



# Staff Report to the Zoning Administrator

Application Number: **251212**

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**Applicant:** William C. Kempf

**Owner:** Human Spaces, LLC

**APN:** 041-141-56

**Site Address:** 9041 Soquel Drive, Aptos

**Agenda Date:** November 7, 2025

**Agenda Item #:** 8

**Time:** After 9:00 a.m.

**Project Description:** Proposal to revise an approved two-story mixed use building in the PA (Professional and Administrative Office) zone district to reduce the overall square footage from 10,981 square feet to 9,110 square feet by removing the basement level and the elevator, and, to increase the residential to commercial area ratio from 46:54 to 80:20, by adding a fourth residential unit and reducing the first-floor commercial space from 2,889 square feet to 1,360 square feet. Requires an Amendment and Time Extension to Commercial Development Permit 191306.

**Location:** The property is located on the north side of Soquel Drive (9041 Soquel Drive) approximately 0.4 miles from the intersection with Rio Del Mar Boulevard and approximately 0.5 miles from the intersection with Trout Gulch Road in Aptos Village within the Aptos Planning Area.

**Permits Required:** Amendment and Time Extension to Commercial Development Permit 191306

**Supervisory District:** 2<sup>nd</sup> District (District Supervisor: Kim De Serpa)

## Staff Recommendation:

- Adoption of the Addendum to the CEQA Mitigated Negative Declaration and Mitigation Measures and Reporting Program related to the proposed project, certifying the Mitigated Negative Declaration per the requirements of the California Environmental Quality Act.
- Approval of Application 251212, based on the attached findings and conditions.

## Project Description & Setting

The project site is located on Soquel Drive just north of Highway One between Rio Del Mar Boulevard and Trout Gulch Road in Aptos. The parcel has an area of approximately 32,000 square feet. While relatively flat at the front of the parcel closer to Soquel Drive, the parcel gently slopes downward towards the rear (north) followed by a sharp decline with slopes at or greater than 50%, where the parcel descends to Valencia Creek before levelling off again closer to the stream channel. The south side of Soquel Drive, opposite the project site, is lined with both deciduous and evergreen trees which screen views of the site from Highway One, a designated scenic road. Surrounding land uses include a Goodwill donation center to the east and an interior design studio

to the west. The neighborhood to the east and west along Soquel Drive consists of several small-scale one and two-story commercial buildings with retail stores, restaurants, offices, and personal service establishments in a variety of architectural styles. Aptos Village, which supports a wide range of retail shops, restaurants, and medical offices, is located about one-half mile west of the site where Soquel Drive meets Trout Gulch Road. The vacant parcel is currently fenced to prevent unpermitted uses.

While the overall mixed-use development concept and general design remain the same, a Major Amendment to the approved Commercial Development Permit/Master Occupancy Program (CDP/MOP) is required because the proposed changes affect the density and intensity of use of the approved project by increasing the number of residential units from three to four units and reducing the amount of commercial floor area by 47%, from 2,889 square feet to 1,360 square feet. The modified Master Occupancy Program will continue to allow a range of potential uses, as listed as permitted in the current PA (Professional and Administrative Office) use charts, and for which sufficient on-site parking will be available.

A Time Extension to the use approval is also required because Permit 191306 would have otherwise expired on May 20, 2025 because the building permit required to exercise this permit has not been obtained prior to permit expiration.

### **Project Background**

The undeveloped subject parcel has a history of prior discretionary approvals for which no building permits were ever issued. Discretionary Permit Application 89-0123 (Proposal to construct a 3,730 square foot, two-story commercial office building) was approved in August of 1989 under previous APN 041-141-32. In May 2022, a Commercial Development Permit/Master Occupancy Program (CDP/MOP) and a Riparian Exception (191306) were approved to construct an approximately 10,981 square foot, two-story mixed-use building to include a 2,889 square foot office space and a covered carport for 5 vehicles on the ground floor and three residential apartment units on the second floor. The original proposal also included a 1,929 square foot basement storage room.

To encourage complete neighborhoods and respond to the reduced demand for office space, the Sustainability Update to the Zoning Code, adopted in 2024, increased the percentage of residential use allowed on a commercially zoned parcel, from 50% to 80% of building square footage at a base density of up to 45 units per acre. The current application takes advantage of this code update to adjust the proposed residential/commercial split. Furthermore, this proposed amendment to CDP/MOP 191306 extends the May 2025 expiration date to May 2026, pursuant to SCCC 18.10.133.

### **Zoning & General Plan Consistency**

The subject property is located in the PA (Professional-Administrative Office) zone district, a designation which allows mixed commercial and residential uses, pursuant to SCCC 13.10.332. The proposed development is a principal permitted use within the zone district and the zoning is consistent with the site's C-O (Professional and Administrative Offices) General Plan designation.

The parcel is an undeveloped 31,712 square foot lot. The building site and exterior footprint of the development as proposed in the current application remain the same as originally approved. The

building meets the required setbacks and development standards within the PA zone (as shown in the table below) and additionally meets the minimum required 15-foot rear yard setback required pursuant to SCCC 13.10.333(C)(b), due to the adjacency of the single-family zoned parcel at the rear. The project will continue to require the previously approved 50-foot riparian setback reduction and the 10-foot construction buffer reduction.

<b>SCCC 13.10.333 Development Standards</b>	<b>PA Zone</b>	<b>Existing</b>	<b>Proposed</b>
Maximum building height	40'	N/A	30' 6"
Maximum number of stories	3	N/A	2
Maximum floor area ratio (FAR) <sup>1</sup>	1.5 / 150%	N/A	.75 / 75%
Front yard setback	10'	N/A	10'
Side yard setbacks—interior (SCCC 13.10.334(A)(3))	0 (5')	N/A	6'
Rear yard setback	5'	N/A	> 65'

1. FAR, pursuant to SCCC 13.10.700-F, is measured by gross site area, however there is significant area of the site which cannot be developed due to General Plan Open Space restrictions as well as slope and biotic concerns, therefore the FAR as listed is the net developable lot area of 12,169 square feet, consistent with the review of application 191306.

County code includes specific standards for Mixed-use Residential and Commercial Developments in addition to those listed in SCCC 13.10.333 for commercial districts. The regulations that apply to this project include open space and setbacks.

SCCC.10.334(A)(2) Open Space.

A minimum of 50 square feet of open space must be provided per dwelling. Open space for mixed-use developments may be provided through any combination of private and common open space. The current proposal includes a large open balcony or deck for each residential unit. While the original project (191306) also included a common open space area at the ground level, which is no longer in the current plans, the modified project still conforms to the code by providing more than the minimum of 50 square feet of private open space for each proposed unit: a 144 square foot balcony for Unit 1, a 220 square foot deck for Unit 2, a 160 square foot balcony for Unit 3, and a 160 square foot deck for Unit 4 at the ground floor level. The shortest dimension of any of the decks is 8 feet, which exceeds the County standard of a minimum length for private open space of 6 feet in any one dimension.

SCCC.10.334(A)(3) Setbacks.

Side and rear setbacks shall be five feet, unless larger setbacks are otherwise required. This project complies with the side and rear yard setbacks as shown in the table above.

General Plan Policy BE-3.2.1 Residential Uses in Commercial Designations.

General Plan Objective BE-3.2 allows for residential uses on commercial properties when residential use contributes to vibrant activity centers and a more complete neighborhood, while also including an appropriate and viable level of commercial land use on parcels within the C-O General Plan designation. This mixed-use proposal combines residential and commercial development with appropriate design considerations to ensure compatibility between land uses on site and with adjacent sites. Four residential units will increase density but will not overwhelm the

site or impact traffic. The 2-story scale is consistent with the 2-story structures on neighboring parcels. The proposed residential square footage of 6,088 square feet, or 79.9% of the proposed total gross floor area of 7,618 square feet, meets the maximum allowance of 80% of building square footage within a commercial zone district.

**Access & Parking**

As previously proposed and approved, the subject mixed-use development will be accessed directly from Soquel Drive via a 24-foot wide, two-way driveway at the southeastern corner of the parcel. The driveway leads to a parking lot with eight spaces to the right along the eastern side of the parcel and five covered spaces to the left where there is a carport below the residential second level, plus a single uncovered parking spot adjacent to the new public sidewalk along Soquel Drive.

As proposed, the project includes 14 on-site parking spaces, one of which is accessible, which meets the standards set forth in SCCC 13.16.050.

**SCCC 13.16.050 Off-Street Vehicle Parking Spaces Required**

Use	Standard	Square Feet / Units	Required Spaces
Commercial / General Office	1 space per 300 GSF	1,360 SF	4.5
Units greater than 750 GSF	2 parking spaces per unit	4 Units	8
Guest Parking	20% of total residential parking	-	1.6
<b>TOTAL</b>			<b>14.1</b>

In addition to vehicular parking, there will be a rack at commercial front entrance to accommodate 4 bicycles for commercial/guest use, plus four secure bicycle parking spaces within lockable storage rooms - one for each of the residences.

**SCCC 13.16.040 Bicycle Parking Spaces Required**

Use	Standard	Required Spaces
Commercial / General Office	15% of vehicle parking requirement prior to any reductions applied Minimum of 2 spaces	2
Multifamily residential (apartments and condominiums)	1 space per unit	4
Guest Parking	20% of total residential parking	2
<b>TOTAL</b>		<b>8</b>

**Traffic Impacts**

Direct regional access to the project site is provided by Soquel Drive, an east-west arterial street and commute corridor that connects Aptos with Santa Cruz. Between Rio Del Mar Boulevard and

State Park Drive, Soquel Drive is the primary access to the Aptos Village and businesses other businesses that lie to the east. It also serves as alternate route for commuters when there is heavy traffic on Highway 1.

Information on potential transportation impacts as a result of the original proposal (191306) were included in the Parking and Traffic Study prepared by Keith Higgins, Traffic Engineer, dated February 6, 2020. As summarized, the project would not adversely impact existing roads or intersections in the surrounding area.

The modified project adds a fourth residential unit (1,475 SF) while reducing the amount of commercial space by 47%. An updated review of vehicle trip rates, based on the ITE Trip Generation Manual (11<sup>th</sup> Edition), shows that the commercial portion of the proposed project will now generate an estimated 42 daily trips, 27 fewer trips than previously estimated 69 daily trips. So, while a fourth residential unit will add approximately one peak trip per day, the overall number of vehicle daily trips will be reduced and therefore will not negatively impact traffic patterns in the surrounding area.

### **Design Review**

All commercial development is subject to the County Design Guidelines and the County's Design Review Ordinance (SCCC 13.11.060). The proposed modification to approved CDP/MOP 19306 continue to comply with these regulations. The design retains key architectural features such as tall vertical windows, large integrated balconies (which also provide usable open space), and a mix of exterior surfacing (stucco and horizontal wood siding) to minimum the bulk and mass of the structure. Additionally, the design of the site clusters the proposed development towards the front half of the site, preserving the greatest amount of native vegetation within the heavily wooded riparian corridor at the rear and protecting the existing viewshed. The proposed landscaping also incorporates multiple rain gardens around the building with a buffer of low water-use plantings at the edge of the parking lot, to minimize the visual impact of the proposed development on surrounding land uses and better blend with the natural landscape.

The Mixed-Use Design Guidelines found within Chapter 5 of the County of Santa Cruz Design Guidelines recommend situating buildings near the front property line and incorporating ground floor commercial space to activate the site at the pedestrian level. Although this site does not connect to adjacent sites via formal public sidewalks, the building is set close to the right-of-way with the commercial space opening to a front walkway, gardens, and bike racks. The parking lot is set off to the side of the structure and partially concealed by a carport and latticed wood screening, further aligning with the guideline's intent to prioritize pedestrian-oriented spaces.

The Design review standards in SCCC 13.11.070 require that proposed development reduce environmental impacts, climate change, and the utilization of resources. The design of this project proposes pervious pavers to surface the parking lot, rooftop solar, and rain gardens with biofiltration areas which contribute to the sustainability of this development.

Additional aesthetically functional features include roof parapets to conceal mechanical equipment, and an enclosed trash / recycling area, located at the ground level and adjacent to the parking area, which is out of public view and of sufficient size to accommodate all proposed uses on site.

## **Environmental Review**

Application 191306 adopted the CEQA Mitigated Negative Declaration and Mitigation Measures and Reporting Program related to the proposed project and certified the Mitigated Negative Declaration per the requirements of the California Environmental Quality Act.

In response to the proposal to modify the project, an Addendum to the Initial Study/Mitigated Negative Declaration was prepared. Due to the changes proposed to the building, the Addendum evaluates the differences, if any, in potential environmental impacts evaluated in the previous CEQA document, and has found that all proposed modifications will have either no increased impact, or result in a lesser environmental impact relative to the original project.

The Addendum in Exhibit A addresses the proposed revisions to application 191306, which include the removal of the basement and elevator, thereby reducing the overall square footage of the building by 1,871 square feet, and the replacement of a portion of the commercial square footage by adding a fourth residential unit at the ground level to result in an increase of the residential to commercial square footage ratio of 80% to 20%.

Additionally, the proposed modifications include the removal of an exterior staircase which provided access to the basement, the relocation of the trash and recycling bins from an uncovered area in the parking lot to an interior room (former elevator shaft) and adding a storage room at the second level. The proposed peak height of the structure – approximately 26 feet, has not changed. The treatment of stormwater through multiple bioswales and rain gardens will be identical to the original plan. Notably, the modification greatly reduces the amount of overall grading required. The amount of cut/excavation has been reduced from 635 cubic yards to 74 cubic yards, although the amount of fill/embankment has slightly increased from 239 cubic yards to 402 cubic yards.

All environmental concerns regarding the riparian areas, slope stability, and stormwater management as initially addressed and conditioned in the 191306 CDP/MOP staff report remain in effect for this modified proposal. The current Conditions of Approval include the original 191306 conditions (unless modified or no longer required by County code).

## **Time Extension**

Extensions to existing use approvals for a period of up to one year may be granted per SCCC 18.10.133.

The previous findings and conditions for 191306 continue to be valid, in that the regulations or site conditions have not changed in a manner that would affect the prior decision or result in noncompliance with the regulations as a result of changes in the project design. An extension for a period of one year from the original expiration date is considered as appropriate. Thus, the permit would expire on May 20, 2026.

## **Conclusion**

As proposed and conditioned, the project is consistent with all applicable codes and policies of the Zoning Ordinance and General Plan/LCP. Please see Exhibit "B" ("Findings") for a complete listing of findings and evidence related to the above discussion.

## Staff Recommendation

- **ADOPT** the Addendum to the CEQA Mitigated Negative Declaration and Mitigation Measures and Reporting Program related to the proposed project, certifying the Mitigated Negative Declaration per the requirements of the California Environmental Quality Act.
- **APPROVAL** of Application Number **251212**, based on the attached findings and conditions.

**Supplementary reports and information referred to in this report are on file and available for viewing at the Santa Cruz County Planning Division, and are hereby made a part of the administrative record for the proposed project.**

**The County Code and General Plan, as well as hearing agendas and additional information are available online at: <https://santacruzcountyca.gov>.**

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## Exhibits

- A. CEQA Environmental Review Addendum
- B. Findings
- C. Conditions
- D. Project plans
- E. Assessor's, Location, Zoning and General Plan Maps
- F. Parcel information
- G. Commercial Development Permit 191306 - CEQA Mitigated Negative Declaration



# County of Santa Cruz

DEPARTMENT OF COMMUNITY DEVELOPMENT AND INFRASTRUCTURE

701 OCEAN STREET, FOURTH FLOOR, SANTA CRUZ, CA 95060-4070  
 Planning (831) 454-2580      Public Works (831) 454-2160

## CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) ENVIRONMENTAL REVIEW INITIAL STUDY ADDENDUM

**Date:** November 7, 2025

**Application Number:** 251212

**Staff Planner:** Rebecca Rockom

**Project:** Proposal to revise an approved two-story mixed-use building in the PA (Professional and Administrative Office) zone district to reduce the overall square footage from 10,981 square feet to 9,110 square feet by removing the basement level and the elevator, and to increase the residential to commercial area ratio from 46:54 to 80:20, by adding a fourth residential unit and reducing the first-floor commercial space from 2,889 square feet to 1,360 square feet.

**APPLICANT:** William C. Kempf

**APN(s):** 041-141-56

**OWNER:** Human Spaces LLC

**SUPERVISORAL DISTRICT:** 2nd District

**PROJECT LOCATION:** The project site is located on the north side of Soquel Drive (9041 Soquel Drive) approximately 0.4 miles of the intersection with Rio Del Mar Boulevard and approximately 0.5 miles from the intersection with Trout Gulch Road in the Aptos Village in the Aptos Planning Area of unincorporated Santa Cruz County. Santa Cruz County is bounded on the north by San Mateo County, on the south by Monterey and San Benito counties, on the east by Santa Clara County, and on the south and west by the Monterey Bay and the Pacific Ocean.

### I. USE OF AN ADDENDUM TO A NEGATIVE DECLARATION

This document is prepared as an Addendum to the Initial Study/Mitigated Negative Declaration prepared for Application number 191306, dated May 06, 2022, which resulted in a preliminary determination to issue a Negative Declaration with Mitigations. The mandatory public comment period expired on May 20, 2022, without any comments affecting the Negative Declaration. The final approval of that project was granted by the Zoning Administrator on May 06, 2022, and the Mitigated Negative Declaration was posted at the Clerk of the Board on June 07, 2022.

This is a proposal to modify the prior approval by reducing the overall square footage of a two-story mixed-use building in the PA (Professional and Administrative Office) zone district, approved under Commercial Development Permit 191306, from 10,981 square feet to 9,110 square feet by removing the basement level and the elevator, and increasing the residential to commercial area ratio from 46:54 to 80:20, by adding a fourth residential unit and reducing the first-floor commercial space from 2,889 square feet to 1,360 square feet.

The Addendum has been prepared according to Section 15164 of the California Environmental Quality Act (CEQA) Guidelines, which provides for the use of this form for California

**EXHIBIT A**

Environmental Quality Act (CEQA) documentation when minor technical changes or additions are necessary. Guidelines indicate that an Addendum need not be circulated for public review but can be included in or attached to the adopted Mitigated Negative Declaration. This Addendum addresses a revised project scope including associated site improvements and ground disturbance etc. The project incorporates previously established Biotic mitigations into the project resulting in no new significant environmental impacts requiring mitigation.

This document evaluates the differences, if any, in potential environmental impacts evaluated in the previous CEQA document. This Addendum is an administrative action to update the existing Initial Study/Mitigated Negative Declaration which was certified by the Zoning Administrator on May 06, 2022.

### **California Environmental Quality Act Requirements**

The California Environmental Quality Act (CEQA) Guidelines, allow “[a]n addendum to an adopted negative declaration [to] be prepared if only minor technical changes or additions are necessary or none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred.” (14 CCR 15164(b).)

Section 15162, subdivision (a), of the CEQA Guidelines establishes the following circumstances that require the preparation of a subsequent EIR:

(a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

(b) If changes to a project or its circumstances occur or new information becomes available after adoption of a negative declaration, the lead agency shall prepare a subsequent EIR if required under subdivision (a). Otherwise, the lead agency shall determine whether to prepare a subsequent negative declaration, an addendum, or no further documentation.

## **II. PROJECT BACKGROUND**

Application 191306, a proposal to construct an approximately 10,981 square foot, two-story mixed-use building in the PA (Professional and Administrative Office) zone district, was considered and approved at a public hearing on May 6, 2022, before the Zoning Administrator. None of the work associated with the prior approval has been exercised or constructed in accordance with the approved conditions of approval. The proposed amendment would result in a change in scope to increase the percentage of residential to commercial area without changing the approved building footprint, landscaping or parking area. Prior conditions of approval and recommended Mitigations, as outlined in the adopted Mitigation Monitoring and Reporting Program for application 191306 shall be incorporated into the proposed amendment.

### **Environmental Setting and Surrounding Land Uses**

The project site is located on Soquel Drive just north of Highway One between Rio Del Mar Boulevard and Trout Gulch Road in Aptos. The parcel is approximately 32,000 square feet. While relatively flat at the front of the parcel, the parcel gently slopes downward towards the rear (north) followed by a sharp decline of about 50% slope where the parcel descends to Valencia Creek. The south side of Soquel Drive is lined with both deciduous and evergreen trees which screen views of the site from Highway One, a designated scenic road.

Surrounding land uses include a Goodwill donation center to the east and an interior design, studio to the west. The neighborhood consists of several small-scale commercial businesses California Environmental Quality Act (CEQA) including retail stores, restaurants, offices, and personal service establishments. Approximately one-quarter of a mile east of the site is Redwood Village which has an eclectic mix of shops and restaurants. West of the site along Soquel Drive are additional small-scale commercial businesses as well as several nonconforming single-family dwellings and a three-story apartment complex. Not including the apartment complex, these properties are developed with a mix of one- and two-story buildings with varying architectural styles built between the 1960s and 1980s. Aptos Village is located about one-half mile west of the

site where Soquel Drive intersects Trout Gulch Road, Aptos Village supports a wide range of retail shops, restaurants, and medical offices.

### **III. ENVIRONMENTAL EVALUATION**

#### **Project Description**

This Addendum addresses the proposed revisions to application 191306, which include the removal of the basement and elevator, thereby reducing the overall square footage of the building by 1,871 square feet, and the replacement of a portion of the commercial square footage by adding a fourth residential unit at the ground level to result in an increase of the residential to commercial square footage ratio of 80% to 20%.

Additionally, the proposed modifications include the removal of an exterior staircase which provided access to the basement, the relocation of the trash and recycling bins from an uncovered area in the parking lot to an interior room (former elevator shaft) and adding a storage room at the second level. The proposed peak height of the structure – approximately 27 feet, has not changed. Notably, the modification greatly reduces the amount of overall grading required. The amount of cut/excavation has been reduced from 635 cubic yards to 74 cubic yards, although the amount of fill/embankment has slightly increased from 239 cubic yards to 402 cubic yards.

#### **Evaluation of Environmental Impacts from Amended Proposal**

The adopted initial study found that, with Mitigations, the original project would not result in potentially significant environmental impacts. At the time application 191306 was approved, CEQA guidelines required evaluation of potential impacts in the following categories: Aesthetics and Visual Resources, Agriculture and Forestry Resources, Air Quality, Biological Resources, Cultural Resources, Energy, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology/Water Supply/Water Quality, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Service, Recreation, Transportation, Tribal Cultural Resources, Utilities and Service Systems, and Wildfire. The analysis below provides an assessment of the net effect of the revisions on the analysis contained within the adopted Initial Study/Mitigated Negative Declaration.

##### ***Aesthetics and Visual Resources***

The project site is located within a mapped General Plan Scenic area due to its location along Highway One, however the proposed mixed-use building will not be visible from the scenic road due to existing mature vegetation between the project site and the highway. The prior project was determined to result in a less than significant impact to scenic resources as it would not be visible from any other vantage point due to the presence of dense woodland to the north, east and west of the project site within the adjacent Valencia Creek arroyo, and therefore not directly impact any other public scenic vistas in that area. As proposed, the revised project would not modify the building height, footprint or any aspect of the approved design resulting in a project with a greater

impact to visual resources. Less than significant impacts to Aesthetics or Visual Resources are anticipated.

### ***Agriculture and Forestry Resources***

The project site does not contain any lands designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. In addition, the project does not contain Farmland of Local Importance. Therefore, no Prime Farmland, Unique Farmland, Farmland of Statewide or Farmland of Local Importance would be converted to a non-agricultural use. No impact would occur from project implementation.

### ***Air Quality***

The prior project was determined not to conflict with or obstruct any long-range air quality plans of the Monterey Bay Air Resources District (MBARD), because general construction activity related to emissions (i.e. temporary sources) are accounted for in the emission inventories included in the air quality plans, and impacts to the air quality plan objectives are less than significant. The proposed project would result in one additional residential unit but less than half the previously proposed commercial square footage and greatly reduced amounts of grading, therefore the project is anticipated to result in the same or slightly reduced construction timeline and impacts to sensitive receptors would continue to be less than significant.

### ***Biological Resources***

The initial study for application 191306 identified that the project site is located in an area of potential biotic concern. The County staff analysis concluded there were no sensitive plant species present as the development site was temporarily used as a bicycle pump track and existing native vegetation removed/destroyed. The project site sits above lower Valencia Creek; however, the construction disturbance will be limited to the southern, mostly flat, portion of the property, approximately 100 lateral feet away and 60 feet above the stream channel. Other than the removal of a set of exterior stairs, no changes have been proposed to the building footprint or the surrounding site improvements and landscaping. The treatment of stormwater through multiple bioswales and rain gardens will be identical to the original plan. Proposed modifications of this project will not incur any additional tree or riparian vegetation removal and will result in an overall decrease in grading quantities. Therefore, the incorporation of conditions and mitigations for the original project with the modification would be sufficient to ensure the current proposal would not result in significant impacts with respect to Biotic resources.

### ***Cultural Resources***

An Archaeological Survey Report was prepared for this project by Patricia Paramoure Archaeological Consulting, dated November 2021, and was reviewed and accepted by the Planning Department Environmental Section. No archaeological resources were identified in the project area. Construction impacts are expected to be less than significant. However, pursuant to

section 16.40.040 of the SCCC, and California Health and Safety Code sections 7050.5-7054, if at any time during site preparation, excavation, or other ground disturbance associated with this project, human remains are California Environmental Quality Act (CEQA) discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the Sheriff-Coroner and the Planning Director. If the coroner determines that the remains are not of recent origin, a full archaeological report shall be prepared, and representatives of local Native American Indian groups shall be contacted. If it is determined that the remains are Native American, the Native American Heritage Commission will be notified as required by law. The Commission will designate a Most Likely Descendant who will be authorized to provide recommendations for management of the Native American human remains. Pursuant to Public Resources Code section 5097, the descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site.

Disturbance shall not resume until the significance of the resource is determined and appropriate mitigations to preserve the resource on the site are established. Changes to the project design do not require revision to the mitigation measure applied to the original project and ensure that the current proposal would not result in significant impacts.

### ***Energy***

The project, like all development, would be responsible for an incremental increase in the consumption of energy resources during site grading and construction of the mixed-use building and associated site improvements. All project construction equipment would be required to comply with the California Air Resources Board (CARB) emissions requirements for construction equipment, which includes measures to reduce fuel-consumption, such as imposing limits on idling and requiring older engines and equipment to be retired, replaced, or repowered. In addition, the project has been modified in a manner that would result in reduced ground disturbance or grading. As a result, impacts associated with the small temporary increase in consumption of fuel during construction are expected to be less than significant.

### ***Geology and Soils***

A geotechnical investigation for the project was performed by CMAG Engineering. dated December 30, 2018. This report was reviewed and accepted by the Planning Department Environmental Section on January 9, 2020.

The report concluded that based on the results of the slope stability analysis, there is a low probability of the overall slope instability to occur under static and seismic conditions on the steep slope that descends to the north from the proposed improvements, and the site would be suitable for development even under saturated conditions subject to conditions to be implemented during grading and construction.

Implementation of the additional requirements included in the review letter prepared by Environmental Planning staff dated January 9, 2020, will serve to further reduce the potential risk of seismic shaking.

The modifications to the approved project reduce the overall grading requirement by removal of the basement and placement of the structure on grade, and do not alter the building footprint, proposed height, or other site improvements. Therefore, any geologic impacts on this site will be less than significant.

### ***Greenhouse Gas Emissions***

The project, like all development, would be responsible for an incremental increase in greenhouse gas (GHG) emissions by usage of fossil fuels during the site grading and construction. The revised project proposal involves a reduction of grading associated with removal of the proposed basement. The original project was found to have a less than significant impact with respect the Greenhouse Gas Emissions. Due to the current proposal resulting in reduced amount of grading associated with removal of the proposed basement from the proposed mixed-use building, impacts associated with the temporary increase in GHG emissions are expected to be less than significant.

### ***Hazards and Hazardous Materials***

The proposed modification to the project would not create or increase any significant hazard to the public or the environment. No routine transport or disposal of hazardous materials is proposed, however, during construction, fuel would be used at the project site. The project site is not included on the list of Hazardous sites in Santa Cruz County compiled pursuant to Government Code Section 65962.5. Therefore, no new significant effects have been identified, and no mitigation measures or project revisions are necessary.

### ***Hydrology, Water Supply, and Water Quality***

The project is located adjacent to Valencia Creek; however, as conditioned, the modified project will have no significant impact on water quality, and the project would not discharge runoff either directly or indirectly into a public or private water supply. The project would continue to obtain water from the City of Santa Cruz and would not rely on private well water. The project site is not located in a mapped groundwater recharge area, and no changes have been proposed to the existing drainage pattern of the site that would result in erosion or an increase in runoff from the site. Impacts would be less than significant.

### ***Land Use and Planning***

The project would not cause a significant environmental impact due to a conflict with any land use plan, policies or regulations adopted for the purpose of avoiding or mitigating an environmental effect. The modifications to this proposal do not increase any disturbance within a riparian corridor and therefore any impacts would be considered less than significant.

### ***Mineral Resources***

The proposed changes would not impact mineral resources or land zoned for mineral extraction as the project is located in zone district (PA) where no mineral extraction is allowed. Therefore, no

new significant effects have been identified, and no mitigation measures or project revisions are necessary.

### ***Noise***

The previously adopted Initial Study/Mitigated Negative Declaration found that no significant noise impact would result from the project; however, the project would create a temporary increase of the existing ambient noise levels during the construction phase. The proposed modification to this project will not alter the level of noise generated during project construction and given the limited duration of construction and the limited hours of construction activity, this impact is considered to be less than significant.

### ***Population and Housing***

The modification of the approved project would not induce substantial population growth in an area because the project does not propose any physical or regulatory change that would remove a restriction to or encourage population growth in an area. The modification to the project proposes one additional residential unit to the approved number of 3 units; therefore, the project would not induce population growth beyond that anticipated by the adopted General Plan Land Use Plan. No impact would occur.

### ***Public Services***

The revised project would result in a minimal increased need for services. Moreover, the project meets all the standards and requirements identified by the local fire agency or California Department of Forestry, as applicable, and school, park, and transportation fees to be paid by the applicant would be used to offset the incremental increase resulting from the original project with respect to demand for school and recreational facilities and public roads. Impacts would be considered less than significant.

### ***Recreation***

The modified project would not substantially increase the use of existing neighborhood and regional parks or other recreational facilities. The project does not propose any expansion or require the construction of additional recreational facilities. No impact would occur.

### ***Transportation/Traffic***

The original project was evaluated for consistency with established State and Local thresholds for significance as it relates to Transportation/Traffic environmental impacts. The original project would create small incremental increase in traffic on nearby roads and intersections by generating an estimated 69 daily trips with 7 trips during the AM peak hour and 10 trips during the PM peak hour. A review, based on the ITE Trip Generation Manual (11<sup>th</sup> Edition), of the vehicle trip rates for the modified project, with one additional residence and 1,360 commercial square feet, or less than half of the previously approved commercial square footage, shows that the commercial portion of the proposed project will now generate an estimated 42 daily trips, 27 fewer trips than

previously estimated 69 daily trips. So, while a fourth residential unit will add approximately one peak trip per day, the overall number of vehicle daily trips will be reduced and therefore will result in a less than significant impact to transportation and traffic patterns in the surrounding area.

### ***Tribal Cultural Resources***

The project proposes to establish a 9,110 square foot mixed-use building with four residential units, 1,360 square feet of commercial space on the ground level, and associated site improvement. Section 21080.3.1(b) of the California Public Resources Code (AB 52) requires a lead agency formally notify a California Native American tribe that is traditionally and culturally affiliated within the geographic area of the discretionary project when formally requested. As of this writing, no California Native American tribes traditionally and culturally affiliated with the Santa Cruz County region have formally requested a consultation with the County of Santa Cruz (as Lead Agency under CEQA) regarding Tribal Cultural Resources. However, no Tribal Cultural Resources are known to occur in or near the project area. Therefore, no impact to the significance of a Tribal Cultural Resource is anticipated from the revised project implementation.

### ***Utilities and Service Systems***

The project site would be connected to an existing municipal water supply. The Soquel Creek Water District has previously determined that adequate supplies are available to serve the project, and no new facilities are required. Municipal wastewater treatment facilities are available and have the capacity to serve the updated project.

The drainage analysis for the project at 9041 Soquel Drive, prepared by Ramsey Civil Engineering originally dated April 1, 2020, and updated November 2022, concludes that the updated project conforms to County design requirements as specified in the County of Santa Cruz Design Criteria.

Consistent with the original approval, the revised the project provides stormwater mitigations for the proposed development by providing a series of biofiltration areas, and permeable paver parking spaces with a deepened stone subbase. Excess flows for the 25-year storm events will be detained and released at the 5-year pre-development release rates. Therefore, potential impacts from stormwater will be less than significant.

The proposed site would be served by electric power and natural gas, and no further improvements to serve the site are necessary. Overall utility impacts would be less than significant from project implementation.

### ***Wildfire***

While the project is mapped within a State Responsibility Area (SRA Moderate), it is not in a Very High Fire Hazard Severity Zone, or a County-mapped Critical Fire Hazard Area and will not conflict with emergency response or evacuation plans. Therefore, no impact would occur.

***Mandatory Findings of Significance***

Analysis of the modified project, with the proposed mitigations, did not identify the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory.

Analysis of the proposed project did not identify the potential to have impacts that are individually limited, but cumulatively considerable.

Analysis of the proposed project did not identify the potential to have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

**IV. CONCLUSION**

The proposed modified project will not result in the need for additional mitigations and, as proposed, is within the scope of the Initial Study and Mitigated Negative Declaration, received by the Clerk of the Board on June 7, 2022. Therefore, no further environmental review is required.

DocuSigned by:

*Mark Connolly*

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11/5/2025

Mark Connolly  
Environmental Coordinator

Date

## Discretionary Permit Findings

- (a) Health and Safety. The proposed location of the project and the conditions under which it would be developed, operated, or maintained will not be detrimental to the health, safety, or welfare of persons residing or working in the neighborhood or the general public and will not be materially injurious to properties or improvements in the vicinity.

This finding can be made, in that the project is located in an area designated for mixed commercial and residential uses. Construction will comply with prevailing building technology, the California Building Code, and the County Building ordinance to ensure that the project will not be detrimental to the health, safety, or welfare of persons residing or working in the neighborhood or the general public, and will not be materially injurious to properties or improvements in the vicinity.

- (b) Zoning Conformance. The proposed location of the project and the conditions under which it would be developed, operated, or maintained will be in substantial conformance with the intent and requirements of all pertinent County ordinances and the purpose of the zone district in which the site is located.

This finding can be made, in that the proposed location of the development and the conditions under which it would be operated or maintained will in substantial conformance with all pertinent County ordinances and the purpose of the PA (Professional-Administrative Office) zone district as the primary use of the property will be one mixed-use commercial and residential development that meets all current site standards for the zone district.

### SCCC.10.334(A)(2) Open Space.

A minimum of 50 square feet of open space must be provided per dwelling. Open space for mixed-use developments may be provided through any combination of private and common open space. The current proposal includes a large open balcony or deck for each residential unit. While the original project (191306) also included a common open space area at the ground level, which is no longer in the current plans, the modified project still conforms to the code by providing more than the minimum of 50 square feet of private open space for each proposed unit: a 144 square foot balcony for Unit 1, a 220 square foot deck for Unit 2, a 160 square foot balcony for Unit 3, and a 160 square foot deck for Unit 4 at the ground floor level. The shortest dimension of any of the decks is 8 feet, which exceeds the County standard of a minimum length for private open space of 6 feet in any one dimension.

### SCCC.10.334(A)(3) Setbacks.

Side and rear setbacks shall be five feet, unless larger setbacks are otherwise required. This project complies with the side and rear yard setbacks as shown in the table above.

- (c) General Plan Conformance. The proposed project is in substantial conformance with the intent, goals, objectives, and policies of all elements of the County General Plan and any specific plan which has been adopted for the area.

This finding can be made, in that the proposed mixed commercial and residential use is in substantial conformance with the use and density requirements specified for the C-O (Professional and Administrative Offices) land use designation in the County General Plan.

General Plan Policy BE-3.2.1 Residential Uses in Commercial Designations.

General Plan Objective BE-3.2 allows for residential uses on commercial properties when residential use contributes to vibrant activity centers and a more complete neighborhood, while also including an appropriate and viable level of commercial land use on parcels within the C-O General Plan designation. This mixed-use proposal combines residential and commercial development with appropriate design considerations to ensure compatibility between land uses on site and with adjacent sites. The proposed residential square footage of 6,088 square feet, or 79.9% of the proposed total gross floor area of 7,618 square feet, meets the maximum allowance of 80% of building square footage within a commercial zone district.

- (d) CEQA Conformance. The proposed project complies with the requirements of the California Environmental Quality Act (CEQA) and any significant adverse impacts on the natural environment will be mitigated pursuant to CEQA.

This finding can be made, in that the project has been determined to be exempt from further review under the California Environmental Quality Act, as indicated in the Notice of Exemption for this project.

- (e) Utilities and Traffic Impacts. The proposed use will not overload utilities, result in inefficient or wasteful use of energy, or generate more than the acceptable level of traffic on the streets in the vicinity.

This finding can be made, in that the proposed development will add four residential units and a commercial office space on an existing undeveloped lot. The expected level of traffic generated by the commercial portion of the proposed project is anticipated to be 42 peak trips per day, plus 4 peak trips for the residential use (1 peak trip per dwelling unit). Pursuant to the previously reviewed Parking and Traffic Study (Exhibit E), such an increase will not adversely impact existing roads or intersections in the surrounding area. In addition, all construction will comply with prevailing building technology, the California Building Code, and the County Building ordinance to ensure that the project will not overload utilities or otherwise result in an inefficient or wasteful use of energy.

- (f) Neighborhood Compatibility. The proposed use will be compatible with the existing and proposed land uses, land use intensities, and dwelling unit densities of the neighborhood, as designated by the General Plan and Local Coastal Program and implementing ordinances.

This finding can be made, in that the proposed development is consistent with the land use intensity and density of the neighborhood as designated by the General Plan and implementing ordinances. The neighborhood to the east and west along Soquel Drive consists of several small-scale one and two-story commercial buildings with retail stores, restaurants, offices, and personal service establishments in a variety of architectural styles. Multi-family zoned parcels are sprinkled throughout the neighborhood, and Valencia Elementary School is within a mile and a half driving/biking distance. Four residential units will increase density beyond the originally approved 3 units, but will not overwhelm the site or impact traffic. The proposed 2-story scale is consistent with the existing 2-story structures on neighboring parcels.

- (g) Local Coastal Program Consistency. For proposed projects located within the coastal zone, the proposed project is consistent with the provisions of the certified Local Coastal Program.

This finding is not required, in that the project site is not located within the coastal zone.

### **Site Development Permit Findings**

- (a) Siting and Neighborhood Context. The proposed development is designed and located on the site so that it will complement and harmonize with the physical design aspects of existing and proposed development in the neighborhood, as designated by the General Plan and Local Coastal Program and implementing ordinances.

This finding can be made, in that the proposed development is designed and located on the site in a manner that will complement and harmonize with the physical design aspects of existing and proposed development in the neighborhood. The site design clusters the proposed development towards the front half of the site, preserving the greatest amount of native vegetation within the heavily wooded riparian corridor at the rear, and protecting the existing viewshed. The proposed landscaping also incorporates multiple rain gardens around the building with a buffer of low water-use plantings at the edge of the parking lot, to minimize the visual impact of the proposed development on surrounding land uses and better blend with the natural landscape.

- (b) Design. The proposed development is in substantial conformance with applicable principles in the adopted Countywide Design Guidelines, except as prohibited by site constraints, and any other applicable requirements of SCCC 13.11 (Site Development and Design Review). If located in the Coastal Zone, the site plan and building design are also in substantial conformance with the policies of the Local Coastal Program and coastal regulations of SCCC 13.20.

This finding can be made, in that the proposed development is in substantial conformance with the requirements of the County Design Review Ordinance. The design retains key architectural features of the approved 191306 application such as tall vertical windows, large integrated balconies (which also provide usable open space), and a mix of exterior surfacing (stucco and horizontal wood siding) to minimum the bulk and mass of the structure. Additional aesthetically functional features include roof parapets to conceal mechanical equipment, and an enclosed trash and recycling area, located at the ground level and adjacent to the parking area, which is out of public view and of sufficient size to accommodate all proposed uses on site.

## Conditions of Approval

Exhibit D: Project plans, prepared by William C. Kempf Architects, dated August 8, 2025.

- I. This permit authorizes Amendment and a Time Extension to Permit 191306 for the construction of an approximately 9,110 square foot mixed-use commercial and residential development as indicated on the approved Exhibit "D" for this permit. This approval does not confer legal status on any existing structure(s) or existing use(s) on the subject property that are not specifically authorized by this permit. Prior to exercising any rights granted by this permit including, without limitation, any construction or site disturbance, the applicant/owner shall:
  - A. Sign, date, and return to Santa Cruz County Planning one copy of the approval to indicate acceptance and agreement with the conditions thereof.
  - B. Obtain a Building Permit from the Santa Cruz County Building Official.
    1. Any outstanding balance due to Santa Cruz County Planning must be paid prior to making a Building Permit application. Applications for Building Permits will not be accepted or processed while there is an outstanding balance due.
  - C. Obtain a Grading Permit from the Santa Cruz County Building Official.
  - D. Obtain an Encroachment Permit from the Department of Public Works for all off-site work performed in the County road right-of-way.
- II. Prior to issuance of a Building Permit the applicant/owner shall:
  - A. Submit final architectural plans for review and approval by Santa Cruz County Planning. The final plans shall be in substantial compliance with the plans marked Exhibit "D" on file with Santa Cruz County Planning. Any changes from the approved Exhibit "D" for this development permit to the plans submitted for the Building Permit must be clearly called out and labeled by standard architectural methods to indicate such changes. Any changes that are not properly called out and labeled will not be authorized by any Building Permit that is issued for the proposed development. The final plans shall include the following additional information:
    1. A copy of the text of these conditions of approval incorporated into the full-size sheets of the architectural plan set.
    2. One elevation shall indicate materials and colors as they were approved by this Discretionary Application. If specific materials and colors have not been approved with this Discretionary Application, in addition to showing the materials and colors on the elevation, the applicant shall supply a color and material sheet in 8 1/2" x 11" format for Santa Cruz County Planning review and approval.

3. Grading, drainage, and erosion control plans.
  4. Details showing compliance with fire department requirements.
- B. Submit a final Landscape Plan for the entire site for review and approval by the Planning Department. The landscape plan shall specify plant species, size and location, and shall include irrigation plans, which meet the following criteria and must conform to all water conservation requirements of the local water district and the following conservation regulations (also see additional requirements for the submittal of a Revegetation Plan at section C. below):
1. Turf Limitation. Turf area shall not exceed 25 percent of the total landscaped area. Turf area shall be of low to moderate water-using varieties, such as tall or dwarf fescue.
    - a. Any seed mix used for erosion control purposes on temporarily impacted areas and exposed soils shall be limited to seeds of native species common to the surrounding habitat and/or sterile seeds.
  2. Plant Selection. At least 80 percent of the plant materials selected for non-turf areas (equivalent to 60 percent of the total landscaped area) shall be well-suited to the climate of the region and require minimal water once established (drought tolerant). Native plants are encouraged. Up to 20 percent of the plant materials in non-turf areas (equivalent to 15 percent of the total landscaped area), need not be drought tolerant, provided they are grouped together and can be irrigated separately.
  3. Soil Conditioning. In new planting areas, soil shall be tilled to a depth of 6 inches and amended with six cubic yards of organic material per 1,000 square feet to promote infiltration and water retention. After planting, a minimum of 2 inches of mulch shall be applied to all non-turf areas to retain moisture, reduce evaporation and inhibit weed growth.
  4. Irrigation Management. All required landscaping shall be provided with an adequate, permanent and nearby source of water which shall be applied by an installed irrigation system, or where feasible, a drip irrigation system. Irrigation systems shall be designed to avoid runoff, over-spray, low head drainage, or other similar conditions where water flows onto adjacent property, non- irrigated areas, walks, roadways or structures.

The irrigation plan and an irrigation schedule for the established landscape shall be submitted with the building permit applications. The irrigation plan shall show the location, size and type of components of the irrigation system, the point of connection to the public water supply and designation of hydrozones. The irrigation schedule shall designate the timing and frequency of irrigation for each station and list the amount of water, in gallons or hundred cubic feet, recommended on a monthly and annual basis.

- a. Appropriate irrigation equipment, including the use of a separate landscape water meter, pressure regulators, automated controllers, low volume sprinkler heads, drip or bubbler irrigation systems, rain shutoff devices, and other equipment shall be used to maximize the efficiency of water applied to the landscape.
  - b. Plants having similar water requirements shall be grouped together in distinct hydrozones and shall be irrigated separately.
  - c. Landscape irrigation should be scheduled between 6:00 p.m. and 11:00 a.m. to reduce evaporative water loss.
5. Maintenance. The site-specific landscape plan shall include a 3-year management plan for maintenance and monitoring of all planting areas. Replacement plants shall be installed as needed during the monitoring.
- C. Meet all requirements of the Environmental Planning section of the Planning Department as follows:
1. Revegetation Plan: (BIO-3) Submit a Revegetation Plan for all areas between the rear of the constructed project (five feet from the back of the building and retaining wall) to the margins of the existing riparian vegetation, in order to restore of the margins of the riparian area, enhance the riparian corridor and for erosion control. The plant palate shall include appropriate California native riparian species plants (shrubs and low growing groundcovers) with at least three species known as nectar plants for the obscure bumblebee.
  2. Existing Trees: Impacts to existing trees within the riparian corridor shall be avoided to the maximum extent possible. All trees shall be protected during construction at or outside of the dripline, if possible, by a system of fencing and straw bale barricades. The exact locations of the protection measures shall be determined in the field during the pre-construction meeting.
  3. Fencing: (BIO-4) A permanent three-foot high fence shall be erected approximately 5 feet behind the proposed building to demarcate and prevent disturbance to the riparian restoration area. The location of this fence shall be shown on plans submitted in support of the building permit for the project and shall be approved by Environmental Planning staff.
  4. Lighting: (BIO-5) Submit a final detailed lighting plan for review and approval by Environmental Planning staff, showing that all light sources will be cast downward, shielded and directed away from Valencia Creek, so that light does not spill over into the riparian habitat to-the north, onto adjacent properties or upwards into the night sky. Lighting shall further be limited to warm light colors with an output temperature of 2,700 kelvin or less.

5. Birds: To minimize potential impacts to migratory and nesting birds, if ground disturbance occurs during March 15 and August 15, within one week of initial ground disturbance activities a nesting bird survey shall be conducted by a qualified biologist. If surveys do not locate nesting birds, work activities may be conducted. If nesting birds are located, no work shall occur within 100 feet of non-raptor nests or within 300 feet of raptor nests until chicks are fledged or the nest is inactive. A brief report shall be submitted to the County of Santa Cruz Environmental Planning Department immediately upon completion of the survey. The report shall detail appropriate fencing or flagging of the buffer zone and make recommendations on additional monitoring requirements. A map of the Project site and nest locations shall be included with the letter report. The Project biologist conducting the nesting survey shall have the authority to reduce or increase the recommended buffer depending upon site conditions.
- D. Meet all the accessibility requirements of the most current Santa Cruz County Codes.
  - E. Meet all requirements of the County Department of Public Works, Stormwater Management. Drainage fees will be assessed on the net increase in impervious area. This project is considered a large project per the CDC requirements. Please see Part 3 Section D.3 and Appendix A and D for the Project Information & Threshold Determination Form and large project building permit submittal requirements. The following shall be provided prior to building permit approval:
    1. Provide the following items in the final stormwater management plan and project improvement plans (See CDC Part 3 Appendix D):
      - a. Adequate construction level details, including construction scheduling and phasing ensuring that mitigation areas are protected from clogging.
      - b. The plan shall clearly illustrate how stormwater runoff from all project areas will be conveyed and controlled (provide spot elevations, slopes, grade breaks, cross sections, roof plan, downspout locations, and other information as necessary) and how safe stormwater overflow has been incorporated into the project design.
      - c. Final details, materials, specifications and methods of construction so that the minimum void space is provided consistent with the final analysis.
      - d. The minimum surface infiltration rate and testing method for the pervious pavers and raingarden soil mix shall be included in the plan. Please note, the testing shall be performed by a qualified professional. The testing method, test results, and test locations shall

be documented in a letter that is signed by the professional who performed the tests and submitted to DPW prior to construction final.

- e. Provide additional grading and drainage information describing how runoff from the proposed curb line in Soquel Drive will be routed. Sections 1 and 3 on sheet C3.1 suggest that the road currently drains towards the project site in conflict with Note 17 on Sheet C1.1. Please clarify. Provide grades demonstrating how runoff will be routed and will not impact adjacent private properties.
  - f. Provide a detail with minimum dimensions, slopes and surfacing requirements for the proposed swale/s.
  - g. Update detail on sheet C.5 for the energy dissipator outfalls to include minimum dimensions.
  - h. Provide details on retaining wall and basement drainage facilities and routing.
  - i. Include source control details for trash enclosure area, storm drain inlet marking/signage, and other relevant items consistent with the source control measure section of the Stormwater Management Report and CDC requirements.
2. Provide a signed and stamped Final Stormwater Management Report that includes the required items per the CDC Part 3 Appendix D:
- a. Analysis supporting the final stormwater management plan and demonstrating compliance with these Design Criteria requirements.
    - i. While the mitigations for water quality and flood control can be provided in combined facilities, the required water quality and detention volumes are additive. Provide analysis demonstrating both are provided in the raingardens and are consistent with the project plans.
    - ii. Provide documentation for the 85th percentile storm event used for sizing the pervious paver treatment and raingarden treatment in the report.
    - iii. Provide analysis supporting the design of the outfall energy dissipators demonstrating compliance with Part 3 Section J.5 accounting for on and off-site surface drainage and any retaining wall and backdrain flows directed to these outlets.
    - iv. Update the upstream runoff control section to describe how existing and proposed runoff from Soquel Drive currently routes

along the project frontage.

- v. Provide analysis for the proposed swales demonstrating adequacy for design and safe overflow to handle on and offsite flows.
  - vi. Ensure that mitigation sizing accounts for the impermeable liner under the paver areas (these areas shall be considered fully impervious).
3. A recorded maintenance agreement (SWM-25B) and associated documents and attachments per CDC Part 3 Appendix D is required (a draft may be provided with the building permit submittal with the recorded document provided prior to construction final). The maintenance agreement shall include acknowledgement of upstream runoff. The document shall include all pertinent details for the on-going inspection and maintenance of the designed drainage system including pervious paving, raingardens, pipes, inlets, downspouts, outfalls, signage, flow control structures, etc. and shall include the required exhibits specified in Part 3 Section D.3.d (pgs. 62-64) of the CDC.
- i. Please include any/all manufacturer recommendations and technical specifications in the checklist for a clear and precise maintenance program.
  - ii. The checklist shall include signs of system failure, maintenance procedures, and methods for testing infiltration rates along with minimum acceptable surface infiltration rates for construction and future maintenance of the proposed mitigation features (pervious pavement and biofiltration areas).
  - iii. The agreement shall include all relevant Source Control Measures described in Section D of the CDC.
  - iv. The property owner will be required to submit annual maintenance reports and associated annual fees to the County Division of Public Works following the Unified Fee Schedule, which is subject to increase annually.
4. Construction of the stormwater related items will be inspected by Public Works staff. Please submit a construction estimate for all drainage related items. 3% of the construction cost or the minimum fee rate following the Unified Fee Schedule will be required upon permit issuance. Please provide the engineer's estimate for the construction cost of the stormwater related items to calculate the inspection deposit.
5. Zone 6 fees will be assessed on the net increase in impervious area due to the project consistent with CDC Part 3 Appendix D.

6. Provide geotechnical review letter approving of the final drainage and civil plans.
- F. Meet all the requirements of the Department of Public Works, Road Engineering Section.
1. A right of way dedication is required for the rear of the driveway's ADA wrap-around located outside the existing right of way.
  2. The development is subject Aptos Transportation Improvement (TIA) fees at the current rate within the County Unified Fee Schedule.
    - a. The residential fees are currently \$4,200 (\$2,100 for Transportation Improvement and \$2,100 for Roadside Improvement) for each new multi-family unit created. The fee for multi-family units will be calculated as 4 multi-family units multiplied by \$4,200 per unit for a total of \$16,800.
    - b. The fees for the proposed commercial area are calculated based on the trip generation rate schedule with estimated number of daily vehicle trips, found under the non-residential land use categories on the Public Works page of the Unified Fee Schedule. Professional and Administrative uses are estimated to generate 18 daily trips per 1,000 gross square feet.
- G. Meet all requirements of the Soquel Creek Water District. Proof of water service availability is required prior to application for a Building Permit.
1. All commercial units and residential units shall be served by an individual water meter. Space shall be provided within the adjacent sidewalk for individual meter boxes and service lines serving each unit. In addition, provide a dedicated fire service meter that serves the entire building.
  2. The parcel has an existing abandoned well on it that needs to be noted as part of the existing site plan. Additionally, this well must be properly destroyed prior to any construction, and a copy of the destruction permit shall be sent to Soquel Creek Water District.
- H. Meet all requirements of the Santa Cruz County Sanitation District. Proof of sanitary sewer service availability is required prior to application for a Building Permit.
- I. Meet all requirements and pay any applicable plan check fee of the Central Fire Protection District.
- J. Submit a copy of an updated soils report prepared and stamped by a licensed Geotechnical Engineer.

- K. Pay the current fees for Parks mitigation. Currently, these fees are \$5.59 per square foot for multi-family dwellings, and \$7.29 per square foot of commercial office area.
  - L. Pay the current fees Child Care mitigation. Currently, these fees are \$0.28 per square foot for multi-family dwellings, and \$2.26 per square foot for commercial office area.
  - M. Pay the current Affordable Housing Impact Fee for residential construction. The fees are based on unit size and the current fee for a dwelling up to 2,000 square feet is \$2 per square foot.
  - N. Pay the current Affordable Housing Impact Fee for non-residential construction. The fees are based on new square footage and the current fee for non-residential construction is \$3 per square foot.
  - O. Provide required off-street parking for 14 cars. Parking spaces must be 8.5 feet wide by 18 feet long and must be located entirely outside vehicular rights-of way. Parking must be clearly designated on the plot plan.
  - P. Provide 4 secure bicycle parking spaces within lockable storage rooms for each of the residential units. Provide 4 bicycle spaces on a single rack at the front of the commercial building for commercial use and residential guests.
  - Q. Submit a written statement signed by an authorized representative of the school district in which the project is located confirming payment in full of all applicable developer fees and other requirements lawfully imposed by the school district.
- III. Prior to any site disturbance or physical construction on the subject property for either phase of the project, the following conditions shall be met:
- A. Pre-Construction Meeting: (BIO-1) Prior to any site disturbance, a pre-construction meeting shall be conducted. The purpose of the meeting will be to ensure that the conditions set forth in the proposed project description and Conditions of Approval of the Riparian Exception are communicated to the various parties responsible for constructing the project. The meeting shall involve all relevant parties including the project proponent, construction supervisor and Environmental Planning Staff.
  - B. Protection Measures: (BIO-2) Prior to construction, high visibility construction fencing shall be installed, to indicate the limits of work and prevent inadvertent grading or other disturbance within the adjacent riparian corridor. No work-related activity including equipment staging, vehicular access, and grading shall be allowed outside the limits of work.
- IV. To minimize noise, dust and nuisance impacts of surrounding properties to insignificant levels during construction, the owner/applicant shall or shall have the project contractor comply with the following measures during all construction work:

- A. Construction activity is limited to between the hours of 7:00 a.m. to 6:00 p.m. Monday through Friday, 9:00 a.m. to 5:00 p.m. Saturday in order to avoid noise during more sensitive nighttime hours, unless a temporary exception to this time restriction is approved in advance by the Building Official to address an emergency situation. Construction activity of Sundays is prohibited. Interior finish work such as painting, tiling, etc., that does not produce sound that might be heard beyond the boundaries of the parcel (hammering, use of an electric drill, sawing, etc.) is not restricted.
  - B. The applicant shall designate a disturbance coordinator, and a 24-hour contact number shall be conspicuously posted on the job site. The disturbance coordinator shall record the name, phone number, and nature of all complaints received regarding the construction site. The disturbance coordinator shall investigate complaints and take remedial action, if necessary, within 24 hours of receipt of the complaint or inquiry.
  - C. All construction and maintenance equipment shall be powered by gasoline or diesel engines that have sound control devices that are at least as effective as those originally provided by the manufacturer and that all equipment be operated and maintained to minimize noise generation.
- V. All construction shall be performed according to the approved plans for the Building Permit. Prior to final building inspection, the applicant/owner must meet the following conditions:
- A. All site improvements shown on the final approved Building Permit plans shall be installed.
  - B. All inspections required by the building permit shall be completed to the satisfaction of the County Building Official.
  - C. The project must comply with all recommendations of the approved soils reports.
  - D. Pursuant to Sections 16.40.040 and 16.42.080 of the County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this development, any artifact or other evidence of an historic archaeological resource or a Native American cultural site is discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the Sheriff-Coroner if the discovery contains human remains, or the Planning Director if the discovery contains no human remains. The procedures established in Sections 16.40.040 and 16.42.080, shall be observed.
- VI. Operational Conditions
- A. Master Occupancy Program: All uses listed in the current PA (Professional and Administrative Office) use charts, County Code section 13.10.332 are allowed within the proposed commercial tenant space subject to the issuance of an Occupancy Permit (initial

occupancies and subsequent changes of occupancy), where on-site parking can be shown to be available in conformance with County Code Chapter 13.16, and with the following restriction:

1. No additional residential units may be added.
- B. All uses on the site are required to be properly licensed and inspected as may be required by Federal, State or County standards.
- C. Hours of Operation: The hours of operation for the proposed office space shall be between 6:00am and 6:00pm Monday through Friday.
- D. The exterior of the building and all parking areas shall be maintained in good condition.
- E. All landscaping shall be maintained in good condition. Any plants that die shall be replaced in-kind or with a similar species suitable to the site and conditions.
- F. All walls/fencing shall be maintained.
- G. In the event that future County inspections of the subject property disclose noncompliance with any Conditions of this approval or any violation of the County Code, the owner shall pay to the County the full cost of such County inspections, including any follow-up inspections and/or necessary enforcement actions, up to and including permit revocation.

## VII. Indemnification

The applicant/owner shall indemnify, defend with counsel approved by the COUNTY, and hold harmless the COUNTY, its officers, employees, and agents from and against any claim (including reasonable attorney's fees, expert fees, and all other costs and fees of litigation), against the COUNTY, its officers, employees, and agents arising out of or in connection to this development approval or any subsequent amendment of this development approval which is requested by the applicant/owner, regardless of the COUNTY's passive negligence, but excepting such loss or damage which is caused by the sole active negligence or willful misconduct of the COUNTY. Should the COUNTY in its sole discretion find the applicant's/owner's legal counsel unacceptable, then the applicant/owner shall reimburse the COUNTY its costs of defense, including without limitation reasonable attorney's fees, expert fees, and all other costs and fees of litigation. The applicant/owner shall promptly pay any final judgment rendered against the COUNTY (and its officers, employees, and agents) covered by this indemnity obligation. It is expressly understood and agreed that the foregoing provisions are intended to be as broad and inclusive as is permitted by the law of the State of California and will survive termination of this development approval.

- a. The COUNTY shall promptly notify the applicant/owner of any claim, action, or proceeding against which the COUNTY seeks to be defended, indemnified, or held harmless. The COUNTY shall cooperate fully in such defense.

- b. Nothing contained herein shall prohibit the COUNTY from participating in the defense of any claim, action, or proceeding if both of the following occur:
  - i. COUNTY bears its own attorney's fees and costs; and
  - ii. COUNTY defends the action in good faith.
- c. Settlement. The applicant/owner shall not be required to pay or perform any settlement unless such applicant/owner has approved the settlement. When representing the COUNTY, the applicant/owner shall not enter into any stipulation or settlement modifying or affecting the interpretation or validity of any of the terms or conditions of the development approval without the prior written consent of the COUNTY.
- d. Successors Bound. The “applicant/owner” shall include the applicant and/or the owner and the successor'(s) in interest, transferee(s), and assign(s) of the applicant and/or the owner.

---

Minor variations to this permit which do not affect the overall concept or density may be approved by the Planning Director at the request of the applicant or staff in accordance with Chapter 18.10 of the County Code.

**Please note: This permit expires one year from the effective date listed below unless a building permit (or permits) is obtained for the primary structure described in the development permit (does not include demolition, temporary power pole or other site preparation permits, or accessory structures unless these are the primary subject of the development permit). Failure to exercise the building permit and to complete all of the construction under the building permit, resulting in the expiration of the building permit, will void the development permit, unless there are special circumstances as determined by the Planning Director.**

Approval Date: \_\_\_\_\_

Effective Date: \_\_\_\_\_

Expiration Date: 5/20/2026

\_\_\_\_\_  
Deputy Zoning Administrator

---

Appeals: Any property owner, or other person aggrieved, or any other person whose interests are adversely affected by any act or determination of the Zoning Administrator, may appeal the act or determination to the Planning Commission in accordance with chapter 18.10 of the Santa Cruz County Code.

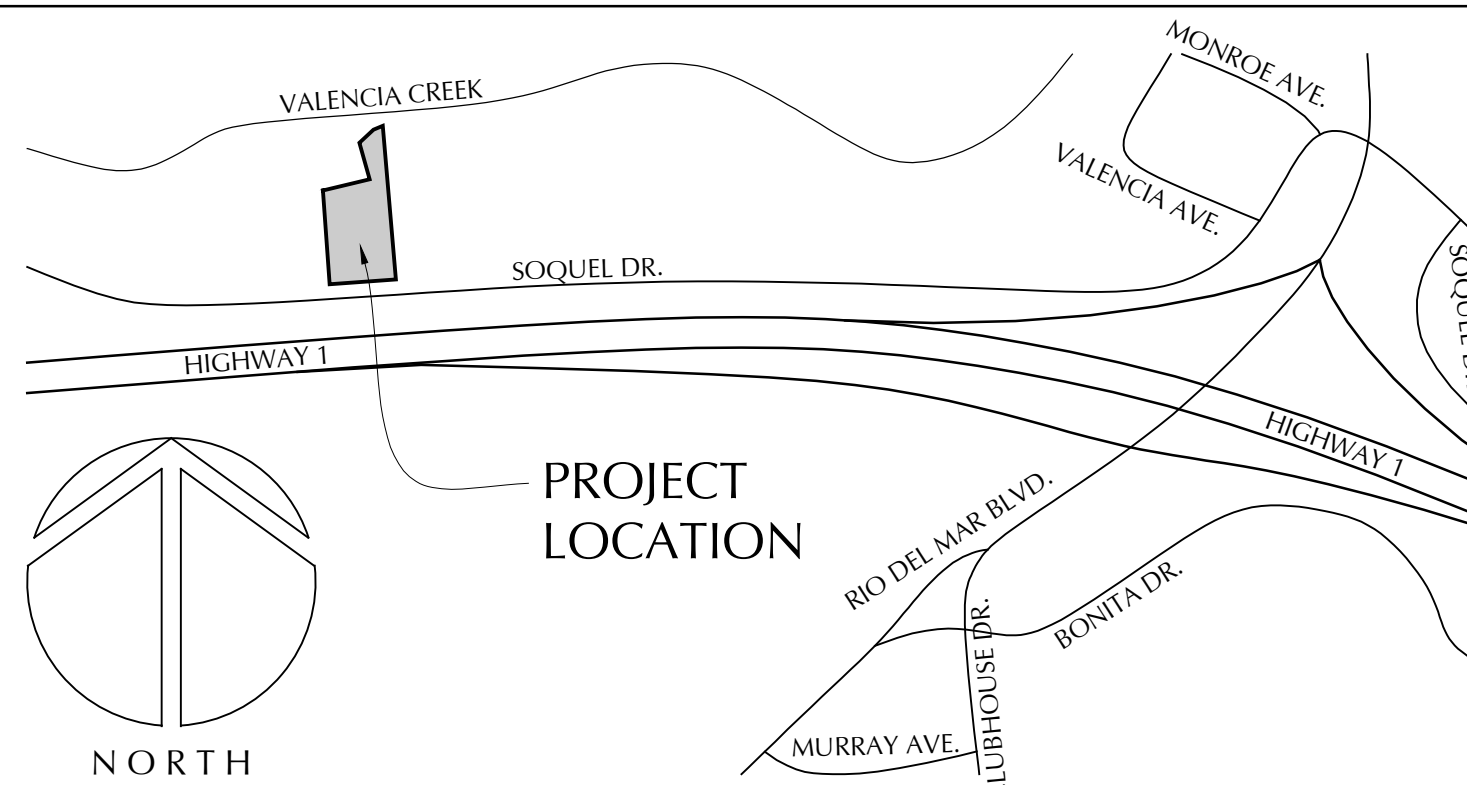
NEW MIXED-USE BUILDING FOR:  
**HUMAN SPACES LLC**  
 9041 SOQUEL DRIVE, APTOS, CALIFORNIA



WILLIAM C. KEMPF  
 ARCHITECTS  
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NEW MIXED-USE BUILDING FOR:  
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 9041 SOQUEL DRIVE, APTOS, CALIFORNIA  
 VICINITY MAP & PROJECT DATA

VICINITY MAP



SHEET INDEX

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A2 PROPOSED SITE PLAN	C4.0 UTILITY PLAN
A3 FIRST FLOOR PLAN	C5.0 DETAILS
A4 SECOND FLOOR PLAN	C5.1 DETAILS
A5 ROOF PLAN	C5.2 DETAILS
A6 EXTERIOR ELEVATIONS	C5.3 DETAILS
A7 EXTERIOR ELEVATIONS	C5.4 DETAILS
A8 SCHEMATIC BUILDING SECTIONS	C5.5 DETAILS
A9 PERSPECTIVE VIEWS	C6.0 EXISTING WATERSHED MAP
A10 BLDG. & SITE EXT. LIGHTING PLAN	C6.1 STORMWATER CONTROL PLAN
C1.0 COVER SHEET	C7.0 EROSION CONTROL NOTES & DTLs.
C1.1 NOTES	C7.1 EROSION CONTROL PLAN
C2.0 SITE PLAN	L1.0 PROPOSED LANDSCAPE PLAN
C3.0 GRADING & DRAINAGE PLAN	TS-1 TOPOGRAPHIC SURVEY
C3.1 OFF-SITE IMPROVEMENT PLAN	

CONSULTANTS

ARCHITECT:	WILLIAM C. KEMPF, ARCHITECTS 105 LOCUST ST., SUITE B SANTA CRUZ, CA 95060 BILL KEMPF: 831 459-0951
CIVIL ENGINEER:	RAMSEY CIVIL ENGINEERING, INC. 2905 KRISTIE COURT SANTA CRUZ, CA 95065 DAVID RAMSEY: 831 462-2905
LANDSCAPE ARCHITECT:	mBLA LANDSCAPE ARCHITECTURE P.O. BOX 328 APTOS, CA 95001 MEGAN BISHOP: 831 818-9227
GEOTECHNICAL ENGINEER:	CMAG ENGINEERING, INC. P.O. BOX 640 APTOS, CA 95001 ADRIAN GARNER: 831 475-1411
TRAFFIC ENGINEER:	KEITH HIGGINS, TRAFFIC ENGINEER 2060 ROCKROSE COURT GILROY, CA 95020 KEITH HIGGINS: 408 201-2752
CASP CONSULTANT:	WILLIAM M. HOLL, AIA, CASp 110 BAJA SOL COURT SCOTTS VALLEY, CA 95066 BILL HOLL: 831 345-5395

BUILDING AREAS

LOT AREA:	31,712 SQ. FT., (0.7280 ACRES)
NET DEVELOPABLE LOT AREA:	12,169 SQ. FT.
GROSS BUILDING AREA:	9,110 SQ. FT. (0.75 FAR)
PROPOSED LOT COVERAGE:	4,954 SQ. FT. (40.7%)
<b>FIRST FLOOR</b>	
GROSS AREA CALC.	
HEATED COMMERCIAL:	1,370 S.F.
HEATED RESIDENTIAL:	1,465 S.F.
RESIDENTIAL STORAGE:	54 S.F.
STAIRS:	207 S.F.
TRASH ROOM:	160 S.F.
<b>OTHER AREAS</b>	
EXTERIOR COVERED WALKWAYS:	504 S.F.
COVERED PARKING:	990 S.F.
RESIDENTIAL BALCONY:	160 S.F.
<b>SECOND FLOOR</b>	
GROSS AREA CALC.	
HEATED RESIDENTIAL:	3,754 S.F.
RESIDENTIAL STORAGE:	214 S.F.
RESIDENTIAL HALL AND STAIR:	394 S.F.
<b>OTHER AREAS</b>	
RESIDENTIAL BALCONIES:	550 S.F.
TOTAL GROSS AREA:	7,618 S.F.
TOTAL GROSS RESIDENTIAL AREA:	6,088 S.F. (79.9% OF TOTAL GROSS AREA)
TOTAL AREA (INCLUDES OTHER AREAS):	9,822 S.F.

