064.3(b).

c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less Than Significant Impact: The existing driveway provides vehicular access to the assisted living facility from Pleasant Hill Road, a County maintained road. Once the bridge structure has been retrofitted, the project involves reconstructing the existing roadway pavement section of the entire length of the driveway from Pleasant Hill Road to brick pavers on the subject property. This development will not change the roadway dimensions or geometric design features. The project would utilize the existing public roadway and utility improvements and does not require alteration or right of way for Pleasant Hill Road. As conditioned, the project proponent will be required to obtain an encroachment permit from the County Public Works Department, if necessary, for any driveway improvements within the right-of-way of Pleasant Hill Road. Approval from Public Works to make these improvements would ensure that the project will have a less than significant impact regarding increased hazards due to potential geometric design features.

d) Would the project result in inadequate emergency access?

Less Than Significant Impact: The project was referred to the Contra Costa County Fire Protection District for agency comments, received in February of 2020. The project was subsequently revised by the applicant who estimates that the bridge will need to be closed for up to 6 months in order to complete the retrofitting work and repave the roadway due to the proposed use of cranes and concrete pump equipment on the roadway. Staff of the Fire District provided an updated response on February 2, 2024, in which it was advised that the rear entrance to the facility off of Diablo View Road is to remain open at all times to allow for emergency vehicle access, and that the project proponent is to notify the Fire District Dispatch Center prior to the bridge closure and when the project is complete. As the Conditions of Approval for County File #CDDP88-03007 restrict residents, staff, and visitors from accessing the facility through Diablo View Road, the applicant is requesting approval to temporarily use the secondary driveway during construction and staff will recommend a condition of approval requiring a fully detailed traffic and detour plan and notification of the CDD prior to bridge closure. Therefore, with temporary access available at Diablo View Road, and as conditioned, the project will result in a less than significant impact on emergency access. Additionally, all construction plans will be subject to the applicable Fire Code that is in effect at the time when the application for a building permit is submitted. The routine review of construction plans will ensure that the proposed project has a for adversely impacting existing emergency access to the subject property or other properties within the County. Therefore, with temporary access available at Diablo View Road, and as conditioned, the project will result in a less than significant impact on emergency access.

Sources of Information

California Office of Planning and Research. “Technical Advisory on Evaluating Transportation Impacts in CEQA”. Accessed in 2020. http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf

Contra Costa County Conservation and Development Department and Public Works Department. “Transportation Analysis Guidelines.” 23 June 2020. https://www.contracosta.ca.gov/DocumentCenter/View/69374/FINAL-CCC-Transportation-Analysis-Guidelines-v2-12-15-20?bidId=

Contra Costa County Fire Protection District. "Atria Road Bridge Repair, 1545 Pleasant Hill Road, Lafayette, DP20-3005, CCCFPD Project No.: P-2024-000342" Dated 2 February 2024. Agency Comment Response Letter.

Contra Costa County Public Works Department. "Development Plan Permit DP20-3005 Staff Report & Conditions of Approval." Dated 22 September 2020.

Contra Costa County Public Works Department. "Atria (CDDP20-03005). Agency Comments Email. Dated 26 February 2024.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
18. *TRIBAL CULTURAL RESOURCES – Would the project* *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, 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:*				
a) 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)?	☐	☐	☒	☐
b) 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?	☐	☐	☒	☐

***SUMMARY**:*

Would the project 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, 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:

a-b) **Less Than Significant Impact**: As discussed in Section 5 (Cultural Resources), neither the subject property nor any of the existing buildings or structures at the project site are listed on Contra Costa County's Historic Resources Inventory, on California's Register of Historical Resources, or the National Register of Historic places. Nor is there any building or structure that qualifies to be listed. Additionally, there is no indication that this property holds any cultural value to a California Native American tribe. Representatives of Native American tribes known to have historically occupied the area (Wilton Rancheria) were contacted for an opportunity to request consultation. In correspondence dated September 29, 2020, Wilton Rancheria indicated that they have no concern on this project and did not request any consultation with our department. Regardless, there is a possibility of cultural resources to be found within the vicinity of the project and upon implementing mitigation measures **CUL-1** through **CUL-3**, impacts to tribal cultural resources will be less than significant.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
19. *UTILITIES AND SERVICE SYSTEMS – Would the project:*				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☐	☒
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
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?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

***SUMMARY**:*

a) Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?

No Impact: The proposed project consists of retrofitting an existing bridge supporting a driveway across a creek ravine on a parcel that is developed with an existing assisted living facility. The project will also repair and retrofit an existing arch culvert within the bridge structure. The culvert repairs are not expected to adversely impact, and may improve, drainage through the ravine. No part of the project proposes to expand the number of residential units, residents, or employees at the existing assisted living facility; thus, the project will not require the establishment, relocation, or expansion of any water, wastewater, electric power, natural gas, or any other utility. Therefore, there will be no need for new or expanded water, wastewater treatment, storm water drainage, or other utility services.

b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

No Impact: The proposed project consists of retrofitting an existing bridge supporting a driveway across a ravine on a parcel that is developed with an existing assisted living facility. The project will also repair and retrofit an existing arch culvert under the bridge structure. The project is of a nature that would not require additional water supplies for operation of the roadway. As an assisted living facility that has been in operation for over fifteen years, there are existing and sufficient water supplies to service the facility. No part of the project proposes to expand the number of residential units, residents, or employees at the existing assisted living facility; therefore, there will be no need for new or expanded water services.

c) *Would the project result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

No Impact: No part of the project proposes to expand the number of residential units, residents, or employees at the existing assisted living facility; therefore, there will be no need for new or expanded wastewater services.

d) *Would the project 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?*

Less Than Significant Impact: No part of the project proposes to expand the number of residential units, residents, or employees at the existing assisted living facility; therefore, it will not require the construction or expansion of solid waste infrastructure.

The proposed project would generate construction solid waste. Construction at the project site would be subject to the CalGreen Construction and Demolition Debris Recovery Program administered by the Department of Conservation and Development. The Debris Recovery Program requires that at least 65% of construction job site debris (by weight) for most construction types, that would otherwise be sent to landfills, be recycled, reused, or otherwise diverted to appropriate recycling facilities. Thus, although construction activities would incrementally increase construction waste in Contra Costa County, the administration of the CalGreen program ensures that the project-related impact would be less than significant.

e) *Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

Less Than Significant Impact: As mentioned above, construction at the project site would be subject to the CalGreen Construction and Demolition Debris Recovery Program administered by the Department of Conservation and Development. The Debris Recovery Program requires that at least 65% of construction job site debris (by weight) for most construction types, that would otherwise be sent to landfills, be recycled, reused, or otherwise diverted to appropriate recycling facilities. The project as proposed is to retrofit an existing bridge supporting the primary access driveway to an existing assisted living facility and to repair an existing culvert beneath the bridge. There is no part of the project which proposes to expand the existing congregate care use on the subject property, nor result in the generation of unique types of solid waste that would conflict with existing regulations applicable to solid waste. Thus, the project would comply with applicable federal, state, and local laws related to solid waste.

Sources of Information

Contra Costa County. "CalGreen / Construction & Demolition (C&D) Debris Recovery Program." Accessed in 2020. https://www.contracosta.ca.gov/4746/CalGreen-Construction-Demolition-Debris-

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	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:***				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
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 a wildfire?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐

SUMMARY*:*

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

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact: According to the California Fire Hazard Severity Zone map, the subject property is located outside of, but would be considered near lands located approximately 250 feet east of the project site that are classified as very high fire hazard severity zone. The County Emergency Operations Plan (EOP) outlines general procedures in the event of emergency crises such as wildfires including those for evacuations and shelter-in-place orders. The main arterial in the project vicinity is Pleasant Hill Road with secondary roads including Diablo View Road. The proposed project will be located completely within the boundaries of the subject property and will not interfere with transport or access along any roadways or waterways that may be part of an emergency response or evacuation plan. Retaining walls and driveways are not typically associated with an elevated risk of fire. There is no proposal to alter infrastructure, including fire hydrants, or communications as part of this project. As discussed in section (f) of the Hazards and Hazardous Materials section of this study, the project was routed to the Contra Costa County Fire Protection District, who did not indicate any concerns with an elevated fire risk for the site. The project was revised since the Fire District's initial comments and the applicant

now anticipates that the driveway from Pleasant Hill Boulevard will be closed for up to 6 months during construction of the retaining wall retrofit and driveway repairs. In their updated comments, the Fire District advised that due to the bridge closure, access to the rear entrance off of Diablo View Road is to remain open at all times during construction to allow for emergency vehicle access, and that the project proponent is to notify the Fire District Dispatch Center prior to the main driveway closure and when the project is complete. The Fire District further advised that the applicant will be required to contact the District to do a field inspection of the temporary access to the Atria facility prior to the bridge being closed to traffic. Thus, by complying with the requirements of the Fire District, the implementation of an emergency response or evacuation plan will not be affected by the construction of the new retaining walls and repairs to the driveway, and any impacts of the project would be less than significant.

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 a wildfire?*

Less Than Significant Impact: According to the California Fire Hazard Severity Zone map, the subject property is located outside of, but near lands located approximately 250 feet east of the project site that are classified as very high fire hazard severity zone. The proposed project involves retrofitting an existing bridge structure for an assisted living facility. The purpose of the project is to repair the existing, failing retaining walls of the bridge and the culvert through which an intermittent creek runs during rainy seasons. Although the ravine area adjacent to the project area is heavily wooded, retaining walls, creek culverts, and driveways alone are not typically associated with an elevated risk of fire. There is no part of the project that would exacerbate the existing structures' wildfire risks. The project will undergo a structural review as part of obtaining a building permit and will be periodically inspected throughout construction. The project will be designed and constructed to avoid exacerbating wildfire risks and are unlikely to fall due to high winds and slope.

As part of the project, up to 10 trees will be removed, including two blue gum eucalyptus trees, three coast redwood trees, one black walnut tree, one deodar cedar, two coast live oak, and one valley oak. In addition, an approximately 3,600-square-foot area adjacent to and west of the retaining walls will be cleared of small brush and plants to provide access for workers and small equipment to perform retrofitting and repair work. According to the U.S. Department of Agriculture, the blue gum eucalyptus tree is highly flammable due to the stringy bark that readily catches fire, and bark streamers which can carry fire into the canopy or elsewhere. In addition, heavy litter fall and flammable oils within the foliage contribute to a highly flammable condition. Although the area to be cleared is relatively small, removal of eucalyptus trees, litter fall, and other trees and foliage may contribute to a reduction in wildfire risks for existing and future residents of the surrounding area. Approval of the project will be conditioned to restore the cleared areas and replace trees as appropriate. Any restoration of the site with landscaping and trees would be subject to the requirements of the County's Model Water Efficient Landscaping policies. Therefore, the impact of the facility to exacerbate wildfire risks and expose occupants to pollutant concentrations from a wildfire is less than significant.

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?*

Less Than Significant Impact: The proposed project involves retrofitting an existing bridge structure providing access to an existing assisted living facility. The driveway will then be re-paved, but no realignment, reduction, or expansion of the roadway is proposed. In updated comments on the revised project, the Fire District advised that due to the bridge closure, access to the facility via the rear entrance from Diablo View Road is to remain open at all times during construction to allow for emergency vehicle access, and that prior to the bridge closure, the project proponent is to notify the Fire District Dispatch Center. All other infrastructure (such as power lines) for the site and emergency services are existing, and no new extensions are required to support the project. Therefore, the proposed project will have a less than significant impact on associated infrastructure and the exacerbation of fire risk.

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?

Less Than Significant Impact: The proposed project to retrofit an existing bridge structure will be built on an already disturbed area of the property. Since the existing retaining walls are beginning to show signs of differential displacement, the project proposes to retrofit the walls by installing soil nails and tie rods through each wall surface and the underlying soils and applying shotcrete over the nails and tie rods. Once the retrofitting work is complete, the surface of the driveway will be replaced. The existing arch culvert through which the intermittent "Murderers Creek" flows during wet conditions will be repaired but will not be extended. Repairs to the culvert involve excavating the inside the culvert, constructing new footings and a new concrete apron, and placing native gravel within the culvert to match the creek flowline. Thus, the project is not expected to result in significant additional impacts on the drainage system. However, as discussed above in the section on Hydrology and Water Quality, the project proponent will be required to apply for and obtain a drainage 1010 permit from the Contra Costa County Department of Public Works, Flood Control and Water Conservation District prior to performing any construction. A hydraulic analysis and geotechnical report including scour analysis for the culvert extension must be provided as part of the application for a 1010 permit. Therefore, as mitigated, the project will have a less than significant impact on downstream flooding, or landslides due to post-fire downslope instability, runoff, or drainage changes.

Sources of Information

California State Geoportal. "California Fire Hazard Severity Zone Viewer." Accessed in 2020. https://gis.data.ca.gov/datasets/789d5286736248f69c4515c04f58f414.

Contra Costa County Fire Protection District. "Atria Road Bridge Repair, 1545 Pleasant Hill Road, Lafayette, DP20-3005, CCCFPD Project No.: P-2024-000342" Dated 2February 2024. Agency Comment Response Letter.

Contra Costa County Public Works Department. "Development Plan Permit DP20-3005 Staff Report & Conditions of Approval." Dated 22 September 2020.

Contra Costa County Public Works Department. "Atria (CDDP20-03005). Agency Comments Email. Dated 26 February 2024.

United States Department of Agriculture. "Species: *Eucalyptus globulus*" Accessed January 3, 2021. https://www.fs.fed.us/database/feis/plants/tree/eucglo/all.html#FIRE%20ECOLOGY

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
21. *MANDATORY FINDINGS OF SIGNIFICANCE*				
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 a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
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.)	☐	☐	☒	☐
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

***SUMMARY**:*

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 a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant Impact: To construct the project, minor grading and clearing of the wash on the western side of the bridge structure is needed to create a flat surface for staging and access to work in the area. The project involves removing up to ten (10) code-protected trees for access to the project site and preserving approximately eight (8) code-protected trees that may be altered during construction. Thus, the project has the potential to substantially impact the habitat of fish, wildlife, and plant species or communities in the construction area. Where mitigation measures are implemented as proposed in this Initial Study, the measures will be conditions of approval of the proposed project and the applicant will be responsible for implementation of the measures. Therefore, the potential for substantial impacts on aesthetics, air quality, biological resources, cultural resources, and noise as a result of the proposed project are reduced to a less than significant level and the project would not substantially degrade the quality of the natural environment.

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.)

Less Than Significant Impact: As described above, potential temporary impacts that would occur as a result of construction activities would be mitigated at the project level. No long-term adverse impacts are anticipated to occur, and as such, the incremental effects of the project would not be considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. At the time this initial study was drafted, there were no concurrent project proposals for the subject property that would have a cumulative considerable impact in connection with this proposed retaining wall retrofit and repair of the existing access driveway and repairs to the existing arch culvert. With the implementation of the mitigations described in the sections above, the proposed project would not result in cumulatively considerable impacts on the environment.

c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant Impact: This Initial Study has disclosed potential impacts on human beings that would be less than significant with the implementation of mitigation measures. All identified mitigation measures will be included as conditions of approval for the proposed project, and the applicant will be responsible for implementation of the measures. As a result, there would not be any environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly.

REFERENCES

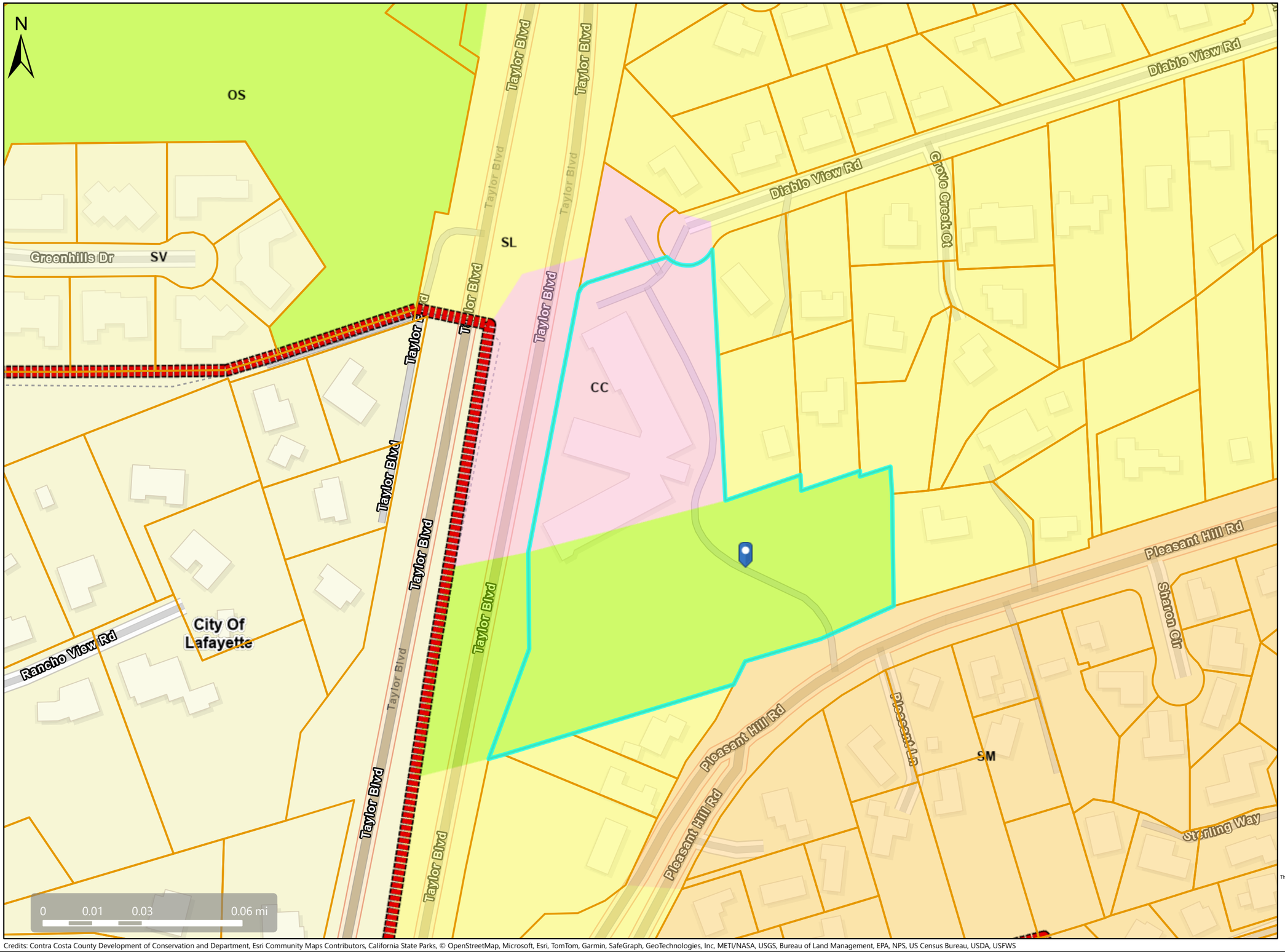
In the process of preparing the Initial Study Checklist and conduction of the evaluation, the above cited references were consulted. Reference materials are available for review by contacting Syd Sotoodeh, Contra Costa County Department of Conservation and Development, by email at syd.sotoodeh@dcd.cccounty.us or by phone at (925) 655-2877.

ATTACHMENTS

1) Maps and Aerial View of the Subject Property/Project Site
2) Photos of the Project Site
3) Project Plans

MAPS/AERIAL VIEW

General Plan: OS, Open Space; CC, Congregate Care



Map Legend

- Assessment Parcels

General Plan

- SV (Single Family Residential - Very Low) 0.2 - 0.9 Units per Net Acre
- SL (Single Family Residential - Low) 1.0 - 2.9 Units per Net Acre
- SM (Single Family Residential - Medium) 3.0 - 4.9 Units per Net Acre
- CC (Congregate Care/Senior Housing)
- OS (Open Space)
- City Limits

DOIT GIS
CONTRA COSTA COUNTY

This map is a user generated, static output from an internet mapping application and is intended for reference use only.
Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.
THIS MAP IS NOT TO BE USED FOR NAVIGATION.
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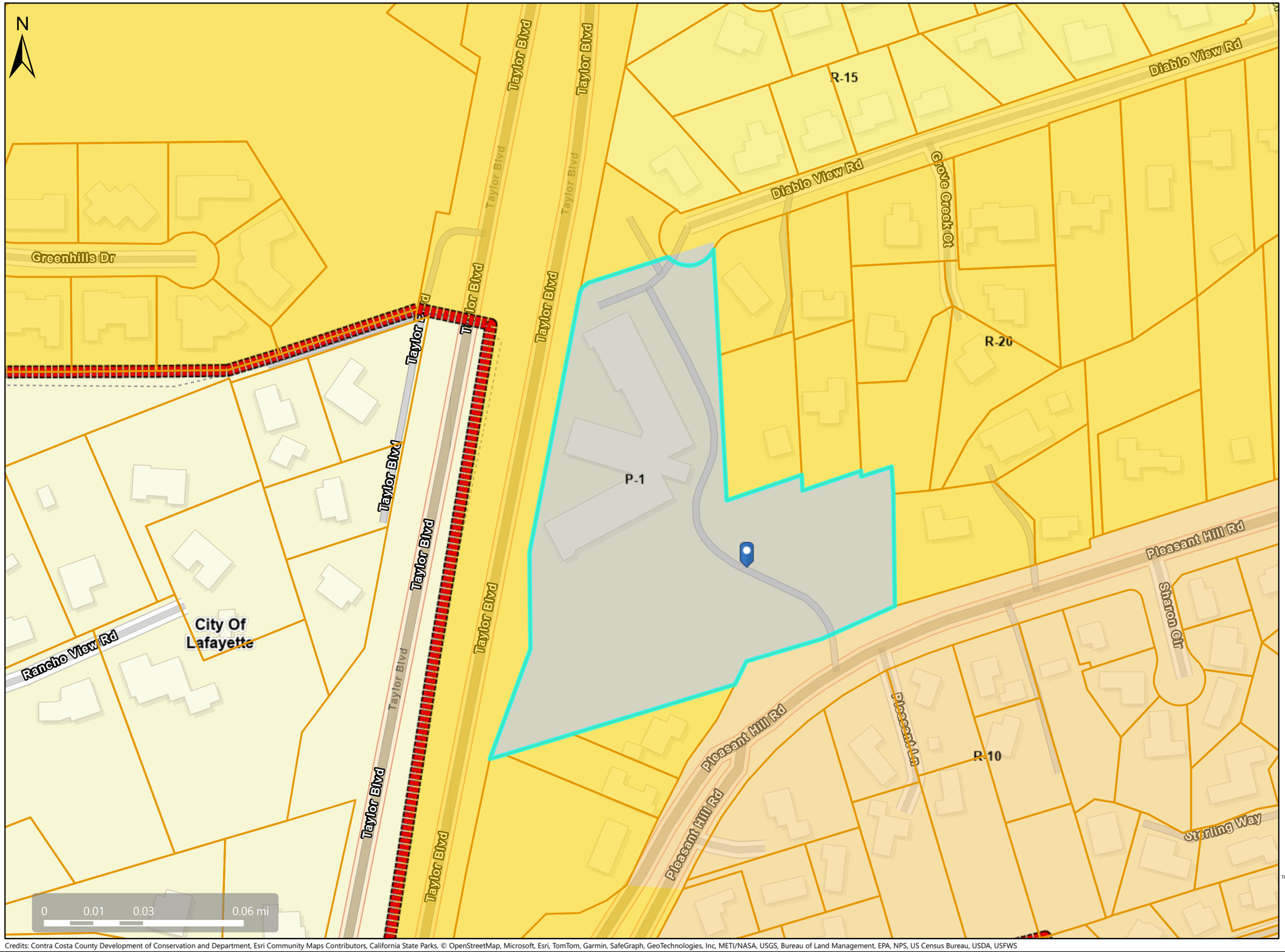
Please direct all data inquires to the appropriate department.

Spatial Reference
PCS: WGS 1984 Web Mercator Auxiliary Sphere
Datum: WGS 1984

Credits: Contra Costa County Development of Conservation and Department, Esri Community Maps Contributors, California State Parks, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS

Zoning: P-1



Map Legend

- Assessment Parcels
- Zoning
- ZONE_OVER
- R-10 (Single Family Residential)
- R-15 (Single Family Residential)
- R-20 (Single Family Residential)
- P-1 (Planned Unit)
- City Limits

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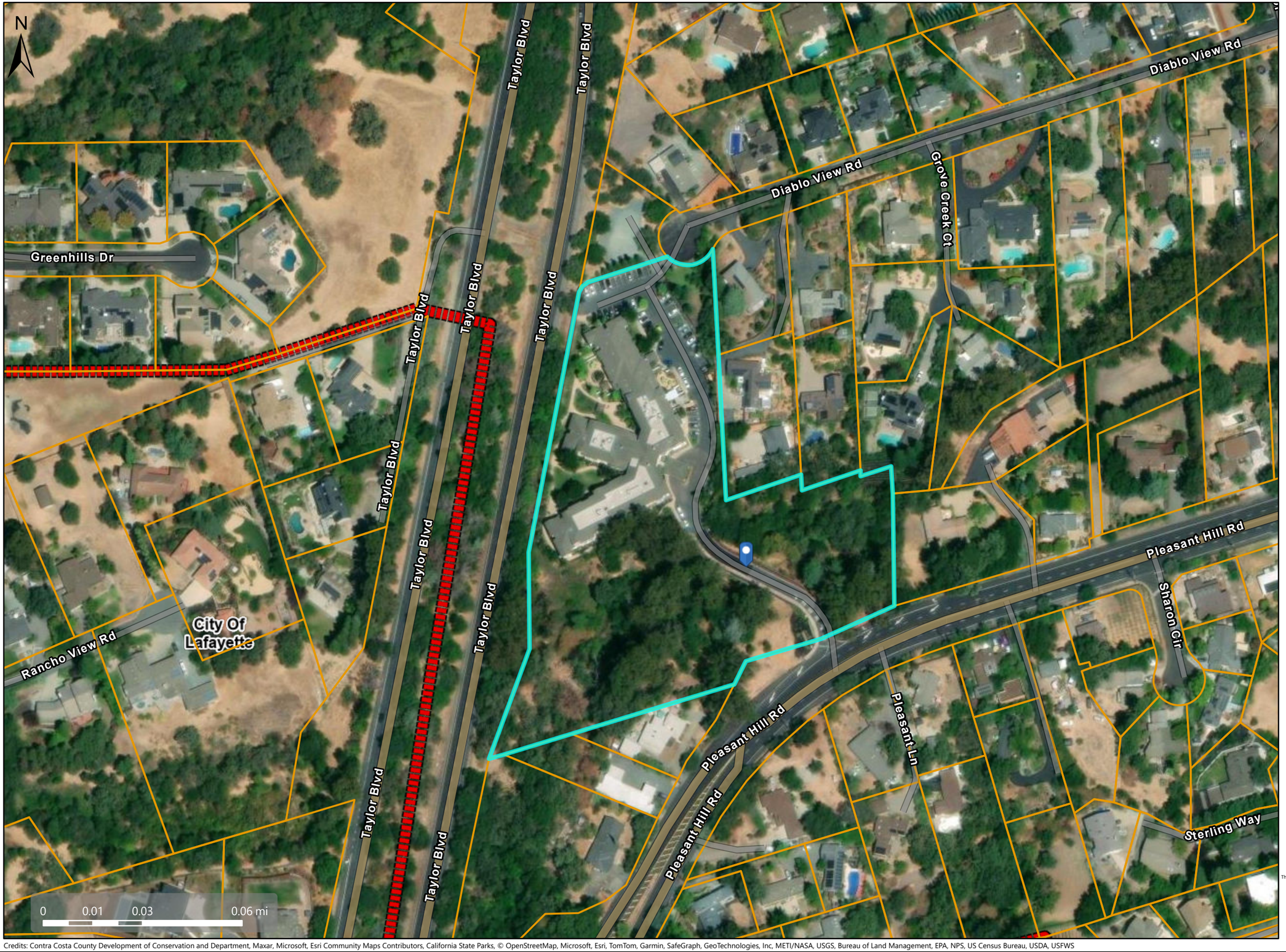
Aerial View - Subject Property/Area



Map Legend

- Assessment Parcels
- City Limits

DOIT GIS
CONTRA COSTA COUNTY

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Aerial View - Project Site

Map Legend

Assessment Parcels

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CONTRA COSTA COUNTY

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PHOTOS

Site Visit Photos, 12/18/2019

Retaining wall on east side of driveway and culvert,
and assisted living facility, viewed from Pleasant Hill Road

East side of bridge/retaining wall structure, viewed from Pleasant Hill Road

Site Visit Photos, 12/18/2019

Driveway to facility

View of Intermittent Stream “Murderers Creek” (photo taken after rainy weather)

West side of bridge/retaining wall structure

PROJECT PLANS

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LEGEND

DESCRIPTION	EXISTING	PROPOSED
LOT LINES		
EASEMENT		
PROPERTY LINE		
CENTERLINE		
CURB & GUTTER		
DITCH		
STORM DRAIN	XX"SD	SD
SANITARY SEWER	XX"SS	SS
WATER	XX"W	W
GAS LINE	G	G
FIRE SERVICE		FS
CULVERT		
SDMH		
AREA DRAIN		
DROP INLET		
DIRECTION OF SURFACE FLOW		
SSMH		
SSCO		
SEWER SERVICE		
BLOW OFF	BO	
FIRE HYDRANT		
WATER VALVE		
WATER METER	WM	
MONUMENT		
UTILITY POLE		
UTILITY POLE WITH LIGHT		
STREET LIGHT		
POST TOP STREET LIGHT		
FENCE	X X	X X
INDEX CONTOUR	25	25
INTERMEDIATE CONTOUR		
HEDGE		
JUNCTION/PULL BOX	PB	PB
SIGN		
GRADE BREAK LINE		GB
FINISH GRADE ELEVATION	+114.55	+57.20
TREE & DRIPLINE		

ABBREVIATIONS

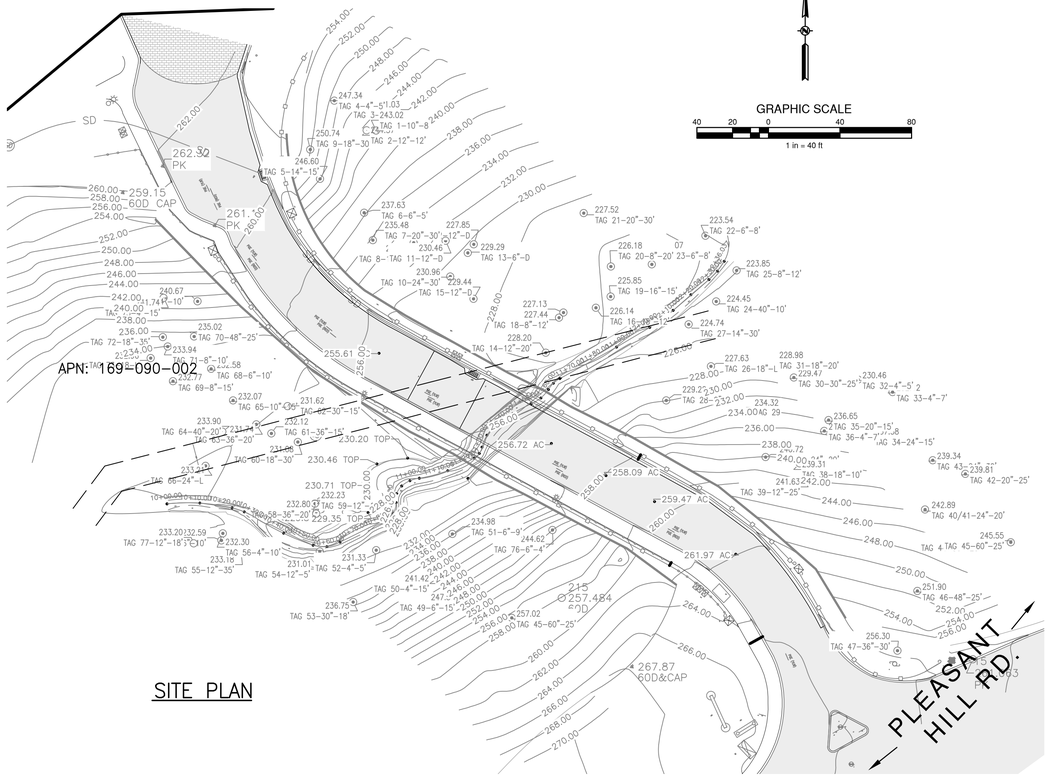
AC	ASPHALT CONCRETE
AD	AREA DRAIN
A.E.	APPROVED EQUAL
AP	ANGLE POINT
ARV	AIR RELEASE VALVE
BK	BOOK
BOC	BACK OF CURB
BOV	BLOW-OFF VALVE
BOW	BACK OF WALK
BW	BOTTOM OF WALL
CC	CURB AND GUTTER
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
CP	CAR POOL
DETL	DETAIL
DI	DROP INLET
DIP	DUCTILE IRON PIPE
DIST	DISTRICT
DWG	DRAWING
(E)	EXISTING OR EAST
EG	EXISTING GRADE
ELEV	ELEVATION
EP	EDGE OF PAVEMENT
ESMT	EASEMENT
EX	EXISTING
EXIST	EXISTING
EV	ELECTRIC VEHICLE
FF	FINISH FLOOR
FG	FINISH GRADE
FS	FIRE SERVICE
FDC	FIRE DEPARTMENT CONNECTION
FES	FLARED END SECTION
FH	FIRE HYDRANT
FL	FLOW LINE
FP	FINISH PAVEMENT
G	GAS
GB	GRADE BREAK
GR	GRATE
HDPE	HIGH DENSITY POLYETHYLENE
HP	HIGH POINT
INTX	INTERSECTION
INV	INVERT
IRR	IRRIGATION
LF	LINEAR FEET
LT	LEFT
NFPA	NATIONAL FIRE PREVENTION ACT
NO	NUMBER
NG	NATIVE GROUND
NTS	NOT TO SCALE
OG	ORIGINAL GROUND
OMP	OPEN METAL PIPE
P	PAVERS
PIV	POST INDICATOR VALVE
(P)	PROPOSED
PROP	PROPOSED
PCC	PORTLAND CEMENT CONCRETE
POC	POINT OF CONNECTION
PL	PROPERTY LINE
PG	PAGE
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
RT	RIGHT
ROW	RIGHT-OF-WAY
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SDWK	SIDEWALK
S.O.	SIDE OPENING
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEAN OUT
SSMH	SANITARY SEWER MANHOLE
STD	STANDARD
SVC	SERVICE
SW	SIDEWALK
TBW	TOP BACK OF WALK
TC	TOP OF CURB
TOE	TOP OF BOTTOM SLOPE
TOE WALL	TOP OF BOTTOM WALL
TYP	TYPICAL
TS	TOP OF SLOPE
TW	TOP OF WALL
W	WATER
WV	WATER VALVE
WM	WATER METER

IMPROVEMENT PLANS FOR

ATRIA PARK OF LAFAYETTE - MAIN ROAD RETROFIT

CITY OF LAFAYETTE, CONTRA COSTA COUNTY, STATE OF CALIFORNIA
1545 PLEASANT HILL ROAD, LAFAYETTE, CA 95816

APN: 169-090-002



SITE PLAN

VICINITY MAP

SHEET INDEX

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5	C5	TOPOGRAPHIC SURVEY
6	C6	TREE SURVEY AND REMOVAL PLAN
7	C7	CREEK SURVEY
8	C8	BRIDGE SURVEY
9	C9	ASPHALT DEMOLITION AND REPLACEMENT PLAN
10	C10	SECTIONS & DETAILS
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12	C12	CREEK/CULVERT PLAN & PROFILE
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18	S3	STRUCTURAL PLAN-CULVERT
19	S4	STRUCTURAL PLAN-CULVERT
20	D1	DRILLTECH SOIL NAIL RETROFIT OF EXISTING WALL NOTES
21	D2	DRILLTECH SOIL NAIL RETROFIT OF EXISTING WALL PLAN VIEW
22	D3	DRILLTECH SOIL NAIL RETROFIT OF EXISTING WALL WALL ELEVATIONS
23	D4	DRILLTECH SOIL NAIL RETROFIT OF EXISTING WALL WALL SECTIONS
24	D5	DRILLTECH SOIL NAIL WALL RETROFIT SOIL NAIL DETAILS
25	D6	DRILLTECH SOIL NAIL WALL RETROFIT DETAILS
26	U1	URETEK PLAN SLOPE SOIL IMPROVEMENT
27	U2	URETEK PLAN SLOPE SOIL IMPROVEMENT
28	U3	URETEK PLAN CULVERT INJECTION
29	U4	URETEK PLAN SLOPE SOIL IMPROVEMENT
30	U5	URETEK PLAN CULVERT INJECTION

SURVEY NOTE

1. TOPOGRAPHIC SURVEY FOR THIS PROJECT WAS PREPARED BY:

   GEO-LEGAL
   8850 GREENBACK LANE, STE C
   ORANGEVALE, CA 95662
   P: (916) 871-4789

2. CONSTRUCTION STAKING FOR THIS PROJECT SHALL NOT OCCUR UNTIL AFTER THE PARTY CHIEF FOR THE FIRM PERFORMING THE CONSTRUCTION STAKING HAS NOTIFIED THE ENGINEER OF RECORD, IN WRITING, THAT HE HAS PERFORMED A TOPOGRAPHIC CHECK OF THE SITE AND THAT THE ELEVATION FOR THE REFERENCED BENCH MARK MATCHES THE SITE TOPOGRAPHY. IF IT IS DETERMINED THAT THE SITE TOPOGRAPHY IDENTIFIED ON THE PLANS DOES NOT MATCH THE IDENTIFIED BENCH MARK FOR THE SITE, THEN THE ENGINEER, CONTRACTOR AND CONSTRUCTION STAKER SHALL MEET AND DETERMINE HOW TO RESOLVE THE DISCREPANCY. UNDER NO CIRCUMSTANCES SHALL THE SITE BE STAKED UNTIL THE ENGINEER OF RECORD ISSUES A LETTER TO THE CONTRACTOR, CONSTRUCTION STAKER AND TO THE OWNER THAT THE SITE TOPO AND BENCH MARK MATCH.

BENCH MARK

BASIS OF ELEVATION: CONTRA COSTA COUNTY BENCHMARK #978 – CONTRA COSTA COUNTY BRONZE DISK SET IN THE NORTHEAST CORNER OF BRIDGE ON PLEASANT HILL ROAD OVER PLEASANT HILL OVERPASS.

ELEV: 342.839

GEOTECHNICAL REPORT

1. A GEOTECHNICAL REPORT FOR THE EXISTING ROAD WAS PREPARED BY GEOTECHNICA ON 06/08/18 PROJECT #172370.

2. AN ADDENDUM TO THE REPORT LISTED ABOVE WAS PREPARED ON 04/16/19, 04/24/23 AND 06/14/23

UTILITY REPRESENTATIVES

UTILITY	COMPANY	CONTACT	PHONE
GAS	PG&E		800-743-5000
ELECTRICITY	LAFAYETTE UTILITIES SYSTEM	DARLINE HOBACK	337-291-8972
TELEPHONE	AT&T		800-750-2355
WATER	LAFAYETTE UTILITIES SYSTEM	STEVE DRONET	337-291-5865
SEWER	CENTRAL CONTRA COSTA SANITARY DISTRICT	CHRIS CARPENTER	925-229-7200
DRAINAGE	CONTRA COSTA COUNTY	BRIAN M.BALBAS	925-313-2315
FIRE	CONTRA COSTA COUNTY FIRE PROTECTION DISTRICT	LEWIS BROSCHARD	925-941-3300
CABLE T.V.	COMCAST		800-945-2288

OWNER:

ATRIA PARK OF LAFAYETTE
1545 PLEASANT HILL RD
LAFAYETTE CA 95816
CONTACT:JAYMES DELGADO
@ 650-226-6515

STRUCTURAL ENGINEER:

MOORADIAN & ASSOCIATES
4578 N.FIRST STREET #140
TUCSON AZ 85718
520-408-8117

EARTHWORK

SITE EARTHWORK CALCULATED PER FOLLOWING CRITERIA AND NOT ADJUSTED FOR COMPACTION OR EXPANSION.

FILL: 0.00 CY

CUT: 450 CY (CULVERT ONLY)

APPROVED BY:	EXPIRES IN 1 YEAR	APPROVED BY:	EXPIRES IN 1 YEAR
CONTRA COSTA COUNTY FIRE DISTRICT	DATE	CONTRA COSTA COUNTY – COUNTY ENGINEER	DATE

CONTRA COSTA COUNTY
MUNICIPAL SERVICES

PROJECT NAME:	1545 PLEASANT HILL ROAD
APN'S:	169-090-002
COUNTY FILE: #TP19-0057 & #DP88-3007	
APPROVED:	
ORDER No. N/A	DRAINAGE FEE: N/A
CHECKED BY:	DRAINAGE APPROVAL:

WDID:	N/A		
CONSTRUCTION START DATE:	N/A		
FINAL STABILIZATION DATE:	N/A		
AREA OF DISTURBANCE (AC.):	N/A		
VOL. OF CUT (CY):	N/A	VOL. OF FILL (CY):	N/A
POST-CONST. STORMWATER BMP'S REQ? (Y/N):			

TRAFFIC NOTE:

NOTE: THE CONTRACTOR SHALL PREPARE, SUBMIT & OBTAIN APPROVAL ON A TRAFFIC/TRANSPORTATION MANAGEMENT PLAN. THE PLAN SHALL DESCRIBE ANTICIPATED IMPACTS TO TRAFFIC ON PLEASANT HILL RD. AND POTENTIAL CLOSURE/DETOUR FOR THE MAIN ENTRY ROAD.

CALL BEFORE YOU DIG
USA
UNDERGROUND SERVICE ALERT
CA: 800-227-2600

REVISIONS:

ATRIA LAFAYETTE
APN 169-090-002
TITLE SHEET
CONTRA COSTA COUNTY, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BOBBIE F. BRANNIN
No. 48856
Exp. 09-30-2024
CIVIL
STATE OF CALIFORNIA

DRAWN BY: LANA T.
DESIGNED BY: B.F.BRANNIN
CHECKED BY: B.F.BRANNIN
DATE: JANUARY, 2024
SCALE: AS SHOWN

PROJECT NO: 23-001

THE OLYMPUS GROUP
ENGINEERING, PLANNING & SURVEYING
8850 GREENBACK LANE, SUITE C | PHONE: 916-966-6228
ORANGEVALE CA. 95662-4692 | WWW.OLYMPUSGROUP.NET

C1
SHEET 1 OF 30

P:\23-001 ATRIA LAFAYETTE - MAIN ROAD RETROFIT\CAD\PLANS\IMPROVEMENT PLANS\23001IP_C01-TI01.DWG Jan 16, 2024 03:20 pm

GENERAL NOTES:

1. FIELD CONFLICTS: THESE PLANS SHOW EXISTING FEATURES INCLUDING BUT NOT LIMITED TO TREES, UTILITIES, AND STRUCTURES THAT MAY BE AFFECTED BY THE CONSTRUCTION OR PLACEMENT OF THE PROPOSED ENGINEERED IMPROVEMENTS. THE CONTRACTOR WILL IMMEDIATELY NOTIFY THE ENGINEER IF THERE ARE ANY EXISTING FEATURES, WHETHER SHOWN OR NOT SHOWN ON THESE PLANS, THAT COULD IN ANY WAY BE IN POTENTIAL CONFLICT WITH THE DESIGN OF THESE PLANS. ALL WORK WITHIN THE VICINITY OF A POTENTIAL CONFLICT SHALL CEASE UNTIL AN ADEQUATE AND APPROPRIATE SOLUTION IS DETERMINED BY THE ENGINEER AND APPROVED BY THE PUBLIC WORKS DEPARTMENT.
2. SHOULD IT APPEAR THAT THE WORK TO BE DONE, OR ANY MATTER RELATIVE THERETO, IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT ______________ (NAME OF PROJECT ENGINEER), FOR SUCH FURTHER EXPLANATIONS AS MAY BE NECESSARY.
3. BASIS OF ELEVATION DATUM: CONTRA COSTA COUNTY BENCHMARK #978- CONTRA COSTA COUNTY BRONZE DISK SET IN THE NORTHEAST CORNER OF BRIDGE ON PLEASANT HILL ROAD OVER PLEASANT HILL ROAD OVER PLEASANT HILL OVERPASS.

   ELEV: 342.839
4. ALL STREET IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF TITLE 9 OF THE CURRENT COUNTY ORDINANCE CODE, COUNTY STANDARD SPECIFICATIONS AND STANDARD PLANS. ALL PEDESTRIAN IMPROVEMENTS SHALL CONFORM WITH THE REQUIREMENTS OF TITLE 24 OF THE CALIFORNIA CODE OF REGULATIONS AND THE AMERICANS WITH DISABILITIES ACT. THE IMPROVEMENTS ARE SUBJECT TO THE INSPECTION AND APPROVAL OF THE PUBLIC WORKS DEPARTMENT. CONTACT THE PUBLIC WORKS DESIGN / CONSTRUCTION DIVISION AT 313-2320, AT LEAST 48 HOURS PRIOR TO THE START OF ANY WORK, TO ARRANGE FOR INSPECTION. ANY WORK PERFORMED WITHOUT PROVIDING THIS ADVANCED NOTICE WILL BE REJECTED AND THE DEVELOPER/CONTRACTOR MAY BE REQUIRED TO REMOVE THE IMPROVEMENTS AND MAY BE SUBJECT TO PAYMENT OF FINES AS DETERMINED BY THE PUBLIC WORKS DIRECTOR.
5. QUALITY CONTROL PLAN: THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING THE QUALITY OF MATERIAL ENTERING THE WORK AND THE WORK PERFORMED, AND SHALL PERFORM TESTING TO ENSURE CONTROL. PRIOR TO START OF WORK THE CONTRACTOR SHALL SUBMIT A QUALITY CONTROL PLAN THAT MUST DESCRIBE THE METHODS AND FREQUENCY OF TESTING, IMPLEMENTATION OF CORRECTIVE ACTIONS AS NECESSARY, AND REPORTING OF TEST RESULTS, SPECIFIC TO EACH MATERIAL TO BE USED.
6. PLAN REVISIONS: ALL REVISIONS TO THIS PLAN MUST BE REVIEWED BY THE PUBLIC WORKS DEPARTMENT PRIOR TO CONSTRUCTION AND SHALL BE ACCURATELY SHOWN ON REVISED PLANS, STAMPED AND DISTRIBUTED BY THE ENGINEERING SERVICES DIVISION, PRIOR TO ACCEPTANCE OF THE WORK AS COMPLETE.
7. 7. EXCAVATION: THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT AT 8110R (800) 227-2600 TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION. THE USA AUTHORIZATION NUMBER SHALL BE KEPT AT THE JOB SITE.
8. ALL UTILITY DISTRIBUTION SERVICES SHALL BE PLACED UNDERGROUND.
9. UTILITY CLEARANCE: PRIOR TO PLACING CURB, SIDEWALK, ASPHALT CONCRETE, SUBBASE OR BASE MATERIAL, ALL UNDERGROUND UTILITIES WITHIN THE RIGHT OF WAY SHALL BE INSTALLED, BACKFILL COMPLETED AND THE PUBLIC WORKS DEPARTMENT'S CONSTRUCTION DIVISION NOTIFIED, BY EACH OF THE UTILITY COMPANIES HAVING FACILITIES WITHIN THE WORK AREA, THAT THE UTILITY INSTALLATION HAS SATISFACTORILY PASSED ACCEPTANCE TESTS.
10. ALL MANHOLES OR INLETS OVER 4 FEET IN DEPTH SHALL BE PROVIDED WITH LADDER STEPS. LADDER STEPS SHALL BE INTEGRALLY CAST INTO THE WALLS OF THE MANHOLE OR INLET WHETHER PRECAST OR FIELD CAST IN ACCORDANCE WITH COUNTY SPECIFICATIONS. LADDER STEPS SHALL BE STEEL REINFORCED COPOLYMER POLYPROPYLENE PLASTIC OR EQUIVALENT.
11. PAVEMENT WIDENING: WHEN WIDENING THE PAVEMENT ON AN EXISTING ROAD, THE EXISTING PAVEMENT SHALL BE CUT TO A NEAT LINE AND REMOVED TO AN EXISTING ADEQUATE STRUCTURAL SECTION. AN EXPLORATORY TRENCH, OR POTHOLING, MAY BE REQUIRED TO DETERMINE THE LIMITS OF PAVEMENT REMOVAL.
12. RETAINING WALLS: RETAINING WALLS WITHIN PUBLIC ROAD RIGHTS OF WAY WILL BE INSPECTED BY THE PUBLIC WORKS DEPARTMENT.

A. A BUILDING PERMIT WILL BE REQUIRED FOR RETAINING WALLS, OUTSIDE PUBLIC ROAD RIGHTS OF WAY, THAT ARE 4 FEET OR HIGHER, OR THAT ARE 3 FEET OR HIGHER WITH SURCHARGE. PRIOR TO ACCEPTANCE OF THE IMPROVEMENTS AS COMPLETE, VERIFICATION THAT THE BUILDING INSPECTION DEPARTMENT HAS SIGNED OFF ON THE PERMIT SHALL BE PROVIDED TO THE CONSTRUCTION INSPECTOR.

B. RETAINING WALLS UNDER 4 FEET HIGH (3 FEET HIGH WITH SURCHARGE) SHOWN ON THE IMPROVEMENT PLAN TO BE OUTSIDE OF PUBLIC ROAD RIGHT OF WAY, WILL BE INSPECTED BY (NAME OF ENGINEERING FIRM). A LETTER STATING THAT ALL WALLS WERE CONSTRUCTED IN ACCORDANCE WITH THE STRUCTURAL AND/OR GEOTECHNICAL ENGINEERS' RECOMMENDATIONS MUST BE SUBMITTED TO THE PUBLIC WORKS DEPARTMENT, PRIOR TO ACCEPTANCE OF IMPROVEMENTS AS COMPLETE.

13. REPRODUCIBLE 610MM X 920MM (24" X 36") MYLAR 'AS BUILT' RECORD DRAWINGS ARE REQUIRED FOR ENGINEERED STRUCTURES WITHIN PUBLIC RIGHTS OF WAY OR EASEMENTS. STRUCTURES INCLUDE: BRIDGES, RETAINING WALLS, TIE BACKS, SUBDRAINS, ETC.
14. TREES: NO TREES SHALL BE REMOVED UNLESS THEY ARE SHOWN AND NOTED TO BE REMOVED ON THE IMPROVEMENT PLANS. IF ANY TREES ARE TO BE REMOVED, THE IMPROVEMENT PLANS MUST BE REVIEWED AND ACKNOWLEDGED BY THE COMMUNITY DEVELOPMENT DEPARTMENT. ALL TREES CONFLICTING WITH GRADING, UTILITIES, OR OTHER IMPROVEMENTS, OR OVERHANGING THE SIDEWALK OR PAVEMENT SO AS TO FORM A NUISANCE OR HAZARD, SHALL BE TRIMMED, PROPERLY TREATED AND SEALED. A TREE PERMIT MAY BE NECESSARY AND CAN BE OBTAINED FROM THE COMMUNITY DEVELOPMENT DEPARTMENT.
15. GRADES LESS THAN 1 PERCENT: WATER TESTING IS REQUIRED FOR ALL CURB GRADES LESS THAN ONE PERCENT.
16. ALL ASPHALT CONCRETE PAVING OF PUBLIC ROADS IS SUBJECT TO TESTS REQUIRED BY AMENDED SECTION 39-HOT MIX ASPHALT OF THE CONTRA COSTA COUNTY STANDARD SPECIFICATIONS DATED OCTOBER 16, 2014. BASED ON THESE TESTS, ADDITIONAL PAVEMENT TREATMENT MAY BE NECESSARY.
17. EXISTING CURB AND SIDEWALK WITHIN THE PROJECT LIMITS THAT ARE DAMAGED OR DISPLACED, EVEN THOUGH NOT PROPOSED TO BE REMOVED, SHALL BE REPAIRED OR REPLACED, EVEN IF DAMAGE OR DISPLACEMENT OCCURRED PRIOR TO ANY WORK PERFORMED BY THE CONTRACTOR.
18. EROSION CONTROL: IF PAVING AND STORM DRAIN IMPROVEMENTS ARE NOT COMPLETED BY OCTOBER 1ST, TEMPORARY SILT AND DRAINAGE CONTROL FACILITIES SHALL BE INSTALLED TO CONTROL AND CONTAIN EROSION-CAUSED SILT DEPOSITS AND TO PROVIDE FOR THE SAFE DISCHARGE OF STORM WATERS INTO EXISTING STORM WATER FACILITIES. DESIGN OF THESE FACILITIES MUST BE APPROVED BY THE BUILDING INSPECTION DEPARTMENT.
19. PAVEMENT STRUCTURAL SECTION: THE THICKNESS OF SUB-BASE, BASE AND SURFACING WILL BE DETERMINED BY THE COUNTY PUBLIC WORKS DEPARTMENT BASED ON THE TRAFFIC INDEX AND SOILS TESTS FOR "R" VALUE.
20. PAVEMENT STRIPING: ALL TRAFFIC STRIPING AND MARKINGS SHALL BE THERMOPLASTIC UNLESS THESE PLANS DESIGNATE THE USE OF TRAFFIC PAINT.
21. ALL STRIPING ON MAJOR ROADS SHALL BE CAT TRACKED PRIOR TO FINAL INSTALLATION. FINAL INSTALLATION OF STRIPING WILL BE ALLOWED ONLY AFTER APPROVAL OF THE STRIPING LAYOUT BY THE CONSTRUCTION INSPECTOR.
22. ALL SUBDIVISION STREETS THAT ARE STUBBED OUT FOR FUTURE USE SHALL HAVE A SIGN POSTED AT THE END OF THE DEAD END STREET THAT READS: 'THIS STREET PLANNED TO BE EXTENDED.' THE SIGN SHALL BE REFLECTORIZED WITH BLACK 2-INCH CAPITAL SERIES "E" LETTERS ON A WHITE BACKGROUND, MEASURING 18 INCHES HIGH BY 36 INCHES WIDE. INSTALL WITH W31 ('END') SIGN BEHIND STANDARD END OF STREET BARRICADE. SEE COUNTY STANDARD PLAN CA 30.
23. THE CONTRACTOR SHALL COMPLY WITH ALL RULES, REGULATIONS AND PROCEDURES OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) FOR MUNICIPAL CONSTRUCTION AND INDUSTRIAL ACTIVITIES AS PROMULGATED BY THE CALIFORNIA STATE WATER RESOURCE CONTROL BOARD OR ANY OF ITS REGIONAL WATER QUALITY CONTROL BOARDS.
24. THE CONTRACTOR IS RESPONSIBLE FOR PRESERVATION AND/OR PERPETUATION OF ALL EXISTING MONUMENTS (THAT CONTROL SUBDIVISIONS, TRACTS, STREETS OR HIGHWAYS, OR PROVIDE SURVEY CONTROL) WHICH WILL BE DISTURBED OR REMOVED DUE TO CONTRACTOR'S WORK. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 10 WORKING DAYS NOTICE, TO PROJECT ENGINEER/SURVEYOR, PRIOR TO DISTURBANCE OR REMOVAL OF EXISTING MONUMENTS. PROJECT ENGINEER/SURVEYOR SHALL COORDINATE WITH THE CONTRACTOR TO RESET MONUMENTS OR PROVIDE PERMANENT WITNESS MONUMENTS AND FILE THE REQUIRED DOCUMENTATION WITH THE COUNTY SURVEYOR, PER BUSINESS AND PROFESSIONS CODE SECTION 8771.
25. ANY MATERIAL IMPORTED FOR THE CONSTRUCTION OF EMBANKMENTS OR AS BACKFILL FOR STRUCTURES, CULVERTS AND OTHER FACILITIES SHALL MEET THE FOLLOWING REQUIREMENTS:

PH*	>5.5 (>7.3**)
WATER SOLUBLE SULFATE***	<0.2%
RESISTIVITY (R)*	>3000 OHM/CM**

* PER CALIFORNIA TEST 532 & 643. ** FOR BACKFILL AROUND METAL PIPE/CONDUIT.

*** REPORTED AS S04

26. ENCROACHMENT PERMIT: THE CONTRACTOR IS REQUIRED TO OBTAIN AN ENCROACHMENT PERMIT FOR ALL WORK WITHIN EXISTING COUNTY ROAD RIGHTS OF WAY. APPLICATIONS FOR ENCROACHMENT PERMIT, SUBMITTED MORE THAN 120 DAYS PAST THE PUBLIC WORKS "REVIEWED" DATE STAMP, MAY REQUIRE UP TO FOUR WEEKS TO PROCESS. FOR FURTHER PERMIT INFORMATION, CONTACT THE APPLICATION AND PERMIT CENTER AT (925) 674-7744.
27. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE COUNTY AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.

EROSION AND SEDIMENT CONTROL NOTES:

1. THE CONTRACTOR SHALL FOLLOW CONTRA COSTA COUNTY GUIDELINES FOR GRADING AND EROSION AND SEDIMENT CONTROL" FOR THE MEASURES SHOWN OR STATED ON THESE PLANS.
2. CONTRACTOR MUST ENSURE THAT THE CONSTRUCTION SITE IS PREPARED PRIOR TO THE ONSET OF ANY STORM. CONTRACTOR SHALL HAVE ALL EROSION AND SEDIMENT CONTROL MEASURES IN PLACE FOR THE WINTER MONTHS PRIOR TO OCTOBER 1.
3. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED. CHANGES TO THIS EROSION AND SEDIMENT CONTROL PLAN SHALL BE MADE TO MEET FIELD CONDITIONS ONLY WITH THE APPROVAL OF OR AT THE DIRECTION OF A REPRESENTATIVE OF THE DEPARTMENT OF UTILITIES.
4. THIS PLAN MAY NOT COVER ALL THE SITUATIONS THAT ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. VARIATIONS MAY BE MADE TO THE PLAN IN THE FIELD SUBJECT TO THE APPROVAL OF OR AT THE DIRECTION OF A REPRESENTATIVE OF THE DEPARTMENT OF UTILITIES.
5. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED BEFORE AND AFTER ALL STORMS TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
6. CONTRACTOR SHALL MAINTAIN A LOG AT THE SITE OF ALL INSPECTIONS OR MAINTENANCE OF BMPS, AS WELL, ANY CORRECTIVE CHANGES TO THE BMPS OR EROSION AND SEDIMENT CONTROL PLAN.
7. IN AREAS WHERE SOIL IS EXPOSED, PROMPT REPLANTING WITH NATIVE COMPATIBLE, DROUGHT-RESITANT VEGETATION SHALL BE PERFORMED. NO AREAS WILL BE LEFT EXPOSED OVER THE WINTER SEASON.
8. THE CONTRACTOR SHALL INSTALL THE STABILIZED CONSTRUCTION ENTRANCE PRIOR TO COMMENCEMENT OF GRADING. LOCATION OF THE ENTRANCE MAY BE ADJUSTED BY THE CONTRACTOR TO FACILITATE GRADING OPERATIONS. ALL CONSTRUCTION TRAFFIC ENTERING THE PAVED ROAD MUST CROSS THE STABILIZED CONSTRUCTION ENTRANCE. THE STABILIZED CONSTRUCTION ENTRANCE SHALL REMAIN IN PLACE UNTIL THE ROAD BASE ROCK COURSE IS COMPLETED.
9. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE SWEPT AT THE END OF EACH WORKING DAY OR AS NECESSARY.
10. CONTRACTOR SHALL PLACE GRAVEL BAGS AROUND ALL NEW DRAINAGE STRUCTURE OPENINGS IMMEDIATELY AFTER THE STRUCTURE OPENING IS CONSTRUCTED. THESE GRAVEL BAGS SHALL BE MAINTAINED AND REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED.
11. CONTRACTOR SHALL IMPLEMENT HOUSEKEEPING PRACTICES AS FOLLOWS:
    - A. SOLID WASTE MANAGEMENT: PROVIDE DESIGNATED WASTE COLLECTION AREAS AND CONTAINERS. ARRANGE FOR REGULAR REMOVAL AND DISPOSAL. CLEAR SITE OF TRASH INCLUDING ORGANIC DEBRIS, PACKAGING MATERIALS, SCRAP OR SURPLUS BUILDING MATERIALS AND DOMESTIC WASTE DAILY.
    - B. MATERIAL DELIVERY AND STORAGE: PROVIDE A DESIGNATED MATERIAL STORAGE AREA WITH SECONDARY CONTAINMENT SUCH AS BERMING. STORE MATERIAL ON PALLETS AND PROVIDE COVERING FOR SOLUBLE MATERIALS. RELOCATE STORAGE AREA INTO BUILDING SHELL WHEN POSSIBLE. INSPECT AREA WEEKLY.
    - C. CONCRETE WASTE: PROVIDE A DESIGNATED AREA FOR A TEMPORARY PIT TO BE USED FOR CONCRETE TRUCK WASH-OUT. DISPOSE OF HARDENED CONCRETE OFFSITE. AT NO TIME SHALL A CONCRETE TRUCK DUMP ITS WASTE AND CLEAN ITS TRUCK INTO THE CITY STORM DRAINS VIA CURB AND GUTTER. INSPECT DAILY TO CONTROL RUNOFF, AND WEEKLY FOR REMOVAL OF HARDENED CONCRETE.
    - D. PAINT AND PAINTING SUPPLIES: PROVIDE INSTRUCTION TO EMPLOYEES AND SUBCONTRACTORS REGARDING REDUCTION OF POLLUTANTS INCLUDING MATERIAL STORAGE, USE, AND CLEAN UP. INSPECT SITE WEEKLY FOR EVIDENCE OF IMPROPER DISPOSAL.
    - E. VEHICLE FUELING, MAINTENANCE AND CLEANING: PROVIDE A DESIGNATED FUELING AREA WITH SECONDARY CONTAINMENT SUCH AS BERMING. DO NOT ALLOW MOBILE FUELING OF EQUIPMENT. PROVIDE EQUIPMENT WITH DRIP PANS. RESTRICT ONSITE MAINTENANCE AND CLEANING OF EQUIPMENT TO A MINIMUM. INSPECT AREA WEEKLY.
    - F. HAZARDOUS WASTE MANAGEMENT: PREVENT THE DISCHARGE OF POLLUTANTS FROM HAZARDOUS WASTES TO THE DRAINAGE SYSTEM THROUGH PROPER MATERIAL USE, WASTE DISPOSAL AND TRAINING OF EMPLOYEES. HAZARDOUS WASTE PRODUCTS COMMONLY FOUND ON-SITE INCLUDE BUT ARE NOT LIMITED TO PAINTS & SOLVENTS, PETROLEUM PRODUCTS, FERTILIZERS, HERBICIDES & PESTICIDES, SOIL STABILIZATION PRODUCTS, ASPHALT PRODUCTS AND CONCRETE CURING PRODUCTS.
12. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL REPAIR/RESTORE THE CHANNEL BOTTOM AND SIDE BANKS TO PRE-PROJECT CONDITION. ANY EXPOSED SOILS SHALL BE HYDROSEEDED WITH GRASSES NATIVE TO THE AREA.

PRECONSTRUCTION & STAKING NOTES:

1. PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL ARRANGE A PRE-CONSTRUCTION MEETING AT THE PROJECT SITE WITH THE CIVIL AND ARCHITECTURAL CONSULTANT, IN ORDER TO WALK THE SITE AND FIELD VERIFY OR CLARIFY ANY CONSTRUCTION OR DESIGN RELATED ISSUES PRIOR TO WORK BEGINNING.
2. WHEN REQUESTING CONSTRUCTION STAKES, THE CONTRACTOR IS REQUIRED TO NOTIFY THE PROJECT ENGINEER 48 HOURS IN ADVANCE. THE OLYMPUS GROUP, INC. ASSUMES NO RESPONSIBILITY FOR ANY COSTS INCURRED FOR CONSTRUCTION SHUTDOWNS OR DELAYS WHEN NOT GIVEN THIS ADVANCE NOTICE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS OR MARKERS DESTROYED OR LOST DURING CONSTRUCTION. ALL SUCH MONUMENTS OR MARKERS DESTROYED OR LOST DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTORS EXPENSE AND WILL REQUIRE 48 HOURS NOTICE FROM THE CONTRACTOR TO REPLACE SAID MONUMENTS.
4. THE CONTRACTOR WILL NOT PERFORM ANY CORRECTIVE WORK DUE TO STAKING ERRORS WITHOUT FIRST CONSULTING WITH THE PROJECT ENGINEER. IN THE EVENT THE COST OF ANY ITEM OF CORRECTIVE WORK EXCEEDS $500.00, PERMISSION TO PROCEED MUST BE RECEIVED IN WRITING FROM THE PROJECT ENGINEER. NO LIABILITY WILL BE ASSUMED BY THE PROJECT ENGINEER FOR THE COSTS OF WORK PERFORMED IN VIOLATION OF THIS PROVISION.
5. THE OLYMPUS GROUP, INC. ASSUMES NO LIABILITY FOR ANY WORK CONSTRUCTED IF STAKED BY OTHERS.
6. WHENEVER THE NOTE "VERIFY" IS INDICATED ON THESE PLANS, THE CONTRACTOR SHALL EXPOSE THESE FACILITIES PRIOR TO THE START OF ANY CONSTRUCTION. AFTER THE CONTRACTOR HAS COMPLETED EXPOSING SAID FACILITIES, HE SHALL NOTIFY THE PROJECT ENGINEER AND REQUEST THEY VERIFY THAT THE HORIZONTAL, VERTICAL ALIGNMENTS, MEASUREMENT. ETC., ARE IN SUBSTANTIAL CONFORMANCE WITH THESE PLANS TO THE PROJECT ENGINEERS SATISFACTION. IN THE EVENT THAT SAID FACILITIES ARE DETERMINED NOT TO BE IN SUBSTANTIAL CONFORMANCE, THE PROJECT ENGINEER RESERVES THE RIGHT TO REVISE THESE PLANS TO REFLECT THE FOUND CONDITIONS.

GRADING:

1. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH FHA STANDARDS.
2. CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CONTRA COSTA COUNTY & CALTRANS STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL OBTAIN AND USE ALL APPLICABLE ADDENDUMS.
3. ALL GRADING SHALL COMPLY WITH THE RECOMMENDATIONS OF THE SOIL AND GEOLOGICAL INVESTIGATION.
4. ALL SLOPE BANKS ARE 2:1 MAXIMUM UNLESS OTHERWISE NOTED.
5. ALL GRADING SHALL BE IN CONFORMANCE WITH THE CONTRA COSTA COUNTY GRADING, EROSION, AND SEDIMENT CONTROL SPECIFICATIONS.
6. GRADING, TRENCHING, CUTTING AND/OR FILLING WITHIN THE DRIP LINE OF THOSE TREES, DESIGNATED ON THE SITE PLAN FOR PRESERVATION, SHALL NOT OCCUR. NO ACTIONS SHALL BE TAKEN THAT WILL HARM THE HEALTH, VITALITY OR LONGEVITY OF THOSE TREES IDENTIFIED ON THE SITE PLAN FOR PRESERVATION.

CALL BEFORE YOU DIG
USA
CA: 800-227-2600

REVISIONS:

ATRIA LAFAYETTE
APN 169-090-002
GENERAL NOTES
CONTRA COSTA COUNTY, CALIFORNIA , CALIFORNIA

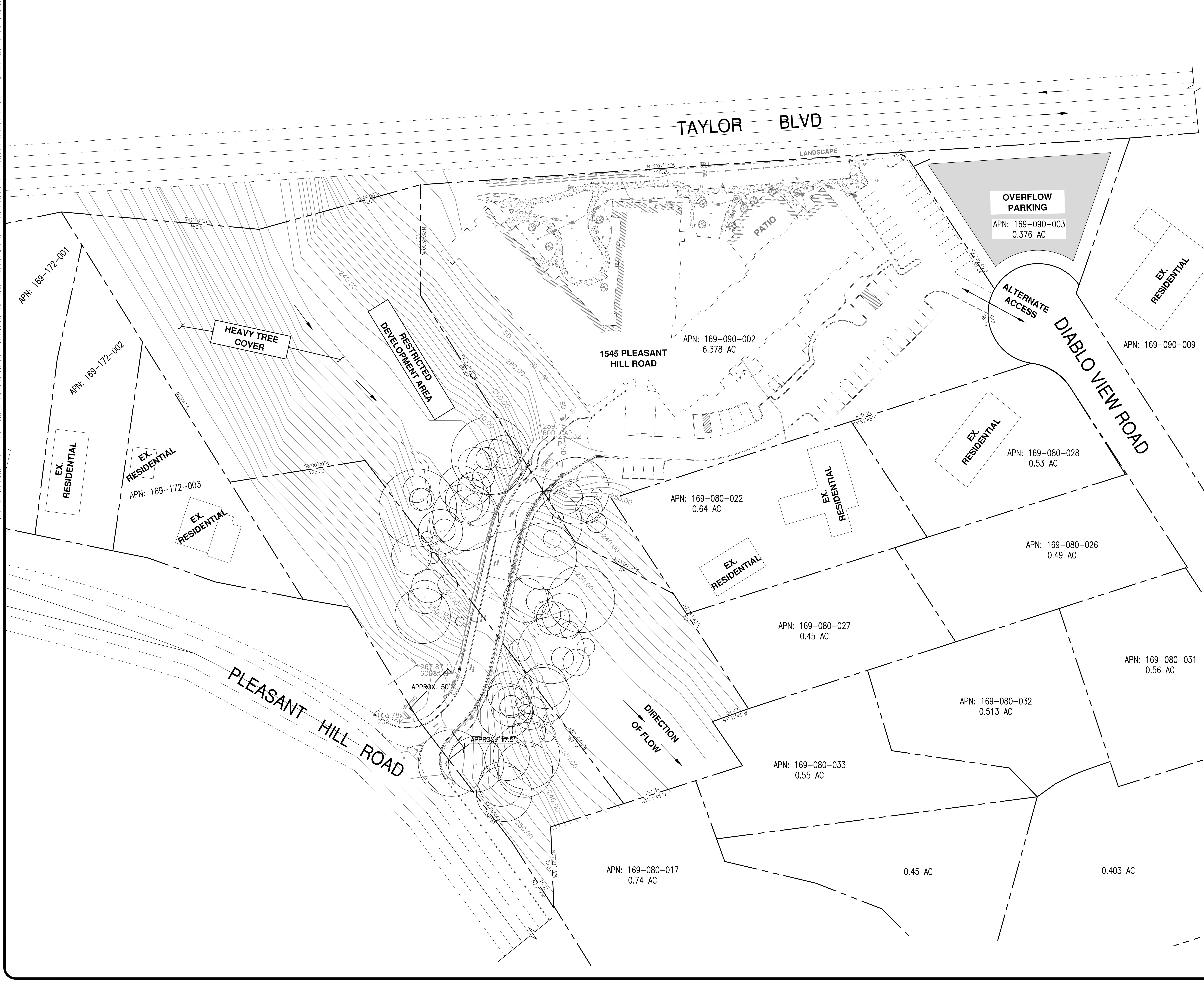
REGISTERED PROFESSIONAL ENGINEER
BOBBIE F. BROWN II
No. 48856
Exp. 09-30-2024
CIVIL
STATE OF CALIFORNIA

DRAWN BY: IANA T.
DESIGNED BY: R.FRANCIS
CHECKED BY: B.F.BROWNII
DATE: JANUARY, 2024
SCALE: AS SHOWN

THE OLYMPUS GROUP
ENGINEERING, PLANNING & SURVEYING
8850 GREENBACK LANE SUITE C
ORANGEVALE CA. 95662-4092
PHONE 916-396-6228
WWW.OLYGROUP.NET

PROJECT NO: 23-001

C2



0' 20' 40'

Scale: 1"=40'

NOTE: SITE PLAN WAS CREATED USING RECORD INFORMATION AS FOUND ON THE CONTRA COSTA COUNTY "CCMAP", TOGETHER WITH RECORD DATA TAKEN FROM THE CONTRA COSTA COUNTY TAX ASSESSOR'S MAPS.

CALL BEFORE YOU DIG
CA: 800-227-2600

REVISIONS:

ATRIA LAFAYETTE

APN 169-090-002

OVERALL SITE PLAN

CONTRA COSTA COUNTY, CALIFORNIA, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BOBBIE F. BROWNE II
No. 48856
Exp. 09-30-2024
CIVIL
STATE OF CALIFORNIA

DRAWN BY: IANA T.
DESIGNED BY: R.FRANCIS
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DATE: JANUARY, 2024
SCALE: AS SHOWN

PROJECT NO: 23-001

THE OLYMPUS GROUP
ENGINEERING, PLANNING & SURVEYING
8950 GREENBACK LANE, SUITE C, ORANGEVALE, CA. 95662-4092
PHONE 916-296-6226
WWW.OLYGROUP.NET

C3

P:\23-001 ATRIA LAFAYETTE - MAIN ROAD RETROFIT\CADD\ENGR\IMPROVEMENT PLANS\IMPROVEMENT PLANS\23001P_C03-OV.DWG Jan 16, 2024-03:21 pm OWNER
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TOPOGRAPHIC SURVEY

CITY OF LAFAYETTE, CONTRA COSTA COUNTY, STATE OF CALIFORNIA
1545 PLEASANT HILL ROAD, LAFAYETTE, CA 95816: ATRIA PARK

JUNE 2023

0' 5' 10'
Scale: 1"=10'

SURVEYORS STATEMENT:

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE PROFESSIONAL LAND SURVEYORS' ACT AT THE REQUEST OF OWNER IN APRIL 2018.

CHRISTOPHER D. JOHNSON, PLS 7576 DATE:
EXPIRATION DATE: 12/31/19

PROFESSIONAL LAND SURVEYOR · CHRISTOPHER D. JOHNSON · LS 7576 EXP. 12/31/23 · STATE OF CALIFORNIA

BENCHMARK

BASIS OF ELEVATION: CONTRA COSTA COUNTY BENCHMARK #978 – CONTRA COSTA COUNTY BRONZE DISK SET IN THE NORTHEAST CORNER OF BRIDGE ON PLEASANT HILL ROAD OVER PLEASANT HILL OVERPASS.

ELEV: 342.839

LEGEND

△	SURVEY CONTROL
⋈	WATER VALVE
	SIGN
	POWER POLE
WM	WATER METER
E	ELECTRIC PULL BOX
	ELECTROLIER
AC	ASPHALT CONCRETE
BW	BACK OF WALK
CONC	CONCRETE
EP	EDGE OF PAVEMENT
FL	FLOW LINE
FG	FACE OF GUTTER
GR	GUARDRAIL
PB	PULL BOX
PP	POWER PLUG
SL	STREET LIGHT
TBC	TOP BACK OF CURB
TW	TOP OF WALL
TAG NO.–XX"–XX'	TREE TAG TAG NO.–TREE DIA.–TREE CANAOPY/DRIP LINE L=LEANING, D=DEAD
SD	STORM DRAIN
	EASEMENT

DETAIL A
BASIS OF BEARING

N14°59'39"W 997.59'
N64°45'45"E 12,863.67'
(BASIS OF BEARING)

DETAIL B
SEE SHEET 3

DETAIL B
SEE SHEET 4

MATCHLINE - SEE SHEET C5

LAND SURVEYING
MAPPING
LEGAL DOCUMENTS

8850 GREENBACK LN. STE. C
ORANGEVALE CA 95662
916-871-4789

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CA: 800-227-2600

REVISIONS:

ATRIA LAFAYETTE
APN 169-090-002
TOPOGRAPHIC SURVEY
CONTRA COSTA COUNTY, CALIFORNIA , CALIFORNIA

THE OLYMPUS GROUP
ENGINEERING, PLANNING & SURVEYING
8850 GREENBACK LANE, SUITE C | PHONE 916-871-4789
ORANGEVALE CA 95662-5662 | WWW.OLYMPUSGROUP.NET

DRAWN BY: INNA T.
DESIGNED BY: B.FRANCIS
CHECKED BY: B.FRANCIS
DATE: JANUARY, 2024
SCALE: AS SHOWN

PROJECT NO: 23-001

C4
SHEET 4 OF 30

P:\23-001 ATRIA LAFAYETTE - MAIN ROAD RETROFIT\CADD\ENGR\IMPROVEMENT PLANS\IMPROVEMENT PLANS\23001IP_C04-C08-TP01.DWG Jan 16, 2024-03:23 pm, OWNER
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CHRISTOPHER D. JOHNSON, PLS 7576 DATE:
EXPIRATION DATE: 12/31/19

PROFESSIONAL LAND SURVEYOR · CHRISTOPHER D. JOHNSON · LS 7576 · EXP. 12/31/23 · STATE OF CALIFORNIA

BENCHMARK

BASIS OF ELEVATION: CONTRA COSTA COUNTY BENCHMARK #978 – CONTRA COSTA COUNTY BRONZE DISK SET IN THE NORTHEAST CORNER OF BRIDGE ON PLEASANT HILL ROAD OVER PLEASANT HILL OVERPASS.

ELEV: 342.839

TOPOGRAPHIC SURVEY

CITY OF LAFAYETTE, CONTRA COSTA COUNTY, STATE OF CALIFORNIA
1545 PLEASANT HILL ROAD, LAFAYETTE, CA 95816: ATRIA PARK

JUNE 2023

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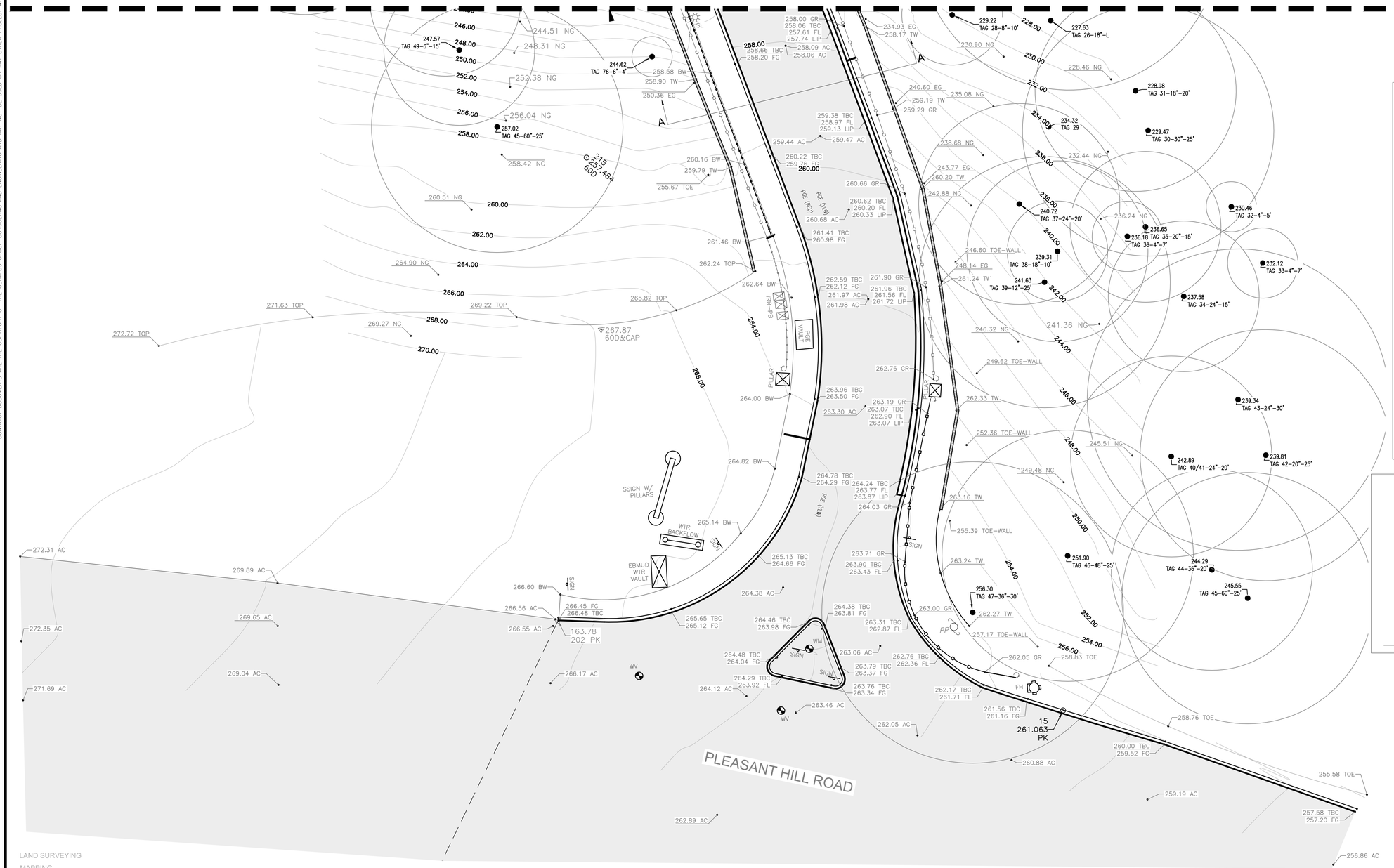
REVISIONS:

MATCHLINE - SEE SHEET C4



Scale: 1"=10'

LEGEND

△	SURVEY CONTROL
⋈	WATER VALVE
d	SIGN
	POWER POLE
WM	WATER METER
E	ELECTRIC PULL BOX
	ELECTROLIER
AC	ASPHALT CONCRETE
BW	BACK OF WALK
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TBC	TOP BACK OF CURB
TW	TOP OF WALL
TAG NO.–XX"–XX'	TREE TAG TAG NO.–TREE DIA.–TREE CANAOPY/DRIP LINE L=LEANING, D=DEAD
90	STORM DRAIN
	EASEMENT

ATRIA LAFAYETTE
APN 169-090-002
TOPOGRAPHIC SURVEY
CONTRA COSTA COUNTY, CALIFORNIA , CALIFORNIA

LAND SURVEYING
MAPPING
LEGAL DOCUMENTS

8850 GREENBACK LN. STE. C
ORANGEVALE CA 95662
916-871-4789

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8850 GREENBACK LANE, SUITE C | PHONE: 916-871-4789
ORANGEVALE, CA. 95662-4692 | WWW.OLYMPUSGROUP.NET

DRAWN BY: IANA T.
DESIGNED BY: P.TRANOS
CHECKED BY: B.F.BROWN III
DATE: JANUARY, 2024
SCALE: AS SHOWN

PROJECT NO: 23-001

C5
SHEET 5 OF 30

P:\23-001 ATRIA LAFAYETTE - MAIN ROAD RETROFIT\CADD\ENGR\IMPROVEMENT PLANS\IMPROVEMENT PLANS\23001IP_C06_TR01.DWG Jan 17, 2024-03:00 pm OWNER
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TREE SURVEY

CITY OF LAFAYETTE, CONTRA COSTA COUNTY, STATE OF CALIFORNIA
1545 PLEASANT HILL ROAD, LAFAYETTE, CA 95816: ATRIA PARK

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REVISIONS:

TOTAL PROTECTED TREES TO BE REMOVED = 6
SEE ARBORIST REPORT

NOTE:
1. SEE ARBORIST REPORT FOR TREE INFORMATION, PROTECT OR PRUNED.

BENCHMARK

BASIS OF ELEVATION: CONTRA COSTA COUNTY BENCHMARK #978 – CONTRA COSTA COUNTY BRONZE DISK SET IN THE NORTHEAST CORNER OF BRIDGE ON PLEASANT HILL ROAD OVER PLEASANT HILL OVERPASS.

ELEV: 342.839

0' 5' 10'
Scale: 1"=10'

LEGEND

- PROTECTED TREE TO BE REMOVED
- APPROXIMATE TREE CANOPY AS SURVEYED
- 231.74 TAG 63-36"-20' — TREE LOCATION, ELEVATION, TAG & APPROXIMATE SIZE, HEIGHT
- 63 — TREE REFERENCE AND ARBORIST REPORT

NOTE:
TREES 78–81, 84 ARE OUTSIDE OF THE SCOPE OF THIS PROJECT

NOTE:
TREES 87, 93 & 95 ARE OUTSIDE OF THE SCOPE OF THIS PROJECT

DO NOT DISTURB

APPROXIMATE SCENIC EASMENT BOUNDARY. SEE BOUNDARY NOTE THIS SHEET.

APPROXIMATE SCENIC EASMENT BOUNDARY. SEE BOUNDARY NOTE THIS SHEET.