PROJECT DATA

OWNER:	HUMAN SPACES LLC 9047 SOQUEL DR. APTOS, CA 95003 PETE TESTORFF: 831 684-2117
PROJECT SITE:	9041 SOQUEL DRIVE APTOS, CALIFORNIA
ASSESSORS PARCEL NUMBER:	041-141-56
ZONING:	PA- PROFESSIONAL-ADMINISTRATIVE OFFICE
CONSTRUCTION TYPE:	TYPE V-B
OCCUPANCY:	GROUP B, S-1, R-2
FIRE SPRINKLERS:	FULLY SPRINKLERED PER NFPA-13
PROJECT DESCRIPTION:	PROPOSED NEW MIXED USE BUILDING ON A VACANT LOT TO CONTAIN AN OFFICE SUITE ON THE FIRST FLOOR, AND 4 RESIDENTIAL APARTMENTS, 1 ON THE FIRST FLOOR AND 3 ON THE SECOND LEVEL.

DRAWING DATE:	MAY 13, 2025
A.P.N.:	041-141-56
CLIENT NAME:	PETE TESTORFF
PROJECT NAME:	9041 SOQUEL DRIVE

REVISIONS		
No.	DESCRIPTION	DATE
1	PLANNING	8/8/25

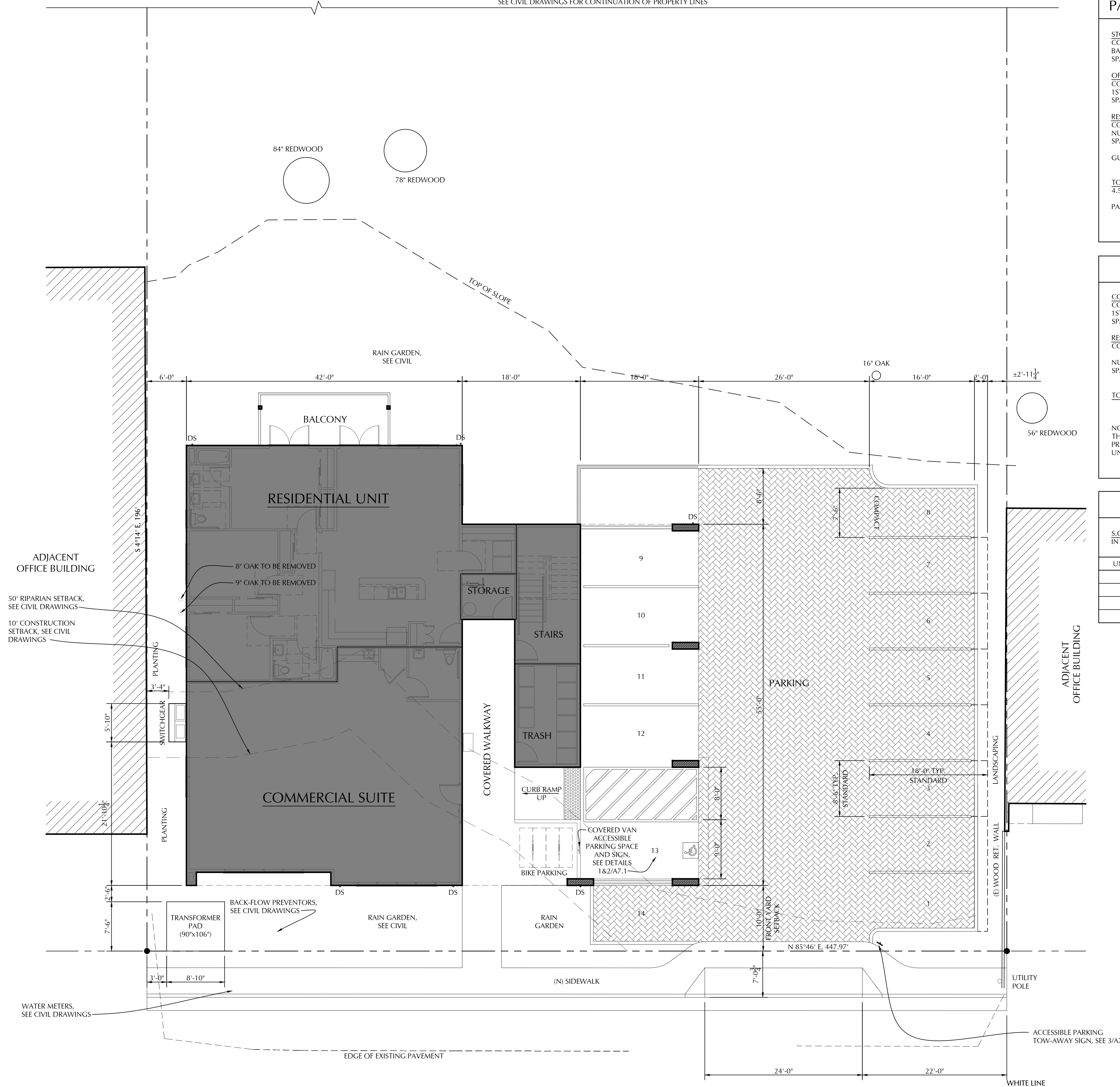
APPROVAL STAMP

STAMP

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SHEET  
**A1**

SEE CIVIL DRAWINGS FOR CONTINUATION OF PROPERTY LINES



**PARKING CALC. PER COUNTY ZONING**

<b>STORAGE AREA</b>	
COUNTY PARKING RATIO:	1 SPACE / 1,000 S.F.
BASEMENT AREA:	NA (BASEMENT HAS BEEN REMOVED)
SPACES REQUIRED:	0 SPACES
<b>OFFICE AREA</b>	
COUNTY PARKING RATIO:	1 SPACE / 300 S.F.
1ST FLOOR OFFICE AREA:	1,360 S.F.
SPACES REQUIRED:	4.53 SPACES
<b>RESIDENTIAL</b>	
COUNTY PARKING RATIO:	2 SPACE / (UNIT > 750 S.F.)
NUMBER OF UNITS:	4 UNITS
SPACES REQUIRED:	8 SPACES
<b>GUEST PARKING:</b>	20% OF REQ. RESIDENTIAL PARKING
	20% x 8 SPACES = 1.6 SPACES
<b>TOTAL PARKING REQUIRED</b>	4.53+8+1.6 = 14.13
PARKING SPACES PROVIDED:	14 SPACES

**BIKE PARKING CALCULATION**

<b>COMMERCIAL AREA</b>	
COUNTY PARKING RATIO:	15% OF VEHICULAR PARKING (2 MIN.)
1ST FLOOR OFFICE AREA:	15% x 5 = 0.75
SPACES REQUIRED:	2 SPACES
<b>RESIDENTIAL</b>	
COUNTY PARKING RATIO:	1 LOCKABLE SPACE / UNIT
	+ 0.2 SPACES / UNIT
NUMBER OF UNITS:	4 UNITS
SPACES REQUIRED:	4 LOCKABLE SPACES
	0.8 SPACES = 1 SPACE
<b>TOTAL BIKE PARKING REQUIRED</b>	4 LOCKABLE SPACES
	3 NORMAL SPACES

NORMAL BIKE SPACES ARE SHARED AND PROVIDED AT THE FRONT OF THE SITE. THE LOCKABLE SPACES FOR EACH DWELLING UNIT HAS BEEN PROVIDED IN PRIVATE STORAGE ROOMS OUTSIDE OF EACH DWELLING UNIT.

**OPEN SPACE CALCULATION**

S.C.C. ORDINANCE 13.10.334 (2)  
IN PA DISTRICTS 50 S.F. MIN. OPEN SPACE PER DWELLING.

UNIT DESCRIPTION	PRIVATE OPEN SPACE	GROUP OPEN SPACE
UNIT 1	171 S.F.	NOT REQUIRED
UNIT 2	220 S.F.	NOT REQUIRED
UNIT 3	160 S.F.	NOT REQUIRED
UNIT 4	160 S.F.	NOT REQUIRED

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NEW MIXED-USE BUILDING FOR:  
**HUMAN SPACES LLC**  
9041 SOQUEL DRIVE, APTOS, CALIFORNIA

**PROPOSED SITE PLAN**

DRAWING DATE: MAY 13, 2025

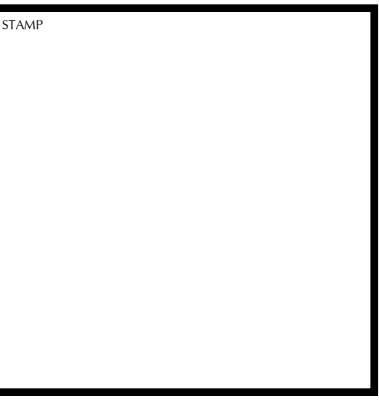
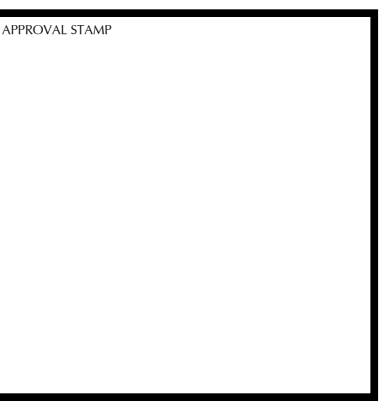
A.P.N.: 041-141-56

CLIENT NAME: PETE TESTORFF

PROJECT NAME: 9041 SOQUEL DRIVE

REVISIONS

No.	DESCRIPTION	DATE
1	PLANNING	8/8/25



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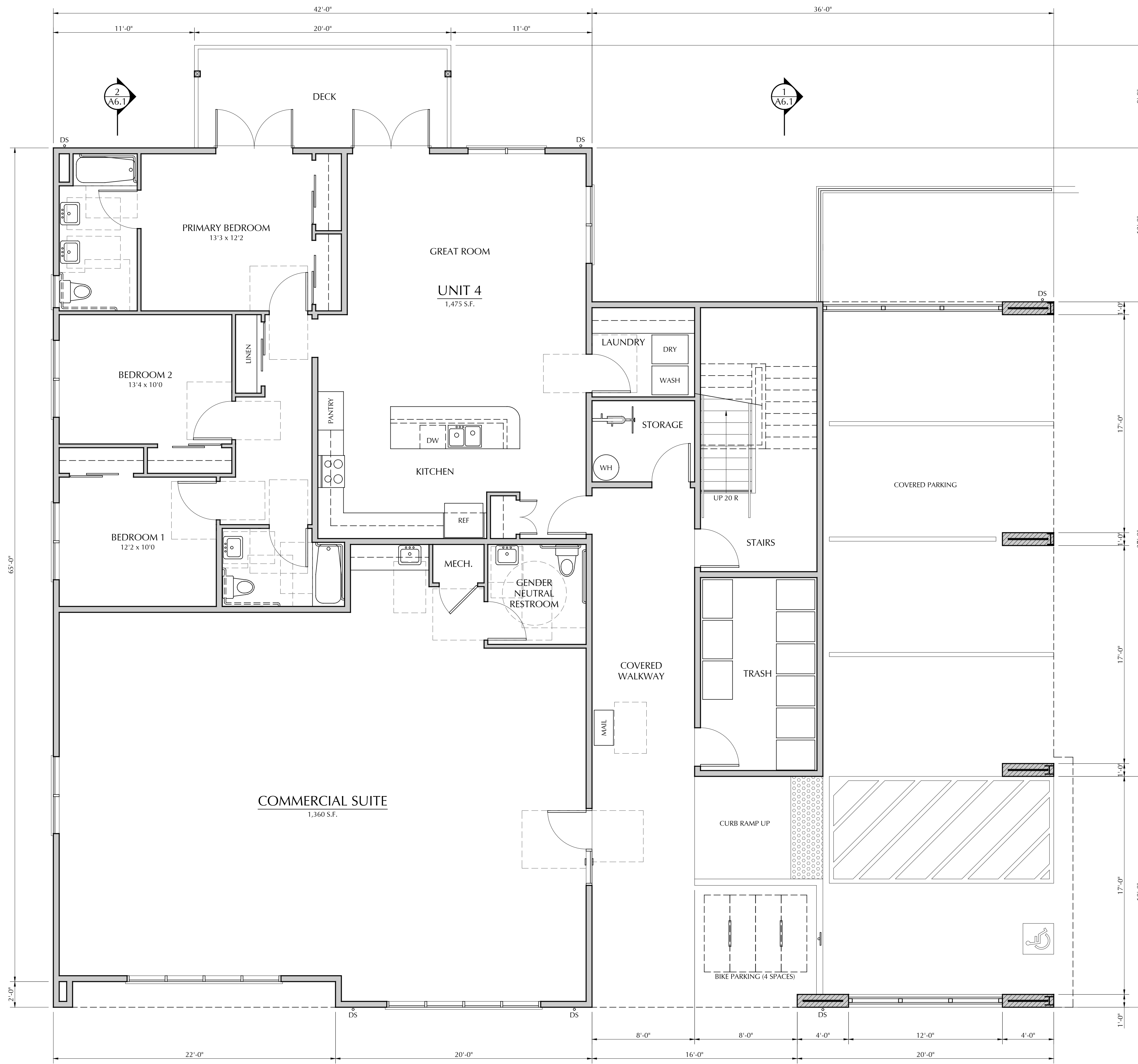
SOQUEL DRIVE

**1** **SITE AND FIRST FLOOR PLAN** **1**

SCALE: 1/8"=1'-0"

NORTH

DOUBLE YELLOW LINE



1

FIRST FLOOR PLAN

SCALE: 1/4"=1'-0"



NORTH

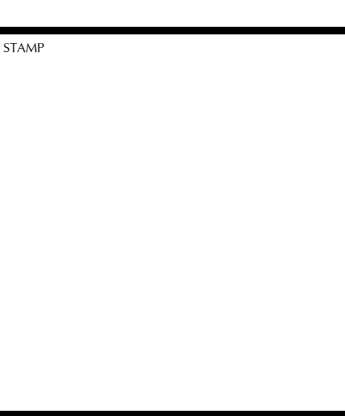


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9041 SOQUEL DRIVE, APTOS, CALIFORNIA  
FIRST FLOOR PLAN

DRAWING DATE:		MAY 13, 2025
A.P.N.:		041-141-56
CLIENT NAME:		PETE TESTORFF
PROJECT NAME:		9041 SOQUEL DRIVE

REVISIONS		
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SHEET  
**A3**



1

SECOND FLOOR PLAN  
SCALE: 1/4"=1'-0"

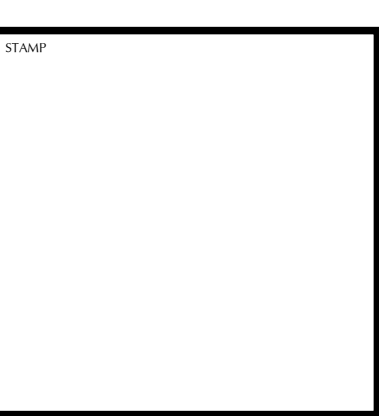
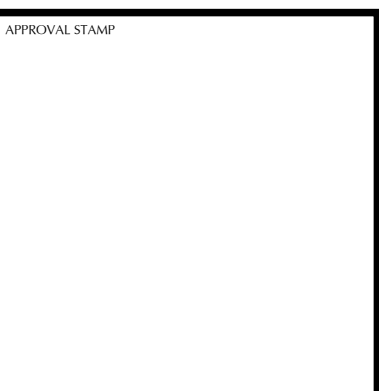


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**HUMAN SPACES LLC**  
9041 SOQUEL DRIVE, APTOS, CALIFORNIA  
SECOND FLOOR PLAN

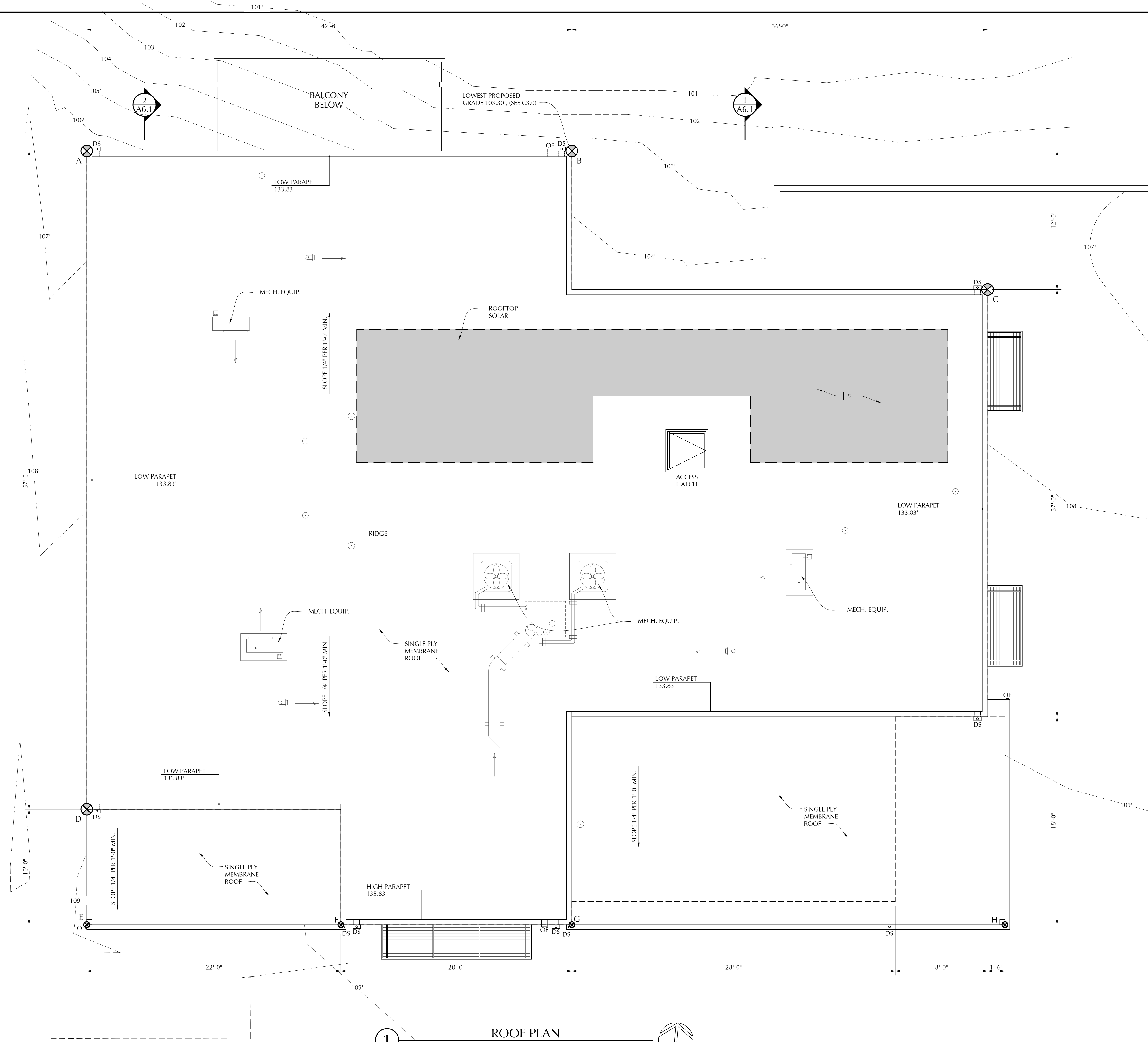
DRAWING DATE:	MAY 13, 2025
A.P.N.:	041-141-56
CLIENT NAME:	PETE TESTORFF
PROJECT NAME:	9041 SOQUEL DRIVE

REVISIONS		
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SHEET  
**A4**



ROOF HEIGHT CALC.			
POINT	LOWEST GRADE AT POINT, (E) OR FINAL	PROPOSED ROOF ELEVATION AT POINT	PROPOSED BUILDING HEIGHT AT POINT
A	(E) 106.55'	133.83'	27.28'
B	(N) 103.30'	133.83'	30.53'
C	(E) 103.62'	133.83'	30.21'
D	(N) 108.95'	133.83'	24.88'
E	(N) 109.15'	131.83'	22.68'
F	(N) 109.22'	135.83'	26.61'
G	(N) 109.89'	135.83'	25.94'
H	(N) 109.34'	131.83'	22.49'

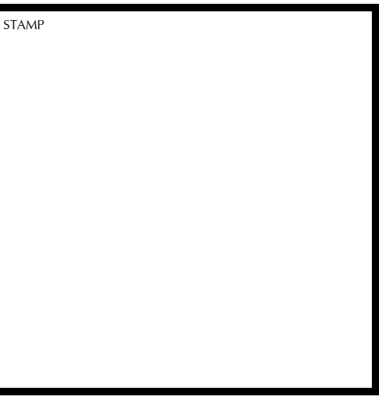
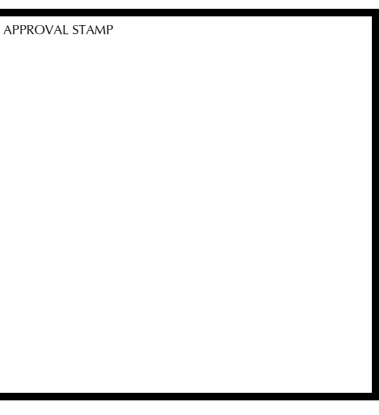
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ROOF PLAN

DRAWING DATE:		MAY 13, 2025
A.P.N.:		041-141-56
CLIENT NAME:		PETE TESTORFF
PROJECT NAME:		9041 SOQUEL DRIVE

REVISIONS		
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SHEET  
**A5**

**ROOF PLAN**  
SCALE: 1/4"=1'-0"  
NORTH



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NEW MIXED-USE BUILDING FOR:  
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9041 SOQUEL DRIVE, APTOS, CALIFORNIA  
EXTERIOR ELEVATIONS

DRAWING DATE:  
MAY 13, 2025  
A.P.N.  
041-141-56  
CLIENT NAME:  
PETE TESTORFF  
PROJECT NAME:  
9041 SOQUEL DRIVE

REVISIONS		
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SHEET  
**A6**

TOP OF FRONT PARAPET  
135.83'  
TOP OF MAIN PARAPET  
133.83'

SECOND FLOOR F.F.  
121.46'

FIRST FLOOR F.F.  
110.00'



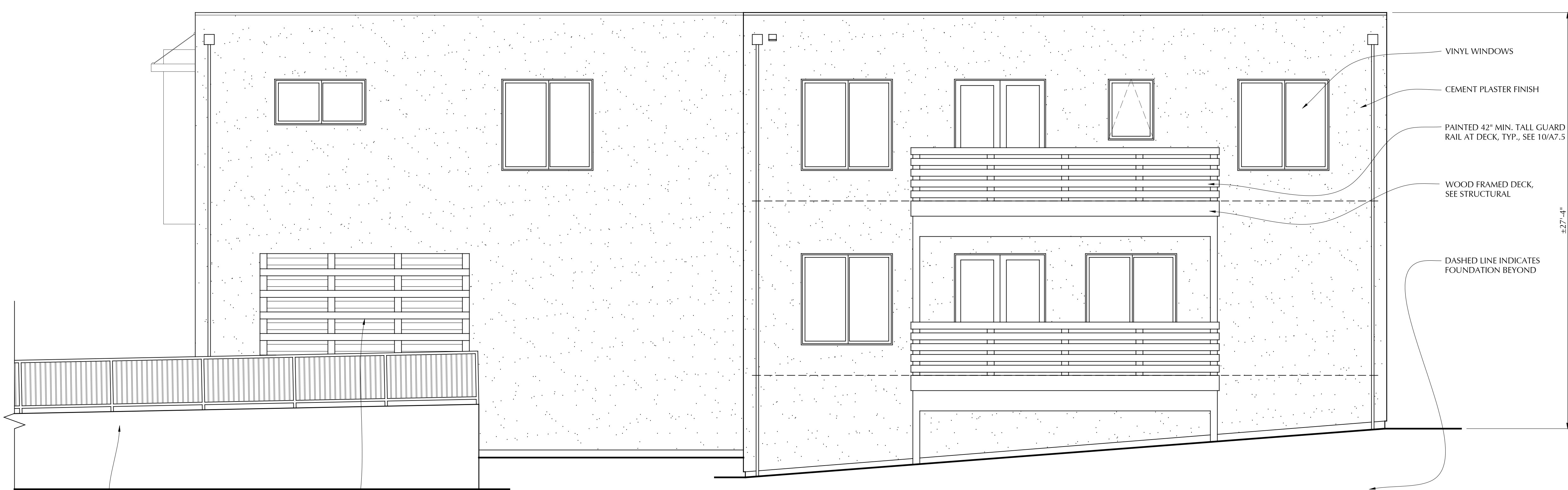
METAL AWNING,  
SEE DETAIL 6/A7.4  
VINYL WINDOWS  
CEMENT PLASTER FINISH  
PAINTED 42" MIN. TALL GUARD  
RAIL AT BALCONY, SEE 6/A7.5  
PAINTED FIBER CEMENT  
HORIZONTAL LAP SIDING  
PAINTED WOOD SCREENING,  
SEE DETAIL 11/A7.5  
ALUMINUM STOREFRONT  
DOOR AND WINDOW

1 SOUTH ELEVATION  
SCALE: 1/4"=1'-0"

TOP OF MAIN PARAPET  
133.83'

SECOND FLOOR F.F.  
121.46'

FIRST FLOOR F.F.  
110.00'



VINYL WINDOWS  
CEMENT PLASTER FINISH  
PAINTED 42" MIN. TALL GUARD  
RAIL AT DECK, TYP., SEE 10/A7.5  
WOOD FRAMED DECK,  
SEE STRUCTURAL  
DASHED LINE INDICATES  
FOUNDATION BEYOND

RETAINING WALL WITH  
GUARDRAIL  
PAINTED WOOD SCREENING,  
SEE DETAIL 11/A7.5

2 NORTH ELEVATION  
SCALE: 1/4"=1'-0"

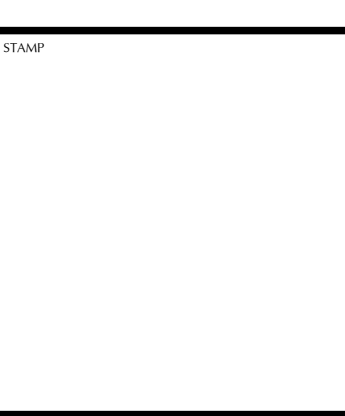


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EXTERIOR ELEVATIONS

DRAWING DATE:	MAY 13, 2025
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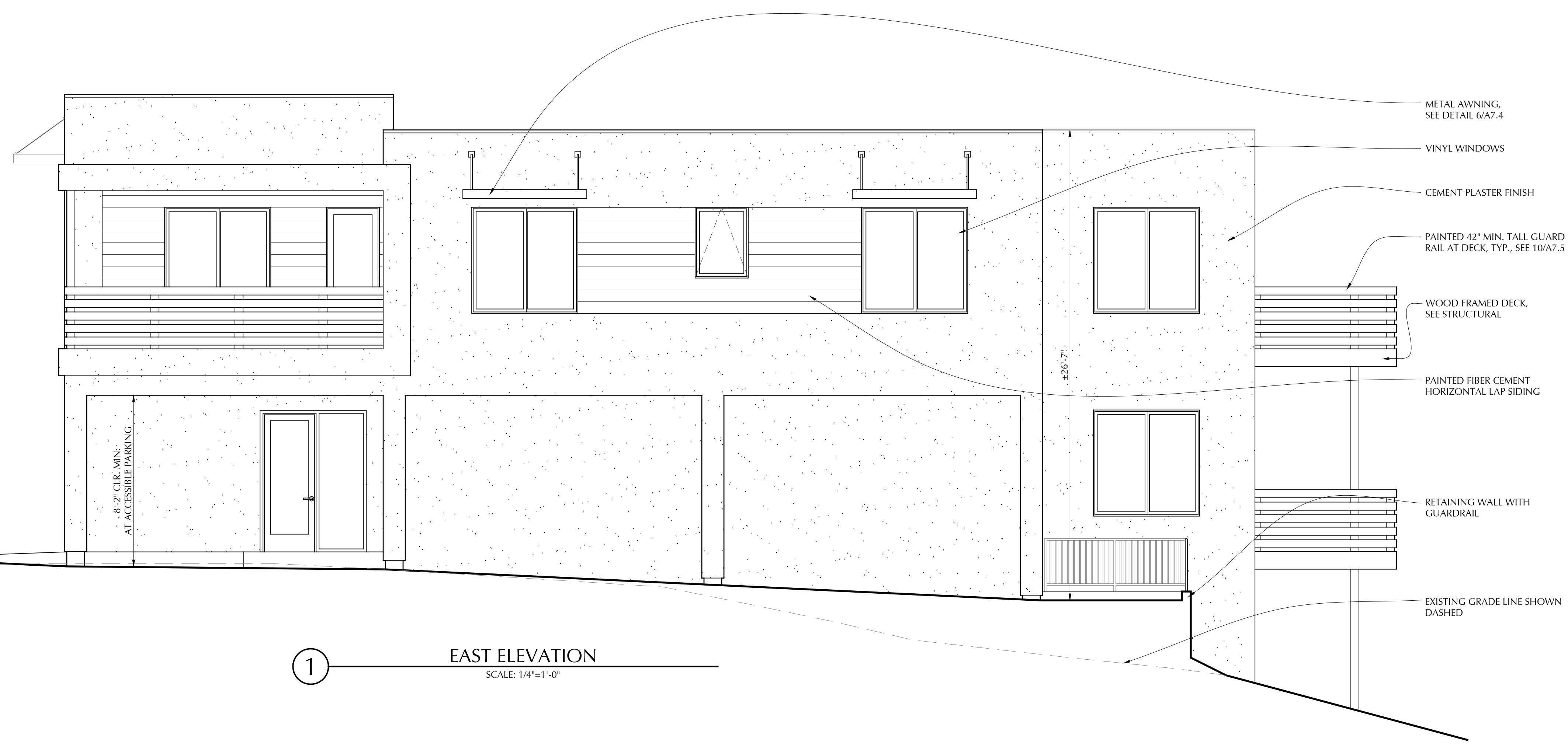
SHEET  
**A7**

TOP OF FRONT PARAPET  
135.83'

TOP OF MAIN PARAPET  
133.83'

SECOND FLOOR F.F.  
121.46'

FIRST FLOOR F.F.  
110.00'

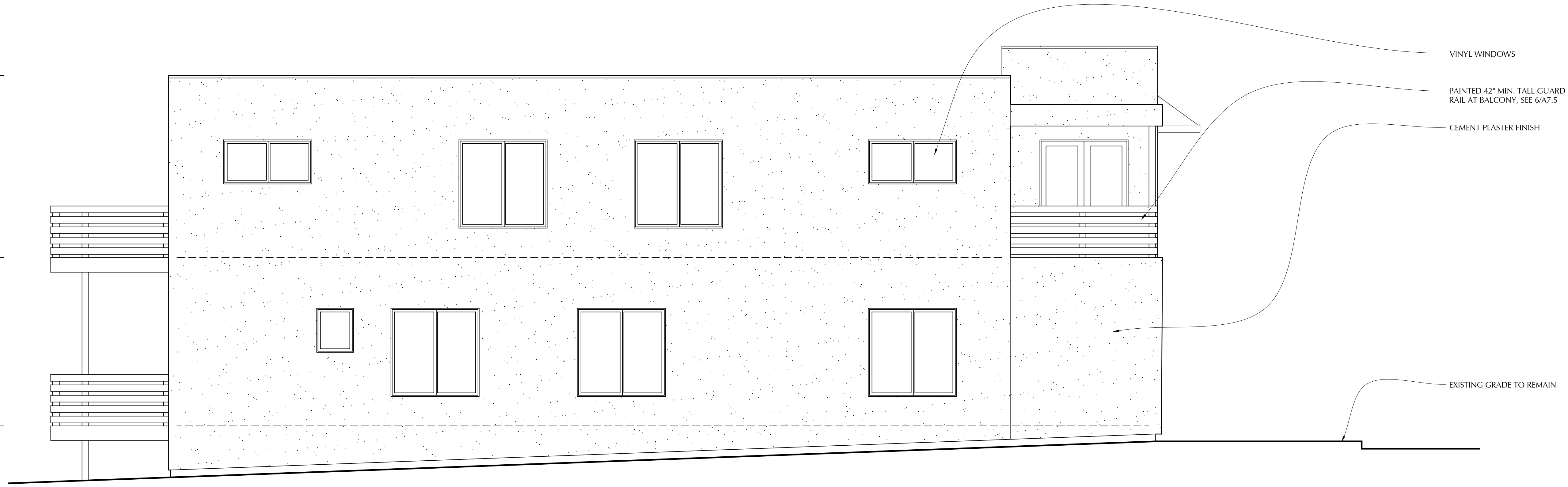


1 EAST ELEVATION  
SCALE: 1/4"=1'-0"

TOP OF MAIN PARAPET  
133.83'

SECOND FLOOR F.F.  
121.46'

FIRST FLOOR F.F.  
110.00'

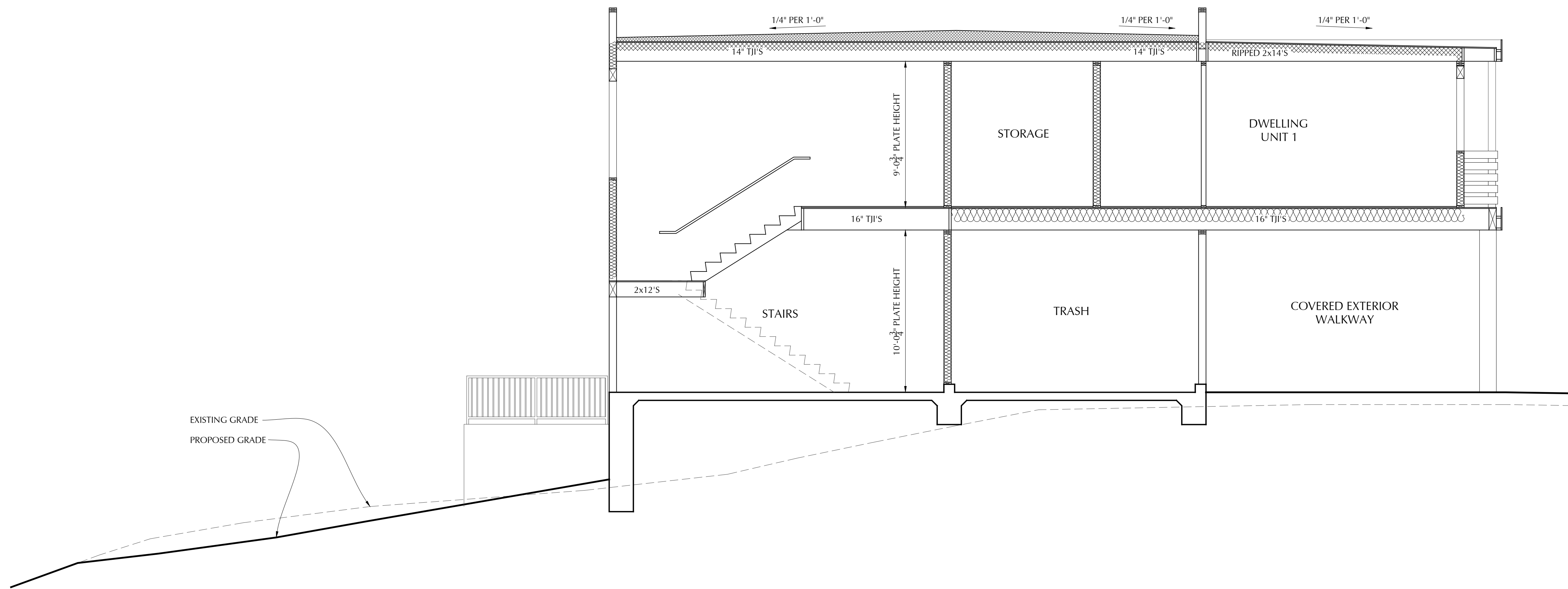


2 WEST ELEVATION  
SCALE: 1/4"=1'-0"

TOP OF MAIN PARAPET  
133.83'

SECOND FLOOR F.F.  
121.46'

FIRST FLOOR F.F.  
110.00'

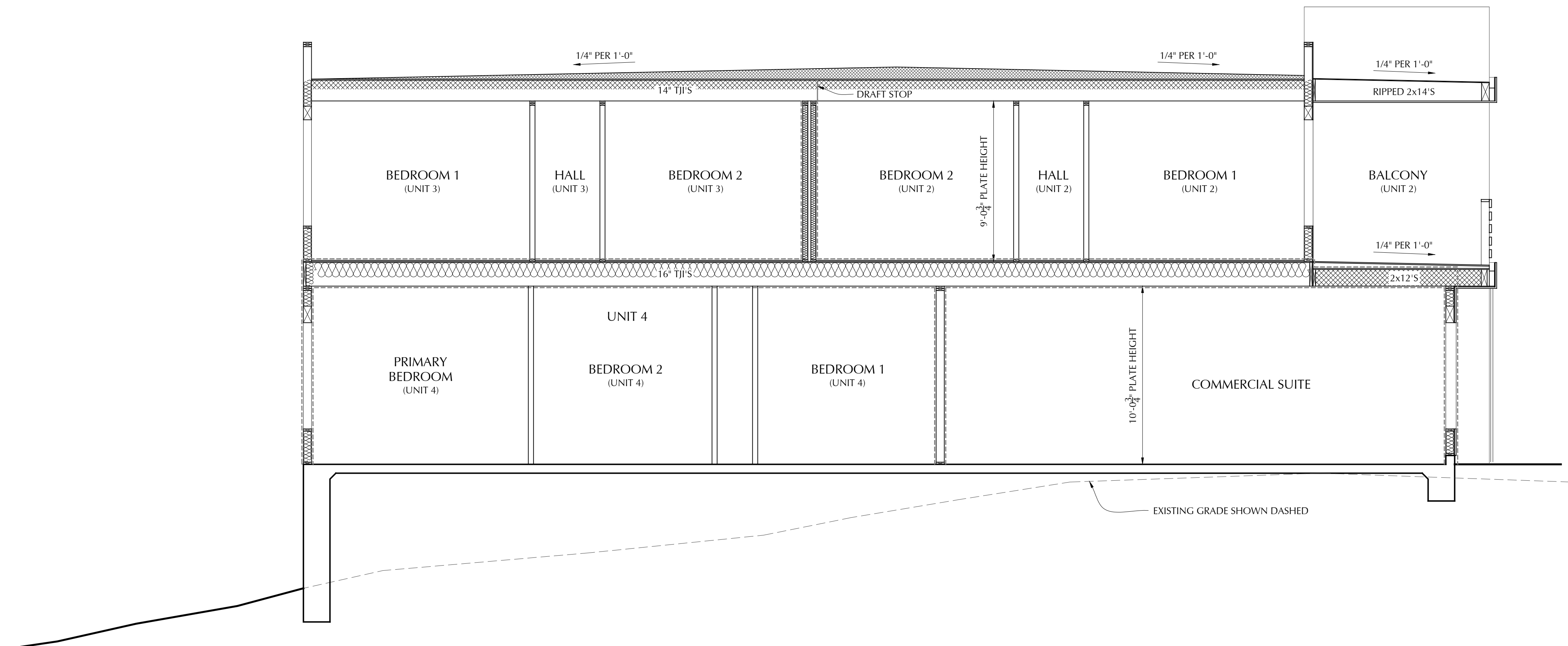


1 SCHEMATIC BUILDING SECTION  
SCALE: 1/4"=1'-0"

TOP OF MAIN PARAPET  
133.83'

SECOND FLOOR F.F.  
121.46'

FIRST FLOOR F.F.  
110.00'



2 SCHEMATIC BUILDING SECTION  
SCALE: 1/4"=1'-0"



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Santa Cruz, CA 95060  
831 459-0951  
www.wckempf.com

NEW MIXED-USE BUILDING FOR:  
**HUMAN SPACES LLC**  
9041 SOQUEL DRIVE, APTOS, CALIFORNIA  
SCHEMATIC BUILDING SECTIONS

DRAWING DATE:	MAY 13, 2025
A.P.N.:	041-141-56
CLIENT NAME:	PETE TESTORFF
PROJECT NAME:	9041 SOQUEL DRIVE

REVISIONS		
No.	DESCRIPTION	DATE
1	PLANNING	8/8/25

APPROVAL STAMP

STAMP

DISCLAIMER  
THE DATA SET FORTH ON THIS SHEET IS THE PROPERTY OF WILLIAM C. KEMPF, ARCHITECTS. IT IS AN INSTRUMENT OF SERVICE AND MAY NOT BE ALTERED, REPRODUCED, OR USED WITHOUT THE CONSENT OF THE ARCHITECT. THE PROPER ELECTRONIC TRANSFER OF DATA SHALL BE THE USER'S RESPONSIBILITY WITHOUT LIABILITY TO THE ARCHITECT. UNAUTHORIZED USE IS PROHIBITED.

SHEET  
**A8**



ELECTRICAL SYMBOLS	
	PENDANT OR SURFACE LIGHT FIXTURE
	WALL MOUNTED FIXTURE



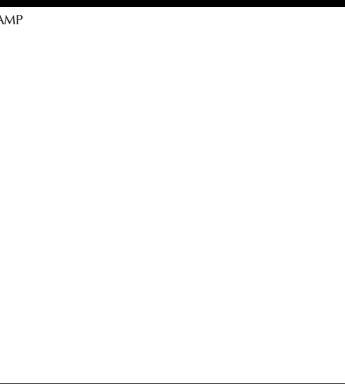
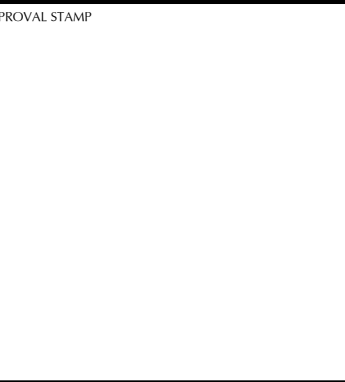
WILLIAM C. KEMPF  
ARCHITECTS  
105 Locust Street, Suite B  
Santa Cruz, CA 95060  
831 459-0951  
www.wckempf.com

NEW MIXED-USE BUILDING FOR:  
**HUMAN SPACES LLC**  
9041 SOQUEL DRIVE, APTOS, CALIFORNIA

**BUILDING & SITE EXTERIOR LIGHTING PLAN**

DRAWING DATE:	MAY 13, 2025
A.P.N.:	041-141-56
CLIENT NAME:	PETE TESTORFF
PROJECT NAME:	9041 SOQUEL DRIVE

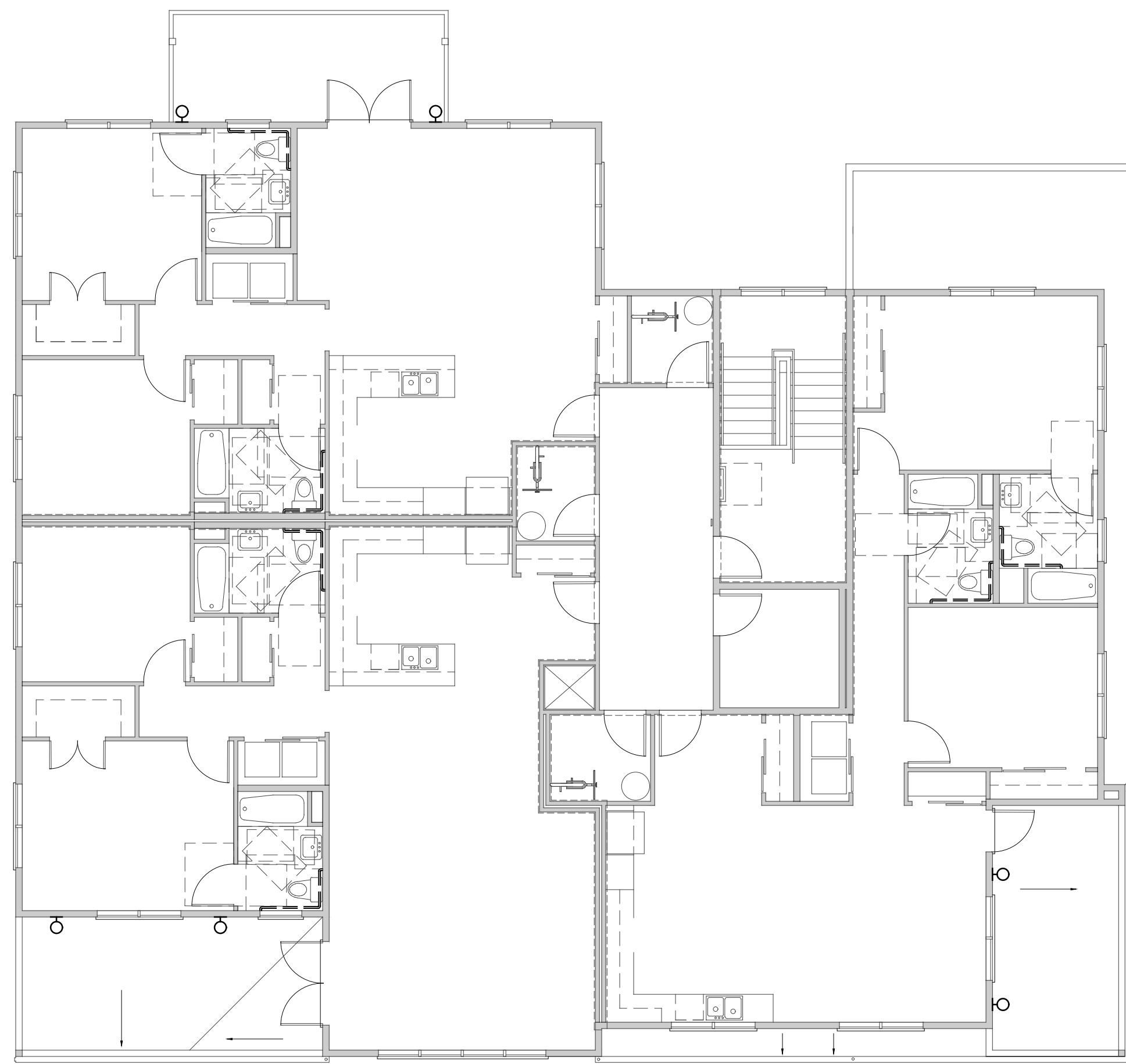
REVISIONS		
No.	DESCRIPTION	DATE
1	PLANNING	8/8/25



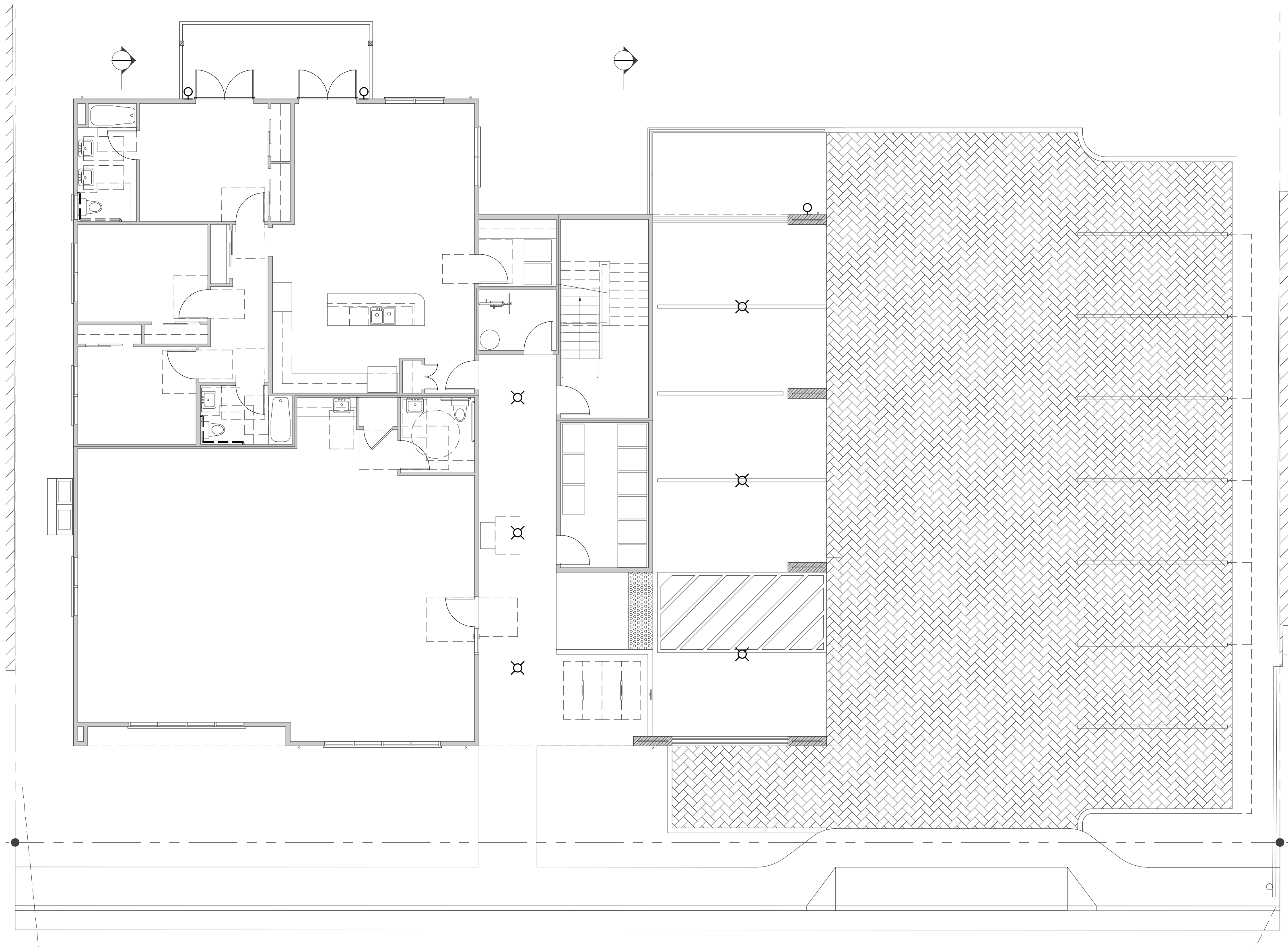
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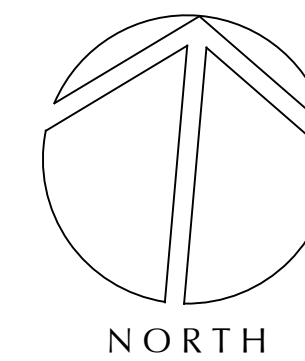
SHEET  
**A10**

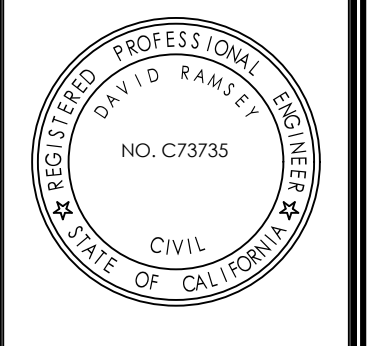


**2 SECOND FLOOR EXT. LIGHTING PLAN**  
SCALE: 1/8"=1'-0"



**1 SITE & FIRST FLOOR EXT. LIGHTING PLAN**  
SCALE: 1/8"=1'-0"





DAVID RAMSEY DATE  
RCE# 73735

APN# 041-141-56  
PLAN TYPE  
MIXED USE  
BUILDING PERMIT SET

COVER SHEET  
**HUMAN SPACES, LLC.**  
9041 SOQUEL DRIVE, APTOS, CA

RESPONSE TO PLANNING COMMENTS	DESCRIPTION	REVISION BLOCK
8/8/2025	DATE	
1	DMR NUMBER	BY

DRAWN BY: GS  
DESIGNED BY: DMR  
DATE: 04/24/2025  
SCALE: AS NOTED  
PROJECT NO: 18-001  
SHEET:

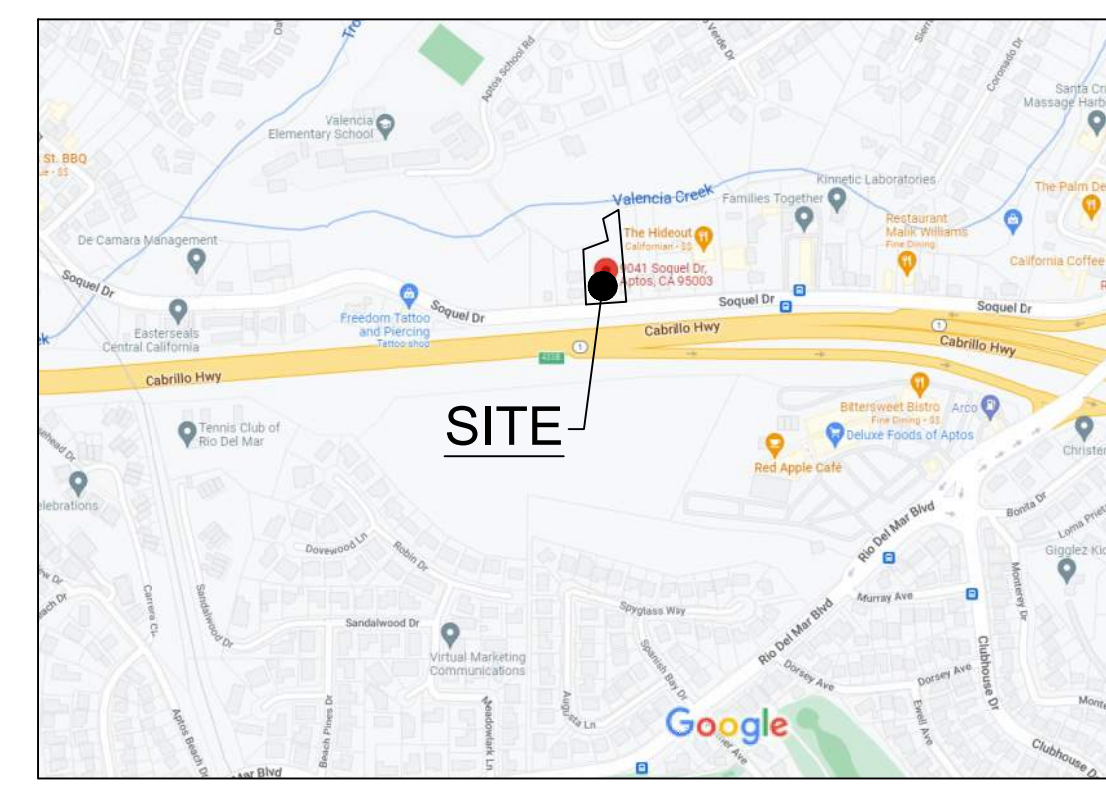
**C1.0**

# IMPROVEMENT PLANS

## FOR

# HUMAN SPACES, LLC.

### 9041 SOQUEL DRIVE APTOS, CALIFORNIA



MAP DATA © GOOGLE  
**VICINITY MAP**  
N.T.S.

**NOTES:**

- REFER TO SHEET A1 FOR PROJECT DATA AND LOT COVERAGE INFORMATION.
- RIPARIAN EXCEPTION INFORMATION
  - 2.1. TOTAL LOT AREA = 31,694 SF (0.73 AC)
  - 2.2. PROPERTY AREA WITHIN RIPARIAN SETBACK = 28,275 SF (0.65 AC)
  - 2.3. ADDITIONAL AREA WITHIN CONSTRUCTION SETBACK = 1,739 SF

TOTAL AREA WITHIN RIPARIAN ZONE = 30,014 SF (0.69 AC)

REQUESTING RIPARIAN EXCEPTION DUE TO THE 883 SF OF USEABLE AREA (EXCLUDES AREA WITHIN FRONTYARD SETBACK).

**INDEX OF SHEETS**

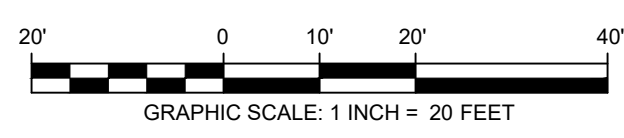
SHEET NO.	DESCRIPTION
C1.0	COVER SHEET
C1.1	NOTES
C2.0	SITE PLAN
C3.0	GRADING AND DRAINAGE PLAN
C3.1	OFF-SITE IMPROVEMENT PLAN
C3.2	SECTIONS
C4.0	UTILITY PLAN
C5.0-C5.5	DETAILS
C6.0	EXISTING WATERSHED MAP
C6.1	STORMWATER CONTROL PLAN
C7.0	EROSION CONTROL NOTES & DETAILS
C7.1	EROSION CONTROL PLAN

**BENCHMARK**  
THE BENCHMARK FOR THIS SURVEY IS SANTA CRUZ COUNTY BENCHMARK 699, WHICH IS A BRASS DISK (PID "GU4227"), LOCATED 1.2 KM (0.7 MI) EASTERLY ALONG US HIGHWAY 1 FROM ITS INTERSECTION WITH THE SOUTHERN PACIFIC RAILROAD IN APTOS, IN TOP OF AND 3.7 M (12.1 FT) SOUTHWEST OF THE NORTHEAST END OF THE ABUTMENT WALKWAY OF THE RIO DEL MAR AVENUE OVERPASS BRIDGE SPANNING US HIGHWAY 1, 7.3 M (24.0 FT) NORTHWEST OF THE CENTERLINE OF THE AVENUE, 0.3 M (1.0 FT) SOUTHEAST OF THE BRIDGE RAIL, AND 0.3 M (1.0 FT) ABOVE THE LEVEL OF THE AVENUE.  
BENCHMARK ELEVATION = 155.22' (NAVD88)

**BASIS OF BEARINGS**  
THE BASIS OF BEARINGS FOR THIS SURVEY IS BETWEEN MONUMENTS FOUND ALONG THE NORTHERLY RIGHT-OF-WAY OF SOQUEL DRIVE, AS SHOWN ON THAT MAP FILED IN VOLUME 117 OF SURVEYS, AT PAGE 30, SANTA CRUZ COUNTY RECORDS.  
BASIS OF BEARINGS = S 85°48'00" W

**TOPOGRAPHIC SURVEY**  
TOPOGRAPHIC SURVEY PROVIDED BY IFLAND SURVEY, DATED 9/26/18.

**BOUNDARY SURVEY**  
BOUNDARY SURVEY PROVIDED BY IFLAND SURVEY, DATED 9/26/18.

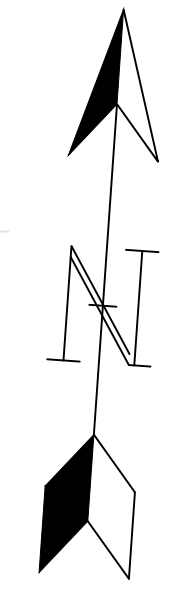
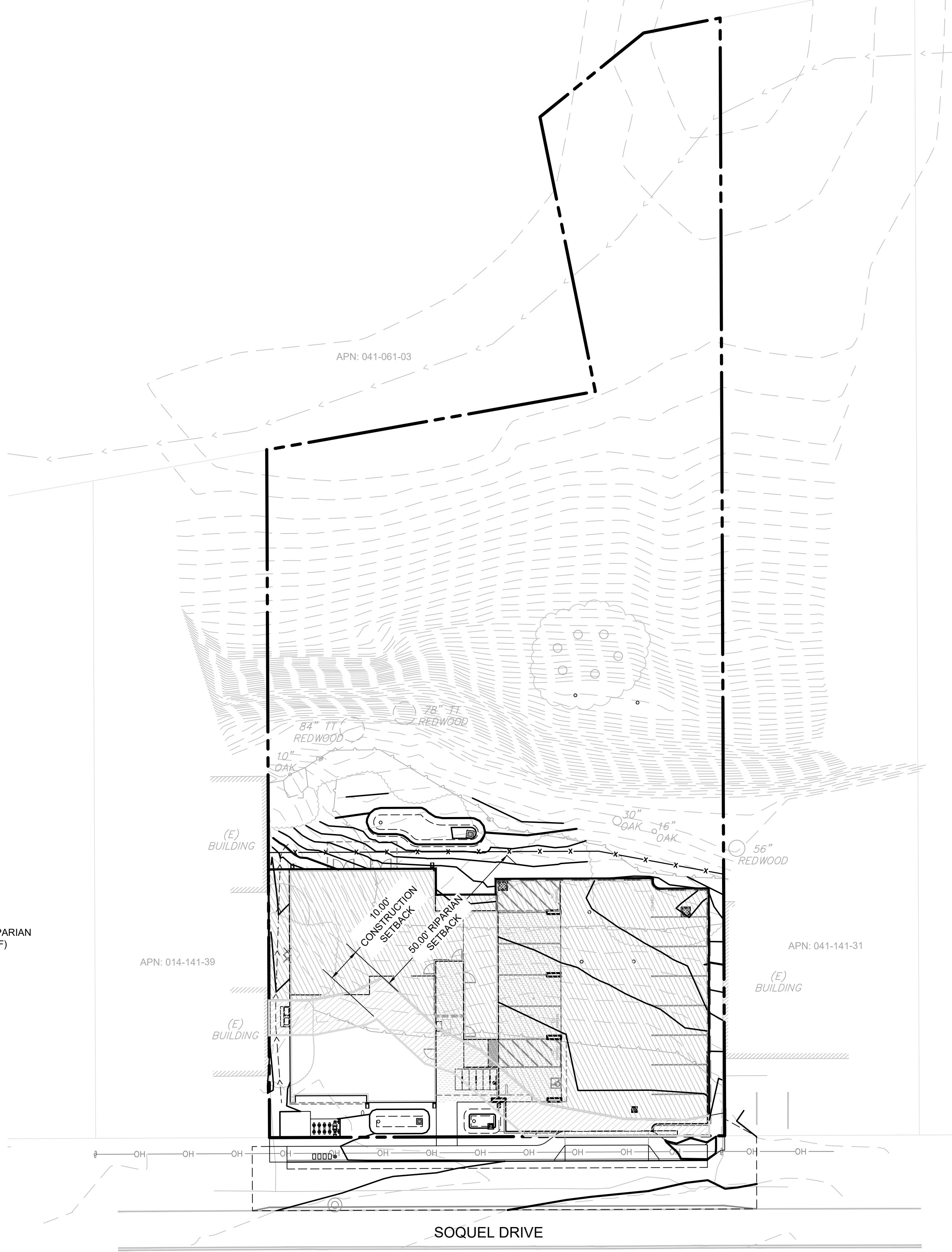


**ABBREVIATIONS**

AB	AGGREGATE BASE	LIP	LIP OF GUTTER
AC	AIR CONDITIONER UNIT	LOG	LIMIT OF GRADING
APN	ASSESSORS PARCEL NUMBER	LP	LOW POINT
ARV	AIR-RELEASE VALVE	MH	MANHOLE
BF	BASEMENT FLOOR	MIN	MINIMUM
BFP	BACKFLOW PREVENTER	N	NORTH
BO	BLOW-OFF VALVE	NE	NORTHEAST
BRW	FG AT BOTTOM OF RETAINING WALL	NTS	NOT TO SCALE
BSW	BACK OF SIDEWALK	NW	NORTHWEST
BVC	BEGIN VERTICAL CURVE	OC	ON CENTER
BW	BOTTOM OF WALL	OCEW	ON CENTER, EACH WAY
CATV	CABLE TELEVISION	OH	OVERHEAD
CB	CATCH BASIN	OFD	OVERFLOW DRAIN
CBC	CALIFORNIA BUILDING CODE	PCC	PORTLAND CEMENT CONCRETE
CI	CURB INLET	POC	POINT OF CONNECTION
CIP	CAST IRON PIPE	PP	POWER POLE
CL	CENTERLINE	PL	PROPERTY LINE
CMP	CORRUGATED METAL PIPE	PRC	POINT OF REVERSE CURVE
CMU	CONCRETE MASONRY UNIT	PS	PLANTING STRIP
CO	CLEANOUT	PSE	PUBLIC SERVICE EASEMENT
CONC	CONCRETE	PIV	POST-INDICATOR VALVE
COTG	CLEANOUT TO GRADE	PV	PAVEMENT
DIP	DUCTILE IRON PIPE	PVC	POLYVINYL CHLORIDE PIPE
DS	DOWNSPOUT	R	RADIUS
DTL	DETAIL	RC	RELATIVE COMPACTION
DWG	DRAWING	RCP	REINFORCED CONCRETE PIPE
DWY	DRIVEWAY	ROW	RIGHT-OF-WAY
E	EAST, ELECTRICAL	RPPB	REDUCE PRESSURE PRINCIPLE BACKFLOW
EG	EXISTING GROUND	RSB	REAR SETBACK
EP	EDGE OF PAVEMENT	RW	RECYCLED WATER
(E)	EXISTING	S	SOUTH, SLOPE
EQ	EQUAL	SD	STORM DRAIN
EX	EXISTING	SE	SOUTHEAST
FC	FACE OF CURB	SCWD	SOQUEL CREEK WATER DISTRICT
FDC	FIRE DEPARTMENT CONNECTION	SDMH	STORM DRAIN MANHOLE
FG	FINISH GRADE	SDE	STORM DRAIN EASEMENT
FF	FINISH FLOOR	SG	SUBGRADE
FH	FIRE HYDRANT	SHT	SHEET
FL	FLOWLINE	SS	SANITARY SEWER
FNC	FENCE	SSB	SIDE SETBACK
FO	FIBER OPTIC	SSE	SANITARY SEWER EASEMENT
FS	FINISHED SURFACE	SSMH	SANITARY SEWER MANHOLE
FSB	FRONT SETBACK	STA	STATION
FT	FOOT/FEET	STD	STANDARD
FW	FIRE WATER	SW	SIDEWALK, SOUTHWEST
G	GAS	SWE	SIDEWALK EASEMENT
GB	GRADE BREAK	T	TELEPHONE
GF	GARAGE FLOOR	TC	TOP OF CURB
HT	HEIGHT	TH	THRESHOLD
HDPE	HIGH-DENSITY POLYETHYLENE	TRAN	TRANSFORMER
HP	HIGH POINT	TRW	FG AT TOP OF RETAINING WALL
INT	INTERSECTION	TW	TOP OF WALL
INV	INVERT	USA	UNDERGROUND SERVICE ALERT
IRR	IRRIGATION	W	WEST, WATER
JB	JUNCTION BOX	WM	WATER METER
JT	JOINT TRENCH	WV	WATER WALVE
L	LANDING		
LF	LINEAR FOOT		

**LEGEND**

	PROPERTY LINE		AIR RELEASE VALVE
	PROPERTY LINE - ADJACENT		BLOW-OFF VALVE
	PROPOSED EASEMENT		CATCH BASIN
	FENCE		CURB INLET
	ELECTRICAL LINE		CLEANOUT STRUCTURE
	FIBER OPTIC LINE		FIRE HYDRANT
	FIRE WATER LINE		GUY ANCHOR
	GAS LINE		MANHOLE STRUCTURE
	IRRIGATION LINE		WATER METER
	JOINT TRENCH LINE		WATER VALVE
	OVERHEAD LINE		WATER THRUST BLOCK
	RECYCLED WATER LINE		FLOW DIRECTION
	STORM DRAIN LINE		RIPARIAN EXCEPTION IMPROVEMENTS WITHIN RIPARIAN SETBACK (APPROX. 6,440 SF)
	SANITARY SEWER LINE		IMPROVEMENTS WITHIN CONSTRUCTION SETBACK (APPROX. 1,200 SF)
	TELEPHONE LINE		
	CABLE TV LINE		
	WATER LINE		
	SWALE		
	LIMIT OF GRADING		
	TREE PROTECTION FENCING		



ABBREVIATIONS

Table with 3 columns: Abbreviation, Description, and Abbreviation. Includes terms like AB AGGREGATE BASE, AC AIR CONDITIONER UNIT, APN ASSESSORS PARCEL NUMBER, etc.