NOTE: TREE #44 IS PARTIALLY OBSCURED ON THIS PLAN, IS OUTSIDE THE SCOPE OF THIS PROJECT & WILL NOT BE REMOVED

SEWER EASEMENT

10' SEWER EASEMENT

EXISTING RETAINING WALL

MANHOLE

241.03 TAG 3-6"-9'
243.02 TAG 1-10"-8'
244.57 TAG 2-12"-12'
246.60 TAG 2-14"-15'
237.63 TAG 6-6"-5'
235.48 TAG 7-20"-30'
227.85 TAG 12-12"-D
230.46 TAG 11-12"-D
233.32 TAG 8-16"-8'
230.96 TAG 10-24"-30'
226.18 TAG 20-8"-20'
225.85 TAG 19-16"-15'
226.14 TAG 16-18"-12'
224.74 TAG 27-14"-30'
227.44 TAG 18-8"-12'
228.20 TAG 14-12"-20'
229.22 TAG 28-8"-10'
228.98 TAG 31-18"-20'
229.47 TAG 30-30"-25'
236.65 TAG 35-20"-15'
237.58 TAG 34-24"-15'
240.72 TAG 37-24"-20'
239.31 TAG 38-18"-10'
241.63 TAG 39-12"-25'
239.34 TAG 42-24"-30'
239.81 TAG 43-20"-25'
242.89 TAG 40/41-24"-20'
244.29 TAG 44-36"-20'
245.55 TAG 45-60"-25'
251.90 TAG 46-48"-25'
256.30 TAG 47-36"-30'
235.02 TAG 70-48"-25'
235.12 TAG 72-18"-35'
233.94 TAG 71-8"-10'
232.96 TAG 73-18"-L
232.07 TAG 65-10"-15'
231.62 TAG 62-30"-15'
232.12 TAG 61-36"-15'
231.74 TAG 63-36"-20'
231.08 TAG 60-18"-30'
233.90 TAG 64-40"-20'
233.21 TAG 66-24"-L
232.23 TAG 59-12"-10'
232.80 TAG 58-36"-20'
234.98 TAG 51-6"-9'
244.62 TAG 76-6"-4
257.02 TAG 48-60"-25'
215 257.484 60D
267.87 60D&CAP
262.32 PK
261.10 PK
163.78 202 PK

BOUNDARY NOTE:
APPROXIMATE R/W LINE. A BOUNDARY SURVEY WAS NOT PERFORMED FOR THIS PROJECT. THE SITE PLAN WAS CREATED USING RECORD INFORMATION AS FOUND ON THE CONTRA COSTA COUNTY "CCMAP", TOGETHER WITH RECORD DATA TAKEN FROM THE CONTRA COSTA COUNTY TAX ASSESSOR'S MAPS.

LEGEND

L	LEANING
D	DEAD
TAG NO.-XX"-XX'	TREE TAG TAG NO.-TREE DIA.-TREE CANAOPY/DRIP LINE

LAND SURVEYING
MAPPING
LEGAL DOCUMENTS
8850 GREENBACK LN. STE. C
ORANGEVALE CA 95662
916-871-4789

ATRIA LAFAYETTE
APN 169-090-002
TREE SURVEY AND REMOVAL PLAN
CONTRA COSTA COUNTY, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BOBBIE F. BROWNI
No. 48856
Exp. 09-30-2024
CIVIL
STATE OF CALIFORNIA

THE OLYMPUS GROUP
ENGINEERING, PLANNING & SURVEYING
8850 GREENBACK LANE, SUITE C | PHONE: 916-871-4789
ORANGEVALE, CA. 95662 | WWW.OLYMPUSGROUP.NET

DRAWN BY: IANA T.
DESIGNED BY: B.F.BROWNI
CHECKED BY: B.F.BROWNI
DATE: JANUARY, 2024
SCALE: AS SHOWN

PROJECT NO: 23-001

C6
SHEET 6 OF 30

CREEK SURVEY

CITY OF LAFAYETTE, CONTRA COSTA COUNTY, STATE OF CALIFORNIA
1545 PLEASANT HILL ROAD, LAFAYETTE, CA 95816: ATRIA PARK

JUNE 2023

SURVEYORS STATEMENT:

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE PROFESSIONAL LAND SURVEYORS' ACT AT THE REQUEST OF OWNER IN APRIL 2018.

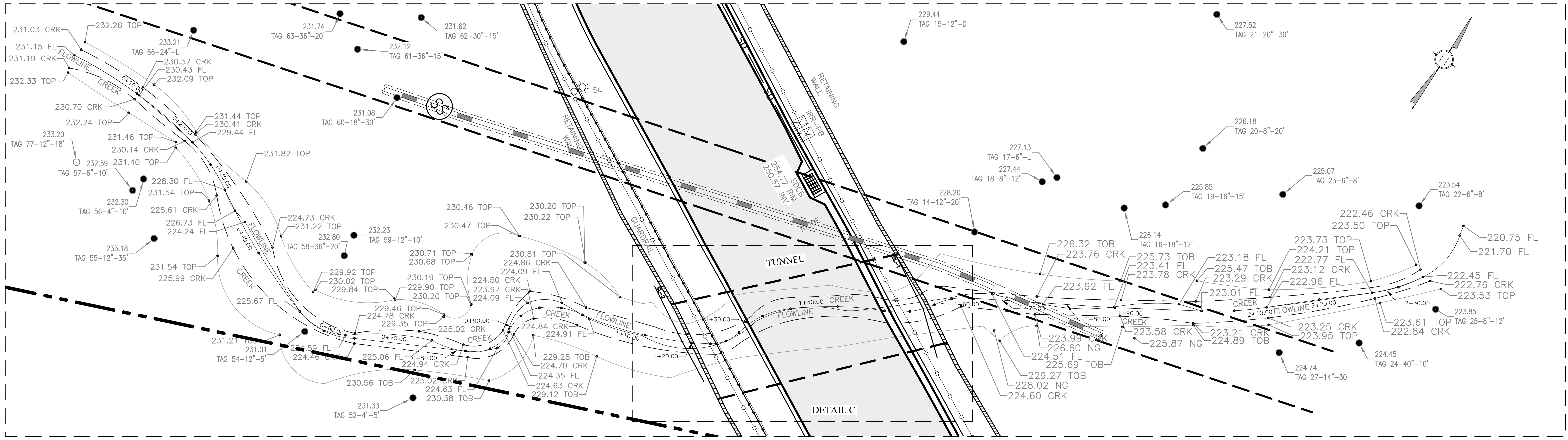
CHRISTOPHER D. JOHNSON, PLS 7576 DATE:
EXPIRATION DATE: 12/31/19

PROFESSIONAL LAND SURVEYOR CHRISTOPHER D. JOHNSON LS 7576 EX. 12/31/24 STATE OF CALIFORNIA

BENCHMARK

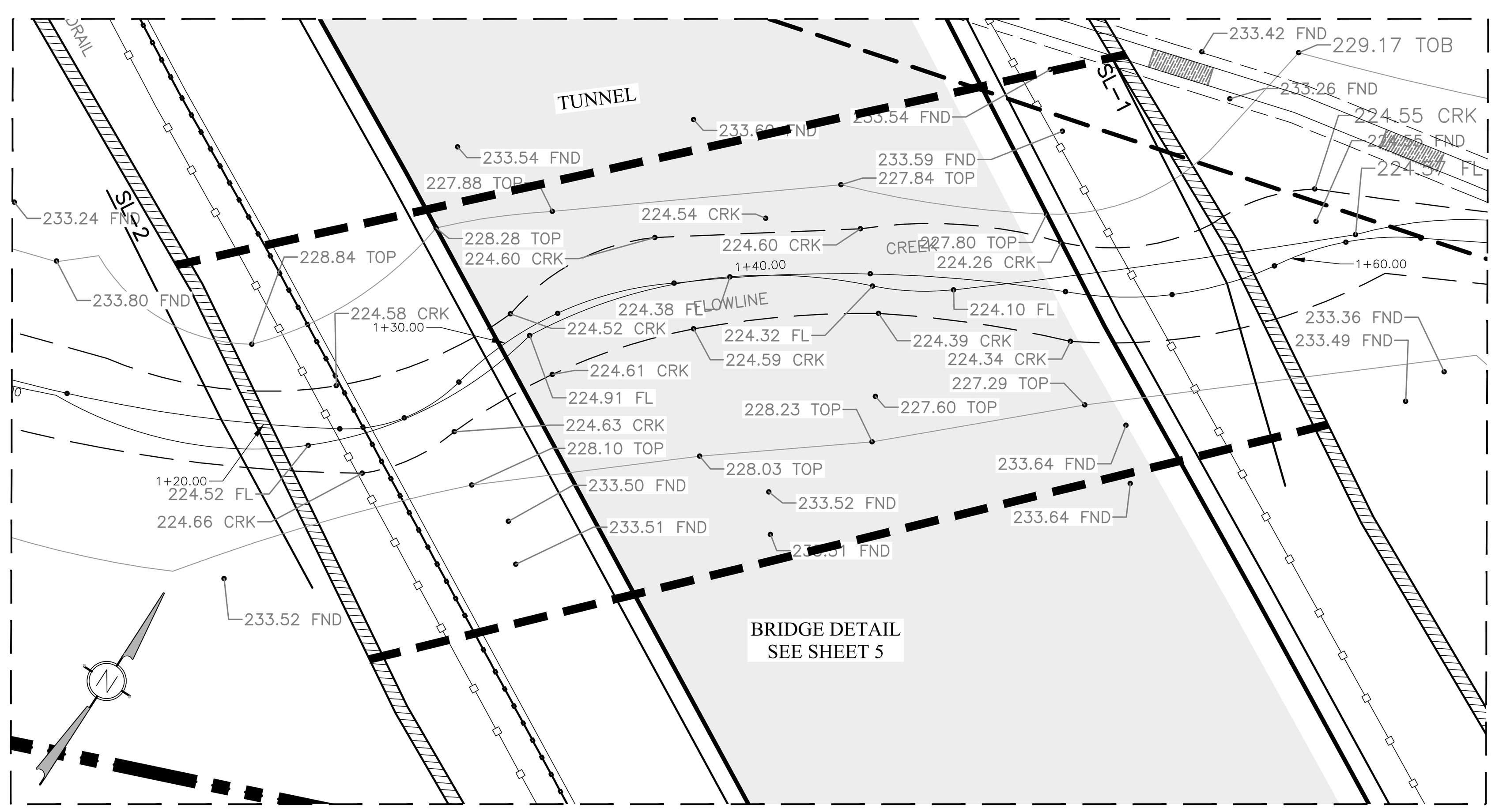
BASIS OF ELEVATION: CONTRA COSTA COUNTY BENCHMARK #978 – CONTRA COSTA COUNTY BRONZE DISK SET IN THE NORTHEAST CORNER OF BRIDGE ON PLEASANT HILL ROAD OVER PLEASANT HILL OVERPASS.
ELEV: 342.839

DETAIL B

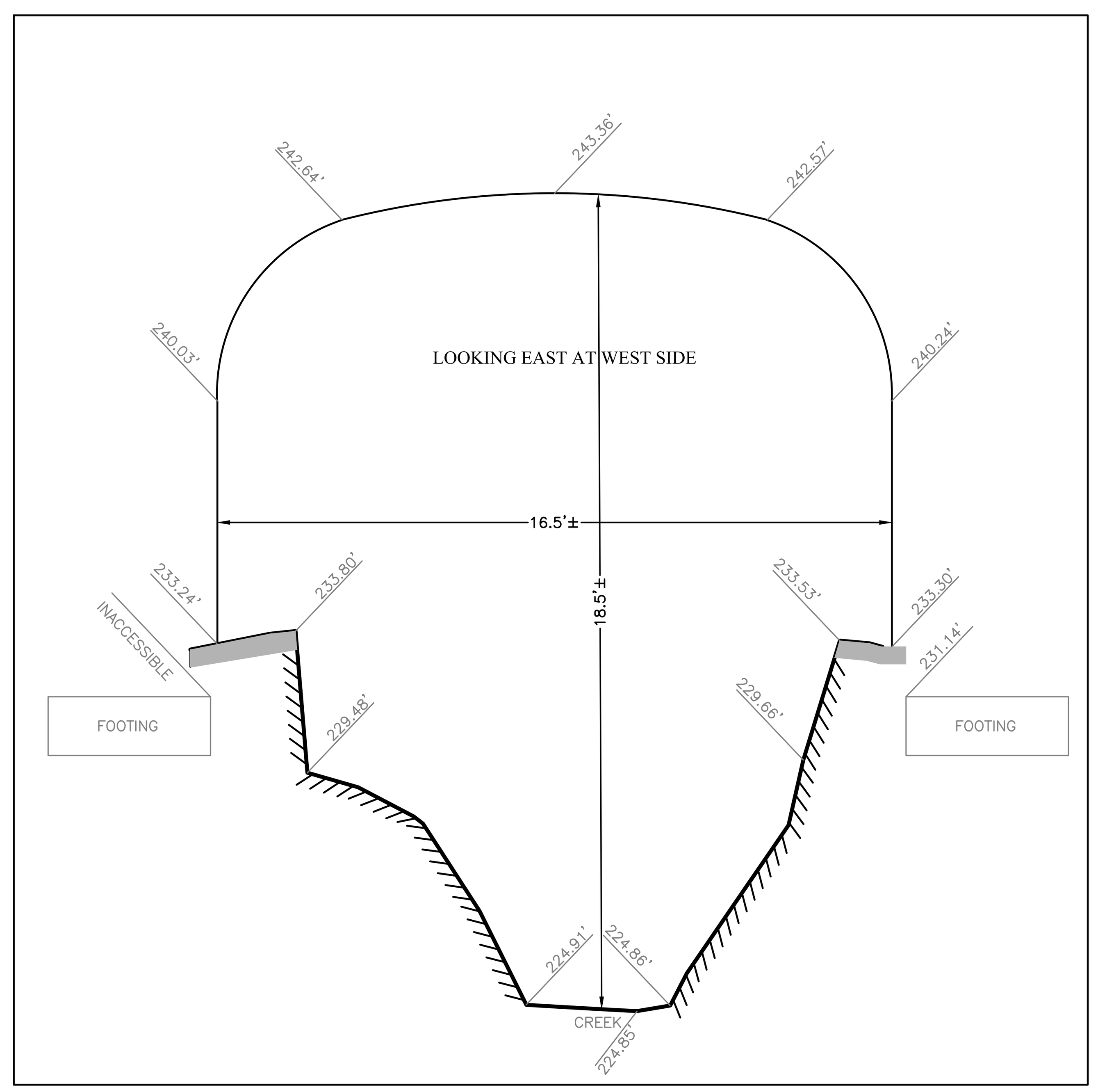


SCALE : 1" = 10'

DETAIL C

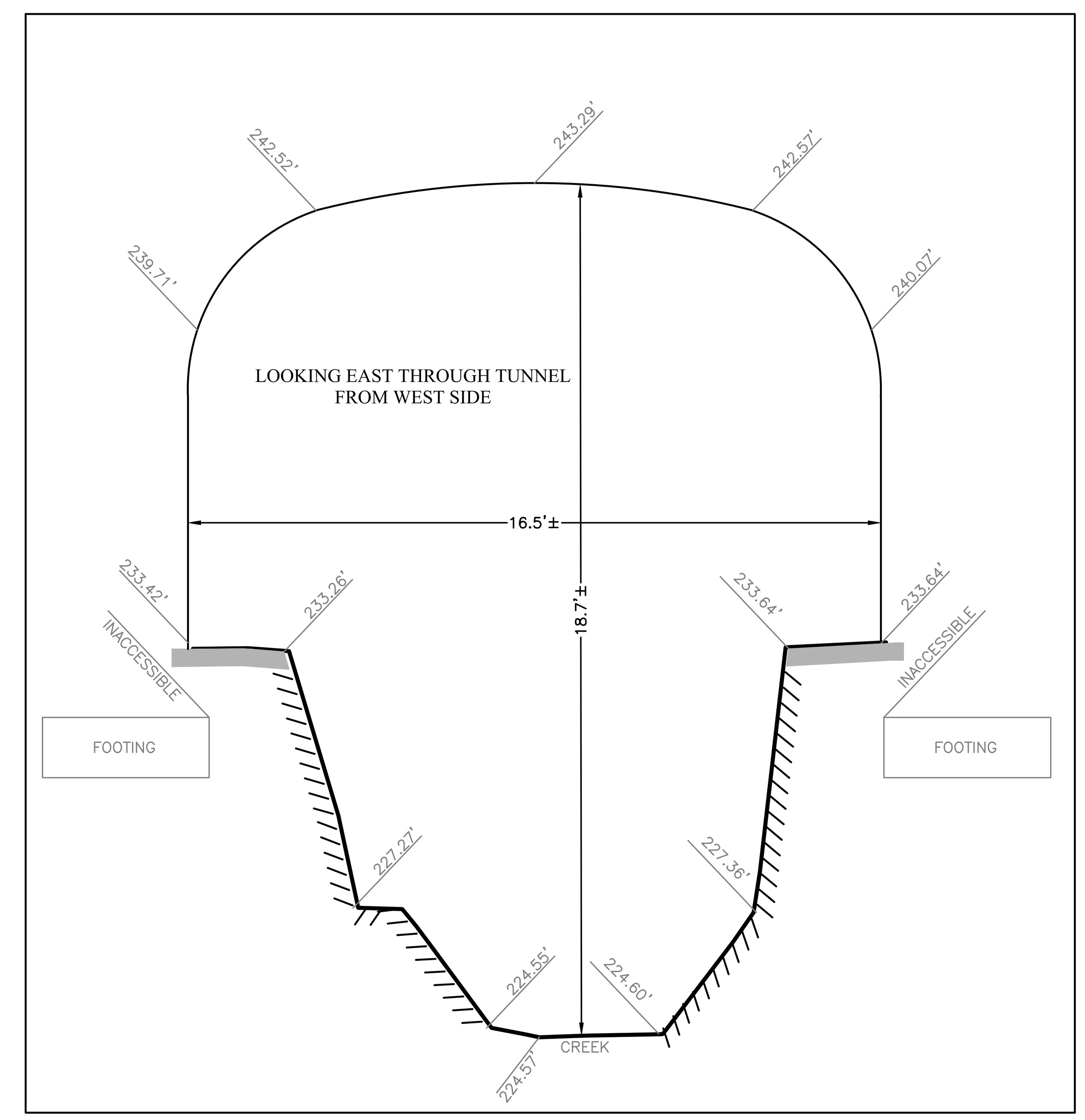


SCALE : 1" = 5'



SL-2: SECTION AT WEST SIDE

SCALE : 1" = 3'



SL-1: SECTION AT EAST SIDE

SCALE : 1" = 3'

LAND SURVEYING
MAPPING
LEGAL DOCUMENTS

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ORANGEVALE CA 95662
916-871-4789

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REVISIONS:

ATRIA LAFAYETTE
APN 169-090-002
CREEK SURVEY
CONTRA COSTA COUNTY, CALIFORNIA , CALIFORNIA

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ENGINEERING, PLANNING & SURVEYING
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ORANGEVALE, CA. 95662-4092 | WWW.OLYGROUP.NET

DRAWN BY: IANA T.
DESIGNED BY: B.FRANCIS
CHECKED BY: B.F.BROWNI
DATE: JANUARY, 2024
SCALE: AS SHOWN
PROJECT NO: 23-001

C7

SHEET 7 OF 30

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CHRISTOPHER D. JOHNSON, PLS 7576 DATE:
EXPIRATION DATE: 12/31/19

PROFESSIONAL LAND SURVEYOR CHRISTOPHER D. JOHNSON LS 7576 EXP. 12/31/20 STATE OF CALIFORNIA

BENCHMARK

BASIS OF ELEVATION: CONTRA COSTA COUNTY BENCHMARK #978 – CONTRA COSTA COUNTY BRONZE DISK SET IN THE NORTHEAST CORNER OF BRIDGE ON PLEASANT HILL ROAD OVER PLEASANT HILL OVERPASS.

ELEV: 342.839

BRIDGE SURVEY

CITY OF LAFAYETTE, CONTRA COSTA COUNTY, STATE OF CALIFORNIA
1545 PLEASANT HILL ROAD, LAFAYETTE, CA 95816: ATRIA PARK

JUNE 2023

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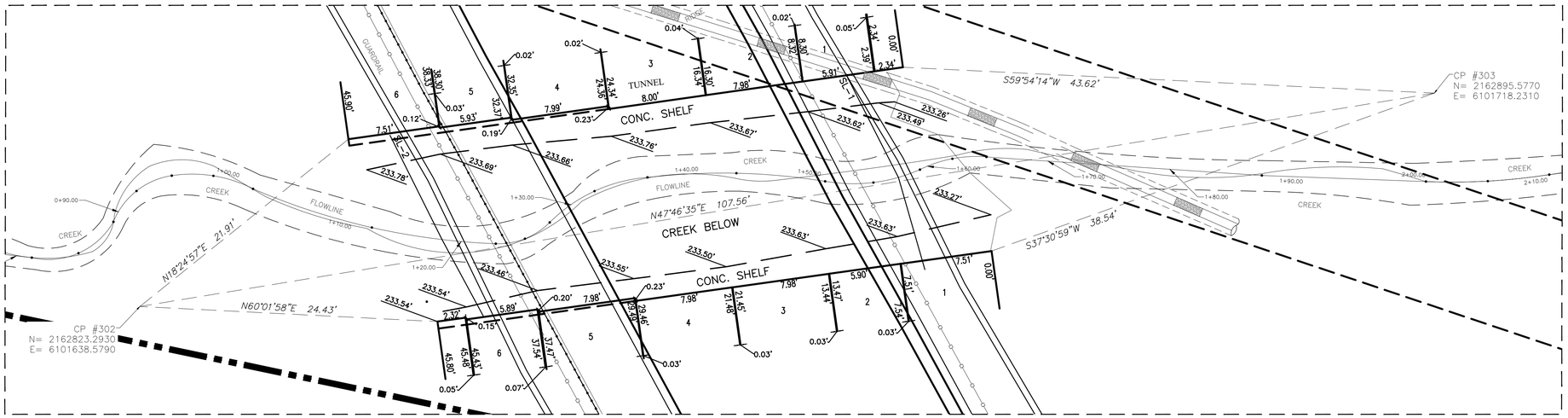
REVISIONS:

0' 2.5' 5'
Scale: 1"=5'



BRIDGE DETAIL

ATRIA LAFAYETTE
APN 169-090-002
BRIDGE SURVEY
CONTRA COSTA COUNTY, CALIFORNIA , CALIFORNIA

LAND SURVEYING
MAPPING
LEGAL DOCUMENTS

8850 GREENBACK LN. STE. C
ORANGEVALE CA 95662
916-871-4789

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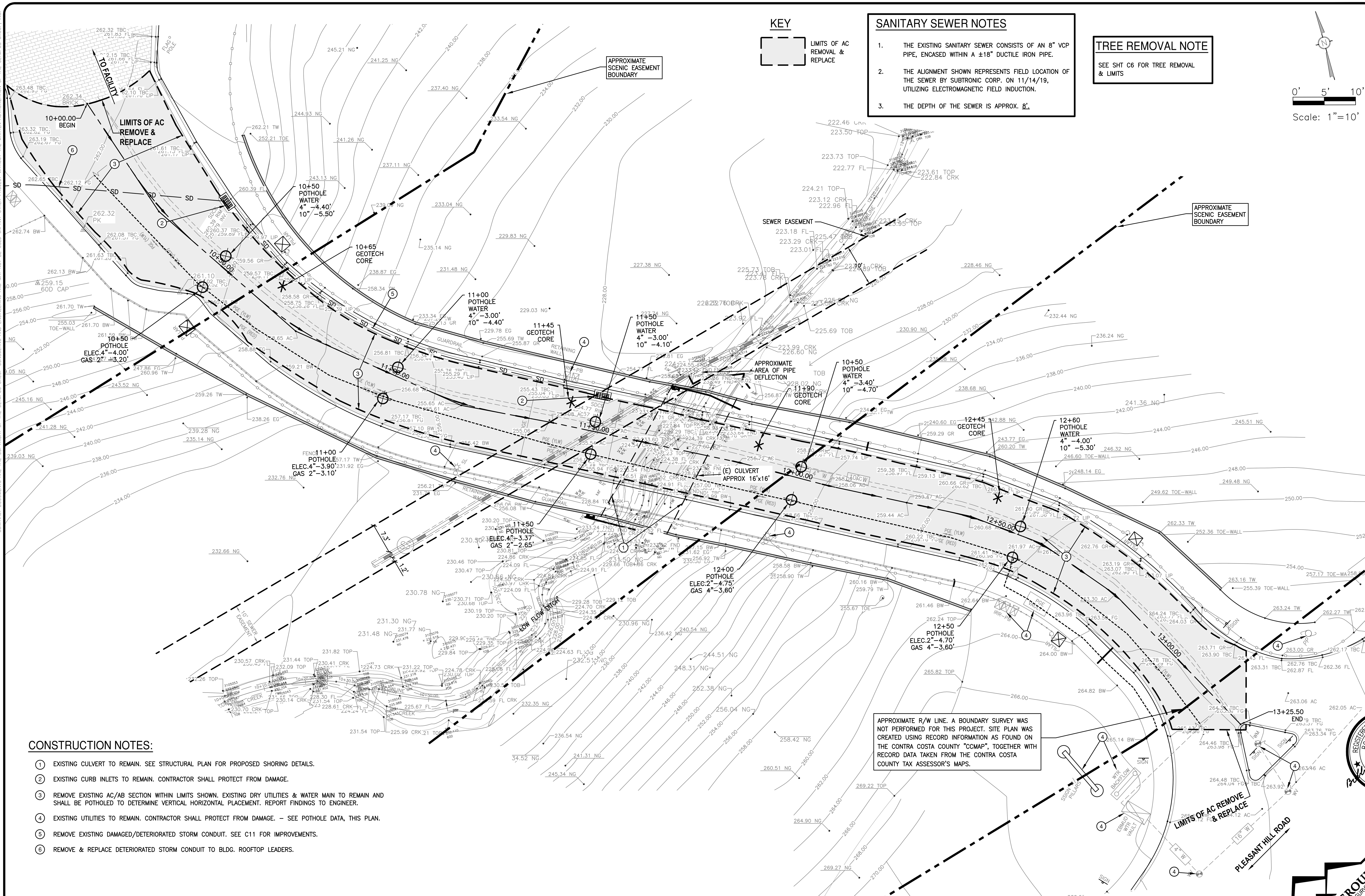
8850 GREENBACK LANE, SUITE C | PHONE: 916-988-2228
ORANGEVALE, CA. 95662-4692 | WWW.OLYGROUP.NET

DRAWN BY: IAN T.
DESIGNED BY: B.FRANCIS
CHECKED BY: B.F. BROWN
DATE: JANUARY, 2024
SCALE: AS SHOWN

PROJECT NO: 23-001

C8
SHEET 8 OF 30

P:\23-001 ATRIA LAFAYETTE - MAIN ROAD RETROFIT\CADD\ENGR\IMPROVEMENT PLANS\IMPROVEMENT PLANS\23001IP_C04-C08-TP01.DWG Jan 16, 2024-03:25 pm OWNER



KEY

LIMITS OF AC REMOVAL & REPLACE

SANITARY SEWER NOTES

1. THE EXISTING SANITARY SEWER CONSISTS OF AN 8" VCP PIPE, ENCASED WITHIN A ±18" DUCTILE IRON PIPE.
2. THE ALIGNMENT SHOWN REPRESENTS FIELD LOCATION OF THE SEWER BY SUBTRONIC CORP. ON 11/14/19, UTILIZING ELECTROMAGNETIC FIELD INDUCTION.
3. THE DEPTH OF THE SEWER IS APPROX. 8'.

TREE REMOVAL NOTE

SEE SHT C6 FOR TREE REMOVAL & LIMITS

CONSTRUCTION NOTES:

1. EXISTING CULVERT TO REMAIN. SEE STRUCTURAL PLAN FOR PROPOSED SHORING DETAILS.
2. EXISTING CURB INLETS TO REMAIN. CONTRACTOR SHALL PROTECT FROM DAMAGE.
3. REMOVE EXISTING AC/AB SECTION WITHIN LIMITS SHOWN. EXISTING DRY UTILITIES & WATER MAIN TO REMAIN AND SHALL BE POTHOLED TO DETERMINE VERTICAL HORIZONTAL PLACEMENT. REPORT FINDINGS TO ENGINEER.
4. EXISTING UTILITIES TO REMAIN. CONTRACTOR SHALL PROTECT FROM DAMAGE. – SEE POTHOLE DATA, THIS PLAN.
5. REMOVE EXISTING DAMAGED/DETERIORATED STORM CONDUIT. SEE C11 FOR IMPROVEMENTS.
6. REMOVE & REPLACE DETERIORATED STORM CONDUIT TO BLDG. ROOFTOP LEADERS.

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REVISIONS:

ATRIA LAFAYETTE
APN 169-090-002
ASPHALT DEMOLITION AND REPLACEMENT PLAN
CONTRA COSTA COUNTY, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — BOBBIE F. BROWN II — No. 48856 — Exp. 09-30-2024 — CIVIL — STATE OF CALIFORNIA

THE OLYMPUS GROUP
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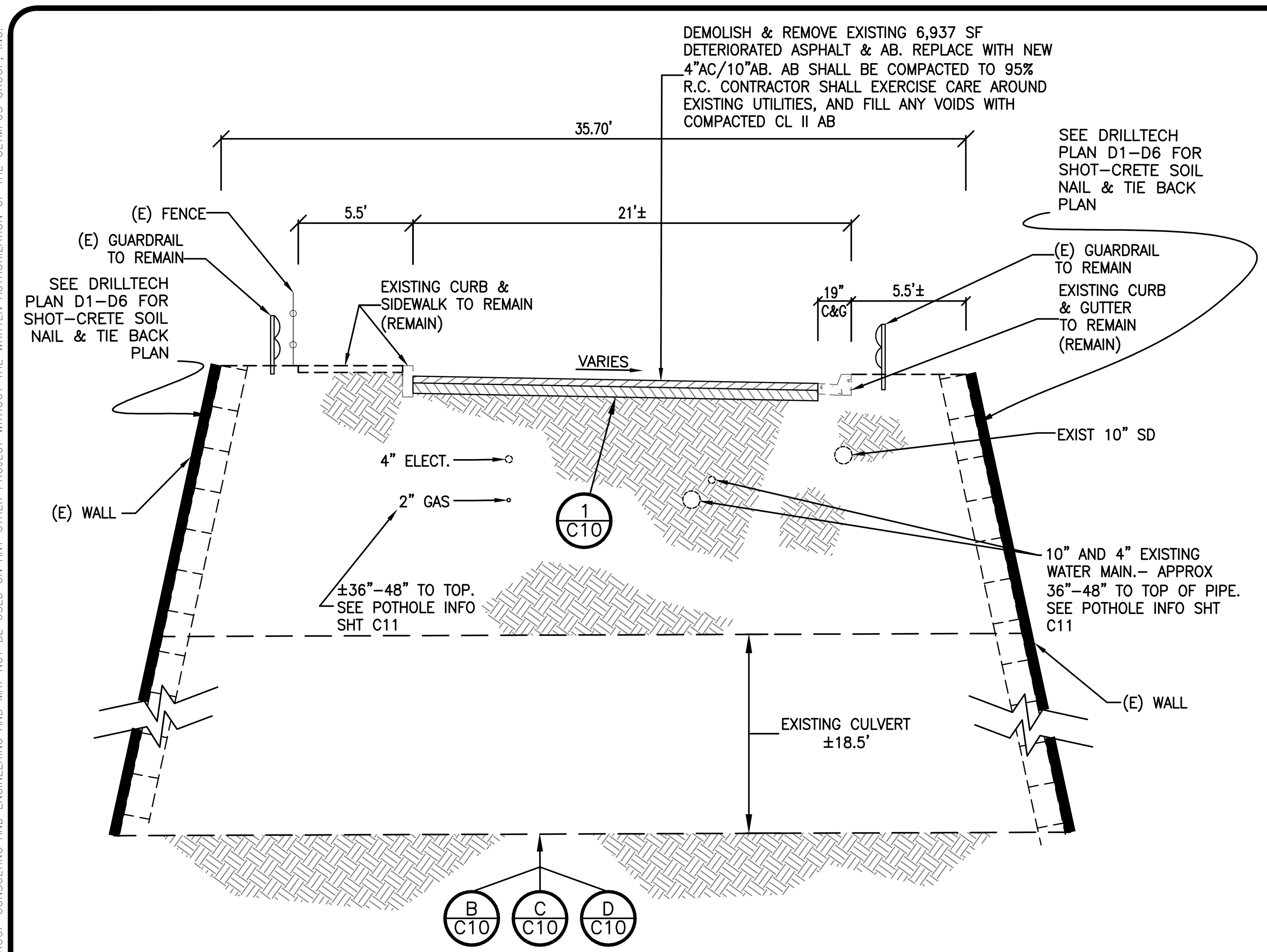
8850 GREENBACK LANE SUITE C, ORANGEVALE CA. 95662-4092 | PHONE 916-396-6228 | WWW.OLYGROUP.NET

DRAWN BY: IANA T.
DESIGNED BY: R.FRANCIS
CHECKED BY: B.F.BROWNII
DATE: JANUARY, 2024
SCALE: AS SHOWN

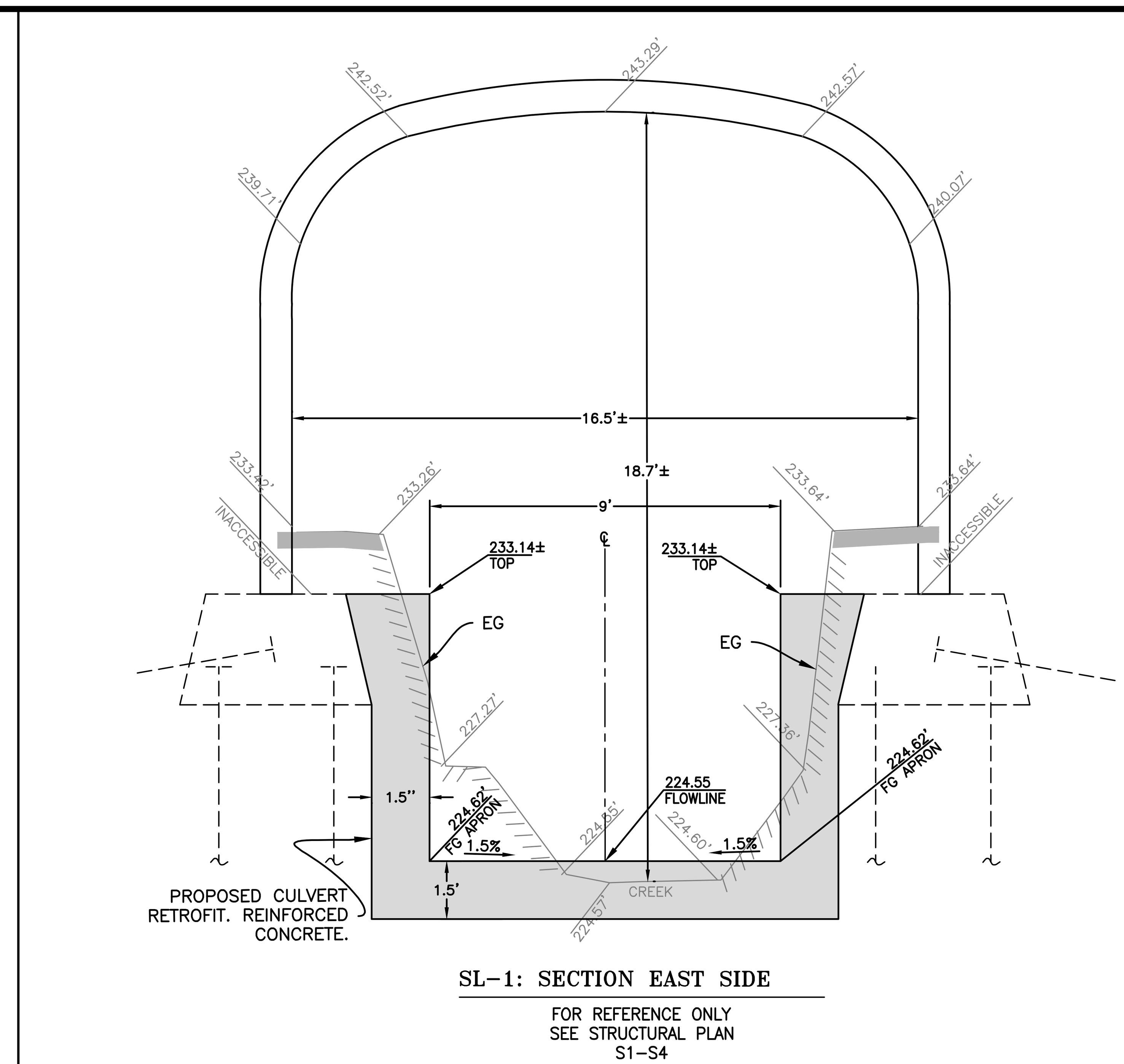
PROJECT NO: 23-001

C9

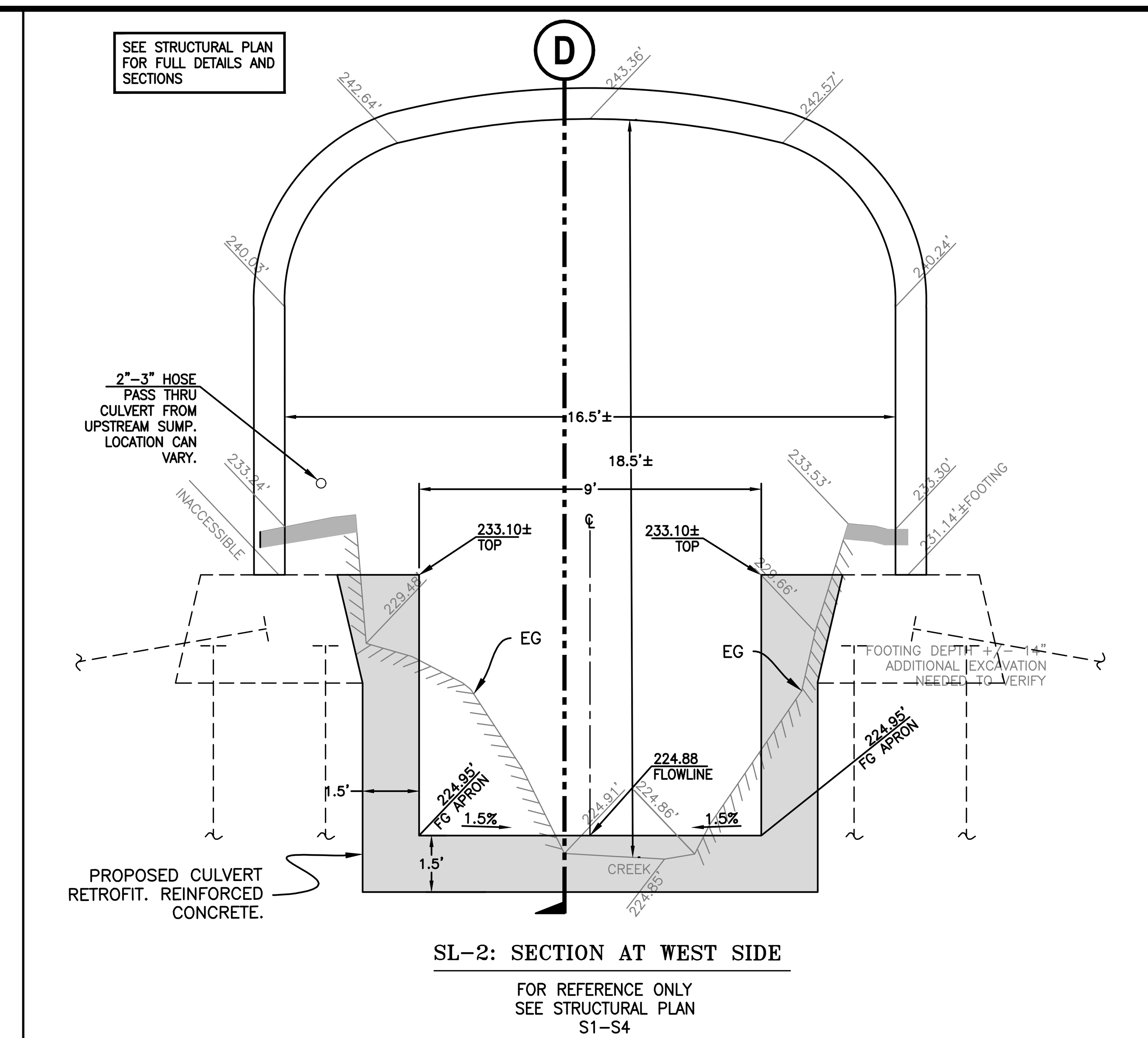
P:\23-001 ATRIA LAFAYETTE - MAIN ROAD RETROFIT\CADD\ENGR\IMPROVEMENT PLANS\23001IP_C09-DEO1.DWG Jan 16, 2024-03:26 pm OWNER



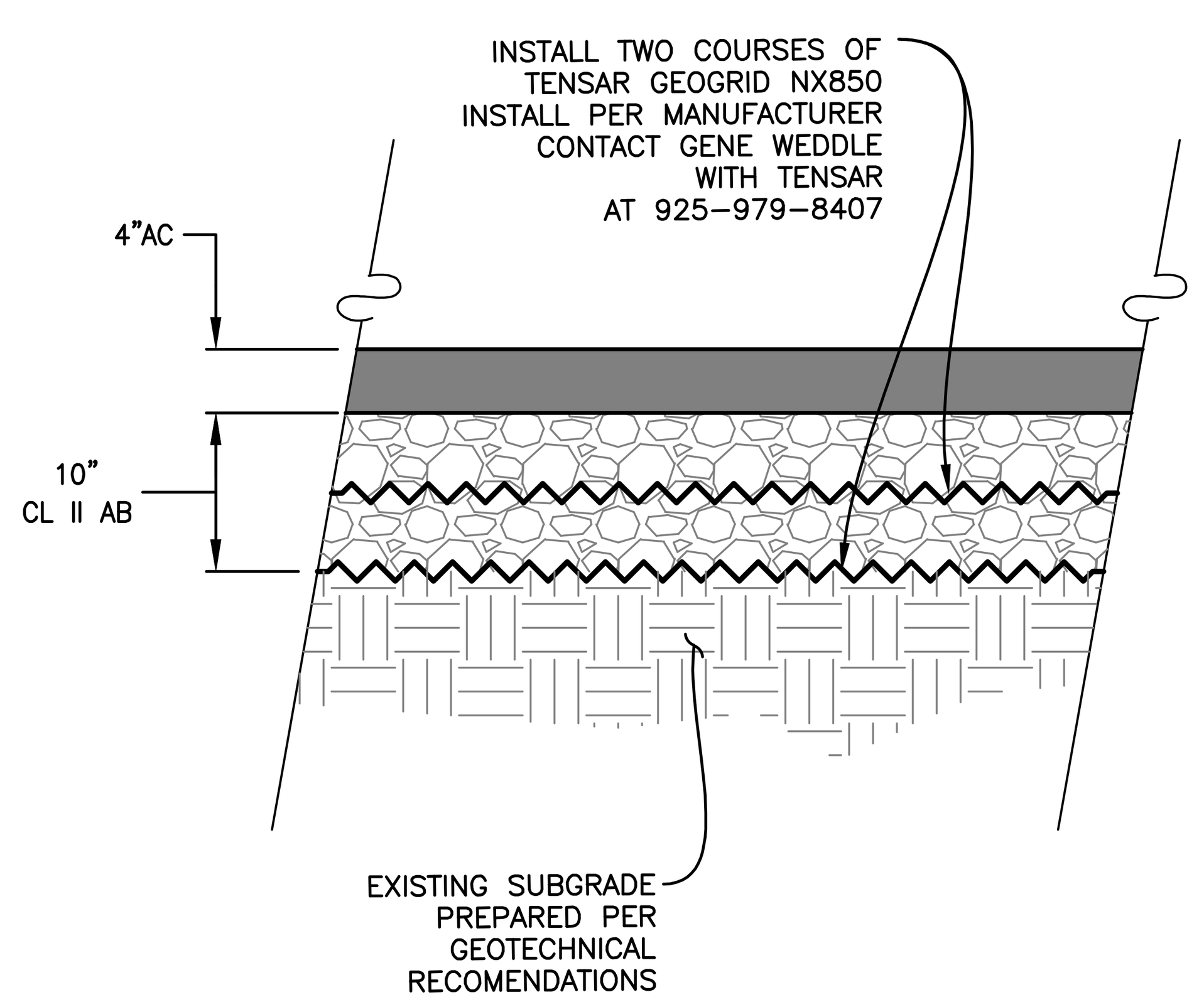
A ROADWAY SECTION REPLACEMENT NTS



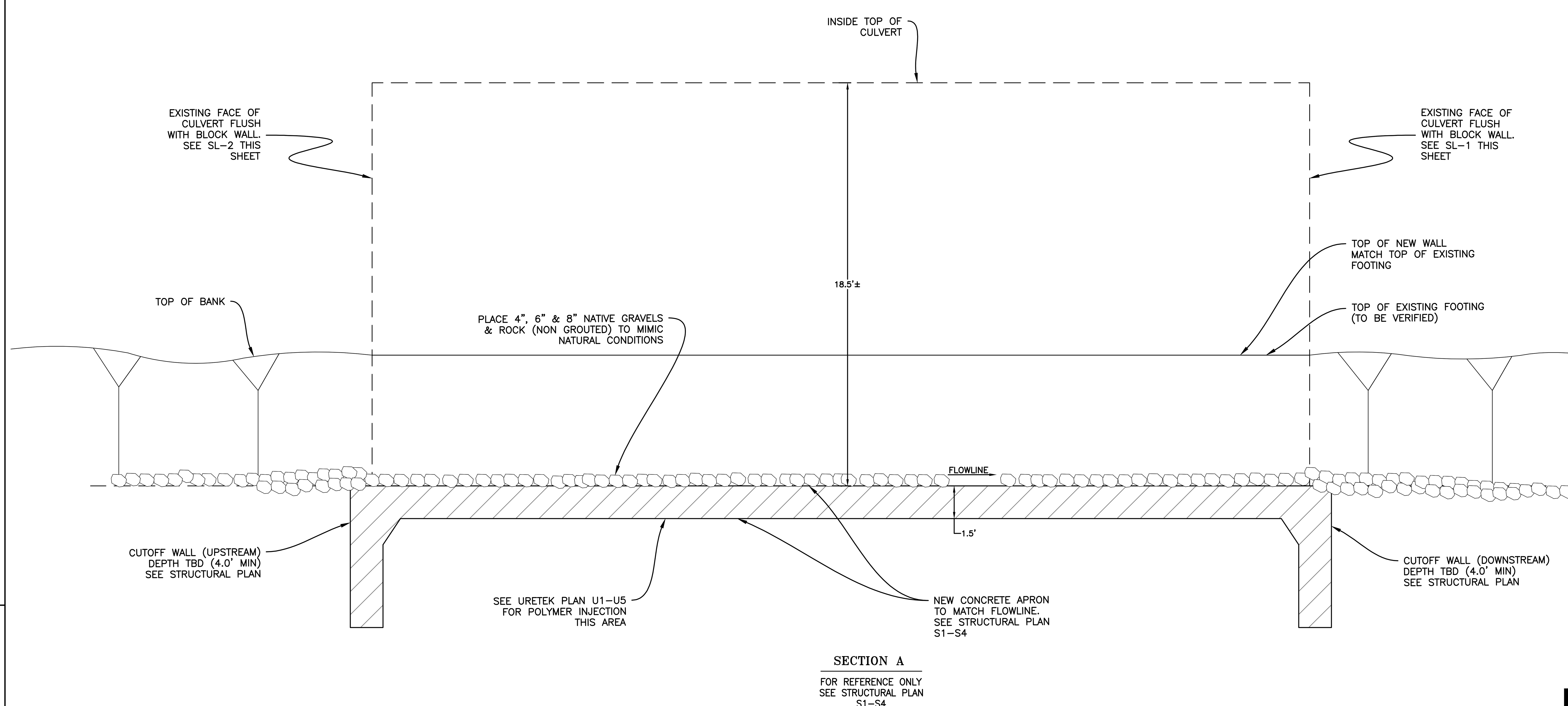
B SECTION EAST SIDE SCALE : 1" = 3'



C SECTION WEST SIDE SCALE : 1" = 3'



1 **ASPHALT SECTION** NTS



D ROADWAY SECTION REPLACEMENT SCALE : 1" = 3'

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CA: 800-227-2600

REVISIONS:

ATRIA LAFAYETTE
APN 227-0142-018
SECTIONS & DETAILS
CONTRA COSTA COUNTY, CALIFORNIA , CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BOBBIE F. BROWN II
No. 48856
Exp. 09–30–2024
CIVIL
STATE OF CALIFORNIA

DRAWN BY: IANA T.
DESIGNED BY: R.FRANCIS
CHECKED BY: B.F.BROWNII
DATE: JANUARY, 2024
SCALE: AS SHOWN

THE OLYMPUS GROUP
ENGINEERING, PLANNING & SURVEYING
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PROJECT NO: 23–001

C10
SHEET 10 OF 30

P:\23–001 ATRIA LAFAYETTE –MAIN ROAD RETROFIT\CADD\ENGR\IMPROVEMENT PLANS\IMPROVEMENT PLANS\23001IP_C10–DT01.DWG Jan 16, 2024–03:27 pm OWNER

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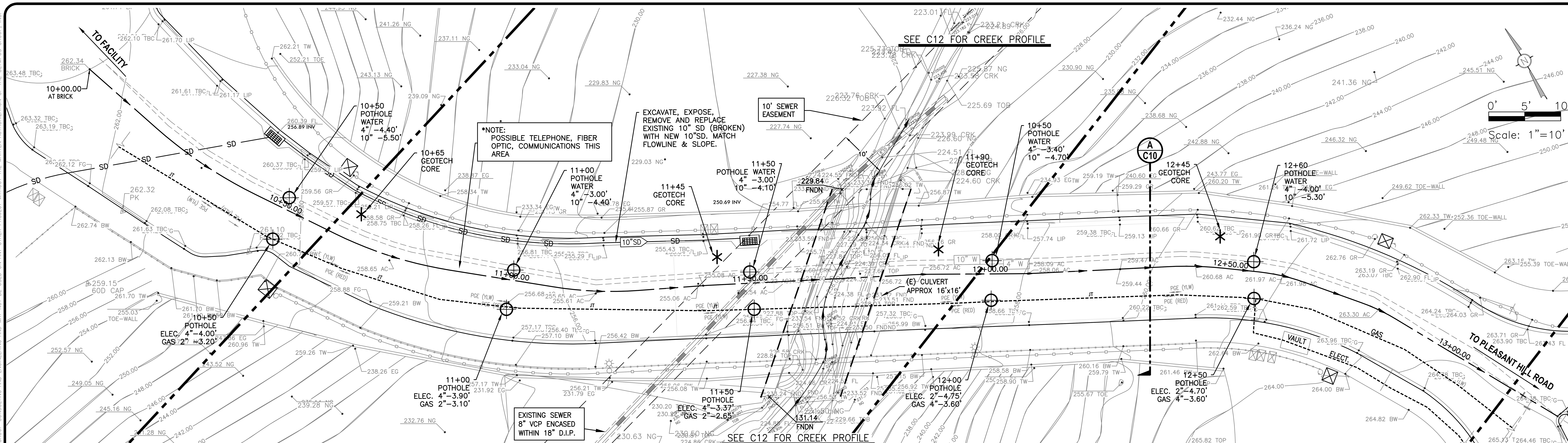
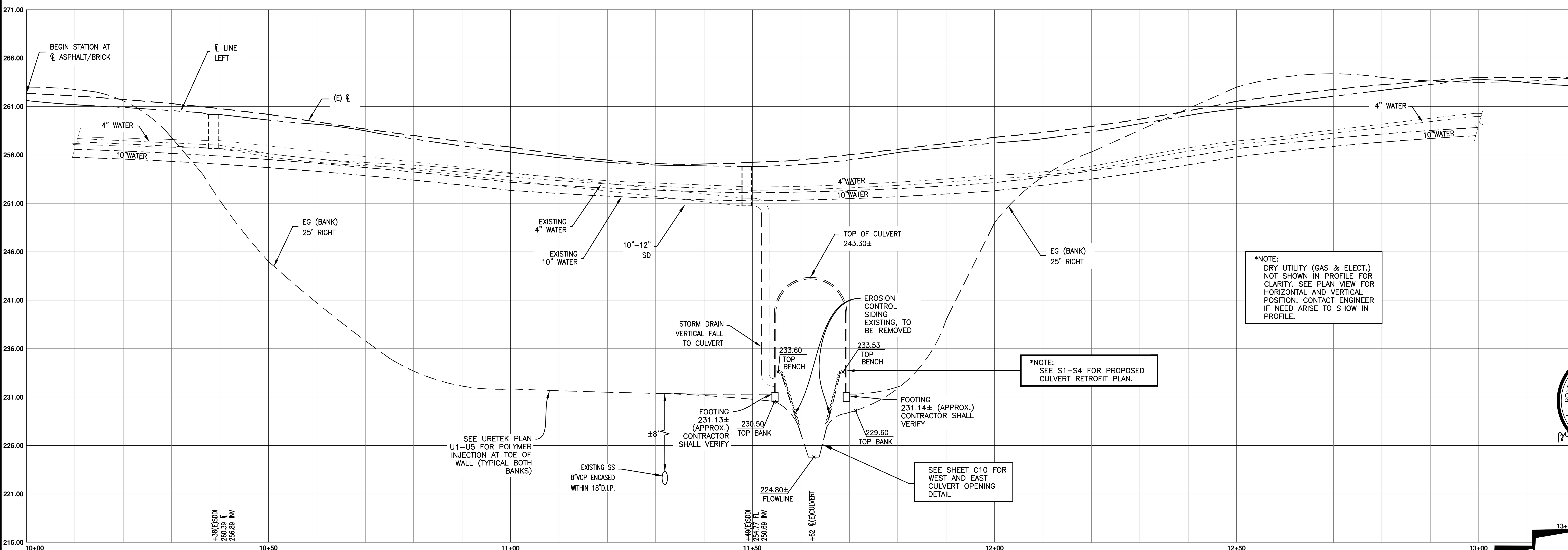


PLAN VIEW 1"=10'



PROFILE 1"=5' VERTICAL; 1"=10' HORIZ.

CALL BEFORE YOU DIG
CA: 800-227-2600

REVISIONS:

ATRIA LAFAYETTE
APN 169-090-002
BRIDGE EXISTING PLAN AND PROFILE
CONTRA COSTA COUNTY, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BOBBIE F. BROWN II
No. 48856
Exp. 09-30-2024
CIVIL
STATE OF CALIFORNIA

THE OLYMPUS GROUP
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DESIGNED BY: R.FRANCIS
CHECKED BY: B.F.BROWN II
DATE: JANUARY, 2024
SCALE: AS SHOWN
PROJECT NO. 23-001

C11
SHEET 11 OF 30

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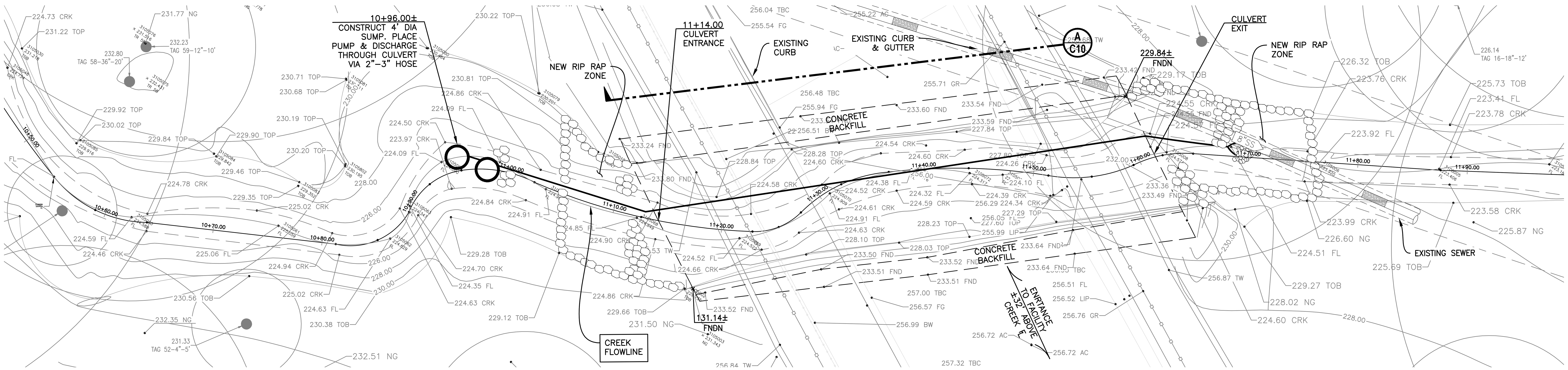
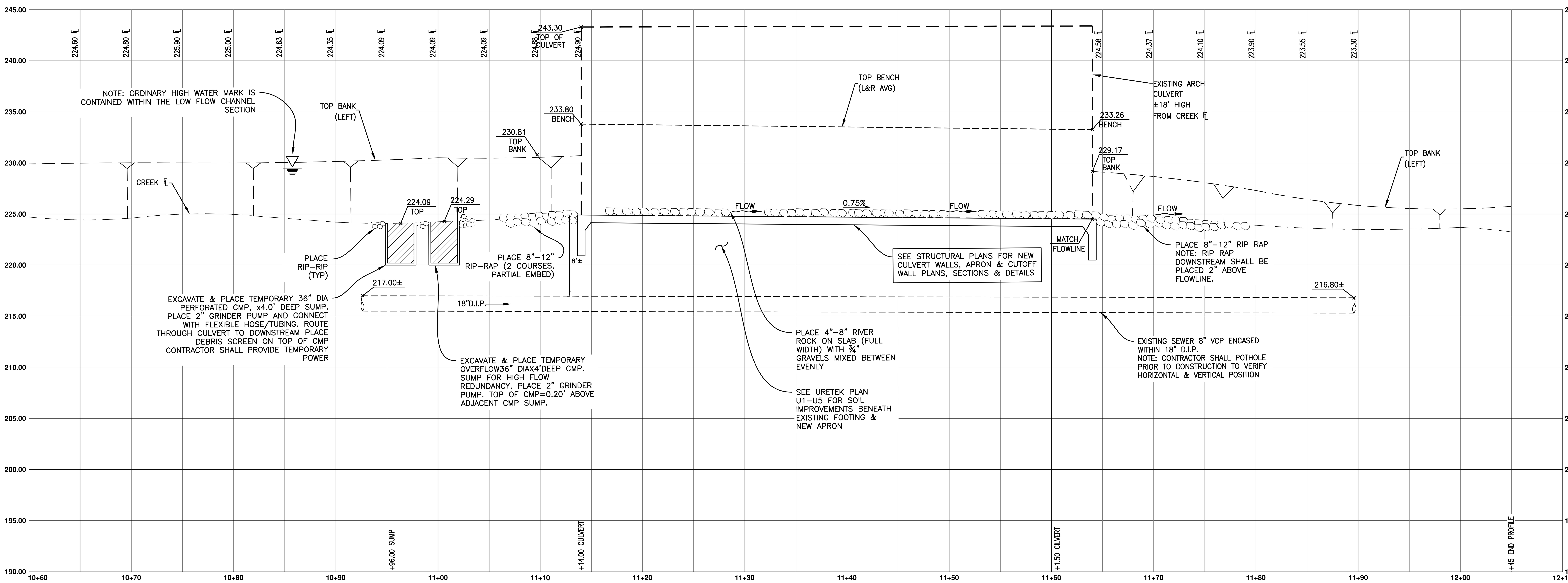
P:\23-001 ATRIA LAFAYETTE - MAIN ROAD RETROFIT\CADD\ENGR\IMPROVEMENT PLANS\IMPROVEMENT PLANS\23001P_C11-PP01.DWG Jan 16, 2024-03:27 pm OWNER



PLAN VIEW 1"=5'



PROFILE 1"=5' VERTICAL; 1"=5' HORIZ.

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APN 169-090-002
CREEK/CULVERT PLAN AND PROFILE
CONTRA COSTA COUNTY, CALIFORNIA, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BOBBIE F. BROWNE
No. 48856
Exp. 09-30-2024
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PROJECT NO: 23-001

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P:\23-001 ATRIA LAFAYETTE - MAIN ROAD RETROFIT\CADD\ENGR\IMPROVEMENT PLANS\IMPROVEMENT PLANS\230011P_C13-AP.DWG Jon 16, 2024-03:29 pm OWNER
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TAYLOR BLVD

LANDSCAPE

PATIO

TEMPORARY CONSTRUCTION EQUIPMENT STAGGING & MATERIAL LAY-DOWN AREA

EXISTING OVERFLOW PARKING
APN: 169-090-003
0.376 AC

1545 PLEASANT HILL ROAD
APN: 169-090-002
6.378 AC

ALTERNATE ACCESS

DIABLO VIEW ROAD

EX. RESIDENTIAL

APN: 169-090-009

APN: 169-172-001

APN: 169-172-002

APN: 169-172-003

HEAVY TREE COVER

BENCHED IN WORKER FOOT AND SMALL EQUIPMENT ACCESS

APN: 169-080-022
0.64 AC

APN: 169-080-028
0.53 AC

APN: 169-080-026
0.49 AC

APN: 169-080-027
0.45 AC

APN: 169-080-031
0.56 AC

APN: 169-080-032
0.513 AC

APN: 169-080-033
0.55 AC

APN: 169-080-017
0.74 AC

0.45 AC

0.403 AC

TEMPORARY GATED ACCESS FOR CONSTRUCTION ONLY

DIRECTION OF FLOW

APPROX. 50'

APPROX. 17.5'

PLEASANT HILL ROAD

CONSTRUCTION CRANE SETUP AREAS

NOTE: TRAFFIC DIRECTIONAL SIGNAGE WILL BE POSTED AS WELL AS TRAFFIC DELINEATION DIRECTING ACESS TO THE ALTERNATE ROUTE

TRENCH PLATES WILL BE USED TO BRIDGE THE STREAM BED FOR WORKER AND EQUIPMENT ACCESS. ACCESS TO THE DOWN STREAM SIDE WILL BE OBTAINED THROUGH THE CULVERT

0' 20' 40'
Scale: 1"=40'

NOTE: SITE PLAN WAS CREATED USING RECORD INFORMATION AS FOUND ON THE CONTRA COSTA COUNTY "CCMAP", TOGETHER WITH RECORD DATA TAKEN FROM THE CONTRA COSTA COUNTY TAX ASSESSOR'S MAPS.

KEY:

TEMPORARY OCCUPANCY & EMERGENCY TRAFFIC ROUTE

CRANE SET UP AREAS

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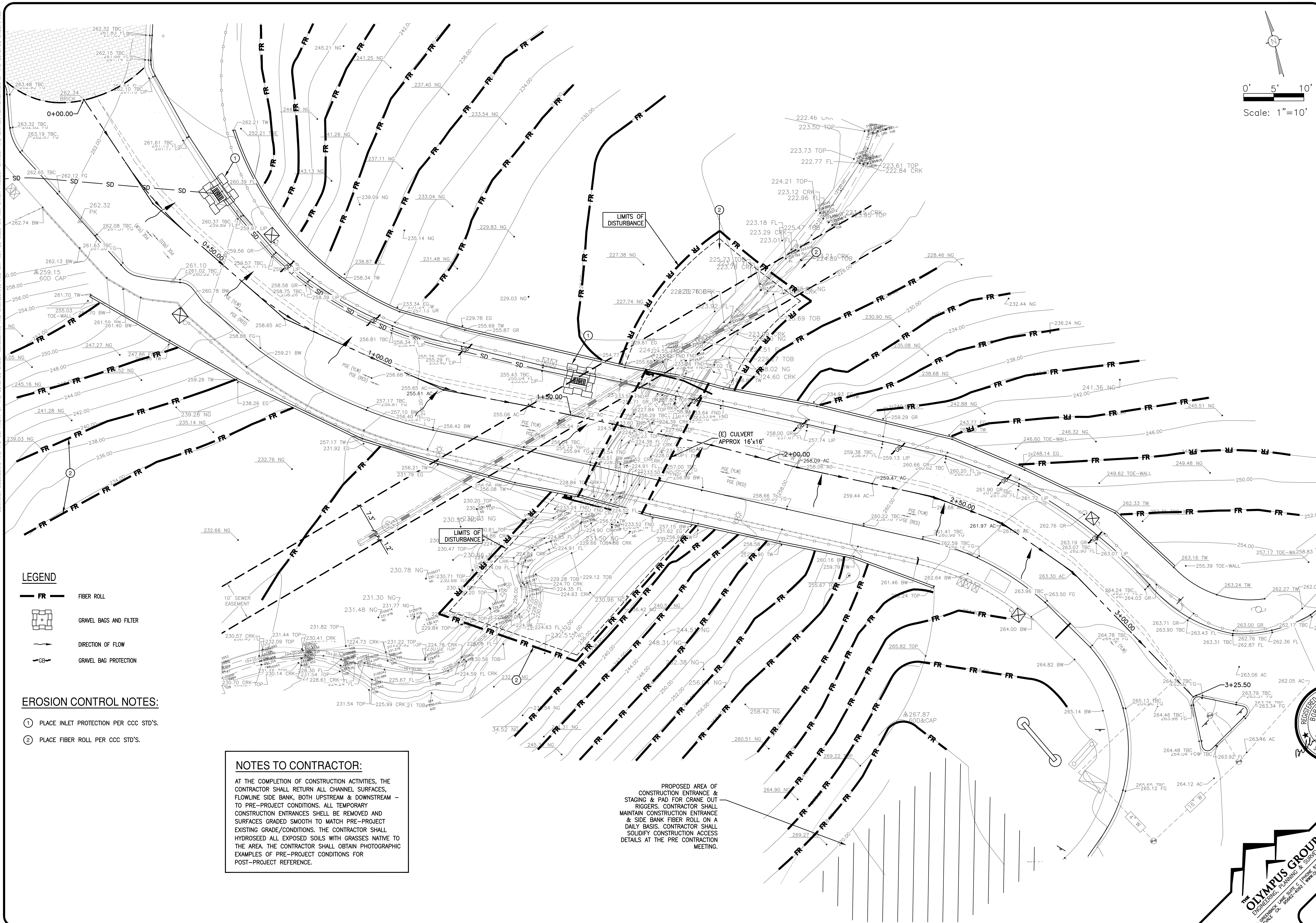
SCALE: AS SHOWN

PROJECT NO: 23-001

C13
SHEET 13 OF 30



LEGEND

- FR — FIBER ROLL
- GRAVEL BAGS AND FILTER
- DIRECTION OF FLOW
- GB — GRAVEL BAG PROTECTION

EROSION CONTROL NOTES:

1. PLACE INLET PROTECTION PER CCC STD'S.
2. PLACE FIBER ROLL PER CCC STD'S.

NOTES TO CONTRACTOR:

AT THE COMPLETION OF CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL RETURN ALL CHANNEL SURFACES, FLOWLINE SIDE BANK, BOTH UPSTREAM & DOWNSTREAM – TO PRE-PROJECT CONDITIONS. ALL TEMPORARY CONSTRUCTION ENTRANCES SHELL BE REMOVED AND SURFACES GRADED SMOOTH TO MATCH PRE-PROJECT EXISTING GRADE/CONDITIONS. THE CONTRACTOR SHALL HYDROSEED ALL EXPOSED SOILS WITH GRASSES NATIVE TO THE AREA. THE CONTRACTOR SHALL OBTAIN PHOTOGRAPHIC EXAMPLES OF PRE-PROJECT CONDITIONS FOR POST-PROJECT REFERENCE.

ATRIA LAFAYETTE

APN 169-090-002

EROSION CONTROL PLAN

CONTRA COSTA COUNTY, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BOBBIE F. BROWN II
No. 48856
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C14

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NOTE:

STRAW MULCH SHALL BE USED IN CONJUNCTION WITH HYPROSEEDING DURING THE WET SEASON FOR SOIL STABILIZATION. HYDROSEEDING ALONE MAY BE USED IF THERE IS ADEQUATE TIME TO ENSURE VEGETATION ESTABLISHMENT BEFORE THE START OF THE RAIN SEESON.

POST CONSTRUCTION DRAINAGE SWALE NOTES:

1. AT COMPLETION OF PROJECT AND PRIOR TO A STORM EVENT. PROVIDE POST CONSTRUCTION STABILIZATION OF DRAINAGE SWALES.
2. PROVIDE HYDROSEEDING 10 PER CONTRA COSTA COUNTY STD'S OR EROSION CONTROL BLANKET ALONG FLOWLINE & SIDE SLOPES OF DITCH.

DUST CONTROL:

1. DUST SHALL BE CONTROLLED BY WATERING THROUGHOUT THE EXCAVATION AND GRADING PROCESS. THE CONTRACTOR SHALL ARRANGE AND PAY FOR CONSTRUCTION WATER AS APPLICABLE.

MAINTENANCE NOTES:

HYDROSEEDING:
1. ALL SLOPES SHALL BE MAINTAINED TO PREVENT EROSION.
2. SEEDED AREAS SHALL BE INSPECTED FOR FAILURES AND RE-SEEDED, FERTILIZED, AND MULCHED WITHIN THE PLANTING SEASON. ANY TEMPORARY REVEGETATION EFFORTS THAT DO NOT PROVIDE ADEQUATE COVER MUST BE REVEGETATED AS REQUIRED BY THE COUNTY ENGINEER.

PRESERVATION OF EXITING VEGETATION (AS APPLICABLE):
IRRIGATION AND MAINTENANCE REQUIREMENTS SHALL BE SPECIFIED ON THE PLANS. IRRIGATION SHALL BE PROVIDED AS NEEDED TO MAINTAIN THE VEGETATION YEAR ROUND.

STABILIZED CONSTRUCTION ACCESS:
1. INSPECT STABILIZED CONSTRUCTION ACCESS DAILY FOR DAMAGE AND EFFECTIVENESS OF PREVENTING SOIL, SEDIMENT, AND CONSTRUCTION DEBRIS FROM BEING TRACKED ONTO PUBLIC STREETS. STREETS ADJACENT TO STABILIZED CONSTRUCTION ACCESS AREAS SHALL BE SWEPT DAILY TO REMOVE LOOSE MATERIALS.
2. REMOVE AGGREGATE, SEPARATE, AND DISPOSED OF SEDIMENT IF CONSTRUCTION ACCESS IS CLOGGED WITH SEDIMENT OR AS DIRECTED BY THE COUNTY INSPECTOR.

SOIL BINDERS:
1. AVOID VEHICULAR AND PEDESTRIAN TRAFFIC ON TREATED AREAS.
2. INSPECT HIGH TRAFFIC AREAS DAILY. LOW TRAFFIC AREAS SHOULD BE INSPECTED WEEKLY. DURING WET WEATHER INSPECTIONS SHOULD BE COMPLETED DAILY AND LOGGED IN THE SWPPP MAINTENANCE LOG. 3. FAILED SLOPES SHALL BE REPAIRED IMMEDIATELY. 4. REAPPLY SOIL BINDER AS NECESSARY FOR PROPER MAINTENANCE.

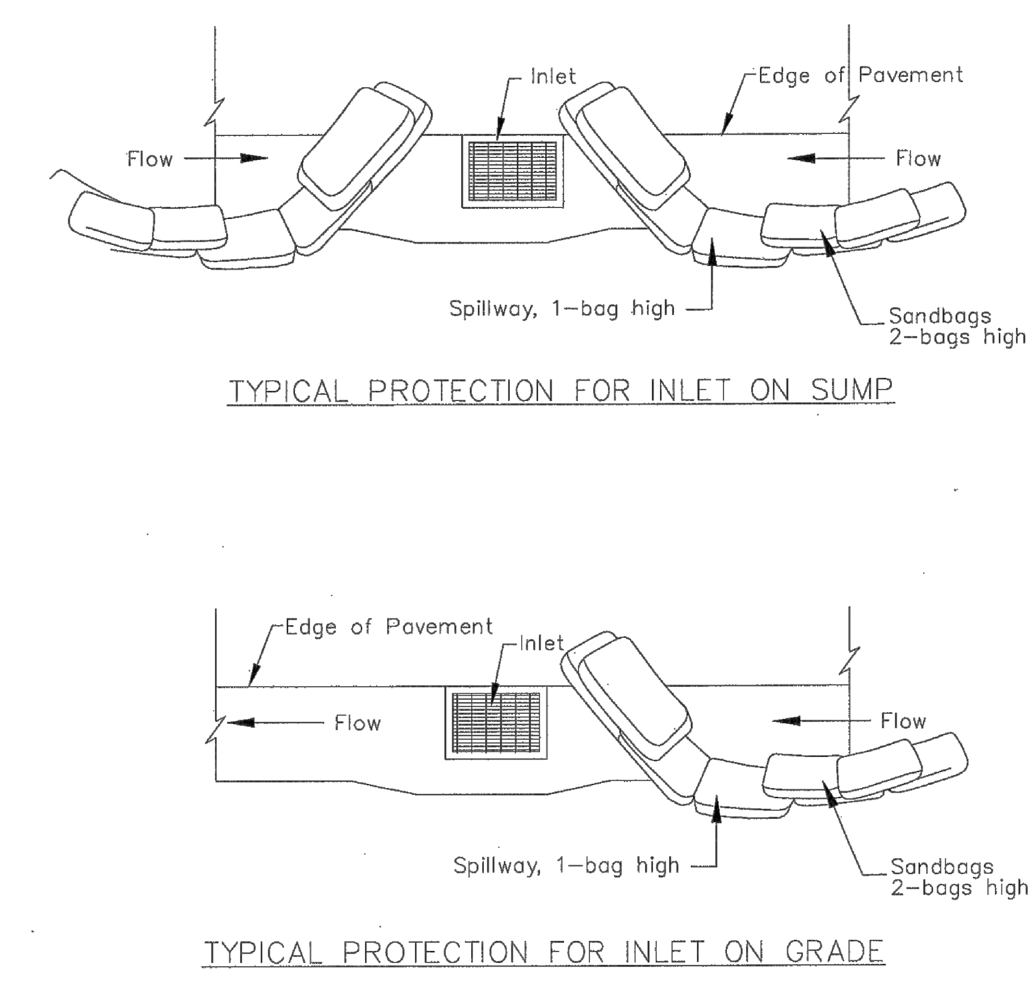
GEOTEXTILES, PLASTIC COVERS, AND EROSION CONTROL BLANKETS/MATS:
1. ALL BLANKETS SHALL BE INSPECTED PERIODICALLY AFTER INSTALLATION.
2. INSPECT INSTALLATIONS AFTER SIGNIFICANT RAINFALLS TO CHECK FOR EROSION AND UNDERMINING. REPAIR FAILURES IMMEDIATELY. DAMAGE TO SLOPES OR CHANNELS SHALL BE REPAIRED PRIOR TO REINSTALLING BLANKETS/MATS.

CONCRETE WASHOUT:
1. INSPECT CONCRETE WASHOUTS DAILY.
2. CONCRETE WASHOUTS SHALL BE MAINTAINED TO PROVIDE HOLDING CAPACITY WITH A MINIMUM FREEBOARD OF 4 INCHES. HARDENED CONCRETE SHALL BE REMOVED AND DISPOSED OF PROPERLY AND THE WASHOUT FACILITIES RETURNED TO A FUNCTIONAL CONDITION.
3. CONCRETE WASHOUTS SHALL BE CLEANED WHEN THE WASTE VOLUME IN THE WASHOUT REACHES 75 PERCENT OF CAPACITY.

STRAW MULCH:
1. REAPPLICATION OF STRAW MULCH AND TACKIFIER MAY BE REQUIRED BY THE COUNTY ENGINEER TO MAINTAIN EFFECTIVE SOIL STABILIZATION OVER DISTURBED AREAS AND SLOPES.
2. SLOPES SHALL BE MAINTAINED AND REPAIRED IMMEDIATELY AFTER ANY RAINFALL EVENT.

FIBER ROLLS:
1. REPAIR OR REPLACE SPLIT, TORN, UNRAVELING, OR SLUMPING FIBER ROLLS.
2. INSPECT FIBER ROLLS WHEN RAIN IS FORECAST.
3. IN ACTIVE CONSTRUCTION AREAS WHERE FIBER ROLLS ARE REMOVED DURING THE WORK DAY, RETURN OR REPLACE THE FIBER ROLL TO ITS PROPER PLACE AND STAKE IT DOWN AT THE END OF EACH WORKDAY DURING THE WET SEASON.

Storm Drain Inlet Protection **SE-10**



NOTES:
1. Intended for short-term use.
2. Use to inhibit non-storm water flow.
3. Allow for proper maintenance and cleanup.
4. Bags must be removed after adjacent operation is completed
5. Not applicable in areas with high silts and clays without filter fabric.

DI PROTECTION TYPE 3
NOT TO SCALE

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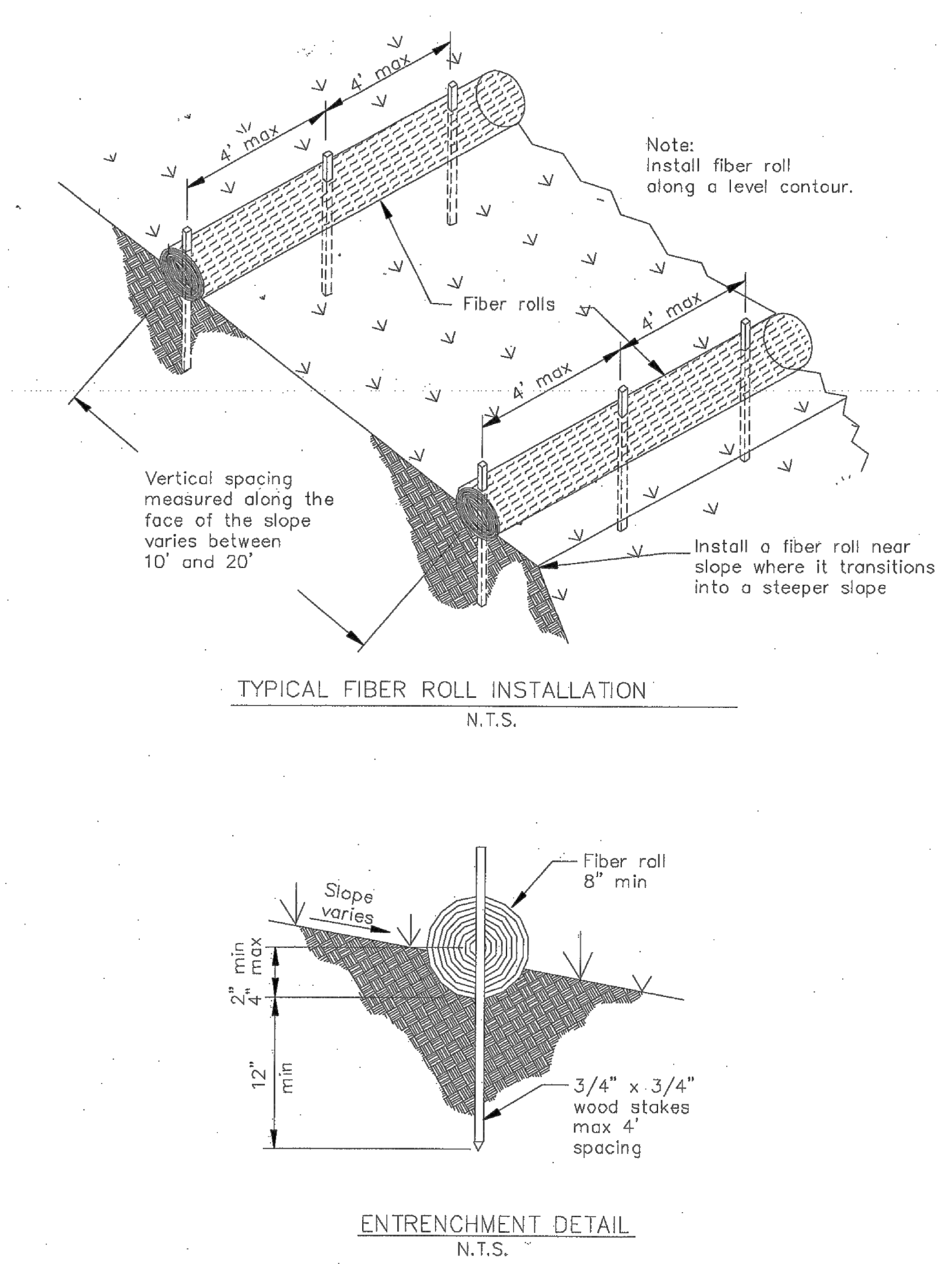
C TYPICAL SECTION NTS

Fiber Rolls **SE-5**



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E TYPICAL SECTION NTS

BMP SCHEDULE

CONSTRUCTION PHASE	WET SEASON (OCT 15 – APR 30)				YEAR ROUND								
	HYDROSEEDING	STRAW MULCHING & TACTIFIER BLANKETS	PRESERVATION OF EXISTING VEGETATION	CONTAINMENT BASINS/V-DITCHES (OR 100% EROSION CONTROL)	FIBER ROLLS	CONCRETE WASHOUT	DUST CONTROL	SAND/GRAVEL BAG BARRIERS	STORM DRAIN INLET PROTECTION	DEWATERING	DI STENCILING	STABILIZED CONSTRUCTION ENTRANCE	MATERIAL & WASTE DISPOSAL LOCATION
PRE-GRADING			●		●		●		●	N/A	N/A	●	●
ON-SITE EARTHWORK	●	●	●	●	●	●	●	●	●	●	↓	●	●
FOUNDATION/HARDSCAPE	N/A	●	●	●	●	●	●	●	●	●	↓	●	●
STORM DRAINAGE IMPROVEMENTS	●	●	●	●	●	●	●	●	●	●	↓	●	●
PUBLIC STREET IMPROVEMENTS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	↓	N/A	N/A
PAVEOUT	N/A	N/A	N/A	N/A	↓	↓	↓	↓	↓	↓	↓	↓	●
POST-CONSTRUCTION	●	●	●	●	●	↓	↓	↓	↓	↓	↓	↓	N/A

ADDITIONAL EROSION AND SEDIMENT CONTROL NOTES

1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE CURRENT EDITION OF THE CONTRA COSTA COUNTY IMPROVEMENT STANDARDS.
2. EROSION CONTROL BEST MANAGEMENT PRACTICES (BMPS) SHALL BE INSTALLED AND MAINTAINED DURING THE WET SEASON (OCTOBER 1 THROUGH APRIL 30). SEDIMENT CONTROL BMPS SHALL BE INSTALLED AND MAINTAINED YEAR ROUND.
3. ALL DRAINAGE INLETS IMMEDIATELY DOWNSTREAM OF THE WORK AREAS AND WITHIN THE WORK AREAS SHALL BE PROTECTED WITH SEDIMENT CONTROL YEAR ROUND. SEDIMENT CONTROL PROTECTION SHALL BE REMOVED FROM THE DRAINAGE INLETS PRIOR TO ACCEPTANCE OF THE PUBLIC IMPROVEMENTS BY THE COUNTY.
4. ALL STABILIZED CONSTRUCTION ACCESS LOCATIONS SHALL BE CONSTRUCTED PER CONTRA COSTA COUNTY STD'S WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES PAVED AREAS. THE STABILIZED ACCESS SHALL BE MAINTAINED ON A YEAR ROUND BASIS UNTIL THE COMPLETION OF CONSTRUCTION.
5. ALL AREAS DISTURBED DURING CONSTRUCTION BY GRADING, TRENCHING, OR OTHER ACTIVITIES, SHALL BE PROTECTED FROM EROSION DURING THE WET SEASON (OCTOBER 1 THROUGH APRIL 30). HYDROSEED, IF UTILIZED, MUST BE PLACED BY SEPTEMBER 15. HYDROSEED PLACED DURING THE WET SEASON SHALL USE A SECONDARY EROSION PROTECTION METHOD.
6. SENSITIVE AREAS AND AREAS WHERE EXISTING VEGETATION IS BEING PRESERVED SHALL BE PROTECTED WITH CONSTRUCTION FENCING. SEDIMENT CONTROL BMPS SHALL BE INSTALLED WHERE ACTIVE CONSTRUCTION AREAS DRAIN INTO SENSITIVE OR PRESERVED VEGETATION AREAS.
7. SEDIMENT CONTROL BMPS SHALL BE PLACED ALONG THE PROJECT PERIMETER WHERE DRAINAGE LEAVES THE PROJECT. SEDIMENT CONTROL BMPS SHALL BE MAINTAINED YEAR ROUND UNTIL THE CONSTRUCTION IS COMPLETE OR THE DRAINAGE PATTERN HAS BEEN CHANGED AND NO LONGER LEAVES THE SITE.
8. EROSION AND SEDIMENT CONTROL MEASURES FOR THE PROJECT SHOULD BE IN SUBSTANTIAL COMPLIANCE AT ALL TIMES WITH THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED FOR THE PROJECT IN ACCORDANCE WITH THE STATE OF CALIFORNIA GENERAL CONSTRUCTION PERMIT. THIS PERMIT REQUIRES THAT THE SWPPP BE KEPT UP TO DATE TO REFLECT THE CHANGING SITE CONDITIONS AND THE SWPPP TO BE AVAILABLE ON SITE AT ALL TIMES FOR REVIEW BY STATE INSPECTORS (IF APPLICABLE).
9. EFFECTIVE EROSION CONTROL BMPS SHALL BE IN PLACE PRIOR TO ANY STORM EVENTS.
10. IF COLLOIDAL SOILS ARE ENCOUNTERED, REMOVAL OF COLLOIDAL SUSPENSIONS BY A COUNTY APPROVED METHOD BEFORE DISCHARGE IS REQUIRED.