CONDITIONS OF APPROVAL NOTES

- REFER TO ARCHITECTURAL DRAWINGS FOR COPY OF CONDITIONS OF APPROVAL.

SANTA CRUZ COUNTY GENERAL NOTES

- ALL CONSTRUCTION ACTIVITIES SHALL COMPLY WITH APPLICABLE REQUIREMENTS IN THE CURRENT EDITION OF THE "COUNTY OF SANTA CRUZ DESIGN CRITERIA". UNLESS OTHERWISE AGREED UPON WITH THE COUNTY OF SANTA CRUZ, WORK SHALL BE LIMITED TO 8:00 A.M. TO 5:00 P.M. WEEKDAYS...

RAMSEY CIVIL ENGINEERING NOTES:

- SITE PLAN BASED ON TOPOGRAPHIC SURVEY, PERFORMED BY IFLAND SURVEY, DATED 9/26/2018. ALL GRADING WORK AND CONSTRUCTION OF IMPROVEMENTS SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS SPECIFIED IN THE GEOTECHNICAL REPORT BY CMAG ENGINEERING, INC...

GEOTECHNICAL NOTES

- FOUNDATION PREPARATION PER GEOTECHNICAL RECOMMENDATIONS: DRILLED, CAST-IN-PLACE, CONCRETE SHAFTS, REQUIRE NO REWORKING OF MATERIALS OTHER THAN THAT NECESSARY TO REWORK MATERIALS DISTURBED DURING EARTHWORK AND CONSTRUCTION...

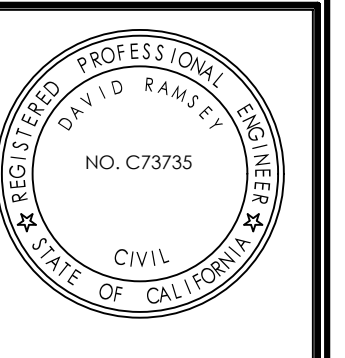
SOQUEL CREEK WATER DISTRICT GENERAL NOTES

- ALL DOMESTIC WATER UTILITIES UP TO AND INCLUDING WATER METERS WITHIN THE PROJECT BOUNDARY ARE PUBLIC UTILITIES AND WILL BE PUBLICLY MAINTAINED. ALL FITTINGS SHALL BE FOR PVC C-900 PIPE AS SHOWN IN THE SOQUEL CREEK WATER DISTRICT STANDARD SPECIFICATIONS...

SANTA CRUZ COUNTY SANITATION DISTRICT GENERAL NOTES

- NO CHANGES IN THE APPROVED IMPROVEMENT PLANS SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE DEPARTMENT OF PUBLIC WORKS. INSTALL SEWER SYSTEM AND CONNECTIONS IN ACCORDANCE WITH ALL REQUIREMENTS OF THE SANTA CRUZ COUNTY SANITATION DISTRICT...

RAMSEY CIVIL ENGINEERING INC. CIVIL ENGINEERING LAND PLANNING PROJECT MANAGEMENT CONSTRUCTION SUPPORT QSD AND QSP SERVICES. 2905 KRISTIE COURT SANTA CRUZ, CA 95065 TEL (831) 462-2905 www.ramsycivilengineering.com



DAVID RAMSEY DATE RCE# 73735

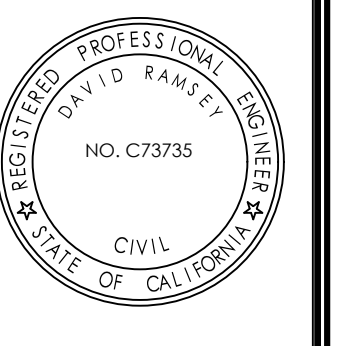
APN# 041-141-56 PLAN TYPE MIXED USE BUILDING PERMIT SET

NOTES HUMAN SPACES, LLC. 9041 SOQUEL DRIVE, APTOS, CA

Table with columns: RESPONSE TO PLANNING COMMENTS, DESCRIPTION, REVISION BLOCK, DMR NUMBER, BY, DATE. Includes entry for 8/8/2025.

DRAWN BY: GS DESIGNED BY: DMR DATE: 04/24/2025 SCALE: AS NOTED PROJECT NO: 18-001 SHEET: C1.1





DAVID RAMSEY DATE  
RCE# 73735

APN# 041-141-56  
PLAN TYPE  
MIXED USE  
BUILDING PERMIT SET

**SITE PLAN**  
**HUMAN SPACES, LLC.**  
 9041 SOQUEL DRIVE, APTOS, CA

NUMBER	DESCRIPTION	DATE
1	DMR	8/8/2025
	BY	
	REVISION BLOCK	

DRAWN BY: GS  
DESIGNED BY: DMR  
DATE: 04/24/2025  
SCALE: AS NOTED  
PROJECT NO: 18-001  
SHEET:

**C2.0**

- ### SITE PLAN KEY LEGEND
- 1 GRADED SWALE PER DTL 3, C5.0
  - 2 ENERGY DISSIPATER PER DTL 9, C5.0
  - 3 VERTICAL CURB PER DTL 8, C5.0
  - 4 CURB TAPER PER DTL 5, C5.0
  - 5 FLUSH CURB PER DTL 6, C5.0
  - 6 ACCESSIBLE PARKING STALL PER DTL 10, C5.1
  - 7 ACCESSIBLE PARKING SIGN PER DTL 11, C5.1
  - 8 TRUNCATED DOMES PER DTL 14, C5.1
  - 9 WHEEL STOP PER DTL 13, C5.1
  - 10 DOWNSPOUT TO CONCRETE SPLASH BLOCK
  - 11 BIKE PARKING (PER ARCH PLANS)
  - 12 BIOFILTRATION AREA PER DTL 18, C5.2
  - 13 NEW CURB, GUTTER, & SIDEWALK PER FIG ST-4a
  - 14 CLEANOUT TO GRADE (COTG) PER DTL 2, C5.0
  - 15 OUTLET CONTROL STRUCTURE (OCS) PER DTL 19, C5.2

- ### HATCH LEGEND
- PROPOSED STRUCTURE (SEE ARCH DRAWINGS)
  - CONCRETE SLAB (SEE STRUCTURAL DRAWINGS)
  - CONCRETE (VEHICULAR) 6" PCC OVER 6" CLASS II AB @95% R.C. (SEE DTL 7, C5.0)
  - CONCRETE (PEDESTRIAN) 4" PCC OVER 4" CLASS II AB @95% R.C. (SEE DTL 7, C5.0)
  - ASPHALT 3" AC OVER 9" CLASS II AB @95% R.C.
  - NEW TO EXISTING AC INTERFACE (SEE DTL 15, C5.1)
  - BIOFILTRATION (SEE DTL 18, SHT C5.2)
  - PERMEABLE PAVERS (SEE DTL 16, SHT C5.0)

### IMPERVIOUS AREA BREAKDOWN

ON-SITE	EXISTING (SF)	NEW/REPLACED (SF)
STRUCTURE AREA/COVERED CONCRETE AREAS	0	4,698
CONCRETE	0	423
ASPHALT	0	0
PERVIOUS PAVERS	0	3,163 (@ 50% 1,582 SF)
TOTAL	0	6,703

PER THE SANTA CRUZ COUNTY DESIGN CRITERIA, 2021 EDITION, THIS PROJECT IS CONSIDERED A "LARGE" PROJECT. SEE STORMWATER REPORT FOR MORE INFORMATION.

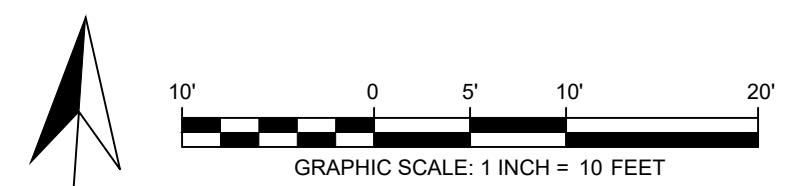
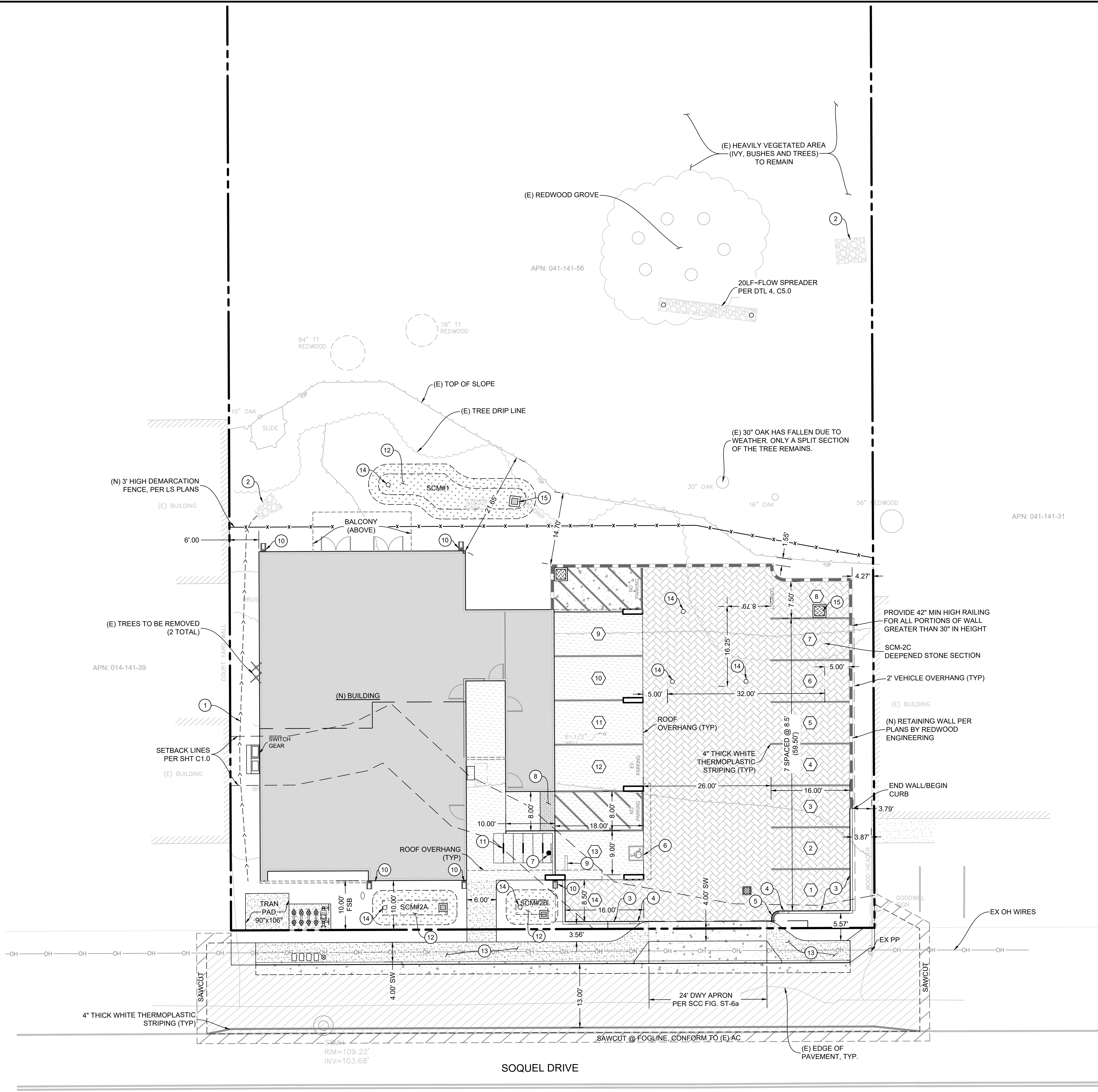
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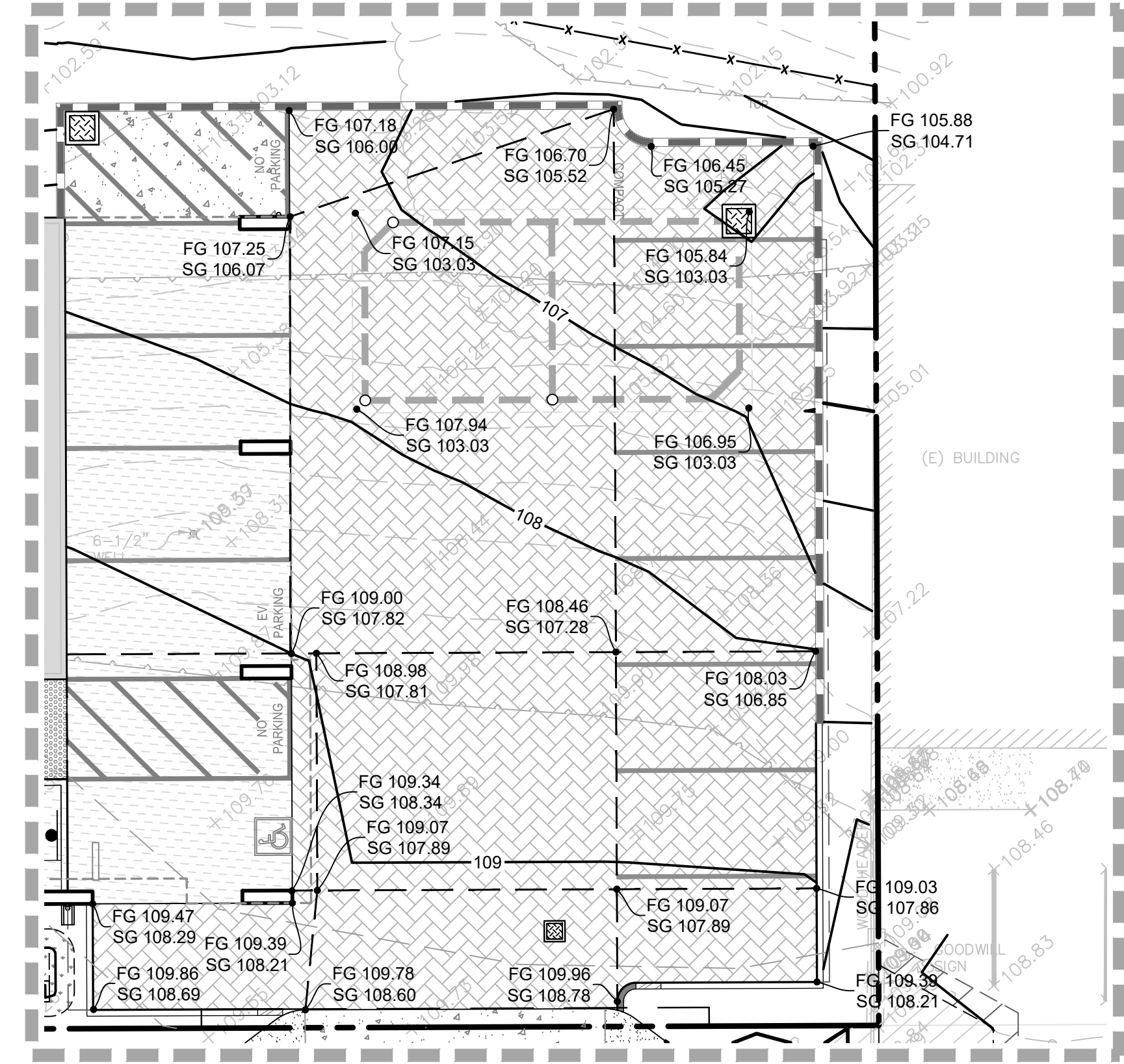
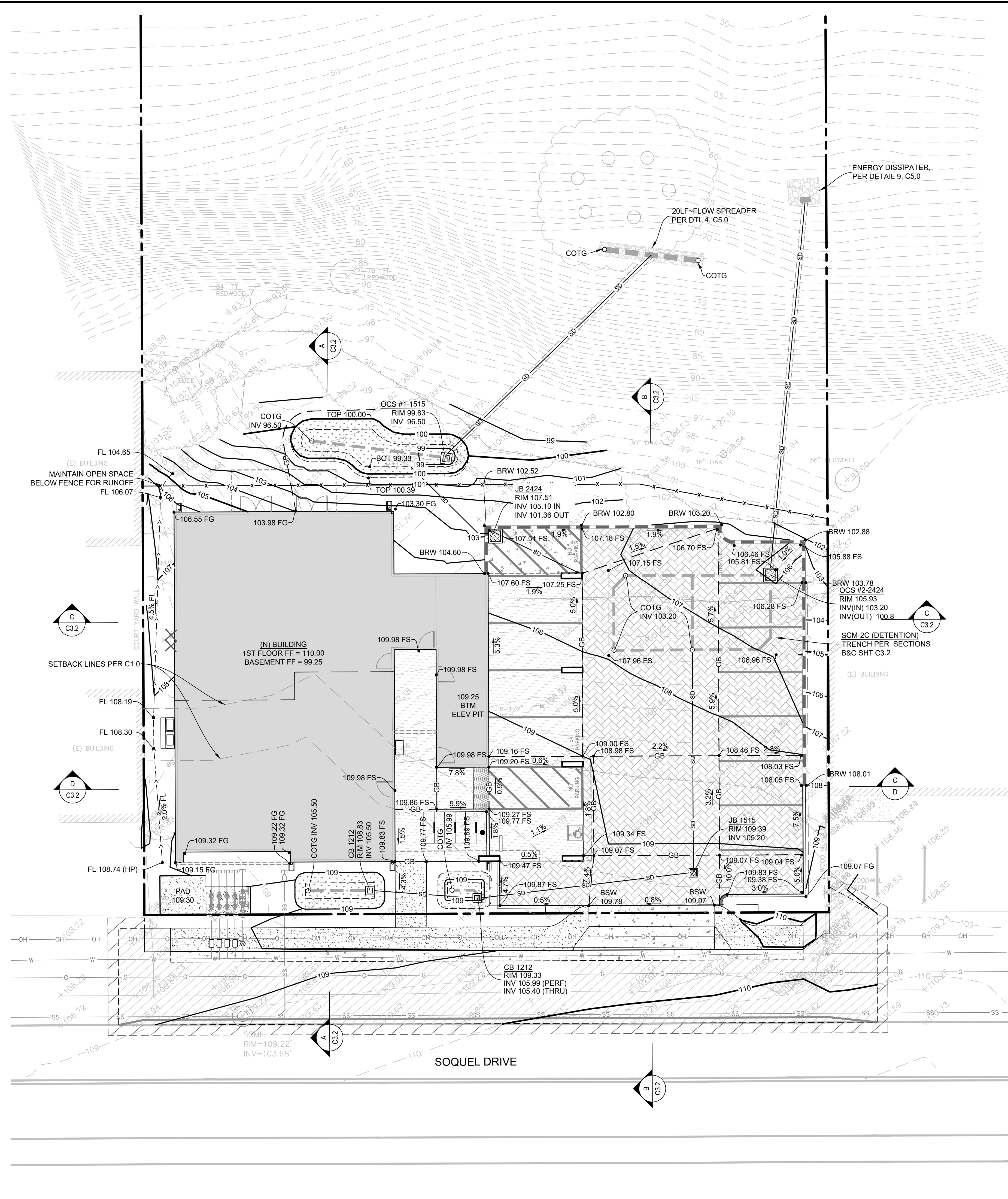
1. DISCONNECTED DOWNSPOUTS AND DRAIN TO VEGETATED SWALES, RAINGARDENS AND/OR PERVIOUS PAVER AREA.
2. USE PERVIOUS PAVERS AS BMP FOR STORM WATER MITIGATION, DRAIN EASTERLY ROOF AREA TO PAVERS.
3. INFILTRATION/RETENTION IS TECHNICALLY INFEASIBLE FOR THIS SITE, REFER TO LETTER FROM GEOTECHNICAL ENGINEER.

### PARKING BREAKDOWN

TYPE	#
OFFSTREET (PARALLEL PARKING)	3
STANDARD SPACES	11
COMPACT SPACES	2
ACCESSIBLE SPACES	1
TOTAL SPACES	17

# PARKING SPACE COUNT





SUB-GRADE PLAN  
(PERMEABLE PAVER SECTION ONLY)

HATCH LEGEND

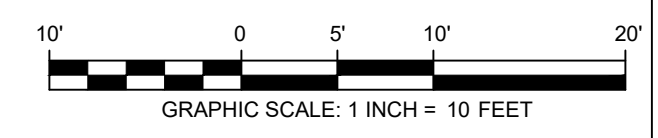
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(SEE ARCH DRAWINGS)
- CONCRETE SLAB  
(SEE STRUCTURAL DRAWINGS)
- CONCRETE (VEHICULAR)  
6" PCC OVER 6" CLASS II AB @95% R.C.  
(SEE DTL 7, C5.0)
- CONCRETE (PEDESTRIAN)  
4" PCC OVER 4" CLASS II AB @95% R.C.  
(SEE DTL 7, C5.0)
- ASPHALT  
3" AC OVER 9" CLASS II AB @95% R.C.
- NEW TO EXISTING AC INTERFACE  
(SEE DTL 15, C5.1)
- BIOFILTRATION  
(SEE DTL 18, SHT C5.2)
- PERMEABLE PAVERS  
(SEE DTL 16, SHT C5.0)

- GRADING PLAN NOTES:
- REFER TO SHEET C3.1 FOR ALL OFF-SITE IMPROVEMENTS.
  - REFER TO SHEET C4.0 FOR ALL PROPOSED UTILITY AND STORM PIPE INFORMATION.

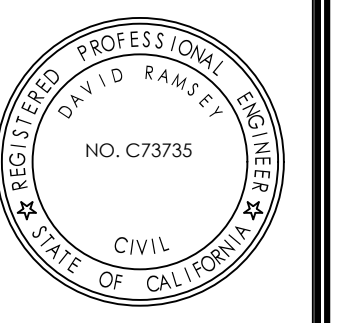
ESTIMATED EARTHWORK QUANTITIES

74	CUBIC YARDS EXCAVATION
402	CUBIC YARDS EMBANKMENT
328	CUBIC YARDS NET (IMPORT)

- NOTES
- ESTIMATE DOES NOT INCLUDE UTILITY TRENCH VOLUMES OR ANY OVEREXCAVATION, IF REQUIRED BY SITE CONDITIONS.
  - ESTIMATE ASSUMES A 15% COMPACTION FACTOR ON ALL FILL MATERIAL AND A 0% EXPANSION FACTOR ON ALL CUT MATERIAL.
  - PRIOR TO COMMENCEMENT OF WORK CONTRACTOR SHALL CONFIRM THAT ESTIMATES ARE CORRECT.
  - EXCESS MATERIAL SHALL BE DISPOSED OF OFFSITE AT AN APPROVED DISPOSAL SITE.



**RAMSEY**  
CIVIL ENGINEERING INC.  
CIVIL ENGINEERING  
LAND PLANNING  
PROJECT MANAGEMENT  
CONSTRUCTION SUPPORT  
QSD AND QSP SERVICES  
2905 KRISTIE COURT  
SANTA CRUZ, CA 95065  
TEL (831) 462-2905  
www.ramseycivilengineering.com



DAVID RAMSEY DATE  
RCE# 73735

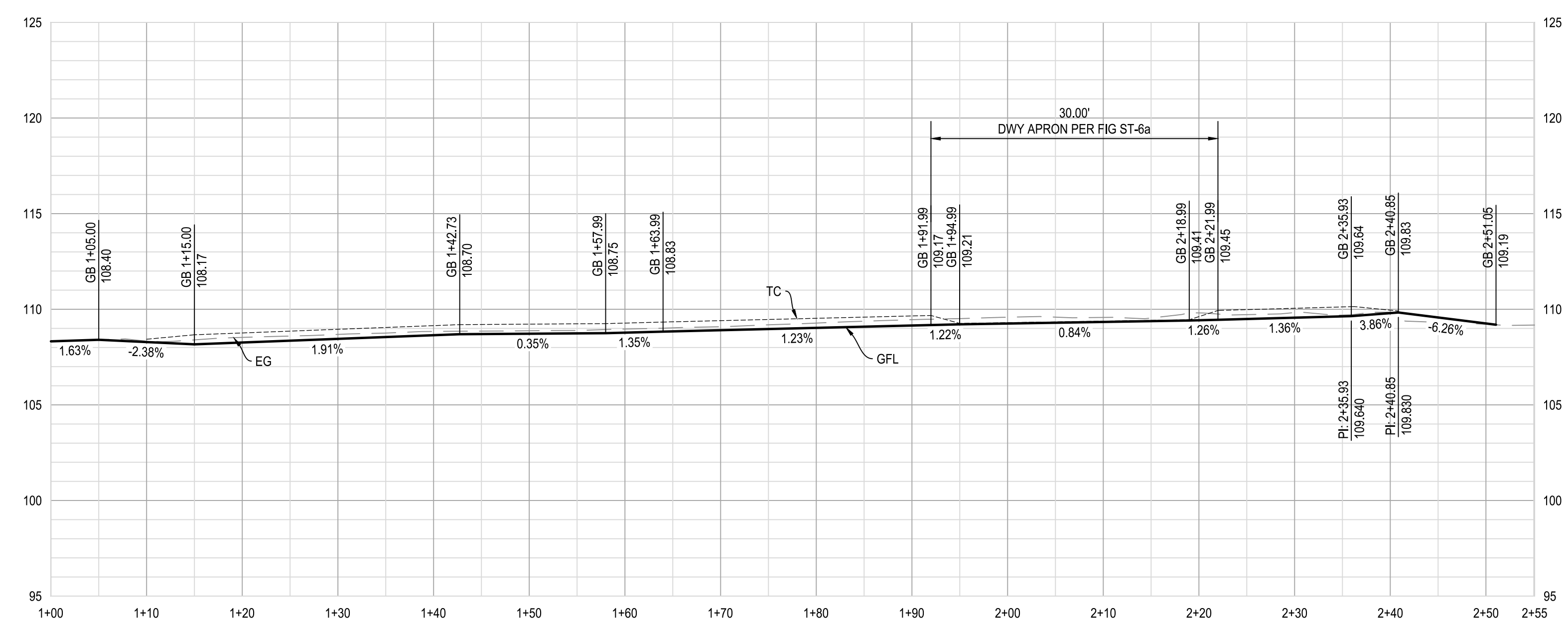
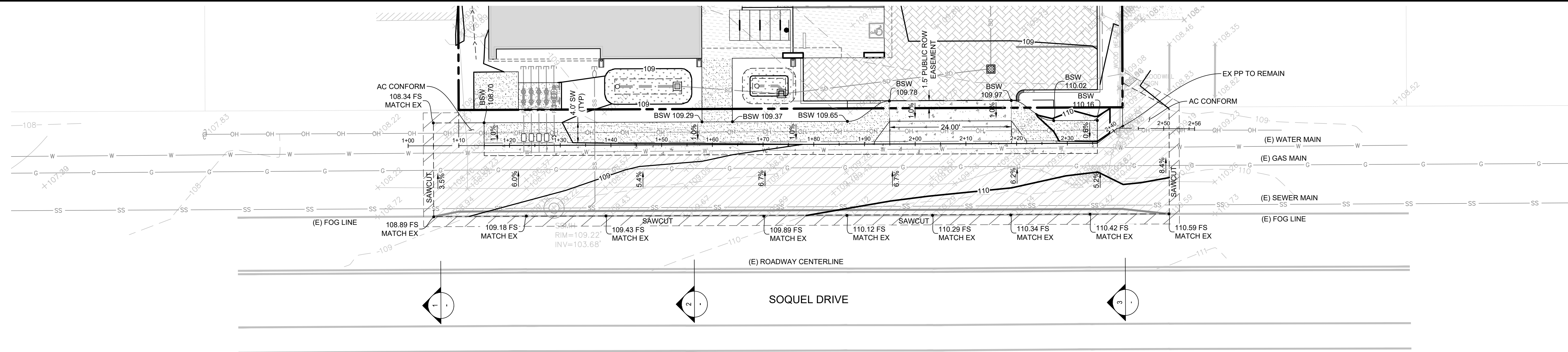
APN# 041-141-56  
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BUILDING PERMIT SET

GRADING & DRAINAGE PLAN  
**HUMAN SPACES, LLC.**  
9041 SOQUEL DRIVE, APTOS, CA

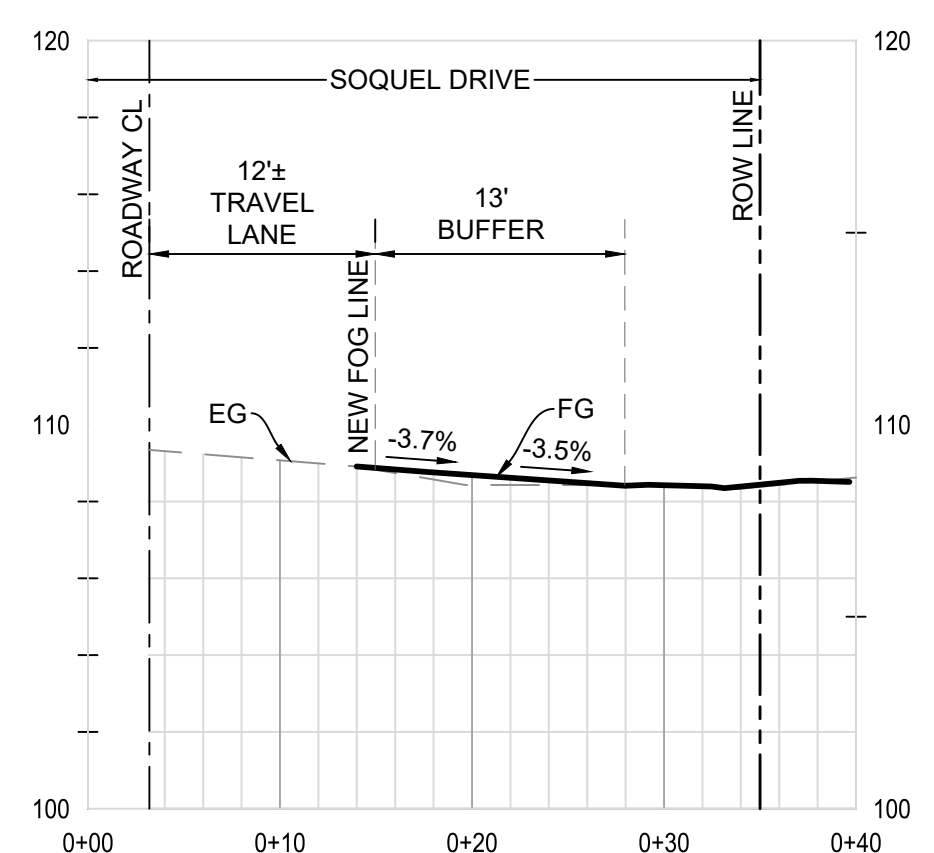
NUMBER	DESCRIPTION	REVISION COMMENTS	DATE
1	DMR	RESPONSE TO PLANNING COMMENTS	8/8/2025

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DESIGNED BY: DMR  
DATE: 04/24/2025  
SCALE: AS NOTED  
PROJECT NO: 18-01  
SHEET:

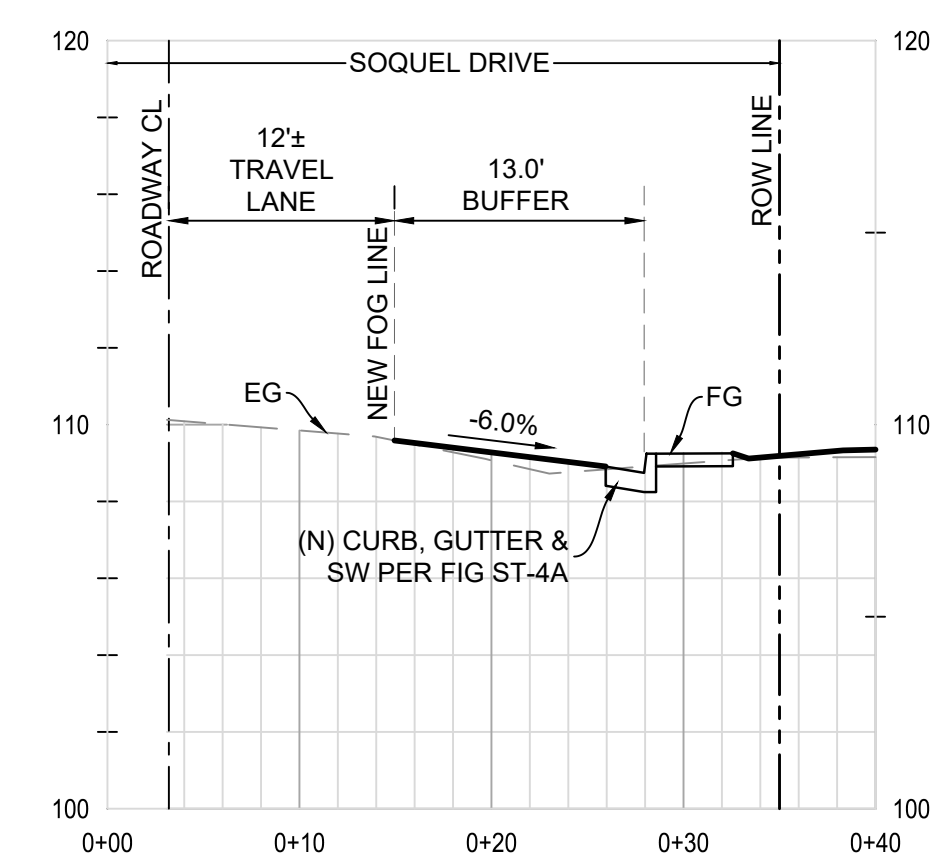
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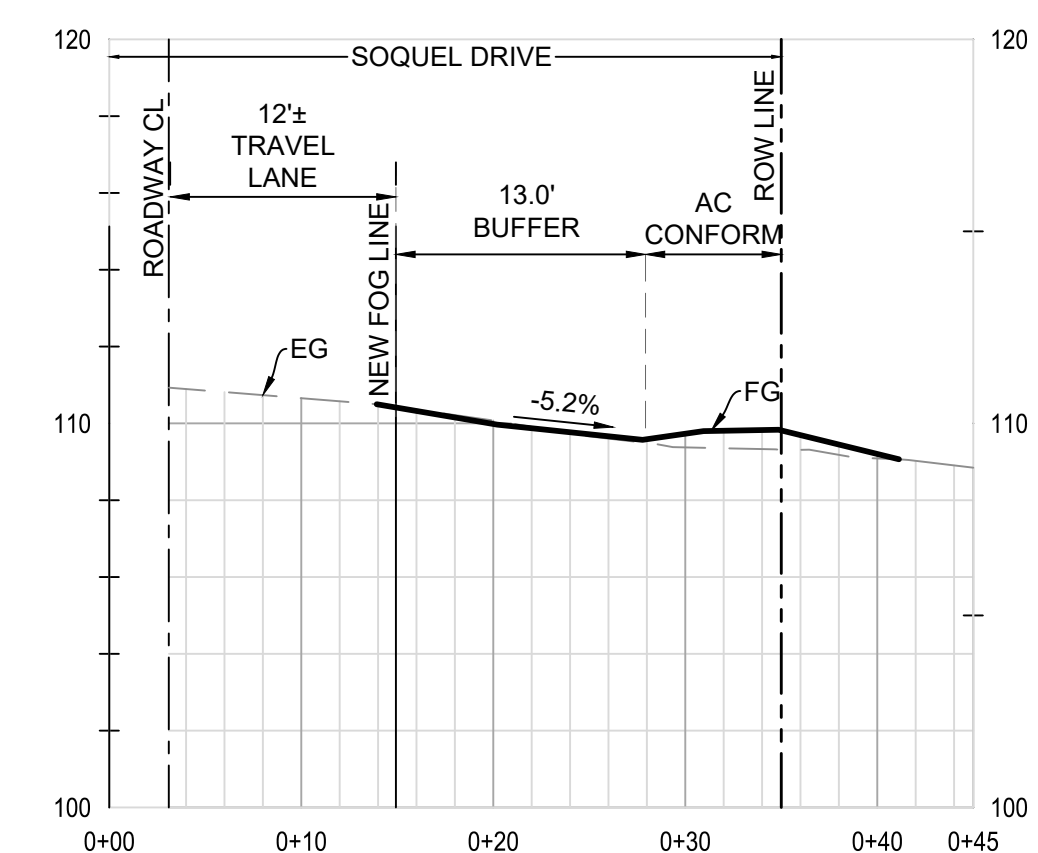
GUTTER FLOW LINE - PROFILE  
STA: 1+00 - 2+55  
H: 1"=10'  
V: 1"=5'



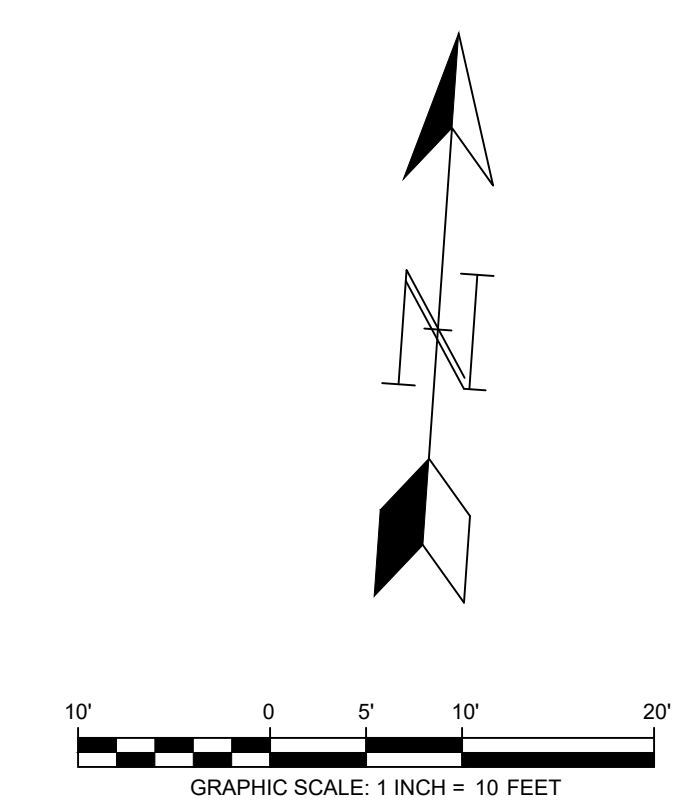
ROAD SECTION 1  
H: 1"=10'  
V: 1"=5'



ROAD SECTION 2  
H: 1"=10'  
V: 1"=5'



ROAD SECTION 3  
H: 1"=10'  
V: 1"=5'



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NO. C73735  
STATE OF CALIFORNIA

DAVID RAMSEY DATE  
RCE# 73735

APN# 041-141-56  
PLAN TYPE  
MIXED USE  
BUILDING PERMIT SET

OFF-SITE IMPROVEMENT PLAN

**HUMAN SPACES, LLC.**  
9041 SOQUEL DRIVE, APTOS, CA

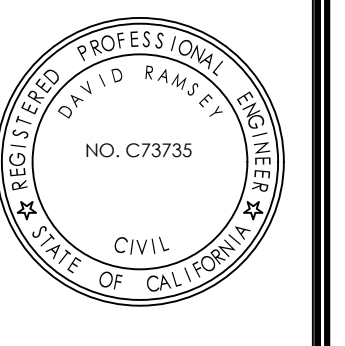
NUMBER	DESCRIPTION	DATE
1	RESPONSE TO PLANNING COMMENTS	8/8/2025

NUMBER	BY	REVISION BLOCK
1	DMR	

DRAWN BY: GS  
DESIGNED BY: DMR  
DATE: 04/24/2025  
SCALE: AS NOTED  
PROJECT NO: 18-001  
SHEET:



C3.1



DAVID RAMSEY DATE  
RCE# 73735

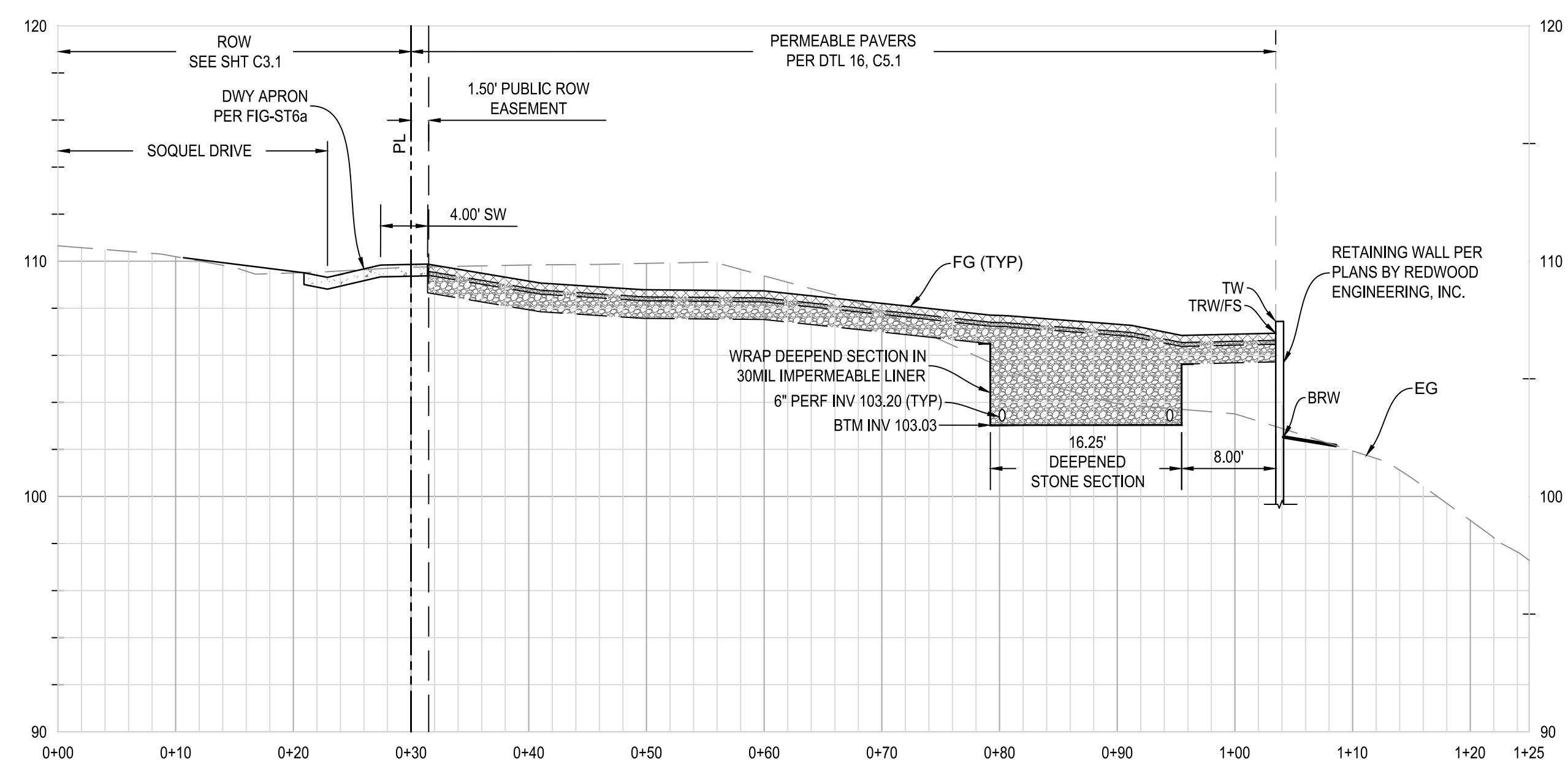
APN# 041-141-56  
PLAN TYPE  
MIXED USE  
BUILDING PERMIT SET

SECTIONS  
**HUMAN SPACES, LLC.**  
9041 SOQUEL DRIVE, APTOS, CA

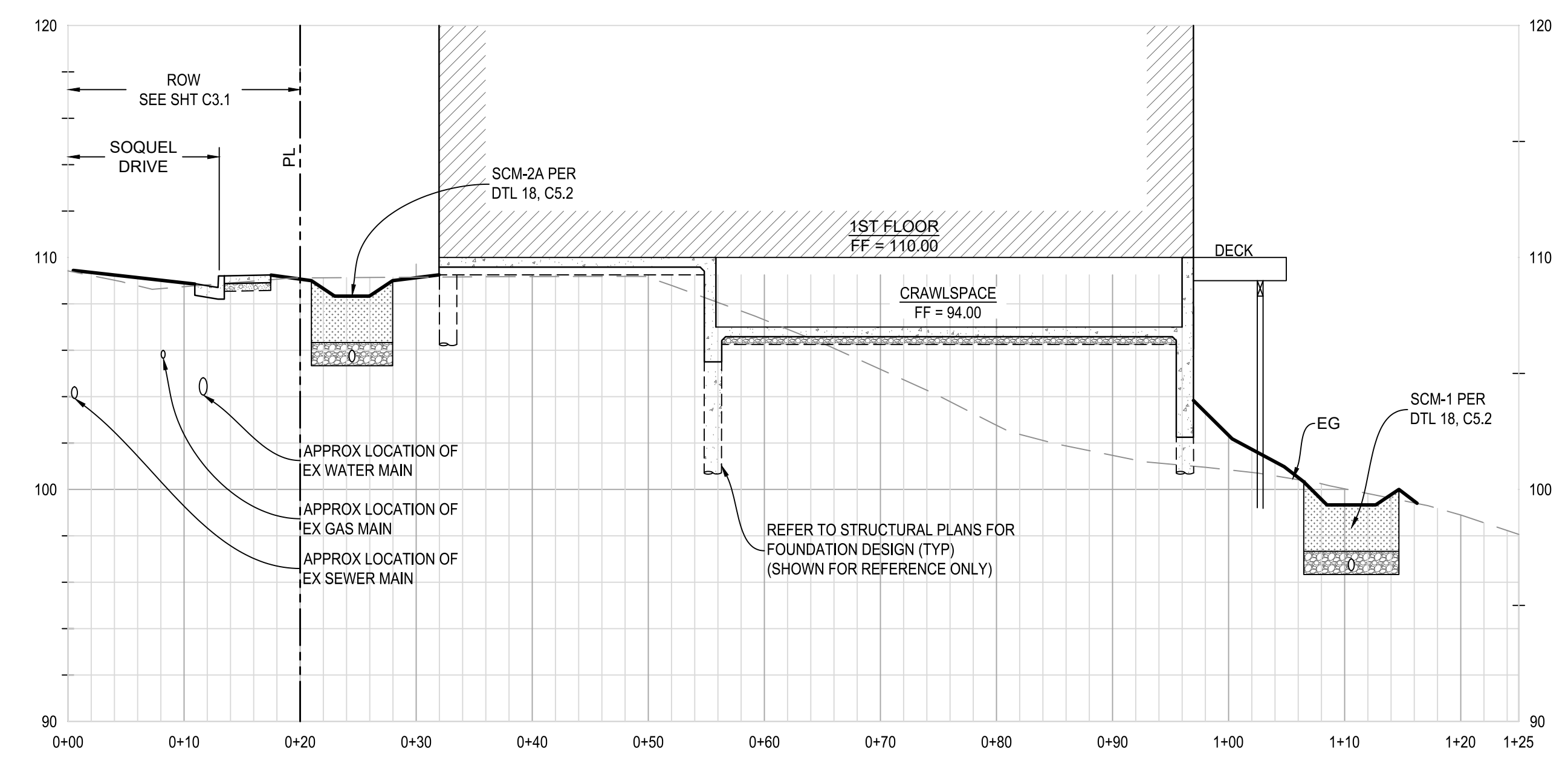
RESPONSE TO PLANNING COMMENTS	DATE
1	8/8/2025
DMR	BY
NUMBER	REVISION BLOCK

DRAWN BY: GS  
DESIGNED BY: DMR  
DATE: 04/24/2025  
SCALE: AS NOTED  
PROJECT NO: 18-001  
SHEET:

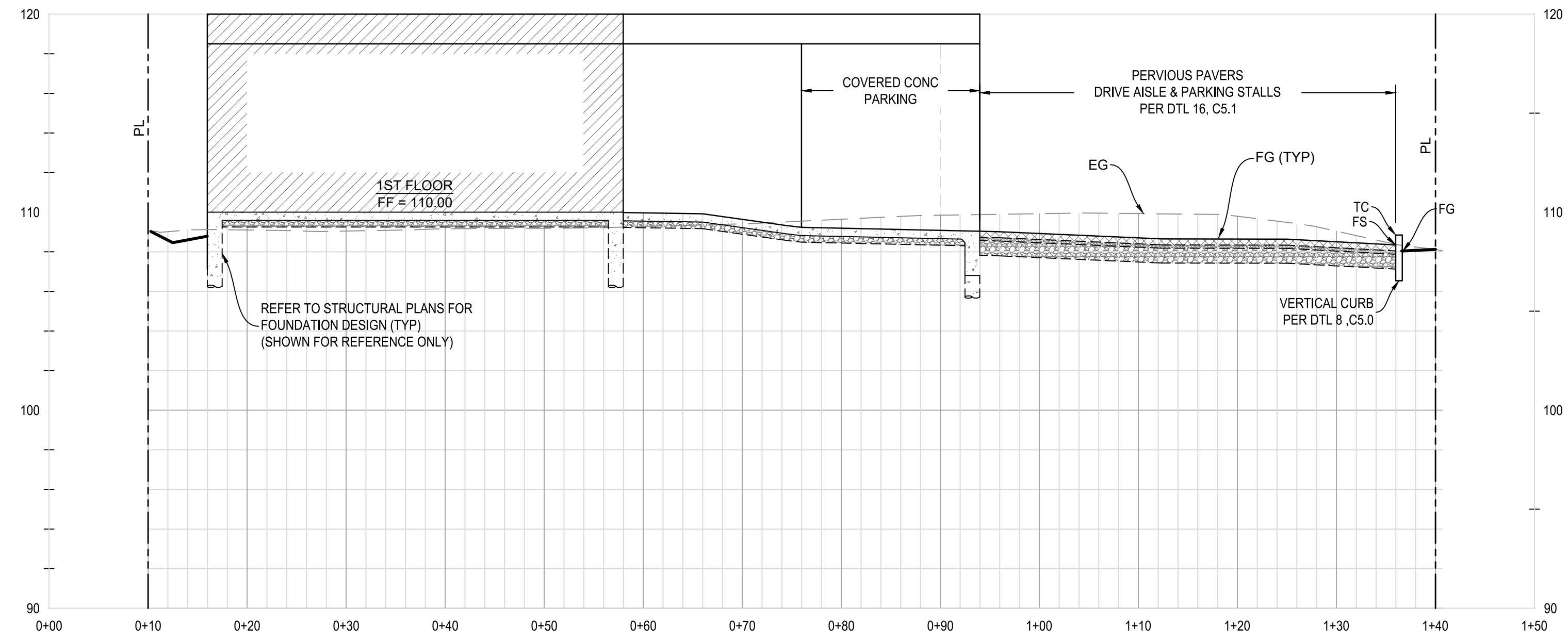
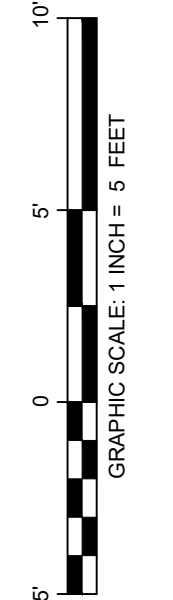
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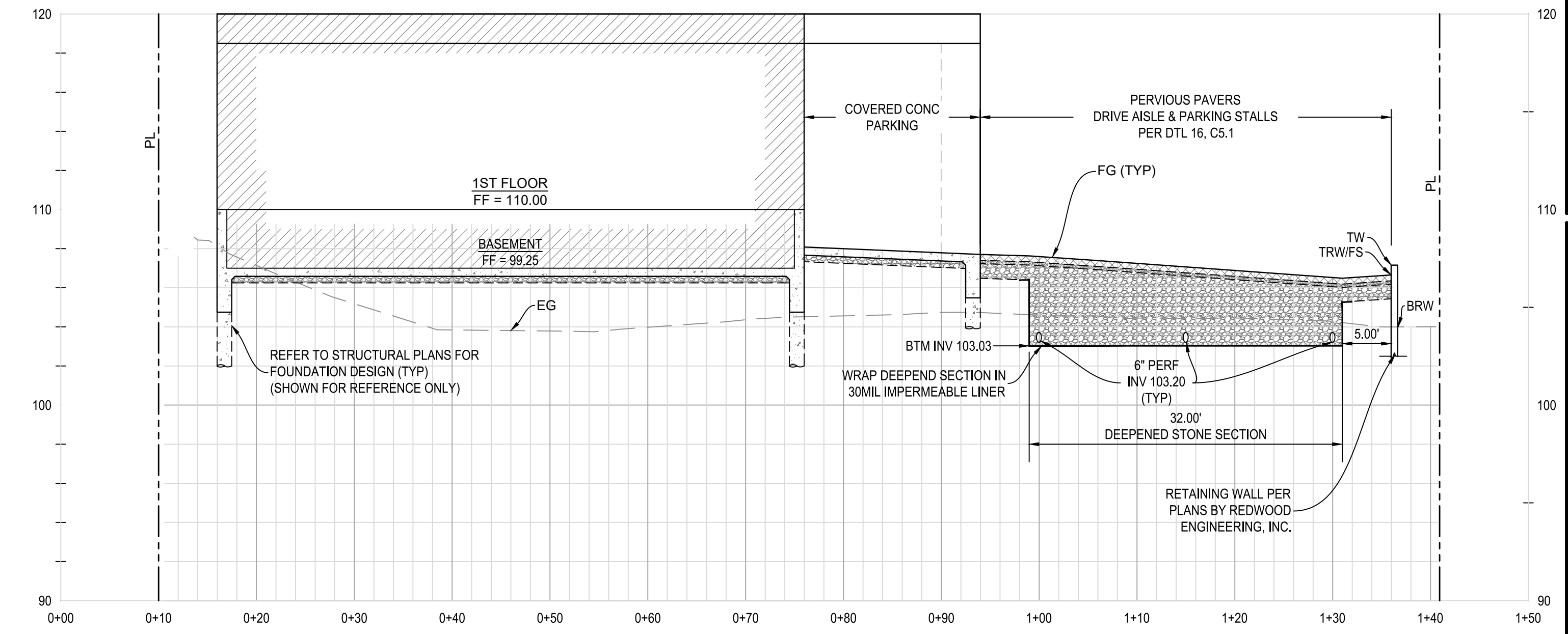
**SECTION B**  
H: 1"=10'  
V: 1"=5'



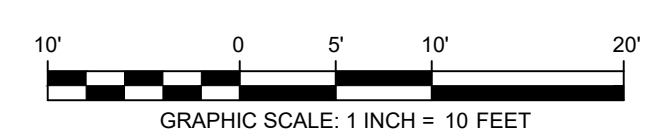
**SECTION A**  
H: 1"=10'  
V: 1"=5'

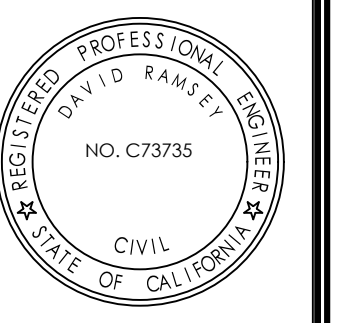


**SECTION D**  
H: 1"=10'  
V: 1"=5'



**SECTION C**  
H: 1"=10'  
V: 1"=5'





DAVID RAMSEY DATE  
RCE# 73735

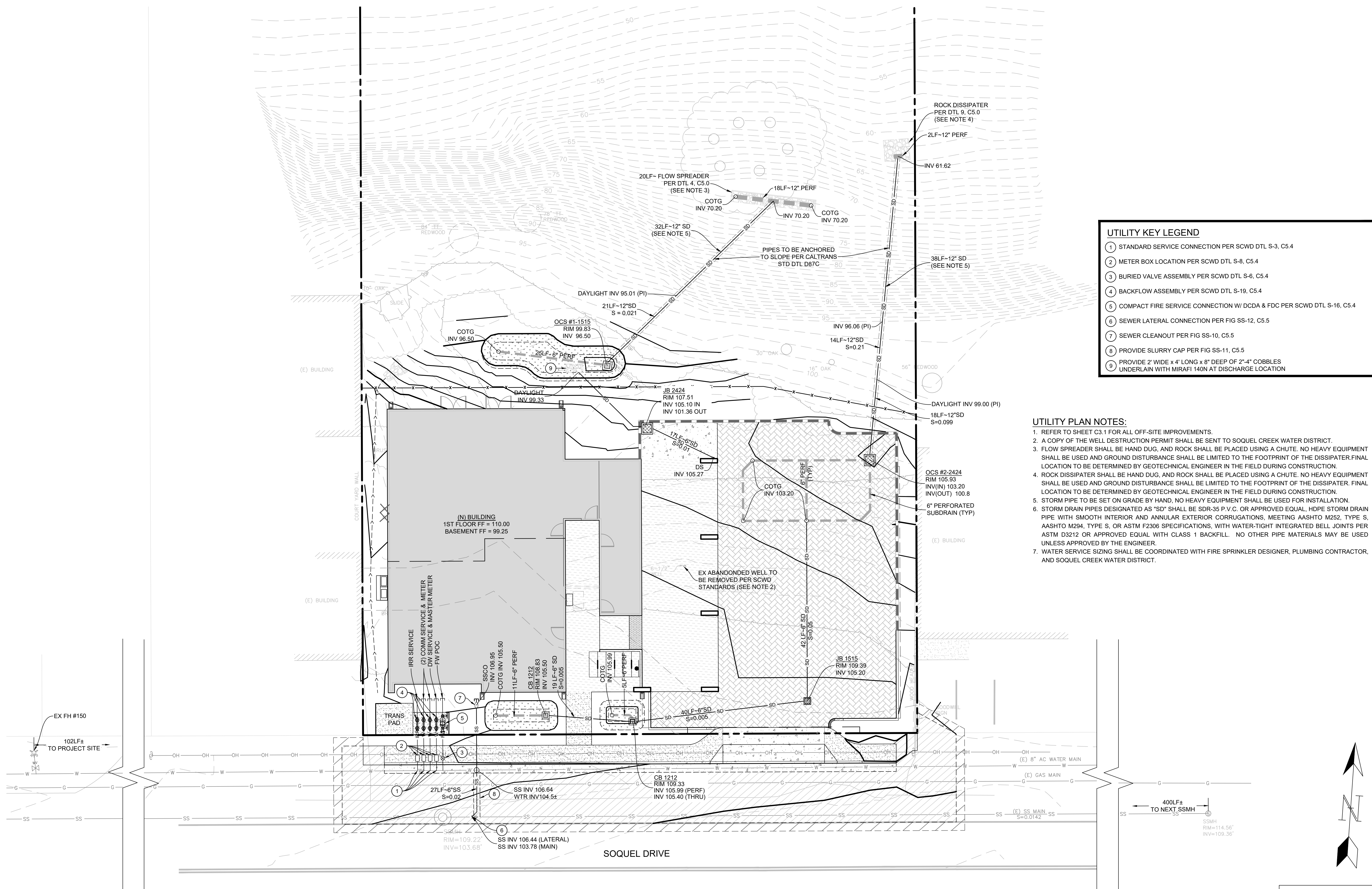
APN# 041-141-56  
PLAN TYPE  
MIXED USE  
BUILDING PERMIT SET

UTILITY PLAN  
**HUMAN SPACES, LLC.**  
9041 SOQUEL DRIVE, APTOS, CA

NUMBER	DESCRIPTION	DATE
1	RESPONSE TO PLANNING COMMENTS	8/8/2025
DMR	BY	DATE
1	REVISION BLOCK	

DRAWN BY: GS  
DESIGNED BY: DMR  
DATE: 04/24/2025  
SCALE: AS NOTED  
PROJECT NO: 18-01  
SHEET:

**C4.0**



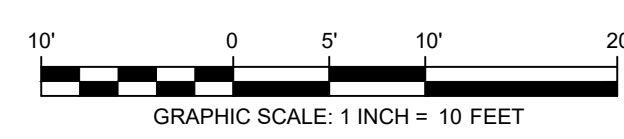
- UTILITY KEY LEGEND**
- STANDARD SERVICE CONNECTION PER SCWD DTL S-3, C5.4
  - METER BOX LOCATION PER SCWD DTL S-8, C5.4
  - BURIED VALVE ASSEMBLY PER SCWD DTL S-6, C5.4
  - BACKFLOW ASSEMBLY PER SCWD DTL S-19, C5.4
  - COMPACT FIRE SERVICE CONNECTION W/ DCDA & FDC PER SCWD DTL S-16, C5.4
  - SEWER LATERAL CONNECTION PER FIG SS-12, C5.5
  - SEWER CLEANOUT PER FIG SS-10, C5.5
  - PROVIDE SLURRY CAP PER FIG SS-11, C5.5
  - PROVIDE 2' WIDE x 4' LONG x 8" DEEP OF 2"-4" COBBLES UNDERLAIN WITH MIRAFI 140N AT DISCHARGE LOCATION

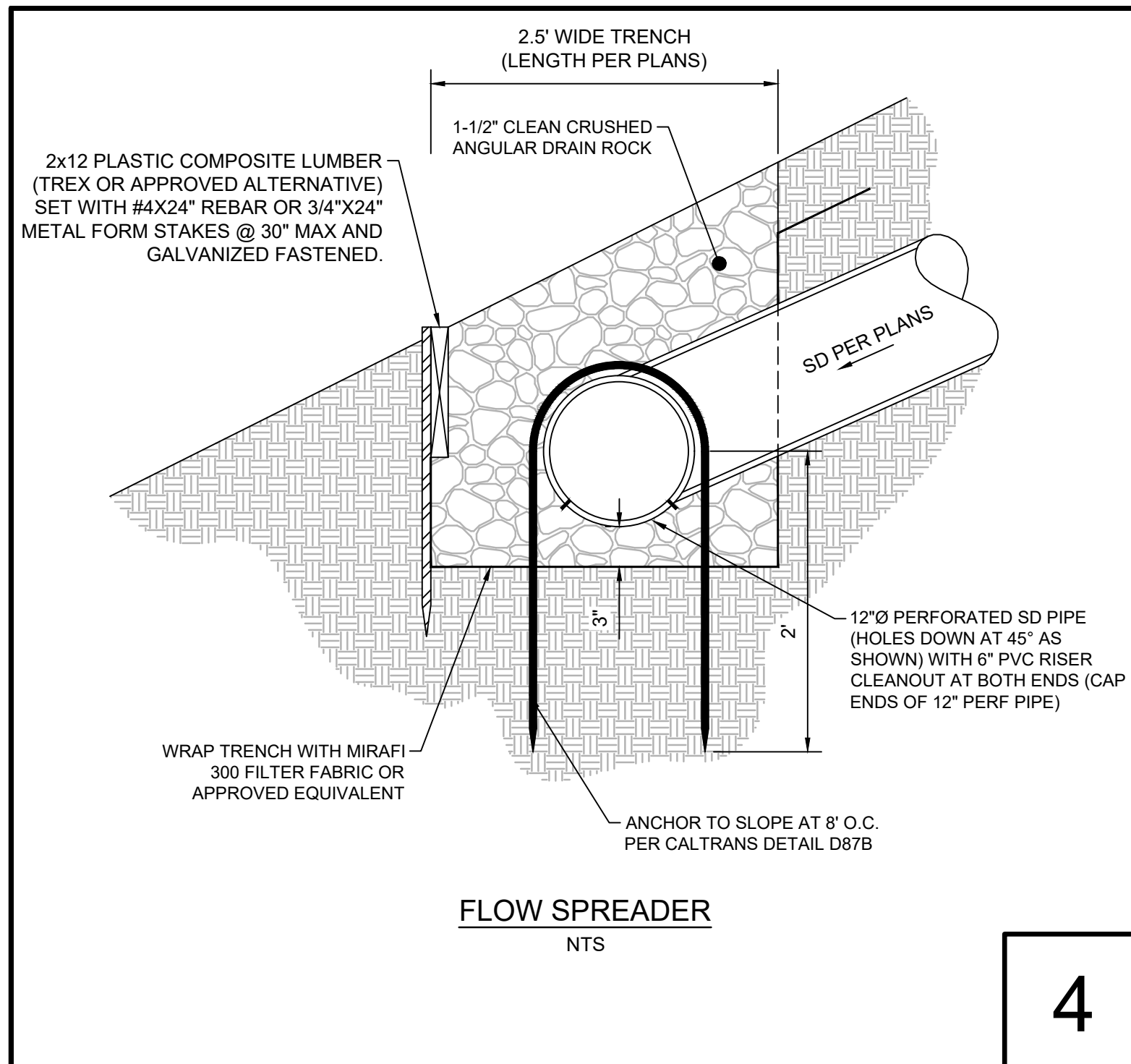
- UTILITY PLAN NOTES:**
- REFER TO SHEET C3.1 FOR ALL OFF-SITE IMPROVEMENTS.
  - A COPY OF THE WELL DESTRUCTION PERMIT SHALL BE SENT TO SOQUEL CREEK WATER DISTRICT.
  - FLOW SPREADER SHALL BE HAND DUG, AND ROCK SHALL BE PLACED USING A CHUTE. NO HEAVY EQUIPMENT SHALL BE USED AND GROUND DISTURBANCE SHALL BE LIMITED TO THE FOOTPRINT OF THE DISSIPATER. FINAL LOCATION TO BE DETERMINED BY GEOTECHNICAL ENGINEER IN THE FIELD DURING CONSTRUCTION.
  - ROCK DISSIPATER SHALL BE HAND DUG, AND ROCK SHALL BE PLACED USING A CHUTE. NO HEAVY EQUIPMENT SHALL BE USED AND GROUND DISTURBANCE SHALL BE LIMITED TO THE FOOTPRINT OF THE DISSIPATER. FINAL LOCATION TO BE DETERMINED BY GEOTECHNICAL ENGINEER IN THE FIELD DURING CONSTRUCTION.
  - STORM PIPE TO BE SET ON GRADE BY HAND, NO HEAVY EQUIPMENT SHALL BE USED FOR INSTALLATION.
  - STORM DRAIN PIPES DESIGNATED AS "SD" SHALL BE SDR-35 P.V.C. OR APPROVED EQUAL, HDPE STORM DRAIN PIPE WITH SMOOTH INTERIOR AND ANNULAR EXTERIOR CORRUGATIONS, MEETING AASHTO M252, TYPE S, AASHTO M294, TYPE S, OR ASTM F2306 SPECIFICATIONS, WITH WATER-TIGHT INTEGRATED BELL JOINTS PER ASTM D3212 OR APPROVED EQUAL WITH CLASS 1 BACKFILL. NO OTHER PIPE MATERIALS MAY BE USED UNLESS APPROVED BY THE ENGINEER.
  - WATER SERVICE SIZING SHALL BE COORDINATED WITH FIRE SPRINKLER DESIGNER, PLUMBING CONTRACTOR, AND SOQUEL CREEK WATER DISTRICT.