CONTRA COSTA COUNTY EROSION AND SEDIMENT CONTROL NOTES:

- 88-11.820 – DRAINAGE, EROSION AND SEDIMENT CONTROL.

SHARE LINK TO SECTIONPRINT SECTIONDOWNLOAD (DOCX) OF SECTIONSEMAIL SECTION (A)

ANY TEMPORARY STREAM OR WATERSHED DIVERSION SHALL BE RESTORED IN FINAL RECLAMATION TO ITS CONDITION PRIOR TO SURFACE MINING OPERATIONS, UNLESS THE PLANNING AGENCY DETERMINES RESTORATION IS UNNECESSARY. (B)

REGRADING AND REVEGETATION SHALL BE DESIGNED AND CARRIED OUT TO MINIMIZE EROSION, TO PROVIDE FOR DRAINAGE TO NATURAL OUTLETS OR INTERIOR BASINS DESIGNED FOR WATER STORAGE, AND TO ELIMINATE CLOSED DEPRESSIONS AND SIMILAR CATCHMENTS THAT COULD SERVE AS BREEDING AREAS FOR INSECTS. (C)

SILT BASINS, WHICH HAVE OUTLET TO LOWER GROUND AND WILL OR MAY STORE WATER DURING PERIODS OF SURFACE RUNOFF, SHALL BE EQUIPPED WITH SEDIMENT CONTROL AND REMOVAL FACILITIES, AND WITH PROTECTED SPILLWAYS DESIGNED TO MINIMIZE EROSION. (D)

FINAL GRADING AND DRAINAGE SHALL BE DESIGNED TO PREVENT DISCHARGE OF SEDIMENT LOADS HIGHER THAN BEFORE MINING OPERATIONS. (E)

UPON RECLAMATION, THE OPERATOR SHALL PRECLUDE OR ELIMINATE ANY CONDITION WHICH WILL OR COULD LEAD TO THE DEGRADATION OF WATER QUALITY BELOW APPLICABLE STANDARDS OF THE REGIONAL WATER QUALITY CONTROL BOARD OR ANY OTHER AGENCY WITH AUTHORITY OVER WATER QUALITY.

(ORD. 79-114).

EARTHWORK

STRIPPING/DEMO	= APPROX. XX±	CU. YDS.
EXCAVATION/IMPORT	= APPROX. XX	CU. YDS.
EXPORT	= APPROX. 0	CU. YDS.

EROSION CONTROL RESPONSIBLE PERSON

NAME CONTACT NUMBER

TOTAL DISTURBED AREA = XX,XXX SF ±

NOTE:

THIS PROJECT DISTURBS LESS THAN 1 ACRE (40548.55 SF) THEREFORE A SWPPP IS NOT NEEDED.

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REVISIONS:

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APN 169-090-002
EROSION CONTROL NOTES
CONTRA COSTA COUNTY, CALIFORNIA , CALIFORNIA

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DESIGNED BY: R.FRANCIS
CHECKED BY: B.F.BROWNII
DATE: JANUARY, 2024
SCALE: 1"=20'

PROJECT NO: 23-001

C15

INTENT OF DRAWINGS

1. TYPICAL DETAILS AND GENERAL NOTES ON THESE DRAWINGS APPLY TO ALL PARTS OF THE JOB EXCEPT WHERE SPECIFICALLY DETAILED OR NOTED OTHERWISE ON THEIR SHEET.
2. RESOLVE ANY CONFLICTS ON THE DRAWINGS WITH THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. DIMENSIONS TAKE PRECEDENCE OVER SCALE OF DRAWINGS. HOWEVER, ANY SIGNIFICANT CONFLICTS SHOULD BE RESOLVED AS NOTED ABOVE.
3. VERIFY ALL DIMENSIONS AND CONDITIONS ON THE JOB. RESOLVE ANY CONFLICTS BETWEEN EXISTING CONDITIONS AND INFORMATION SHOWN ON THESE DRAWINGS WITH THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.
4. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE MEANS OR METHODS OR SEQUENCES OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY BRACING, SHORING AND SUPPORT NECESSARY TO ACHIEVE THE FINISHED STRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING AND ENFORCING ALL CONSTRUCTION LOAD LIMITS ON THE STRUCTURE.

GENERAL

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE DRAWINGS AND GENERAL NOTES AND SPECIFICATIONS.
2. ALL APPLICABLE REQUIREMENTS OF THE CALIFORNIA CONSTRUCTION AND GENERAL INDUSTRY SAFETY ORDERS, THE OCCUPATIONAL SAFETY AND HEALTH ACT AND THE CONSTRUCTION SAFETY ACT SHALL BE MET.
3. ALL ERECTION PROCEDURES SHALL CONFORM TO OSHA STANDARDS. ANY DEVIATION MUST BE APPROVED BY OSHA PRIOR TO ERECTION.
4. ALL NECESSARY PERMITS, LICENSES, APPROVALS, FEES, NOTICES, ETC, SHALL BE OBTAINED PRIOR TO BEGINNING CONSTRUCTION.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE STRUCTURE DURING THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL RETAIN A CALIFORNIA REGISTERED CIVIL ENGINEER TO DESIGN ALL TEMPORARY SHORING, BRACING AND GUYS REQUIRED DURING CONSTRUCTION IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES.
6. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITIES AGENCIES AS TO THE LOCATION OF ALL UNDERGROUND FACILITIES FOR THE PROTECTION OF AND REPAIR OF DAMAGE TO THEM. CALL "UNDERGROUND SERVICE ALERT" FORTY-EIGHT HOURS BEFORE DIGGING.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND SHALL BE RESOLVED BEFORE PROCEEDING WITH THE WORK.
9. SHOP DRAWINGS REQUIRED BY THE CONTRACT DOCUMENTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION. ALL SHOP DRAWINGS SHALL BE REVIEWED BY THE GENERAL CONTRACTOR BEFORE SUBMITTAL. THE ENGINEER'S REVIEW IS TO BE FOR CONFORMANCE WITH THE DESIGN CONCEPT AND GENERAL COMPLIANCE WITH THE RELEVANT CONTRACT DOCUMENTS. THE ENGINEER'S REVIEW DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW, CHECK AND COORDINATE THE SHOP DRAWINGS PRIOR TO SUBMISSION. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, DIMENSIONS, ETC.
10. ALL DETAILS DESIGNATED AS STANDARD OR TYPICAL SHALL APPLY TO ALL APPLICABLE CONDITIONS IN ADDITION TO OTHER SPECIFICALLY REFERENCED DETAILS AND SECTIONS.
11. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW BY THE ENGINEER
12. REFER TO CIVIL, MECHANICAL, HVAC, PLUMBING AND ELECTRICAL DRAWINGS FOR SIZE AND LOCATION OF ALL OPENINGS REQUIRED FOR DUCTS, PIPES AND PIPE SLEEVES, ELECTRICAL CONDUITS AND OTHER ITEMS TO BE EMBEDDED IN CONCRETE OR OTHERWISE INCORPORATED IN STRUCTURAL WORK. NO PIPES OR DUCTS SHALL BE EMBEDDED INTO STRUCTURAL MEMBERS UNLESS SHOWN ON THE PLANS.
13. CIVIL, MECHANICAL, PLUMBING AND ELECTRICAL PLANS ARE CONSIDERED A PART OF THE STRUCTURAL DESIGN DRAWINGS AND ARE TO BE USED TO DEFINE DETAIL CONFIGURATIONS INCLUDING, BUT NOT LIMITED TO RELATIVE LOCATION OF MEMBERS, ELEVATIONS, LOCATION OF ALL OPENINGS, ETC.
14. REFER TO CIVIL PLANS FOR FLOOR DEPRESSIONS, OPENINGS, SLOPES, DRAINS, CURBS, PADS, EMBEDDED ITEMS
15. REFER TO CIVIL DRAWINGS FOR ALL SIDEWALK LOCATIONS AND DETAILING REQUIREMENTS. SIDEWALK INFORMATION IS NOT SHOWN ON STRUCTURAL DRAWINGS.

TESTS AND INSPECTIONS

STRUCTURAL TESTS AND SPECIAL INSPECTIONS SHALL BE PROVIDED BY A QUALIFIED TESTING AND INSPECTION AGENCY AS REQUIRED BELOW AND SHALL CONFORM TO THE REQUIREMENTS OF CHAPTER 17 OF THE CBC.

TESTS:

- ☒ FILL COMPACTION
- ☒ REINFORCING STEEL
- ☒ CONCRETE
- ☒ STRUCTURAL STEEL
- ☐ MASONRY
- ☐ GROUT AND MORTAR
- ☒ EPOXY AND EXPANSION ANCHORS
- ☐ SHOTCRETE

INSPECTIONS:

- ☒ SPECIAL GRADING, EXCAVATION AND FILLING
- ☐ PILE/PIER INSTALLATION
- ☒ REINFORCEMENT PLACEMENT
- ☒ CONCRETE PLACEMENT
- ☐ SHOP WELDING
- ☐ FIELD WELDING
- ☐ HIGH STRENGTH BOLTING
- ☐ MASONRY PLACEMENT AND GROUTING
- ☐ SHEAR STUD INSTALLATION
- ☒ EPOXY AND EXPANSION ANCHORS
- ☐ SHOTCRETE
- ☐ ANCHOR BOLT SIZE AND PLACEMENT

DESIGN CRITERIA

1. CODES AND STANDARDS:

   2019 CALIFORNIA BUILDING CODE (CBC)

   ACI 318-14 ACI BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE

2. SEISMIC DESIGN PARAMETERS;

   SITE CLASS D
   SEISMIC DESIGN CATEGORY D
   RISK CATEGORY III

   $S_S = 0.59g$ $F_a = 1.33$ $S_{DS} = 0.52g$
   $S_1 = 0.26g$ $F_v = 2.08$ $S_{D1} = 0.36g$
   $I = 1.00$

3. WIND LOADS

   RISK CATEGORY = II
   BASIC WIND SPEED = 95 MPH
   EXPOSURE CATEGORY = C

GEOTECHNICAL DESIGN PARAMETERS

1. THE STRUCTURAL DESIGN IS BASED ON THE GEOTECHNICAL RECOMMENDATIONS STATED IN THE FOLLOWING GEOTECHNICAL ENGINEERING REPORT:

   TITLE GEOTECHNICAL STUDY
   DISTRESSED ENTRANCE ACCESS
   ROAD AT ATRIA PARK
   1545 PLEASANT HILL ROAD
   LAFAYETTE, CALIFORNIA
   BY GEOTECNIA CONSULTING GEOTECHNICAL ENGINEERS
   PROJ No. 172370
   DATE JUNE 8, 2018

2. GEOTECHNICAL DESIGN PARAMETERS

   ALLOWABLE BEARING PRESSURES

   DEAD+LIVE = 1500 PSF
   DEAD+LIVE+TRANSIENT = 2000 PSF

   LATERAL EARTH PRESSURES

   ACTIVE PRESSURE (IN-SITU) = 132 PSF/FT
   ACTIVE PRESSURE (URETEK STABALIZED) = 105 PSF/FT

DETAIL AND SECTION REFERENCE TAGS

DETAIL REFERENCE TAG — XX: DETAIL LETTER; S-X: DRAWING WHERE DETAIL OCCURS

DETAILS ARE **NOT** CROSS REFERENCED BACK TO SHEETS WHERE DETAIL REFERENCE TAG OCCURS

SECTION REFERENCE TAG — XX: SECTION NUMBER; S-X: DRAWING WHERE SECTION OCCURS

SECTIONS ARE CROSS REFERENCED BACK TO SHEETS WHERE SECTION REFERENCE TAG OCCURS

X / S-X **SECTION**
SCALE:
DRAWING WHERE SECTION IS REFERENCE ON PLAN → S-X

FOUNDATION AND EARTHWORK

1. THE FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL RECOMMENDATIONS STATED IN THE GEOTECHNICAL ENGINEERING REPORT. REFER TO GEOTECHNICAL DESIGN PARAMETERS **NOTE 1** ON SHEET **S-1**.
2. UNLESS OTHERWISE INDICATED, FOUNDATION WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REFERENCED GEOTECHNICAL ENGINEERING REPORT. THIS REPORT IS SUPPLEMENTAL INFORMATION AND SHOULD BE KEPT ON THE JOB SITE AT ALL TIMES.
3. IT IS RECOMMENDED THAT THE FOUNDATION EXCAVATIONS BE EXAMINED AND APPROVED BY THE GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE PRIOR TO THE PLACEMENT OF ANY REINFORCING STEEL OR CONCRETE.
4. UNEXPECTED SOIL CONDITIONS: FOUNDATION DESIGN IS BASED UPON SOIL CONDITIONS SHOWN BY TEST BORINGS IN THE REFERENCED GEOTECHNICAL ENGINEERING REPORT. ANY SUBSURFACE CONDITIONS NOT IN ACCORDANCE WITH THE REFERENCED GEOTECHNICAL REPORTS SHALL BE REPORTED TO THE GEOTECHNICAL ENGINEER IMMEDIATELY FOR RESOLUTION PRIOR TO CONTINUING ANY WORK.
5. FOUNDATIONS SHALL BEAR ON APPROVED COMPACTED SUB-BASE OR COMPACTED FILL AS REQUIRED BY GEOTECHNICAL ENGINEERING REPORT. SOIL SHALL BE COMPACTED UNDER AND AROUND THE SIDES OF ALL FOOTINGS AND SLABS.
6. COMPACTED FILL: AREAS TO RECEIVE FILL SHOULD BE STRIPPED OF ANY VEGETATION, DEBRIS, ANIMAL BURROWS, EXISTING UNENGINEERED FILL, OR OTHER DELETERIOUS MATERIAL. THE APPROVED EXPOSED SURFACE SHOULD BE SCARIFIED TO A DEPTH OF 8 INCHES; MOISTURE CONDITIONS TO AT, OR ABOVE, THE OPTIMUM MOISTURE, AND COMPACTED TO AT LEAST 90% OF THE ASTM D1557 MAXIMUM DRY DENSITY. FILL SHALL CONSIST OF ON-SITE, OR SIMILAR, SOIL WHICH IS FREE OF DELETERIOUS MATERIAL AND HAS AN ORGANIC CONTENT LESS THAN 3% BY WEIGHT (ASTM D2321). FILL SHOULD BE MOISTURE CONDITIONED TO AT, OR ABOVE, THE OPTIMUM MOISTURE; SPREAD IN HORIZONTAL LIFTS COMPATIBLE WITH THE COMPACTION EQUIPMENT; AND, UNIFORMLY COMPACTED TO AT LEAST 90% OF THE MAXIMUM DENSITY.
7. COMPACTED BACKFILL: BACKFILL FOR STRUCTURES CAN CONSIST OF EXCAVATED ON SITE, OR SIMILAR, SOIL THAT MEETS THE CRITERIA SPECIFIED IN THE GEOTECHNICAL ENGINEERING REPORT OF THE CONTRACT DOCUMENTS. THE AREA SHALL BE CLEARED OF ALL CONSTRUCTION DEBRIS PRIOR TO BACKFILLING. BACKFILL SHOULD BE MOISTURE CONDITIONED TO, OR ABOVE, THE OPTIMUM MOISTURE; SPREAD IN HORIZONTAL LIFTS; AND, COMPACTED TO AT LEAST 90% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557. LIFT THICKNESS SHOULD BE SUFFICIENTLY THIN TO ALLOW FOR UNIFORM COMPACTION THROUGHOUT THE LIFT. ANY LOOSE SOIL ON CONSTRUCTION SLOPES SHOULD BE REMOVED BY USE OF SMALL NOTCHES (MAXIMUM 2'-0" IN HEIGHT) AS THE FILL IS BROUGHT UP. THE INTENT IS FOR BACKFILL TO BE BONDED INTO COMPETENT UNDISTURBED NATURAL SOIL OR PREVIOUSLY COMPACTED FILL.
8. FORM FOUNDATIONS AS NECESSARY TO ACHIEVE MINIMUM DIMENSIONS SHOWN ON THESE DRAWINGS. EARTH FORMS CAN BE USED IF SOIL CONDITIONS PERMIT EXCAVATION WITHOUT SOIL SLOUGHING DURING STEEL AND CONCRETE PLACEMENT. IF EARTH FORMS ARE USED, INCREASE WIDTH OF FOOTING ONE INCH ON EACH SIDE FROM SIZE SHOWN ON DRAWINGS.
9. BOTTOM OF FOUNDATIONS SHALL BE STEPPED AS NECESSARY TO PROVIDE LEVEL BEARING. CONTRACTOR SHALL PROVIDE PROPOSED STEPS WHERE REQUIRED BY SITE CONDITIONS AND BURIED UTILITY LOCATIONS IN ADDITION TO LOCATIONS SPECIFICALLY NOTED ON THE PLANS AND DETAILS FOR REVIEW AND APPROVAL.
10. FOUNDATION EXCAVATIONS SHALL BE CLEANED OF ANY LOOSENED SOILS, DEBRIS AND STANDING WATER BEFORE PLACING STEEL OR CONCRETE.

ANCHORAGE TO EXISTING CONCRETE

1. UON EPOXY ANCHORS AND DOWELS SHALL BE HILTI HIT HY-150 OR EQUIVALENT WITH ENGINEERS PRIOR APPROVAL. WHERE DOWELS ARE THROUGH DOWELS USE SIKADUR 35, HI MOD LV OR EQUAL.
2. ALL EPOXY GROUTED WORK AND SURFACE PREPARATION AND INSTALLATION SHALL FOLLOW MANUFACTURER'S PRINTED INSTRUCTIONS.
3. DRILL HOLES TO THE DEPTH AND DIAMETER AS SPECIFIED IN THE PRODUCT LITERATURE. HOLES ARE TO BE CLEANED PER SPECIFICATION AND SHALL BE DRY.
4. POST INSTALLED ANCHORS, (EXPANSION AND ADHESIVE TYPE ANCHORS LOADED WITH EITHER PULLOUT OR SHEAR), SHALL HAVE 10% OF THE ANCHORS TESTED WITH A DIRECT TENSION PULL TEST. THE TENSION TEST LOAD SHALL BE 1.25 TIMES THE MAXIMUM DESIGN STRENGTH OR 80% OF THE YIELD STRENGTH OF THE ANCHOR, (0.8 Ab Fy), WHICHEVER IS LESS. THE MAXIMUM DESIGN STRENGTH IS AS DETERMINED IN ACCORDANCE WITH ACI 318 APPENDIX D PROVISIONS. THE SPECIAL INSPECTOR MAY OBTAIN THE DESIGN STRENGTH FROM THE EQUIPMENT ANCHORAGE DEFERRED SUBMITTAL CALCULATIONS. THE SPECIAL INSPECTOR SHALL SELECT THE ANCHORS TO BE TESTED AT RANDOM. IF ANY ANCHOR FAILS TESTING, ALL ANCHORS OF THE SAME TYPE NOT PREVIOUSLY TESTED SHALL BE TESTED UNTIL 20 CONSECUTIVE ANCHORS PASS. THEN RESUME INITIAL TESTING FREQUENCY.
   Ab = AREA OF ANCHOR (in^2)
   Fy = YIELD STRENGTH OF BOLT (PSI)
5. THE REINFORCEMENT IN EXISTING CONCRETE SHALL NOT BE CUT OR DAMAGED BY THE NEW CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT A PROCEDURE FOR IDENTIFICATION OF EXISTING REINFORCEMENT FOR THE ENGINEER'S APPROVAL BEFORE DRILLING.
6. THE REINFORCING BARS SHALL BE FREE OF OILS, PAINTS, DIRT OR OTHER COATINGS THAT WILL REDUCE THE BOND.

REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL CONFORM TO ASTM STANDARD AS NOTED:

   TYPICAL REBAR: A615 GRADE 60
   REBAR WHERE SPECIFICALLY NOTED: A615 GRADE 40
   REBAR TO BE WELDED: A706 GRADE 60

2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185. MINIMUM LAP AT SPLICES SHALL BE 12 INCHES.
3. ALL CONCRETE SHALL BE REINFORCED UNLESS SPECIFICALLY NOTED "NOT REINFORCED" IN THE DRAWINGS. IF REINFORCING BARS ARE NOT SHOWN OR NOTED, PROVIDE SAME REINFORCEMENT AS FOR SIMILAR CONDITIONS ELSEWHERE IN THE WORK, OR AS DIRECTED BY THE ENGINEER.
4. REINFORCEMENT BARS #5 AND LARGER SHALL NOT BE SPLICED EXCEPT AS DETAILED AND LOCATED ON DRAWINGS. #4 AND SMALLER BARS WITH LENGTH NOT SHOWN SHALL BE CONTINUOUS, LAPPING IN CONCRETE 1'-6" MINIMUM. WALL HORIZONTAL REINFORCEMENT SPLICES SHALL BE STAGGERED, VERTICAL REINFORCEMENT SHALL BE SPLICED ONLY AT HORIZONTAL SUPPORTS, SUCH AS ROOF OR FLOOR UNLESS OTHERWISE NOTED ON DRAWINGS. ALL SPLICES SHALL BE CLASS B U.O.N.
5. ANCHOR BOLTS, DOWELS AND OTHER EMBEDDED ITEMS SHALL BE ACCURATELY SET IN PLACE AND FIRMLY SUPPORTED BEFORE CONCRETE IS POURED.
6. REINFORCEMENT BARS SHALL BE ACCURATELY PLACED AND FIRMLY SUPPORTED USING TIES AND SUPPORT BARS IN ADDITION TO REINFORCEMENT SHOWN WHERE FIRM AND ACCURATE PLACING IS NECESSARY AS SPECIFIED IN THE ACI STANDARDS. DOWELS SHOULD BE PROVIDED TO MATCH ALL REINFORCEMENT AT CONSTRUCTION JOINTS UNLESS OTHERWISE NOTED.
7. NO REINFORCEMENT WELDING (TACK WELDING INCLUDED) SHALL BE DONE UNLESS SHOWN ON THE DRAWINGS OR APPROVED BY THE ENGINEER.
8. ALL DIMENSIONS SHOWN FOR LOCATION OF REINFORCING ARE TO THE FACE OF BARS AND DENOTE CLEAR COVERAGE UNLESS OTHERWISE NOTED.
9. MINIMUM CONCRETE COVERAGE OF REINFORCING STEEL SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED ON PLANS:

   CONCRETE CAST AGAINST EARTH 3"

   FORMED CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6-#18 BARS 2"
   #5 BAR AND SMALLER 1 ½"

   SLABS ON GRADE: ¾" (FROM TOP)

10. DRAWINGS SHOW TYPICAL REINFORCING CONDITIONS. CONTRACTOR SHALL PREPARE DETAILED PLACEMENT DRAWINGS OF ALL CONDITIONS SHOWING QUANTITY, SPACING, SIZES, CLEARANCE, LAPS, INTERSECTIONS AND COVERAGE REQUIRED BY STRUCTURAL DETAILS, APPLICABLE CODE AND TRADE STANDARDS. CONTRACTOR SHALL NOTIFY REINFORCING INSPECTOR OF ANY ADJUSTMENTS FROM TYPICAL CONDITIONS WHICH ARE PROPOSED IN PLACEMENT DRAWINGS TO FACILITATE FIELD PLACEMENT OF REINFORCING STEEL AND CONCRETE.

CONCRETE

1. ALL STRUCTURAL CONCRETE SHALL HAVE A DENSITY AFTER CURING BASED ON WEIGHT CLASSIFICATION AS SHOWN BELOW, UON:

   NORMAL WEIGHT: DENSITY = 145 PCF

2. ALL CONCRETE SHALL BE NORMAL WEIGHT UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.
3. ALL STRUCTURAL CONCRETE SHALL BE MADE FROM AGGREGATES BASED ON WEIGHT CLASSIFICATION AS SHOWN BELOW, UON.:
   NORMAL WEIGHT: ASTM C33 WITH PROVEN SHRINKAGE CHARACTERISTICS OF LESS THAN 0.05%
4. ALL CONCRETE SHALL CONFORM TO THE MINIMUM COMPRESSIVE STRENGTHS AND WATER/CEMENTITIOUS MATERIAL RATIOS TABULATED BELOW:

	f'c (28 DAY)
RETAINING WALL STRUCTURES	5000 PSI
FOOTING AND SLAB ON GROUND	5000 PSI

5. ALL CEMENT SHALL CONFORM TO ASTM C150 TYPE II OR V, UON.
6. CONCRETE MIX DESIGNS SHALL BE PREPARED BY AN INDEPENDENT LABORATORY AND REVIEWED BY THE STRUCTURAL ENGINEER.
7. ADMIXTURES SHALL COMPLY WITH ASTM C494 AND BE OF A TYPE THAT INCREASES THE WORKABILITY OF THE CONCRETE, BUT SHALL NOT BE CONSIDERED TO REDUCE THE SPECIFIED MINIMUM CEMENT CONTENT. CALCIUM CHLORIDE SHALL NOT BE USED.
8. PLACEMENT OF CONCRETE SHALL BE IN CONFORMANCE WITH ACI 304.
9. CONTROL JOINTS SHALL BE LOCATED AND FORMED AS SHOWN ON THE DRAWINGS. SLAB CONTROL JOINTS SHALL BE PLACED AT POINTS OF LOW STRESS AS WELL AS LOCATED TO MINIMIZE EFFECTS OF SHRINKAGE. KEY AND DOWEL SLAB CONSTRUCTION JOINTS AS SHOWN ON THE PLANS. ALL CONSTRUCTION JOINTS SHALL BE CLEANED THOROUGHLY AND ALL LAITANCE SHALL BE REMOVED FROM THE SURFACE. ALL VERTICAL JOINTS SHALL BE THOROUGHLY WETTED AND SLUSHED WITH A COAT OF NEAT CEMENT OR BONDING AGENT IMMEDIATELY BEFORE POURING NEW CONCRETE.
10. SET FLOOR SCREEDS TO REQUIRED ELEVATIONS DURING CONCRETE POURING TO COMPENSATE FOR FORM SETTLEMENT.

CALL BEFORE YOU DIG — USA — CA: 800-227-2600

REVISIONS:

ATRIA LAFAYETTE
GENERAL STRUCTURAL NOTES
APN 169-090-002
CONTRA COSTA COUNTY, CALIFORNIA

100% SUBMITTAL

THE OLYMPUS GROUP

S-1

CONDUITS AND PIPES EMBEDDED IN REINFORCED CONCRETE STRUCTURES

1. THE CONTRACTOR SHALL NOT INSTALL ANY CONDUITS, PIPES, DUCTS, OR SLEEVES THAT ARE NOT SHOWN ON THE PLANS OR NOT APPROVED BY THE ENGINEER.
2. CONDUITS AND PIPES OF ALUMINUM SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE.
3. PIPING AND CONDUIT SHALL BE SO FABRICATED AND INSTALLED SUCH THAT CUTTING, BENDING, OR DISPLACEMENT OF REINFORCEMENT FROM IT'S PROPER LOCATION WILL NOT BE REQUIRED.
4. PIPES PASSING THROUGH WALLS OF A LIQUID CONTAINING STRUCTURE SHALL INCLUDE AN INTEGRAL WATERSTOP.
5. LIQUID, GAS, OR VAPOR, EXCEPT WATER NOT EXCEEDING 90° F NOR 50 PSI PRESSURE, SHALL "NOT" BE PLACED UNTIL THE CONCRETE HAS ATTAINED ITS DESIGN STRENGTH.
6. PIPE AND CONDUIT SIZE AND SPACING SHALL BE PER STANDARD DETAILS DESCRIBED WITHIN.

NON-SHRINK GROUT

1. NON-SHRINK GROUT SHALL BE MASTER BUILDERS EMBECO 713, OR SIKA GROUT 212, OR U.S. GROUT FIVE STAR, OR EQUIVALENT WITH ENGINEER'S PRIOR APPROVAL.
2. SURFACE PREPARATION SHALL FOLLOW MANUFACTURER'S PAINTED INSTRUCTIONS. PROPER SURFACE CLEANING AND MOIST CURING IS ESSENTIAL.
3. SAND-BLASTING: REMOVE ALL DIRT, OIL, GREASE, AND OTHER BOND-INHIBITING MATERIALS. CONCRETE MUST BE SAND-BLASTED AND ROUGHENED TO PROMOTE MECHANICAL ADHESION. PRIOR TO POURING, SURFACE SHOULD BE BROUGHT TO A SATURATED SURFACE CONDITION.
4. FORMING: FOR POURABLE GROUT, CONSTRUCT FORMS TO RETAIN GROUT WITHOUT LEAKAGE. FORMS SHOULD BE LINED OR COATED WITH BOND-BREAKER FOR EASY REMOVAL.
5. MIXING: MIX MECHANICALLY WITH LOW-SPEED DRILL (400-600 RPM) AND A MIXING PADDLE AND FOLLOW MANUFACTURER'S RECOMMENDATIONS.
6. NON-SHRINK GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 4,000 PSI PER ASTM C109. TESTING REQUIREMENTS SHALL FOLLOW ACI AND ASTM STANDARDS.

STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITIONS OF AISC SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS, AND CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.
2. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS AND GRADES:
   - WIDE FLANGE BEAMS AND COLUMNS: ASTM A992, GRADE 50
   - CHANNELS, ANGLES AND PLATES: ASTM A36
   - ROUND STEEL PIPE: ASTM A53, TYPE E OR S, GRADE B
   - RECTANGULAR STRUCTURAL TUBING: ASTM A500, GRADE B
3. MACHINE BOLTS SHALL BE GRADE "A" CONFORMING TO ASTM A307, UON. ANCHOR BOLTS SHALL BE GRADE 36 CONFORMING TO ASTM F1554, UON. NUTS SHALL BE STANDARD HEX, GRADE A, CONFORMING TO ASTM A563.
4. WELDING SHALL BE DONE BY A PROCESS APPROVED BY THE ENGINEER AND THE BUILDING DEPARTMENT. WELDERS SHALL BE CERTIFIED IN ACCORDANCE WITH AWS D1.1 LATEST EDITION.
5. A SEQUENCE OF FIELD WELDING SHALL BE PLANNED TO MINIMIZE LOCKED-IN STRESSES AND DISTORTION.
6. WELDING SHALL CONFORM TO AWS D1.1 LATEST EDITION.
7. LENGTHS OF WELDS SHOWN ARE EFFECTIVE LENGTHS AS SPECIFIED IN AWS D1.1. WHERE LENGTH OF WELD IS NOT SHOWN IT SHALL BE FULL LENGTH OF JOINT. ALL BUTT WELDS SHALL BE FULL PENETRATION UNLESS NOTED OTHERWISE.
8. WHERE MINIMUM AISC FILLET WELD THICKNESS REQUIREMENTS EXCEED WELDS SHOWN ON DETAILS, PROVIDE MINIMUM AISC WELD.
9. ALL SHOP WELDING SHALL BE PERFORMED IN AN APPROVED FABRICATOR'S SHOP IN ACCORDANCE WITH CBC 1704.2.5.2.
10. ELECTRODES: AWSD1.1 E70XX SERIES AS REQUIRED FOR INTENDED USE.
11. AFTER FABRICATION, ALL STEEL SHALL BE CLEARED FREE OF RUST, LOOSE MILL SCALE AND OIL AND HOT DIPPED GALVANIZED.
12. SHOP DRAWINGS: CONTRACTOR SHALL PREPARE STEEL SHOP DRAWINGS INDICATING PROFILES, SIZES, SPACING, LOCATIONS OF STRUCTURAL MEMBERS, OPENINGS, ATTACHMENTS, CONNECTIONS AND CAMBERS.

ABBREVIATIONS

AB ANCHOR BOLT
ABV ABOVE
ACI AMERICAN CONCRETE INSTITUTE
ADDL ADDITIONAL
AISC AMERICAN INSTITUTE OF STEEL CONSTRUCTION

ALT ALTERNATE
ALUM ALUMINUM
ANCH ANCHOR, ANCHORAGE
APPROX APPROXIMATE
ARCH ARCHITECT, ARCHITECTURAL
A/E ARCHITECT/ENGINEER
ASPH ASPHALT
ASTM AMERICAN SOCIETY FOR TESTING AND MATERIALS

AWS AMERICAN WELDING SOCIETY

BD BOARD
BN BOUNDARY NAILING
BTWN BETWEEN
BLDG BUILDING
BLKG BLOCKING
BLW BELOW
BM BEAM
BOT BOTTOM
BP BASE PLATE
BRG BEARING
BRKT BRACKET
BOF BOTTOM OF FRAMING
BOS BOTTOM OF STEEL

CC CENTER TO CENTER
CANT CANTILEVER
CAP CAPACITY
CIP CAST-IN-PLACE
CJ CONTROL JOINT
℄ CENTERLINE
CLR CLEAR
CLSM CONTROLLED LOW STRENGTH MATERIAL
CMU CONCRETE MASONRY UNIT
COL COLUMN
CONC CONCRETE
CONST CONSTRUCTION
CONN CONNECTION
CONT CONTINUOUS
CTR CENTER
CF CUBIC FEET
CY CUBIC YARD

DBL DOUBLE
DEMO DEMOLITION
DET DETAIL
DIAG DIAGONAL
DIA DIAMETER
DIM DIMENSION
DO DITTO (REPEAT)
d BAR DIAMETER
DWGS DRAWINGS

EA EACH
EF EACH FACE
EJ EXPANSION JOINT
EL ELEVATION
EN EDGE NAILING
ENGR ENGINEER
EOR ENGINEER OF RECORD
EQ EQUAL
EQUIP EQUIPMENT
EW EACH WAY
(E) EXISTING
EXP EXPANSION
EXT EXTERIOR

FDN FOUNDATION
FIN FINISH, FINISHED
FLR FLOOR
FN FIELD NAILING
FO FACE OF
FOC FACE OF CONCRETE
FOF FACE OF FINISH
FOM FACE OF MASONRY
FOS FACE OF STUD
FOW FACE OF WALL
FP FIREPROOF
FS FAR SIDE
FT FOOT, FEET
FTG FOOTING, FITTING

GA GAUGE, GAGE
GALV GALVANIZED
GLB GLUE LAMINATED BEAM
GYP BD GYPSUM BOARD

HDR HEADER
HEX HEXAGONAL
HGR HANGER
HT HEIGHT
HORIZ HORIZONTAL
HSB HIGH STRENGTH BOLTS
HSS HOLLOW STRUCTURAL SECTION

IBC INTERNATIONAL BUILDING CODE
ID INSIDE DIAMETER
IF INSIDE FACE
IN INCH
INT INTERIOR

JF JOINT FILLER
JST JOIST
JT JOINT

KIP KILOPOUND (1000 POUNDS)
KO KNOCKOUT
KS KING STUD
L ANGLE
LAM LAMINATED
LAT LATERAL
LB POUND (WEIGHT)
LONG LONGITUDINAL
LLH LONG LEG HORIZONTAL
LLV LONG LEG VERTICAL
LT WT LIGHTWEIGHT
LVL LAMINATED VENEER LUMBER
LWC LIGHT WEIGHT CONCRETE

MAS MASONRY
MAT MATERIAL
MAX MAXIMUM
MB MACHINE BOLT
MBM METAL BUILDING MANUFACTURER

MECH MECHANICAL
MEMB MEMBRANE
MEZZ MEZZANINE
MFR MANUFACTURER
MIN MINIMUM
MISC MISCELLANEOUS
MTL METAL

(N) NEW
NS NEAR SIDE
NTS NOT TO SCALE
NO NUMBER

oc ON CENTER
OD OUTSIDE DIAMETER
OF OUTSIDE FACE
OPNG OPENING
OPP OPPOSITE
OH OPPOSITE HAND

PAF POWDER ACTUATED FASTENERS
PAR PARALLEL
PARTN PARTITION
PCF POUNDS PER CUBIC FOOT
PERIM PERIMETER
PERP PERPENDICULAR
℘ PLATE
PLF POUNDS PER LINEAL FOOT
PLYWD PLYWOOD
PN PLATE NAILING
PP PARTIAL PEN
PSF POUNDS PER SQUARE FOOT
PSI POUNDS PER SQUARE INCH
PSL PARALLEL STRAND LUMBER
PT PRESERVATIVE/PRESSURE TREATED

QUAL QUALITY
QTY QUANTITY

R RADIUS
RCP REINFORCED CONCRETE PIPE
REINF REINFORCEMENT
REQD REQUIRED
REV REVISION

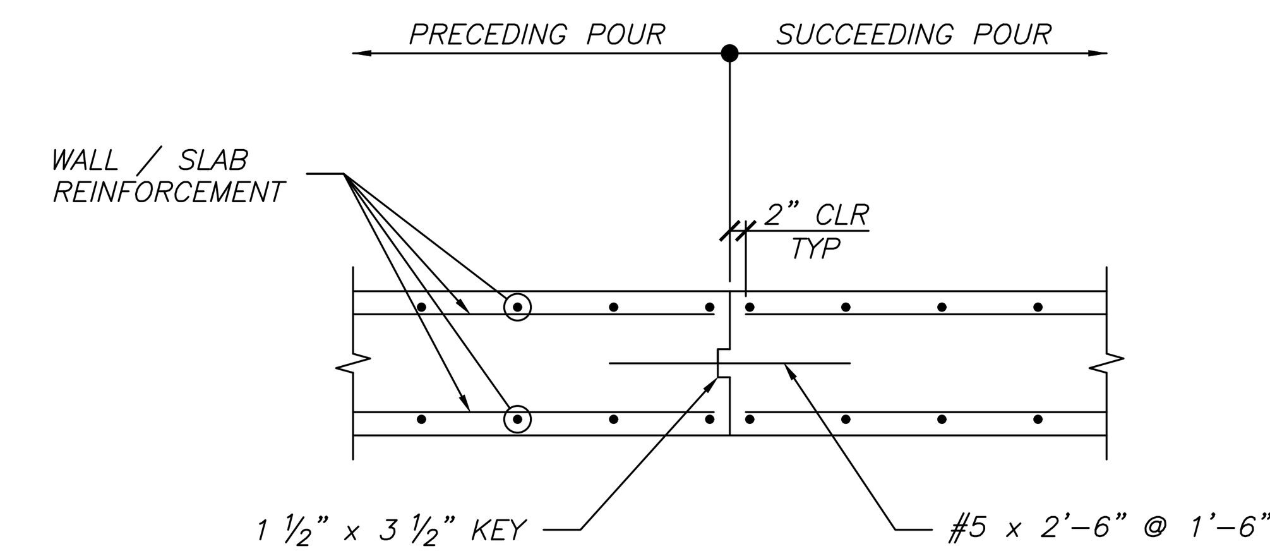
SAD SEE ARCHITECTURAL DRAWINGS
SCH SCHEDULE
SECT SECTION
SF SQUARE FOOT
SHTG SHEATHING
SIM SIMILAR
SMS SHEET METAL SCREW
SN SOLE NAILING
SOG SLAB ON GROUND
SPECS SPECIFICATIONS
SQ SQUARE
SS STAINLESS STEEL
STD STANDARD
STGR STAGGER
STIFF STIFFENER
STL STEEL
STRUCT STRUCTURAL
SUSP SUSPENDED
SW SHEARWALL
SYM SYMMETRICAL

T&B TOP AND BOTTOM
T&G TONGUE AND GROOVE
THK THICK, THICKNESS
THRU THROUGH
TOC TOP OF CONCRETE
TOF TOP OF FRAMING
TOS TOP OF STEEL
TR TRIMMER
TYP TYPICAL

UON UNLESS OTHERWISE NOTED

VERT VERTICAL

w/ WITH
w/o WITHOUT
WD WOOD
WF WIDE FLANGE
WDW WINDOW
WP WORKING POINT
WTPF WATERPROOF
WS WATER STOP
WT WEIGHT
WWF WELDED WIRE FABRIC



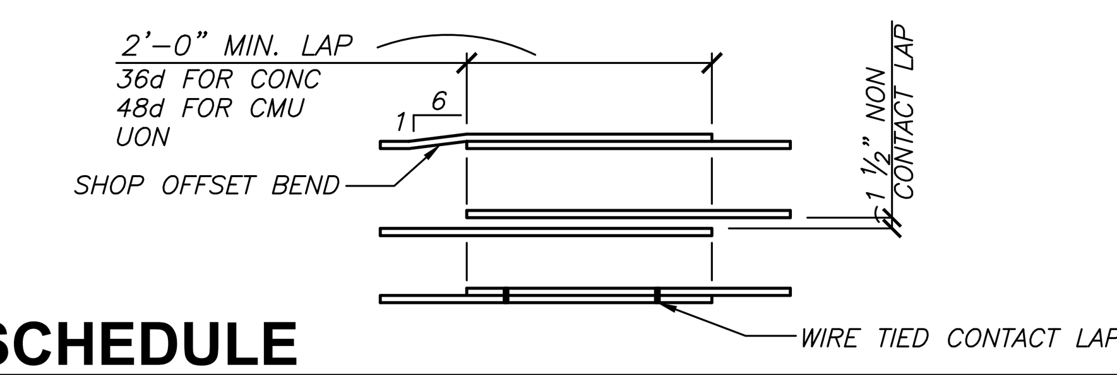
1 / S-2 EXPANSION JOINT

SCALE: ??=??

NOTES

1. REINFORCEMENT TABLE IS BASED ON THE CURRENT EDITION OF ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
2. HORIZONTAL REINFORCEMENT PLACED SUCH THAT 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE DEVELOPMENT LENGTH OR SPLICE.
3. EMBEDMENT AND LAP LENGTH IS BASED ON NORMAL WEIGHT CONCRETE. FOR LIGHT WEIGHT CONCRETE MULTIPLY THE TENSION DEVELOPMENT AND SPLICE LENGTHS BY 1.3.
4. THE DEVELOPMENT AND LAP SPLICE SCHEDULE CAN BE USED FOR NON CONTACT LAP SPLICE WHEN BAR SPACING IS LESS THAN 6".
5. IF FIELD CONDITIONS PRECLUDES MEETING ACI REQUIRED CLEAR COVER AND/OR CLEAR SPACING REQUIREMENTS. THE CONTRACTOR SHALL CONTACT THE ENGINGEER FOR MODIFIED LAP SPLICE LENGTHS.
6. ALL BAR TENSION LAP SPLICES ARE CLASS B UNLESS OTHERWISE NOTED.
7. FOR 3 BAR BUNDLE MULTIPLY THE TENSION LAP SPLICE BY 1.2. FOR 4 BAR BUNDLE MULTIPLE THE TENSION LAP SPLICE BY 1.33.
8. FOR BAR SIZES #14 AND #18 USE MECHANICAL SPLICES.
9. TENSION LAP SPLICES MAY BE SUBSTITUTED WITH MECHANICAL SPLICES WITH APPROVAL BY THE ENGINEER.

			#11	#10	#9	#8	#7	#6	#5	#4		#3	
REINFORCEMENT PROPERTIES	REINF GRADE (ksi)		60	60	60	60	60	60	60	60	40	60	40
	NOMINAL AREA (in)		1.56	1.27	1.00	0.79	0.60	0.44	0.31	0.20	0.20	0.11	0.11
	WEIGHT (lb/ft)		5.313	4.303	3.400	2.670	2.044	1.502	1.043	0.668	0.668	0.376	0.376
	NOMINAL DIA (in)		1.410	1.270	1.128	1.000	0.875	0.750	0.625	.500	.500	.375	.375
DEVELOPMENT OR CLASS A TENSION LAP SPLICE LENGTH IN INCHES.	3000	TYPICAL	78	70	62	55	48	33	28	22	15	17	12
		SEE NOTE 2	101	91	81	72	63	43	36	29	19	22	15
	4000	TYPICAL	67	61	54	48	42	29	24	19	13	15	12
		SEE NOTE 2	87	79	70	62	54	37	31	25	17	19	13
	4500	TYPICAL	63	57	51	45	39	27	23	18	12	14	12
		SEE NOTE 2	82	74	66	58	51	35	27	23	16	18	12
CLASS B TENSION LAP SPLICE LENGTH IN INCHES.	3000	TYPICAL	101	91	81	72	63	43	36	29	19	22	15
		SEE NOTE 2	131	118	105	93	81	56	47	37	25	28	19
	4000	TYPICAL	87	79	70	62	54	37	31	25	17	19	13
		SEE NOTE 2	113	102	91	81	71	49	41	33	22	24	16
	4500	TYPICAL	82	74	66	58	51	35	29	23	16	18	12
		SEE NOTE 2	101	91	81	72	63	43	36	28	19	22	14
COMPRESSION LAP SPLICE LENGTH IN INCHES.	<3000		55	50	44	39	35	30	25	20	13	15	12
	>3000		43	39	34	30	26	23	19	15	12	12	12
STANDARD HOOK DEVELOPMENT LENGTH IN INCHES.	3000		31	28	25	22	20	17	13	11	8	8	6
	4000		26	24	22	19	17	15	12	10	7	7	6
	4500		25	23	20	18	16	14	11	9	7	7	6

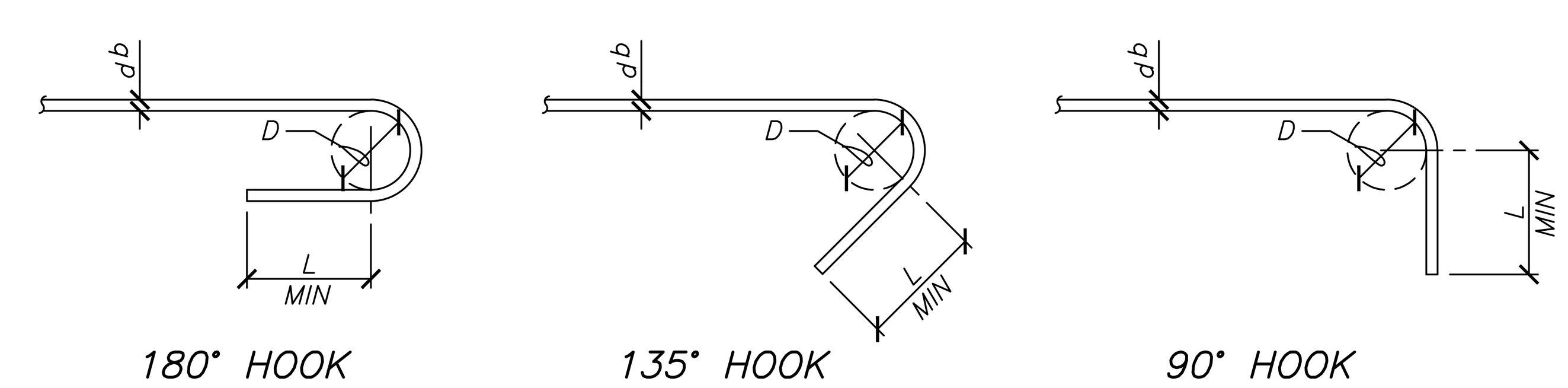


8 / S-2 TYPICAL DEVELOPMENT AND LAP SPLICE SCHEDULE

SCALE: N.T.S. (SF = 24)

BAR SIZE	"D"	180° "L"	135° "L"	90° "L"
BARS OTHER THAN STIRRUPS, TIES, HOOPS AND CROSS-TIES				
#3	2 ¼	2 ½	2 ½	4 ½
#4	3	2 ½	3	6
#5	3 ¾	2 ½	3 ¾	7 ½
#6	4 ½	3	4 ½	9
#7	5 ¼	3 ½	5 ¼	10 ½
#8	6	4	6	12
#9	9 ½	4 ½	6 ¾	13 ½
#10	10 ¾	5 ¼	7 ¾	15 ¼
#11	12	5 ¾	8 ½	17
#14	18 ¼	7	10 ½	21
#18	24	9	13 ½	27
STIRRUPS, TIES, HOOPS AND CROSS-TIES				
#3	1 ½	–	4	4
#4	2	–	4	4
#5	2 ½ (1)	–	4	4
#6	4 ½	–	4 ½	9
#7	5 ¼	–	5 ¼	10 ½
#8	6	–	6	12
(1) USE 3 ¾" IN CONC. BLK. CONSTRUCTION				

NOTE: ALL DIMENSIONS GIVEN ARE IN INCHES.



LEGEND FOR REINF. BENDS (NOT SHOWN TO SCALE)

- INDICATES 90° BEND IN PLANE OF DRAWING
- INDICATES 90° BEND PERPENDICULAR TO PLANE OF DRAWING
- INDICATES 135° BEND IN PLANE OF DRAWING
- INDICATES 180° BEND IN PLANE OF DRAWING
- INDICATES 135° OR 180° BEND PERPENDICULAR TO PLANE OF DRAWING
- INDICATES OFFSET IN PLANE OF DRAWING

9 / S-2 TYPICAL REINFORCING BAR BENDS AND HOOKS

SCALE: N.T.S. (SF = 16)

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UNDERGROUND SERVICE ALERT
CA: 800-227-2600

REVISIONS:

ATRIA LAFAYETTE
TYPICAL STRUCTURAL DETAILS
APN 169-090-002
CONTRA COSTA COUNTY, CALIFORNIA , CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
Gerardo V. Calvillo Jr.
No. 2920
Exp. 6-30-24
STRUCTURAL
STATE OF CALIFORNIA

100% SUBMITTAL

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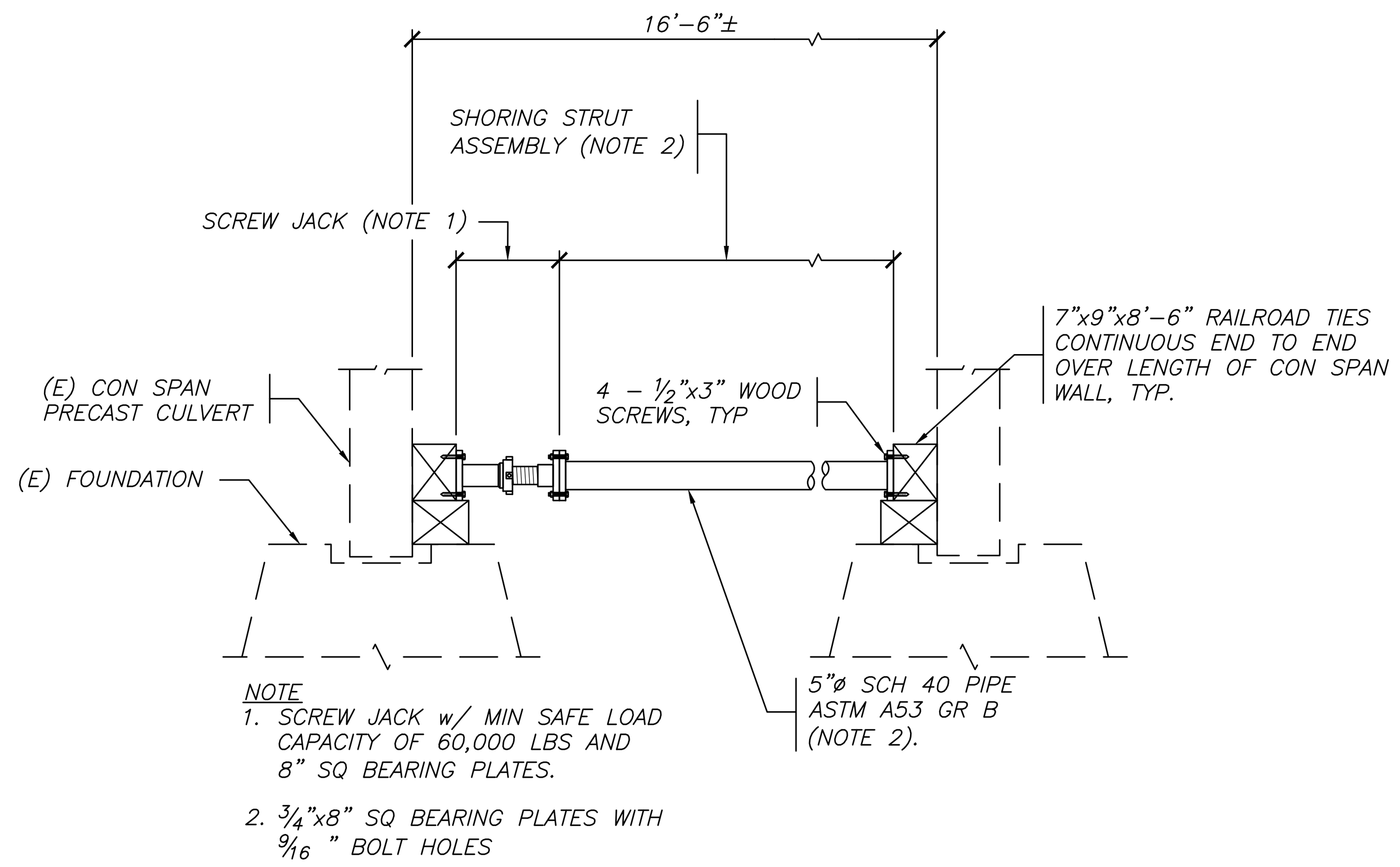
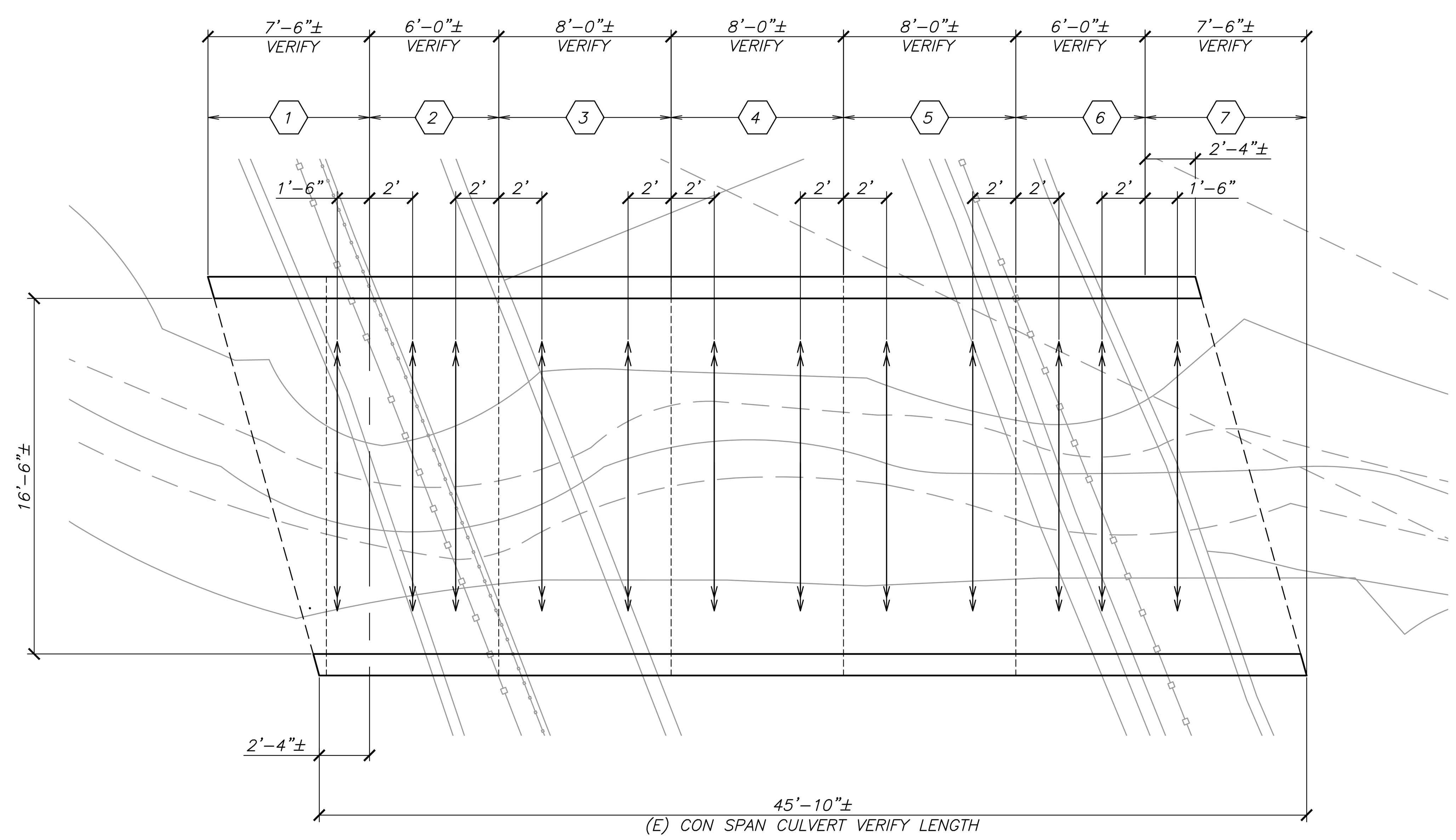
DRAWN BY: IANA T.
DESIGNED BY: R.FRANCIS
CHECKED BY: B.F.BROWNII
DATE: JULY, 2023
SCALE: AS SHOWN
PROJECT NO: 23-001



1/S-3 SHORING STRUT ASSEMBLY

SCALE: NO SCALE



A/S-3 TEMPORARY SHORING PLAN

SCALE: 1" = 5'-0"

⟷ DENOTES COMPRESSION SHORING STRUT ASSEMBLY DET3 (1/S-3)

(1) DENOTES CON SPAN SPAN SEGMENT MARK NUMBER

NOTES

1. SOIL STABILIZATION IMPROVEMENT SHALL BE PERFORMED BEFORE EXCAVATION PROCEEDS. REFER TO URETEK STABILIZATION PLANS AND SPECIFICATIONS.
2. UPON COMPLETION OF SOIL STABILIZATION, THE CONTRACTOR SHALL SEQUENCE CONSTRUCTION IN 4'-0" SEGMENTS, FOLLOWING THE "ACTIVE SLOT" METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT A DETAILED CONSTRUCTION METHODOLOGY PRIOR TO CONSTRUCTION.

INTENT OF DRAWINGS

1. REVIEW INTENDED SHORING METHODS WITH ADJACENT PROPERTY OWNERS AND RECEIVE WRITTEN APPROVAL PRIOR TO STARTING ANY WORK. WRITTEN APPROVAL SHALL INCLUDE EXPLICIT APPROVAL OF INSTALLATION OF SOIL IMPROVEMENTS AND FOOTING ELEMENTS TO BE PLACED UNDER EXISTING STRUCTURES. APPROVAL LETTERS SHALL BE PROVIDED TO THE REVIEWING AGENCIES FOR INCLUSION IN THE PROJECT FILE.
2. GENERAL CONTRACTOR SHALL MONITOR THE ADJACENT STRUCTURES FOR ANY MOVEMENT AND SHALL STOP ALL ACTIONS IF MOVEMENT OCCURS AND NOTIFY ENGINEER. THE BUILDING OWNER/GENERAL CONTRACTOR ACCEPTS ALL LIABILITY OF ADJACENT STRUCTURE DAMAGES IF OCCURS.
3. THESE DRAWINGS REPRESENT STANDARD SHORING PRACTICES TO SUPPORT ADJACENT STRUCTURAL SYSTEMS WHILE UNDERMINING THEIR SUPPORT DURING THE CONSTRUCTION PROCESS. IT IS THE OWNER'S RESPONSIBILITY TO GAIN APPROVAL FROM THE ADJACENT STRUCTURES' OWNERS FOR THESE SHORING PRACTICES AND TO MONITOR THE ADJACENT STRUCTURE DURING THE SHORING PROCESS.
4. RESOLVE ANY CONFLICTS ON THE DRAWINGS WITH THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. DIMENSIONS TAKE PRECEDENCE OVER SCALE OF DRAWINGS. HOWEVER, ANY SIGNIFICANT CONFLICTS SHOULD BE RESOLVED AS NOTED ABOVE.

SHORING SEQUENCE

1. MONITOR ADJACENT STRUCTURES FOR MOVEMENT AS REQUIRED.
2. SOIL ENGINEER SHALL REVIEW AND APPROVE SHORING PARAMETERS AND TECHNIQUES PRIOR TO STARTING ANY WORK.
3. DRAINAGE OR BYPASS SYSTEM SHALL BE DISCUSSED AND PLACED AS REQUIRED PRIOR TO STARTING ANY WORK.
4. SOIL STABILIZATION IMPROVEMENT SHALL BE PERFORMED BEFORE EXCAVATION PROCEEDS, REFER TO URETEK STABILIZATION PLANS AND SPECIFICATIONS.
5. UPON COMPLETION OF SOIL STABILIZATION, THE CONTRACTOR SHALL SEQUENCE CONSTRUCTION IN SEGMENTS, FOLLOWING THE "ACTIVE SLOT" METHOD OF CONSTRUCTION.
6. EXCAVATE/GRADE STARTER 6' STRIP NEXT TO EXISTING ADJACENT FOUNDATION SUPPORTED BY SOIL STABILIZATION IMPROVEMENT NO DEEPER THAT NEW FOUNDATION DEPTH AT CHANNEL.
7. THE 6' STRIPS WILL BE SHARED BY AN "ACTIVE SLOT" – 4' WIDE AND "ADJACENT UNACTIVE SLOT" – 2' WIDE.
8. INSTALL UNDERPINNING REINFORCING FOR "ACTIVE SLOT" AND PROVIDE UNDERPINNING DOWELS BETWEEN SLOT CUT "ACTIVE SLOT" AND ADJACENT "UNACTIVE SLOT".
9. AFTER "ACTIVE SLOT" CONCRETE IS INSTALLED EXCAVATE/GRADE NEW 4' STRIP STARTING AT "UNACTIVE SLOT", AT ANYTIME THE "ACTIVE LOT" AND "UNACTIVE SLOT" DOES NOT EXCEED 6' WIDE.
10. THE CONTRACTOR MAY SUBMIT AN ALTERNATE DETAILED CONSTRUCTION METHODOLOGY PRIOR TO CONSTRUCTION FOR REVIEW BY THE ENGINEER OF RECORD AND GEOTECHNICAL ENGINEER.

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REVISIONS:

ATRIA LAFAYETTE
TEMPORARY SHORING PLAN
APN 169-090-002
CONTRA COSTA COUNTY, CALIFORNIA

100% SUBMITTAL

THE OLYMPUS GROUP — ENGINEERING, PLANNING & SURVEYING

DRAWN BY: IANA T. — DESIGNED BY: B.FRANCIS — CHECKED BY: B.F.BROWN — DATE: JULY 2023 — SCALE: AS SHOWN — PROJECT NO. 23-001

S-3

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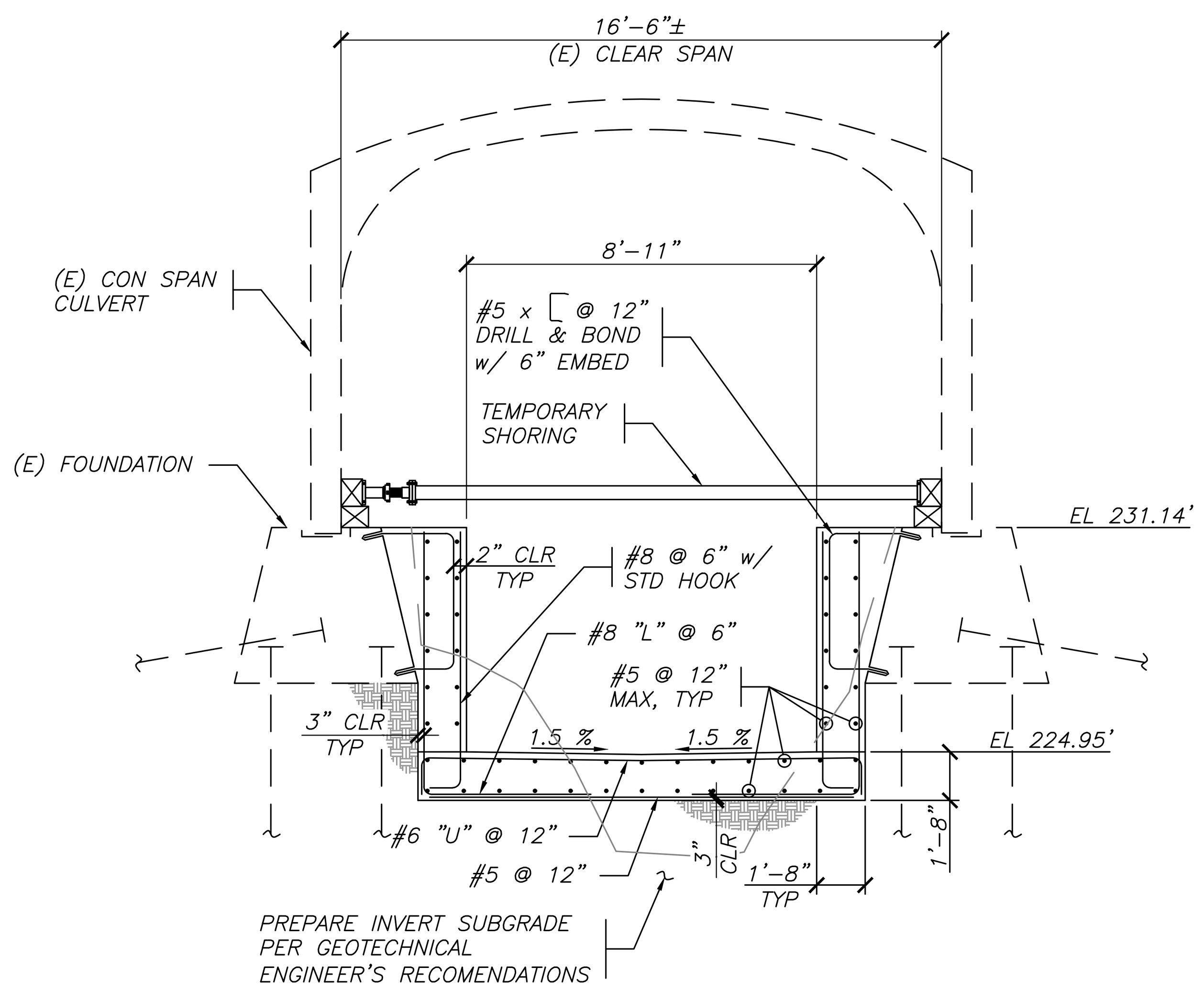
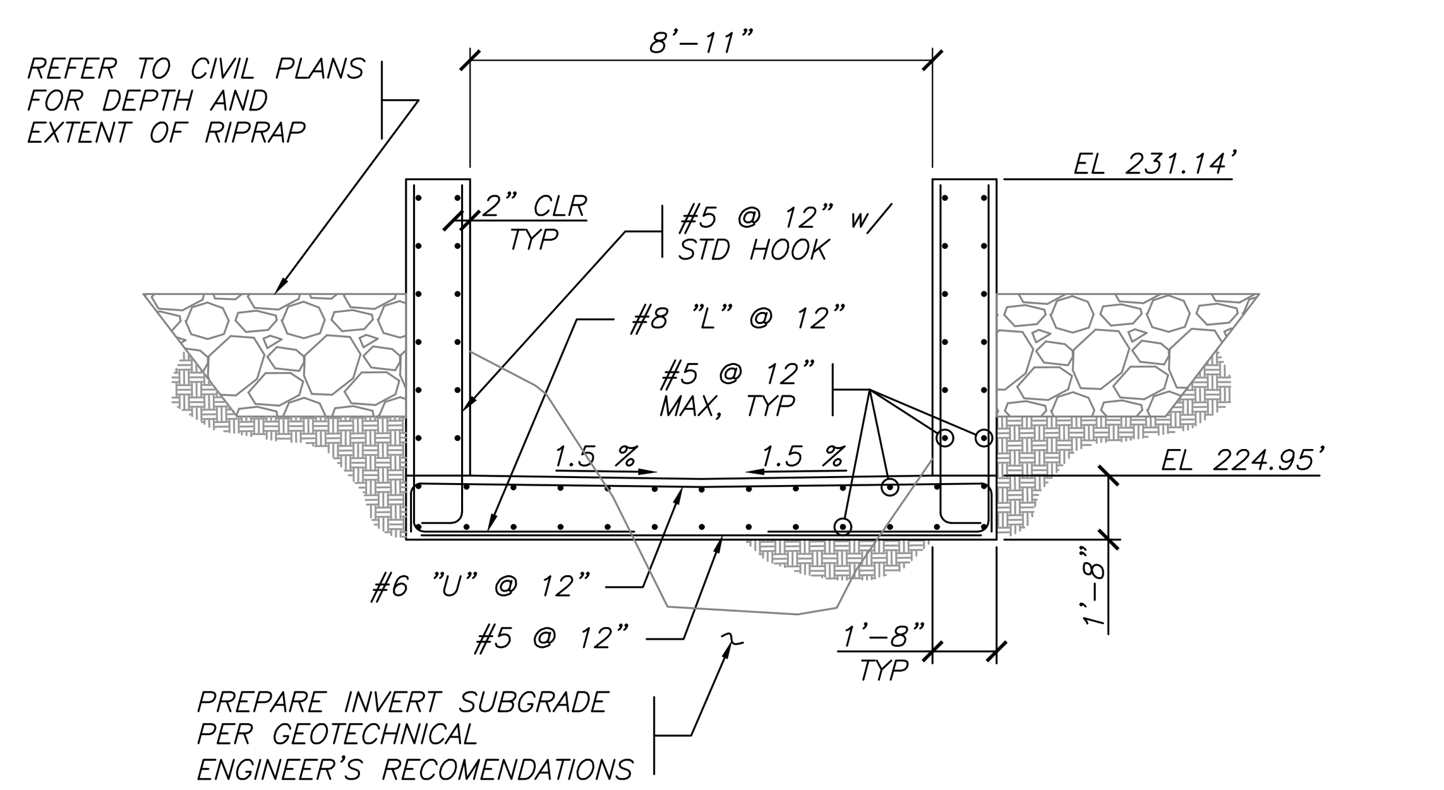
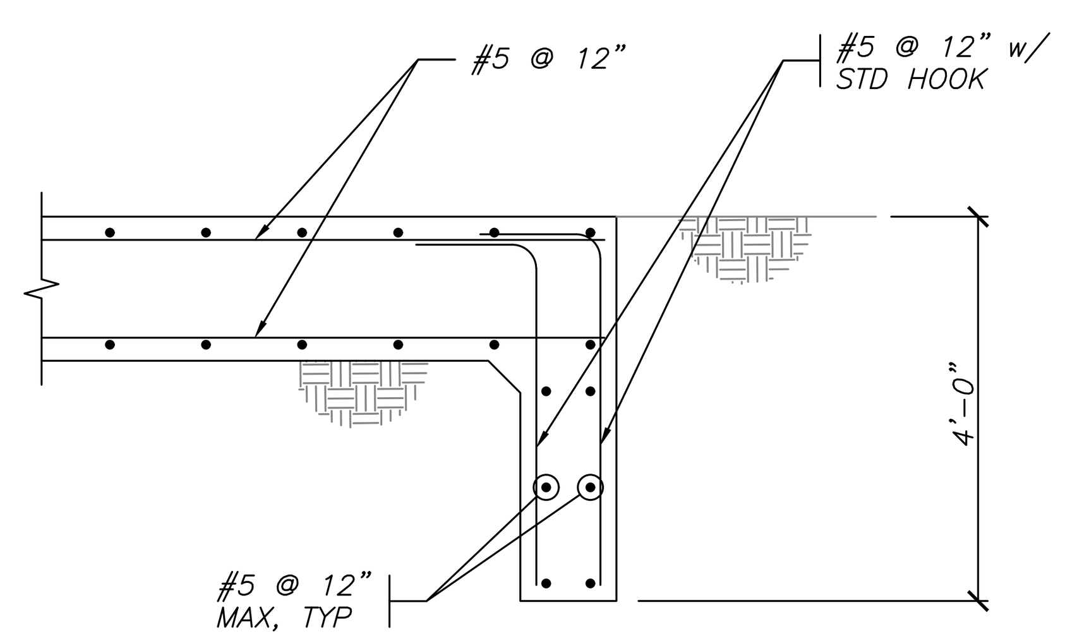


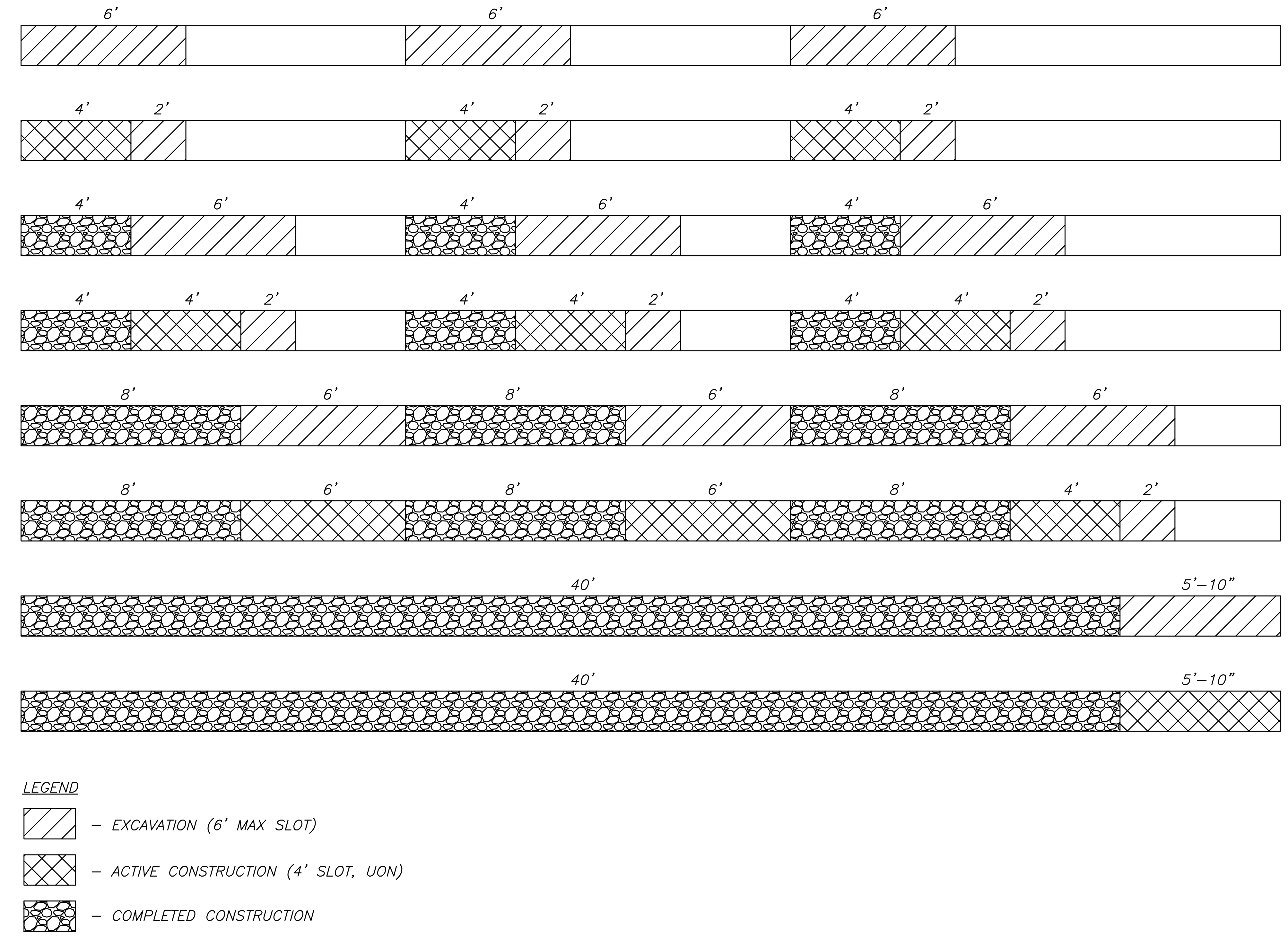
1/S-4 CULVERT INVERT RETROFIT
SCALE: ??=??



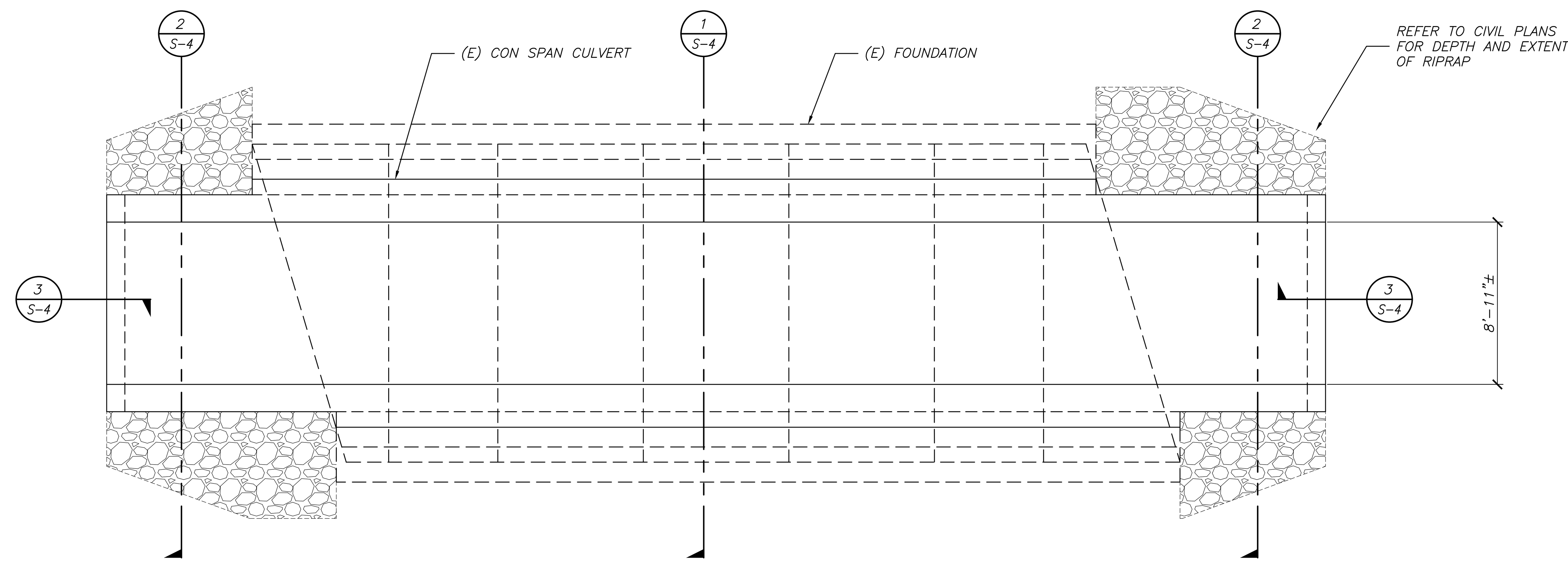
2/S-4 CULVERT INVERT RETROFIT
SCALE: ??=??



3/S-4 CULVERT INVERT CUTOFF WALL
SCALE: ??=??



B/S-4 ACTIVE SLOT CONSTRUCTION SCHEMATIC
SCALE: NO SCALE



A/S-4 FOUNDATION PLAN
SCALE: 1" = 5'-0"

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ATRIA LAFAYETTE
FOUNDATION PLAN
APN 169-090-002
CONTRA COSTA COUNTY, CALIFORNIA

No. 2920
Exp. 6-30-24
STRUCTURAL
STATE OF CALIFORNIA

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ENGINEERING, PLANNING & SURVEYING

JULY 2023
AS SHOWN

S-4
Sheet 19 of 30

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GENERAL NOTES:

1. ALL MATERIALS AND WORKMANSHIP TO BE IN ACCORDANCE WITH THE THESE SPECIFICATIONS AND THE 2019 EDITIONS OF THE CALIFORNIA BUILDING CODE. WHERE CONFLICTS OCCUR, THESE SPECIFICATIONS SHALL PREVAIL.

2. THE SOIL NAIL WALL STRUCTURES HAVE BEEN DESIGNED IN ACCORDANCE WITH THE SLD (SERVICE LOAD DESIGN) PROCEDURES CONTAINED IN THE FHWA "MANUAL FOR DESIGN AND CONSTRUCTION MONITORING OF SOIL NAIL WALLS", REPORT NO. FHWA-SA-96-069, "SOIL NAIL WALLS REFERENCE MANUAL", REPORT NO. FHWA-NHI-14-007 AND THE CALTRANS "SNAIL" DESIGN PROGRAM.

3. THE DESIGN IS THE PROPERTY OF DRILL TECH DRILLING & SHORING, INC. (DTDS) AND ASSUMES THAT THE CONTRACTOR WILL BE DIRECTLY RESPONSIBLE TO THE DESIGN ENGINEER. THEREFORE THIS DESIGN IS ONLY VALID IF CONSTRUCTED BY DTDS.

4. REFERENCE MATERIALS:

   A. "REPORT–SUPPLEMENTAL GEOTECHNICAL STUDY, DISTRESSED ENTRANCE ROAD AT ATRIA PARK" PREPARED BY GEOTECHNIA DATED APRIL 16, 2019.
   B. "REPORT–FOUR ADDITIONAL BORINGS, DISTRESSED ENTRANCE ROAD AT ATRIA PARK" PREPARED BY GEOTECHNIA DATED APRIL 24, 2023.
   C. "RECOMMENDED UNIT WEIGHTS AND STRENGTH PARAMETERS, DISTRESSED ENTRANCE ROAD AT ATRIA PARK" PREPARED BY GEOTECHNIA DATED JUNE 14, 2023.
   D. IMPROVEMENT PLANS FOR "ATRIA PARK OF LAFAYETTE – MAIN ROAD RETROFIT, 1545 PLEASANT HILL ROAD, LAFAYETTE, CA 95816" PREPARED BY THE OLYMPUS GROUP DATED 7/10/23

5. DESIGN PARAMETERS FOR SOIL NAIL WALLS ARE IN ACCORDANCE WITH THE REFERENCED GEOTECHNICAL LETTER:

MATERIAL	FRICTION ANGLE (DEGREES)	COHESION (PSF)	UNIT WEIGHT (PCF)	ALLOWABLE SOIL/GROUT BOND STRENGTH, Qd (K/FT)*
EMBANKMENT FILL	35	0	130	1.13
NATIVE SOIL	18	200	120	1.13
BEDROCK	40	0	140	2.26

* TO BE VERIFIED BY SOIL NAIL TESTING

6. THE GENERAL CONTRACTOR SHALL VERIFY ALL GRADES AND DIMENSIONS. SEE CONTRACT DRAWINGS AND SPECIFICATIONS FOR ALL INFORMATION RELATIVE TO THE NEW AND EXISTING CONSTRUCTION AND CONDITIONS. THE GENERAL CONTRACTOR SHALL RESOLVE CONFLICTS BETWEEN THESE DRAWINGS AND OTHER CONTRACT DRAWINGS WITH THE RETAINING WALL ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.

7. DESIGN OF TEMPORARY AND PERMANENT SLOPES ARE NOT INCLUDED IN THE SCOPE OF THESE DRAWINGS. SLOPES SHOULD BE DESIGNED BY OTHERS AND SHOULD CONFORM TO APPLICABLE CAL OSHA SAFETY ORDERS.

8. A SAFETY RAILING ABOVE THE WALL WALL SHALL BE MAINTAINED BY THE GENERAL CONTRACTOR AS LONG AS THE WALL PRESENTS A FALL HAZARD.

EXCAVATION NOTES:

1. EXCAVATION SHOULD BE PERFORMED UNDER THE DIRECTION OF THE GENERAL CONTRACTOR AND TO THE GRADES SHOWN IN THE PROJECT CIVIL PLANS.