**FIRE HYDRANT FLOW DATA**

FLOW DATA PROVIDED BY SOQUEL CREEK WATER DEPARTMENT DATED 11/14/2022

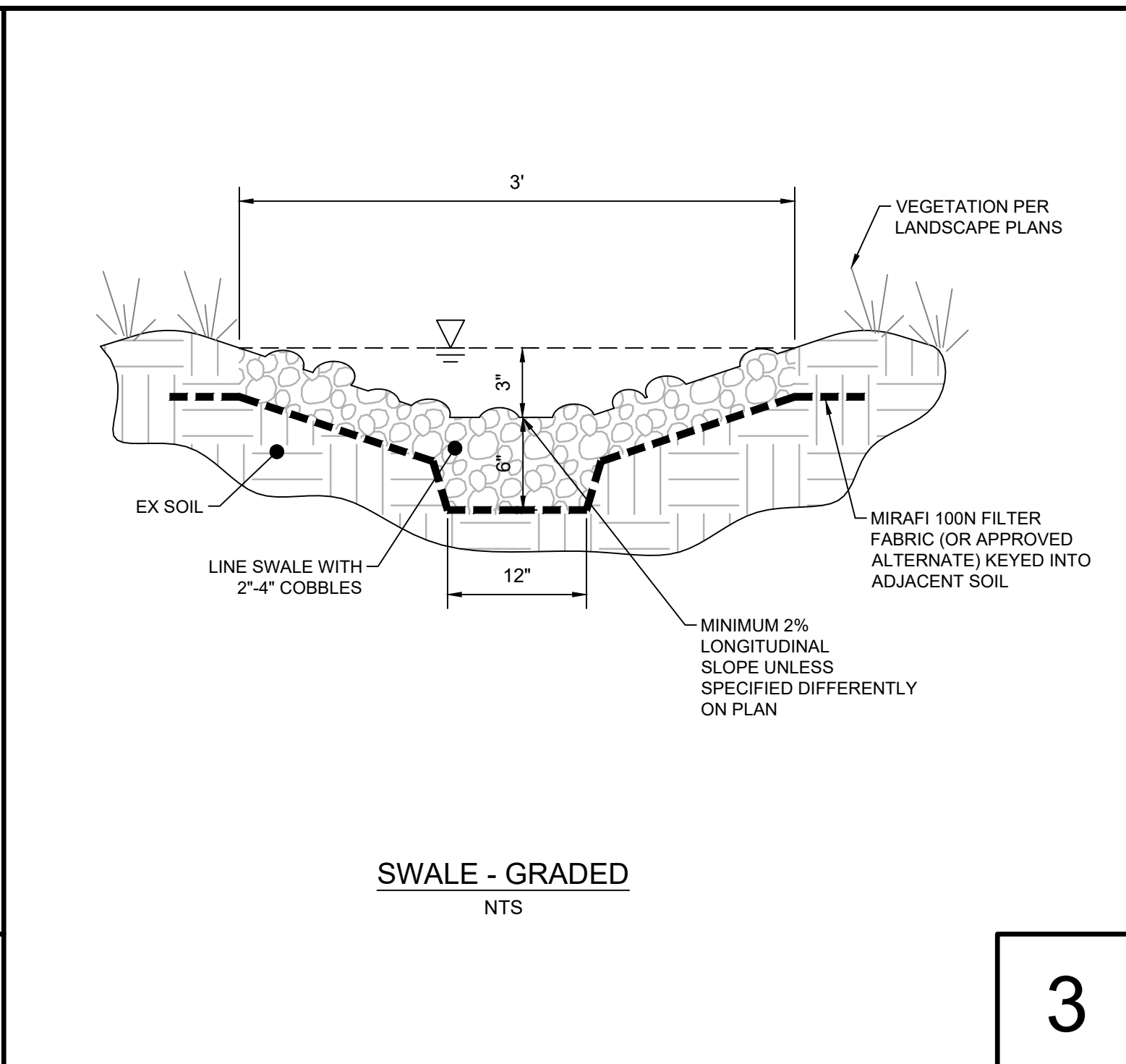
HYDRANT #	STATIC PRESSURE (PSI)	RESIDUAL PRESSURE (PSI)	FLOW (GPM)	FLOW @ 20 PSI (GPM)	TEST DATE
150	106	46	1500	2,037	(MODELED DATA)





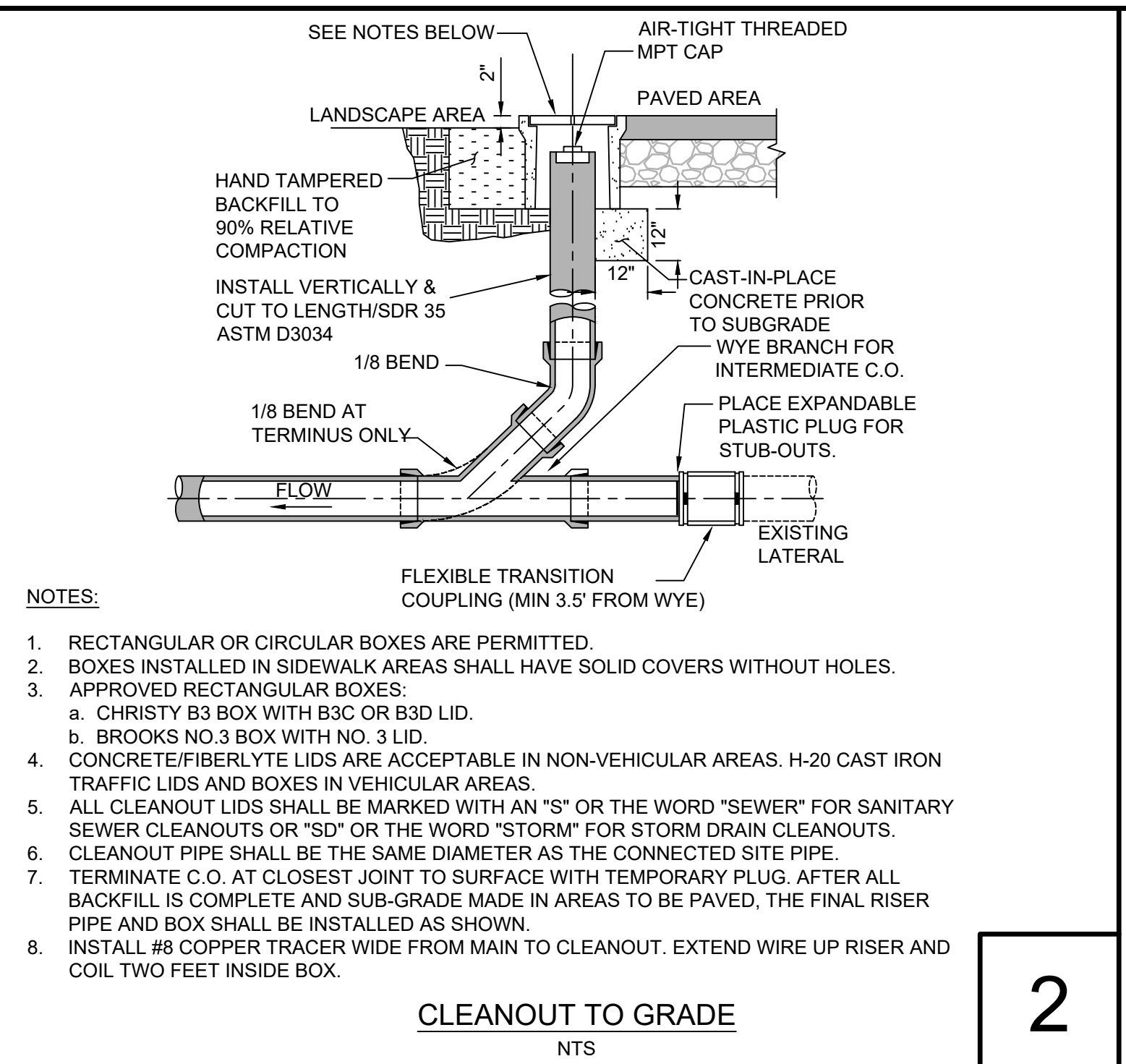
**FLOW SPREADER**  
NTS

4



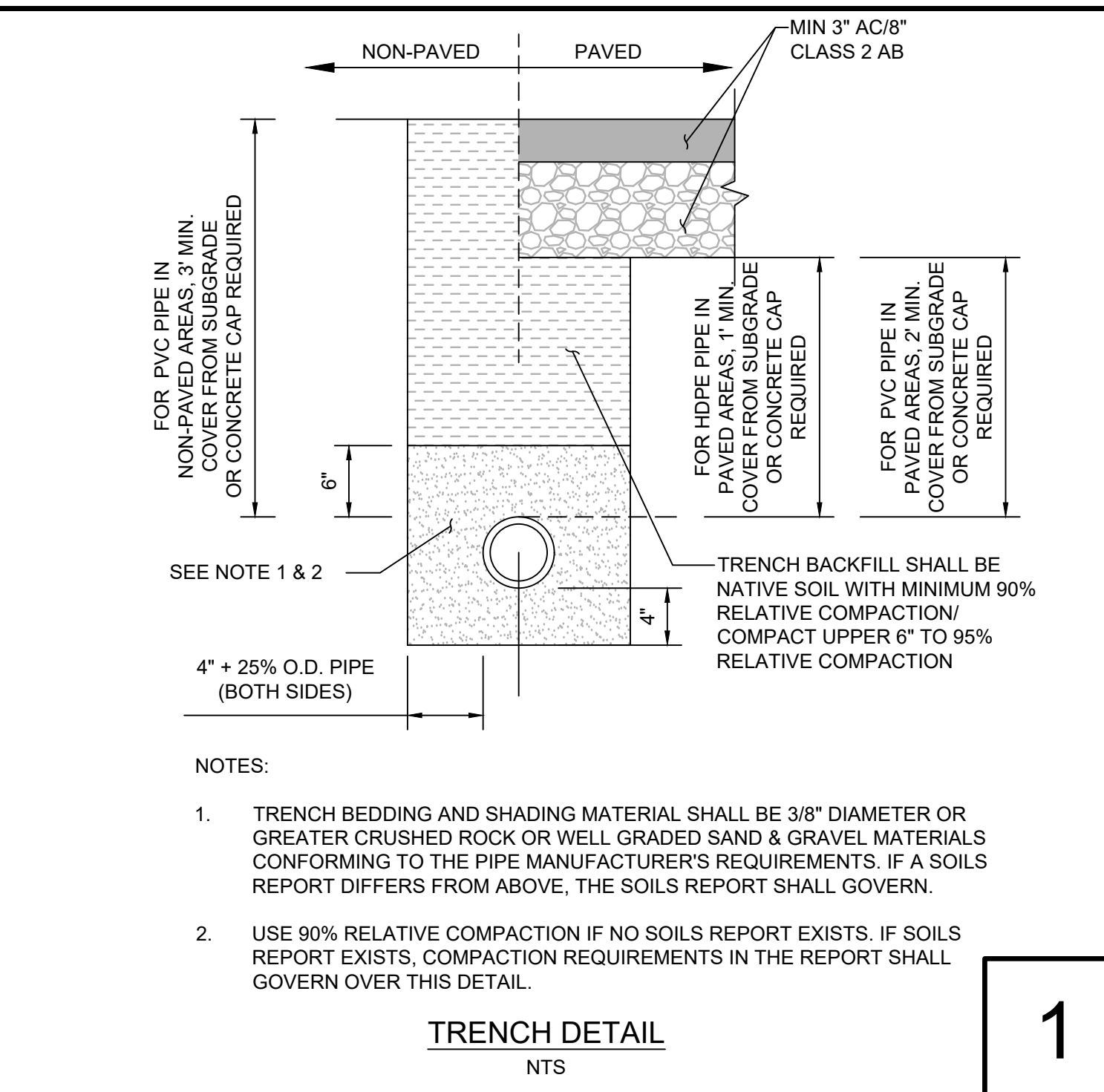
**SWALE - GRADED**  
NTS

3



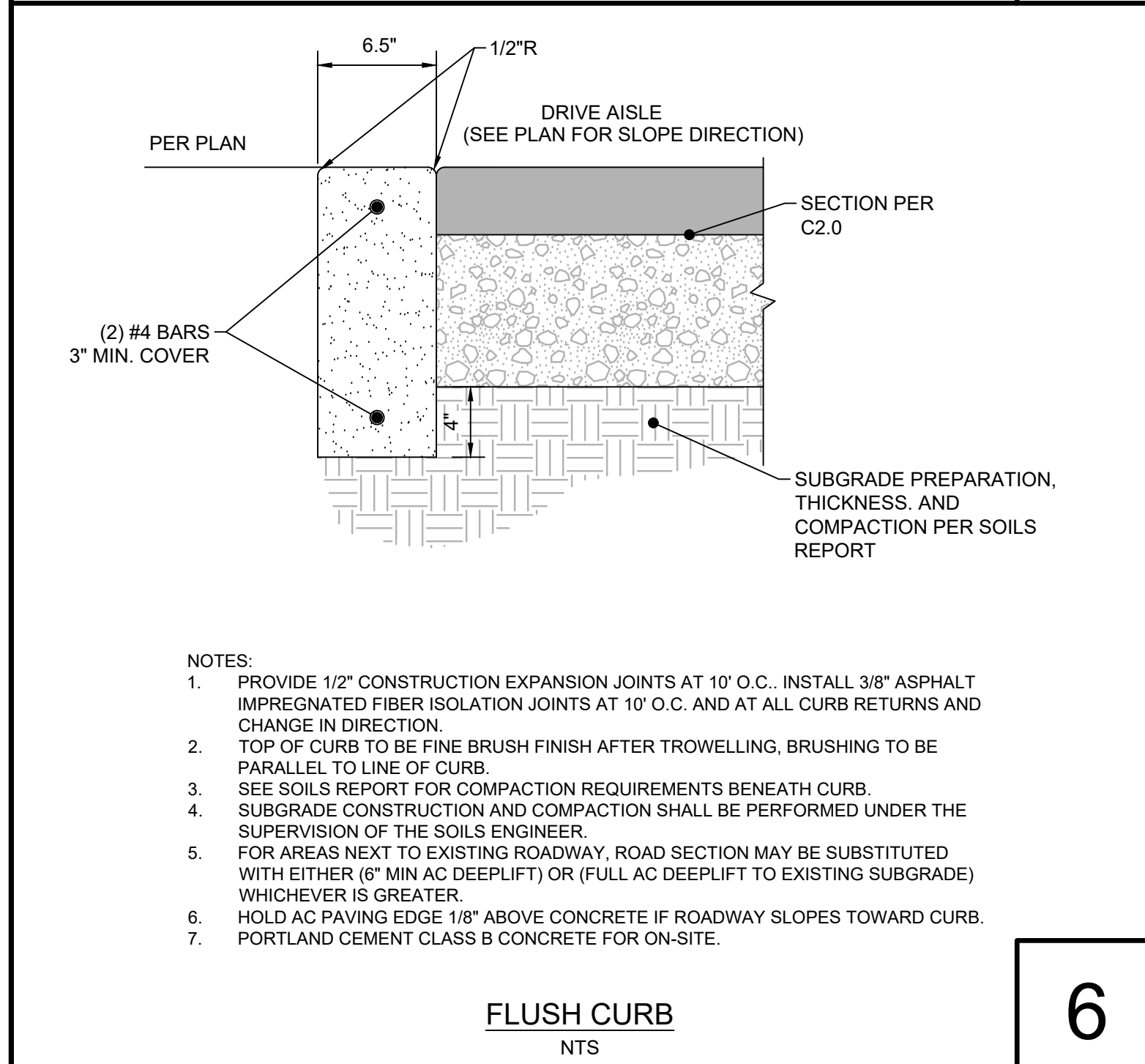
**CLEANOUT TO GRADE**  
NTS

2



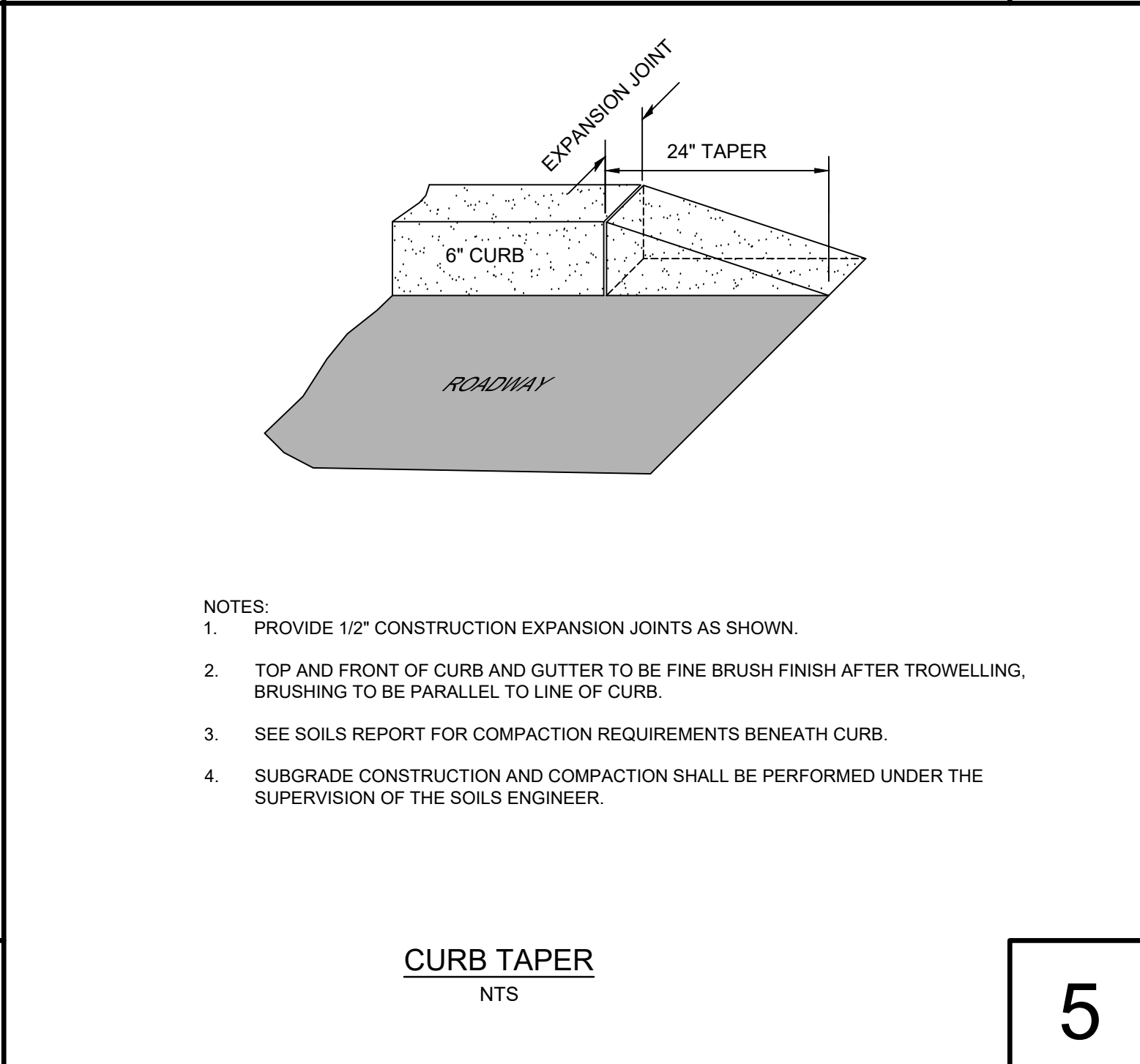
**TRENCH DETAIL**  
NTS

1



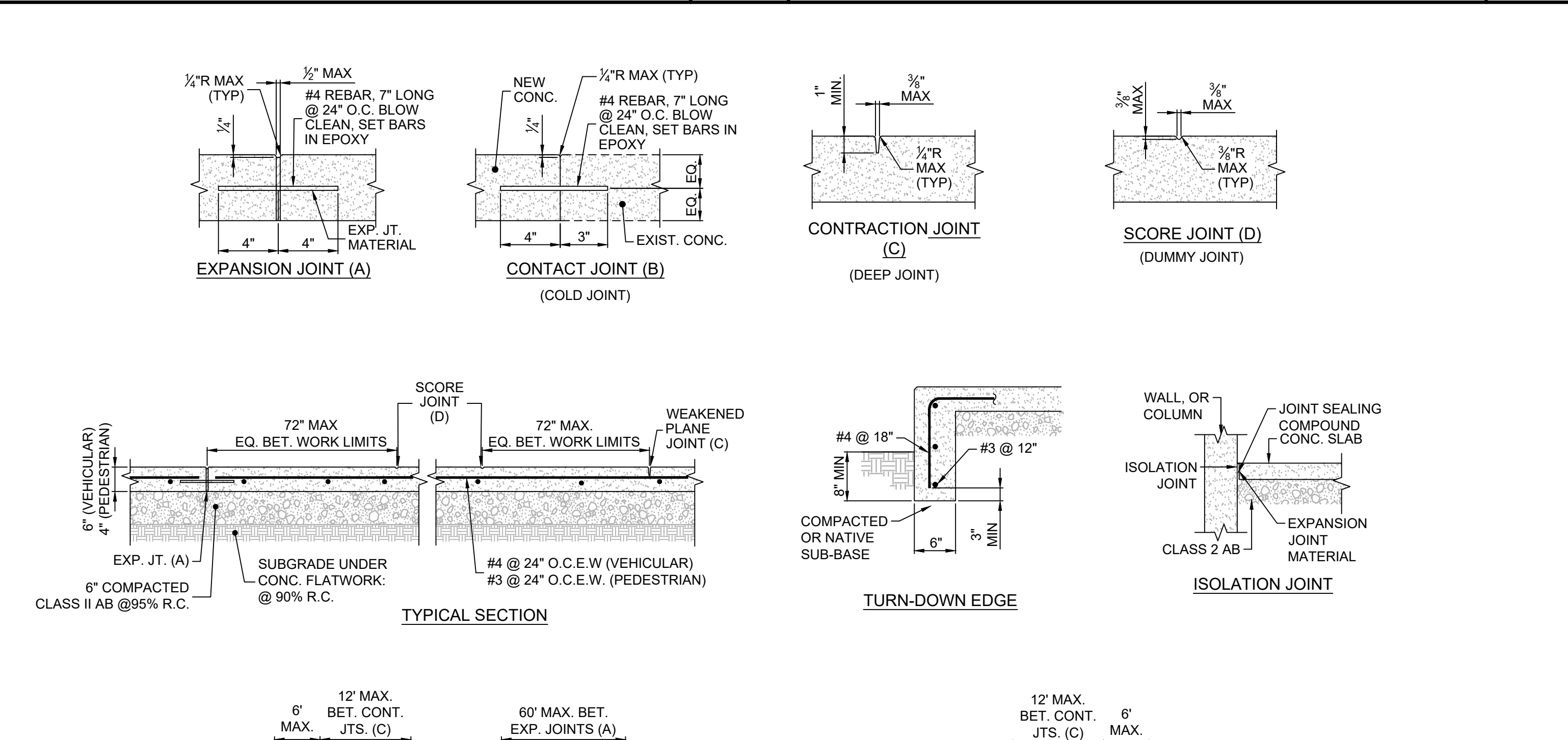
**FLUSH CURB**  
NTS

6

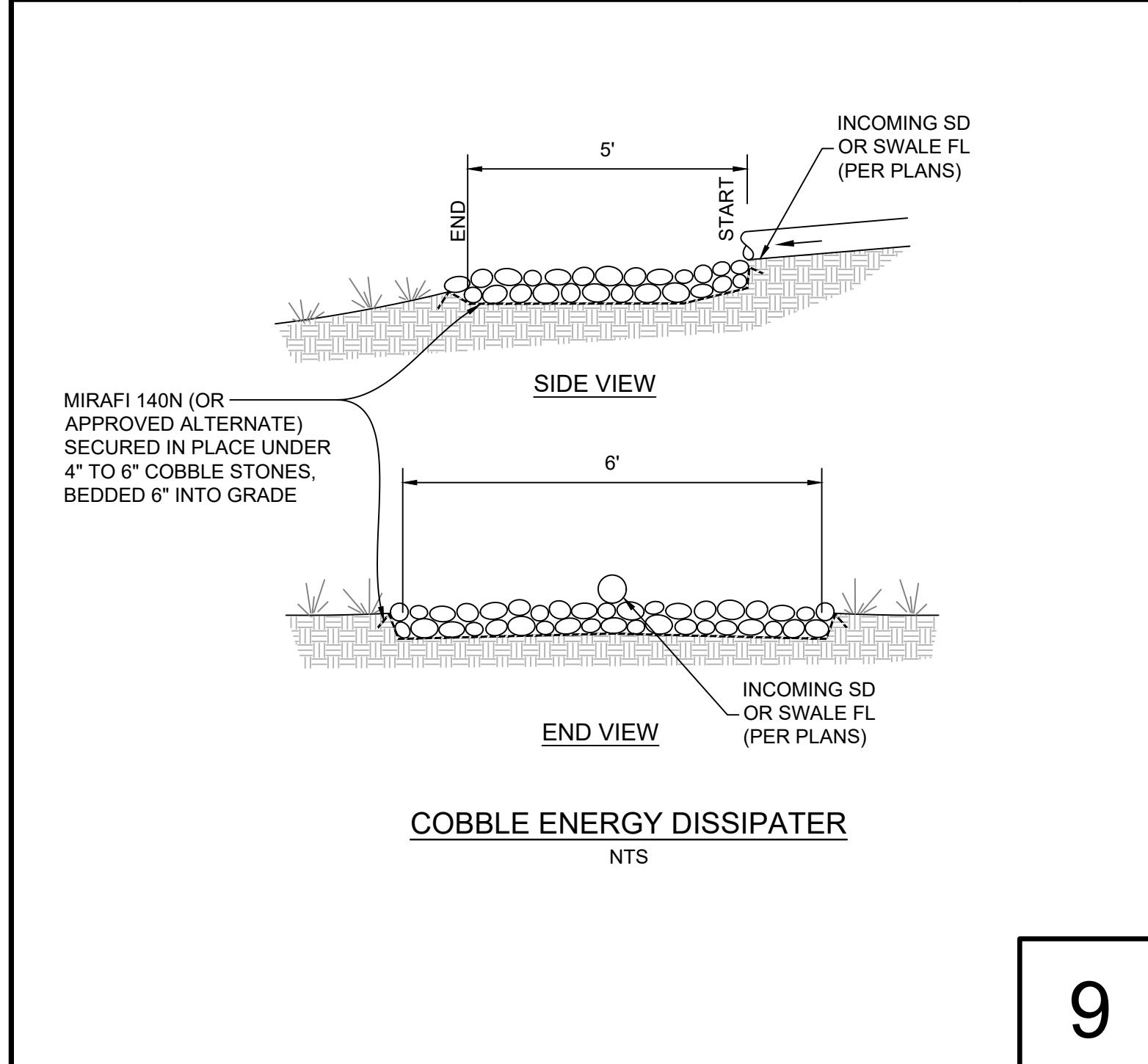


**CURB TAPER**  
NTS

5

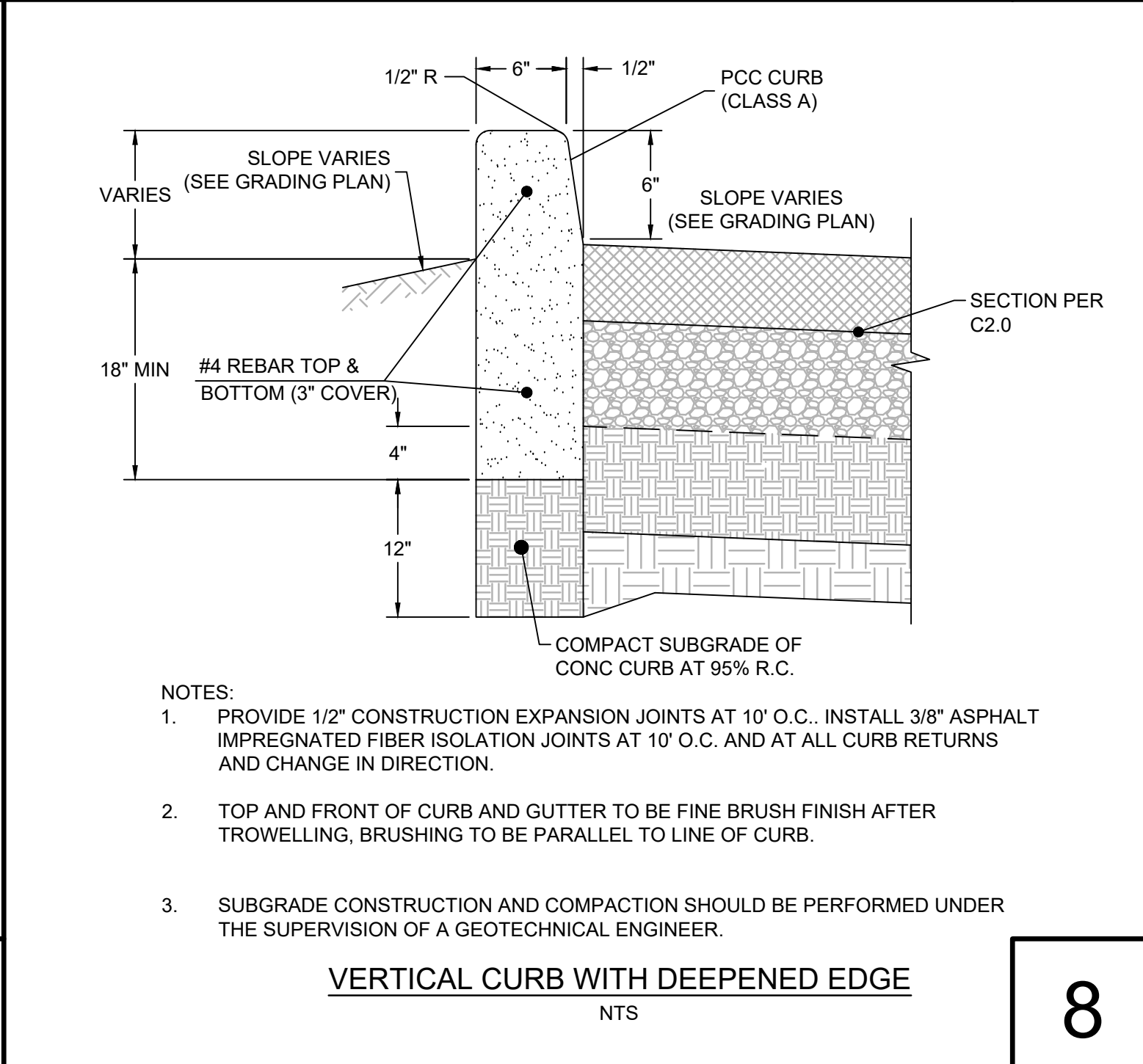


**DETAILS**  
**HUMAN SPACES, LLC.**  
 9041 SOQUEL DRIVE, APTOS, CA



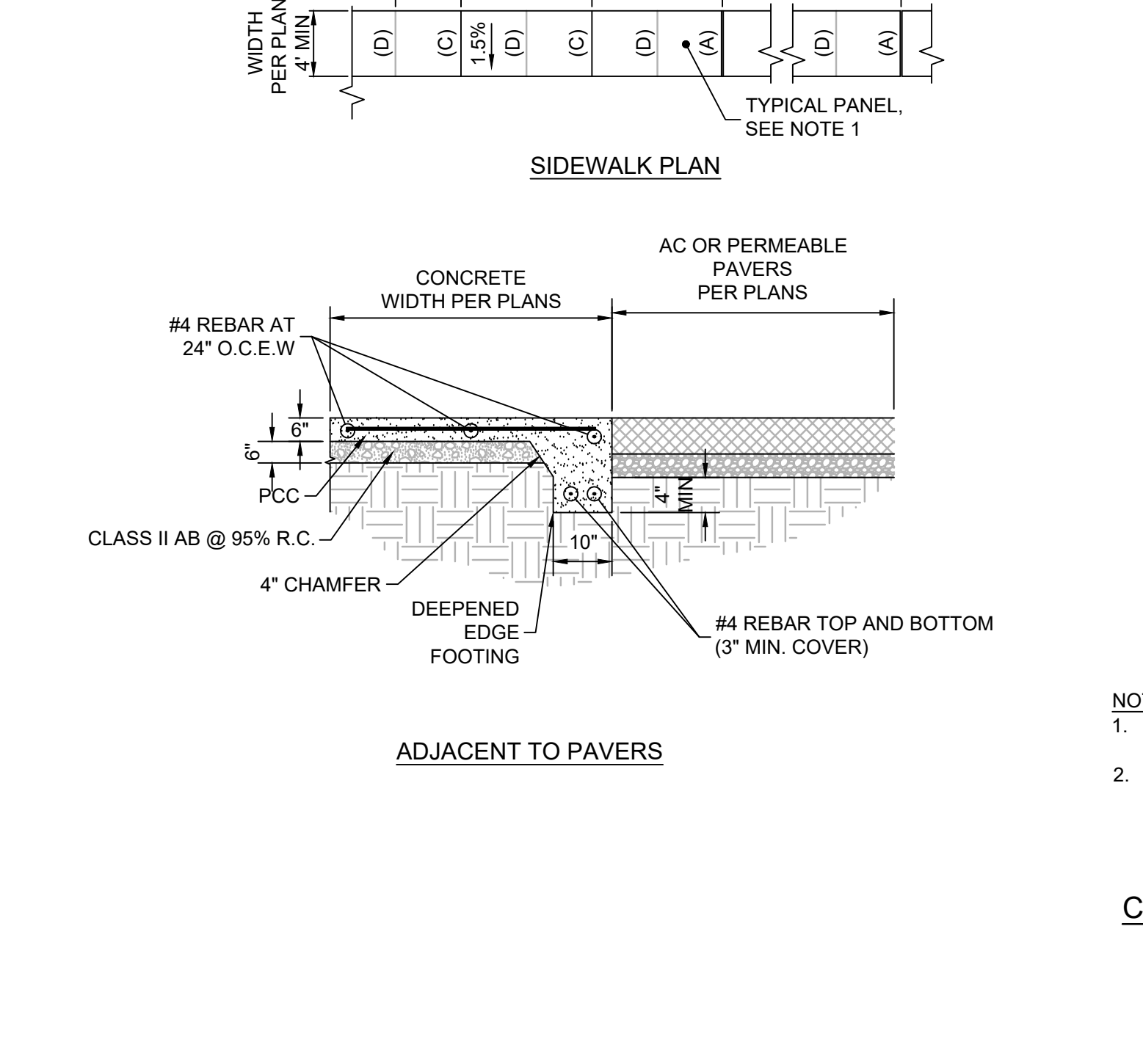
**COBBLE ENERGY DISSIPATER**  
NTS

9



**VERTICAL CURB WITH DEEPEDED EDGE**  
NTS

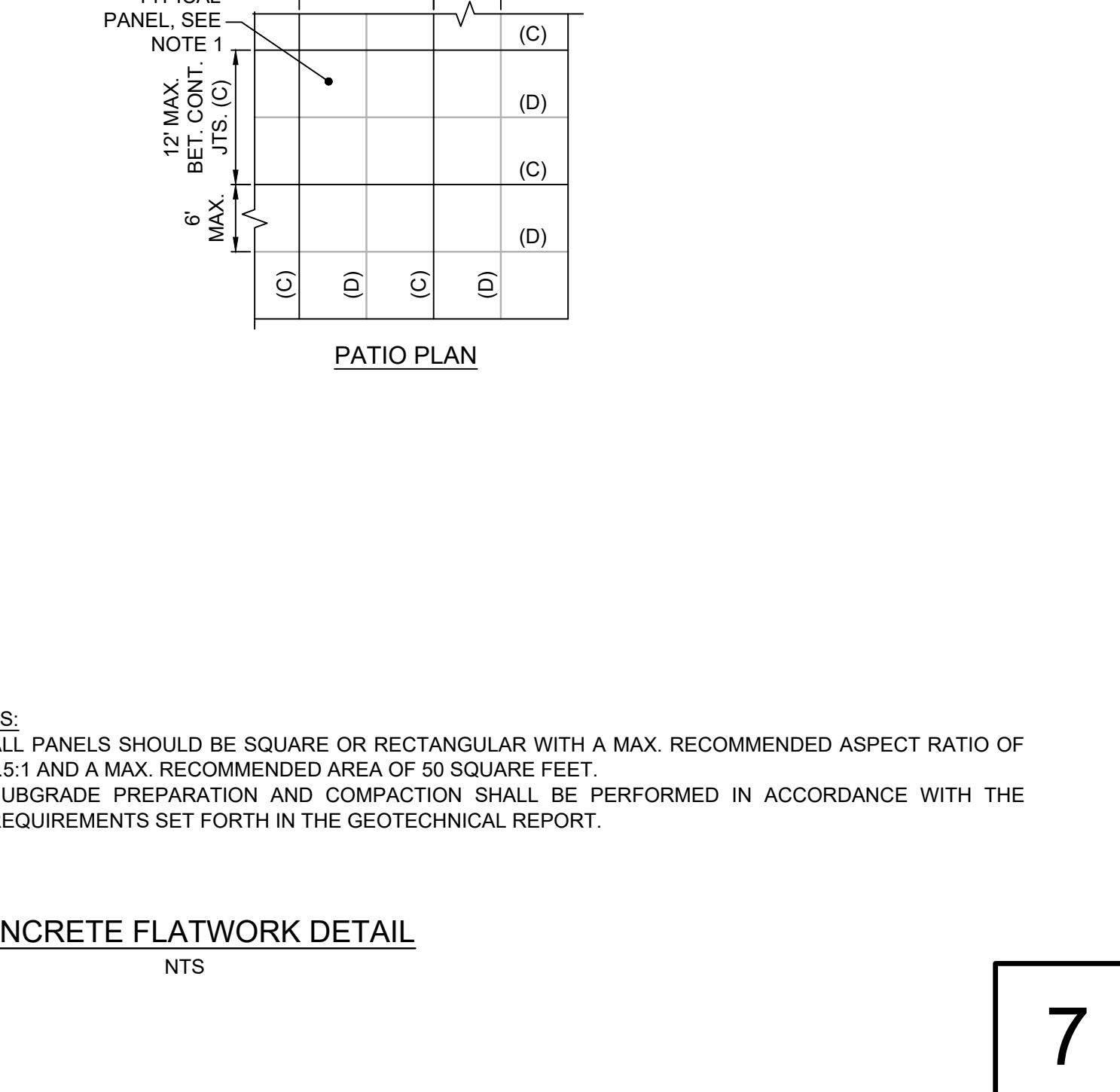
8



**SIDEWALK PLAN**

**ADJACENT TO PAVERS**

**CONCRETE FLATWORK DETAIL**  
NTS



**PATIO PLAN**

- NOTES:
- ALL PANELS SHOULD BE SQUARE OR RECTANGULAR WITH A MAX. RECOMMENDED ASPECT RATIO OF 1.5:1 AND A MAX. RECOMMENDED AREA OF 50 SQUARE FEET.
  - SUBGRADE PREPARATION AND COMPACTION SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN THE GEOTECHNICAL REPORT.

CIVIL ENGINEERING  
 LAND PLANNING  
 PROJECT MANAGEMENT  
 CONSTRUCTION SUPPORT  
 QSD AND QSP SERVICES  
 2905 KRISTIE COURT  
 SANTA CRUZ, CA 95065  
 TEL (831) 462-2905  
 www.ramseycivilengineering.com

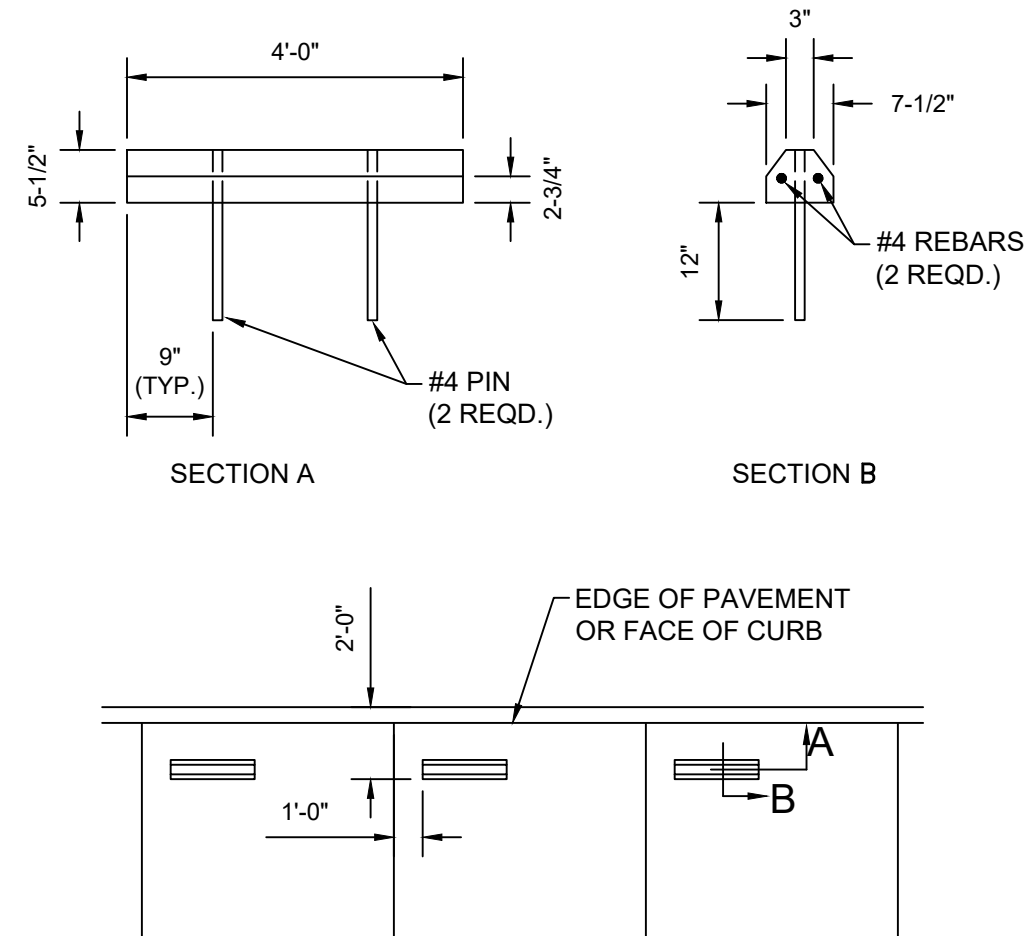
DAVID RAMSEY DATE  
 RCE# 73735

APN# 041-141-56  
 PLAN TYPE  
 MIXED USE  
 BUILDING PERMIT SET

NUMBER	DMR BY	RESPONSE TO PLANNING COMMENTS	DESCRIPTION	REVISION BLOCK	DATE
1	DMR				8/8/2025

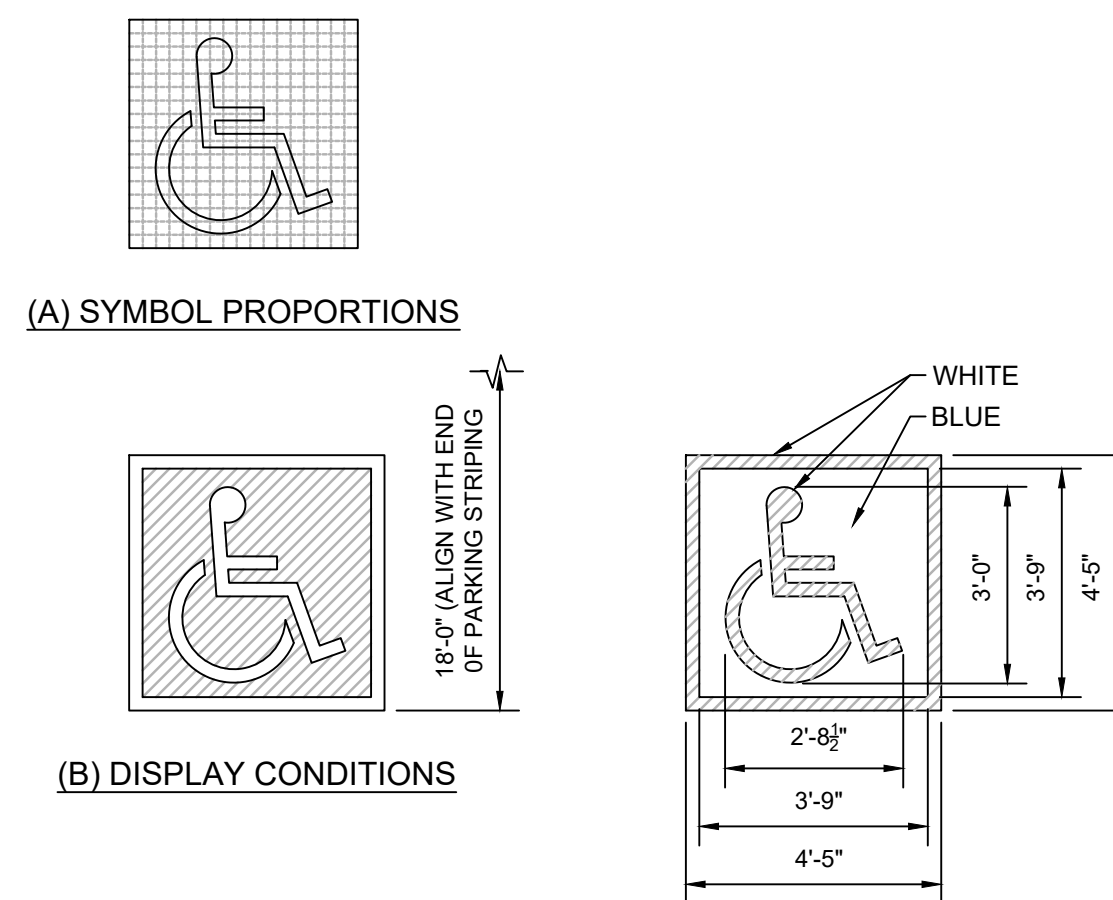
DRAWN BY: GS  
 DESIGNED BY: DMR  
 DATE: 04/24/2025  
 SCALE: AS NOTED  
 PROJECT NO: 18-01  
 SHEET:

**C5.0**



WHEEL STOPS  
NTS

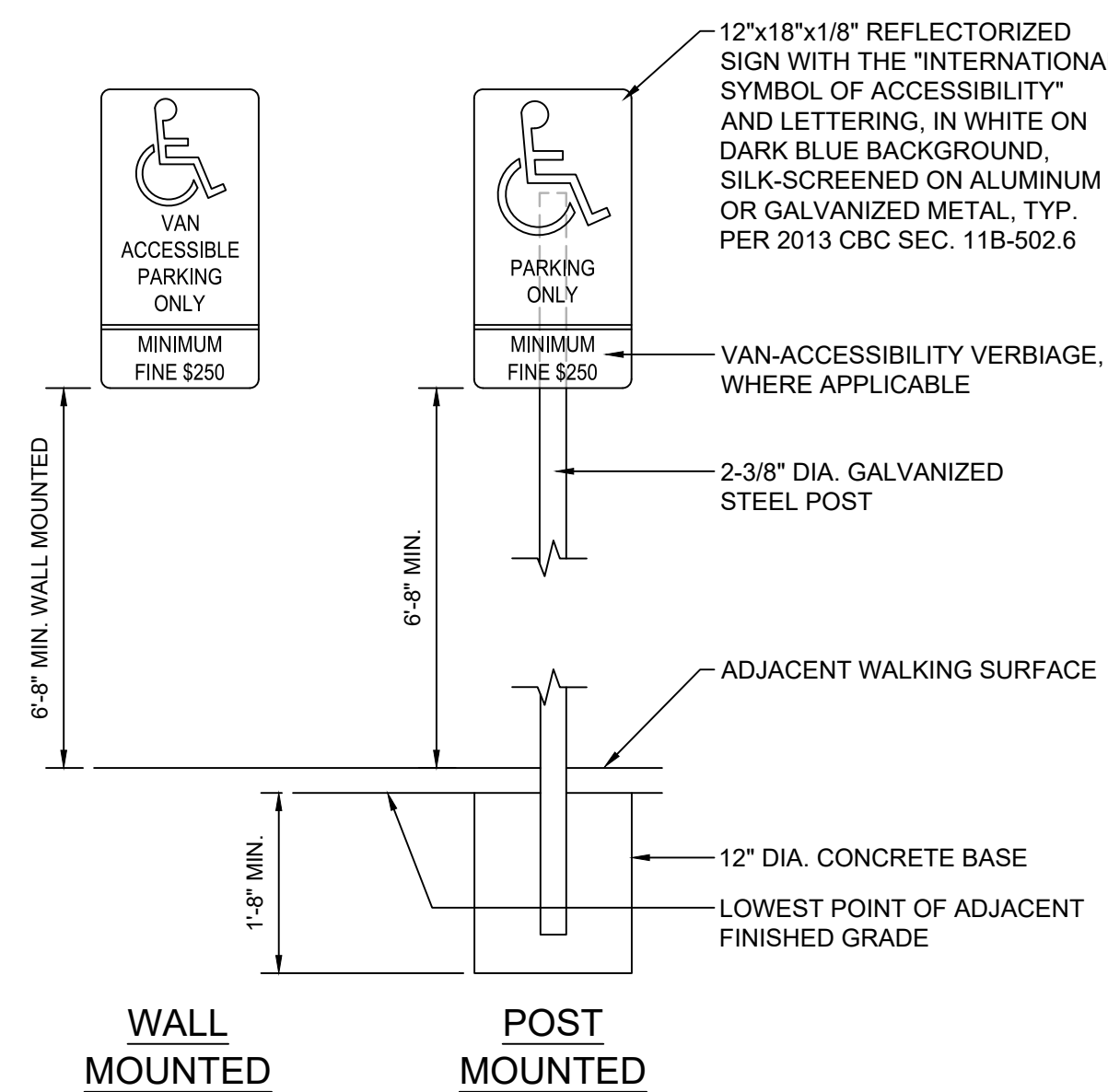
13



NOTES:  
THE SURFACE OF EACH ACCESSIBLE PARKING SPACE OR STALL SHALL HAVE A SURFACE IDENTIFICATION DUPLICATING EITHER OF THE FOLLOWING SCHEMES:  
1. OUTLINING OR PAINTING THE STALL OR SPACE IN BLUE AND OUTLINING ON THE GROUND IN THE STALL OR SPACE IN WHITE OR SUITABLE CONTRASTING COLOR A PROFILE VIEW DEPICTING A WHEELCHAIR WITH OCCUPANT; OR,  
2. OUTLINING A PROFILE VIEW OF A WHEELCHAIR WITH OCCUPANT IN WHITE ON BLUE BACKGROUND AND SHALL BE 36" HIGH BY 36" WIDE.

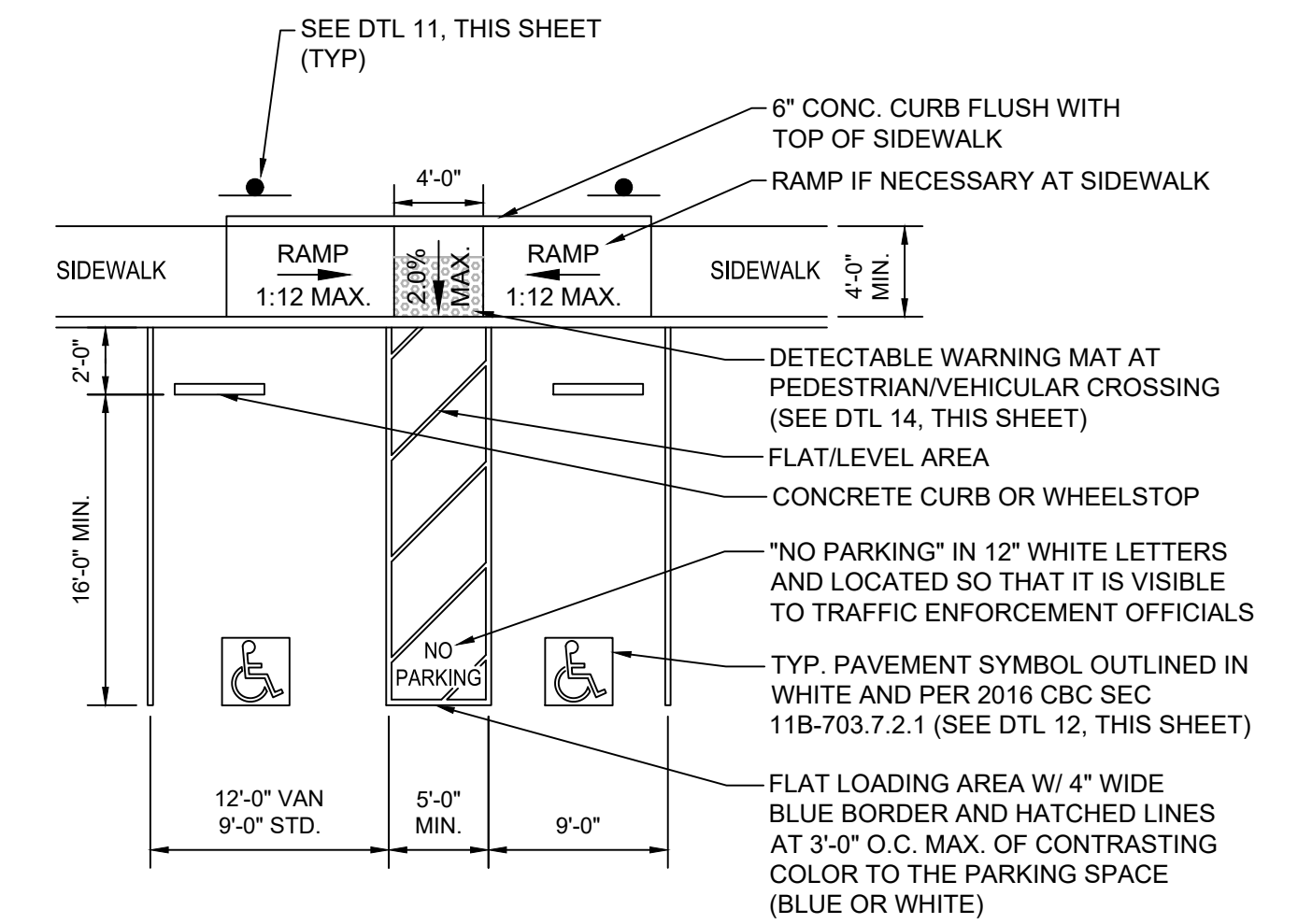
ACCESSIBLE PARKING SYMBOL  
NTS

12



ACCESSIBLE PARKING SIGNS  
NTS

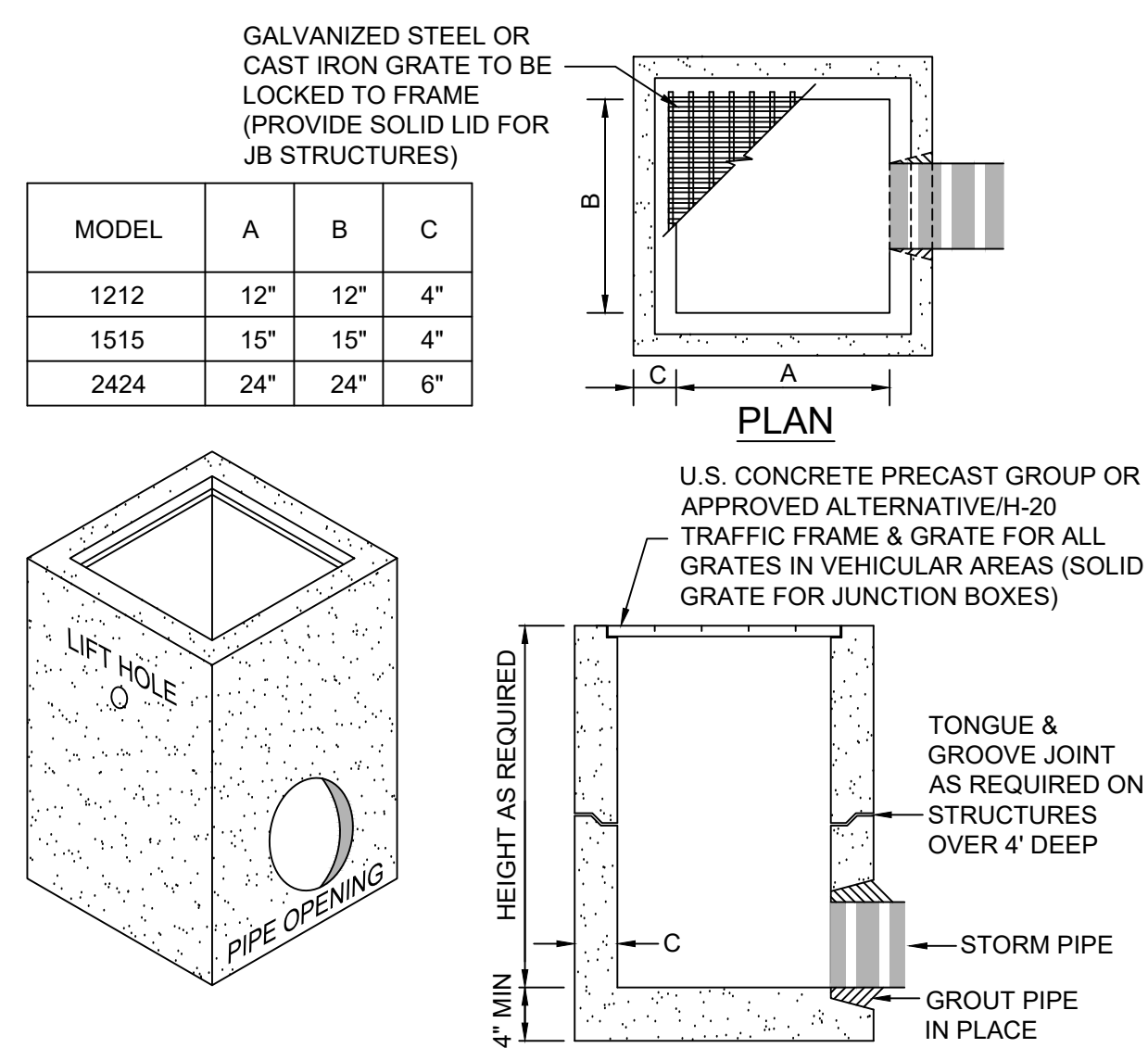
11



NOTES:  
1. A MINIMUM OF 8'2" VERTICAL CLEARANCE SHALL BE PROVIDED.

ACCESSIBLE PARKING STALL  
NTS

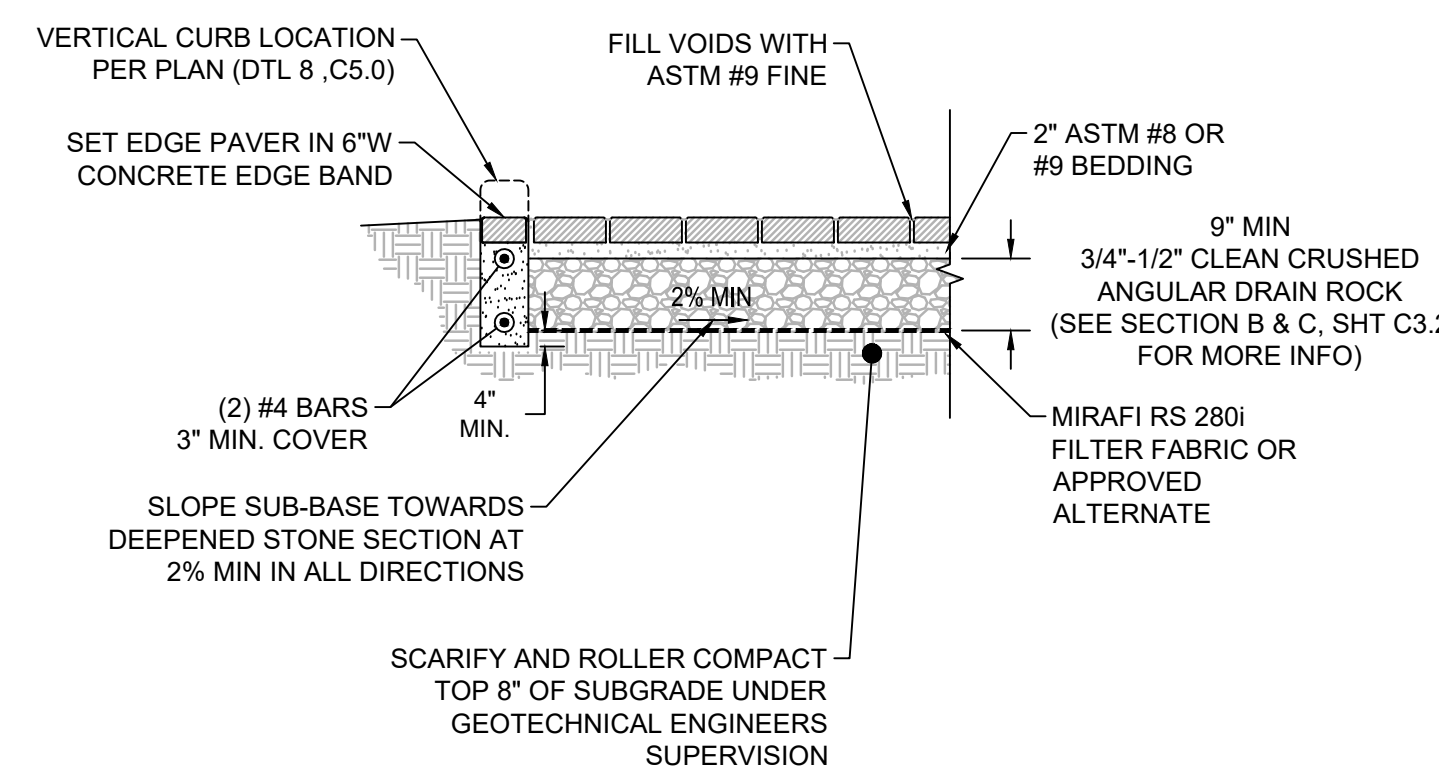
10



NOTES:  
1. ALL GRATES WITHIN DRIVE AISLES AND WALKWAYS SHALL BE HEEL PROOF ACCESSIBLE AND RATED FOR H-20 HEAVY TRAFFIC LOADING.  
2. ALTERNATE MANUFACTURES MAY BE USED SUBJECT TO APPROVAL BY THE CIVIL ENGINEER.

CATCH BASIN (CB/JB)  
NTS

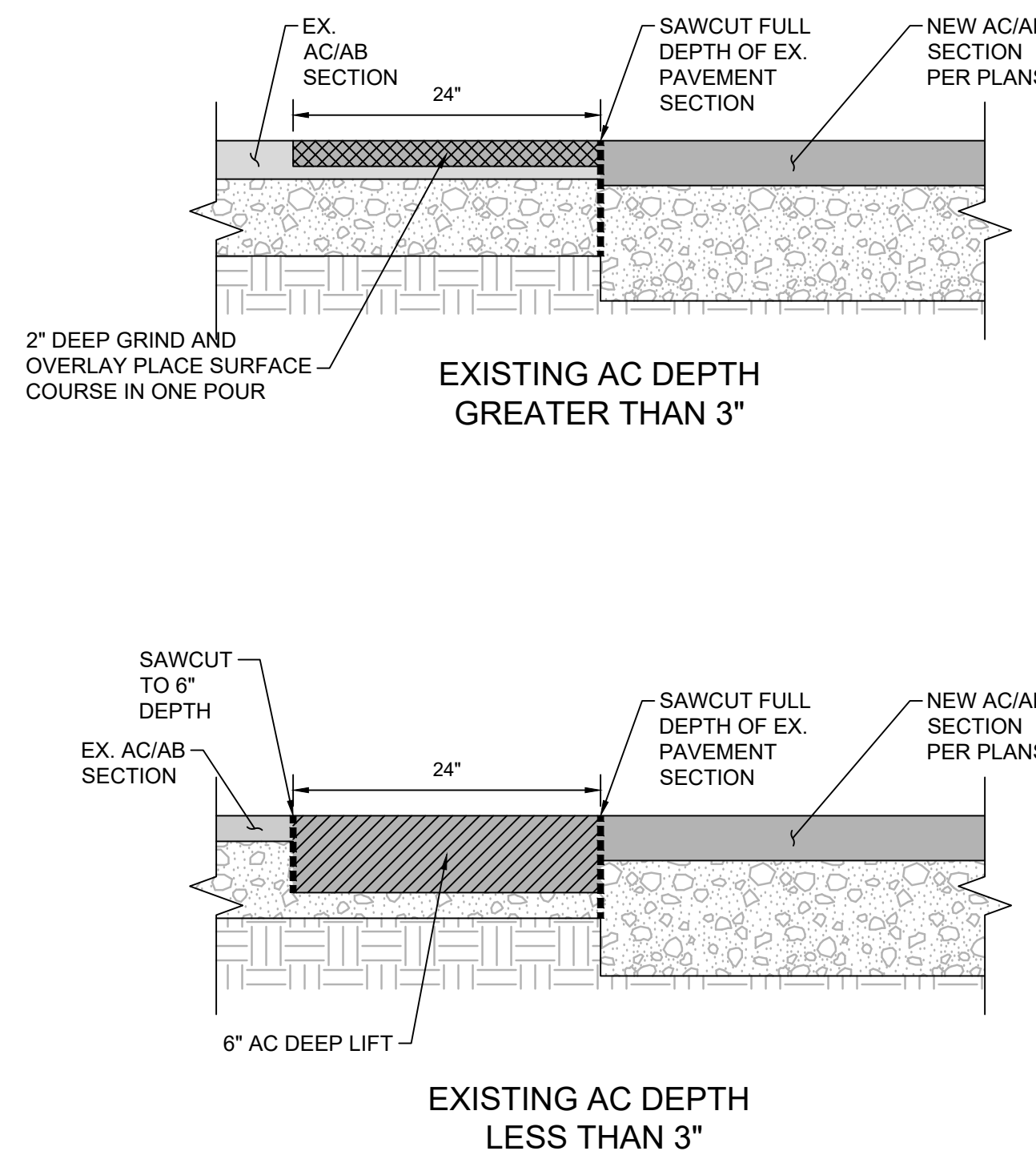
17



NOTES:  
1. CONCRETE PAVERS SHALL BE CALSTONE 6"x9" QUARRY STONE PAVERS WITH THE FOLLOWING SPECIFICATIONS:  
-3 1/8" THICKNESS IN VEHICULAR APPLICATION  
-4 1% OPEN AREA (GAP SPACING)  
-JOINT MATERIAL CONFORMING TO ASTM D448  
-190 INCH PER HOUR INITIAL INFILTRATION RATE  
-COLOR AND SPECIFICATIONS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT AND OWNER PRIOR TO CONSTRUCTION  
2. ALTERNATE PAVES SYSTEMS MAY BE USED BUT ARE SUBJECT TO REVIEW & APPROVAL BY THE PROJECT CIVIL ENGINEER, SOILS ENGINEER & APPROPRIATE STORMWATER REVIEW AGENCY. ALTERNATE SYSTEM MUST MEET THE ABOVE PERFORMANCE SPECIFICATIONS.  
3. COMPACT AREA BENEATH CURBS AT 95% RELATIVE COMPACTION UNDER THE SUPERVISION OF THE GEOTECHNICAL ENGINEER.