2. ALL UTILITIES SHALL BE POTHOLED AND FIELD LOCATED BY THE GENERAL CONTRACTOR PRIOR TO EXCAVATION AND DRILLING. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY CONFLICTS WITH RETAINING WALL ELEMENTS.

3. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR SURVEY CONTROL.

SOIL NAIL NOTES:

1. NAIL GROUT: f'c = 3,000 PSI MIN. PER AASHTO T106/ASTM C109

2. NAIL BARS: OPTION 1: EPOXY COATED (ASTM A775 OR A934) OR SHEATHED AND GROUTED (DCP) GRADE 75 BARS (ASTM A615)
   OPTION 2: GALVANIZED R38N HOLLOW BAR

3. LAYOUT OF SOIL NAILS IS AS SHOWN. ADJUSTMENTS MAY BE MADE TO ACCOMMODATE FIELD CONDITIONS AS APPROVED BY THE ENGINEER. ADJUSTMENTS OF UP TO ONE FOOT ON ISOLATED NAILS MAY BE MADE WITHOUT NOTIFYING THE ENGINEER. ELEVATION GRADES ARE BASED ON THE REFERENCED GRADING PLAN.

4. NAILS IN A GIVEN VERTICAL SECTION SHALL BE INSTALLED ACCORDING TO THE TYPICAL SECTION, DESIGN SCHEDULE, AND THE REFERENCED DETAILS.

5. TOTAL LENGTH OF THE TEST SOIL NAIL ASSEMBLY EQUALS EMBEDMENT LENGTH PLUS EXTRA LENGTH REQUIRED FOR JACKING EQUIPMENT.

6. TESTING: PROOF TESTING OF THE SOIL NAILS SHALL BE PERFORMED ON A MINIMUM OF 5 PERCENT OF THE NAILS IN ACCORDANCE WITH THE SPECIFICATIONS. MAXIMUM TEST LOADS ARE SHOWN ON THE SOIL NAIL TEST SCHEDULE. VERIFICATION TESTS SHALL BE PERFORMED AT THE LOCATIONS INDICATED, ALSO IN ACCORDANCE WITH THE SPECIFICATIONS PROVIDED. A VERIFICATION TEST NAIL MAY TAKE THE PLACE OF A PROOF TEST NAIL FOR THE PURPOSE OF SATISFYING THE ONE TEST PER 20 NAIL REQUIREMENT. ALL TEST NAILS ARE SACRIFICAL.

SHOTCRETE NOTES:

1. REINFORCEMENT AND SHOTCRETE: fy = 60,000 PSI (REBAR PER AASHTO M3 1/ ASTM A615)
   fy = 65,000 PSI (WWF PER ASTM A82/A185
   f'c = 4,000 PSI (28 DAY SHOTCRETE COMPRESSIVE STRENGTH)

2. CEMENT FOR SHOTCRETE SHALL CONFORM TO AASHTO M85/ASTMC150 TYPE I,II,III, OR V. FINE AGGREGATE SHALL CONFORM TO AASHTO M6/ASTM C33.

3. UNLESS OTHERWISE NOTED ON THE PLANS, MINIMUM SHOTCRETE COVER MEASURED FROM THE FACE OF THE SHOTCRETE TO THE FACE OF ANY REINFORCING BAR SHALL BE 2 INCHES.

4. A SHOTCRETE TEST PANEL SHALL BE MADE FOR EACH DAY OF SHOTCRETE APPLICATION. THESE PANELS SHALL BE CORED AND THE CORES SHALL BE TESTED FOR COMPRESSIVE STRENGTH.

5. MINIMUM LAP SPLICE OF STEEL REINFORCEMENT SHALL BE AS FOLLOWS: REBAR:48 BAR DIAMETERS, WWF:2 SQUARES

6. MINIMUM LAP SPLICE FOR GEOCOMPOSITE DRAINAGE SHALL BE 12 INCHES.

7. GEOCOMPOSITE DRAIN BOARDS SHALL BE SECURED TO THE SLOPE IN SUCH A MANNER THAT PREVENTS SHOTCRETE FROM GETTING BETWEEN THE CUT SLOPE AND THE GEOCOMPOSITE DRAIN.

8. THE INTEGRITY OF THE GEOCOMPOSITE DRAIN TO WEEPHOLE CONNECTION SHALL BE MAINTAINED WHILE SHOTCRETING.

SOIL NAIL TESTING:

TEST NAIL UNBONDED LENGTH

1. PROVIDE TEMPORARY UNBONDED LENGTHS FOR EACH TEST NAIL. THE MINIMUM UNBONDED LENGTH SHALL BE 3 FEET. ISOLATE THE TEST NAIL BAR FROM THE SHOTCRETE FACING AND/OR THE REACTION FRAME USED DURING TESTING. ISOLATION OF A TEST NAIL THROUGH THE SHOTCRETE FACING SHALL NOT AFFECT THE LOCATION OF THE REINFORCING STEEL UNDER THE BEARING PLATE.

TESTING EQUIPMENT

2. TESTING EQUIPMENT SHALL INCLUDE DIAL OR DIGITAL GAUGES, GAUGE SUPPORT, JACK AND PRESSURE GAUGE, AND A REACTION FRAME. THE TESTING REACTION FRAME SHALL BE SUFFICIENTLY RIGID AND OF ADEQUATE DIMENSIONS SUCH THAT EXCESSIVE DEFORMATION OF THE TESTING EQUIPMENT DOES NOT OCCUR. IF THE REACTION FRAME WILL BEAR DIRECTLY ON THE SHOTCRETE FACING, IT SHALL PREVENT CRACKING OF THE SHOTCRETE. INDEPENDENTLY SUPPORT AND CENTER THE JACK OVER THE NAIL BAR SO THAT THE BAR DOES NOT CARRY THE WEIGHT OF THE TESTING EQUIPMENT. ALIGN THE JACK, BEARING PLATES, AND STRESSING ANCHORAGE WITH THE BAR SUCH THAT UNLOADING AND REPOSITIONING OF THE EQUIPMENT WILL NOT BE REQUIRED DURING THE TEST.

3. APPLY AND MEASURE THE TEST LOAD WITH A HYDRAULIC JACK AND PRESSURE GAUGE. THE PRESSURE GAUGE SHALL BE GRADUATED IN 100 PSI OR LESS INCREMENTS. JACK RAM TRAVEL SHALL BE SUFFICIENT TO ALLOW THE TEST TO BE DONE WITHOUT RESETTING THE EQUIPMENT.

4. MEASURE THE NAIL HEAD MOVEMENT WITH A DIAL OR DIGITAL GAUGE CAPABLE OF MEASURING TO 0.001 INCHES. THE GAUGE SHALL HAVE A TRAVEL SUFFICIENT TO ALLOW THE TEST TO BE DONE WITHOUT HAVING TO RESET THE GAUGE. VISUALLY ALIGN THE GAUGE TO BE PARALLEL WITH THE AXIS OF THE NAIL AND SUPPORT THE GAUGE INDEPENDENTLY FROM THE JACK, WALL OR REACTION FRAME.

VERIFICATION TESTING

5. THE VERIFICATION TEST NAIL LOCATIONS ARE SHOWN ON THE DEVELOPED ELEVATIONS FOR REFERENCE, HOWEVER THE LOCATION OF EACH TEST NAIL SHALL BE DETERMINED IN THE FIELD BY A DRILL TECH REPRESENTATIVE.

6. TEST NAILS SHALL HAVE BOTH BONDED AND UNBONDED LENGTHS. THE UNBONDED LENGTH OF THE TEST NAIL SHALL BE A MINIMUM OF 3 FEET. THE BONDED LENGTH OF THE TEST NAIL SHALL BE MINIMUM 10 FEET.

7. THE ALLOWABLE BAR STRUCTURAL LOAD DURING TESTING SHALL NOT EXCEED 80% OF THE ULTIMATE STRENGTH FOR GRADE 75 BAR AND 80% OF THE ULTIMATE STRENGTH FOR GRADE 150 BAR.

8. THE DESIGN TEST LOAD (DTL) DURING VERIFICATION TESTING SHALL BE DETERMINED BY THE FOLLOWING EQUATION:

   DTL = Design Test Load (kips) = LBL x Qd
   LBL = As-built bonded test length (feet)
   Qd = Allowable pullout resistance (kips per foot of grouted nail length)
   MTL = 2.0 x DTL = Maximum Test Load (kips)

9. VERIFICATION TESTS SHALL BE PERFORMED BY INCREMENTALLY LOADING THE TEST NAIL TO A MAXIMUM TEST LOAD OF 200 PERCENT OF THE DESIGN TEST LOAD (DTL). THE NAIL MOVEMENT AT EACH LOAD SHALL BE MEASURED AND RECORDED BY THE ENGINEER. THE TEST LOAD SHALL BE MONITORED BY A JACK PRESSURE GAUGE WITH A SENSITIVITY AND RANGE MEETING THE REQUIREMENTS OF PRESSURE GAUGES USED FOR VERIFICATION TEST NAILS. AT LOAD INCREMENTS BELOW 1.5 DTL, THE LOAD SHALL BE HELD LONG ENOUGH TO OBTAIN A STABLE READING. INCREMENTAL LOADING FOR TESTS SHALL BE IN ACCORDANCE WITH THE FOLLOWING LOADING SCHEDULE. THE SOIL NAIL MOVEMENTS SHALL BE RECORDED AT EACH LOAD INCREMENT.

   VERIFICATION TEST LOADING SCHEDULE

LOAD	HOLD TIME
AL (.10 DTL)	UNTIL STABLE
0.25 DTL	UNTIL STABLE
0.50 DTL	UNTIL STABLE
0.75 DTL	UNTIL STABLE
1.00 DTL	UNTIL STABLE
1.25 DTL	UNTIL STABLE
1.50 DTL	60 MINUTES
1.75 DTL	UNTIL STABLE
2.00 DTL	UNTIL STABLE

10. THE ALIGNMENT LOAD (AL) SHOULD BE THE MINIMUM LOAD REQUIRED TO ALIGN THE TESTING APPARATUS. DIAL GAUGES SHOULD BE SET TO "ZERO" AFTER THE ALIGNMENT LOAD HAS BEEN APPLIED.

11. ALL LOAD INCREMENTS SHALL BE MAINTAINED WITHIN 5 PERCENT OF THE INTENDED LOAD. A 60-MINUTE CREEP TEST SHALL BE PERFORMED AT 1.50 DTL. THE CREEP PERIOD SHALL START AS SOON AS THE TEST LOAD IS APPLIED AND THE NAIL MOVEMENT SHALL BE MEASURED AND RECORDED AT 1, 2, 3, 5, 6, 10, 20, 30, 50, AND 60 MINUTES.

PROOF TESTING OF PRODUCTION NAILS

12. PERFORM PROOF TESTING FOR 5 PERCENT (1 IN 20) OF THE PRODUCTION NAILS AND 1 PER DISTINCT SOIL TYPE. THE PROOF TEST NAIL LOCATIONS ARE SHOWN ON THE DEVELOPED ELEVATIONS FOR REFERENCE, HOWEVER THE LOCATION OF EACH TEST NAIL SHALL BE DETERMINED IN THE FIELD BY A DRILL TECH REPRESENTATIVE.

13. TEST NAILS SHALL HAVE BOTH BONDED AND UNBONDED LENGTHS. THE UNBONDED LENGTH OF THE TEST NAIL SHALL BE AT LEAST 3 FEET AND THE BONDED LENGTH OF THE TEST NAIL SHALL BE 10 FEET.

14. THE ALLOWABLE BAR STRUCTURAL LOAD DURING TESTING SHALL NOT EXCEED 80% OF THE ULTIMATE STRENGTH FOR GRADE 75 BAR AND 80% OF THE ULTIMATE STRENGTH FOR GRADE 150 BAR.

15. THE DESIGN TEST LOAD (DTL) DURING PROOF TESTING SHALL BE DETERMINED BY THE FOLLOWING EQUATION:

   DTL = Design Test Load (kips) = LBL x Qd
   LBL = As-built bonded test length (feet)
   Qd = Allowable pullout resistance (kips per foot of grouted nail length)
   MTL = 1.5 x DTL = Maximum Test Load (kips)

16. PROOF TESTS SHALL BE PERFORMED BY INCREMENTALLY LOADING THE PROOF TEST NAIL TO A MAXIMUM TEST LOAD OF 150 PERCENT OF THE DESIGN TEST LOAD (DTL). THE NAIL MOVEMENT AT EACH LOAD SHALL BE MEASURED AND RECORDED BY THE CONTRACTOR. THE TEST LOAD SHALL BE MONITORED BY A JACK PRESSURE GAUGE. AT LOAD INCREMENTS OTHER THAN MAXIMUM TEST LOAD, THE LOAD SHALL BE HELD LONG ENOUGH TO OBTAIN A STABLE READING. INCREMENTAL LOADING FOR PROOF TESTS SHALL BE IN ACCORDANCE WITH THE FOLLOWING LOADING SCHEDULE. THE SOIL NAIL MOVEMENTS SHALL BE RECORDED

   PROOF TEST LOADING SCHEDULE

LOAD	HOLD TIME
AL (.10 DTL)	UNTIL STABLE
0.25 DTL	UNTIL STABLE
0.50 DTL	UNTIL STABLE
0.75 DTL	UNTIL STABLE
1.00 DTL	UNTIL STABLE
1.25 DTL	UNTIL STABLE
1.50 DTL	10 OR 60 MINUTES

17. THE ALIGNMENT LOAD (AL) SHOULD BE THE MINIMUM LOAD REQUIRED TO ALIGN THE TESTING APPARATUS. DIAL GAUGES SHOULD BE SET TO "ZERO" AFTER THE ALIGNMENT LOAD HAS BEEN APPLIED.

18. ALL LOAD INCREMENTS SHALL BE MAINTAINED WITHIN 5 PERCENT OF THE INTENDED LOAD. DEPENDING ON PERFORMANCE, EITHER 10 MINUTE OR 60 MINUTE CREEP TESTS SHALL BE PERFORMED AT THE MAXIMUM TEST LOAD (1.50 DTL). THE CREEP PERIOD SHALL START AS SOON AS THE MAXIMUM TEST LOAD IS APPLIED AND THE NAIL MOVEMENT SHALL BE MEASURED AND RECORDED AT 1, 2, 3, 5, 6, AND 10 MINUTES. WHERE THE NAIL MOVEMENT BETWEEN 1 MINUTE AND 10 MINUTES EXCEEDS 0.04 INCH, THE MAXIMUM TEST LOAD SHALL BE MAINTAINED AN ADDITIONAL 50 MINUTES AND MOVEMENTS SHALL BE RECORDED AT 20 MINUTES, 30, 50, AND 60 MINUTES.

19. TEST NAIL ACCEPTANCE CRITERIA – A TEST NAIL SHALL BE CONSIDERED ACCEPTABLE WHEN:

   19.A. TOTAL CREEP MOVEMENT OF LESS THAN 0.04 INCH IS MEASURED BETWEEN THE 1 AND 10 MINUTE READINGS, OR A TOTAL CREEP MOVEMENT OF LESS THAN 0.08 INCHES IS MEASURED BETWEEN THE 6 AND 60 MINUTE READINGS.
   19.B. THE TOTAL MEASURED MOVEMENT AT THE MAXIMUM TEST LOAD EXCEEDS 80 PERCENT OF THE THEORETICAL ELASTIC ELONGATION OF THE TEST NAIL UNBONDED LENGTH.
   19.C. A PULLOUT FAILURE DOES NOT OCCUR AT THE MAXIMUM TEST LOAD. PULLOUT FAILURE IS DEFINED AS THE LOAD AT WHICH ATTEMPTS TO FURTHER INCREASE THE TEST LOAD SIMPLY RESULT IN CONTINUED PULLOUT MOVEMENT OF THE TEST NAIL. THE PULLOUT FAILURE LOAD SHALL BE RECORDED AS PART OF THE TEST DATA.

20. TEST NAIL REJECTION – IF A TEST NAIL DOES NOT SATISFY THE ACCEPTANCE CRITERION, THE CONTRACTOR SHALL DETERMINE THE CAUSE. THE NEED FOR DESIGN AND/OR CONSTRUCTION PROCEDURE MODIFICATIONS SHALL BE DETERMINED BY THE DESIGN ENGINEER. THE DESIGN ENGINEER MAY REQUIRE ADDITIONAL NAILS IN THE AREA OF THE FAILED VERIFICATION TESTS AND/OR IN THE NEXT LOWER ROW OF NAILS, LONGER NAILS, THE INSTALLATION OF ADDITIONAL TEST NAILS, INCREASED DRILL HOLE DIAMETERS, MODIFIED INSTALLATION OR GROUTING METHODS, OR CLOSER NAIL SPACINGS. ALTERNATIVELY, THE DESIGN ENGINEER MAY REQUIRE THE INSTALLATION AND TESTING OF ADDITIONAL VERIFICATION OR PROOF TEST NAILS TO VERIFY THAT ADJACENT PREVIOUSLY INSTALLED PRODUCTION NAILS HAVE SUFFICIENT LOAD CARRYING CAPACITY.

SPECIAL INSPECTION REQUIREMENTS:

PER CBC 2019 CHAPTER 17

INSPECTION TASK	CONTINUOUS*	PERIODICALLY
1. INSPECT REINFORCING STEEL.		X
2. VERIFY SHOTCRETE STRENGTH PER NOTE 4 OF SHOTCRETE NOTES.		X
3. OBSERVE SHOTCRETE PLACEMENT.	X	
4. OBSERVE SOIL NAIL LOAD TESTING.	X	

* CONTINUOUS DURING TASK LISTED

DRAWING LIST:

RW1 NOTES
RW2 SITE PLAN
RW3 ELEVATIONS
RW4 SECTIONS
RW5 SOIL NAIL DETAILS
RW6 DETAILS

REVISION:	DATE:	DESCRIPTION/REASON:	DESIGN BY:	SCALE:
			SM	AS SHOWN
			CHECKED BY:	JOB NUMBER:
			DB	23016
			DATE:	CONTRACT NO:
			AUGUST 23, 2023	

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No. C86618
Exp. 06/24
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STATE OF CALIFORNIA

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2200 Wymore Way – Antioch, CA 94509-8518
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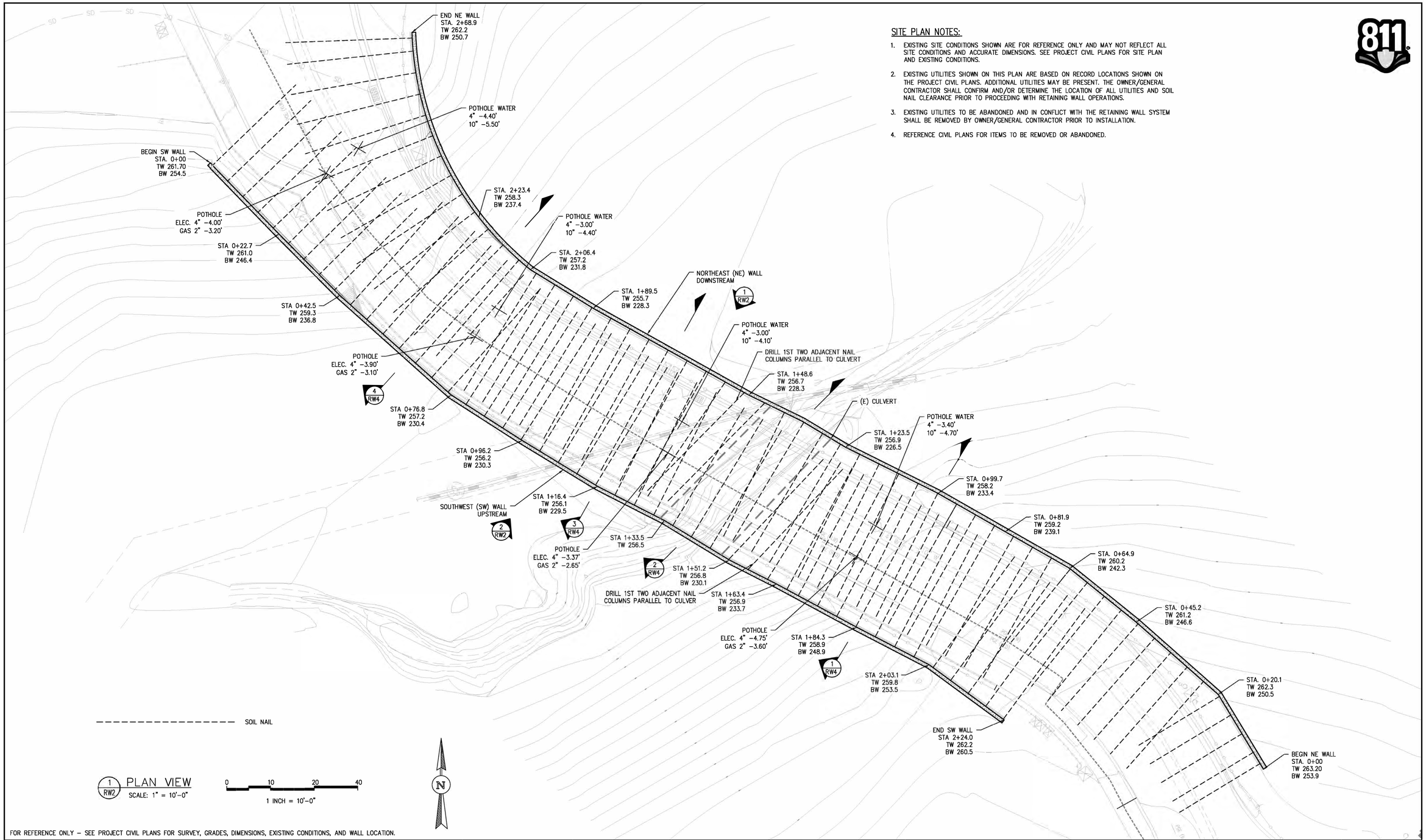
ATRIA PARK OF LAFAYETTE

SOIL NAIL RETROFIT OF EXISTING WALL
1545 PLEASANT HILL ROAD, LAFAYETTE, CA

NOTES

SHEET: D1

SHEET	OF
20	30



SITE PLAN NOTES:

1. EXISTING SITE CONDITIONS SHOWN ARE FOR REFERENCE ONLY AND MAY NOT REFLECT ALL SITE CONDITIONS AND ACCURATE DIMENSIONS. SEE PROJECT CIVIL PLANS FOR SITE PLAN AND EXISTING CONDITIONS.
2. EXISTING UTILITIES SHOWN ON THIS PLAN ARE BASED ON RECORD LOCATIONS SHOWN ON THE PROJECT CIVIL PLANS. ADDITIONAL UTILITIES MAY BE PRESENT. THE OWNER/GENERAL CONTRACTOR SHALL CONFIRM AND/OR DETERMINE THE LOCATION OF ALL UTILITIES AND SOIL NAIL CLEARANCE PRIOR TO PROCEEDING WITH RETAINING WALL OPERATIONS.
3. EXISTING UTILITIES TO BE ABANDONED AND IN CONFLICT WITH THE RETAINING WALL SYSTEM SHALL BE REMOVED BY OWNER/GENERAL CONTRACTOR PRIOR TO INSTALLATION.
4. REFERENCE CIVIL PLANS FOR ITEMS TO BE REMOVED OR ABANDONED.

FOR REFERENCE ONLY – SEE PROJECT CIVIL PLANS FOR SURVEY, GRADES, DIMENSIONS, EXISTING CONDITIONS, AND WALL LOCATION.

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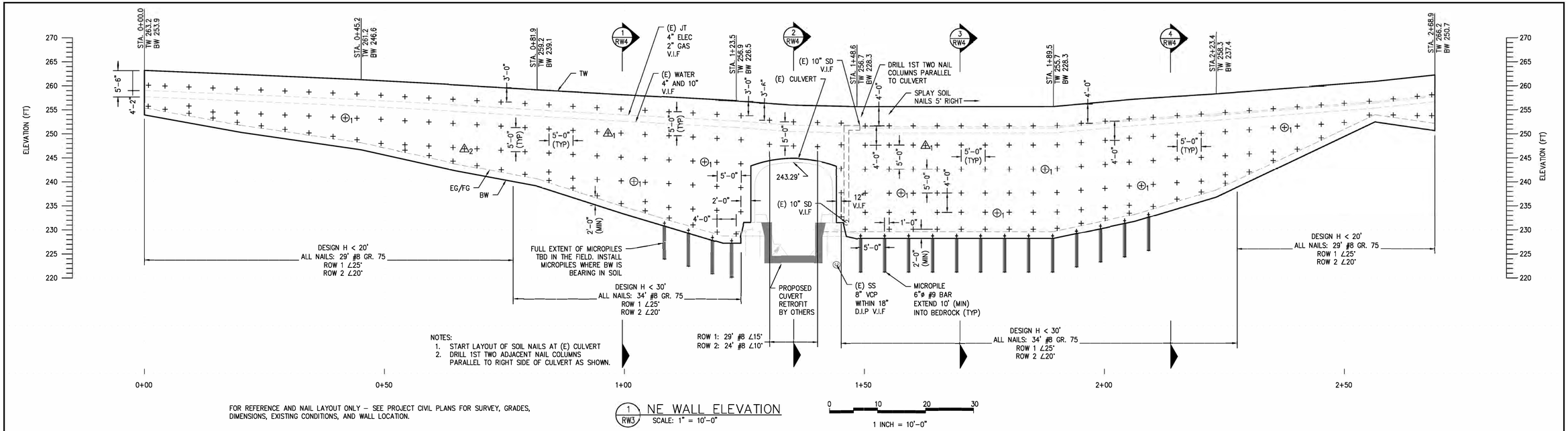
ATRIA PARK OF LAFAYETTE

SOIL NAIL RETROFIT OF EXISTING WALL
1545 PLEASANT HILL ROAD, LAFAYETTE, CA

PLAN VIEW

SHEET: D2

SHEET	OF
21	30

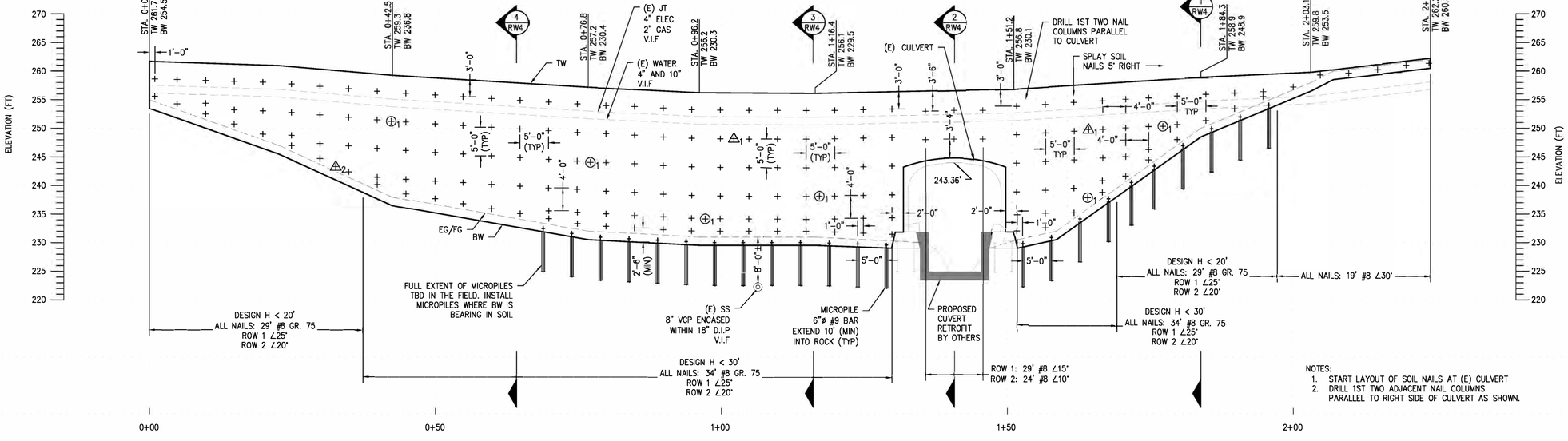


NOTES:
1. START LAYOUT OF SOIL NAILS AT (E) CULVERT
2. DRILL 1ST TWO ADJACENT NAIL COLUMNS PARALLEL TO RIGHT SIDE OF CULVERT AS SHOWN.

FOR REFERENCE AND NAIL LAYOUT ONLY – SEE PROJECT CIVIL PLANS FOR SURVEY, GRADES, DIMENSIONS, EXISTING CONDITIONS, AND WALL LOCATION.

1 RW3 — NE WALL ELEVATION
SCALE: 1" = 10'-0"

0 10 20 30
1 INCH = 10'-0"



NOTES:
1. START LAYOUT OF SOIL NAILS AT (E) CULVERT
2. DRILL 1ST TWO ADJACENT NAIL COLUMNS PARALLEL TO RIGHT SIDE OF CULVERT AS SHOWN.

FOR REFERENCE AND NAIL LAYOUT ONLY – SEE PROJECT CIVIL PLANS FOR SURVEY, GRADES, DIMENSIONS, EXISTING CONDITIONS, AND WALL LOCATION

2 RW3 — SW WALL ELEVATION
SCALE: 1" = 10'-0"

0 10 20 30
1 INCH = 10'-0"

LEGEND

+	SOIL NAIL
⊕	PROOF TEST SOIL NAIL
⚠	VERIFICATION TEST SOIL NAIL
STA	WALL STATION
TW	TOP OF WALL
BW	BOTTOM OF WALL
EG/FG	EXISTING/FINISHED GRADE

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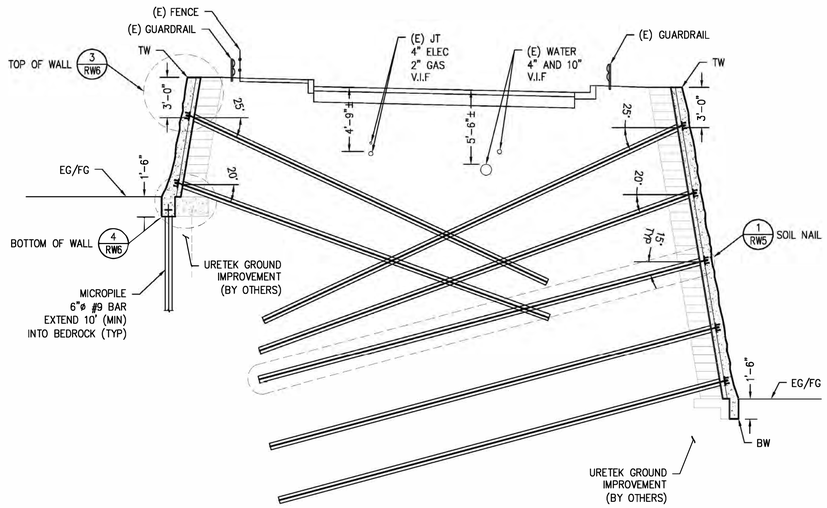
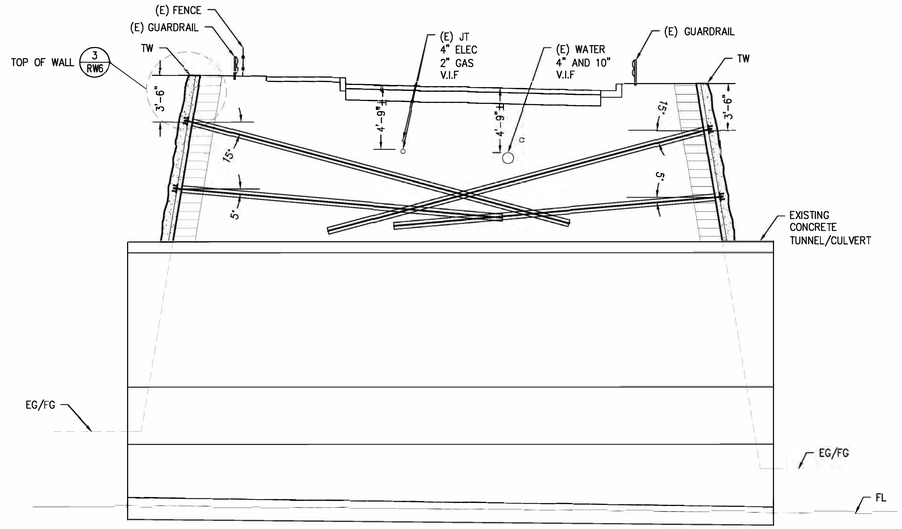
ATRIA PARK OF LAFAYETTE
SOIL NAIL RETROFIT OF EXISTING WALL
1545 PLEASANT HILL ROAD, LAFAYETTE, CA

WALL ELEVATIONS

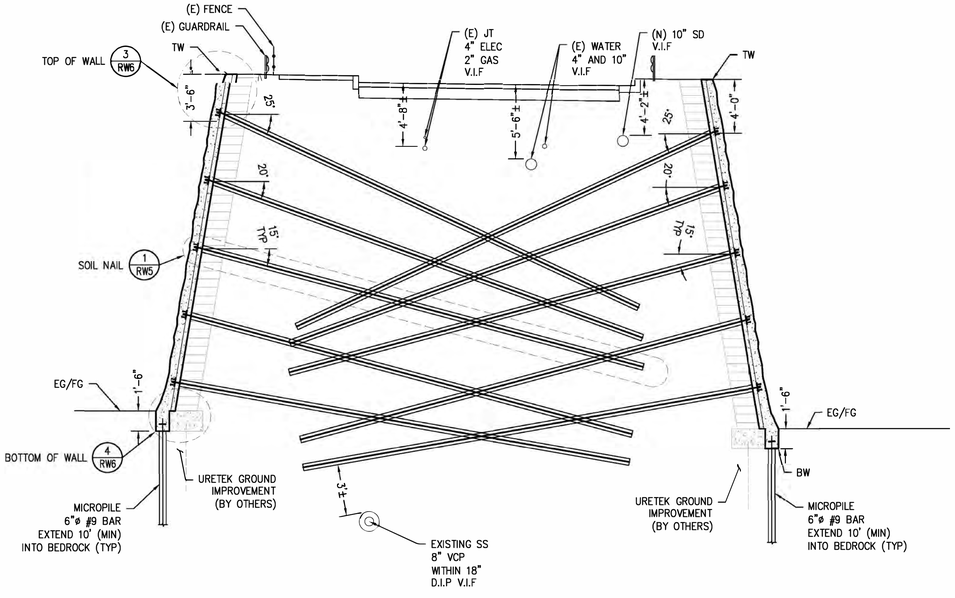
SHEET: D3



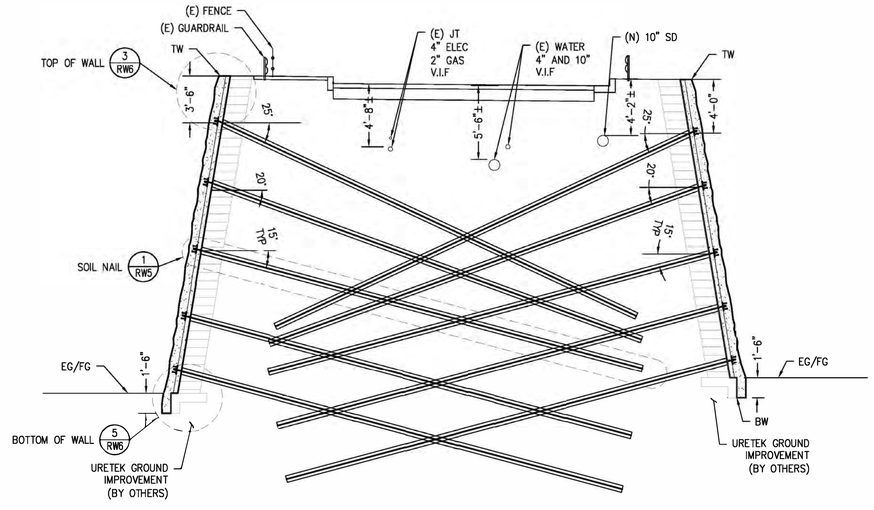
1 RW4 WALL – SECTION
SCALE: 1/8" = 1'-0"



2 RW4 WALL – SECTION
SCALE: 1/8" = 1'-0"



3 RW4 WALL – SECTION
SCALE: 1/8" = 1'-0"



4 RW4 WALL – SECTION
SCALE: 1/8" = 1'-0"

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ATRIA PARK OF LAFAYETTE

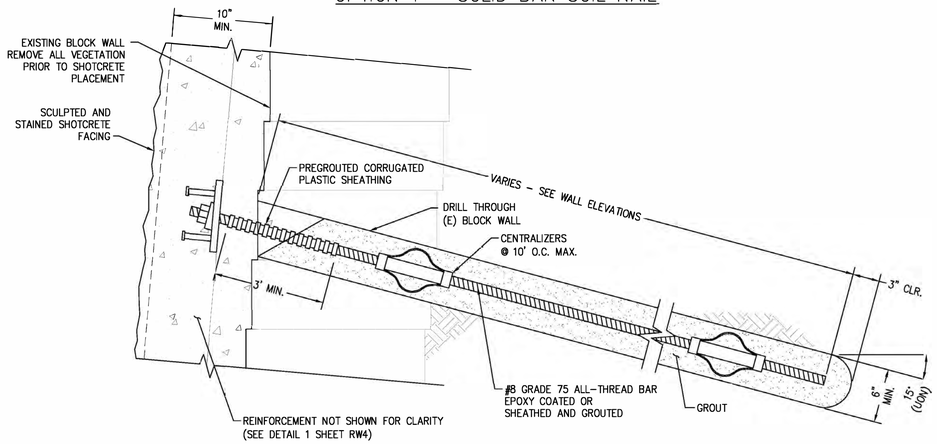
SOIL NAIL RETROFIT OF EXISTING WALL
1545 PLEASANT HILL ROAD, LAFAYETTE, CA

WALL SECTIONS

SHEET: D4

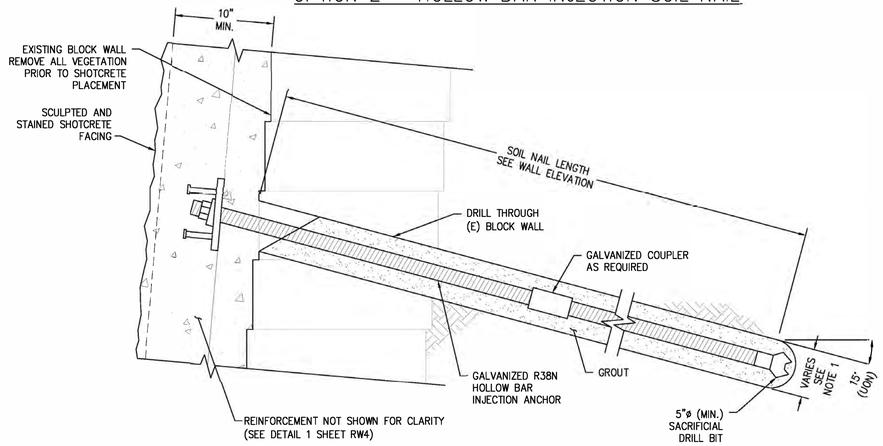
SHEET	OF
23	30

OPTION 1 – SOLID BAR SOIL NAIL



1 SOIL NAIL ASSEMBLY – SECTION
NO SCALE

OPTION 2 – HOLLOW BAR INJECTION SOIL NAIL



1 HOLLOW BAR INJECTION SOIL NAIL ASSEMBLY – SECTION
NO SCALE

HOLLOW BAR INJECTION ANCHOR INSTALLATION NOTES:

1. GROUTED HOLE DIAMETER TYPICALLY VARIES FROM 1.5X TO 2X THE DRILL BIT DIAMETER.
2. THE GROUTING AND DRILLING OPERATIONS WILL BE PERFORMED SIMULTANEOUSLY FROM THE POINT OF ENTRY UNTIL THE REQUIRED DEPTH IS ACHIEVED. THE GROUT WILL BE INJECTED THROUGH THE TOP OF THE BAR AT A CONTINUOUS RATE AND BE DISTRIBUTED EVENLY THROUGHOUT THE HOLE THROUGHT GROUT PORTS ON THE SACRIFICAL BIT.
3. AFTER THE DESIGN DEPTH IS ACHIEVED, PUMP ADDITIONAL GROUT AS NECESSARY TO FLUSH ANY RESIDUAL SOIL SPOILS FROM THE HOLE UNTIL CLEAN GROUT IS OBSERVED.
2. TEST NAILS SHALL BE INSTALLED AT THE SAME INCLINATION AS ADJACENT PRODUCTION NAILS.
3. FOR TEST NAILS: USE A PVC PIPE WITH A FLUSHING END TO WASH OUT THE GROUT FROM THE SURFACE DOWN TO THE BONDED LIMIT LINE. THE PVC FLUSHING PIPE SHALL BE MARKED AT THE PRESCRIBED UNDBONDED LENGTH TO INSURE CORRECT WASHED LENGTH AND BONDED LENGTH.

2 TEST NAIL ASSEMBLY – SECTION
NO SCALE

2 HOLLOW BAR INJECTION TEST NAIL ASSEMBLY – SECTION
NO SCALE

SOIL NAIL TEST SCHEDULE

SOIL/ROCK TYPE	DESIGN LOAD (KIPS)*	MAX. PROOF TEST LOAD (KIPS)*	MAX. VERIFICATION TEST LOAD (KIPS)*
1. FILL/NATIVE SOIL	11.3	17.0	22.6
2. BEDROCK	22.6	34.0	45.2

* BASED ON 10' BONDED LENGTH. IF AS-BUILT BONDED LENGTH DIFFERS FROM THIS VALUE, THE ENGINEER SHALL BE NOTIFIED AND WILL MODIFY THE TEST LOADS.

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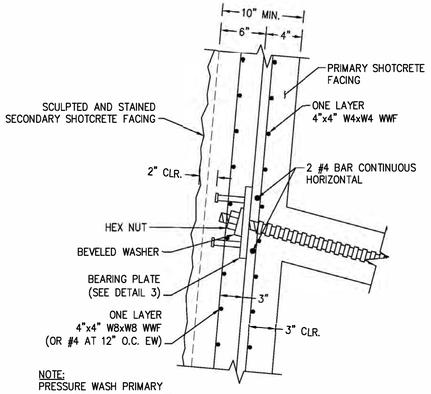
ATRIA PARK OF LAFAYETTE

SOIL NAIL WALL RETROFIT
1545 PLEASANT HILL ROAD, LAFAYETTE, CA

SOIL NAIL DETAILS

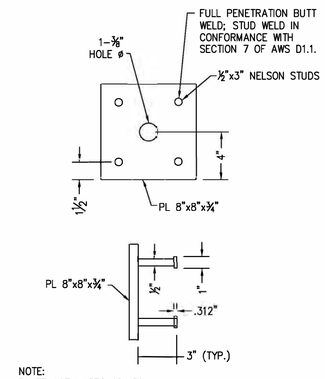
SHEET: D5

SHEET	OF
24	30



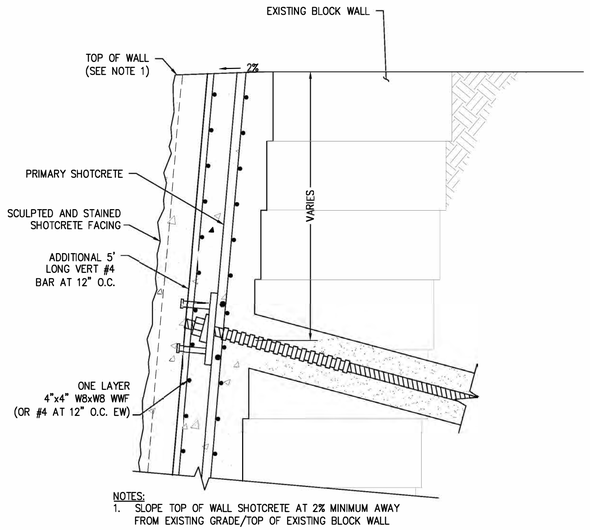
NOTE:
PRESSURE WASH PRIMARY SHOTCRETE FACING PRIOR TO PLACING SECONDARY SHOTCRETE.

1 NAIL ANCHORAGE ASSEMBLY AND SHOTCRETE FACING DETAIL
NO SCALE



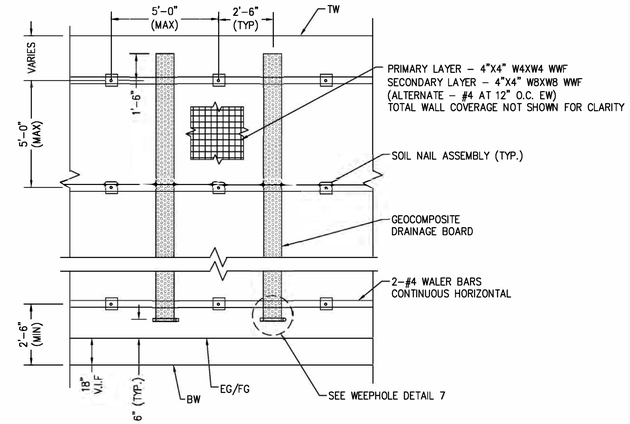
NOTE:
PLATE ASTM A572 GR. 50

2 BEARING PLATE DETAIL
NO SCALE



NOTES:
1. SLOPE TOP OF WALL SHOTCRETE AT 2% MINIMUM AWAY FROM EXISTING GRADE/TOP OF EXISTING BLOCK WALL

3 TOP OF WALL DETAIL
NO SCALE

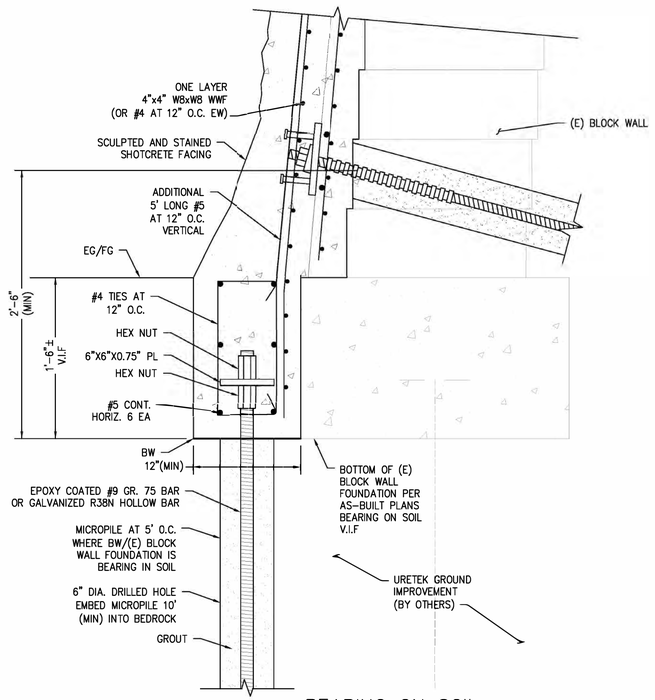


NOTES:

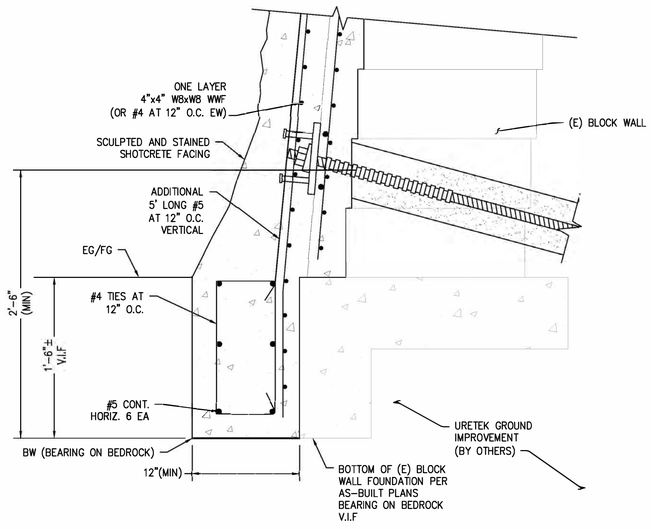
1. NAIL LOCATION MAY VARY IN ISOLATED CASES UP TO 12" FROM DESIGN LOCATION.

2. OVERLAP GEOCOMPOSITE DRAINS AT BOTTOM OF WALL TO "WRAP AROUND" WEEP HOLE PIPE.

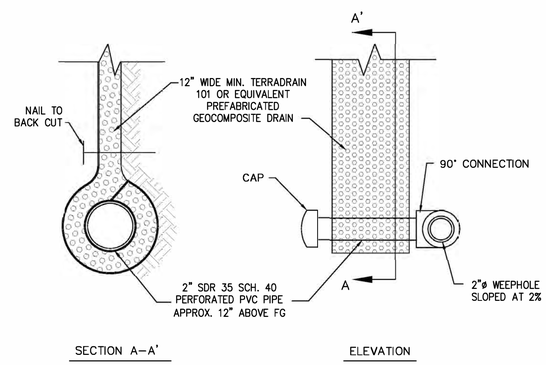
6 PARTIAL ELEVATION
NO SCALE



4 BEARING ON SOIL BOTTOM OF WALL DETAIL
NO SCALE



5 BEARING ON BEDROCK BOTTOM OF WALL DETAIL
NO SCALE



7 WEEPHOLE DETAIL
NO SCALE

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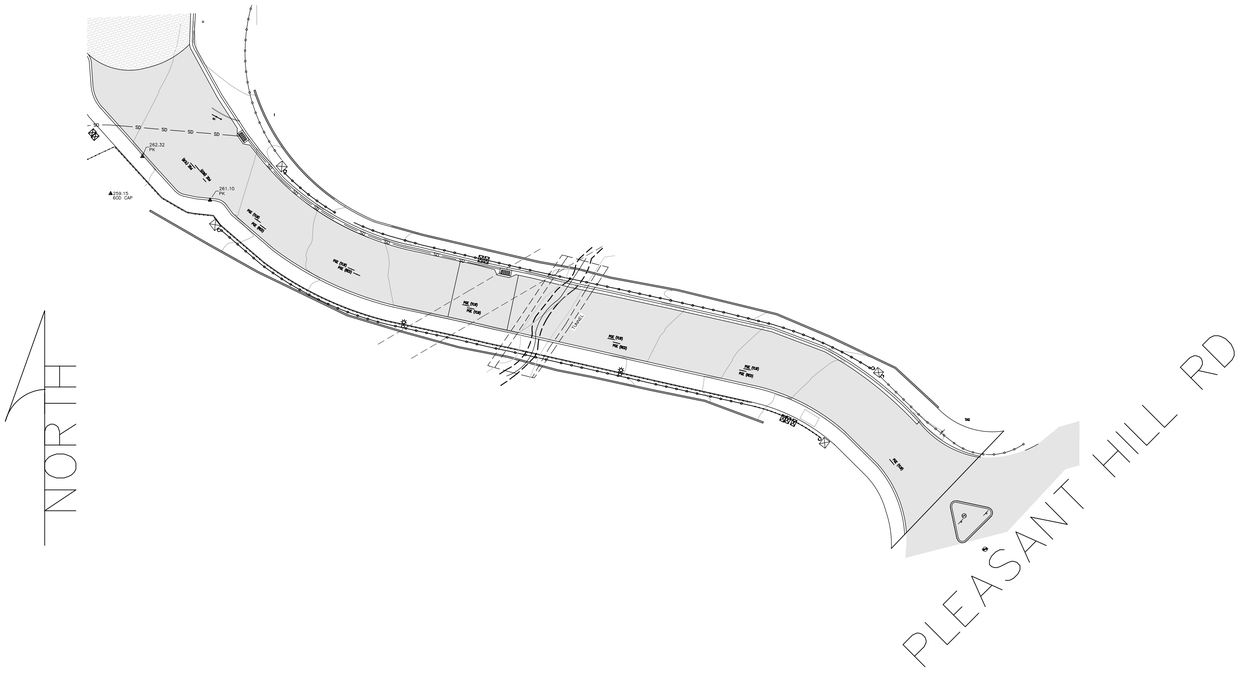
ATRIA PARK OF LAFAYETTE
SOIL NAIL WALL RETROFIT
1545 PLEASANT HILL ROAD, LAFAYETTE, CA

DETAILS

SHEET: D6

SHEET	OF
25	30



SCALE: 1"= 20'

0' 10' 20' 30' 40' 50'

SITE PLAN

WORK SCOPE

1. GROUND IMPROVEMENT WITH CHEMICAL GROUTING (POLYURETHANE)

PROPERTY DATA

1. OCCUPANCY: N/A (ROADWAY)
2. TYPE OF CONSTRUCTION: N/A
3. STORIES: N/A
4. OWNER'S NAME: ATRIA SENIOR LIVING
5. APN: 169-090-002

SHEET INDEX

NO.	DESCRIPTION
1	SITE PLAN/ SHEET INDEX
2	GROUND IMPROVEMENT POLYURETHANE DEEP INJECTION

CURRENT CODES

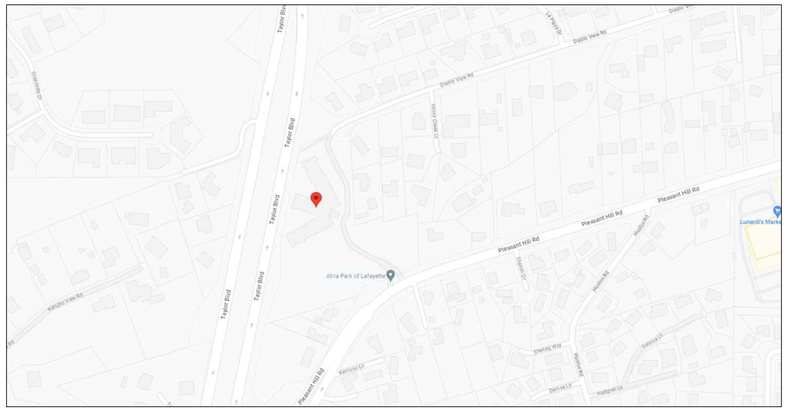
CALIFORNIA BUILDING STANDARD CODES
2019 CALIFORNIA BUILDING CODE (CBC)
2019 CAL EXIST BUILDING CODE

CITY REQUIREMENTS

1. PERIODIC INSPECTION REQUIRED FOR ALL DEEP INJECTION.
2. THE ISSUE OF A PERMIT SHALL NOT PREVENT THE BUILDING OFFICIAL FROM REQUIRING CORRECTIONS OF ERRORS ON THE PLANS OF FROM PREVENTING ANY VIOLATION OF THE CODES ADOPTED BY THE CITY, RELEVANT LAWS, ORDINANCES, RULES AND/OR REGULATIONS.

VICINITY MAP

NORTH



SLOPE SOIL IMPROVEMENT
ATRIA BRIDGE SLOPE STABILITY
1545 PLEASANT HILL RD.
LAFAYETTE, CA 94549

URETEK USA, INC.
1925 E HIGHLAND COURT
ONTARIO, CA 91764-1626
PH: 909-816-4038

DATE:
8-26-2023

DRAWN BY:
K.O.

REV:

SHEET
U1

FIELD NOTES

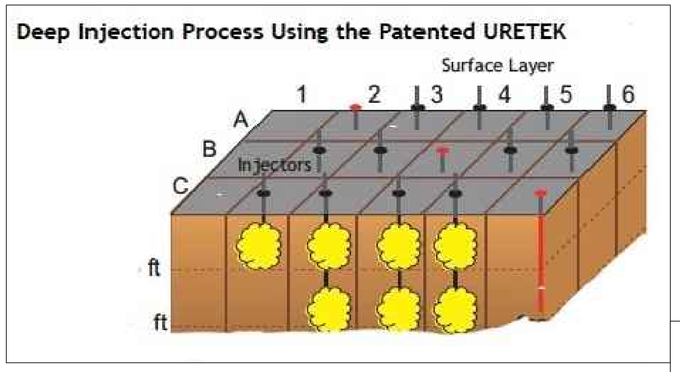
1. PERFORM LEAK DETECTION TEST TO DETERMINE IF EXISTING LEAKS OR CRACKS EXIST WITHIN PLUMBING AND DRAINAGE. ANY (E) LEAKS MAY RESULT IN POLYMER INTRUSION
2. PERFORM LEAK DETECTION TEST FOLLOWING INJECTIONS. POLYMERS MAY INVADE PLUMBING AND DRAINAGE LINES, AND IT MUST BE CLEANED PRIOR TO RETURNING TO SERVICE.

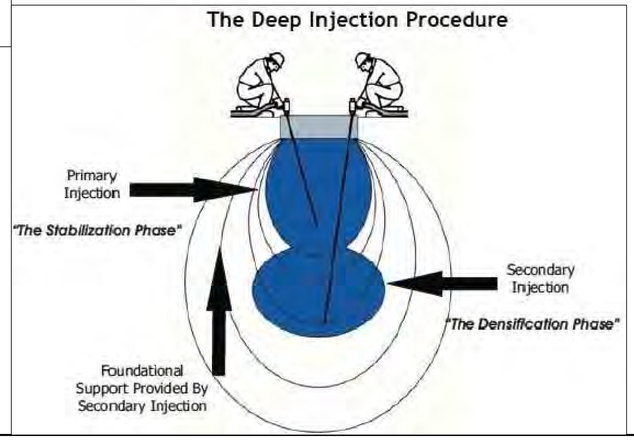
CONSTRUCTION NOTES

1. INJECTION SPACING NOT TO EXCEED 4'–0" OC.
2. CONTACT PROJECT MANAGER FOR ANY UNFORESEEN CONDITIONS.
3. LOCATE AND PROTECT ALL UNDERGROUND AND OVERHEAD UTILITY LINES PRIOR TO CONSTRUCTION.

MATERIAL NOTES

1. HYDRO–INSENSITIVE PROPERTIES WILL REDUCE SWELL POTENTIAL OF EXPANSIVE CLAY SOIL. PRODUCT MUST DISPLAY PASSING TEST RESULTS OF NYDOT'S GTP–9 PANEL TEST.
2. TESTING AT TTCI FACILITY DISPLAYS REDUCTION OF LATERAL EARTH PRESSURE BY APPROXIMATELY 40%.
3. MATERIAL SPECIFIED MUST BE LOS ANGELES LISTING PRODUCT THROUGH LOS ANGELES RESEARCH BUREAU, (RESEARCH REPORT #26197) TO COMPLY WITH ACCREDITED TESTING OF THE PRODUCTS THROUGH ACCREDITED AGENCIES.





SPECIFICATIONS

STRUCTURE AND FOUNDATION SOILS
STABILIZATION, AND LIFTING WHERE NECESSARY, UTILIZING A TWO-PART 1:1 BY VOLUME, WATER RESISTANT, HIGH-DENSITY POLYURETHANE FOAM (HDPF)

DESCRIPTION:

This work shall consist of soil densification to strengthen base and sub-base soils under flexible asphalt, concrete, or composite pavement, and structures such as bridge approaches with sleeper slabs, by furnishing and injecting expansive polyurethane material into the foundation soils beneath the pavement through holes or injection tubes inserted into drilled holes at locations and depths, as shown on the plans or as directed by the Engineer, while monitoring for movement at the surface. If necessary, injection of material shall continue as needed to lift the pavement to grade.

MATERIAL:

1. High Density Polyurethane Foam.

Certify that the material conforms to the following requirements listed in this section:

PROPERTY	TEST	RESULTS
• Density, lbs./cu. ft.	ASTM D-1622	3.5 - 4.5
• Compressive Strength, psi (min.)	ASTM D-1621	55
• Tensile Strength, psi (min.)	ASTM D-1623	90
• Shear Strength, psi (min.)	ASTM C-273	45
• Flexural Strength, psi (min.)	ASTM D-790	90
• Closed Cell content (%)	ASTM D-1940	+85

HDPF shall reach 90% compressive strength within 30 minutes of injection. The material used shall be a two-part 1:1 by volume HDPF, such as URETEK 486 STAR. Other polyurethanes submitted must meet all of the required specifications and be preapproved by the Owner. The material shall be water blown, not chemically blown. The material shall be a polyurethane-forming mixture, having water insoluble diluents, which permits the formation of polyurethanes in the presence of water. Water insoluble diluents shall provide polyurethane foam with improved dimensional stability properties. The presence of water insoluble diluents and the characteristics and properties listed above must be certified by the manufacturer (paragraph 3). The certification from the polyurethane manufacturer must be submitted with the bid documents.

2. Aquatic and Terrestrial Toxicity Testing.

Polyurethane must pass aquatic and terrestrial toxicity testing and chemical analysis (RCRA metals, TOC, and COD). The polyurethane must show a lack of toxicity at 200 ppm TCLP leachate and show non-toxic for all test species. Testing must have been performed by an independent third-party testing laboratory. The certification from the independent third-party testing laboratory must be submitted with the bid documents.

3. Panel Test for Hydro-Insensitivity of High-Density Polyurethane Grout.

Polyurethane must pass the Panel Test for Hydro-Insensitivity of High-Density Polyurethane Grout (see the attached testing protocol). The Panel Test must be performed by an independent third-party testing laboratory, under the supervision and review of a licensed Professional Engineer, and must certify that the polyurethane material meets or exceeds the limits set forth in the panel test specification. The certification from the independent third-party testing laboratory must be submitted with the bid documents.

4. ASTM D1621 and ASTM D1622 Requirements.

Prior to beginning work and with the inspector observing, the Contractor must prepare 5 machine mixed field samples for density and compressive strength determination. The samples shall then be transported to an independent third-party testing laboratory at the Contractor's expense. At the laboratory, a nominal 2" by 2" by 2" sample shall be taken from the center of each of the field samples and the density of the material shall be determined in accordance with ASTM D1622. The compressive strength shall then be determined by testing in accordance with ASTM D1621.

The Contractor shall submit electronic copies to the Owner's Representative of the stress strain curves (ASTM D1621 showing force, lbs. vs. deflection, %) as well as density calculations, including measured specimen dimensions (ASTM D1622) for each specimen tested. Field samples shall be prepared and sent for testing for each individual batch/lot number of resin component used on the project.

The compressive strength and density determined from ASTM D1621 and ASTM D1622 shall be used to determine the percent of pay for this item as outlined in Measurement and Payment.

5. Non-shrink grout to patch drill holes.

Non-shrink grout must be supplied by a manufacturer on the approved products list and must be used within the shelf life and temperature limitation set by the manufacturer.

EQUIPMENT:

1. Portable Dynamic Cone Penetrometer (DCP).

Provide a portable DCP for on-site soils investigation to assist in location and depth of weak foundation soils and determination of correct injection pattern and injection elevations through tubes to densify weak soils. The DCP must be a Pagani DPM 30 or similar, capable of taking readings up to 30 feet below grade. DCP testing may be required, as directed by the Owner's Representative, to confirm existing sub-grade soil conditions. The name, model number, and description of the DCP unit(s) intended for use must be submitted with the bid documents.

2. Pumping Units.

Ensure that all pumping units used are equipped with certified flow meters to precisely measure the amount of each component injected, so that the 1:1 ratio by volume is maintained for quality control and a certified volume of injected polyurethane material is obtained for proper payment. Flow meters must be recertified annually (once every 12 months) to ensure accuracy. Certifications from the manufacturer (or an independent third party) demonstrating that each flow meter intended for use has been tested within the past 12 months must be submitted with the bid documents.

QUALITY MANAGEMENT:

1. Drilling Holes and Installation of Injection Tubes.

Drill injection holes in the pattern shown on the Standard Drawings, or as indicated on the approved field Quality Control (QC) plan, as approved by the Owner's Representative. Drill 5/8" to 2" diameter holes, vertical and round, and to a depth indicated on the approved field QC plan. Install injection tubes to the prescribed injection depth(s). Tubes must be pushed a minimum of 4" below the grade of the road and/or runway prior to the commencement of injections.

2. Injection of the HDPF.

Inject the HDPF through holes, via injection tubes when needed, to fill voids and into the foundation soils beneath the pavement to the prescribed injection depth(s). Continuously monitor for movement of the structure. Foundations soils are sufficiently stabilized when movement of the structure is detected. If necessary, injection of material shall continue as needed to lift the pavement to grade.

3. Hole Patching.

Install a rapid set, non-shrink patching material into the drilled-out hole and strike patches flush with the surface of the surrounding pavement.

EXPERIENCE:

Have a minimum 3 years of experience injecting 1:1 by volume, two-part, expansive polyurethane through holes or tubes into soils while monitoring at the surface of the pavement for movement to demonstrate sufficient densification of the soils. Evidence of prior experience must be submitted with the bid documents: 5 awarded contracts within each of the previous 3 years.

Have as an employee of the company, a licensed Professional Engineer (P.E.) with a minimum of 3 years of experience in stabilization of pavement foundation soils by injecting 1:1 by volume, two-part, expansive polyurethane through holes or tubes into soils while monitoring at the surface of the pavement for movement to demonstrate sufficient densification of the soils. The name, hire date, and resume of the licensed Professional Engineer must be submitted with the bid documents.

SLOPE SOIL IMPROVEMENT
ATRIA BRIDGE SLOPE STABILITY
1545 PLEASANT HILL RD.
LAFAYETTE, CA 94549

URETEK USA, INC.
1925 E HIGHLAND COURT
ONTARIO, CA 91764-1626
PH: 909-816-4038

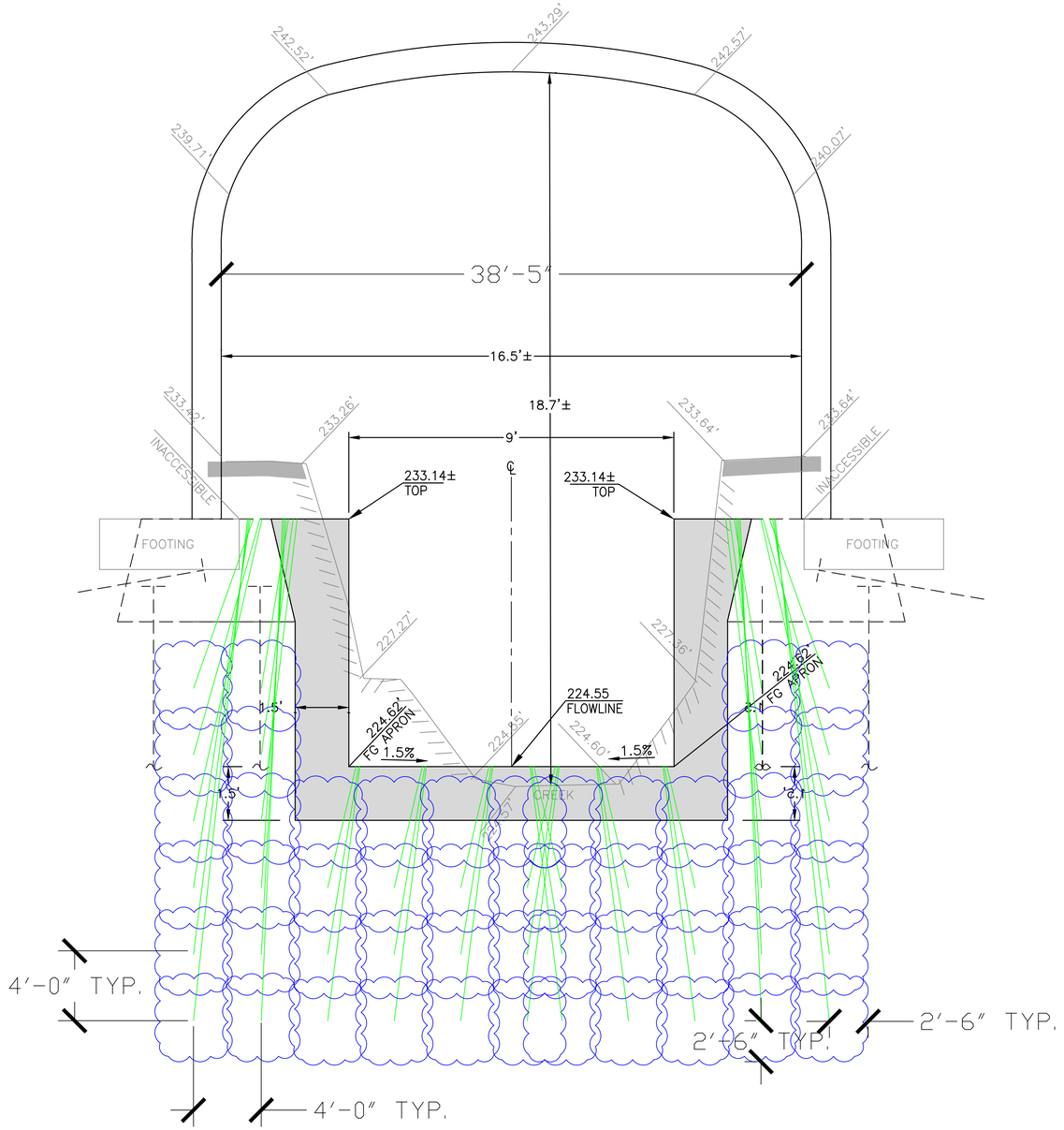
DATE:
8-26-2023

DRAWN BY:
K.O.

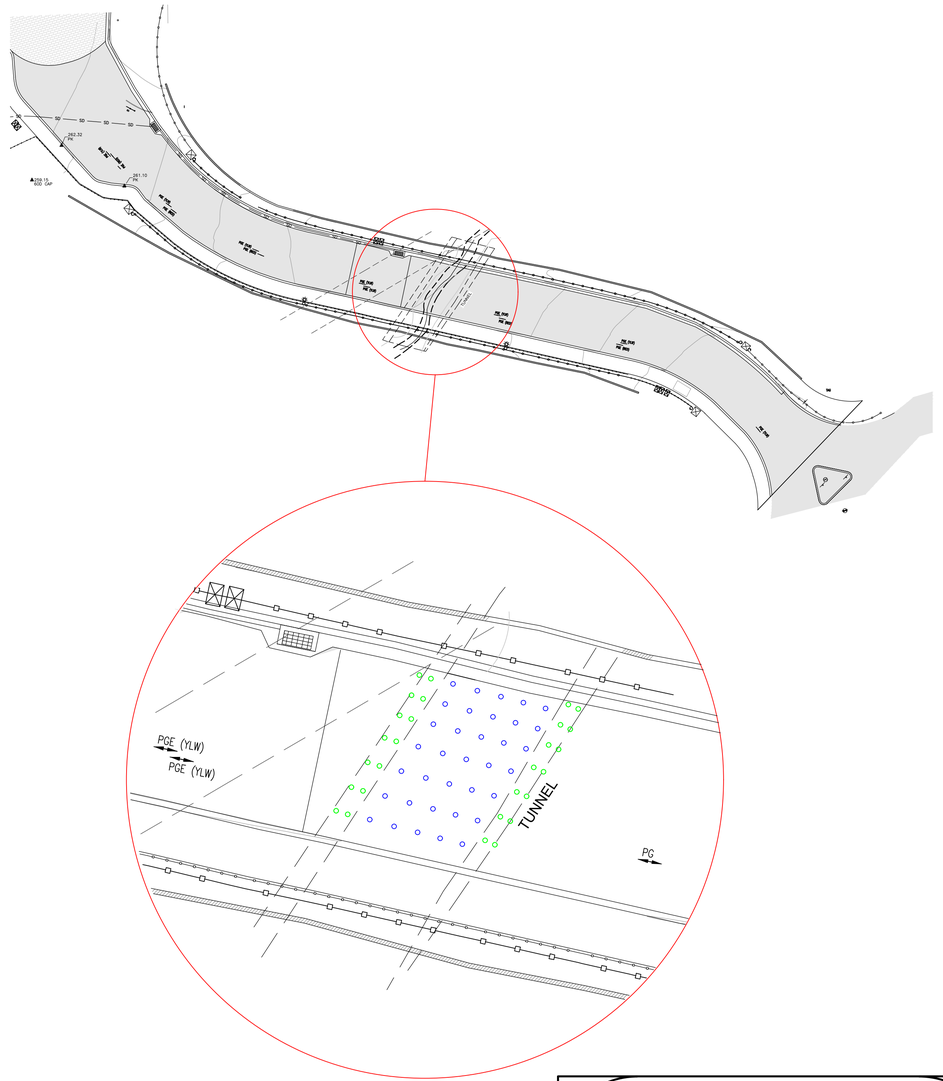
REV:

SHEET
U2

PROFILE VIEW



PLAN VIEW



*NOTE: DEPTH OF INJECTIONS REQUIRE ARE BASED ON BEDROCK DEPTH(S) NOTED IN GEO REPORT

LEGEND

- INJECTION TUBE
- INJECTION INFLUENCE
- SLAB INJ. (3 DEPTHS)
- PER. INJ. (6 DEPTHS)

CULVERT INJECTION

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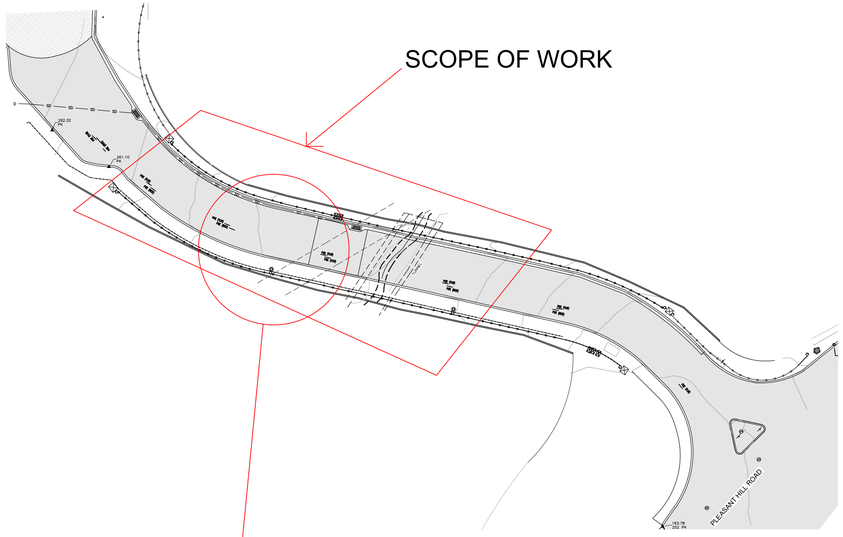
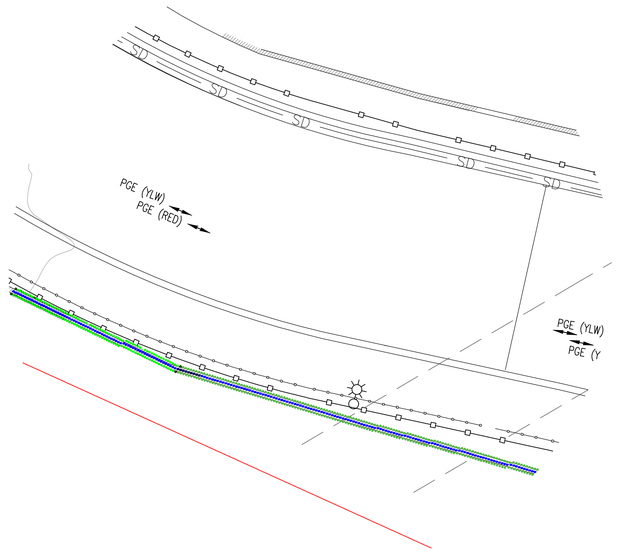
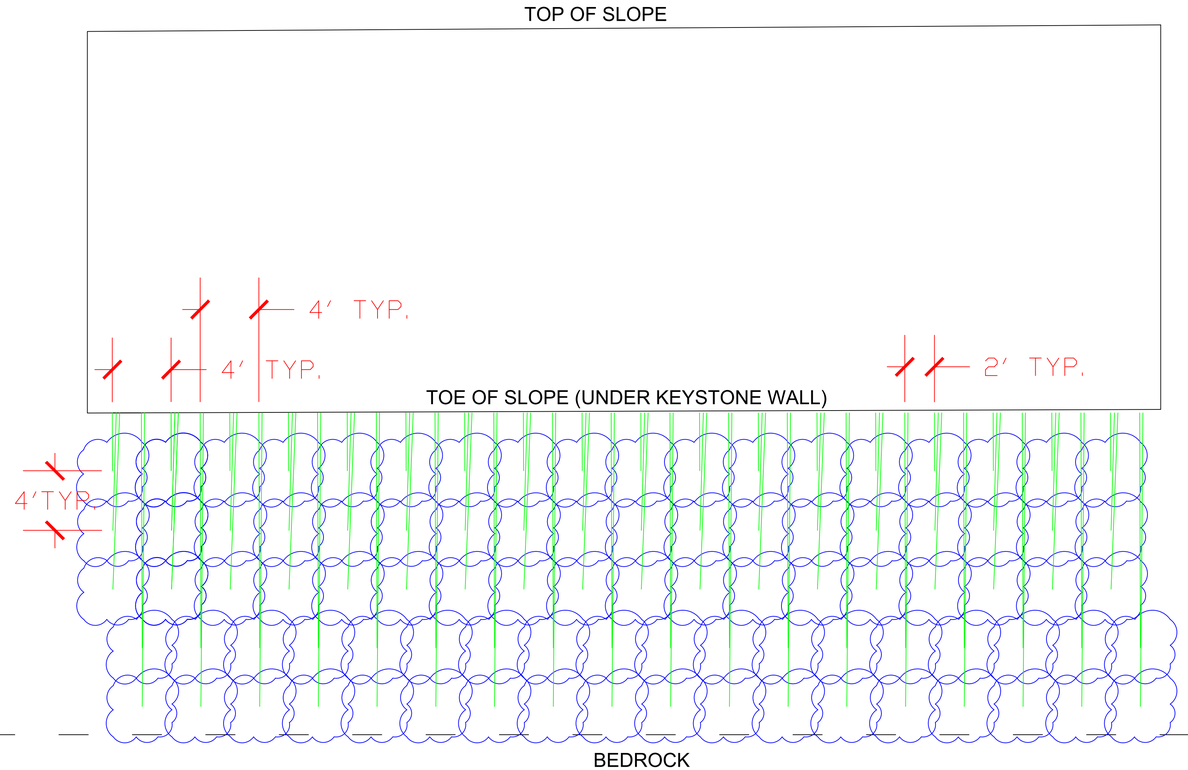




LEGEND:

4'-0" AND 8'-0" INJECTIONS

12'-0" AND 16'-0" INJECTIONS



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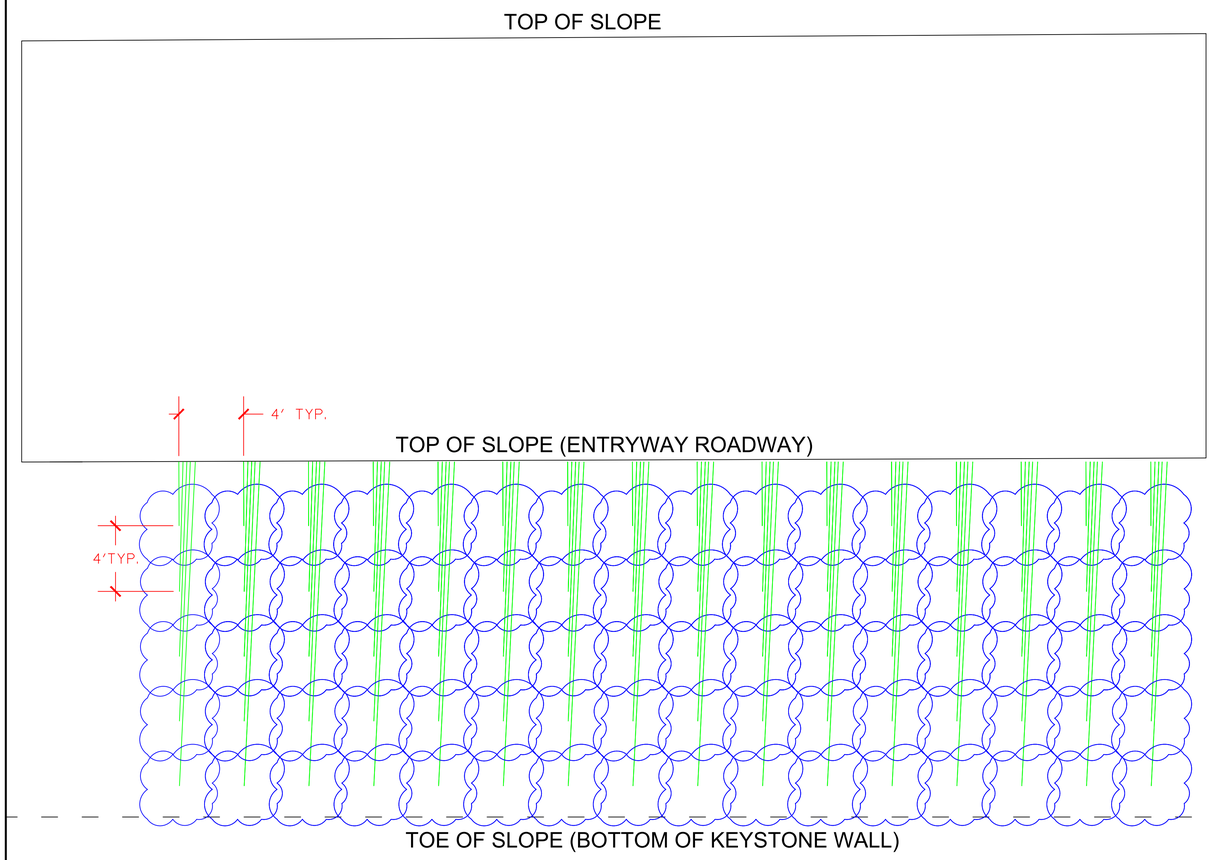
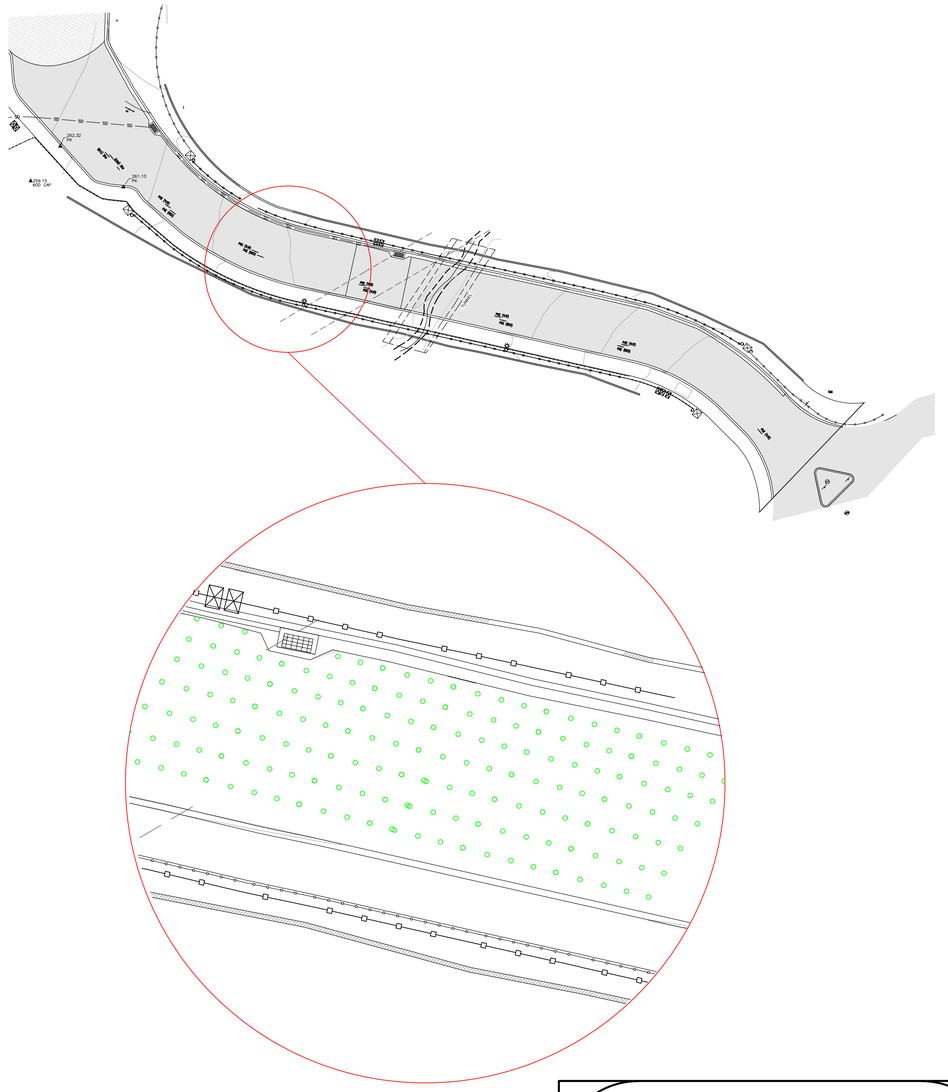


PLAN VIEW



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