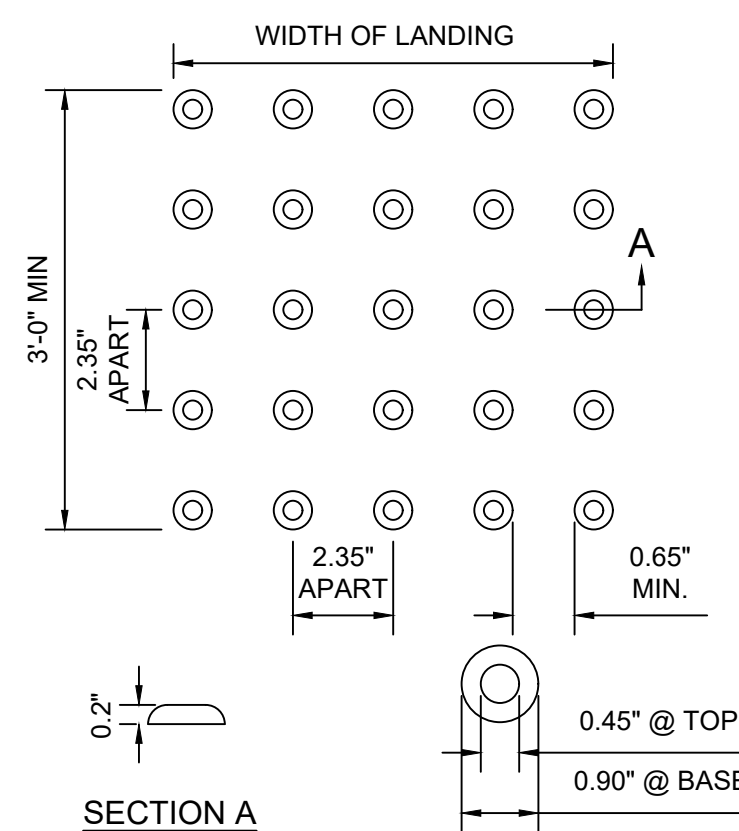
PERVIOUS PAVERS DETAIL  
NTS

16



NEW TO EXISTING AC INTERFACE  
NTS

15



DETECTABLE WARNING SURFACE:  
1. DETECTABLE WARNING SURFACE TILES SHALL COMPLY WITH THE DETECTABLE WARNINGS ON WALKING SURFACES SECTION OF THE AMERICANS WITH DISABILITIES ACT (TITLE 111 REGULATIONS, 28 CFR PART 36 ADA STANDARDS FOR ACCESSIBLE DESIGN, APPENDIX A, SECTION 4.29.2 DETECTABLE WARNINGS ON WALKING SURFACES). TILES SHALL BE ARMOR-TILE MANUFACTURED BY ENGINEERED PLASTICS INC. PHONE: (800)852-2525 OR APPROVED EQUIVALENT. COLOR SHALL BE YELLOW CONFORMING TO FEDERAL COLOR NO. 33538 AND SHALL BE HOMOGENEOUS THROUGHOUT THE TILE OR MEETING THE ADJUSTING CONTRASTING COLOR REQUIREMENTS SHOULD ANOTHER COLOR BE USED. CONTRACTOR SHALL CAST THE DETECTABLE WARNING SURFACE TILES FLUSH WITH THE CONCRETE AND COORDINATE WITH THE CONCRETE INSTALLER.

TRUNCATED DOMES  
NTS

14

RESPONSE TO PLANNING COMMENTS	DATE
1	8/8/2025

REVISION BLOCK	NUMBER	BY	DESCRIPTION
	1	DMR	

DRAWN BY:	GS
DESIGNED BY:	DMR
DATE:	04/24/2025
SCALE:	AS NOTED
PROJECT NO.:	18-001
SHEET:	

C5.1

**BIORETENTION NOTES**

1. SURFACE OF THE PLANTING BED SHALL BE RELATIVELY LEVEL BUT MAY HAVE A SLIGHT SLOPE TO DISTRIBUTE WATER THROUGHOUT SURFACE AREA.
2. PER LANDSCAPE PLANS ALL SLOPES 3:1 OR GREATER MUST BE COVERED WITH EROSION CONTROL NETTING PER THE MANUFACTURERS SPECIFICATIONS. OVERLAP ALL EDGES A MINIMUM OF 12" AND SECURE AS REQUIRED WITH METAL STAPLES. MULCH AND PLANT SLOPES PER LANDSCAPE PLANS.

**SOIL REQUIREMENTS**

1. PLANTING SOILS SHALL MEET THE BIOTREATMENT SOIL MIX SPECIFICATIONS APPROPRIATE FOR THE JURISDICTION. A MINIMUM INFILTRATION RATE OF 5 IN/HR AND A MAXIMUM INFILTRATION RATE OF 10 IN/HR ARE REQUIRED.

**VEGETATION**

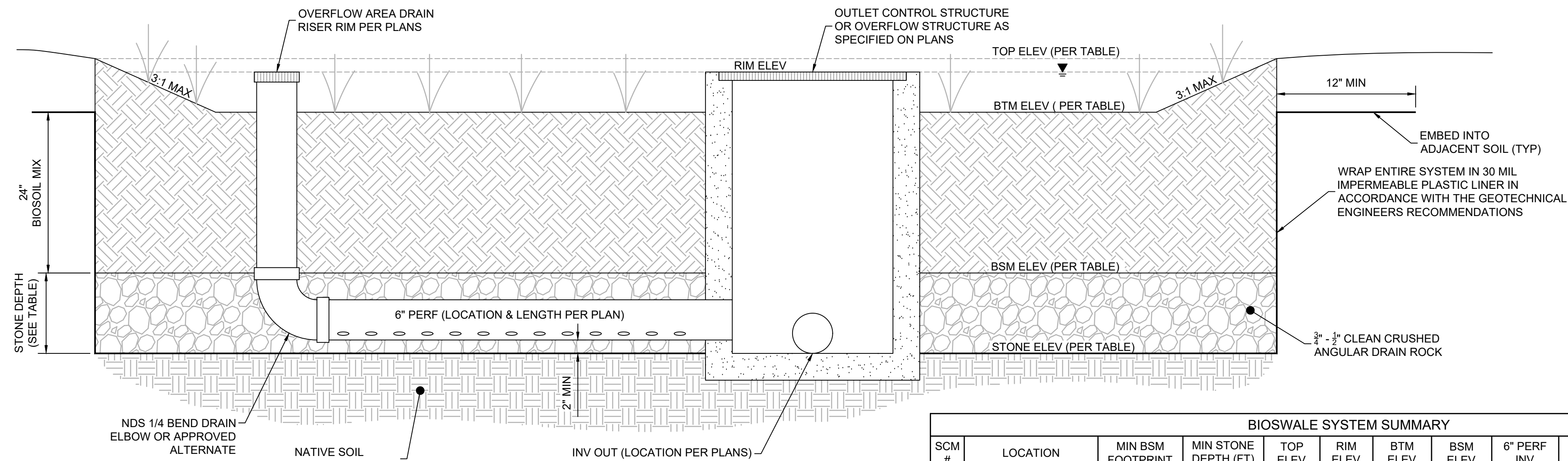
1. PLANT SPECIES SELECTED SHALL BE SUITABLE FOR BIORETENTION AREA LOCATION, BIOTREATMENT SOILS AND OCCASIONAL INUNDATION
2. VEGETATION SHOULD NOT BLOCK INFLOW, CREATE SAFETY ISSUES OR OBSTRUCT FACILITIES.
3. PLANTING SELECTIONS ARE SUBJECT TO THE LANDSCAPING REQUIREMENTS OF THE LOCAL JURISDICTION AND SHALL BE SELECTED BY A LICENSED LANDSCAPE ARCHITECT OR ARCHITECT.

**CONSTRUCTION REQUIREMENTS**

4. BIORETENTION AREAS ARE NOT INTENDED TO WORK AS CONSTRUCTION PHASE BMP'S. PROTECT THE AREA FROM CONSTRUCTION SITE RUNOFF; DIVERT RUNOFF FROM UNSTABILIZED AREAS AWAY FROM COMPLETED BIORETENTION AREAS.
5. SURFACE INFILTRATION TESTING METHOD: FALLING HEAD TEST (OR APPROVED ALTERNATE, TO BE PERFORMED BY A QUALIFIED PROFESSIONAL).  
- MIN ACCEPTABLE SURFACE INFILTRATION RATE = 5IN/HR

**MAINTENANCE**

6. CONDUCT BIENNIAL EVALUATION OF THE HEALTH OF THE VEGETATION AND REMOVE AND REPLACE DEAD OR DYING PLANTS.
7. MAINTAIN VEGETATION AND THE IRRIGATION SYSTEM.
8. AVOID THE USE OF PESTICIDES AND QUICK RELEASE SYNTHETIC FERTILIZERS.
9. BEFORE THE WET SEASON BEGINS, VERIFY THAT THERE IS SUFFICIENT BIOTREATMENT SOIL MEDIA TO EFFECTIVELY FILTER STORMWATER. REMOVE ACCUMULATIONS OF SEDIMENT, LITTER AND DEBRIS AS NECESSARY.
10. PERIODICALLY CHECK DOWNSPOUTS, INLETS AND OVERFLOW PIPING. REMOVE DEBRIS AND REPAIR/REPLACE DAMAGED OR DISCONNECTED PIPES.
11. CONDUCT ANNUAL SURFACE INFILTRATION RATE TESTING DURING THE DRY SEASON.  
- TEST METHODOLOGY: (FALLING HEAD TEST, OR APPROVED ALTERNATE - TO BE PERFORMED BY A QUALIFIED PROFESSIONAL).  
- MIN ACCEPTABLE SURFACE INFILTRATION RATE = 5 IN/HR.



**BIORETENTION DETAIL**  
NTS

BIOSWALE SYSTEM SUMMARY											
SCM #	LOCATION	MIN BSM FOOTPRINT	MIN STONE DEPTH (FT)	TOP ELEV	RIM ELEV	BTM ELEV	BSM ELEV	6" PERF INV	STONE ELEV	INV OUT	FUNCTION
1	NORTH SIDE OF PROPOSED BUILDING	284 SF	1.00	100	99.83	99.33	97.33	96.33	96.50	96.50	TREATMENT & DETENTION
2A	SOUTH-WEST SIDE OF SITE	116 SF	1.00	109.00	108.83	108.33	106.33	105.33	105.50	105.50	TREATMENT ONLY
2B	SOUTH-CENTRAL SIDE OF SITE	70 SF	1.00	109.50	109.33	108.83	106.83	105.83	106.00	106.00	TREATMENT ONLY

**RAMSEY**  
CIVIL ENGINEERING INC.  
CIVIL ENGINEERING  
LAND PLANNING  
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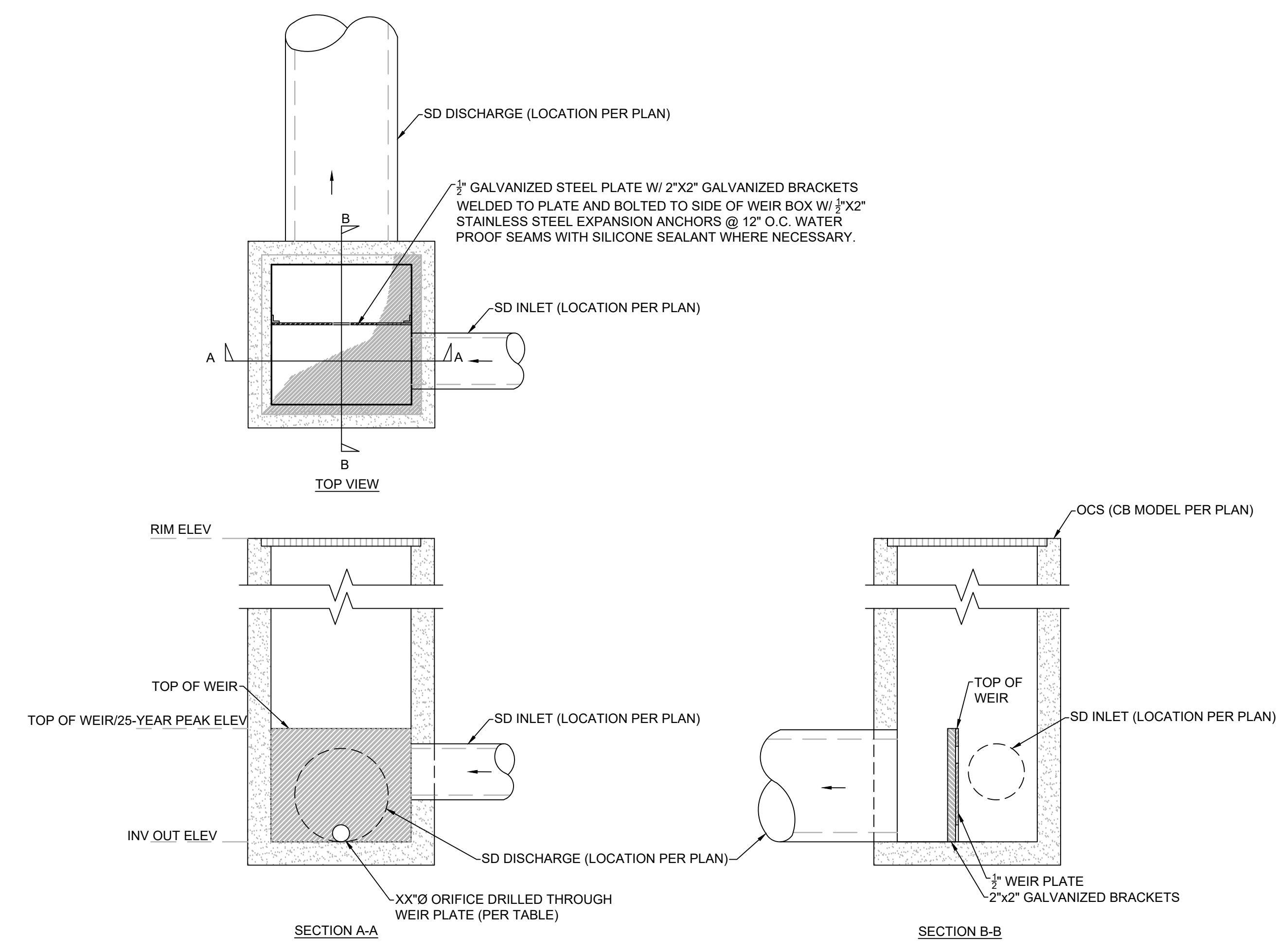
REGISTERED PROFESSIONAL ENGINEER  
DAVID RAMSEY  
NO. C73735  
STATE OF CALIFORNIA  
CIVIL

DAVID RAMSEY DATE  
RCE# 73735

APN# 041-141-56  
PLAN TYPE  
MIXED USE  
BUILDING PERMIT SET

18

DETAILS  
**HUMAN SPACES, LLC.**  
9041 SOQUEL DRIVE, APTOS, CA



OCS SUMMARY							
OCS	RIM	6" PERF INV	INV OUT	REQ DET V <sup>1</sup>	WEIR HEIGHT	TOP OF WEIR ELEV	ORIFICE DIAMTER
1	98.83	95.50	95.50	225 CF	2.57 FT	98.07	5/8 IN
2	105.93	103.20	100.80	329 CF	1.60 FT	104.80	7/8 IN

1- SEE SWM-17 SPREADSHEET

- NOTES:  
1. ENSURE THAT DISCHARGE PIPES ARE LOCATED BEHIND WEIR PLATE.

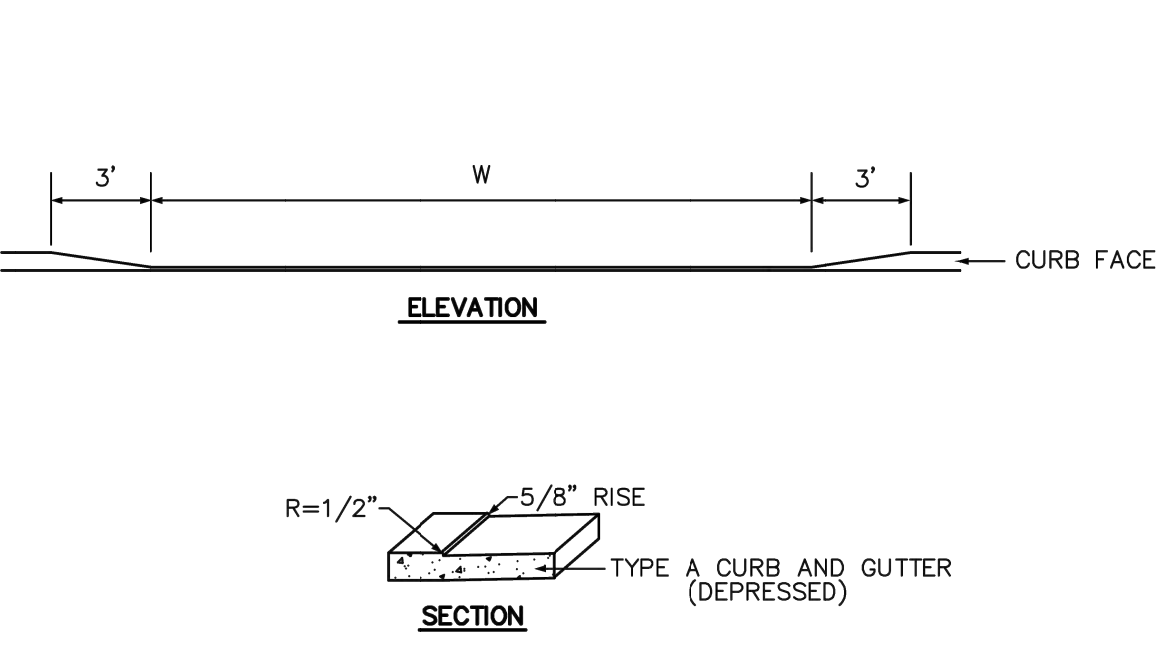
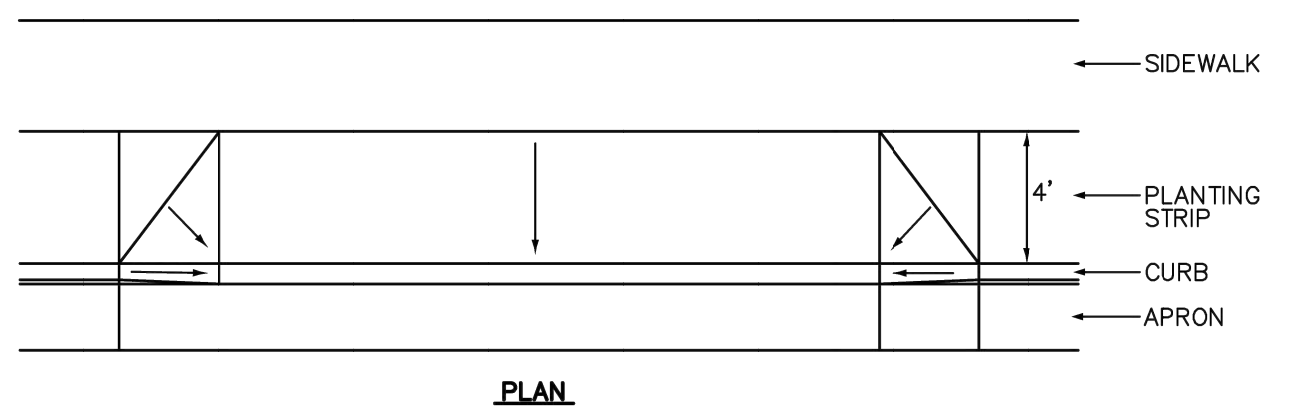
**OUTLET CONTROL STRUCTURE**  
NTS

19

DATE	DESCRIPTION	REVISION BLOCK
8/8/2025	RESPONSE TO PLANNING COMMENTS	
	DMR	
	BY	
	NUMBER	
	1	

DRAWN BY: GS  
DESIGNED BY: DMR  
DATE: 04/24/2025  
SCALE: AS NOTED  
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SHEET:

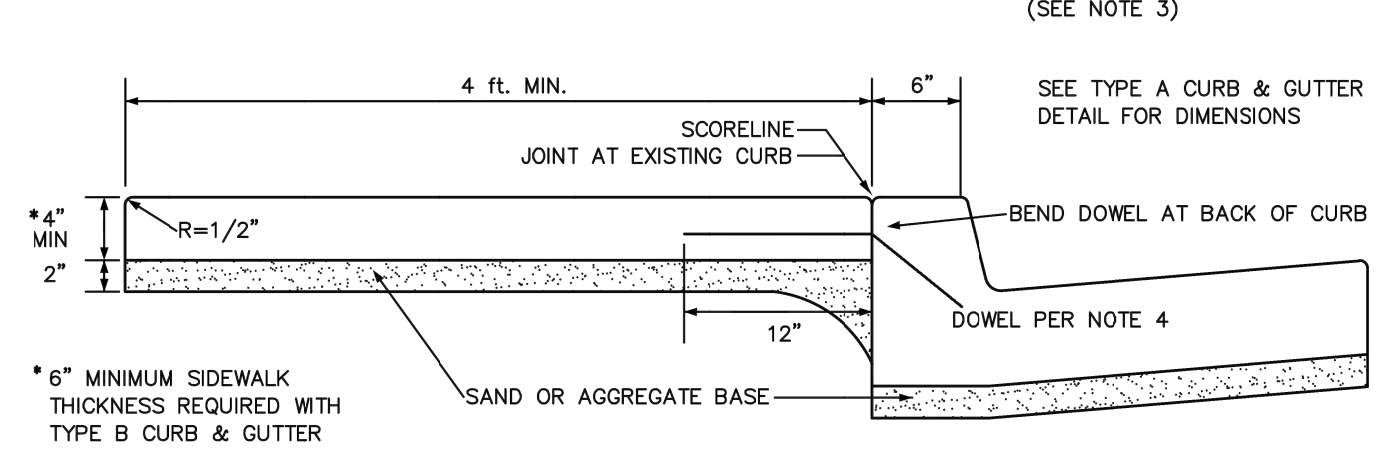
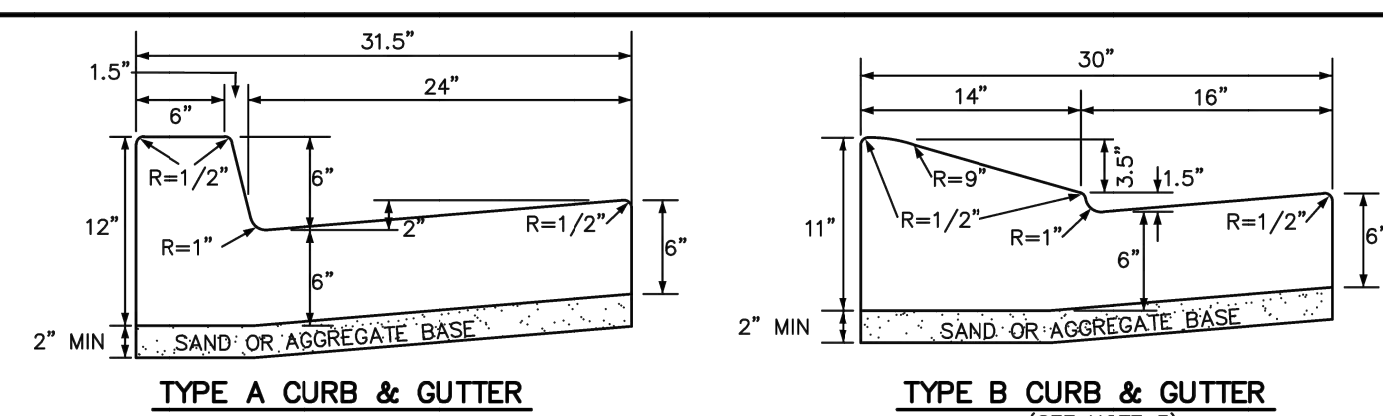
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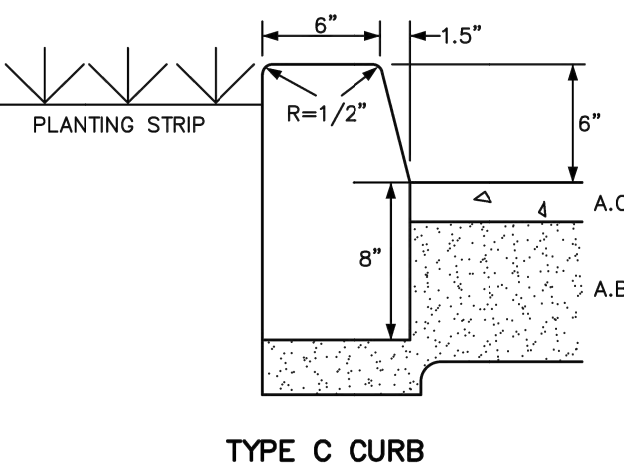
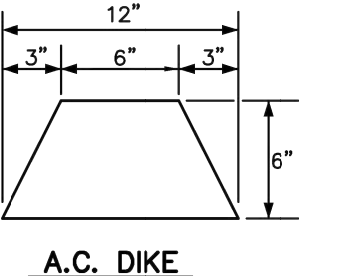
**NOTES:**  
 THE WIDTH OF THE DRIVEWAY IS THE DISTANCE 'W'.  
 THE MAXIMUM WIDTH FOR RESIDENTIAL DRIVEWAYS IS 24'.  
 THE MAXIMUM WIDTH FOR COMMERCIAL DRIVEWAYS IS 40'.  
 DRIVEWAY CONCRETE SHALL BE 6" THICK ON 6" CLASS 2 AGGREGATE BASE.  
 WHEN MORE THAN ONE DRIVEWAY IS TO SERVE A GIVEN PROPERTY FRONTAGE, THE WIDTH OF ALL DRIVEWAYS SHALL NOT EXCEED 70 PERCENT OF THE FRONTAGE FOR COMMERCIAL PARCELS OR 50 PERCENT OF THE FRONTAGE FOR RESIDENTIAL PARCELS. NOT LESS THAN 20' OF FULL HEIGHT CURB SHALL BE PROVIDED BETWEEN DRIVEWAYS. THE DISTANCE BETWEEN DRIVEWAYS MAY BE REDUCED BY THE DIRECTOR OF PUBLIC WORKS DUE TO SPECIAL CIRCUMSTANCES.  
 THE SIDELINE OF ANY DRIVEWAY SHALL NOT BE LESS THAN 10' FROM THE INTERSECTION CURB RETURN.

TYPICAL DRIVEWAY DEPRESSION

REV 5/19 FIG. ST-6a 30

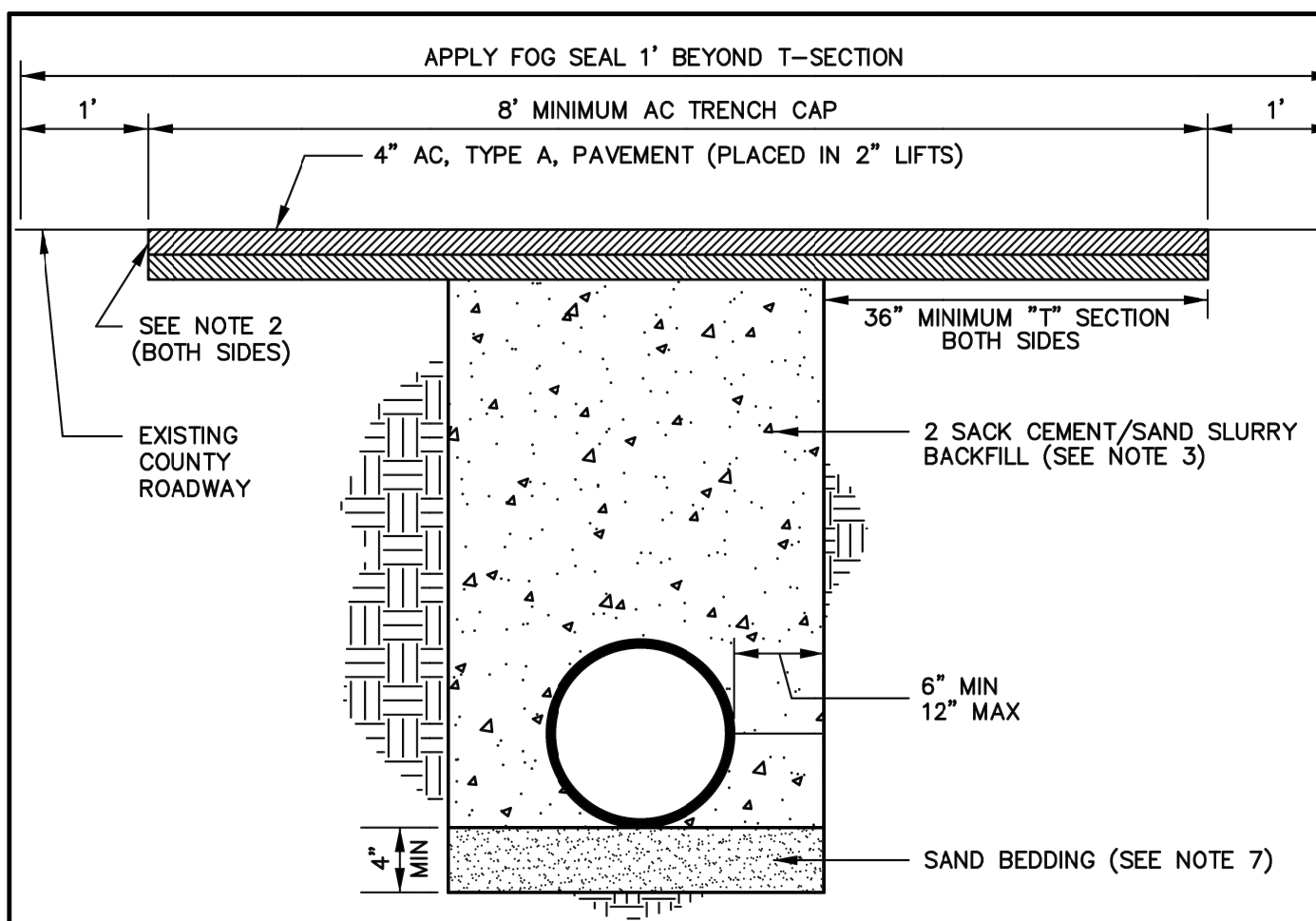


- NOTES:**
- TYPE A, B, & C CURB, GUTTER, & SIDEWALK SHALL BE CONSTRUCTED OF CALTRANS STANDARD MINOR CONCRETE.
  - BASE MATERIAL SHALL BE COMPACTED TO 90% RELATIVE COMPACTION UNDER SIDEWALK AND 95% RELATIVE COMPACTION UNDER CURB, GUTTER, AND ASPHALT.
  - WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED AT MAXIMUM 12' INTERVALS.
  - TYPE B CURB SHALL BE USED ONLY TO CONFORM TO EXISTING TYPE B CURB WHERE SPECIFICALLY APPROVED BY THE DIRECTOR OF PUBLIC WORKS.
  - IF SIDEWALK IS NOT INSTALLED MONOLITHICALLY WITH CURB & GUTTER, PLACE #4 DOWELS 18" LONG AT 4' O.C. IN BACK OF CURB 2" DOWN FROM TOP OF CURB, 6" INTO CURB.
  - DOWELS SHALL BE PLACED AT ALL JUNCTIONS WITH EXISTING CONCRETE.
  - WHERE CURB AND GUTTER IS REQUIRED TO BE REPLACED, REMOVE AND REPLACE A MINIMUM OF 2' OF ASPHALT ADJACENT TO NEW GUTTER, UNLESS WAIVED BY THE DIRECTOR OF PUBLIC WORKS.



CURB, GUTTER, SIDEWALK, AND DIKE DETAILS

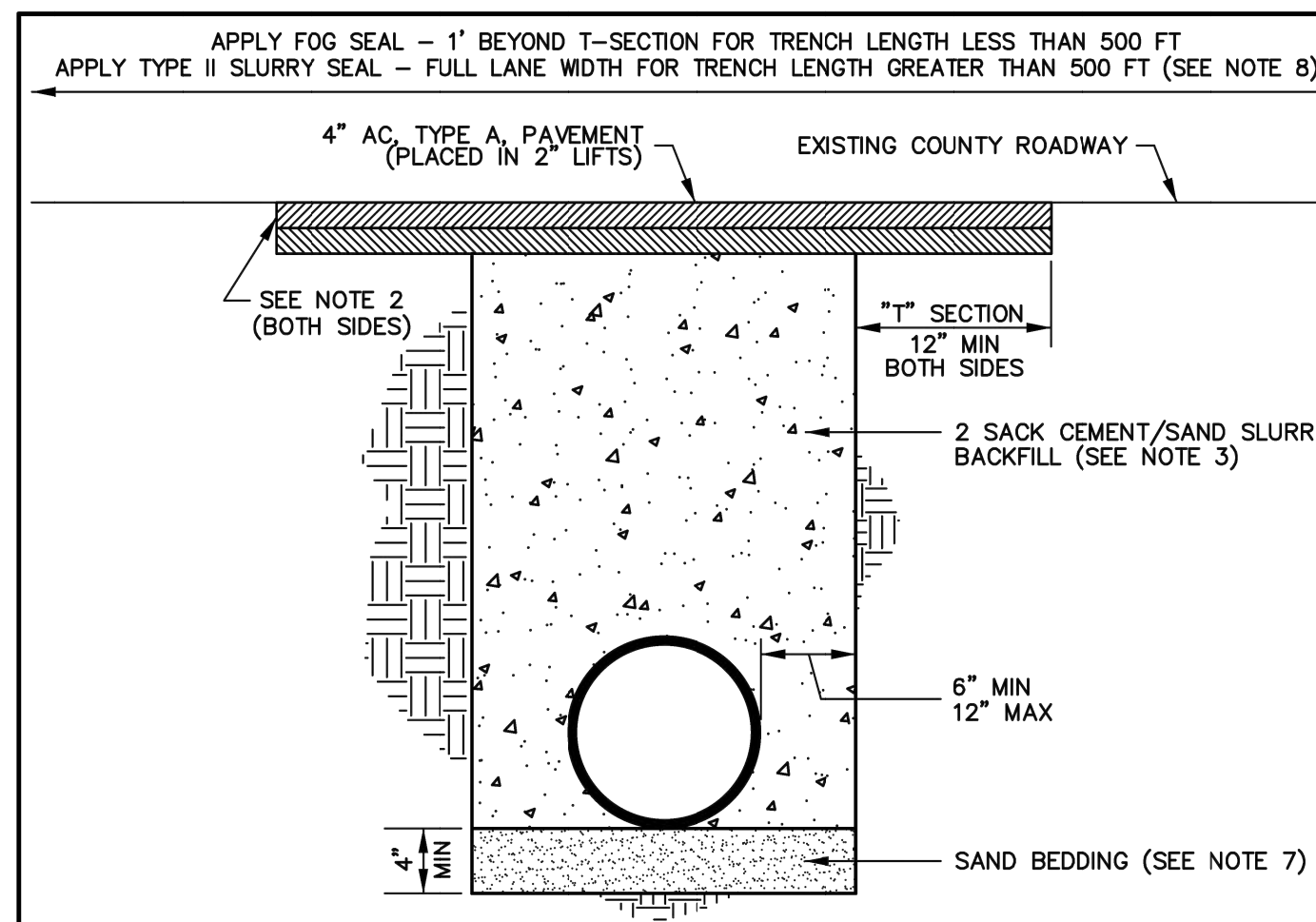
REV 5/19 FIG. ST-4a 27



- NOTES:**
- MINIMUM STANDARDS ARE AS FOLLOWS:  
 A. PAVED ROADS - 4" AC, TYPE A, 1/2" MAX, PLACED IN 2" LIFTS  
 B. NON-PAVED ROADS - SINGLE SEAL COAT OVER 6" AB, CLASS 2, IN TRENCH AREA, THEN SINGLE SEAL COAT ENTIRE ROAD SECTION.
  - CUT EXISTING PAVEMENT TO PRODUCE A STRAIGHT VERTICAL FACE AGAINST WHICH TO BUTT THE TRENCH PAVEMENT.
  - CEMENT/SAND SLURRY SHALL BE MIXED IN A TRANSIT MIXER (CERTIFICATION TAGS REQUIRED) AND CONSIST OF 188 lbs OF CEMENT FOR EACH CUBIC YARD OF MATERIAL.
  - TRENCHES OUTSIDE A PAVED AREA OR A ROAD RIGHT-OF-WAY SHALL HAVE BACKFILL COMPACTED TO NOT LESS THAN 90% RELATIVE COMPACTION.
  - TRENCH CAP AND LAYOUT REQUIREMENTS:  
 A. IF THE EDGE OF THE ASPHALT TRENCH CAP IS WITHIN 2' OF THE EXISTING EDGE OF PAVEMENT, LIP OF GUTTER, OR LANE LINE, THE REMAINING PAVEMENT SHALL BE REMOVED AND THE TRENCH PAVING SHALL BE EXTENDED TO THE EDGE OF PAVEMENT, LIP OF GUTTER, OR LANE LINE.  
 B. IF THERE IS 4' OR LESS BETWEEN TRENCH CAPS, THE REMAINING PAVEMENT BETWEEN TRENCHES SHALL BE REMOVED AND TRENCH PAVING SHALL BE EXTENDED TO CREATE A SINGLE TRENCH CAP.
  - ANY EXCEPTIONS TO THIS DETAIL MUST BE APPROVED BY THE DIRECTOR OF PUBLIC WORKS.
  - CLEAN SAND COMPACTED TO 95% RELATIVE COMPACTION MAY BE USED FOR PIPE BEDDING BELOW BOTTOM OF PIPE. FOR WATER MAIN LINES THE SAND BEDDING MAY EXTEND UP TO 12" ABOVE TOP OF PIPE. CEMENT SAND SLURRY SHALL BE USED ABOVE SAND ZONE.
  - WHEN MULTIPLE CROSS TRENCHES ARE INSTALLED OR WHEN A CROSS TRENCH IS INSTALLED IN COMBINATION WITH A LONGITUDINAL TRENCH, A TYPE II SLURRY SEAL COAT MAY BE REQUIRED.

CROSS TRENCH DETAIL

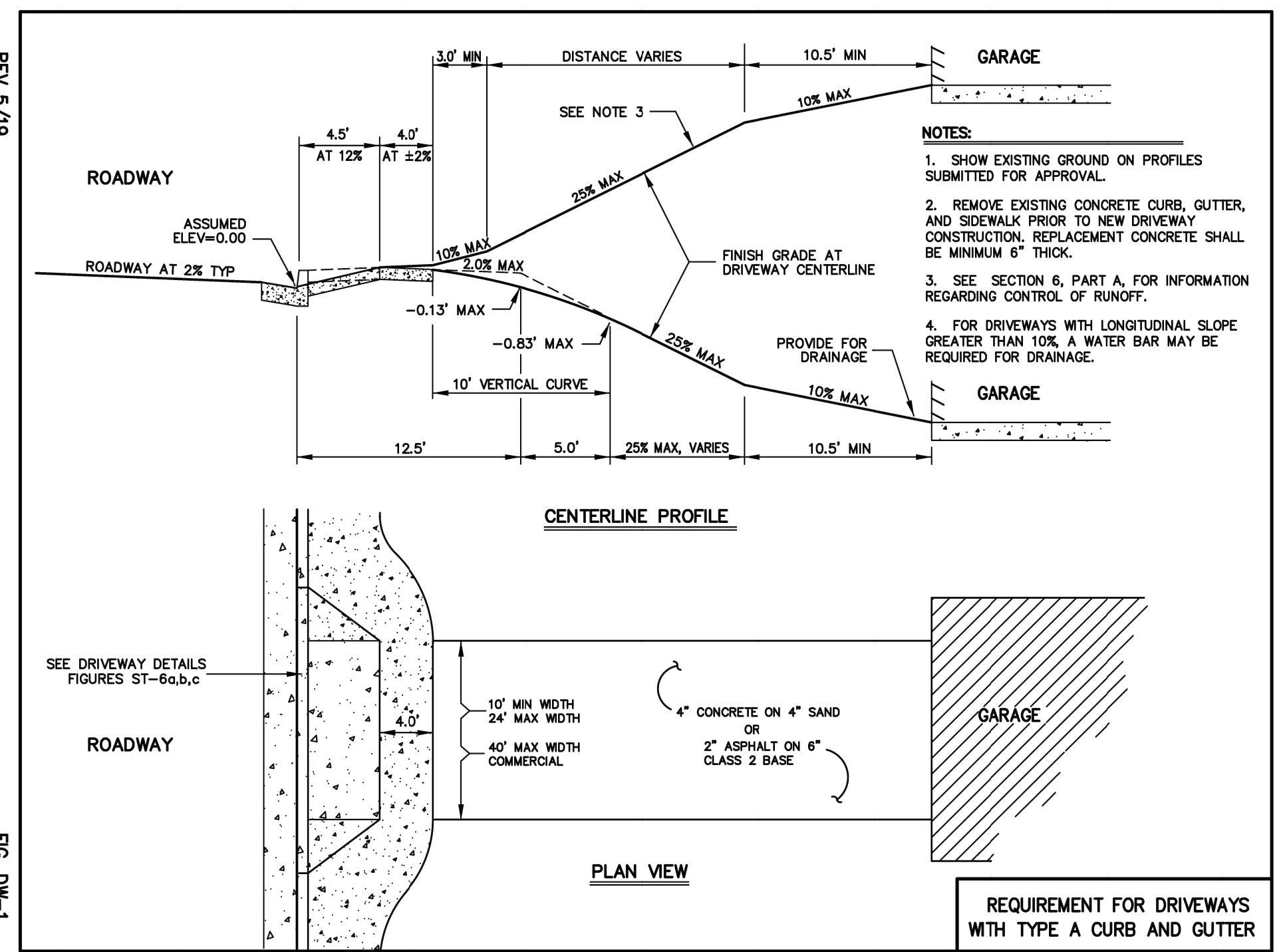
REV 5/19 FIG. EP-2 214



- NOTES:**
- MINIMUM STANDARDS ARE AS FOLLOWS:  
 A. PAVED ROADS - 4" AC, TYPE A, 1/2" MAX, PLACED IN 2" LIFTS  
 B. NON-PAVED ROADS - SINGLE SEAL COAT OVER 6" AB, CLASS 2, IN TRENCH AREA, THEN SINGLE SEAL COAT ENTIRE ROAD SECTION.
  - CUT EXISTING PAVEMENT TO PRODUCE A STRAIGHT VERTICAL FACE AGAINST WHICH TO BUTT THE TRENCH PAVEMENT.
  - CEMENT/SAND SLURRY SHALL BE MIXED IN A TRANSIT MIXER (CERTIFICATION TAGS REQUIRED) AND CONSIST OF 188 lbs OF CEMENT FOR EACH CUBIC YARD OF MATERIAL.
  - TRENCHES OUTSIDE A PAVED AREA OR A ROAD RIGHT-OF-WAY SHALL HAVE BACKFILL COMPACTED TO NOT LESS THAN 90% RELATIVE COMPACTION.
  - TRENCH CAP AND LAYOUT REQUIREMENTS:  
 A. IF THE EDGE OF THE ASPHALT TRENCH CAP IS WITHIN 2' OF THE EXISTING EDGE OF PAVEMENT, LIP OF GUTTER, OR LANE LINE, THE REMAINING PAVEMENT SHALL BE REMOVED AND THE TRENCH PAVING SHALL BE EXTENDED TO THE EDGE OF PAVEMENT, LIP OF GUTTER, OR LANE LINE.  
 B. IF THERE IS 4' OR LESS BETWEEN TRENCH CAPS, THE REMAINING PAVEMENT BETWEEN TRENCHES SHALL BE REMOVED AND TRENCH PAVING SHALL BE EXTENDED TO CREATE A SINGLE TRENCH CAP.
  - ANY EXCEPTIONS TO THIS DETAIL MUST BE APPROVED BY THE DIRECTOR OF PUBLIC WORKS.
  - CLEAN SAND COMPACTED TO 95% RELATIVE COMPACTION MAY BE USED FOR PIPE BEDDING BELOW BOTTOM OF PIPE. FOR WATER MAIN LINES THE SAND BEDDING MAY EXTEND UP TO 12" ABOVE TOP OF PIPE. CEMENT SAND SLURRY SHALL BE USED ABOVE SAND ZONE.
  - WHERE NO PAINTED CENTERLINE EXISTS, A FULL ROAD WIDTH TYPE II SLURRY SEAL COAT IS REQUIRED AFTER TRENCH PAVING.

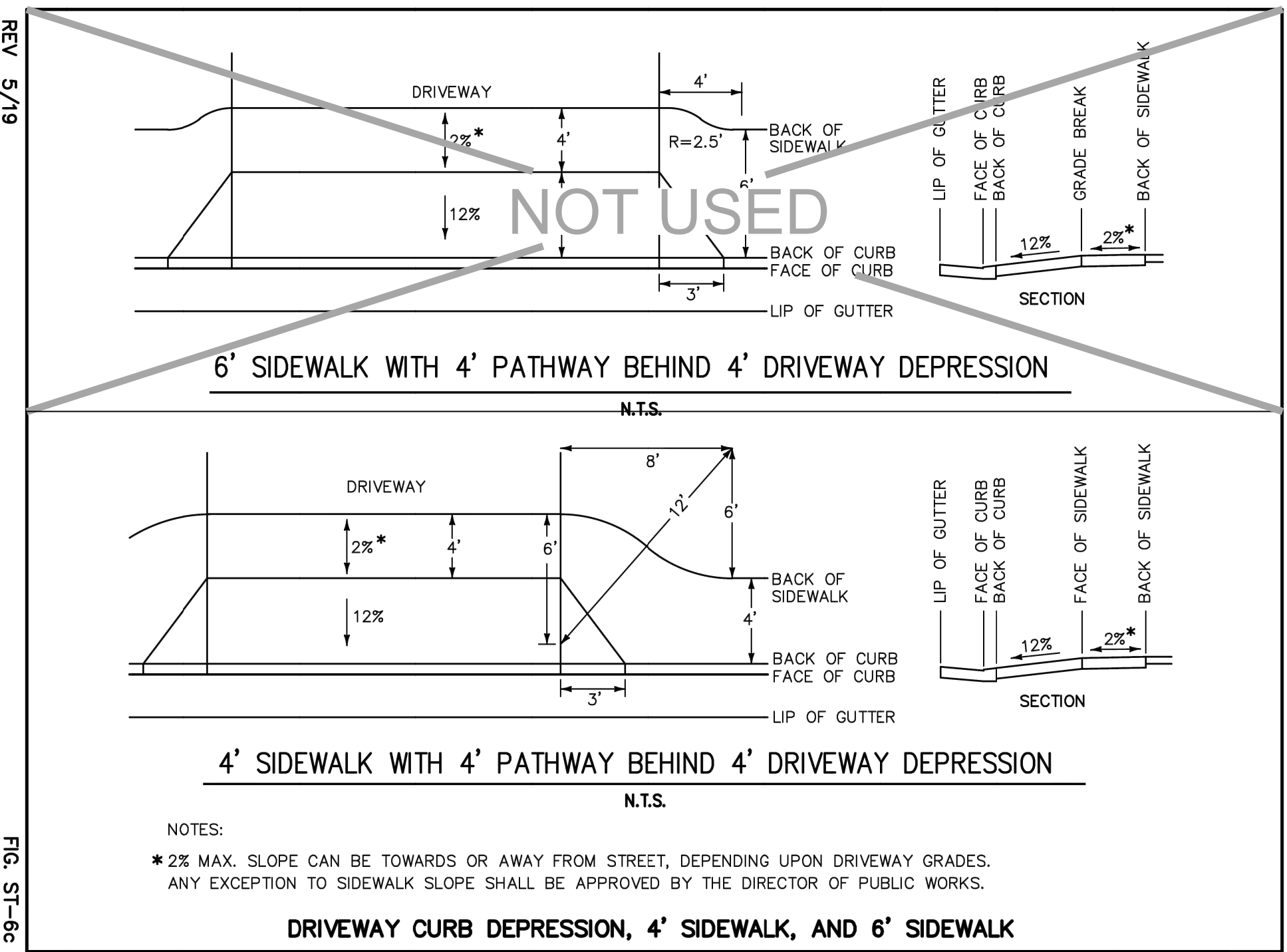
LONGITUDINAL TRENCH DETAIL

REV 5/19 FIG. EP-1 213



REQUIREMENT FOR DRIVEWAYS WITH TYPE A CURB AND GUTTER

REV 5/19 FIG. DW-1 206



DRIVEWAY CURB DEPRESSION, 4' SIDEWALK, AND 6' SIDEWALK

REV 5/19 FIG. ST-6c 21

**RAMSEY**  
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 2905 KRISTIE COURT  
 SANTA CRUZ, CA 95065  
 TEL (831) 462-2905  
 www.ramseycivilengineering.com

REGISTERED PROFESSIONAL ENGINEER  
 DAVID RAMSEY  
 NO. C73735  
 CIVIL  
 STATE OF CALIFORNIA

DAVID RAMSEY DATE  
 RCE# 73735

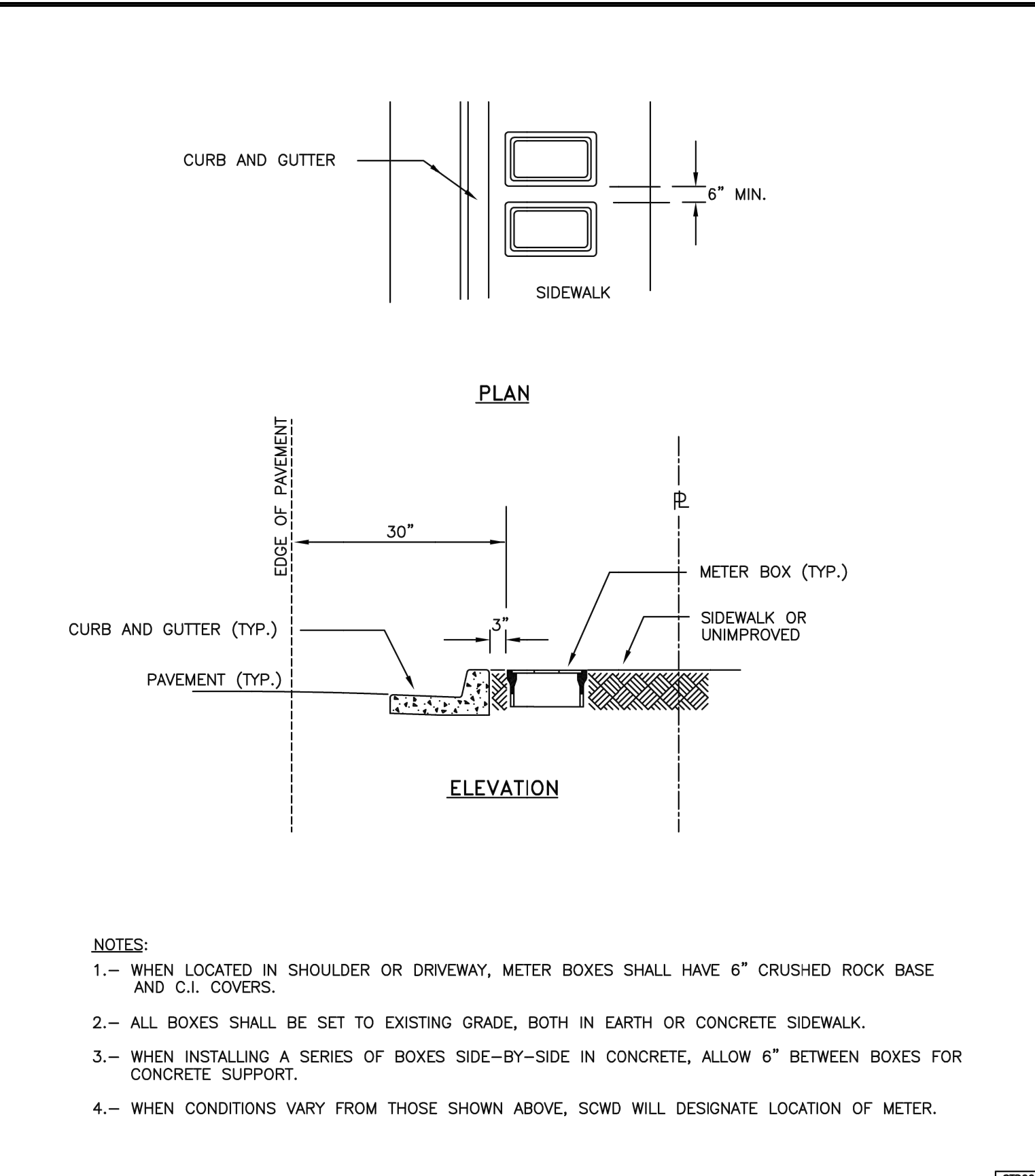
APN# 041-141-56  
 PLAN TYPE  
 MIXED USE  
 BUILDING PERMIT SET

DETAILS  
**HUMAN SPACES, LLC.**  
 9041 SOQUEL DRIVE, APTOS, CA

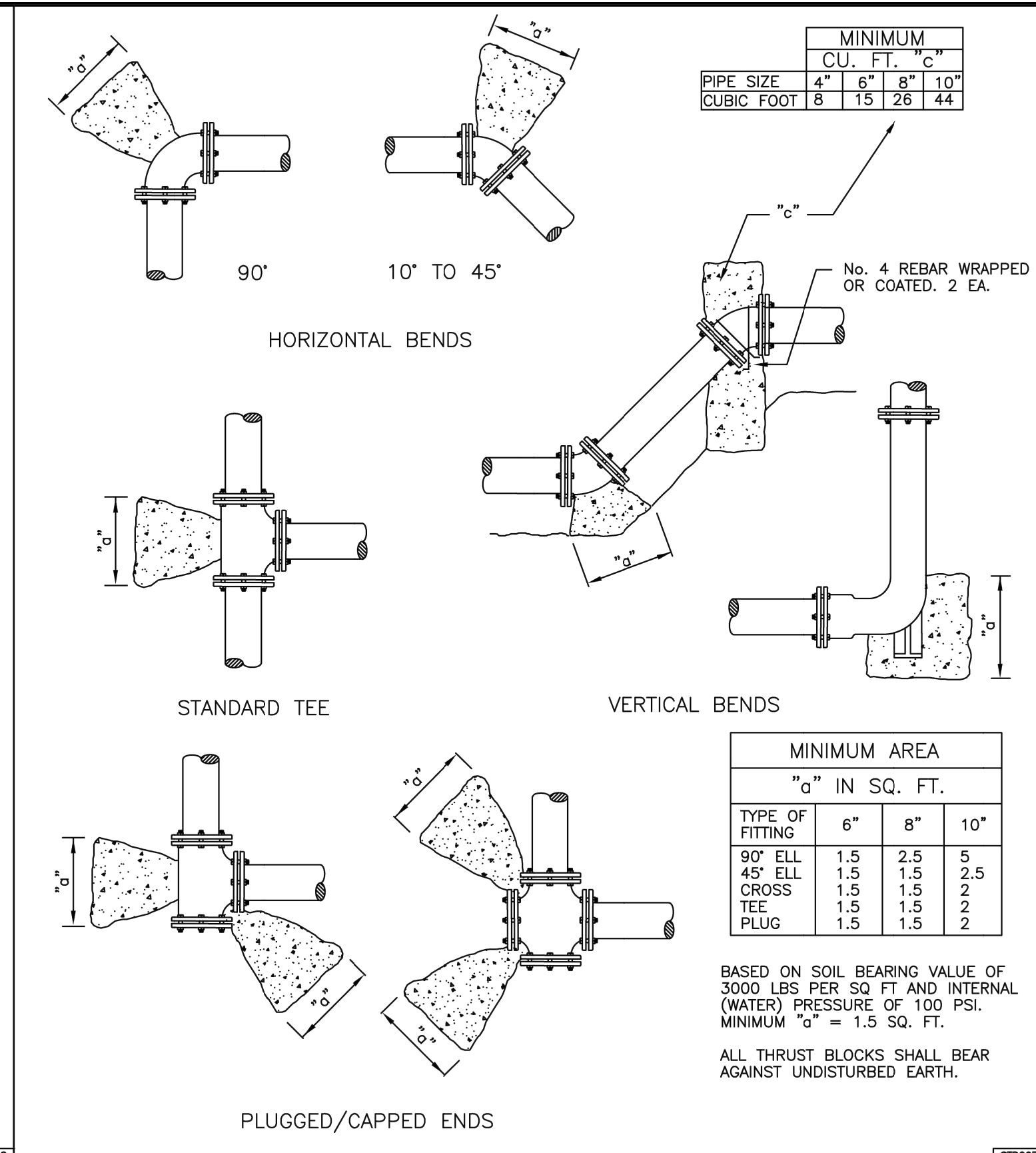
NUMBER	DMR	BY	RESPONSE TO PLANNING COMMENTS	DESCRIPTION	REVISION BLOCK	DATE
1						8/8/2025

DRAWN BY: GS  
 DESIGNED BY: DMR  
 DATE: 04/24/2025  
 SCALE: AS NOTED  
 PROJECT NO: 18-001  
 SHEET:

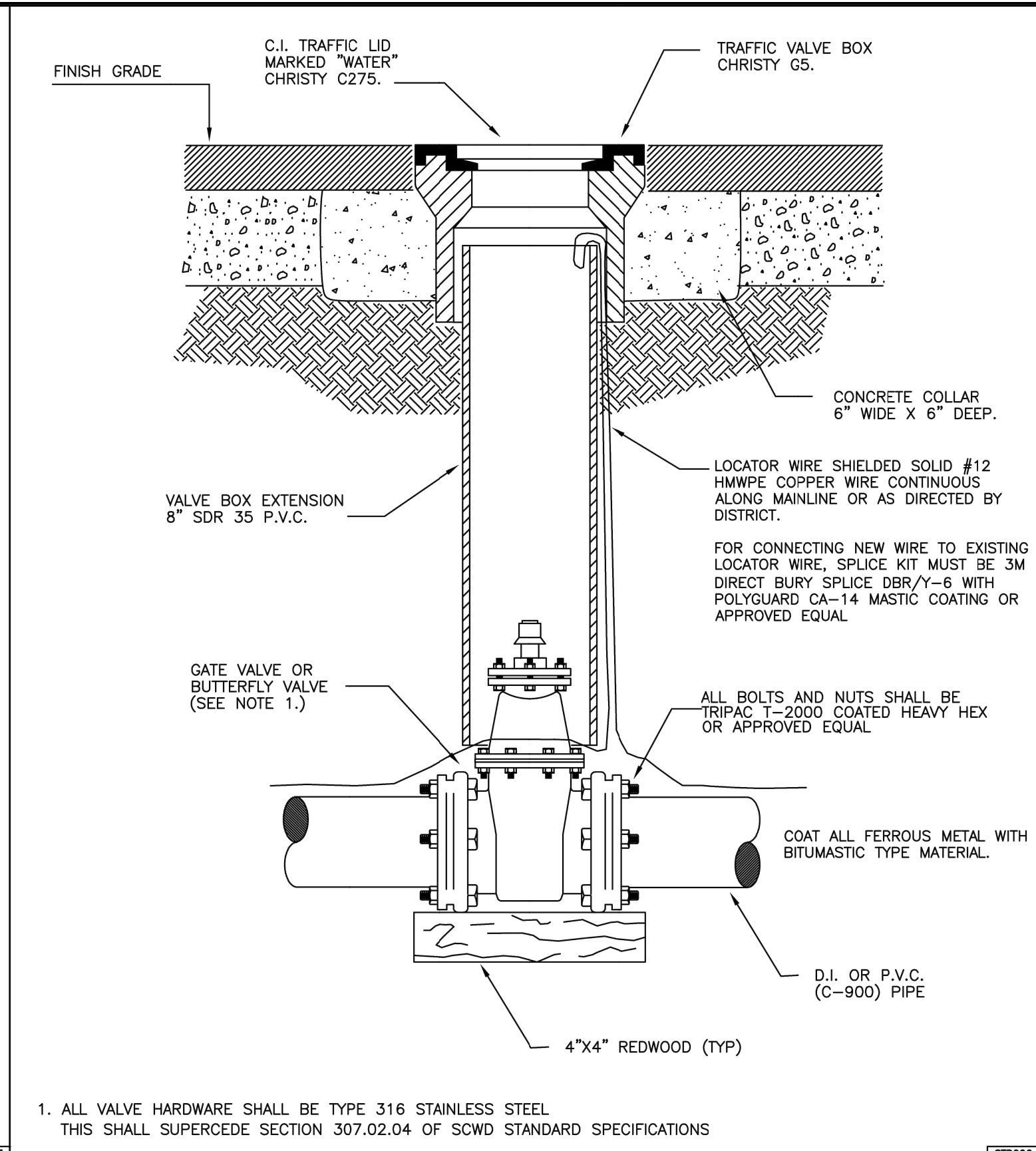
C5.3



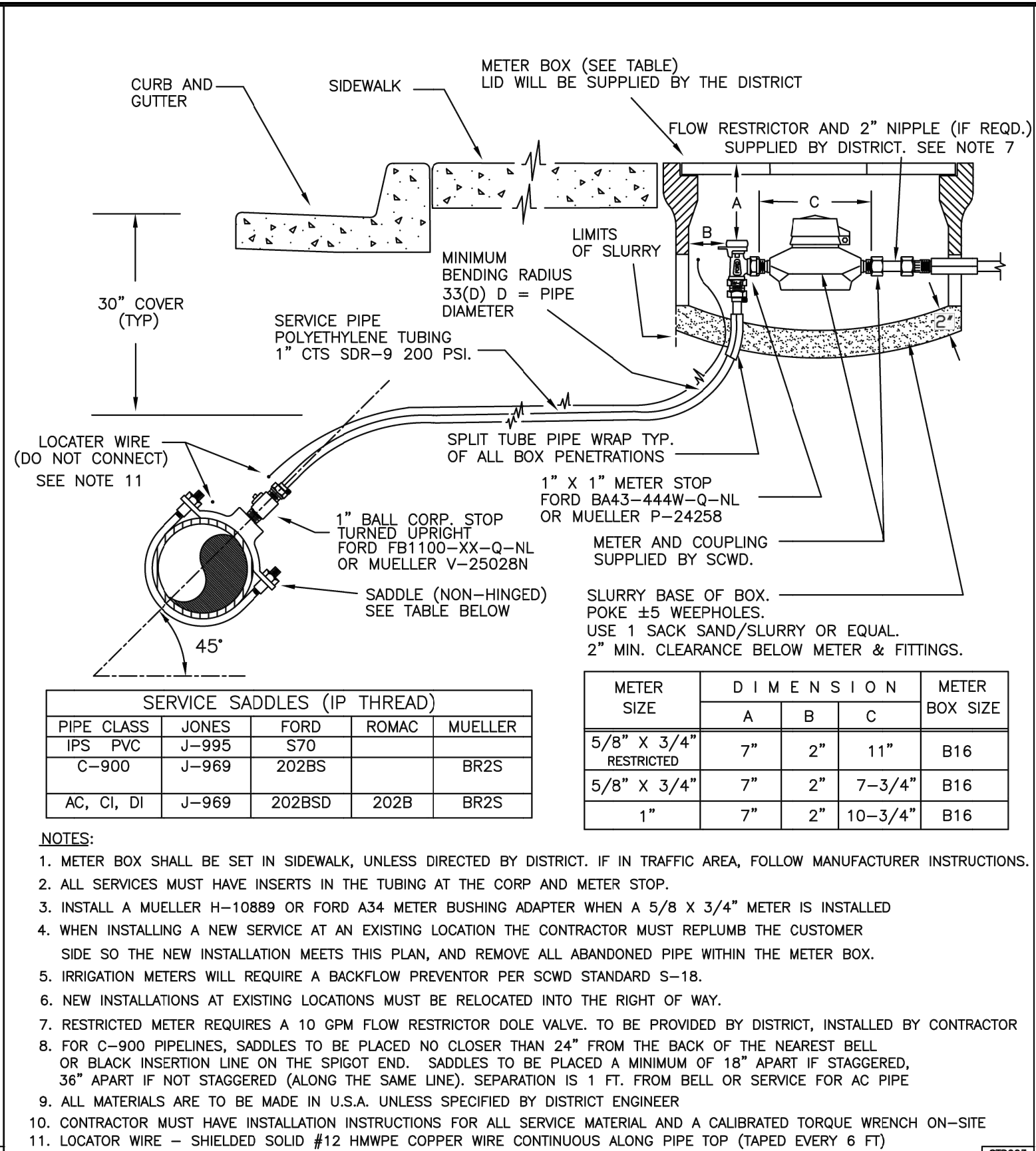
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CAD: TAD	DATE: DEC-06	CHECKED: MJW
APPROVED: JNG		



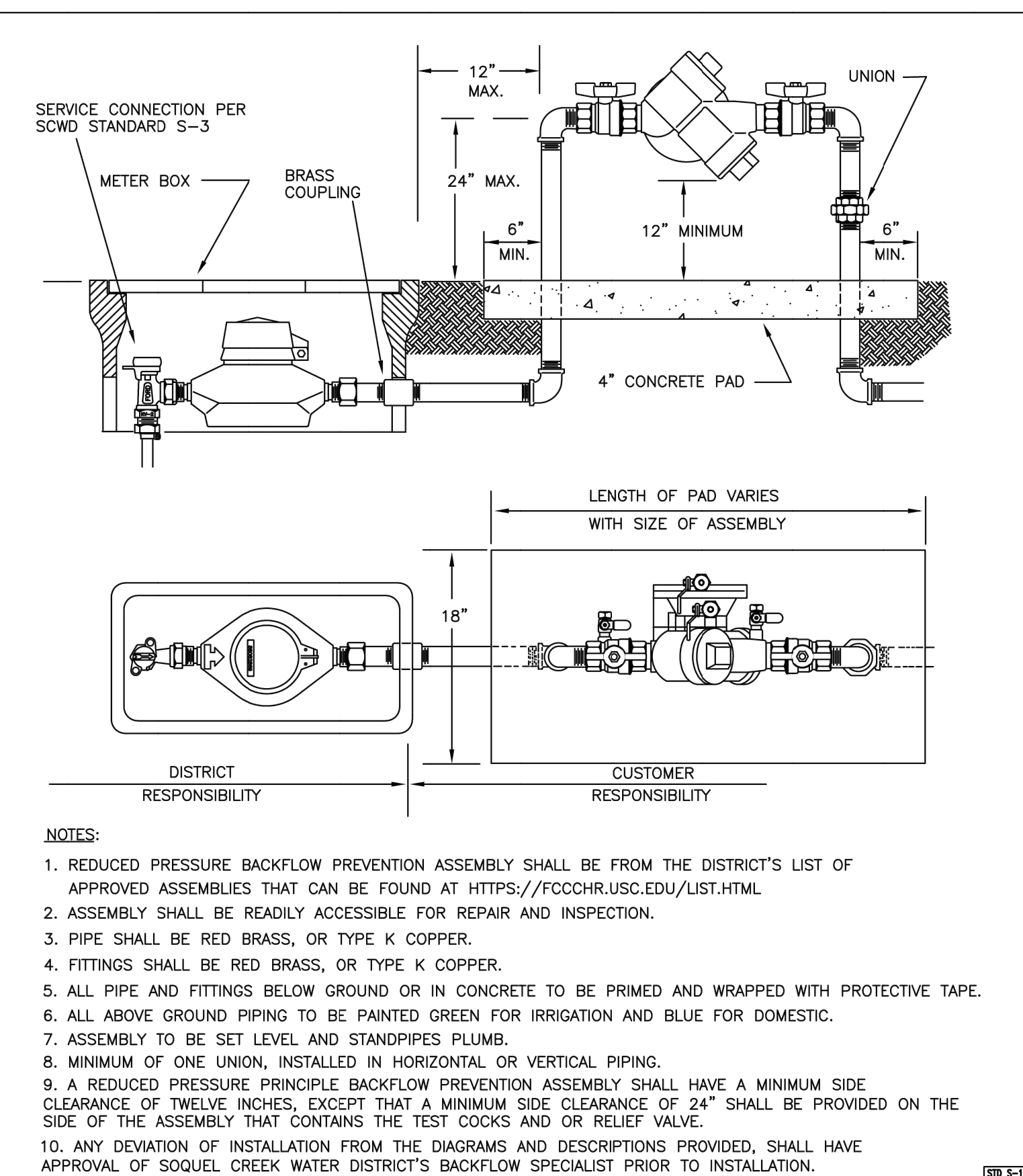
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APPROVED: JNG		



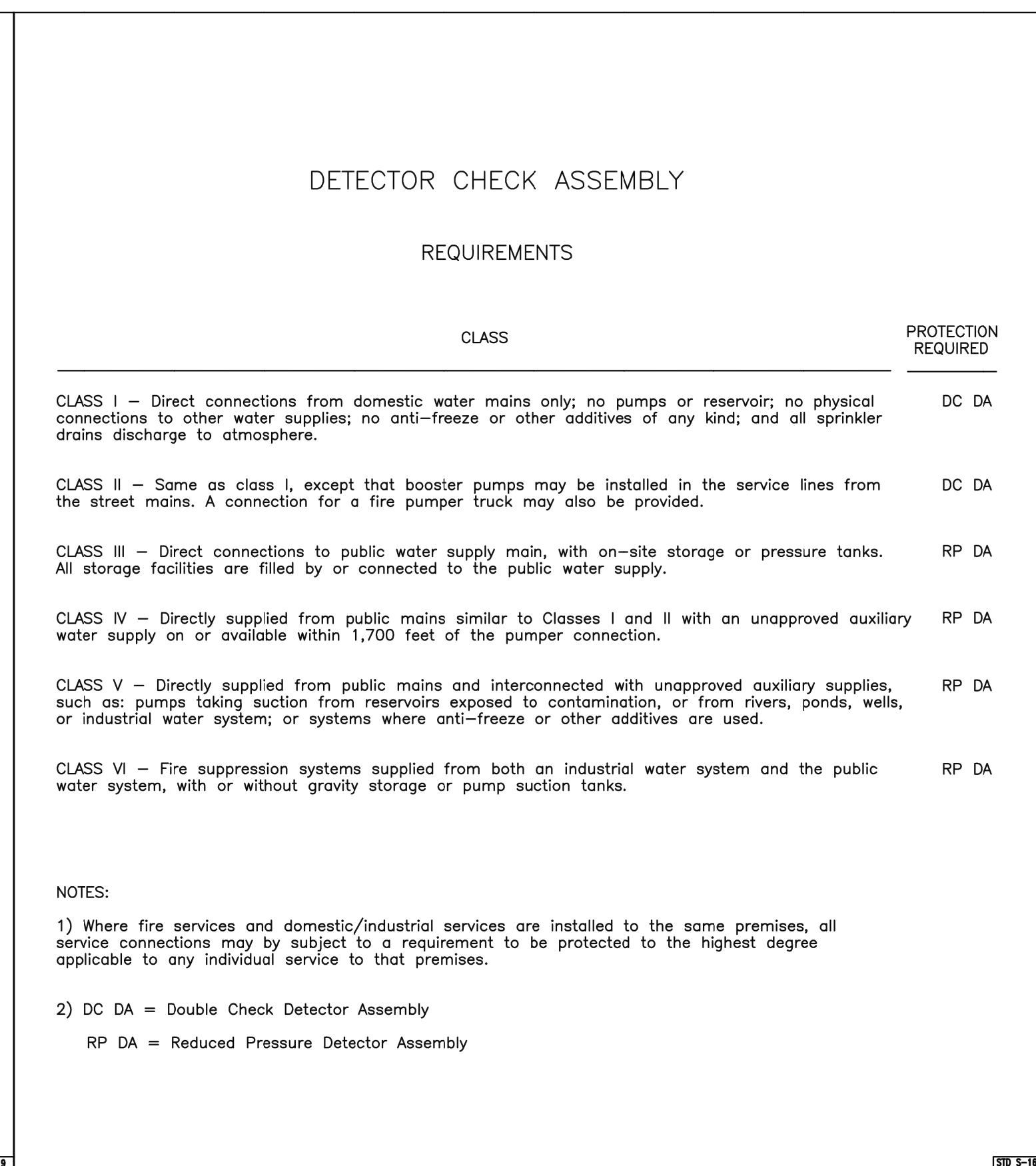
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CAD: AJB	DATE: AUGUST 30, 2021	CHECKED: BPD
APPROVED: TAD		



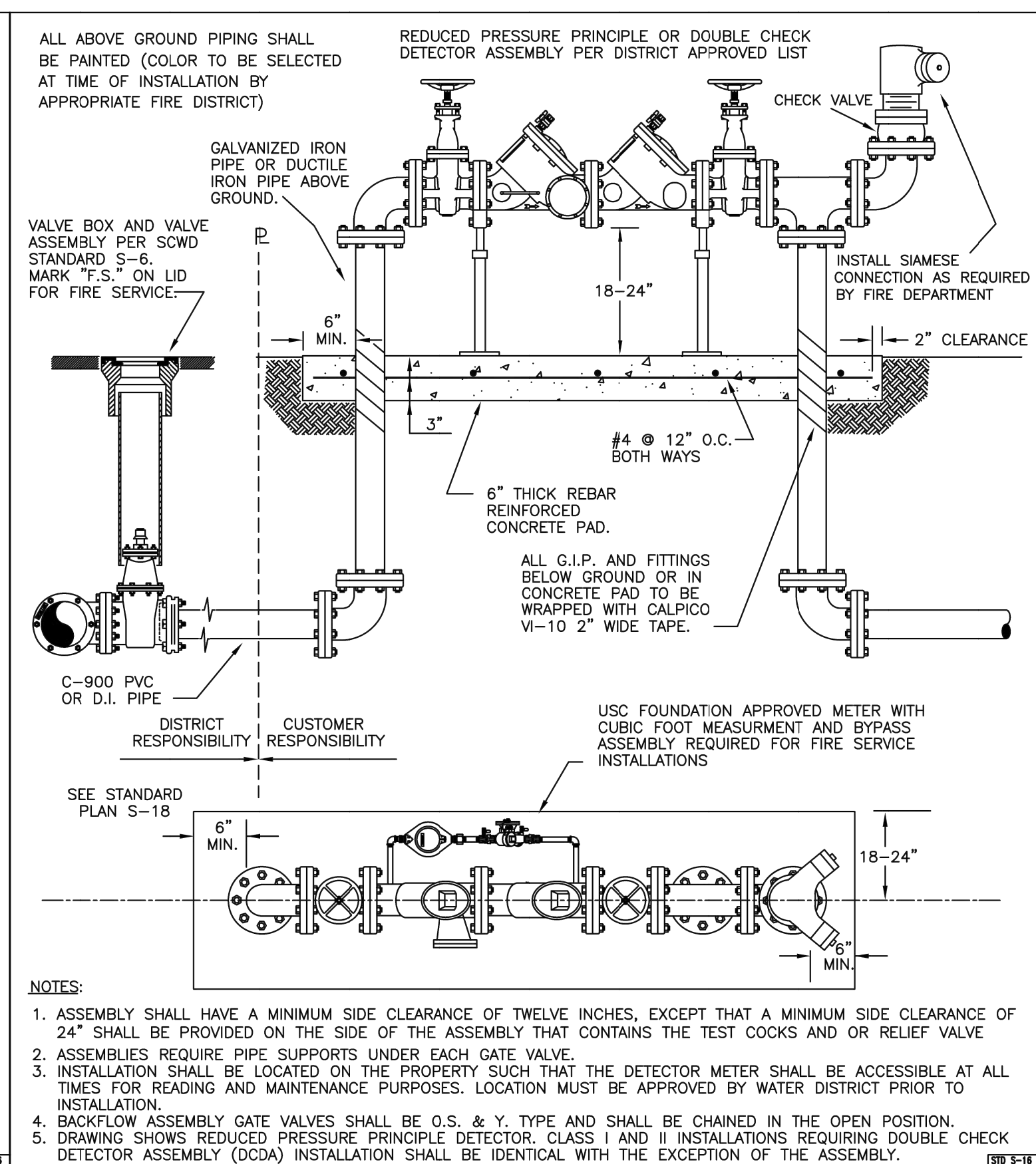
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CAD: AJB	DATE: SEPT. 19, 2022	CHECKED: BPD
APPROVED: TAD		



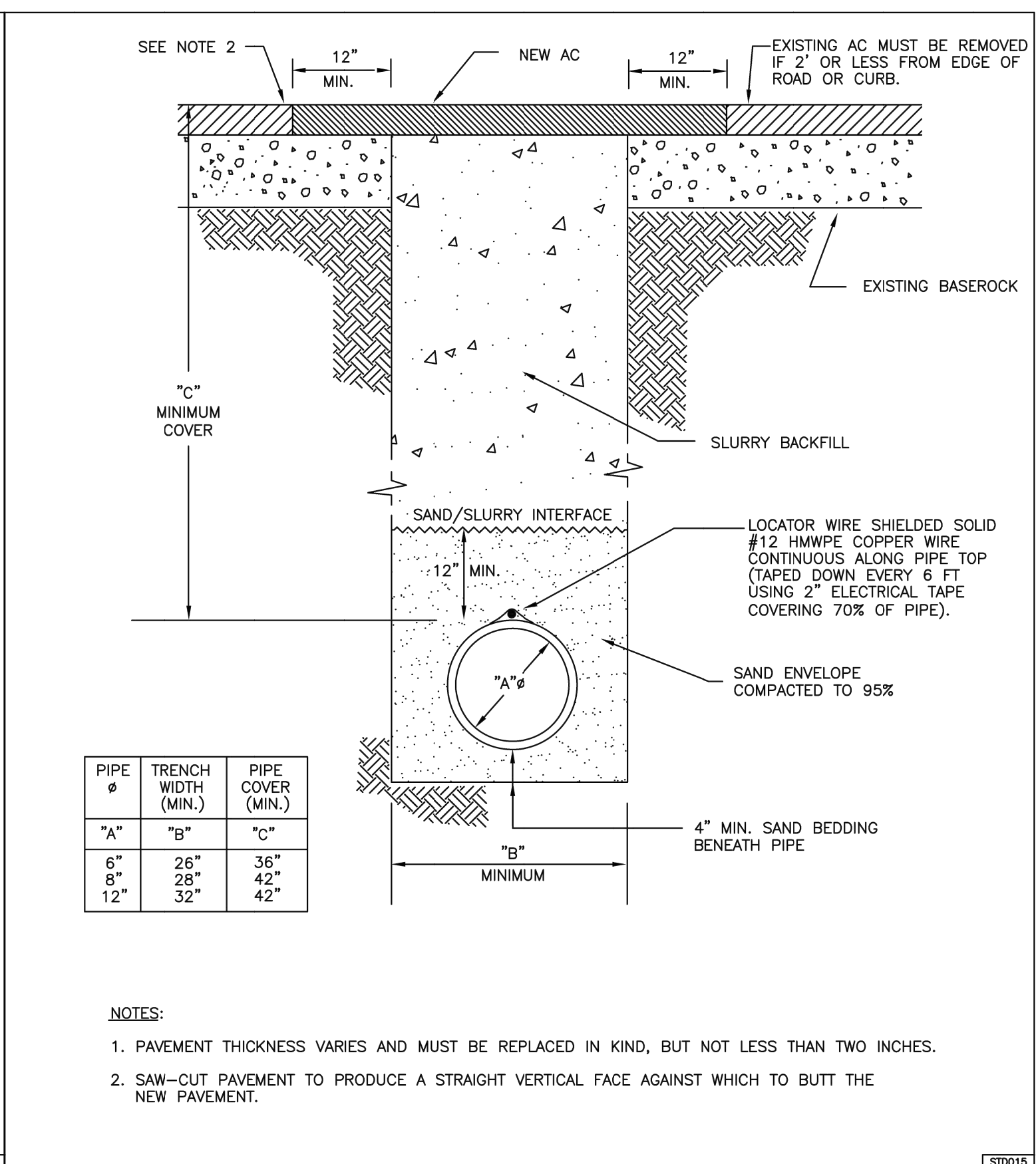
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CAD: AJB	DATE: JULY-22	CHECKED: BPD
APPROVED: TAD		



SOQUEL CREEK WATER DISTRICT P.O. BOX 1550 CAPITOLA, CALIFORNIA 95010		STD. NO. <b>S-16</b>
CAD: TAD	DATE: DEC-06	CHECKED: MJW
APPROVED: JNG		



SOQUEL CREEK WATER DISTRICT P.O. BOX 1550 CAPITOLA, CALIFORNIA 95010		STD. NO. <b>S-16</b>
CAD: TAD	DATE: DEC-06	CHECKED: MJW
APPROVED: JNG		



SOQUEL CREEK WATER DISTRICT P.O. BOX 1550 CAPITOLA, CALIFORNIA 95010		STD. NO. <b>S-15</b>
CAD: AJB	DATE: AUGUST 2021	CHECKED: BPD
APPROVED: TAD		

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2905 KRISTIE COURT  
SANTA CRUZ, CA 95065  
TEL (831) 462-2905  
www.ramseycivilengineering.com

REGISTERED PROFESSIONAL ENGINEER  
DAVID RAMSEY  
CIVIL  
STATE OF CALIFORNIA  
NO. C73735

DAVID RAMSEY DATE  
RCE# 73735

APN# 041-141-56  
PLAN TYPE  
MIXED USE  
BUILDING PERMIT SET

DETAILS

**HUMAN SPACES, LLC.**  
9041 SOQUEL DRIVE, APTOS, CA

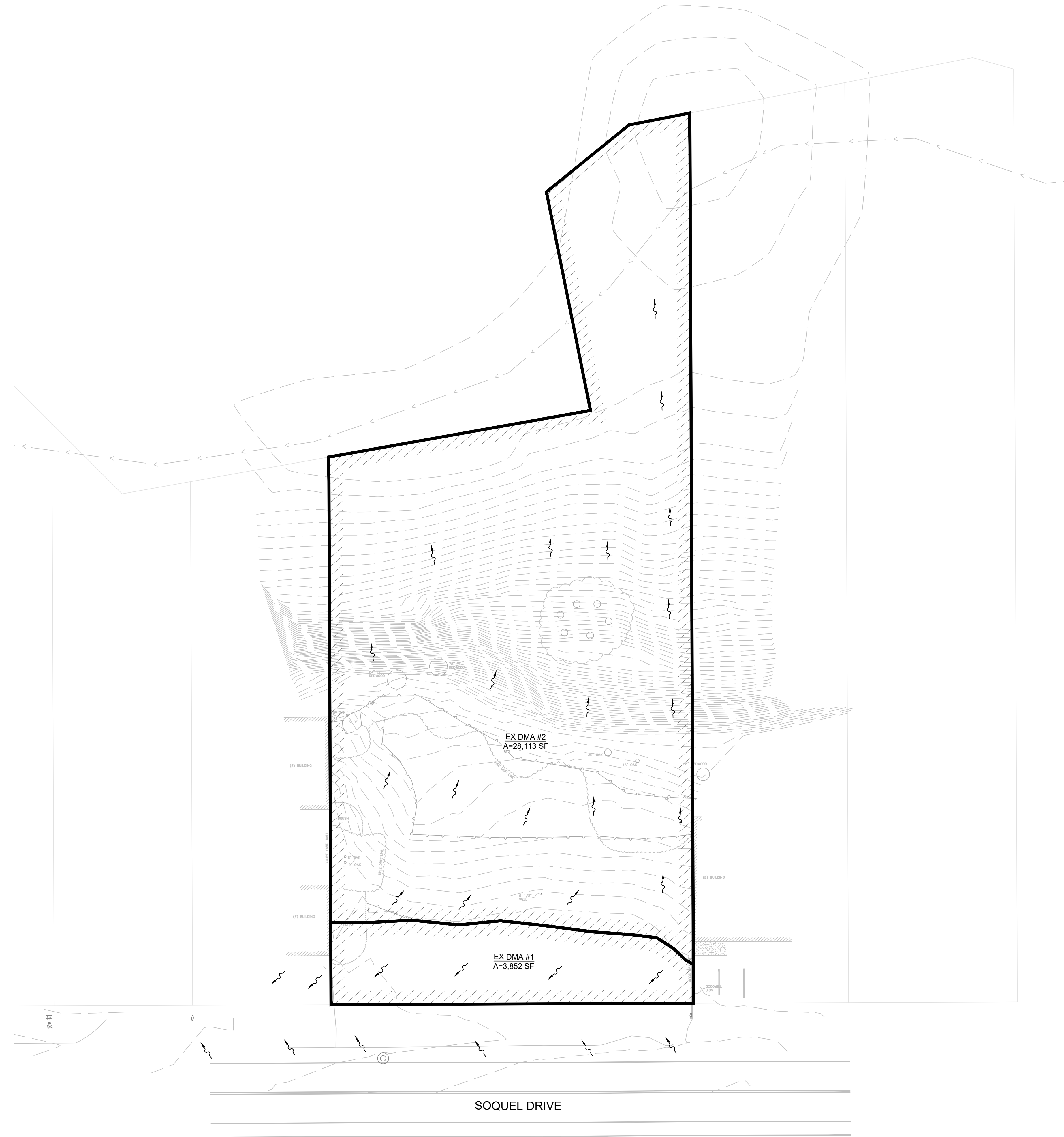
RESPONSE TO PLANNING COMMENTS	DESCRIPTION	REVISION BLOCK
1	DMR	BY
8/8/2025	DATE	

DRAWN BY: GS  
DESIGNED BY: DMR  
DATE: 04/24/2025  
SCALE: AS NOTED  
PROJECT NO.: 18-01  
SHEET:

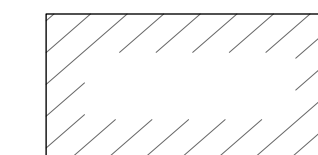
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EXHIBIT D





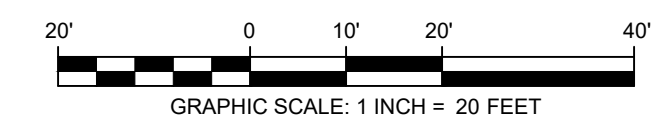
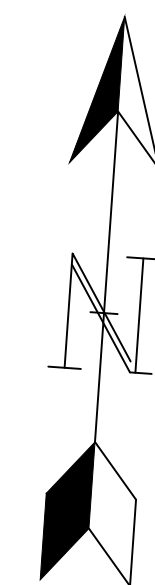
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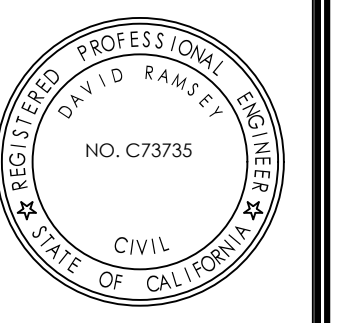
DMA-BOUNDARY



SURFACE FLOW ARROWS



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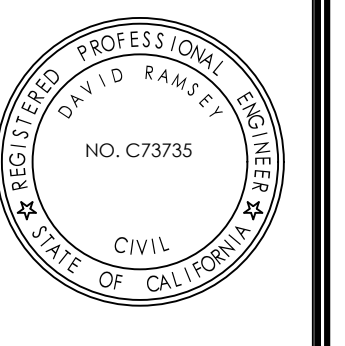
DAVID RAMSEY DATE  
RCE# 73735

APN# 041-141-56  
PLAN TYPE  
MIXED USE  
BUILDING PERMIT SET

EXISTING WATERSHED MAP  
**HUMAN SPACES, LLC.**  
9041 SOQUEL DRIVE, APTOS, CA

NUMBER	BY	DESCRIPTION	DATE
1	DMR	RESPONSE TO PLANNING COMMENTS	8/8/2025
			REVISION BLOCK

DRAWN BY:	GS
DESIGNED BY:	DMR
DATE:	04/24/2025
SCALE:	AS NOTED
PROJECT NO.:	18-001
SHEET:	<b>C6.0</b>



DAVID RAMSEY DATE  
RCE# 73735

APN# 041-141-56  
PLAN TYPE  
MIXED USE  
BUILDING PERMIT SET

PROPOSED STORMWATER CONTROL PLAN  
**HUMAN SPACES, LLC.**  
9041 SOQUEL DRIVE, APTOS, CA

RESPONSE TO PLANNING COMMENTS	DATE
1	8/8/2025

DRAWN BY: GS  
DESIGNED BY: DMR  
DATE: 04/24/2025  
SCALE: AS NOTED  
PROJECT NO: 18-01  
SHEET: C6.1

DMA AREA SUMMARY						
	C	DMA #1	DMA #2A	DMA #2B	DMA #2C	2A+2B+2C
BUILDING	= 0.9	2,085 SF	2,010 SF	603 SF	0 SF	2,613 SF
CONCRETE	= 0.9	158 SF	0 SF	75 SF	190 SF	265 SF
PERMEABLE PAVERS*	= 0.5	0 SF	0 SF	0 SF	3,163 SF	3,163 SF
TOTAL DMA AREA	= -	2,243 SF	2,010 SF	678 SF	3,353 SF	6,041 SF
TOTAL IMPERVIOUS AREA	= -	2,243 SF	2,010 SF	678 SF	1,772 SF	4,460 SF
WEIGHTED 'C'	=	0.90	0.90	0.90	0.52	0.69

\* PERMEABLE PAVERS COUNT AS 50% IMPERVIOUS

SCM - STORMWATER TREATMENT SUMMARY					
FLOW BASED DESIGN	TRIBUTARY AREA	SCM #1	SCM #2A	SCM #2B	SCM #2C
			DMA #1	DMA #2A	DMA #2B
	TRIBUTARY IMPERVIOUS AREA	2,243 SF	2,010 SF	678 SF	1,772 SF
	RUNOFF FROM I=0.2in/hr	0.009 CFS	0.008 CFS	0.003 CFS	0.008 CFS
	MIN SCM AREA	80 SF	72 SF	24 SF	70 SF
	PROVIDED SCM AREA	284 SF	116 SF	70 SF	3,163 SF

VOLUME BASED DESIGN (SCM#2C)	
85TH PERCENTILE STORM	= 1.18 IN
WQV	= 172 CF
MIN STONE DEPTH	= 0.136 FT
MIN STONE DEPTH	= 1.63 IN

1- BASED ON SURFACE INFILTRATION RATE = 5 IN/HR

SCM - STORMWATER DETENTION SUMMARY		
	SCM #1	SCM #2C
TRIBUTARY AREA	DMA #1	DMA #2A+2B+2C
TOTAL TRIBUTARY AREA	2,243 SF	6,041 SF
TRIBUTARY IMPERVIOUS AREA	2,243 SF	4,460 SF
WEIGHTED 'C'	0.90	0.69
SCM AREA	284 SF	520 SF
POND 'BTM' AREA	138 SF	0 SF
PONDING DEPTH	0.5 FT	0.0 FT
PONDING STORAGE V	105.50 CF	0.00 CF
BSM STORAGE V <sup>1</sup>	142.00 CF	0.00 CF
STONE DEPTH <sup>2</sup>	0.0 FT	1.60 FT
STONE STORAGE V <sup>3</sup>	0.00 CF	332.80 CF
TOTAL PROVIDED STORAGE V	247.50 CF	332.80 CF
REQUIRED STORAGE V <sup>4</sup>	225.00 CF	329.00 CF
WEIR HEIGHT ABOVE SYSTEM BOTTOM	2.57 FT	1.60 FT

- 1 - ASSUMES 2-FT OF BSM WITH VOIDS=0.25
- 2 - STONE DEPTH REQUIRED IN ADDITION TO 12" MIN REQUIRED FOR TREATMENT
- 3 - ASSUMES VOIDS = 0.4 FOR STONE
- 4 - SEE SWM-17 (25 YEAR STORM @ 5YR PRE-RELEASE)

PROJECT: TESTORFF CONSTRUCTION - APN: 041-141-56 - SCM-1 Calc by: GS Date: 11/3/2022

RUNOFF DETENTION BY THE MODIFIED RATIONAL METHOD			
Data Entry: PRESS TAB & ENTER DESIGN VALUES		Ver: 6.14.21	
Site Location P60 Isoleth:	1.40	Fig. SWM-2 in County Design Criteria	
Rational Coefficients Cpre:	0.30	See note # 2	
Cpost:	0.99	See note # 2	
Impervious Area:	2243	ft <sup>2</sup> See note # 2 and # 4	

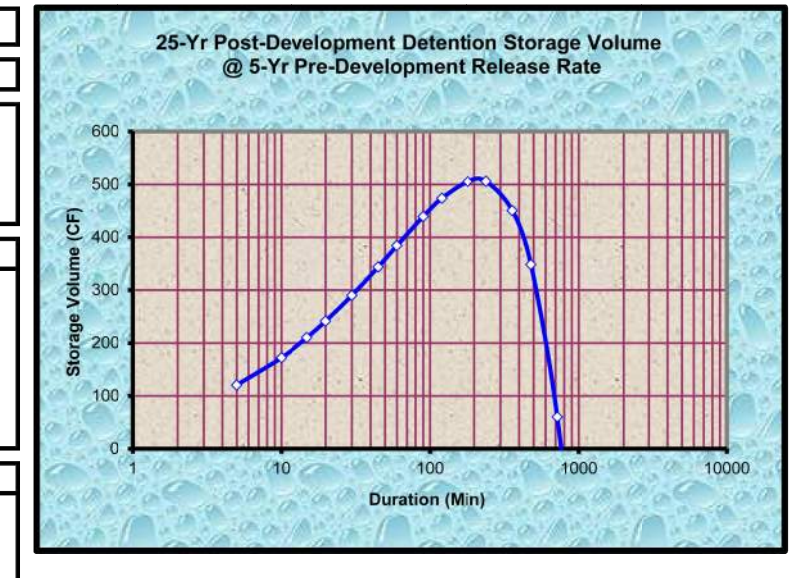
  

STRUCTURE DIMENSIONS FOR DETENTION			
225	ft <sup>3</sup> storage volume calculated		
100	% void space assumed		
225	ft <sup>3</sup> excavated volume needed		
Structure	Length	Width*	Depth*
Ratios	1.00	1.00	1.00
Dimen. (ft)	6.08	6.08	6.08

25 - YEAR DESIGN STORM				DETENTION @ 15 MIN.	
Storm Duration (min)	25 - Year Intensity (in/hr)	5 - Yr. Release Cpre (cfs)	25 - Year Cpost (cfs)	Detention Rate To Storage (cfs)	Specified Storage Volume (cf)
1440	0.28	0.003	0.016	-0.007	-714
1200	0.30	0.003	0.017	-0.005	-478
960	0.33	0.004	0.019	-0.004	-256
720	0.38	0.004	0.021	-0.001	-96
480	0.45	0.005	0.026	0.003	111
360	0.51	0.006	0.029	0.007	176
240	0.61	0.007	0.035	0.012	218
180	0.69	0.008	0.039	0.017	225
120	0.83	0.009	0.047	0.024	218
90	0.94	0.010	0.053	0.030	206
60	1.12	0.012	0.063	0.041	183
45	1.27	0.014	0.072	0.049	166
30	1.51	0.017	0.085	0.063	141
20	1.80	0.020	0.102	0.079	119
15	2.04	0.022	0.115	0.093	104
10	2.43	0.027	0.137	0.115	86
5	3.29	0.036	0.186	0.163	51

*This method is available from the County Public Works web site in a computerized Excel spreadsheet format to simplify usage. <http://www.dpw.ca.santa-cruz.ca.us/drainage.htm>*



- Notes & Limitations on Use:**
- 1) The modified rational method, and therefore the standard calculations are applicable in watersheds up to 20 acres in size.
  - 2) Required detention volume determinations shall be based on all net new impervious areas, both on and off-site, resulting from the proposed project. Pervious areas shall not be included in detention volume sizing; an exception may be made for incidental pervious areas less than 10% of the total area.
  - 3) Gravel packed detention chambers shall specify on the plans, aggregate that is washed, angular, and uniformly graded (of single size), assuring void space not less than 35%.
  - 4) A map showing boundaries of both regulated impervious areas and actual drainage areas routed to the hydraulic control structure of the detention facility is to be provided, clearly distinguishing between the two areas, and noting the square footage.
  - 5) The EPA defines a class V injection well as any bored, drilled, or driven shaft, or dug hole that is deeper than its widest surface dimension, or an improved sinkhole, or a subsurface fluid distribution system. Such storm water drainage wells are "authorized by rule". For more information on these rules, contact the EPA. A web site link is provided from the County DPW Stormwater Management web page.
  - 6) Refer to the County of Santa Cruz Design Criteria, for complete method criteria.

The spreadsheet formulas and format are copy protected to prevent alteration. Any modified submittals may be rejected, unless the changes made and the author are clearly identified, and the format is recognizably different.

PROJECT: TESTORFF CONSTRUCTION - APN: 041-141-56 - SCM-2C Calc by: GS Date: 11/3/2022

RUNOFF DETENTION BY THE MODIFIED RATIONAL METHOD			
Data Entry: PRESS TAB & ENTER DESIGN VALUES		Ver: 6.14.21	
Site Location P60 Isoleth:	1.40	Fig. SWM-2 in County Design Criteria	
Rational Coefficients Cpre:	0.30	See note # 2	
Cpost:	0.76	See note # 2	
Impervious Area:	6041	ft <sup>2</sup> See note # 2 and # 4	

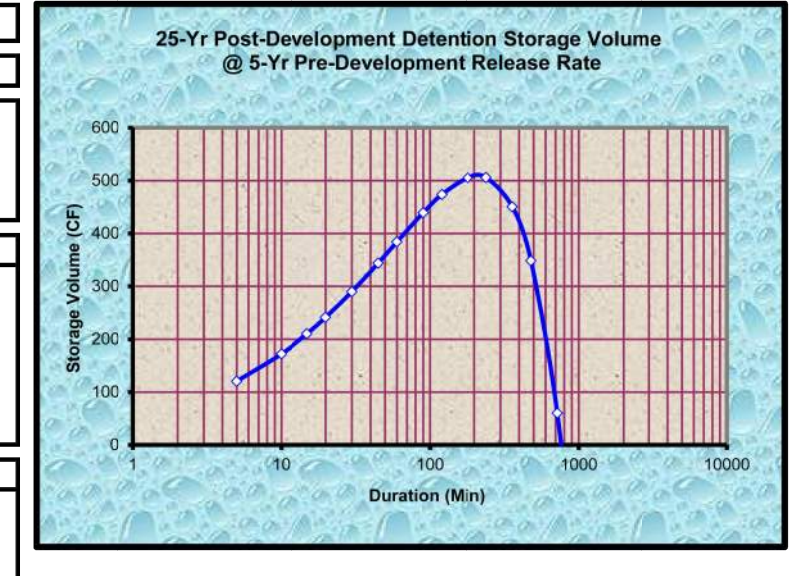
  

STRUCTURE DIMENSIONS FOR DETENTION			
329	ft <sup>3</sup> storage volume calculated		
100	% void space assumed		
329	ft <sup>3</sup> excavated volume needed		
Structure	Length	Width*	Depth*
Ratios	1.00	1.00	1.00
Dimen. (ft)	6.90	6.90	6.90

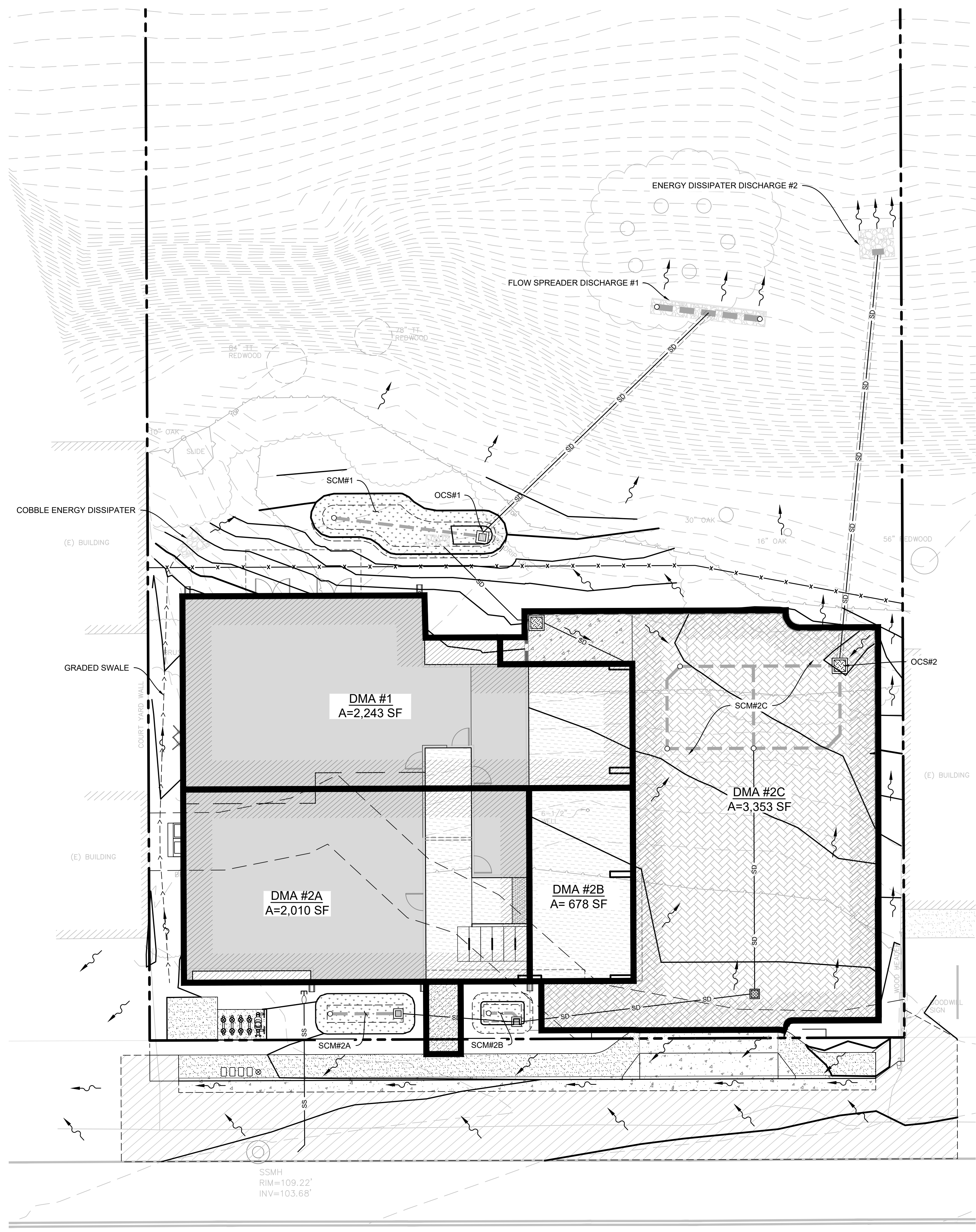
25 - YEAR DESIGN STORM				DETENTION @ 15 MIN.	
Storm Duration (min)	25 - Year Intensity (in/hr)	5 - Yr. Release Cpre (cfs)	25 - Year Cpost (cfs)	Detention Rate To Storage (cfs)	Specified Storage Volume (cf)
1440	0.28	0.005	0.033	-0.028	-3002
1200	0.30	0.009	0.035	-0.025	-2258
960	0.33	0.010	0.039	-0.021	-1547
720	0.38	0.011	0.044	-0.016	-879
480	0.45	0.013	0.053	-0.008	-279
360	0.51	0.015	0.060	-0.001	-19
240	0.61	0.018	0.071	0.011	195
180	0.69	0.021	0.081	0.020	274
120	0.83	0.025	0.096	0.036	323
90	0.94	0.028	0.109	0.049	329
60	1.12	0.033	0.130	0.070	314
45	1.27	0.038	0.148	0.087	294
30	1.51	0.045	0.176	0.116	260
20	1.80	0.053	0.210	0.150	224
15	2.04	0.061	0.238	0.177	200
10	2.43	0.072	0.284	0.223	167
5	3.29	0.098	0.384	0.323	121

*This method is available from the County Public Works web site in a computerized Excel spreadsheet format to simplify usage. <http://www.dpw.ca.santa-cruz.ca.us/drainage.htm>*

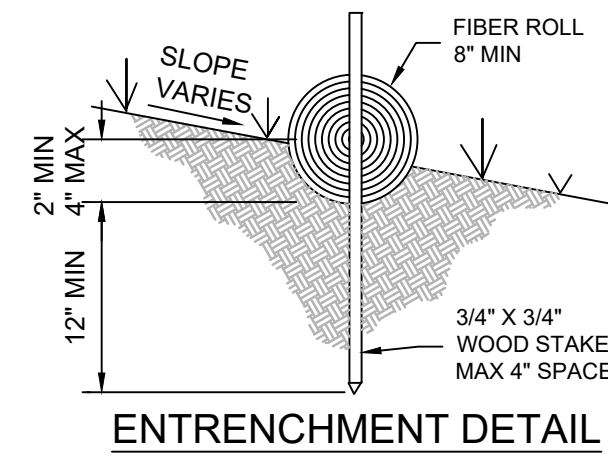


- Notes & Limitations on Use:**
- 1) The modified rational method, and therefore the standard calculations are applicable in watersheds up to 20 acres in size.
  - 2) Required detention volume determinations shall be based on all net new impervious areas, both on and off-site, resulting from the proposed project. Pervious areas shall not be included in detention volume sizing; an exception may be made for incidental pervious areas less than 10% of the total area.
  - 3) Gravel packed detention chambers shall specify on the plans, aggregate that is washed, angular, and uniformly graded (of single size), assuring void space not less than 35%.
  - 4) A map showing boundaries of both regulated impervious areas and actual drainage areas routed to the hydraulic control structure of the detention facility is to be provided, clearly distinguishing between the two areas, and noting the square footage.
  - 5) The EPA defines a class V injection well as any bored, drilled, or driven shaft, or dug hole that is deeper than its widest surface dimension, or an improved sinkhole, or a subsurface fluid distribution system. Such storm water drainage wells are "authorized by rule". For more information on these rules, contact the EPA. A web site link is provided from the County DPW Stormwater Management web page.
  - 6) Refer to the County of Santa Cruz Design Criteria, for complete method criteria.

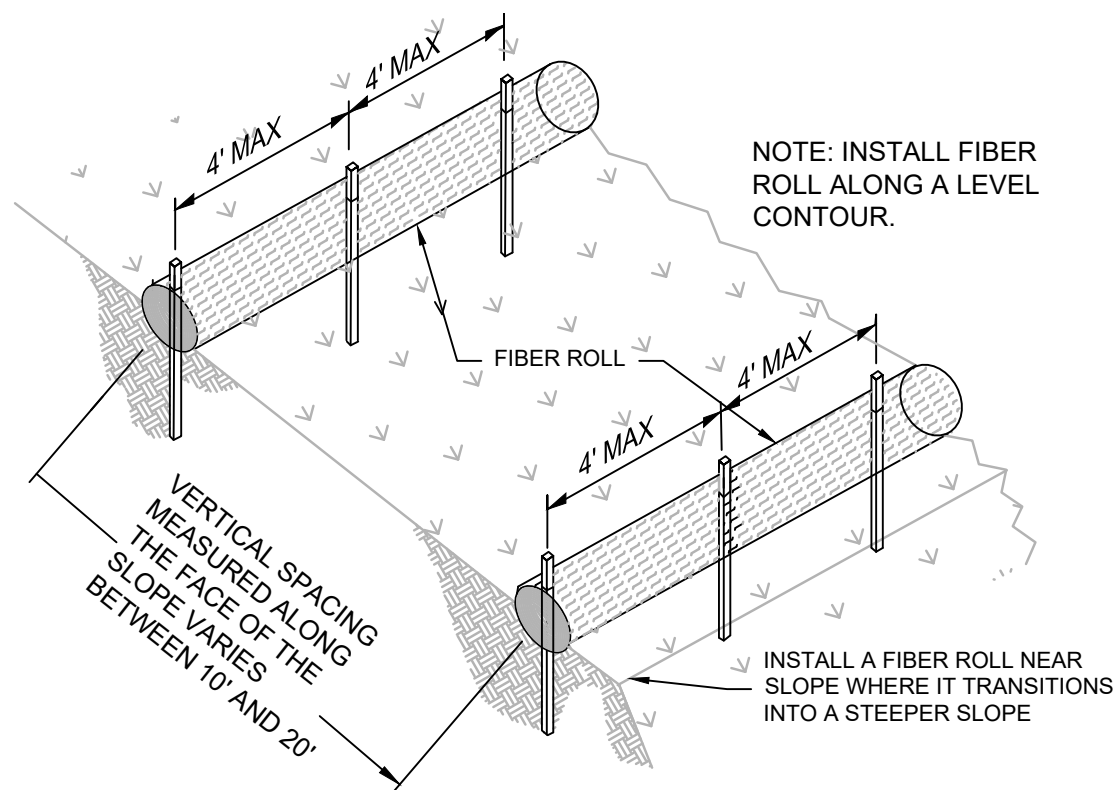
The spreadsheet formulas and format are copy protected to prevent alteration. Any modified submittals may be rejected, unless the changes made and the author are clearly identified, and the format is recognizably different.



SOQUEL DRIVE



**ENTRENCHMENT DETAIL**



**TYPICAL INSTALLATION**

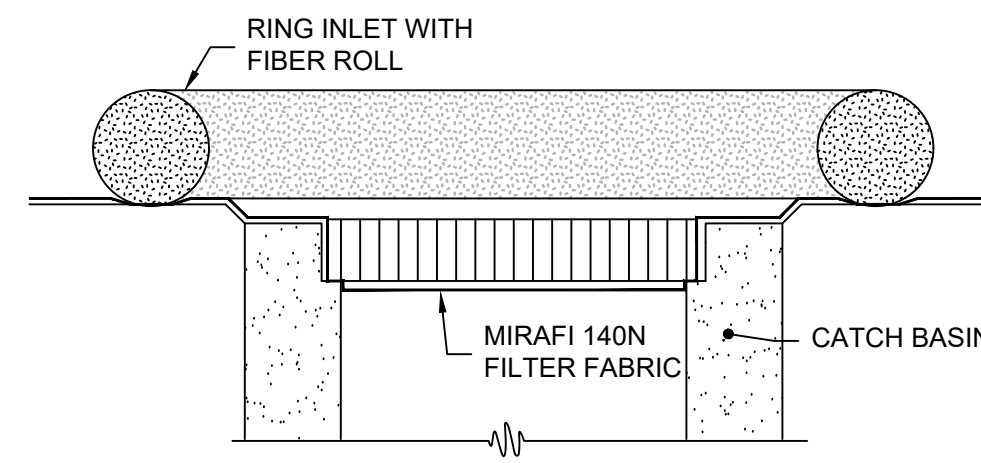
**FIBER ROLLS**  
NTS

**FIBER ROLLS CONSTRUCTION SPECIFICATIONS**

1. PREPARE SLOPE BEFORE THE FIBER ROLL PROCEDURE IS STARTED. SHALLOW GULLIES SHOULD BE SMOOTHED AS WORK PROGRESSES.
2. DIG SMALL TRENCHES ACROSS SLOPE ON CONTOUR. TO PLACE FIBER ROLLS IN. THE TRENCH SHOULD BE DEEP ENOUGH TO ACCOMMODATE HALF THE THICKNESS OF THE FIBER ROLL. WHEN THE SOIL IS LOOSE AND UNCOMPACTED, THE TRENCH SHOULD BE DEEP ENOUGH TO BURY THE FIBER ROLL 2/3 OF ITS THICKNESS BECAUSE THE GROUND WILL SETTLE. IT IS CRITICAL THAT FIBER ROLLS ARE INSTALLED PERPENDICULAR TO WATER MOVEMENT, PARALLEL TO THE SLOPE CONTOUR.
3. START BUILDING TRENCHES AND INSTALL FIBER ROLLS FROM THE BOTTOM OF THE SLOPE AND WORK UP.
4. CONSTRUCT TRENCHES AT CONTOUR INTERVALS OF THREE TO EIGHT FEET APART DEPENDING ON STEEPNESS OF SLOPE. THE STEEPER THE SLOPE, THE CLOSER TOGETHER THE TRENCHES.
5. LAY THE FIBER ROLL ALONG THE TRENCHES FITTING IT SNUGLY AGAINST THE SOIL. MAKE SURE NO GAPS EXIST BETWEEN THE SOIL AND THE FIBER ROLL. USE A STRAIGHT BAR TO DRIVE HOLES THROUGH THE FIBER ROLL AND INTO THE SOIL FOR THE WOODEN STAKES.
6. DRIVE THE STAKE THROUGH THE PREPARED HOLE INTO THE SOIL. LEAVE ONLY ONE OR TWO INCHES OF STAKE EXPOSED ABOVE FIBER ROLL. IF USING WILLOW STAKES REFER TO USDA SOIL CONSERVATION SERVICE TECHNICAL GUIDE, BIOENGINEERING, FOR GUIDELINES TO PREPARING LIVE WILLOW MATERIAL.
7. INSTALL STAKES AT LEAST EVERY FOUR FEET APART THROUGH FIBER ROLL. ADDITIONAL STAKES MAY BE DRIVEN ON THE DOWNSLOPE SIDE OF THE TRENCHES ON HIGHLY EROSION OR VERY STEEP SLOPES.

**INSTALLATION AND MAINTENANCE**

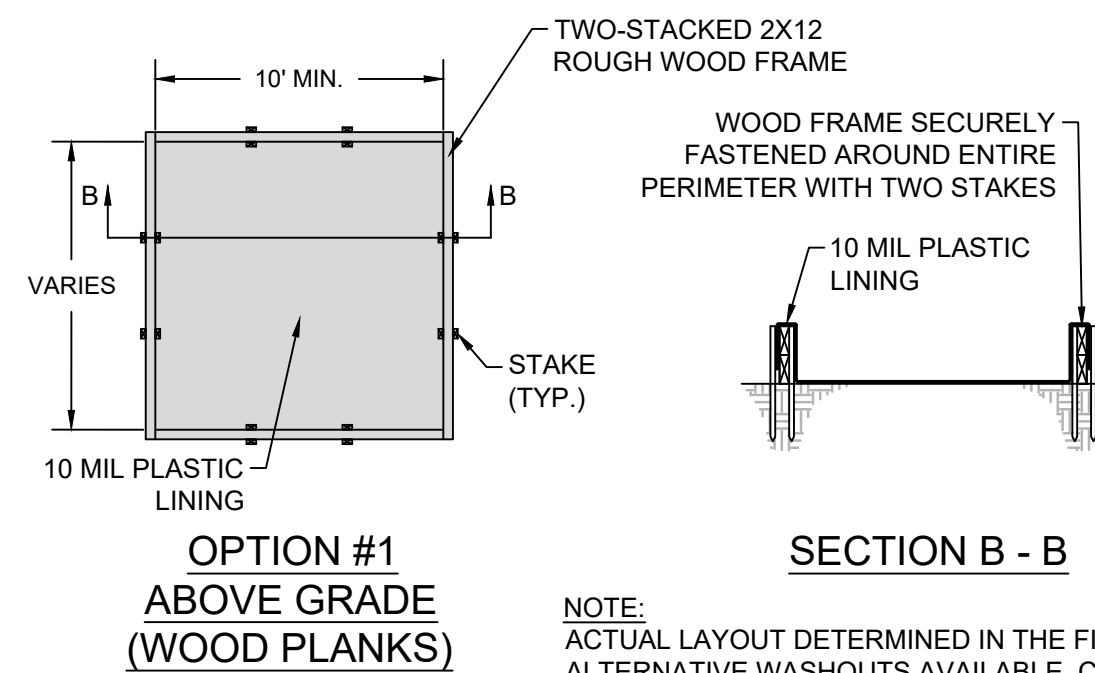
8. INSPECT THE FIBER ROLL AND THE SLOPES AFTER SIGNIFICANT STORMS. MAKE SURE THE FIBER ROLLS ARE IN CONTACT WITH THE SOIL.
9. REPAIR ANY RILLS OR GULLIES PROMPTLY.
10. RESEED OR REPLANT VEGETATION IF NECESSARY UNTIL THE SLOPE IS STABILIZED.



**INSPECTION AND MAINTENANCE:**

1. FILTER FABRIC BARRIERS SHALL BE INSPECTED WEEKLY AFTER EACH SIGNIFICANT STORM - 1 INCH RAINFALL (25.4 MM) IN 24 HOUR PERIOD. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
2. SEDIMENT SHOULD BE REMOVED WHEN IT REACHES 3" MAXIMUM HEIGHT. AT THAT TIME INSPECT THE FILTER MATERIAL FOR TEARS AND CLEAN OR REPLACE AS REQUIRED.
3. THE REMOVED SEDIMENT SHALL BE DISTRIBUTED EVENLY ACROSS AREAS ON-SITE, CONFORM WITH THE EXISTING GRADE AND BE REVEGETATED OR OTHERWISE STABILIZED PER EROSION CONTROL NOTES.

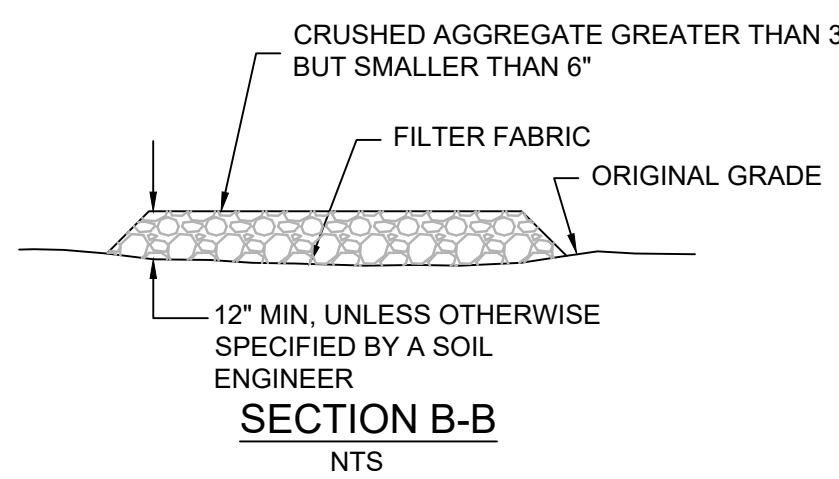
**CATCH BASIN PROTECTION**  
NTS



**INSPECTION AND MAINTENANCE**

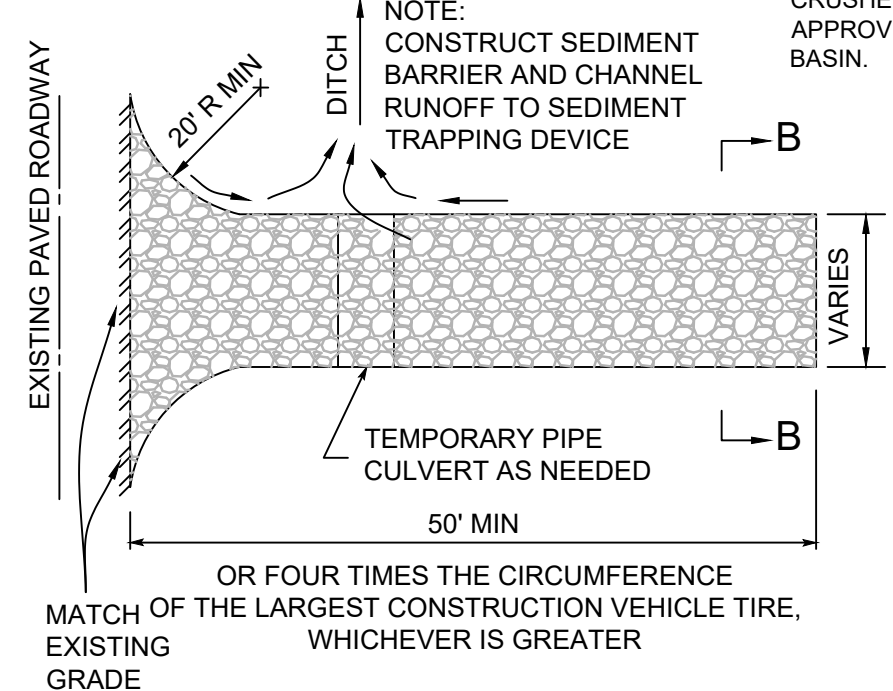
1. THE CONTRACTORS WATER POLLUTION CONTROL (WPCM) MANAGER SHALL MONITOR ON SITE CONCRETE WASTE STORAGE AND DISPOSAL PROCEDURES AT LEAST WEEKLY.
2. THE WPCM SHALL MONITOR CONCRETE WORKING TASKS, SUCH AS SAW CUTTING, CORING, GRINDING AND GROOVING DAILY TO ENSURE PROPER METHODS ARE EMPLOYED AS DIRECTED BY THE ENGINEER.
3. TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE MAINTAINED TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM FREEBOARD OF 4 INCHES FOR ABOVE GRADE FACILITIES AND 12 INCHES FOR BELOW GRADE FACILITIES. MAINTAINING TEMPORARY CONCRETE WASHOUT FACILITIES SHALL INCLUDE REMOVING AND DISPOSING OF HARDENED CONCRETE AND RETURNING THE FACILITIES TO A FUNCTIONAL CONDITION. HARDENED CONCRETE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
4. EXISTING FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75% FULL.
5. TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE INSPECTED FOR DAMAGE (I.E. TEARS IN POLYETHYLENE LINER, MISSING SANDBAGS, ETC.). DAMAGED FACILITIES SHALL BE REPAIRED.

**CONCRETE WASHOUT**  
NTS



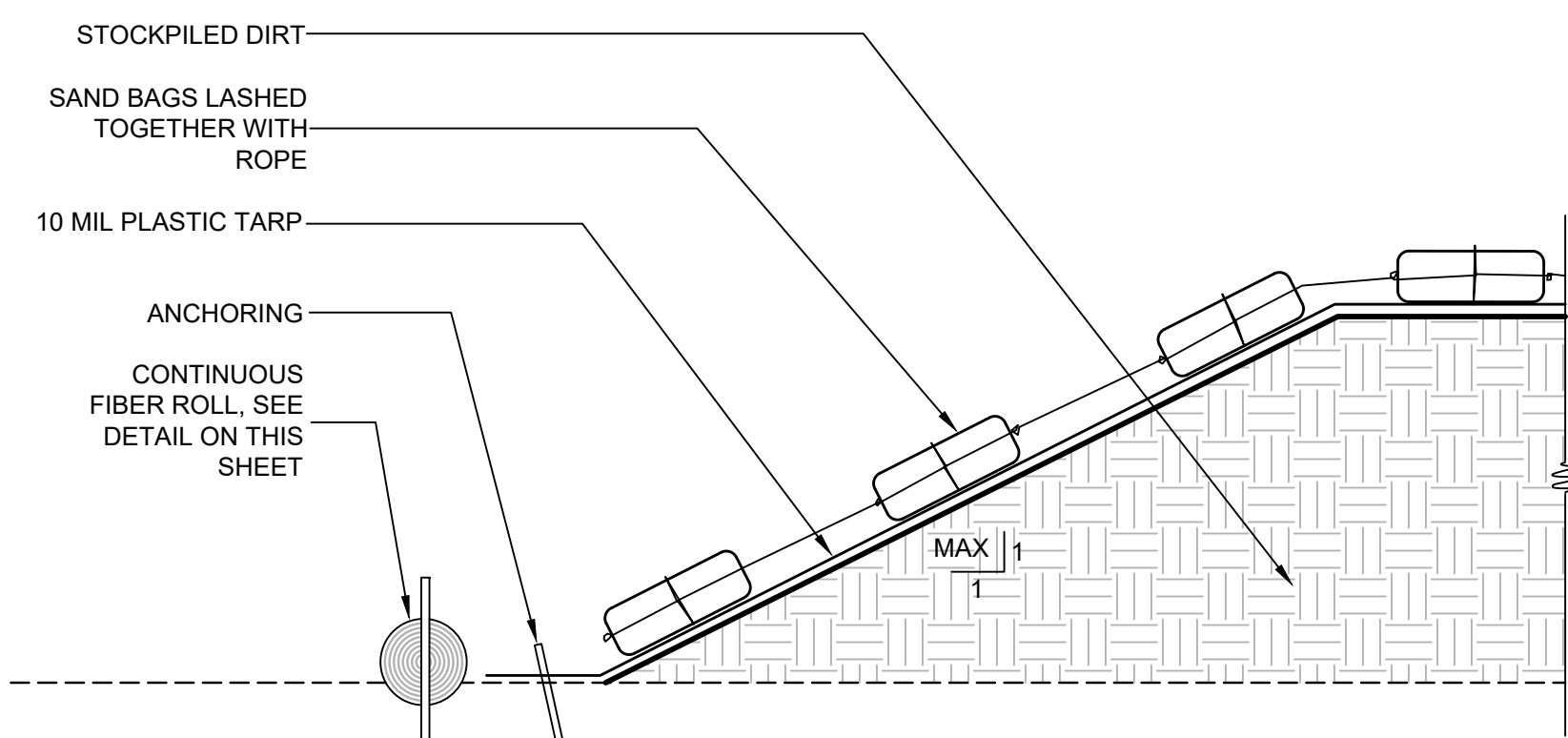
**NOTES:**

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.



**STABILIZED CONSTRUCTION ENTRANCE PART 1**  
NTS

**STABILIZED CONSTRUCTION ENTRANCE PART 2**  
NTS



**NOTE:**  
STOCKPILE SIZE AND LOCATIONS TO BE DETERMINED BY CONTRACTOR WITH ENGINEERS APPROVAL.

**DIRT STOCKPILE**  
N.T.S.

**EROSION CONTROL NOTES**

1. THE EROSION CONTROL PLANS IN THIS SET SHALL BE REVIEWED AND IMPLEMENTED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORK.
2. THE CONTRACTOR SHALL ENSURE ALL MONITORING AND INSPECTIONS ARE PERFORMED AS REQUIRED ONSITE THROUGHOUT CONSTRUCTION.
3. NO LAND CLEARING, GRADING OR EXCAVATION SHALL BE DONE BETWEEN OCTOBER 15TH AND APRIL 15TH. ANY DEVIATION FROM THIS CONDITION REQUIRES REVIEW AND APPROVAL OF A SEPARATE WINTER EROSION CONTROL PLAN BY ENVIRONMENTAL PLANNING PRIOR TO BEGINNING CONSTRUCTION. THE DEVELOPER SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING SITE EROSION CONTROL AT ALL TIMES.
4. IT SHALL BE THE RESPONSIBILITY OF THE OWNER AND THE PERMITEE TO ENSURE THAT EROSION DOES NOT OCCUR FROM ANY ACTIVITY DURING OR AFTER PROJECT CONSTRUCTION. ADDITIONAL MEASURES, BEYOND THOSE SPECIFIED, MAY BE REQUIRED BY THE PLANNING DIRECTOR AS DEEMED NECESSARY TO CONTROL ACCELERATED EROSION.
5. PRIOR TO ANY FORECAST RAIN AND ANYTIME BETWEEN OCTOBER 15 AND APRIL 15, AT THE END OF EACH WORKDAY, AT THE END OF EACH WORKWEEK, THE DEVELOPER SHALL IMPLEMENT ALL TEMPORARY MEASURES NECESSARY TO PREVENT EROSION AND SILTATION, UNTIL THE PROJECT HAS BEEN FINALIZED. THESE MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, DIRECT SEEDINGS OF THE AFFECTED AREAS, STRAW MULCHING, AND/OR INSTALLATION OF STRAW BALES DAMS/SILT FENCES.
6. DURING CONSTRUCTION, NO TURBID WATER SHALL BE PERMITTED TO LEAVE THE SITE. USE OF SILT AND GREASE TRAPS, FILTER BERMS, HAY BALES OR SILT FENCES SHALL BE USED TO PREVENT SUCH DISCHARGE.
7. ALL AREAS ON- AND OFF-SITE EXPOSED DURING CONSTRUCTION ACTIVITIES, IF NOT PERMANENTLY LANDSCAPED PER PLAN, SHALL BE PROTECTED BY MULCHING AND/OR SEEDING WITH ANNUAL WINTER BARLEY.
8. ALL EXCAVATED MATERIAL SHALL BE REMOVED TO AN APPROVED DISPOSAL SITE OR DISPOSED OF ON-SITE IN A MANNER THAT WILL NOT CAUSE EROSION.
9. ANY MATERIAL STOCKPILED, FOR LONGER THAN 14 DAYS, DURING CONSTRUCTION SHALL BE COVERED WITH PLASTIC.
10. UPON COMPLETION OF CONSTRUCTION, ALL REMAINING EXPOSED SOILS SHALL BE PERMANENTLY REVEGETATED PER LANDSCAPING PLAN. THE PROTECTION SHALL BE INSTALLED PRIOR TO CALLING FOR FINAL APPROVAL OF THE PROJECT AND AT ALL TIMES BETWEEN OCTOBER 15 AND APRIL 15. SUCH PROTECTION SHALL BE MAINTAINED FOR AT LEAST ONE WINTER UNTIL PERMANENT PROTECTION IS ESTABLISHED.
11. EXPOSED SOIL ON SLOPES GREATER THAN 20% SHALL BE SEEDED, COVERED WITH 2 INCHES OF STRAW, AND AN EROSION CONTROL BLANKET. THE EROSION CONTROL BLANKET SHALL BE STAKED IN PLACE.
12. IT IS THE DEVELOPER'S RESPONSIBILITY TO SEE THAT ADDITIONAL MEASURES, NECESSARY TO CONTROL SITE EROSION AND PREVENT SEDIMENT TRANSPORT OFF-SITE ARE IMPLEMENTED.
13. ALL SPILLS AND/OR LEAKS SHALL BE IMMEDIATELY CLEANED UP AND MITIGATED PER THE CONTRACTORS O&M STANDARDS.

**STORMWATER O&M PLAN**

1. REFER TO THE RECORDED STORMWATER MAINTENANCE AGREEMENT (SCC FIG. SWM-25B) FOR ADDITIONAL SITE/PROJECT INFORMATION AND REQUIREMENTS, AS WELL AS RESPONSIBLE PARTY AGREEMENT.
2. STORMWATER MAINTENANCE AGREEMENT SHALL TRANSFER WITH OWNERSHIP
3. BELOW MAINTENANCE SPECIFICATIONS REFER TO POST-CONSTRUCTION REQUIREMENTS, REFER TO THE PROJECT EROSION CONTROL PLAN (SHEET C7.1) FOR MAINTENANCE REQUIREMENTS DURING THE CONSTRUCTION PHASE OF THE PROJECT.
4. MAINTENANCE AGREEMENT REFERS TO ALL PRIVATELY OWNED STORMWATER FACILITIES:
  - 5.1. ROOF DOWNSPOUTS:
    - 5.1.1. ALL DOWNSPOUTS AND ROOF GUTTERS SHALL BE INSPECTED YEARLY FOR SEDIMENT AND/OR TRASH BUILD-UP. ALL SEDIMENT AND TRASH SHALL BE REMOVED AND PROPERLY DISPOSED OF.
  - 5.2. GRADED SWALES & PERVIOUS DRIVEWAY/PEDESTRIAN SLAB AREAS:
    - 5.2.1. ROUTINE MAINTENANCE ON AN ANNUAL BASIS SHALL INCLUDE TRASH AND DEBRIS REMOVAL, AND REMOVAL OF LEAVES DURING AND AFTER FALL LEAF DROP.
    - 5.2.2. RECOMMENDED INSPECTIONS ON AN ANNUAL BASIS INCLUDE:
      - 5.2.2.1. ENSURE INFLOW AND OUTFLOW AREAS ARE SECURE AND NO EROSION HAS OCCURRED. ADD ROCK DISSIPATION PADS OR CHECK DAMS AS NECESSARY TO REDUCE FLOWS AND ELIMINATE EROSION.
      - 5.2.2.2. IF VISIBLE SEDIMENT EXIST AT BOTTOM OF FACILITY OR WITHIN GAPS OF SLABS, SEDIMENT SHALL BE REMOVED TO ENSURE PROPER FLOW THROUGH.
      - 5.2.2.3. IF EXCESSIVE PONDING OF WATER IS OCCURRING (2-3 DAYS AFTER THE END OF A STORM) CONFIRM LEAF, DEBRIS OR SEDIMENT BUILD-UP IS NOT IMPEDING FLOW. REMOVE AS NECESSARY.
      - 5.2.2.4. IF VEGETATED ENSURE ALL VEGETATION IS HEALTHY. REMOVE AND REPLACE ALL DEAD OR DYING VEGETATION.

**SOURCE CONTROL MEASURES**

- BELOW ARE THE MEANS AND METHODS TO CONTROLLING POLLUTING ACTIVITIES:
- INDOOR & STRUCTURAL PEST CONTROL - ALL PEST CONTROL MEASURES SHALL BE PERFORMED TO PREVENT ANY DISCHARGES INTO THE STORM DRAIN SYSTEM.
  - LANDSCAPE/OUTDOOR PESTICIDE USE - PESTICIDES SHALL BE USED ONLY IF NECESSARY AND SHALL BE LIMITED TO REQUIRED TREATMENT AREA. SPOT TREATMENT WITH HANDHELD SPRAYER SHALL BE USED IN LOW QUANTITIES.
  - OUTDOOR STORAGE OF EQUIPMENT OR MATERIALS - ALL MATERIALS, CONSTRUCTION OR OTHER, SHALL BE STORED INDOORS OR WITHIN A COVERED (PROTECTED) AREA.
  - UNAUTHORIZED NON-STORMWATER DISCHARGES - ALL UNAUTHORIZED NON-STORMWATER DISCHARGES, DURING AND AFTER CONSTRUCTION, SHALL BE REPORTED TO THE COUNTY OF SANTA CRUZ. DISCHARGES SHALL BE MITIGATED PER COUNTY GUIDANCE.
  - BUILDING & GROUND MAINTENANCE - ANY ROUTINE MAINTENANCE PERFORMED SHALL BE COMPLETED TO REDUCE OR ELIMINATE ANY NON-STORMWATER DISCHARGES FROM THE SITE.

**RAMSEY**  
CIVIL ENGINEERING INC.  
CIVIL ENGINEERING  
LAND PLANNING  
PROJECT MANAGEMENT  
CONSTRUCTION SUPPORT  
QSD AND QSP SERVICES  
2905 KRISTIE COURT  
SANTA CRUZ, CA 95065  
TEL (831) 462-2905  
www.ramsycivilengineering.com

REGISTERED PROFESSIONAL ENGINEER  
DAVID RAMSEY  
NO. C73735  
STATE OF CALIFORNIA  
CIVIL

DAVID RAMSEY DATE  
RCE# 73735

APN# 041-141-56  
PLAN TYPE  
MIXED USE  
BUILDING PERMIT SET

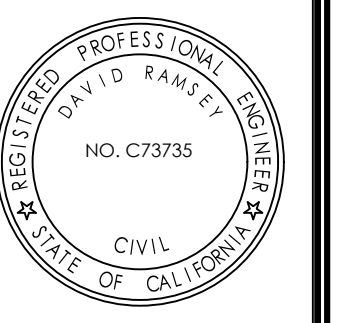
EROSION CONTROL NOTES AND DETAILS  
**HUMAN SPACES, LLC.**  
9041 SOQUEL DRIVE, APTOS, CA

DATE	DESCRIPTION	REVISION BLOCK
08/20/2025	RESPONSE TO PLANNING COMMENTS	
DMR	BY	
1	NUMBER	

DRAWN BY: GS  
DESIGNED BY: DMR  
DATE: 04/24/2025  
SCALE: AS NOTED  
PROJECT NO: 18-01  
SHEET:

**811**  
Know what's below.  
Call before you dig.

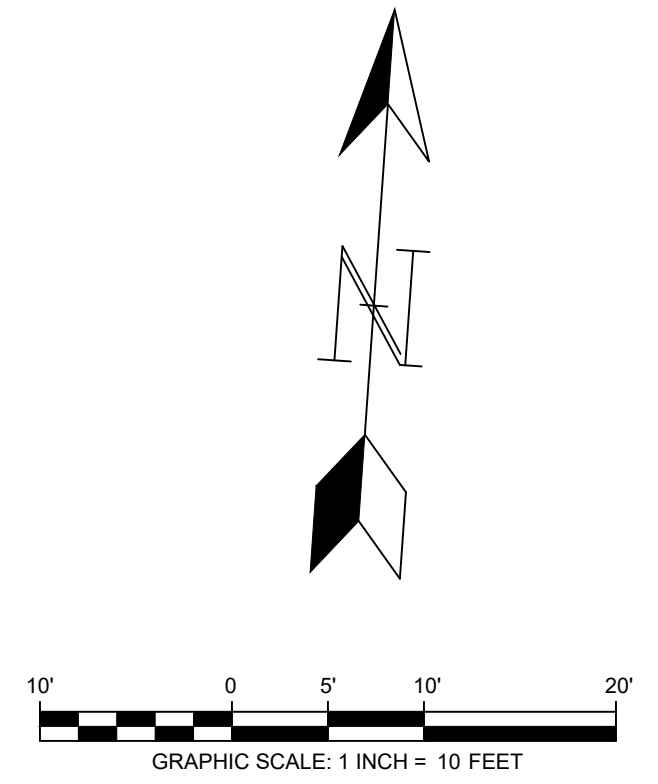
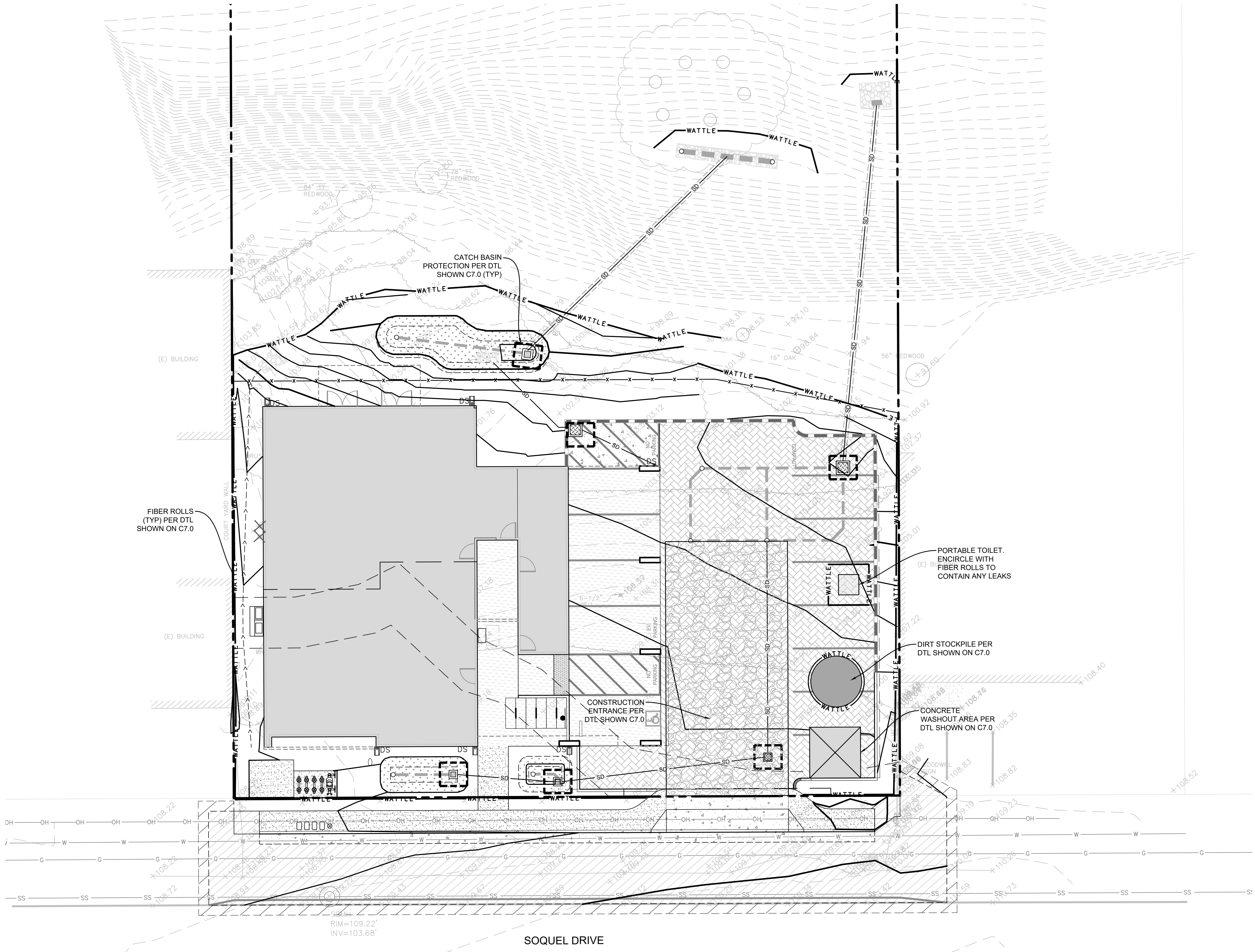
**C7.0**



DAVID RAMSEY DATE  
 RCE# 73735

APN# 041-141-56  
 PLAN TYPE  
 MIXED USE  
 BUILDING PERMIT SET

EROSION CONTROL PLAN  
**HUMAN SPACES, LLC.**  
 9041 SOQUEL DRIVE, APTOS, CA

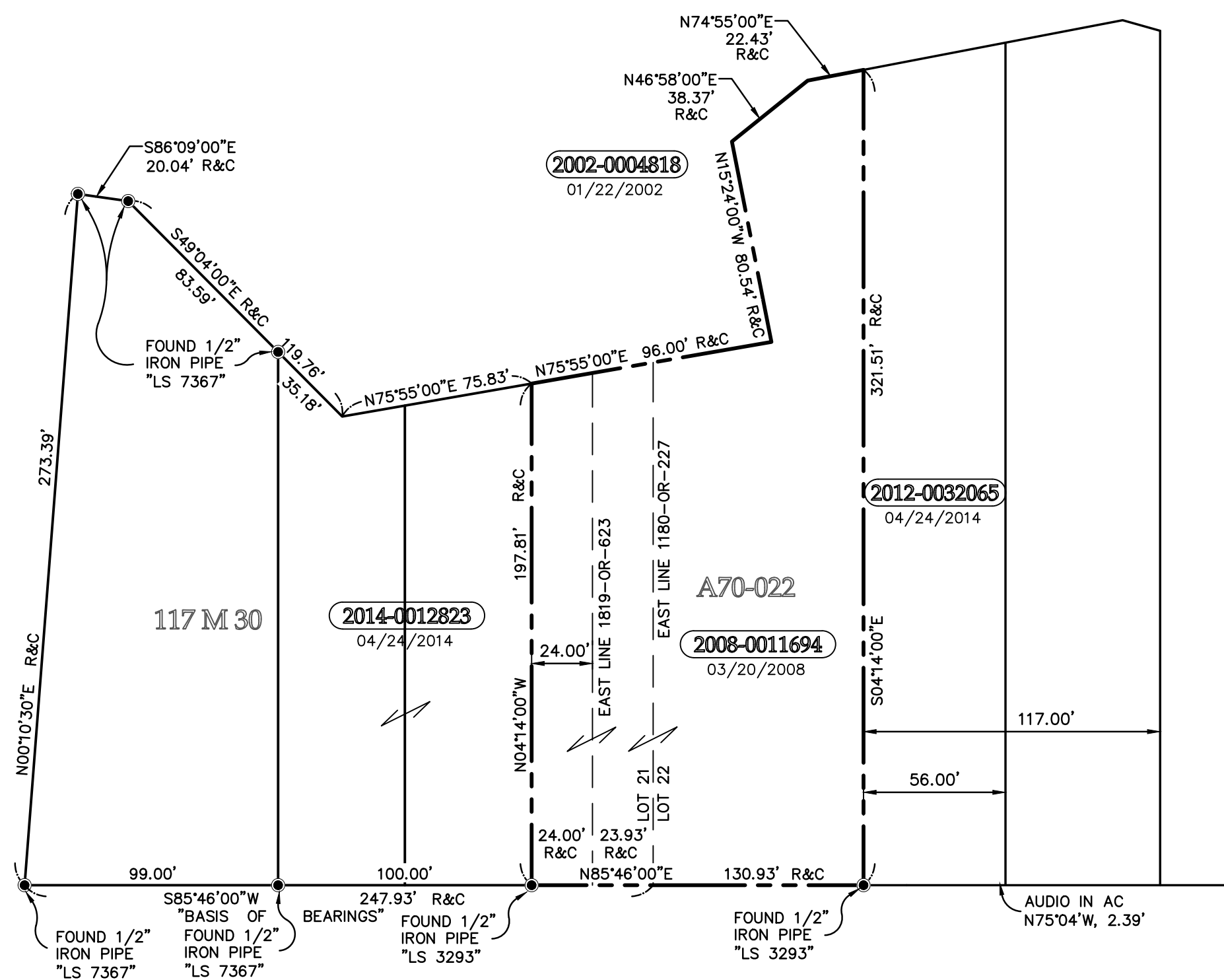


NUMBER	BY	DESCRIPTION	DATE
1	DMR	RESPONSE TO PLANNING COMMENTS	8/8/2025
		REVISION BLOCK	

DRAWN BY: GS  
 DESIGNED BY: DMR  
 DATE: 04/24/2025  
 SCALE: AS NOTED  
 PROJECT NO: 18-01  
 SHEET:  
**C7.1**



**Detail** 1"=50'



**Soquel Drive**  
(60' WIDE)

**Basis of Bearings**

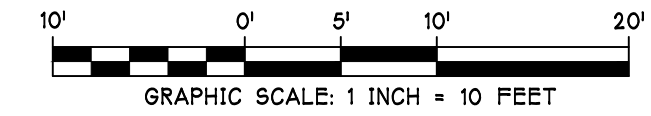
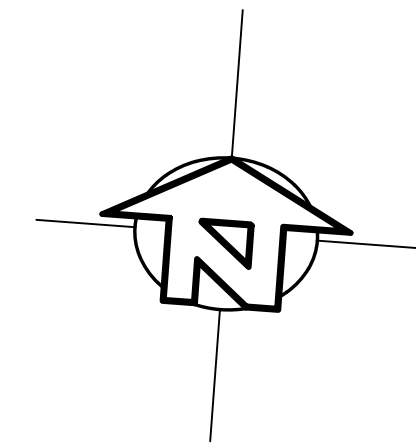
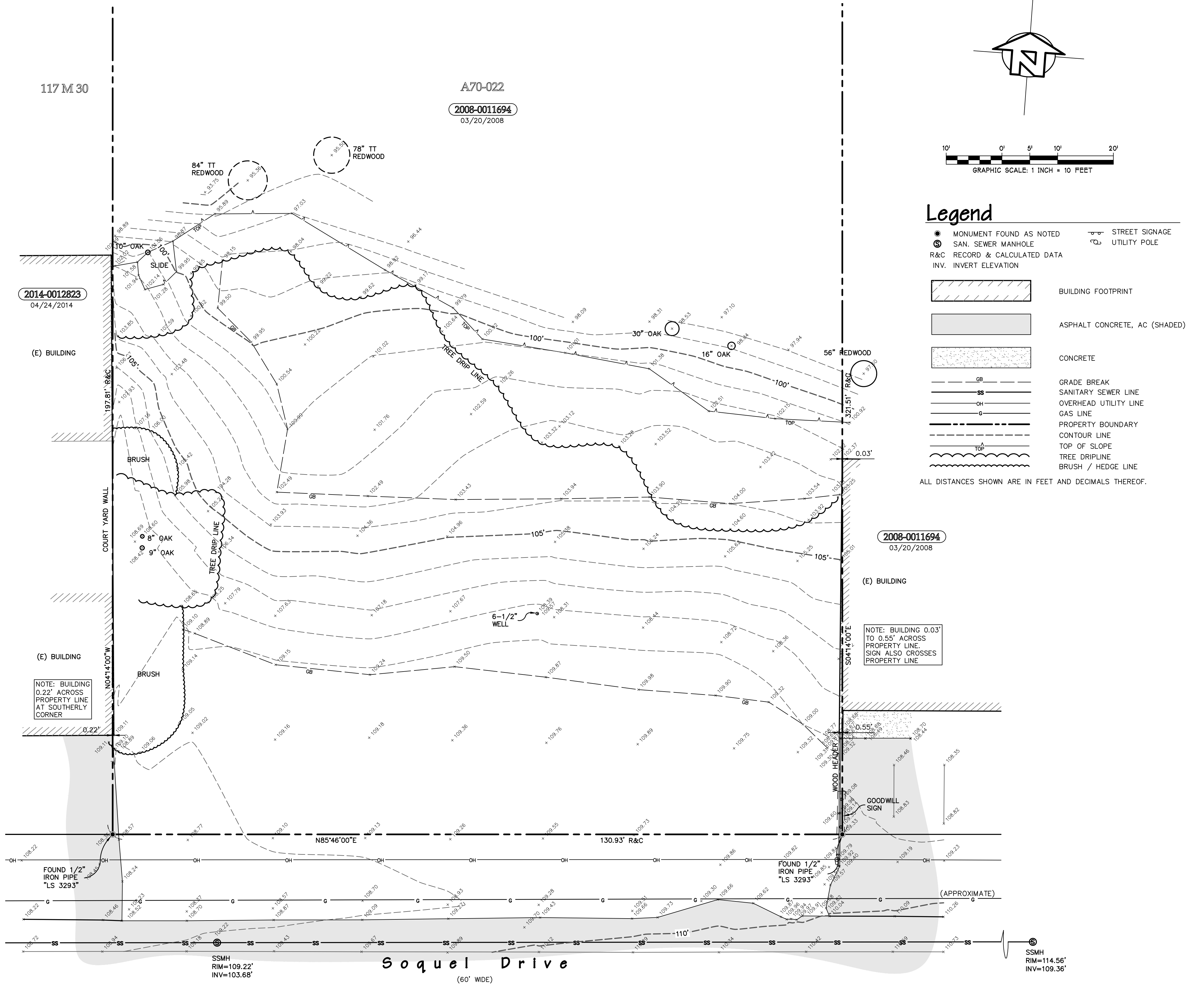
THE BASIS OF BEARINGS FOR THIS SURVEY IS BETWEEN MONUMENTS FOUND ALONG THE NORTHERLY RIGHT-OF-WAY OF SOQUEL DRIVE, AS SHOWN ON THAT MAP FILED IN VOLUME 117 OF SURVEYS, AT PAGE 30, SANTA CRUZ COUNTY RECORDS.

BASIS OF BEARINGS = S 85°48'00\"/>

**Benchmark**

THE BENCHMARK FOR THIS SURVEY IS SANTA CRUZ COUNTY BENCHMARK 899, WHICH IS A BRASS DISK (PID "GU4227"), LOCATED 1.2 KM (0.7 MI) EASTERLY ALONG US HIGHWAY 1 FROM ITS INTERSECTION WITH THE SOUTHERN PACIFIC RAILROAD IN APTOS, IN TOP OF AND 3.7 M (12.1 FT) SOUTHWEST OF THE NORTHEAST END OF THE ABUTMENT WALKWAY OF THE RIO DEL MAR AVENUE OVERPASS BRIDGE, SPANNING US HIGHWAY 1, 7.3 M (24.0 FT) NORTHWEST OF THE CENTERLINE OF THE AVENUE, 0.3 M (1.0 FT) SOUTHWEST OF THE BRIDGE RAIL, AND 0.3 M (1.0 FT) ABOVE THE LEVEL OF THE AVENUE.

BENCHMARK ELEVATION = 155.22' (NAVD88)



**Legend**

- MONUMENT FOUND AS NOTED
  - ⊙ SAN. SEWER MANHOLE
  - R&C RECORD & CALCULATED DATA
  - INV. INVERT ELEVATION
  - ▭ BUILDING FOOTPRINT
  - ▭ ASPHALT CONCRETE, AC (SHADED)
  - ▭ CONCRETE
  - GB GRADE BREAK
  - SS SANITARY SEWER LINE
  - OH OVERHEAD UTILITY LINE
  - G GAS LINE
  - P PROPERTY BOUNDARY
  - C CONTOUR LINE
  - T TOP OF SLOPE
  - TD TREE DRIPLINE
  - B BRUSH / HEDGE LINE
  - S STREET SIGNAGE
  - U UTILITY POLE
- ALL DISTANCES SHOWN ARE IN FEET AND DECIMALS THEREOF.

**IFLAND SURVEY**  
Surveying - Mapping - GPS  
5300 Soquel Avenue, Suite 101, Santa Cruz, CA 95062  
Tel 831.426.7941 Fax 831.426.8266

Boundary and Topographic Survey for:  
**9041 Soquel Drive**  
Aptos, CA 95003

APN 041-141-56	DATE 09/26/18	SCALE 1"=10'	DRAWN VCL
SHEET 1 OF 1 SHEETS			
JOB NO. G18036			

FOR TAX PURPOSES ONLY

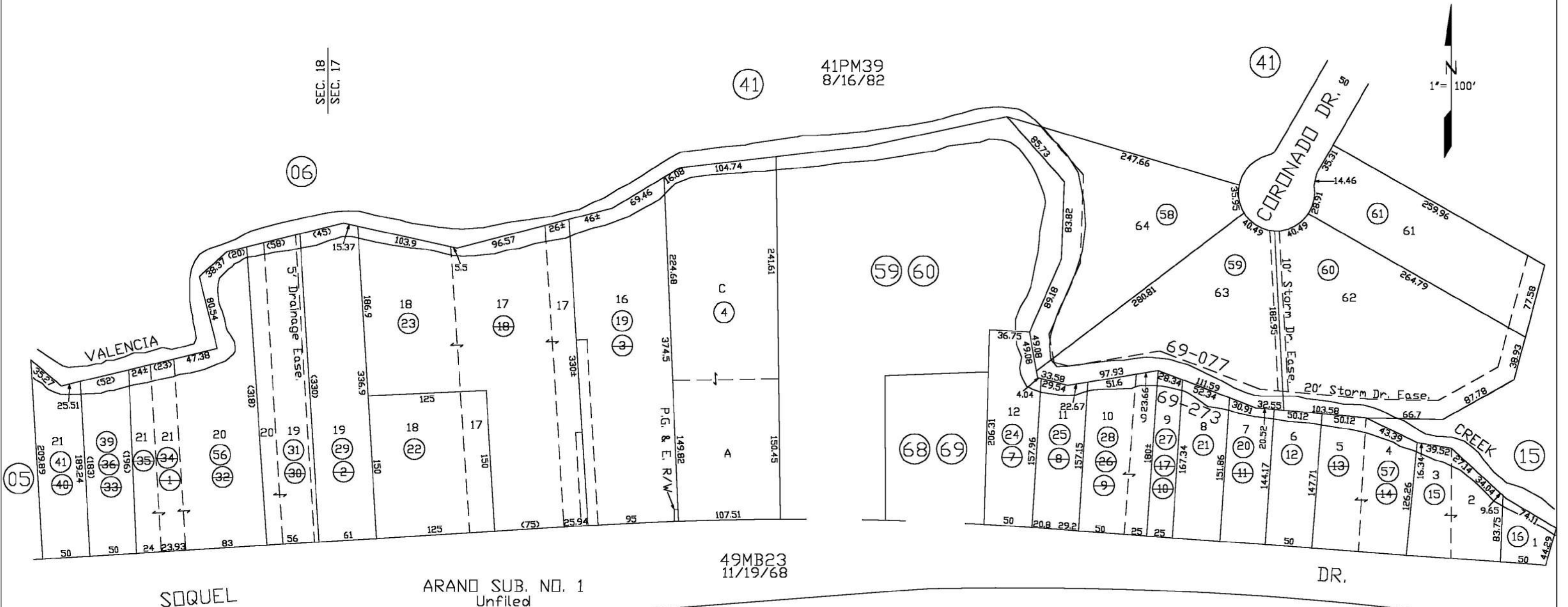
THE ASSESSOR MAKES NO GUARANTEE AS TO MAP ACCURACY NOR ASSUMES ANY LIABILITY FOR OTHER USES. NOT TO BE REPRODUCED. ALL RIGHTS RESERVED.

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POR. APTOS RANCHO  
N.W. 1/4 SEC. 17 & N.E. 1/4 SEC. 18,  
T.11S., R.1E., M.D.B. & M.

Tax Area Code  
69-077 69-273

41-14



Electronically Redrawn 1/13/99  
Rev. 1/13/99 (Por. to pgs. 6, 59 & 60) r/w  
Rev. 1/15/99 (Por. From pg. 41) r/w  
Rev. 5/10/01 m/vn (changed page refs.)

SOQUEL

ARAND SUB. NO. 1  
Unfiled

49MB23  
11/19/68

ROLLING GREEN ESTATE SUB # 290  
37MB56 9/21/61

STATE

HWY.

1

Bk. 44  
01

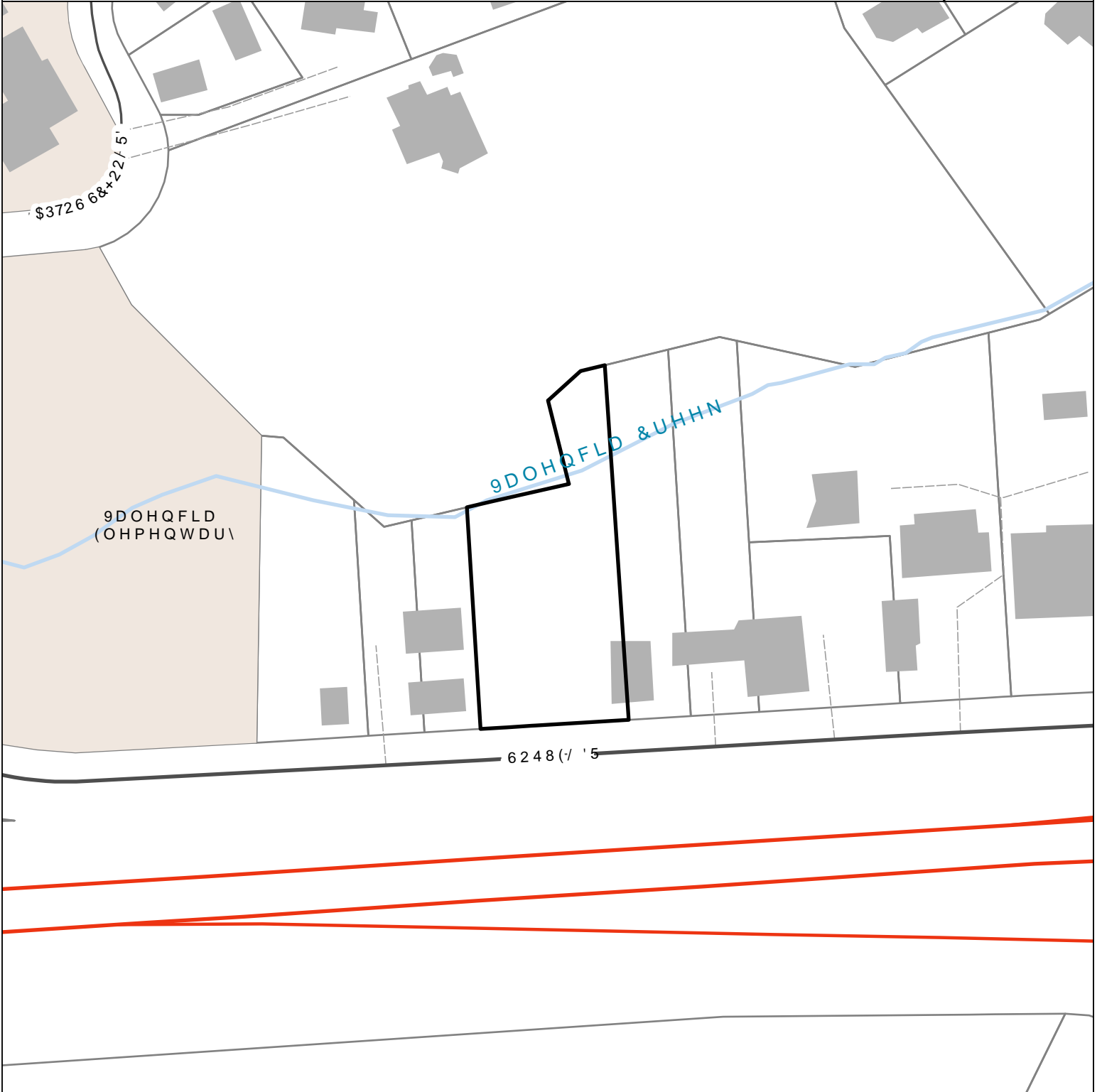
Note - Assessor's Parcel & Block  
Numbers Shown in Circles.

Bk. 44  
29

Assessor's Map No. 41-14  
County of Santa Cruz, Calif.  
Jan. 1999



6DQWD &UX] &RXQW\ 3ODQQLQJ 'HSDUWP  
3DUFHO /RFDWLRQ ODS

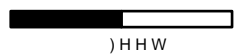


3DUFHO

□ 6XEMHFW 3DUFHO

ODS SULQWHG 1RY

9

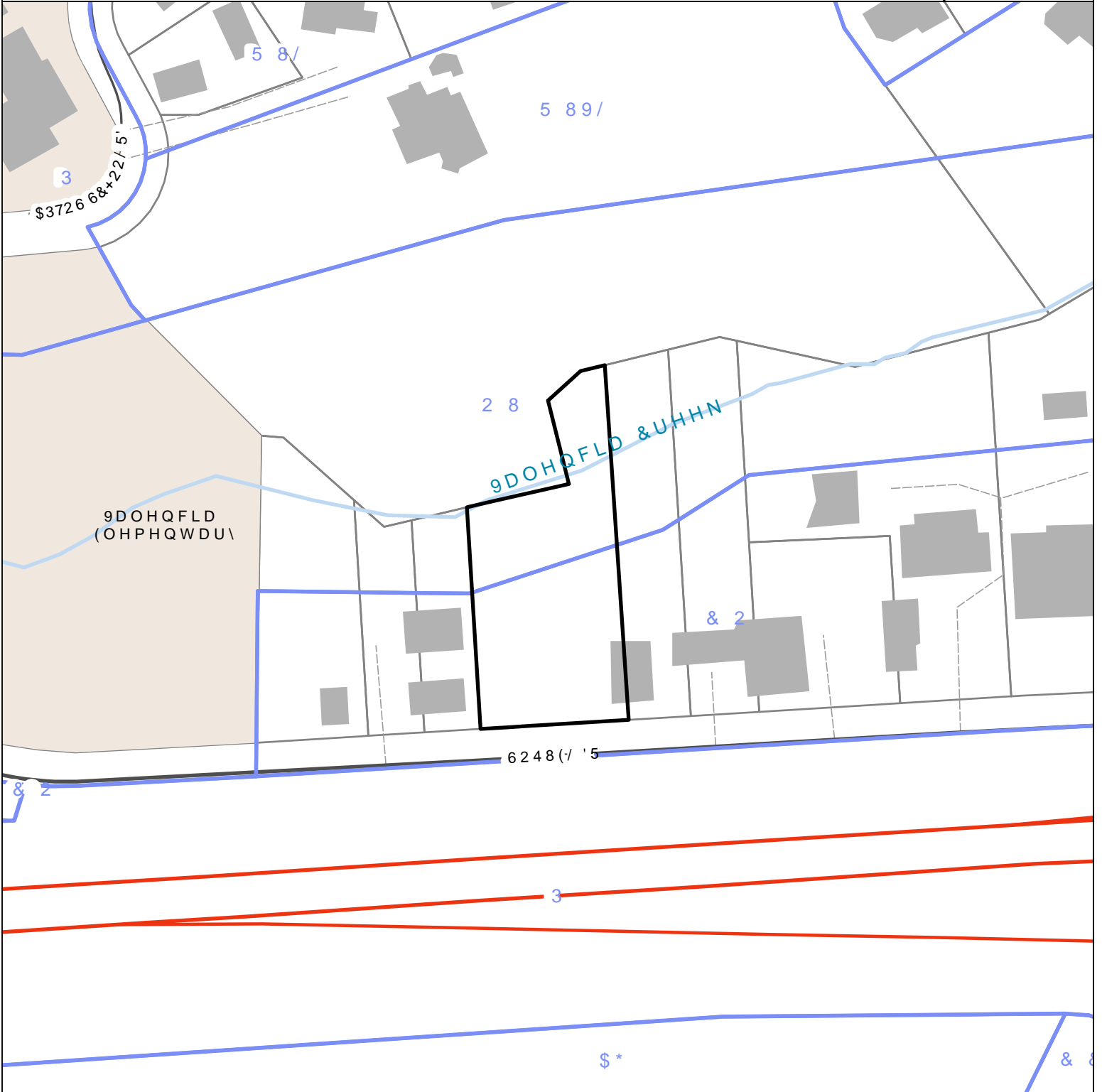


)HHW

EXHIBIT E

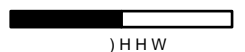


6DQWD &UX] &RXQW\ 3ODQQLQJ 'HSDUWP  
3DUFHO \*HQUHDO 3ODQ ODS



□ 6XEMHFW 3DUFHO

9

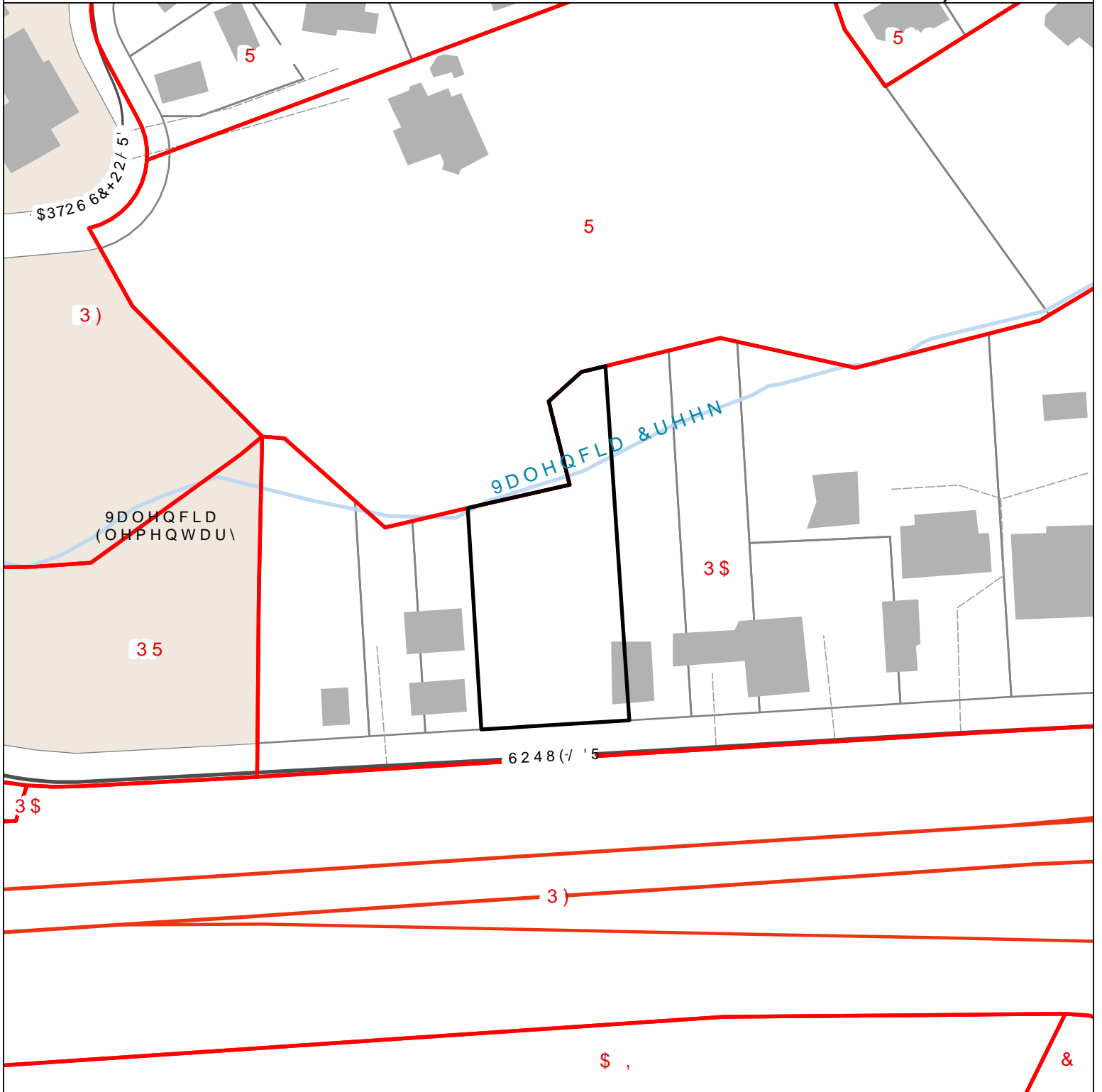


)HHW

EXHIBIT E

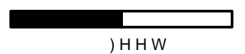


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3DUFHO =RQLQJ 0DS



□ 6XEMHFW 3DUFHO

9



)HHW

EXHIBIT E

Application #: 251212  
APN: 041-141-56  
Owner: Human Spaces, LLC

## Parcel Information

### Services Information

Urban/Rural Services Line:  Inside  Outside  
Water Supply: Soquel Creek Water District  
Sewage Disposal: Santa Cruz Sanitation District  
Fire District: Central Fire Protection District  
Drainage District: Flood Control Zone 6

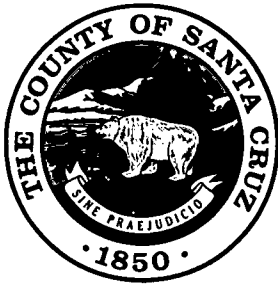
### Parcel Information

Parcel Size: 31,712 square feet  
Existing Land Use - Parcel: undeveloped  
Existing Land Use - Surrounding: commercial  
Project Access: Soquel Drive  
Planning Area: Aptos Planning Area  
Land Use Designation: C-O (Professional and Administrative Offices)  
Zone District: PA (Professional-Administrative Office)  
Coastal Zone:  Inside  Outside  
Appealable to Calif. Coastal Comm.:  Yes  No

**Technical Reviews:** Archaeological Report Review (REV221010)  
Geotechnical Report Review (REV191154)

### Environmental Information

Geologic Hazards: Partially mapped  
Fire Hazard: Not a mapped constraint  
Slopes: Areas greater than 50% slope  
Env. Sen. Habitat: Mapped biotic resources / No physical evidence on site  
Grading: Grading proposed (325 cubic yards of net fill/embankment)  
Tree Removal: One 8" oak tree and one 9" oak tree to be removed on west site  
Scenic: Mapped resource  
Archeology: Mapped resource



# County of Santa Cruz

## PLANNING DEPARTMENT

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## CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) INITIAL STUDY/ENVIRONMENTAL CHECKLIST

**Date:** October 19, 2021 **Application Number:** 191306

**Project Name:** 9041 Soquel Drive, Aptos **Staff Planner:** Lezanne Jeffs

### I. OVERVIEW AND ENVIRONMENTAL DETERMINATION

**APPLICANT:** Bill Kempf, Architect **APN:** 041-141-56

**OWNER:** Human Spaces, LLC **SUPERVISORIAL DISTRICT:** 2

**PROJECT LOCATION:** The project is located on the north side of Soquel Drive approximately 0.4 miles west of Rio Del Mar Boulevard, within the community of Aptos in unincorporated Santa Cruz County. Santa Cruz County is bounded on the north by San Mateo County, on the south by Monterey and San Benito counties, on the east by Santa Clara County, and on the south and west by the Monterey Bay and the Pacific Ocean.

**SUMMARY PROJECT DESCRIPTION:** This is a proposal to construct an approximately 10,981 square foot mixed-use building with a 1,929 square foot basement, 2,889 square feet of office space on the first floor with a covered carport for 5 vehicles, and three residential apartment units on the second floor, located in the PA (Professional-Administrative Office) district. This requires a Commercial Development permit including a Master Occupancy Permit for the two tenant spaces on the ground floor, and a Riparian Exception to allow for a portion of the parking lot and an associated retaining wall, that encroach into the riparian corridor within the arroyo along Valencia Creek. Valencia Creek crosses the northern edge of the parcel approximately 100 feet south of the proposed development site.

**ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:** *All of the following potential environmental impacts are evaluated in this Initial Study. Categories that are marked have been analyzed in greater detail based on project specific information.*

- |   |   |
|---|---|
| <input type="checkbox"/> Aesthetics and Visual Resources    | <input type="checkbox"/> Mineral Resources      |
| <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Noise                  |
| <input type="checkbox"/> Air Quality                        | <input type="checkbox"/> Population and Housing |
| <input checked="" type="checkbox"/> Biological Resources    | <input type="checkbox"/> Public Services        |
| <input type="checkbox"/> Cultural Resources                 | <input type="checkbox"/> Recreation             |

**ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:** *All of the following potential environmental impacts are evaluated in this Initial Study. Categories that are marked have been analyzed in greater detail based on project specific information.*

- |   |   |
|---|---|
| <input type="checkbox"/> Energy                               | <input type="checkbox"/> Transportation                     |
| <input checked="" type="checkbox"/> Geology and Soils         | <input type="checkbox"/> Tribal Cultural Resources          |
| <input type="checkbox"/> Greenhouse Gas Emissions             | <input type="checkbox"/> Utilities and Service Systems      |
| <input type="checkbox"/> Hazards and Hazardous Materials      | <input type="checkbox"/> Wildfire                           |
| <input type="checkbox"/> Hydrology/Water Supply/Water Quality | <input type="checkbox"/> Mandatory Findings of Significance |
| <input type="checkbox"/> Land Use and Planning                |   |

**DISCRETIONARY APPROVAL(S) BEING CONSIDERED:**

- |   |  |
|---|--|
| <input type="checkbox"/> General Plan Amendment             | <input type="checkbox"/> Coastal Development Permit    |
| <input type="checkbox"/> Land Division                      | <input checked="" type="checkbox"/> Grading Permit     |
| <input type="checkbox"/> Rezoning                           | <input checked="" type="checkbox"/> Riparian Exception |
| <input checked="" type="checkbox"/> Development Permit      | <input type="checkbox"/> LAFCO Annexation              |
| <input checked="" type="checkbox"/> Sewer Connection Permit | <input type="checkbox"/> Other:                        |

**OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED (e.g., permits, financing approval, or participation agreement):**

<u>Permit Type/Action</u>	<u>Agency</u>
401 Permit	Regional Water Quality Control Board
1602 Permit	California Department of Fish and Wildlife

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

No California Native American tribes traditionally and culturally affiliated with the area of Santa Cruz County have requested consultation pursuant to Public Resources Code section 21080.3.1.

**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 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.



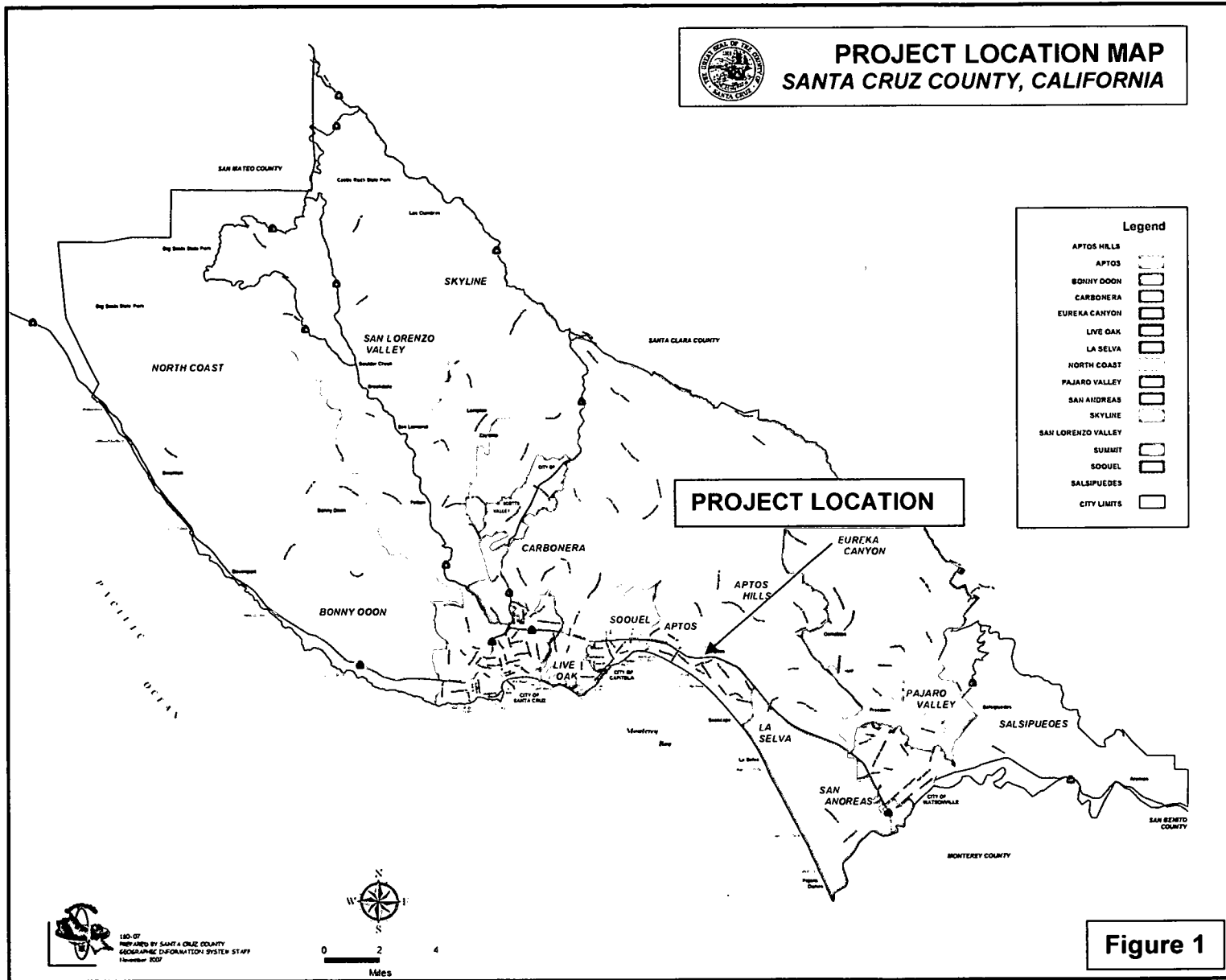
MATT JOHNSTON, Environmental Coordinator

3/11/22

Date



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## II. BACKGROUND INFORMATION

### EXISTING SITE CONDITIONS:

Parcel Size (acres): 31,712 square feet; 12,169 square feet net  
Existing Land Use: Vacant  
Vegetation: Trees including redwoods, live oaks, big leaf maple.  
Groundcover including brambles and poison oak  
Slope in area affected by project:  0 - 30%  31 - 100%  N/A  
Nearby Watercourse: Valencia Creek (perennial stream)  
Distance To: Approximately 110 feet down steep slope

### ENVIRONMENTAL RESOURCES AND CONSTRAINTS:

Water Supply Watershed:	Not Mapped	Fault Zone:	Not Mapped
Groundwater Recharge:	Yes/Portion	Scenic Corridor:	Scenic
Timber or Mineral:	Not Mapped	Historic:	Not Mapped
Agricultural Resource:	Not Mapped	Archaeology:	Potential
Biologically Sensitive Habitat:	Yes	Noise Constraint:	None
Fire Hazard:	Not Mapped	Electric Power Lines:	Yes
Floodplain:	Zone 6	Solar Access:	Adequate
Erosion:	Potential	Solar Orientation:	Adequate
Landslide:	Not Mapped	Hazardous Materials:	None
Liquefaction:	Very High	Other:	None

### SERVICES:

Fire Protection:	Central FPD	Drainage District:	Zone 6
School District:	Pajaro Valley	Project Access:	Soquel Drive
Sewage Disposal:	SC County Sanitation	Water Supply:	Soquel Creek

### PLANNING POLICIES:

Zone District: PA  
(Professional-Administrative Office)  
General Plan: C-O; O-U  
(Professional and Administrative Office); Urban Open Space Lands)  
Urban Services Line:  Inside  Outside  
Coastal Zone:  Inside  Outside

Special Designation:

## **ENVIRONMENTAL SETTING AND SURROUNDING LAND USES:**

### **Natural Environment**

Santa Cruz County is uniquely situated along the northern end of Monterey Bay approximately 55 miles south of the City of San Francisco along the Central Coast. The Pacific Ocean and Monterey Bay to the west and south, the mountains inland, and the prime agricultural lands along both the northern and southern coast of the county create limitations on the style and amount of building that can take place. Simultaneously, these natural features create an environment that attracts both visitors and new residents every year. The natural landscape provides the basic features that set Santa Cruz apart from the surrounding counties and require specific accommodations to ensure building is done in a safe, responsible and environmentally respectful manner.

The California Coastal Zone affects nearly one third of the land in the urbanized area of the unincorporated County with special restrictions, regulations, and processing procedures required for development within that area. Steep hillsides require extensive review and engineering to ensure that slopes remain stable, buildings are safe, and water quality is not impacted by increased erosion. The farmland in Santa Cruz County is among the best in the world, and the agriculture industry is a primary economic generator for the County. Preserving this industry in the face of population growth requires that soils best suited to commercial agriculture remain active in crop production rather than converting to other land uses.

### **PROJECT BACKGROUND:**

The upper portion of the project site is currently used as an unpermitted bicycle sales and repair shop with a pump track at the top of the arroyo slope. Discretionary Permit Application 89-0123 (Proposal to construct a 3,730 square foot, two-story commercial office building), which is filed under previous APN 041-141-32, was approved in August of 1989. This approval, however, was never exercised in that a building permit was never obtained to construct the office building. There were no other proposals for this site other than a consultation in 2009 to inquire about a 4,000 square foot medical building.

### **DETAILED PROJECT DESCRIPTION:**

The project site is located on Soquel Drive just north of Highway One between Rio Del Mar Boulevard and Trout Gulch Road in Aptos. The parcel is approximately 32,000 square feet. While relatively flat at the front of the parcel, the parcel gently slopes downward towards the rear (north) followed by a sharp decline of about 50% slope where the parcel descends to Valencia Creek. The south side of Soquel Drive is lined with both deciduous and evergreen trees which screen views of the site from Highway One, a designated scenic road.

Surrounding land uses include a Goodwill donation center to the east and an interior design studio to the west. The neighborhood consists of several small-scale commercial businesses

including retail stores, restaurants, offices, and personal service establishments. Approximately one-quarter of a mile east of the site is Redwood Village which has an eclectic mix of shops and restaurants. West of the site along Soquel Drive are additional small-scale commercial businesses as well as several nonconforming single-family dwellings and a three-story apartment complex. Not including the apartment complex, these properties are developed with a mix of one - and two-story buildings with varying architectural styles built between the 1960s and 1980s. Aptos Village is located about one-half mile west of the site where Soquel Drive intersects Trout Gulch Road. Aptos Village supports a wide range of retail shops, restaurants, and medical offices.

The applicant is proposing to construct an approximately 10,981 square foot mixed-use building with office space on the first floor, three residential units on the second floor and a basement at the lower level. As shown on the project plans (Exhibit D), the proposed building will be located along the Soquel Drive frontage and includes parking in carports at the main floor, beneath the second floor of the building, as well as uncovered parking located on the eastern side of the parcel. From the street, the proposed building will appear to be two stories in height, with office tenant spaces on the lower floor and residential units above. Two of the three proposed residential units will be directly above the office space, with the third located over the covered parking area. Below the office space at the rear of the building, is a basement that will serve as storage for the tenants of the office space.

### III. ENVIRONMENTAL REVIEW CHECKLIST

#### A. AESTHETICS AND VISUAL RESOURCES

Except as provided in Public Resources Code section 21099, would the project:

1. Have a substantial adverse effect on a scenic vista?

**Discussion:** The parcel is located within a mapped General Plan Scenic area due to its location along Highway One; however, as discussed below, the proposed mixed-use building will not be visible from the scenic road due to existing mature vegetation between the project site and the highway. The project will not directly impact any other public scenic vistas in the area, in that the proposed building is not visible from any other vantage point due to the presence dense woodland to the north, east and west of the project site within the adjacent Valencia Creek arroyo. Therefore, the impact on any scenic vista will be less than significant.

2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

**Discussion:** The project site is located on the north side of Soquel Drive in an area where this street runs parallel and immediately adjacent to Highway One, which is a state scenic highway. However, on the south side of Soquel Drive, between the travelled roadway at Highway One and the project site, there is a thick row of trees and shrubs ranging in height between thirty and one hundred feet, that runs for around 680 feet along the southern edge of Soquel Drive, east toward Rio Del Mar Boulevard. The project site, which is located on the northern side of Soquel Drive between lots that are developed with other two-story commercial structures, is almost entirely hidden behind this existing landscaping. Therefore, because of the screening provided by the existing mature trees and shrubs and because the proposed structure will blend with other existing developments along Soquel Drive, the project would not be noticeably visible from public viewpoints within Highway One, and impacts will be less than significant.

3. 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 point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

**Discussion:** The existing visual setting is a mix of commercial and residential structures that run east and west of the project site along the north side of Soquel Drive, backed by dense woodland running along Valencia Creek. Opposite the commercial buildings, between Soquel Drive and Highway One, there is a row of dense of trees and shrubs. Adjacent sites are developed with a mix of one- and two-story buildings with varying architectural styles built between the 1960s and 1980s. The project has been designed and landscaped to fit into this existing setting. The landscape plan includes two new Crape Myrtle trees along the front of the building to replace the two small trees being removed on the west side of the project site, and twelve tall shrubs will be planted between the parking strip and the adjacent building along the eastern side to provide a buffer between the parking strip and the existing Good Will store. A new sidewalk will be installed along the front property line that will connect with a concrete walkway that leads to the entrance to the lower (office) floor, stairs and an elevator leading to the apartment units above, and to stairs in the rear that go down to the basement.

The project is designed to be consistent with County Code sections that regulate height, bulk, density, setback, landscaping, and design of new structures in the County, including County Code Chapter 13.11, Site, Architectural and Landscape Design Review, including all applicable design guidelines. Therefore, impacts from the project will be less than significant.

4. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

**Discussion:** The project would create an incremental increase in night lighting. However, this increase would be small, and would be similar in character to the lighting associated with the surrounding existing uses. As required by County Code, and as included as conditions of approval of this project, all site, building, security and landscape lighting shall be directed downwards onto the site and away from adjacent properties and away from the adjacent riparian corridor. Further, light sources shall not be visible from adjacent properties and shall be shielded by landscaping, structure, fixture design or other physical means. Building and security lighting shall be integrated into the building design. Project impacts are therefore expected to be less than significant.

**B. AGRICULTURE AND FORESTRY RESOURCES**

*In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies*

may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 1. 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** The project site does not contain any lands designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. In addition, the project does not contain Farmland of Local Importance. Therefore, no Prime Farmland, Unique Farmland, Farmland of Statewide or Farmland of Local Importance would be converted to a non-agricultural use. No impact would occur from project implementation.

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 2. Conflict with existing zoning for agricultural use, or a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** The project site is zoned PA (Professional-Administrative Office), which is not considered to be an agricultural zone. Additionally, the project site's land is not under a Williamson Act contract. Therefore, the project does not conflict with existing zoning for agricultural use, or a Williamson Act contract. No impact is anticipated.

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 3. 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))? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

**Discussion:** The project is not located near land designated as Timber Resource. Therefore, the project would not affect the resource or access to harvest the resource in the future. Timberland as defined by Public Resources Code section 4526, would not support harvesting of redwood trees within the riparian corridor adjacent to Valencia Creek but, if any redwood

trees were required to be removed in the future for safety reasons, the timber resource may only be removed from the site in accordance with California Department of Forestry timber harvest rules and regulations. No trees are within the proposed development area and no trees will be removed as a result of project implementation. No impact would occur.

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 4. <i>Result in the loss of forest land or conversion of forest land to non-forest use?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** No forest land will be impacted as a result of this project. See discussion under B-3 above. No impact is anticipated.

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 5. <i>Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** The project site and surrounding area east and west of Soquel drive does not contain any lands designated as Prime Farmland, Unique Farmland, Farmland of Statewide Importance or Farmland of Local Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. The nearest parcel zoned Agriculture is on the other side of Highway One which will not be affected by the project site and proposal. Therefore, no Prime Farmland, Unique Farmland, Farmland of Statewide, or Farmland of Local Importance would be converted to a non-agricultural use. In addition, the project site contains no forest land, and no forest land occurs within one half of a mile of the project site. Therefore, no impacts are anticipated.

**C. AIR QUALITY**

*The significance criteria established by the Monterey Bay Air Resources District (MBARD)<sup>1</sup> has been relied upon to make the following determinations. Would the project:*

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 1. <i>Conflict with or obstruct implementation of the applicable air quality plan?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

**Discussion:** The project would not conflict with or obstruct any long-range air quality plans of the MBARD. Because general construction activity related emissions (i.e., temporary sources) are accounted for in the emission inventories included in the air quality plans, impacts to air quality plan objectives are less than significant.

<sup>1</sup> Formerly known as the Monterey Bay Unified Air Pollution Control District (MBUAPCD).

General estimated basin-wide construction-related emissions are included in the MBARD emission inventory (which, in part, form the basis for the air quality plans cited below) and are not expected to prevent long-term attainment or maintenance of the ozone and particulate matter standards within the North Central Coast Air Basin (NCCAB). Therefore, temporary construction impacts related to air quality plans for these pollutants from the project would be less than significant, and no mitigation would be required, since they are presently estimated and accounted for in the District’s emission inventory, as described below. No stationary sources would be constructed that would be long-term permanent sources of emissions.

Santa Cruz County is located within the NCCAB. The NCCAB does not meet state standards for ozone (reactive organic gases [ROGs] and nitrogen oxides [NOx]) and fine particulate matter (PM<sub>10</sub>). Therefore, the regional pollutants of concern that would be emitted by the project are ozone precursors and PM<sub>10</sub>.

The primary sources of ROG within the air basin are on- and off-road motor vehicles, petroleum production and marketing, solvent evaporation, and prescribed burning. The primary sources of NOx are on- and off-road motor vehicles, stationary source fuel combustion, and industrial processes. In 2010, daily emissions of ROGs were estimated at 63 tons per day. Of this, area-wide sources represented 49%, mobile sources represented 36%, and stationary sources represented 15%. Daily emissions of NOx were estimated at 54 tons per day with 69% from mobile sources, 22% from stationary sources, and 9% from area-wide sources. In addition, the region is “NOx sensitive,” meaning that ozone formation due to local emissions is more limited by the availability of NOx as opposed to the availability of ROGs (MBUAPCD, 2013b).

PM<sub>10</sub> is the other major pollutant of concern for the NCCAB. In the NCCAB, highest particulate levels and most frequent violations occur in the coastal corridor. In this area, fugitive dust from various geological and man-made sources combines to exceed the standard. The majority of NCCAB exceedances occur at coastal sites, where sea salt is often the main factor causing exceedance. In 2005 daily emissions of PM<sub>10</sub> were estimated at 102 tons per day. Of this, entrained road dust represented 35% of all PM<sub>10</sub> emission, windblown dust 20%, agricultural tilling operations 15%, waste burning 17%, construction 4%, and mobile sources, industrial processes, and other sources made up 9% (MBUAPCD, 2008).

Given the modest amount of new traffic that would be generated by the project there is no indication that new emissions of ROGs or NOx would exceed MBARD thresholds for these pollutants; and therefore, there would not be a significant contribution to an existing air quality violation.

Project construction may result in a short term, localized decrease in air quality due to generation of PM<sub>10</sub>. However, standard dust control best management practices (BMPs), such

as periodic watering, would be implemented during construction to avoid significant air quality impacts from the generation of PM<sub>10</sub>.

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 2. <i>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?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

**Discussion:** The primary pollutants of concern for the NCCAB are ozone and PM<sub>10</sub>, as those are the pollutants for which the district is in nonattainment. Project construction would have a limited and temporary potential to contribute to existing violations of California air quality standards for ozone and PM<sub>10</sub> primarily through diesel engine exhaust and fugitive dust. The criteria for assessing cumulative impacts on localized air quality are the same as those for assessing individual project impacts. Projects that do not exceed MBARD's construction or operational thresholds and are consistent with the AQMP would not have cumulatively considerable impacts on regional air quality (MBARD, 2008). Because the project would not exceed MBARD's thresholds and is consistent with the AQMP, there would not be cumulative impacts on regional air quality.

- |   |                          |                          |                                     |                          |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 3. <i>Expose sensitive receptors to substantial pollutant concentrations?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

**Discussion:**

The proposed mixed-use project would not generate substantial pollutant concentrations. Emissions from construction activities represent temporary impacts that are typically short in duration. Impacts to sensitive receptors would be less than significant.

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 4. <i>Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

**Discussion:** Land uses typically producing objectionable odors include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed project does not include any uses that would be associated with objectionable odors. Odor emissions from the proposed project would be limited to odors associated with vehicle and engine exhaust and idling from cars entering, parking, and exiting the facility. The project does not include any known sources of objectionable odors associated with the long-term operations phase.

During construction activities, only short-term, temporary odors from vehicle exhaust and construction equipment engines would occur. California ultralow sulfur diesel fuel with a

maximum sulfur content of 15 ppm by weight would be used in all diesel-powered equipment, which minimizes emissions of sulfurous gases (sulfur dioxide, hydrogen sulfide, carbon disulfide, and carbonyl sulfide). As the project site is in a coastal area that contains coastal breezes off of the Monterey Bay, construction-related odors would disperse and dissipate and would not cause substantial odors at the closest sensitive receptors. Construction-related odors would be short-term and would cease upon completion. Therefore, no objectionable odors are anticipated from construction activities associated with the project.

The project would not create objectionable odors affecting a substantial number of people; therefore, the project is not expected to result in significant impacts related to objectionable odors during construction or operation.

**D. BIOLOGICAL RESOURCES**

Would the project:

- 1. 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 Wildlife, or U.S. Fish and Wildlife Service?

**Discussion:** The project site is located in an area identified as a potential area of biotic concern based on preliminary analysis. The site is mapped for the following biotic resources on the California Natural Diversity Database (CNDDDB): Dudley’s Lousewort (*Pedicularis dudleyi*), Western Bumble Bee (*Bombus occidentalis*) and Central California Coast Steelhead (*Oncorhynchus mykiss irideus*)

County environmental staff performed several site visits to the property over the course of several months in 2020 and 2021 to determine the extent to which any of these sensitive species may be present. With regard to Dudley’s lousewort, no plants were identified during the site visits and the last collection of this species occurred in 1884 in the vicinity of Aptos. Since those site visits, the entire development area has been converted to a bicycle shop with storage containers converted to shop space and a bicycle pump track that has been installed in the northern portion of the proposed development area. Within the future building site area all native vegetation has been removed.

No plants that produce suitable nectar for bumble bees currently exist within the development area. However, due to the potential that bumble bees may be present in the wider area, the project

will be conditioned to require planting of a variety of flowering plant species that support these bees should they travel through the area.

Valencia Creek is a tributary to Aptos Creek in the Aptos Creek watershed. Valencia Creek is known to support steelhead (*Oncorhynchus mykiss irideus*), which are part of the Central California Coast Distinct Population Segment, listed as threatened under the federal Endangered Species Act. The project site sits above lower Valencia Creek, which serves as a migration corridor for adults to reach spawning habitat further upstream and also supports low densities of juvenile steelhead throughout the year.

The proposed project limits disturbance to the southern, mostly flat, portion of the property, which is approximately 100 feet away laterally and 60 feet above the stream channel. The proposed development envelope would not extend any further towards the stream than existing buildings on the adjacent lots located immediately to the east and west of the project site. The only exception to this is the stormwater discharge. Immediately north of the development area the topography is at or above a 50% slope for a lateral distance of approximately 45 feet. The geotechnical report for the project (Attachment 2), identifies release of stormwaters above this slope as a significant hazard and recommends piping stormwater runoff to the toe of the steep slope. This will require installation of two stormwater pipes that will be anchored to the slope, and a perforated dispersal pipe set upon rock energy dissipators that will be installed at the toe of the slope. A site visit with County staff, project civil engineer and the project geotechnical engineer on 2/17/2021 identified the two locations for these outlets, one just above a redwood grove/ring approximately 25 feet across and the other west of that location in an area with a slope less than 5%. The area between the two outlets is densely vegetated with a mix of native redwood, willow, native blackberry and dense English and cape ivy. Plans showing the approved location of the drainage outlets is included at Attachment 4. The two discharge locations are approximately 25 feet above and 55 feet away from the stream channel. The project also includes a pervious paver driveway as well as three rain gardens to aide in filtering stormwater. With the relatively gentle slope below the outlets and the dense vegetation, and the dissipation from the spreaders and the RSP, as well as the treatment of stormwater and controlled release from the rain gardens, there should be no significant impact on steelhead water quality.

Furthermore, the proposed development will not require the removal of any trees or removal of riparian vegetation that would provide shade or organic material supporting the aquatic food web, and habitat for both terrestrial and aquatic insects, which are important food sources for steelhead.

An increase in lighting at the project site has the potential to impact riparian habitat and the common species that utilize it. To reduce those impacts to less than significant, only essential artificial lighting will be permitted. In addition, as a condition of project approval, a final detailed lighting plan shall be required, showing that all light sources will be cast downward, shielded and directed away from Valencia Creek, so that light does not spill over into the riparian habitat to the

north, onto adjacent properties or upwards into the night sky. Lighting shall further be limited to limited to warm light colors with an output temperature of 2,700 kelvin or less

There is the potential to cause some impact associated with construction to water quality. In order to ensure that steelhead habitat is protected, the following mitigation measures will reduce potential impacts to a less than significant level.

### Mitigation Measures

- BIO-1: Prior to any site disturbance, a pre-construction meeting shall be conducted. The purpose of the meeting will be to ensure that the conditions set forth in the proposed project description and Conditions of Approval of the Riparian Exception are communicated to the various parties responsible for constructing the project. The meeting shall involve all relevant parties including the project proponent, construction supervisor and Environmental Planning Staff.
- BIO-2: Prior to construction, high visibility construction fencing shall be installed, to indicate the limits of work and prevent inadvertent grading or other disturbance within the adjacent riparian corridor. No work-related activity including equipment staging, vehicular access, and grading shall be allowed outside the limits of work.
- BIO-3: A revegetation plan using appropriate California native riparian species plants (shrubs and low growing groundcover) with at least three species known as nectar plants for the obscure bumblebee shall be submitted and approved at the building permit review stage and implemented at the rear of the constructed project (five feet from the back of the building and retaining wall to the existing riparian vegetation) in order to restore of the margins of the riparian area, enhance the riparian corridor and for erosion control.
- BIO-4: A permanent three-foot fence shall be erected approximately 5 feet behind the proposed building to demarcate and prevent disturbance to the riparian restoration area. The location of this fence shall be shown on plans submitted in support of the building permit for the project and shall be approved by Environmental Planning staff.
- BIO-5: Prior to issuance of a building permit, a final detailed lighting plan shall be submitted for review and approval by Environmental Planning staff, showing that all light sources will be cast downward, shielded and directed away from Valencia Creek, so that light does not spill over into the riparian habitat to the north, onto adjacent properties or upwards into the night sky. Lighting shall further be limited to limited to warm light colors with an output temperature of 2,700 kelvin or less

With the implementation of these mitigation measures, the project is not expected to result in significant impacts and will result in beneficial impacts for the obscure bumblebee.

- |  |                          |                                     |                          |                          |
|--|--------------------------|-------------------------------------|--------------------------|--------------------------|
| 2. Have a substantial adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, regulations (e.g., wetland, native grassland, special forests, intertidal zone, etc.) or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|-------------------------------------|--------------------------|--------------------------|

**Discussion:** The site of the proposed mixed-use building and associated parking area is located to the south of Valencia Creek, which runs through the northern half of the parcel within a deeply incised arroyo. In accordance with County Code, “Arroyo” means a gully, ravine or canyon created by a perennial, intermittent or ephemeral stream, with characteristic steep slopes frequently covered with vegetation. An arroyo includes the area between the top of the arroyo banks defined by a discernible break in the slope rising from the arroyo bottom. All areas lying within an arroyo constitute the riparian corridor. The riparian corridor along Valencia Creek is therefore defined by the break of slope which runs across the parcel just north of the proposed building site. Because of the potential impacts on the riparian corridor a resource planner was consulted who indicated the following:

Riparian Woodland

Riparian woodland occurs along the banks of the Valencia Creek in the project area. The woodland is dominated by coast live oaks and redwoods along the higher edge of the banks with redwoods on the steeper slopes beyond. Riparian woodland is considered a sensitive natural community by the California Department of Fish and Wildlife (CDFW) and is regulated under the California Fish and Game Code section 1600 regarding lake and streambed alteration agreements. The riparian woodland in the project area falls within the CDFW stream zone, which extends laterally to the outer edge of riparian vegetation. In addition, riparian habitat is granted further protections under the County’s Sensitive Habitat Protection and Riparian Corridor and Wetlands Protection ordinances (SCCC 16.30 and 16.32).

Impacts

Development will not require the removal of any trees or removal of riparian vegetation; however, a portion of the proposed parking area and an associated retaining wall be located within the delineated riparian corridor where the land starts to drop off toward Valencia Creek. In addition, a portion of the proposed mixed-use building, the retaining wall and parking area will be located within the required 10-foot construction buffer along the edge of the riparian corridor. In order to conduct work within a County-defined riparian corridor,

or for any construction within the designated construction buffer, the project requires the approval of a Riparian Exception by the County. Therefore, together with the Commercial Development Permit for the proposed mixed-use building, the applicant is required to obtain approval of a Riparian Exception. Prior to the approval of any Riparian Exception, a specific set of findings must be met (SCCC Section 16.30.060). Preliminary analysis has determined that the project complies with these findings and all conditions of approval for the Riparian Exception shall be adhered to.

See additional discussions and all proposed mitigation measures specified under D-1 above, that will reduce potential impacts on the riparian corridor a less than significant level.

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 3. <i>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?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** There are no mapped or designated federally protected wetlands on or adjacent to the project site. Therefore, no impacts would occur from project implementation.

- |   |                          |                                     |                          |                          |
|---|--------------------------|-------------------------------------|--------------------------|--------------------------|
| 4. <i>Interfere substantially with the movement of any native resident or migratory fish or wildlife species or migratory wildlife corridors, or impede the use of native wildlife nursery sites?</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|-------------------------------------|--------------------------|--------------------------|

**Discussion:** The project has some potential to interfere with the movement of steelhead or other migratory species; See discussions and mitigation measures specified under D-1 and D-2 above. With the implementation of these mitigation measures, the project would not interfere with the movement of steelhead trout of any other migratory fish or wildlife species or migratory wildlife corridors or impede the use of native wildlife nursery sites. Impacts would be less than significant.

- |   |                          |                                     |                          |                          |
|---|--------------------------|-------------------------------------|--------------------------|--------------------------|
| 5. <i>Conflict with any local policies or ordinances protecting biological resources (such as the Sensitive Habitat Ordinance, Riparian and Wetland Protection Ordinance, and the Significant Tree Protection Ordinance)?</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|-------------------------------------|--------------------------|--------------------------|

**Discussion:** The project is located within a County-defined riparian corridor. See discussions and mitigation measures specified under D-1 and D-2 above. The project must be granted a Riparian Exception in order to be consistent with the County of Santa Cruz Riparian

Corridor and Wetlands Protection Ordinance. In order for a project to qualify for a Riparian Exception (SCCC Section 16.30.060), a specific set of findings must be made. Preliminary analysis has determined that the project complies with these findings.

The project is therefore consistent with the County of Santa Cruz Riparian Corridor and Wetlands Protection Ordinance and impacts from project implementation would be less than significant with mitigation incorporated.

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 6. <i>Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** The project would not conflict with the provisions of any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, no impact would occur.

**E. CULTURAL RESOURCES**

*Would the project:*

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 1. <i>Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** There are no existing permanent structure(s) on the property. As a result, no impacts to historical resources would occur from project implementation.

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 2. <i>Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** The Archaeological Survey Report prepared by Patricia Paramoure Archaeological Consulting, dated November 1, 2021, did not indicate the presence of an archaeological site in the vicinity of the proposed project. However, pursuant to section 16.40.040 of the SCCC, if archeological resources are uncovered during construction, the responsible persons shall immediately cease and desist from all further site excavation and comply with the notification procedures given in SCCC Chapter 16.40.040.

Pursuant to section 16.40.040 of the SCCC, if archaeological resources are uncovered during construction, the responsible persons shall immediately cease and desist from all further site excavation and comply with the notification procedures given in SCCC Chapter 16.40.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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3. *Disturb any human remains, including those interred outside of dedicated cemeteries?*

**Discussion:** Impacts are expected to be less than significant. However, pursuant to section 16.40.040 of the SCCC, and California Health and Safety Code sections 7050.5-7054, if at any time during site preparation, excavation, or other ground disturbance associated with this project, human remains are discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the Sheriff-Coroner and the Planning Director. If the coroner determines that the remains are not of recent origin, a full archaeological report shall be prepared, and representatives of local Native American Indian groups shall be contacted. If it is determined that the remains are Native American, the Native American Heritage Commission will be notified as required by law. The Commission will designate a Most Likely Descendant who will be authorized to provide recommendations for management of the Native American human remains. Pursuant to Public Resources Code section 5097, the descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. Disturbance shall not resume until the significance of the resource is determined and appropriate mitigations to preserve the resource on the site are established.

**F. ENERGY**

*Would the project:*

1. *Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

**Discussion:** The project, like all development, would be responsible for an incremental increase in the consumption of energy resources during site grading and construction due to onsite construction equipment and potential traffic delays. All project construction equipment would be required to comply with the California Air Resources Board (CARB) emissions requirements for construction equipment, which includes measures to reduce fuel-consumption, such as imposing limits on idling and requiring older engines and equipment to be retired, replaced, or repowered. In addition, the project would comply with General Plan policy 8.2.2, which requires all new development to be sited and designed to minimize site disturbance and grading. As a result, impacts associated with the small temporary increase in consumption of fuel during construction are expected to be less than significant.

The project involves the construction of an approximately 11,000 square foot mixed-use building with a 1,900 square foot basement, 3,000 square feet of office space on the first floor with a covered carport for 5 vehicles, and three residential apartment units on the second floor. No impacts are expected from project implementation. Therefore, the project will not result in wasteful, inefficient, or unnecessary consumption of energy resources.

In addition, the County has strategies to help reduce energy consumption and greenhouse gas (GHG) emissions. These strategies included in the *County of Santa Cruz Climate Action Strategy* (County of Santa Cruz, 2013) are outlined below.

#### Strategies for the Reduction of Energy Use and GHG Emissions

- Develop a Community Choice Aggregation (CCA) Program, if feasible.<sup>2</sup>
- Increase energy efficiency in new and existing buildings and facilities.
- Enhance and expand the Green Business Program.
- Increase local renewable energy generation.
- Public education about climate change and impacts of individual actions.
- Continue to improve the Green Building Program by exceeding the minimum standards of the state green building code (Cal Green).
- Form partnerships and cooperative agreements among local governments, educational institutions, nongovernmental organizations, and private businesses as a cost-effective way to facilitate mitigation and adaptation.
- Reduce energy use for water supply through water conservation strategies.

#### Strategies for the Reduction of Energy Consumption and GHG Emissions from Transportation

- Reduce vehicle miles traveled (VMT) through County and regional long-range planning efforts.
- Increase bicycle ridership and walking through incentive programs and investment in bicycle and pedestrian infrastructure and safety programs.
- Provide infrastructure to support zero and low emissions vehicles (plug in, hybrid plug-in vehicles).
- Increase employee use of alternative commute modes: bus transit, walking, bicycling, carpooling, etc.
- Increase the number of electric and alternative fuels vehicles in the County fleet.

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<sup>2</sup> Monterey Bay Community Power (MBCP) was formed in 2017 to provide carbon-free electricity. All Pacific Gas & Electric Company (PG&E) customers in unincorporated Santa Cruz County were automatically enrolled in the MBCP in 2018.

Therefore, the project will not result in wasteful, inefficient, or unnecessary consumption of energy resources. Impacts are expected to be less than significant.

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** AMBAG’s 2040 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) recommends policies that achieve statewide goals established by CARB, the California Transportation Plan 2040, and other transportation-related policies and state senate bills. The SCS element of the MTP targets transportation-related greenhouse gas (GHG) emissions in particular, which can also serve to address energy use by coordinating land use and transportation planning decisions to create a more energy efficient transportation system.

The Santa Cruz County Regional Transportation Commission (SCCRTC) prepares a County-specific regional transportation plan (RTP) in conformance with the latest AMBAG MTP/SCS. The 2040 RTP establishes targets to implement statewide policies at the local level, such as reducing vehicle miles traveled and improving speed consistency to reduce fuel consumption.

In 2013, Santa Cruz County adopted a Climate Action Strategy (CAS) focused on reducing the emission of greenhouse gases, which is dependent on increasing energy efficiency and the use of renewable energy. The strategy intends to reduce energy consumption and greenhouse gas emissions by implementing a number of measures such as reducing vehicle miles traveled through County and regional long-range planning efforts, increasing energy efficiency in new and existing buildings and facilities, increasing local renewable energy generation, improving the Green Building Program by exceeding minimum state standards, reducing energy use for water supply through water conservation strategies, and providing infrastructure to support zero and low emission vehicles that reduce gasoline and diesel consumption, such as plug in electric and hybrid plug in vehicles.

In addition, the Santa Cruz County General Plan has historically placed a priority on “smart growth” by focusing growth in the urban areas through the creation and maintenance of an urban services line. Objective 2.1 (Urban/Rural Distinction) directs most residential development to the urban areas, limits growth, supports compact development, and helps reduce sprawl. The Circulation Element of the General Plan further establishes a more

efficient transportation system through goals that promote the wise use of energy resources, reducing vehicle miles traveled, and transit and active transportation options.

Energy efficiency is a major priority throughout the County's General Plan. Measure C was adopted by the voters of Santa Cruz County in 1990 and explicitly established energy conservation as one of the County's objectives. The initiative was implemented by Objective 5.17 (Energy Conservation) and includes policies that support energy efficiency, conservation, and encourage the development of renewable energy resources. Goal 6 of the Housing Element also promotes energy efficient building code standards for residential structures constructed in the County.

The project will be consistent with the AMBAG 2040 MTP/SCS and the SCCRTC 2040 RTP. The project would also be required to comply with the Santa Cruz County General Plan and any implemented policies and programs established through the CAS. In addition, the project design would be required to comply with CALGreen, the state of California's green building code, to meet all mandatory energy efficiency standards. Therefore, the project would not conflict with or obstruct any state or local plan for renewable energy or energy efficiency.

**G. GEOLOGY AND SOILS**

Would the project:

1. *Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:*

A. <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? Refer to Division of Mines and Geology Special Publication 42.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B. <i>Strong seismic ground shaking?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C. <i>Seismic-related ground failure, including liquefaction?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D. <i>Landslides?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Discussion (A through D):** All of Santa Cruz County is subject to some hazard from earthquakes, and there are several faults within the County. While the San Andreas fault is larger and considered more active, each fault is capable of generating moderate to severe ground shaking from a major earthquake. Consequently, large earthquakes can be expected in the future. The October 17, 1989 Loma Prieta earthquake (magnitude 7.1) was the second largest earthquake in central California history.

The project site is located outside of the limits of the State Alquist-Priolo Special Studies Zone or any County-mapped fault zone (County of Santa Cruz GIS Mapping, California Division of Mines and Geology, 2001). The project site is located approximately 8.5 miles southwest of the San Andreas fault zone, as the crow flies over mountain ranges so actual distance is much greater than this, and 4.5 miles of the Zayante fault zone, as the crow flies over mountain ranges and is considered much farther than this number. A geotechnical investigation for the project was performed by CMAG Engineering, Inc., dated December 30, 2018 (Attachment 2). This report has been reviewed and has been accepted by the County Civil Engineer as indicated in the letter dated January 9, 2020 (Attachment 3). The report concluded that based on the results of their slope stability analysis, there is a low probability for overall slope instability to occur under static and seismic conditions on the steep slope that descends to the north from the proposed improvements. However, under saturated conditions with slope parallel seepage, the factor of safety of shallow seated erosional failures, on the steep slope adjacent to the proposed improvements, does not meet industry standard factors of safety. To conclude, based on the results of the field investigations, laboratory testing, and engineering analysis, the subject site will be suitable for the proposed development provided the recommendations presented are implemented during grading and construction:

- The proposed north side of the building is to be located approximately 10 to 20 feet from the top of the slope.
- The building is to incorporate a basement, approximately 8 to 10 feet below grade for the portion of the building adjacent to the steep slope.
- The proposed north side of the parking area is to be located approximately 10 to 20 feet from the top of the slope.
- The grade for the parking area adjacent to the steep slope is to be raised by approximately 6 to 8 feet.
- Foundation, retaining wall, and grading recommendations in the subject report shall be adhered to.



**Discussion:** The geotechnical report for the project did not identify any elevated direct or indirect risks associated with expansive soils. Therefore, no impact is anticipated.

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 5. Have soils incapable of adequately supporting the use of septic tanks, leach fields, or alternative wastewater disposal systems where sewers are not available for the disposal of waste water? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** No septic systems are proposed. The project would connect to the Santa Cruz County Sanitation District, and the applicant would be required to pay standard sewer connection and service fees that fund sanitation improvements within the district as a Condition of Approval for the project.

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 6. Directly or indirectly destroy a unique paleontological resource or site of unique geologic feature? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** No unique paleontological resources or sites or unique geologic features are known to occur in the vicinity of the project. A query was conducted of the mapping of identified geologic/paleontological resources maintained by the County of Santa Cruz Planning Department, and there are no records of paleontological or geological resources in the vicinity of the project parcel. No direct or indirect impacts are anticipated.

or unique geologic features do not occur on the project site. No direct or indirect impacts are anticipated.

**H. GREENHOUSE GAS EMISSIONS**

*Would the project:*

- |   |                          |                          |                                     |                          |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

**Discussion:** The project, like all development, would be responsible for an incremental increase in greenhouse gas (GHG) emissions by usage of fossil fuels during the site grading and construction. In 2013, Santa Cruz County adopted a Climate Action Strategy (CAS) intended to establish specific emission reduction goals and necessary actions to reduce greenhouse gas levels to pre-1990 levels as required under Assembly Bill (AB) 32 legislation. The strategy intends to reduce GHG emissions and energy consumption by implementing measures such as reducing vehicle miles traveled through the County and regional long-range planning efforts and increasing energy efficiency in new and existing buildings and facilities. Implementing the CAS, the MBCP was formed in 2017 to provide carbon-free electricity. All

PG&E customers in unincorporated Santa Cruz County were automatically enrolled in the MBCP in 2018. All project construction equipment would be required to comply with the CARB emissions requirements for construction equipment. Further, all new buildings are required to meet the State's CalGreen building code. As a result, impacts associated with the temporary increase in GHG emissions are expected to be less than significant.

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 2. <i>Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** See the discussion under H-1 above. No significant impacts are anticipated.

**I. HAZARDS AND HAZARDOUS MATERIALS**

Would the project:

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 1. <i>Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

**Discussion:** The project would not create a significant hazard to the public or the environment. No routine transport or disposal of hazardous materials is proposed. However, during construction, fuel would be used at the project site. In addition, fueling may occur within the limits of the staging area proposed to be located at the project site (9041 Soquel Drive). Best management practices would be used to ensure that no impacts would occur. Impacts are expected to be less than significant.

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 2. <i>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?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

**Discussion:** See discussion under I-1 above. Project impacts would be considered less than significant.

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 3. <i>Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** Aptos Junior High School located at 1001 Huntington Drive in Aptos, is approximately .75 miles to the edge of the project site. Although fueling of equipment is likely to occur within the staging area, BMPs to contain spills would be implemented. No impacts are anticipated.

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 4. <i>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?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** The project site is not included on the Cortese list of hazardous sites in Santa Cruz County compiled pursuant to Government Code section 65962.5. No impacts are anticipated from project implementation.

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 5. <i>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?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** The project is not located within two miles of a public airport or public use airport. No impact is anticipated.

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 6. <i>Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** The project would not conflict with implementation of the County of Santa Cruz Local Hazard Mitigation Plan 2015-2020 (County of Santa Cruz, 2020). Therefore, no impacts to an adopted emergency response plan or evacuation plan would occur from project implementation.

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 7. <i>Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** See discussion under Wildfire Question T-2. The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. No impact would occur.

**J. HYDROLOGY, WATER SUPPLY, AND WATER QUALITY**

Would the project:

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

**Discussion:**

The project is located adjacent to Valencia Creek; however, as conditioned, the project will have no significant impact on water quality and the project would not discharge runoff either directly or indirectly into a public or private water supply. No heavy commercial or industrial activities are proposed that would generate a substantial level of contaminants. However, runoff from this project may contain small amounts of chemicals and other household contaminants, such as pathogens, pesticides, trash, and nutrients. The parking and driveway associated with the project would incrementally contribute urban pollutants to the environment; however, the contribution would be small, given the size of the driveway and parking area. The project incorporates pervious pavers and rain garden catchments to treat stormwater and control release to pre-development levels. The discharge locations direct the pre-treated waters through dense vegetation along a gentle slope over 50-feet from the active channel, further reducing potential impacts. Potential siltation from the project during construction would be addressed through implementation of erosion control BMPs. No water quality standards or waste discharge requirements would be violated, and surface or ground water quality would not otherwise be substantially degraded. Impacts would be less than significant.

- |   |                          |                          |                                     |                          |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

**Discussion:** The project would obtain water from Soquel Creek Water District and would not rely on private well water. Although the project would incrementally increase water demand, Soquel Creek Water District has previously provided information indicating that adequate supplies are available to serve the project and prior to the issuance of a building permit, a valid will-serve letter will be required to be submitted. The project is not located in

a mapped groundwater recharge area or water supply watershed and will not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. Impacts would be less than significant.

- |   |                          |                          |                                     |                          |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 3. <i>Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| A. <i>result in substantial erosion or siltation on- or off-site;</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| B. <i>substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| C. <i>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; or;</i>                              | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| D. <i>impede or redirect flood flows?</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Discussion:** The project will not alter the course of any stream or river. A drainage plan was prepared for the proposed Project. The County Department of Public Works Stormwater Management Section staff has reviewed and approved the proposed drainage plan. The Project will not substantially alter the existing drainage pattern of the site in a manner that would result in erosion or siltation, or an increase in runoff from the site.

The subject site slopes from the south (Soquel Drive) towards the north (riparian area) and drains to Valencia Creek. The first 35 feet adjacent to Soquel Drive is relatively flat and is steeply sloped beyond that. There are no onsite or near-site drainage facilities. Soquel Drive is crowned and approximately half of the paved road drains toward the subject parcel. The project will result in the construction of approximately 5,000 square feet of impervious area and approximately 3,000 square feet of semi-impervious pavers.

The project’s civil engineer has prepared Preliminary Civil Improvement Plans and drainage calculations that have been reviewed and approved by the Department of Public Works (DPW) Stormwater Management for feasibility to comply with the County Design Criteria. The plans and report detail how the project has been designed to mitigate for the proposed increase in impervious area coverage. The proposal includes routing impervious area runoff to biofiltration areas and through permeable paver and underground rock sections that will provide both filtering for water quality treatment as well as flood control storage. The flood control storage is sized to detain the post development runoff from the 25-year storm while controlling the release so that predevelopment 5-year runoff rates are maintained. The controlled release will be routed to the north in two 8-inch storm drains that discharge on separate rip rap outfalls. The project has been conditioned to provide detailed grading information to ensure that existing runoff from Soquel Drive will continue with existing drainage patterns and routed so as not to impact adjacent private properties. The project is also conditioned to ensure that the civil engineer’s final design and siting of the outfall structures are acceptable to the project geotechnical engineer. A recorded maintenance agreement regarding the ongoing maintenance of all proposed stormwater mitigations is also required prior to final acceptance of the project. Impacts would therefore be considered less than significant.

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 4. <i>In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** According to the Federal Emergency Management Agency (FEMA) National Flood Insurance Rate Map, dated September 29, 2017, no portion of the project site lies within a flood hazard zone, and there would be no impact.

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 5. <i>Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

**Discussion:** All County water agencies are experiencing a lack of sustainable water supply due to groundwater overdraft and diminished availability of streamflow. Because of this, coordinated water resource management has been of primary concern to the County and to the various water agencies. Projects seeking approval must be consistent with numerous water management plans as described below.

As required by state law, each of the County’s water agencies serving more than 3,000 connections must update their Urban Water Management Plans (UWMPs) every five years, with the most recent updates completed in 2021. This project falls within the City of Santa Cruz Water Department service area. The City of Santa Cruz Water Department is

anticipating that water use through 2040 will slightly increase, and they are planning accordingly through the development of several diverse water supply projects.

County staff are working with the water agencies on various integrated regional water management programs to provide for sustainable water supply and protection of the environment. Effective water conservation programs have reduced overall water demand in the past 20 years, despite continuing growth. In August 2014, the Board of Supervisors and other agencies adopted the Santa Cruz Integrated Regional Water Management (IRWM) Plan Update 2014, which identifies various strategies and projects to address the current water resource challenges of the region. In 2020, an updated climate change chapter was added to the IRWMP. A Countywide Storm Water Resources Plan was created through a related effort in 2016 to ensure the coordinated use of storm water as a resource.

The County is working closely with water agencies to implement the Sustainable Groundwater Management Act (SGMA) of 2014. There are three groundwater basins in the County that are subject to SGMA, the Santa Margarita Basin, the Santa Cruz Mid-County Basin, and the Pajaro Valley Basin. The project is located in the Santa Cruz Mid-County Groundwater Basin.

In 2016, Soquel Creek Water District (SqCWD), Central Water District (CWD), County, and City of Santa Cruz adopted a Joint Powers Agreement to form the Santa Cruz Mid-County Groundwater Agency for management of the Mid-County Basin under SGMA. The Groundwater Sustainability Plan (GSP) written by the Groundwater Agency was approved by the Department of Water Resources in June 2021. The GSP outlines an approach to reach sustainability by 2040 which relies on projects including a purified recycled water and an aquifer storage and recovery project to provide additional supply to the Basin. Projects and Management Actions included in the Plan originated through the SqCWD Community Water Plan and the City of Santa Cruz Water Supply Augmentation Strategy.

In addition to the Groundwater Sustainability Plan, Urban Water Management Plans, and the Integrated Regional Water Management Plan, the project will comply with SCCC Chapters 13.13 (Water Conservation – Water Efficient Landscaping), 7.69 (Water Conservation) and 7.70 (Water Wells), as well as Chapter 7.71 (Water Systems) section 7.71.130 (Water use measurement and reporting). The proposed project is consistent with the community Water Plan and so no significant impacts are anticipated.

**K. LAND USE AND PLANNING**

*Would the project:*

- 1. *Physically divide an established community?*

**Discussion:** The project does not include any element that would physically divide an established community. No impact would occur.

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 2. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

**Discussion:** The project would not cause a significant environmental impact due to a conflict with any land use plan, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. General Plan policy 5.2.3 (Activities Within Riparian Corridors and Wetlands) states: "Development activities, land alterations and vegetation disturbance within riparian corridors and wetlands and required buffers shall be prohibited unless an exception is granted per the Riparian Corridor and Wetlands Protection ordinance". Please see complete discussion under Question D-5. Impacts would be considered less than significant.

**L. MINERAL RESOURCES**

Would the project:

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 1. 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** The site does not contain any known mineral resources that would be of value to the region and the residents of the state. Therefore, no impact is anticipated from project implementation.

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 2. 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** The project site is zoned PA, which is not considered to be an Extractive Use Zone (M-3) nor does it have a land use designation with a Quarry Designation Overlay (Q) (County of Santa Cruz 1994). Therefore, no potentially significant loss of availability of a known mineral resource of locally important mineral resource recovery (extraction) site delineated on a local general plan, specific plan or other land use plan would occur as a result of this project.

**M. NOISE**

Would the project result in:

- |   |                          |                          |                                     |                          |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 1. 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

**Discussion:**

County of Santa Cruz General Plan

The County of Santa Cruz has not adopted noise thresholds for construction noise. The following applicable noise related policy is found in the Public Safety and Noise Element of the Santa Cruz County General Plan (Santa Cruz County 1994).

- Policy 6.9.7 Construction Noise. Require mitigation of construction noise as a condition of future project approvals.

The General Plan also contains the following table, which specifies the maximum allowable noise exposure for stationary noise sources (operational or permanent noise sources) (Table 2).

	Daytime <sup>5</sup> (7:00 am to 10:00 pm)	Nighttime <sup>2, 5</sup> (10:00 pm to 7:00 am)
Hourly Leq average hourly noise level, dB <sup>3</sup>	50	45
Maximum Level, dB <sup>3</sup>	70	65
Maximum Level, dB – Impulsive Noise <sup>4</sup>	65	60
Notes: 1 As determined at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards may be applied to the receptor side of noise barriers or other property line noise mitigation measures. 2 Applies only where the receiving land use operates or is occupied during nighttime hours 3 Sound level measurements shall be made with "slow" meter response. 4 Sound level measurements shall be made with "fast" meter response 5 Allowable levels shall be raised to the ambient noise levels where the ambient levels exceed the allowable levels. Allowable levels shall be reduced to 5 dB if the ambient hourly Leq is at least 10 dB lower than the allowable level. Source: County of Santa Cruz 1994		

County of Santa Cruz Code

There are no County of Santa Cruz ordinances that specifically regulate construction or operational noise levels. However, Section 8.30.010 (Curfew—Offensive noise) of the SCCC contains the following language regarding noise impacts:

- (A) No person shall make, cause, suffer, or permit to be made any offensive noise.

(B) "Offensive noise" means any noise which is loud, boisterous, irritating, penetrating, or unusual, or that is unreasonably distracting in any other manner such that it is likely to disturb people of ordinary sensitivities in the vicinity of such noise, and includes, but is not limited to, noise made by an individual alone or by a group of people engaged in any business, activity, meeting, gathering, game, dance, or amusement, or by any appliance, contrivance, device, tool, structure, construction, vehicle, ride, machine, implement, or instrument.

I The following factors shall be considered when determining whether a violation of the provisions of this section exists:

(1) Loudness (Intensity) of the Sound.

(a) Day and Evening Hours. For purposes of this factor, a noise shall be automatically considered offensive if it occurs between the hours of 8:00 a.m. and 10:00 p.m. and it is:

- (i) Clearly discernible at a distance of 150 feet from the property line of the property from which it is broadcast; or
- (ii) In excess of 75 decibels at the edge of the property line of the property from which the sound is broadcast, as registered on a sound measuring instrument meeting the American National Standard Institute's Standard S1.4-1971 (or more recent revision thereof) for Type 1 or Type 2 sound level meters, or an instrument which provides equivalent data.

A noise not reaching this intensity of volume may still be found to be offensive depending on consideration of the other factors outlined below.

(b) Night Hours. For purposes of this factor, a noise shall be automatically considered offensive if it occurs between the hours of 10:00 p.m. and 8:00 a.m. and it is:

- (i) Clearly discernible at a distance of 100 feet from the property line of the property from which it is broadcast; or
- (ii) In excess of 60 decibels at the edge of the property line of the property from which the sound is broadcast, as registered on a sound measuring instrument meeting the American National Standard Institute's Standard S1.4-1971 (or more recent revision thereof) for Type 1 or Type 2 sound level meters, or an instrument which provides equivalent data.

A noise not reaching this intensity of volume may still be found to be offensive depending on consideration of the other factors outlined below.

(2) Pitch (frequency) of the sound, e.g., very low bass or high screech;

- (3) Duration of the sound;
- (4) Time of day or night;
- (5) Necessity of the noise, e.g., garbage collecting, street repair, permitted construction activities;
- (6) The level of customary background noise, e.g., residential neighborhood, commercial zoning district, etc.; and
- (7) The proximity to any building regularly used for sleeping purposes. [Ord. 5205 § 1, 2015; Ord. 4001 § 1, 1989]

Air Compressor	80
Backhoe	80
Chain Saw	85
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Saw	90
Crane	83
Dozer	85
Dump Truck	84
Excavator	85
Flat Bed Truck	84
Fork Lift	75
Generator	82
Grader	85
Hoe-ram	90
Jack Hammer	88
Loader	80
Paver	85
Pick-up Truck	55
Pneumatic Tool	85
Roller	85
Tree Chipper	87
Truck	84

Source: Federal Transit Authority, 2006, 2018.

Sensitive Receptors

Some land uses are generally regarded as being more sensitive to noise than others due to the type of population groups or activities involved. Sensitive population groups generally include children and the elderly. Noise sensitive land uses typically include all residential uses (single- and multi-family, mobile homes, dormitories, and similar uses), hospitals, nursing homes, schools, and parks.

The nearest sensitive receptors are residential units across the creek and riparian area that goes down and up to a residential neighborhood, located approximately 500 feet to the north of the project area.

Impacts

Potential Temporary Construction Noise Impacts

Noise generated during project construction would increase the ambient noise levels in adjacent areas. Construction would be temporary, and construction hours would be limited as a condition of approval. Given the limited duration of construction and the limited hours of construction activity, this impact is considered to be less than significant.

Potential Permanent Impacts

The project would not result in a permanent increase in the ambient noise level. The main source of ambient noise in the project area is traffic noise along Soquel Drive. However, no substantial increase in traffic trips is anticipated as a result of the project. Impacts are expected to be less than significant.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
--------------------------------	--	------------------------------	-----------

- |   |                          |                          |                                     |                          |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 2. Generation of excessive groundborne vibration or groundborne noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

**Discussion:** The use of construction and grading equipment would potentially generate periodic vibration in the project area. This impact would be temporary and periodic and is not expected to cause damage; therefore, impacts are not expected to be significant.

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 3. 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** The project is not in the vicinity of a private airstrip or within two miles of a public airport. Therefore, the project would not expose people residing or working in the project area. No impact is anticipated.

## N. POPULATION AND HOUSING

Would the project:

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 1. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** The project would not induce substantial population growth in an area because the project does not propose any physical or regulatory change that would remove a restriction to or encourage population growth in an area. The project proposes only to construct an approximately 11,000 square foot mixed-use building with a 1,900 square foot basement, 3,000 square feet of commercial space and 3 apartment units and would not induce population growth. No impact would occur.

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 2. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** The project would not displace any existing housing since the project site is currently considered vacant. No impact would occur.

**O. PUBLIC SERVICES**

Would the project:

1. *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. <i>Fire protection?</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b. <i>Police protection?</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c. <i>Schools?</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d. <i>Parks?</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e. <i>Other public facilities; including the maintenance of roads?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Discussion (a through e):** The project site is served by the Aptos/La Selva Fire Protection District and County Sheriff. The site is located within the Pajaro Valley Unified School District which has available space for new children should any be added as a result of this project. Nearby schools include Rio Del Mar and Valencia Elementary Schools (which serve students from kindergarten through 6<sup>th</sup> grade), Aptos Junior High School (which serves students for 7<sup>th</sup> and 8<sup>th</sup> grade) and Aptos High School (serving students from 9<sup>th</sup> grade to graduation). The nearest parks to serve this parcel are the Aptos Village County Park which is located approximately .75 miles to the west of the project site and the Polo Grounds County Park which is located approximately .75 miles to the east of the project site. While the project represents an incremental contribution to the need for services, the increase would be minimal. Moreover, the project meets all of the standards and requirements identified by the local fire agency or California Department of Forestry, as applicable, and school, park, and transportation fees to be paid by the applicant would be used to offset the incremental increase in demand for school and recreational facilities and public roads. Impacts would be considered less than significant.

**P. RECREATION**

Would the project:

- |   |                          |                          |                                     |                          |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 1. <i>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?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

**Discussion:** The project would not substantially increase the use of existing neighborhood and regional parks or other recreational facilities. Impacts would be considered less than significant.

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 2. 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** The project does not propose the expansion or require the construction of additional recreational facilities. No impact would occur.

**Q. TRANSPORTATION**

Would the project:

- |   |                          |                          |                                     |                          |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 1. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

**Discussion:**

Senate Bill (SB) 743, signed by Governor Jerry Brown in 2013, changed the way transportation impacts are identified under CEQA. Specifically, the legislation directed the State of California’s Office of Planning and Research (OPR) to look at different metrics for identifying transportation impacts. OPR issued its “Technical Advisory on Evaluating Transportation Impacts in CEQA” (December 2018) to assist practitioners in implementing the CEQA Guidelines revisions to use vehicle miles traveled (VMT) as the preferred metric for assessing passenger vehicle related impacts. The CEQA Guidelines were also updated in December 2018, such that vehicle level of service (LOS) will no longer be used as a determinant of significant environmental impacts, and an analysis of Vehicle Miles Traveled (VMT) will be required as of July 2020. A discussion of consistency with the Santa Cruz County General Plan LOS policy is provide below for informational purposes only.

The project would create a small incremental increase in traffic on nearby roads and intersections. The proposed project would generate an estimated 69 daily trips with 7 trips during the AM peak hour and 10 trips during the PM peak hour. The increase would not cause the LOS at any nearby intersection to drop below LOS D, consistent with General Plan Policy 3.12.1.

The project design would comply with current road requirements, including the regulations under section 13.11.074 of the County Code, “Access, circulation and parking” to prevent

potential hazards to motorists, bicyclists, and/or pedestrians, as well as the County of Santa Cruz Department of Public Works design criteria. Impacts would be considered less than significant.

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 2. <i>Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(1) (Vehicle Miles Traveled)?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

**Discussion:** In response to the passage of Senate Bill 743 in 2013 and other climate change strategies, OPR amended the CEQA Guidelines to replace LOS with VMT as the measurement for transportation impacts. The “Technical Advisory on Evaluating Transportation Impacts in CEQA,” prepared by OPR (2018) provides recommended thresholds and methodologies for assessing impacts of new developments on VMT. There are also a number of screening criteria recommended by OPR that can be used to determine whether a project will have a less-than-significant impact. The screening criteria include projects that generate less than 110 net new trips, map-based screening, projects within a ½ mile of high-quality transit, affordable housing projects, and local serving retail. Since Santa Cruz County has a Regional Transportation Planning Authority and generally conducts transportation planning activities countywide, the county inclusive of the cities is considered a region.

In June of 2020, the County of Santa Cruz adopted a threshold of 15% below the existing countywide average per capita VMT levels for residential projects, 15% below the existing countywide average per employee VMT for office and other employee-based projects, no net increase in the countywide average VMT for retail projects, and no net increase in VMT for other projects. Based on the countywide travel demand model the current countywide average per capita VMT for residential uses is 10.2 miles. The current countywide per employee average VMT for the service sector (including office land uses) is 8.9 miles, for the agricultural sector is 15.4, for the industrial sector is 13.9, and for the public sector is 8.2. Therefore, the current VMT thresholds for land use projects are 8.7 miles per capita for residential projects. For employee-based land uses the current thresholds are: 7.6 miles per employee for office and services projects, 13.1 miles per employee for agricultural projects, 11.8 miles per employee for industrial projects, and 7 miles per employee for public sector land use projects. The threshold for retail projects and all other land uses is no net increase in VMT. For mixed-use projects, each land use is evaluated separately unless they are determined to be insignificant to the total VMT.

A traffic impact analysis for the proposed mixed-use development was submitted by traffic engineer Keith Higgins (dated February 6, 2020) which summarizes traffic impacts in two ways. One method was to summarize the project trip generation. County Code states if a

proposed project generates 20 or more AM or PM peak hour vehicle trips, a formal traffic impact analysis is required. Exhibit 7 of the he submitted traffic study summarizes the project trip generation, which was estimated using trip rates from *Trip Generation Manual*, 10<sup>th</sup> Edition, published by the Institute of Transportation Engineers in 2017. The proposed project would generate an estimated 69 daily trips with 7 trips during the AM peak hour and 10 trips during the PM peak hour. A formal traffic impact analysis, therefore, is not required since this is below the threshold number of 20 additional trips. Furthermore, the small number of added trips generated by the project would be distributed throughout the surrounding street network, including Soquel Drive and Highway One, which will minimize the number of trips added to any one of these roadways. Therefore, the project as proposed would not adversely impact existing roads or intersections in the surrounding area.

Vehicle Miles Traveled (VMT) is defined as the total miles traveled by all vehicles traveling to and from a specific area over an average day. Santa Cruz County standards state that projects that generate less than 110 net new daily vehicle trips are considered to have a less than significant impact on VMT. Exhibit 7 of the Traffic Report indicates that the project would only generate 69 daily trips, therefore, the proposed project would have a less than significant impact on VMT.

3. *Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

**Discussion:** The project consists of a proposal to construct a 10,981 square foot mixed-use building that includes an approximately 1,900 square foot basement storage area, approximately 3,000 square feet of office space on the first floor with a covered carport for 5 vehicles, and three residential apartment units at the second floor, located in the PA (Professional-Administrative Office) district. No increase in hazards would occur from project design or from incompatible uses. No impact would occur from project implementation.

4. *Result in inadequate emergency access?*

**Discussion:** The project's road access meets County standards and has been approved by the local fire agency or California Department of Forestry, as appropriate.



*drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*

**Discussion:**

Water

The project would connect to an existing municipal water supply. Soquel Creek Water District has previously determined that adequate supplies are available to serve the project and that no new facilities are required to serve the project. Prior to the issuance of a building permit, an updated will-serve letter is required confirming this initial determination. No impact would occur from project implementation.

Wastewater

Municipal wastewater treatment facilities are available and have capacity to serve the project. No new wastewater facilities are required to serve the project. No impact would occur from project implementation.

Stormwater

The drainage analysis for the project 9041 Soquel Drive, prepared by Ramsey Civil Engineering, Inc., dated April 1, 2020. The project's civil engineer has prepared Preliminary Civil Improvement Plans and drainage calculations that have been reviewed and approved by the Department of Public Works (DPW) Stormwater Management for feasibility to comply with the County Design Criteria. The plans and report detail how the project has been designed to mitigate for the proposed increase in impervious area coverage. The proposal includes routing impervious area runoff to biofiltration areas and through permeable paver and underground rock sections that will provide both filtering for water quality treatment as well as flood control storage. The flood control storage is sized to detain the post development runoff from the 25-year storm while controlling the release so that predevelopment 5-year runoff rates are maintained. The controlled release will be routed to the north in two 8-inch storm drains that discharge on separate rip rap outfalls. The project has been conditioned to provide detailed grading information to ensure that existing runoff from Soquel Drive will continue with existing drainage patterns and routed so as not to impact adjacent private properties. The project is also conditioned to ensure that the civil engineer's final design and siting of the outfall structures are acceptable to the project geotechnical engineer. A recorded maintenance agreement regarding ongoing maintenance of the proposed stormwater mitigations is required prior to final acceptance of the project. No impacts are expected to occur from the project.

Electric Power

Pacific Gas and Electric Company (PG&E) provides power to existing and new developments in the Santa Cruz County area. As of 2018, residents and businesses in the County were automatically enrolled in MBCP’s community choice energy program, which provides locally controlled, carbon-free electricity delivered on PGE’s existing lines.

The proposed site is previously undeveloped and is not currently served by electric power (the unpermitted bike shop uses a solar inverter system). Electric power service will be required to serve the site; however, no substantial environmental impacts will result from the additional improvements; impacts will be less than significant.

Natural Gas

PG&E serves the urbanized portions of Santa Cruz County with natural gas.

The proposed site is considered undeveloped and not currently served by natural gas. Extension of gas lines are proposed to serve the site. However, no environmental impacts will result from the additional improvements; impacts will be less than significant.

Telecommunications

Telecommunications, including telephone, wireless telephone, internet, and cable, are provided by a variety of organizations. AT&T is the major telephone provider, and its subsidiary, DirectTV provides television and internet services. Cable television services in Santa Cruz County are provided by Charter Communications in Watsonville and Comcast in other areas of the county. Wireless services are also provided by AT&T, as well as other service providers, such as Verizon.

No improvements related to telecommunications are required, and there will be no impact.

2. *Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?*

**Discussion:** All the main aquifers in this County, the primary sources of the County’s potable water, are in some degree of overdraft. Overdraft is manifested in several ways including 1) declining groundwater levels, 2) degradation of water quality, 3) diminished stream base flow, and/or 4) seawater intrusion. Surface water supplies, which are the primary source of supply for the northern third of the County, are inadequate during drought periods and will be further diminished as a result of the need to increase stream baseflows to restore habitat for endangered salmonid populations. In addition to overdraft, the use of water resources is further constrained by various water quality issues.

Soquel Creek Water District has previously indicated that adequate water supplies are available to serve the project subject to the payment of fees and charges in effect at the time of service. Prior to issuance of a building permit an updated will-serve letter will be required to be submitted, confirming this initial determination. The development would also be subject to the water conservation requirements in Chapter 7.69 (Water Conservation) and 13.13 (Water Conservation—Water Efficient Landscaping) of the County Code and the policies of section 7.18c (Water Conservation) of the General Plan. Therefore, existing water supplies would be sufficient to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years. Impacts would be less than significant.

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 3. <i>Result in 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?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** The Santa Cruz County Sanitation District has reviewed the proposed project and has determined that that the project meets all feasibility requirements and that adequate capacity in the sewer collection system is available to serve the project. Therefore, existing wastewater collection/treatment capacity would be sufficient to serve the project. No impact would occur from project implementation.

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 4. <i>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?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

**Discussion:** Due to the small incremental increase in solid waste generation by the project during construction and operations, the impact would be less than significant.

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 5. <i>Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** The project would comply with all federal, state, and local statutes and regulations related to solid waste disposal. No impact would occur.

**T. WILDFIRE**

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

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 1. Substantially impair an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

**Discussion:** The project is not located in a State Responsibility Area, a Very High Fire Hazard Severity Zone, or a County-mapped Critical Fire Hazard Area and will not conflict with emergency response or evacuation plans. Therefore, no impact would occur.

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 2. 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

**Discussion:** The project is not located in a State Responsibility Area, a Very High Fire Hazard Severity Zone, or a County-mapped Critical Fire Hazard Area. In addition, the project design incorporates all applicable fire safety code requirements and includes fire protection devices as required by the local fire agency and is unlikely to exacerbate wildfire risks. Impacts would be less than significant.

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 3. 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

**Discussion:** The project is not located in a State Responsibility Areas, a Very High Fire Hazard Severity Zone, or a County-mapped Critical Fire Hazard Area. Improvements associated with the project are unlikely to exacerbate wildfire risks. Impacts would be less than significant.

- |   |                          |                          |                                     |                          |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 4. 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

**Discussion:** The project is not located within a State Responsibility Areas, a Very High Fire Hazard Severity Zone, or a County-mapped Critical Fire Hazard Area. Downslope and downstream impacts associated with wildfires are unlikely to result from the project.

Regardless, the project design incorporates all applicable fire safety code requirements and includes fire protection devices as required by the local fire agency. Impacts would be less than significant. See section D.1. for further discussion of slope stability related to stormwater release.

**U. MANDATORY FINDINGS OF SIGNIFICANCE**

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| <p>1. <i>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 community or eliminate important examples of the major periods of California history or prehistory?</i></p> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

**Discussion:** 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 were considered in the response to each question in Section III (A through T) of this Initial Study. As a result of this evaluation, with the proposed mitigations, there is no substantial evidence that significant effects associated with this project would result. Therefore, this project has been determined not to meet this Mandatory Finding of Significance.

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| <p>2. <i>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)?</i></p> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

**Discussion:** In addition to project specific impacts, this evaluation considered the project’s potential for incremental effects that are cumulatively considerable. As a result of this evaluation, there were determined to be no potentially significant cumulative effects

associated with this project. Therefore, this project has been determined not to meet this Mandatory Finding of Significance.

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

**Discussion:** In the evaluation of environmental impacts in this Initial Study, the potential for adverse direct or indirect impacts to human beings were considered in the response to specific questions in Section III (A through T). As a result of this evaluation, no potentially adverse effects to human beings associated with this project were identified. Therefore, this project has been determined not to meet this Mandatory Finding of Significance.

#### IV. REFERENCES USED IN THE COMPLETION OF THIS INITIAL STUDY

California Department of Conservation, 1980

Farmland Mapping and Monitoring Program Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance Santa Cruz County U.S. Department of Agriculture, Natural Resources Conservation Service, soil surveys for Santa Cruz County, California, August 1980.

California Department of Fish and Wildlife, 2019

California Natural Diversity Database SOQUEL USGS 7.5 minute quadrangle; queried November 29, 2021

CalFIRE, 2010

*Santa Cruz County-San Mateo County Community Wildfire Protection Plan.* May 2010.

Caltrans, 2018

California Public Road Data 2017: Statistical Information Derived from the Highway Performance Monitoring System. Released by the State of California Department of Transportation November 2018.

County of Santa Cruz, 1994

1994 General Plan and Local Coastal Program for the County of Santa Cruz, California. Adopted by the Board of Supervisors on May 24, 1994, and certified by the California Coastal Commission on December 15, 1994.

County of Santa Cruz, 2013

County of Santa Cruz Climate Action Strategy. Approved by the Board of Supervisors on February 26, 2013.

County of Santa Cruz, 2015

*County of Santa Cruz Local Hazard Mitigation Plan 2015-2020.* Prepared by the County of Santa Cruz Office of Emergency Services.

DOF, 2018

*E-5 Population and Housing Estimates for Cities, Counties and the State—January 1, 2011-2018.* Released by the State of California Department of Finance May 2018.

Federal Transit Administration, 2006

*Transit Noise and Vibration Impact Assessment Manual.*

Federal Transit Administration, 2018

*Transit Noise and Vibration Impact Assessment Manual.* September 2018.

FEMA,

Flood Insurance Rate Map Flood Insurance Rate Map 0351 Federal Emergency Management Agency. Effective on May 16, 2012.

MBUAPCD, 2008

Monterey Bay Unified Air Pollution Control District (MBUAPCD), CEQA Air Quality Guidelines. Prepared by the MBUAPCD, Adopted October 1995, Revised: February 1997, August 1998, December 1999, September 2000, September 2002, June 2004 and February 2008.

MBUAPCD, 2013a

Monterey Bay Unified Air Pollution Control District, NCCAB (NCCAB) Area Designations and Attainment Status – January 2013. Available online at [http://www.mbuapcd.org/mbuapcd/pdf/Planning/Attainment\\_Status\\_January\\_2013\\_2.pdf](http://www.mbuapcd.org/mbuapcd/pdf/Planning/Attainment_Status_January_2013_2.pdf)

MBUAPCD, 2013b

Triennial Plan Revision 2009-2011. Monterey Bay Unified Air Pollution Control District. Adopted April 17, 2013.

OPR, 2018

“Technical Advisory on Evaluating Transportation Impacts in CEQA.” Available online at [http://www.opr.ca.gov/docs/20190122-743\\_Technical\\_Advisory.pdf](http://www.opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf).

---

# Attachment 1

## Mitigation Monitoring and Reporting Program

Potentially  
Significant  
Impact

Less than  
Significant  
with  
Mitigation  
Incorporated

Less than  
Significant  
Impact

No Impact



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## County of Santa Cruz

**PLANNING DEPARTMENT**  
 701 OCEAN STREET, 4<sup>TH</sup> FLOOR, SANTA CRUZ, CA 95060  
 (831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123

## MITIGATION MONITORING AND REPORTING PROGRAM

For  
**9041 Soquel Drive, Aptos**  
**Application No. 191306, October 2019**

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
<b>Biological Resources</b>					
<b>BIO-1</b>	<i>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 Wildlife, or U.S. Fish and Wildlife Service?</i>	Prior to any site disturbance, a pre-construction meeting shall be conducted. The purpose of the meeting will be to ensure that the conditions set forth in the proposed project description and Conditions of Approval of the Riparian Exception are communicated to the various parties responsible for constructing the project. The meeting shall involve all relevant parties including the project proponent, construction supervisor and Environmental Planning Staff.	Applicant	Compliance monitored by the County Planning Department and Applicant	To be implemented prior to and during project construction
<b>BIO-2</b>	<i>Have a substantial adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, regulations (e.g., wetland, native grassland, special forests, intertidal zone, etc.) or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?</i>	Prior to construction, high visibility construction fencing shall be installed, to indicate the limits of work and prevent inadvertent grading or other disturbance within the adjacent riparian corridor. No work-related activity including equipment staging, vehicular access, and grading shall be allowed outside the limits of work.	Applicant	Compliance monitored by the County Planning Department and Applicant	To be implemented prior to and during project construction
<b>BIO-3</b>	<i>Have a substantial adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, regulations (e.g., wetland, native grassland, special forests, intertidal zone, etc.) or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?</i>	A revegetation plan using appropriate California native riparian species plants (shrubs and low growing groundcover) with at least three species known as nectar plants for the obscure bumblebee shall be submitted and approved at the building permit review stage and implemented at the rear of the constructed project (five feet from the back of the building and retaining wall to the existing riparian vegetation) in order to restore of the margins of the riparian area, enhance the riparian corridor and for erosion control.	Applicant	Compliance monitored by the County Planning Department and Applicant	To be implemented prior to and during project construction
<b>BIO-4</b>	<i>Have a substantial adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, regulations (e.g., wetland, native grassland, special forests, intertidal zone, etc.) or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?</i>	A permanent three-foot high fence shall be erected approximately 5 feet behind the proposed building to demarcate and prevent disturbance to the riparian restoration area. The location of this fence shall be shown on plans submitted in support of the building permit for the project and shall be approved by Environmental Planning staff.	Applicant	Compliance monitored by the County Planning Department and Applicant	To be implemented prior to and during project construction
<b>BIO-5</b>	<i>Have a substantial adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, regulations (e.g., wetland, native grassland, special forests, intertidal zone, etc.) or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?</i>	Prior to issuance of a building permit, a final detailed lighting plan shall be submitted for review and approval by Environmental Planning staff, showing that all light sources will be cast downward, shielded and directed away from Valencia Creek, so that light does not spill over into the riparian habitat to the north, onto adjacent properties or upwards into the night sky. Lighting shall further be limited to limited to warm light colors with an output temperature of 2,700 kelvin or less.	Applicant	Compliance monitored by the County Planning Department and Applicant	To be implemented prior to and during project construction

---

## Attachment 2

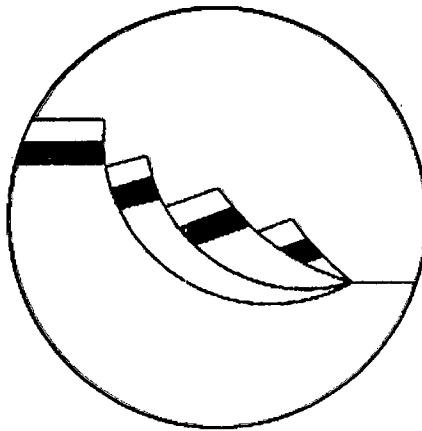
Geotechnical Report by CMAG Engineering, Inc.  
Dated December 30, 2018

# **GEOTECHNICAL INVESTIGATION**

**9041 Soquel Drive  
Aptos, Santa Cruz County, California**

Submitted to:

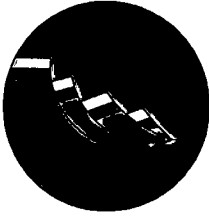
Testorff Construction  
335 Spreckels Drive, Suite D  
Aptos, California 95003



Prepared by:

**CMAG ENGINEERING, INC.**

Project No. 18-142-SC  
December 30, 2018



# CMAG ENGINEERING, INC.

P.O. BOX 640 APTOS, CALIFORNIA 95001

PHONE: 831.475.1411

WWW.CMAGENGINEERING.COM

December 30, 2018  
Project No. 18-142-SC

Testorff Construction  
335 Spreckels Drive, Suite D  
Aptos, California 95003

Attn: Pete Testorff

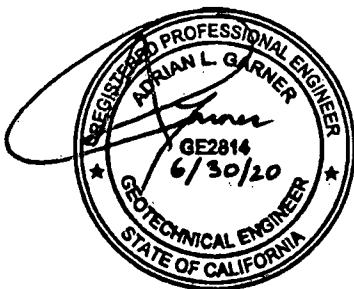
**SUBJECT: GEOTECHNICAL INVESTIGATION**  
Proposed Commercial Building  
9041 Soquel Drive,  
Aptos, Santa Cruz County, California  
APN 041-141-56

Dear Mr. Testorff:

In accordance with your authorization, we have completed a geotechnical investigation for the subject project. This report summarizes the findings, conclusions, and recommendations from our field exploration, laboratory testing, and engineering analysis. It is a pleasure being associated with you on this project. If you have any questions, or if we may be of further assistance, please do not hesitate to contact our office.

Sincerely,

**CMAG ENGINEERING, INC.**



Adrian L. Garner, PE, GE  
Principal Engineer  
C 66087, GE 2814  
Expires 6/30/20

Distribution: Addressee (4 Hard Copies; Electronic Copy)

**EXHIBIT G**

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**APPENDIX A**

Field Exploration Program

**APPENDIX B**

Laboratory Testing Program

**APPENDIX C**

Slope Stability Program

## **1.0 INTRODUCTION**

This report presents the results of our geotechnical investigation for the proposed commercial building at 9041 Soquel Drive in Aptos, Santa Cruz County, California.

The purpose of our investigation was to provide information regarding the surface and subsurface soil and bedrock conditions, and based on our findings, provide geotechnical recommendations for the design and construction of the proposed commercial building and associated improvements. Conclusions and recommendations related to geotechnical hazards, site grading, drainage, foundations, concrete slabs, retaining structures, and pavements are presented herein.

### **1.1 Terms of Reference**

CMAG Engineering, Inc.'s (CMAG) scope of work for this phase of the project included site reconnaissance, subsurface exploration, soil and bedrock sampling, laboratory testing, engineering analyses, and preparation of this report.

The work was undertaken in accordance with CMAG's *Proposal for Geotechnical Services* dated October 22, 2018.

The recommendations contained in this report are subject to the limitations presented in Section 8.0 of this report.

### **1.2 Site Location**

The project site is located on the north side of Highway 1 and the north side of Soquel Drive, between Rio Del Mar Boulevard and Spreckels Drive in Aptos, Santa Cruz County, California. The site location is shown on the Site Location Map, Appendix A, Figure A-1.

### **1.3 Surface Conditions**

The parcel is 0.7 acres in size, irregular in shape, and currently, undeveloped. The parcel is situated on the north side of Soquel Drive. The south side of the parcel is flat to gently sloping. The north side of the parcel consists of a dissected slope that descends to the north towards Valencia Creek. Immediately adjacent to Soquel Drive, the site is relatively flat. The flat area, covered with baserock, extends to the north from Soquel Drive for approximately 35 feet and has been previously graded to create the relatively flat pad. A second, gently sloping terrace, extends further to the north of the flat pad, for an average distance of approximately 60 feet. A dissected north facing slope is located further to the north of the terrace. Immediately adjacent to the north side of the terrace, the slope is steep. Beyond the steep slope, moderate and steep north facing slopes descend towards Valencia Creek.

Adjacent to Soquel Drive, the site is covered with baserock. The gently sloping terrace is vegetated with grass and weeds. The remaining portion of the site, that descends to Valencia Creek, is densely vegetated with mature trees and brush.

## **2.0 PROJECT DESCRIPTION**

It is our understanding that the project consists of the construction of a new two-story commercial building with a partial basement. The proposed building envelope is located on the relatively flat and gently sloping portion of the site. It is our understanding that the north side of the proposed building is to be located approximately 10 to 20 feet from the top of the steep slope. Also proposed is open parking, utility, stormwater retention/detention facilities, and landscape improvements.

The preliminary plan consists of constructing a partial basement on the north side of the building, extending approximately 8 to 10 feet below grade. The proposed parking area is located on the west side of the parcel. A retaining wall will be required to support the north side of the parking area due to the grade change between the relatively flat area and the terrace further to the north.

## **3.0 FIELD EXPLORATION AND LABORATORY TESTING PROGRAMS**

Our field exploration program included drilling, logging, and interval sampling of 5 borings on October 22 and December 7, 2018. The borings were advanced to depths ranging from 17.5± feet to 36.5± feet below the existing grades. Details of the field exploration program, including the Boring Logs, Figures A-4 through A-8, are presented in Appendix A.

Representative samples obtained during the field investigation were taken to the laboratory for testing to determine physical and engineering properties. Details of the laboratory testing program are presented in Appendix B. Test results are presented on the Boring Logs and in Appendix B.

## **4.0 SUBSURFACE CONDITIONS AND EARTH MATERIALS**

### **4.1 General**

The geologic map of Santa Cruz County (Brabb, 1989) depicts the subject property as underlain by Older Flood Plain deposits (Qof; Holocene) described as consisting of unconsolidated fine grained sand, silt, and clay. Alluvial deposits (Qal; Holocene) are depicted on the north side of the parcel, within close proximity to Valencia Creek. Purisima Formation bedrock (Tp; Pliocene and Upper Miocene) described as consisting of yellowish-gray siltstone with interbeds of fine grained sandstone is depicted south and north of the parcel.

Five borings were advanced in the vicinity of the proposed improvements. The subsurface profile encountered in our field exploration consisted of Older Flood Plain Deposits overlying Purisima Formation bedrock within the depths explored. A thin veneer of fill was encountered on the south side of the parcel, adjacent to Soquel Drive. Complete subsurface profiles are presented on the Boring Logs, Appendix A, Figures A-4 through A-8. The boring locations are shown on the Boring Location Plan, Figure A-2.

A representative cross section has been constructed based on the results of our field exploration program. See Appendix A, Figure A-9.

#### **4.2 Artificial Fill - af**

Fill was encountered on the south side of the parcel to a maximum depth of approximately 6 feet below grade. Fill was also encountered in Boring B-3, adjacent to the crest of the slope, extending to a depth of approximately 2.5 feet below grade. The fill generally consisted of very loose to medium dense silty and clayey sands with varying amounts of gravel.

#### **4.3 Older Flood Plain Deposits - Qof**

Older Flood Plain Deposits were encountered in all the borings. The deposits consisted of interbedded silty sands, sandy silts, clayey sands, and sandy lean and fat clays. The cohesionless deposits were generally medium dense. The cohesive soils were generally firm to very stiff. Based on the results of our laboratory testing, the near surface clays have a high expansion potential.

#### **4.4 Purisima Formation Bedrock - Tp**

Purisima Formation bedrock was encountered at depths varying from 24± to 32.5± feet below existing grades. The bedrock generally consisted of dense, non cemented sandstone.

#### **4.5 Groundwater**

Groundwater was not encountered during our field exploration.

It should be noted that groundwater conditions, perched or regional, may vary with location and may fluctuate with variations in rainfall, runoff, irrigation, and other changes to the conditions existing at the time our field investigation was performed.

## **5.0 GEOTECHNICAL HAZARDS**

### **5.1 General**

In our opinion, the geotechnical hazards that could potentially affect the proposed project are:

- Seismic Shaking
- Slope Creep

### **5.2 Seismic Shaking**

The seismic hazard due to seismic shaking in California is high in many areas, indicative of the number of large earthquakes that have occurred historically. Intense seismic shaking may occur at the site during the design lifetime of the proposed structure from an earthquake along one of the local fault systems. Generally, the intensity of shaking will increase the closer the site is to the epicenter of an earthquake, however, seismic shaking is a complex phenomenon and may be modified by local topography and soil conditions. The transmission of earthquake vibrations from the ground into the structure may cause structural damage.

#### **5.2.1 2016 California Building Code**

The County of Santa Cruz has adopted the seismic provisions set forth in the 2016 California Building Code (2016 CBC) to address seismic shaking. The seismic provisions in the 2016 CBC are minimum load requirements for the seismic design for the proposed structure. The provisions set forth in the 2016 CBC will not prevent structural and nonstructural damage from direct fault ground surface rupture, coseismic ground cracking, liquefaction and lateral spreading, seismically induced differential compaction, or seismically induced landsliding.

Table 1 has been constructed based on the 2016 CBC requirements for the seismic design of the proposed structure. The Site Class has been determined based on our field investigation and laboratory testing.

**Table 1. Seismic Design Parameters - 2016 CBC**

$S_s$	$S_1$	Site Class	$F_a$	$F_v$	$S_{MS}$	$S_{M1}$	$S_{DS}$	$S_{D1}$	$PGA_M$
1.659g	0.628g	D	1.0	1.5	1.659g	0.942g	1.106g	0.628g	0.633g

### 5.2.2 2008 USGS PSHA

We determined the PGAs using the USGS 2008 NSHMP PSHA Unified Hazard Tool (UHT). The PGA has been established for a return period that corresponds to 10 percent chance of exceedance in 50 years. The input parameters for the online tool consist of the site latitude and longitude and a  $V_{S30}$  value. A  $V_{S30}$  of 760 m/s for the soft rock site condition was used for the determination. The PGA is presented in Table 2.

**Table 2. PGA - 2008 USGS PSHA**

Return Period (Chance of Exceedance)	PGA - Soft Rock Site Condition ( $V_{S30} = 760$ m/s)
475 Years (10% in 50 Years)	0.41g

### 5.3 Collateral Seismic Hazards

In addition to seismic shaking, other seismic hazards that may have an adverse affect to the site and/or the structure are: fault ground surface rupture, coseismic ground cracking, seismically induced liquefaction and lateral spreading, seismically induced differential compaction, and seismically induced landsliding. It is our opinion that the potential for collateral seismic hazards to affect the site, and to damage the proposed structure is low. Slope stability, including seismically induced stability is discussed in Section 5.4.

### 5.4 Slope Stability

#### 5.4.1 Introduction

The proposed commercial building and parking area is situated adjacent to a steep slope that descends to the north. We have analyzed the stability of the steep slope in the immediate vicinity of the proposed improvements.

#### 5.4.2 Analysis

The slope stability analysis for the existing configuration, Cross section A-A' was completed for the static and pseudostatic cases. See Appendix A, Figure A-2 for the location of Cross Section A-A', and Figure A-9 for Cross Section A-A'. We have also analyzed the condition assuming seepage parallel to the ground surface within the upper 4 feet of the steep slope descending from the proposed improvements. The material properties used in our analysis are presented in Appendix C.

The stability of the slope was analyzed using the computer program Slide, Version 7.0 from Rocscience, Inc. This program utilizes a limiting equilibrium method for determining the factor of safety against sliding on an assumed failure surface. The factor of safety against slope failure was calculated using Spencer's method which satisfies both force and moment equilibrium and accounts for inter-slice forces. We also analyzed the slope using a typical infinite slope formulation.

To analyze the seismic stability of the cross section, we performed a pseudostatic analysis based on *Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California* (2008). Our pseudostatic analysis was performed assuming a  $k_{eq}$  of 0.27g. The  $k_{eq}$  was calculated based on an allowable screen displacement of 5cm. The event that we considered for determination of  $k_{eq}$  consisted of a magnitude 8.0 earthquake at a distance of 11.1 km from the site generating a peak ground acceleration of 0.41g. The event is based on the USGS 2008 NSHMP PSHA for a 10 percent chance of exceedance in 50 years (Section 5.2.2, Table 2).

In terms of slope stability, the factor of safety against sliding is defined as the ratio of resisting forces to driving forces. A factor of safety of unity (1.0) indicates a delicate balance between the resisting and driving forces and represents incipient failure. A factor of safety below unity indicates instability.

#### 5.4.3 Analysis Results

The results of our analysis are presented in Appendix C, Figures C-1 through C-3. A summary of the results are presented in Table 3. The details of our slope stability analysis including the soil and bedrock parameters used are presented in Appendix C.

**Table 3. Summary of Calculated Factors of Safety**

Figure	Description	Calculated F.S.	Minimum Acceptable F.S.
C-1	Cross Section A-A' - Static Case	1.6	1.5*
C-2	Cross Section A-A' - Pseudostatic Case	1.6	1.0**
C-3	Infinite Slope - Slope Parallel Seepage	1.4	1.5*

Notes: \*Considered the minimum industry standard Factor of Safety.

\*\* Considered the minimum Factor of Safety for the pseudostatic analysis procedure outlined in *Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California* (2008).

#### 5.4.4 Acceptable Factors of Safety

The industry standard acceptance criteria for the long-term static stability of a slope is a factor of safety equal to, or greater than 1.5. The pseudostatic slope stability analysis was performed per the procedure recommended by *Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California* (2008). The minimum acceptable factor of safety based on the pseudostatic analysis procedure is 1.0.

#### 5.4.5 Discussion

Based on the results of our analysis, it is our opinion that there is a low probability for overall slope instability to occur under static and seismic conditions in the location of Cross Section A-A'. However, our analysis also indicates that under saturated conditions with slope parallel seepage, the factor of safety of shallow seated erosional failures, on the steep slope adjacent to the proposed improvements, does not meet industry standard factors of safety.

It must be cautioned that slope stability analysis is an inexact science; and that the mathematical models of the slopes and soils contain many simplifying assumptions, not the least of which is homogeneity. Density, moisture content and shear strength may vary within a soil type. There may be localized areas of low strength within a soil.

Slope stability analyses and the generated factors of safety should be used as indicating trendlines. A slope with a safety factor less than one will not necessarily fail, but the probability of slope movement will be greater than a slope with a higher safety factor. Conversely, a slope with a safety factor greater than one may fail, but the probability of stability is higher than a slope with a lower safety factor.

#### 5.5 Slope Creep

Slope creep is an imperceptibly slow downward and outward movement of slope forming rocks and soils. Creep can affect both the near surface soil or deep seated materials. The on-site clays may experience soil creep due to expansion and contraction from seasonal wetting and drying cycles. Typically the amount of movement is governed by the shear strength of the clay, slope angle, slope height, elapsed time, moisture conditions, and thickness of the active creep zone. Based on the results of our expansion index test of the near surface clay and the angle of the steep slope on the north side of the proposed improvements, it is our opinion that the potential for creep to affect the steep slope is high.

## **6.0 DISCUSSIONS AND CONCLUSIONS**

The subsurface profile consists of Older Flood Plain Deposits overlying Purisima Formation bedrock within the depths explored. A thin veneer of fill was encountered on the south side of the parcel, adjacent to Soquel Drive. The Older Flood Plain Deposits consisted of interbedded silty sands, sandy silts, clayey sands, and sandy lean and fat clays. The cohesionless deposits were generally medium dense. The cohesive soils were generally firm to very stiff. Dense sandstone bedrock was encountered beneath the flood plain deposits at depths varying from 24± to 32.5± feet below the existing grades. The fill, on the south side of the parcel, extended to a maximum depth of approximately 6 feet below grade. Fill was also encountered in Boring B-3, adjacent to the crest of the slope, extending to a depth of approximately 2.5 feet below grade. The fill generally consisted of very loose to medium dense silty and clayey sands with varying amounts of gravel. Groundwater was not encountered during the course of our field exploration.

Based on the results of our slope stability analysis, it is our opinion that there is a low probability for overall slope instability to occur under static and seismic conditions on the steep slope that descends to the north from the proposed improvements. However, our analysis also indicates that under saturated conditions with slope parallel seepage, the factor of safety of shallow seated erosional failures, on the steep slope adjacent to the proposed improvements, does not meet industry standard factors of safety.

Valencia Creek is located at the toe of the north facing slope, downslope of the steep slope that we analyzed for our stability analysis (Section 5.4). A quantitative hydraulic and scour analysis of the creek channel was beyond the scope of our services for this project and has not been performed. The slope stability analysis, presented in this report, assumes that Valencia Creek will not adversely affect the stability of the steep slope, descending from the proposed improvements, throughout the life of the project.

The results of our laboratory testing indicates that the near surface clay has a high expansion potential. Based on the results of our laboratory testing coupled with the angle of the steep slope on the north side of the proposed improvements, it is our opinion that the potential for creep to affect the steep slope is high.

## **7.0 RECOMMENDATIONS**

### **7.1 General**

Based on the results of our field investigation, laboratory testing, and engineering analysis, it is our opinion, from the geotechnical standpoint, the subject site will be suitable for the proposed development provided the recommendations presented herein are implemented during grading and construction.

Based on the proximity of the steep slope to the proposed building footprint, we recommend that the proposed commercial building be founded on drilled, cast-in-place concrete shafts. We also recommend that the retaining wall, supporting the north side of the parking area, be supported by drilled, cast-in-place concrete shafts. The recommendations provided herein are based on the following assumptions:

- The proposed north side of the building is to be located approximately 10 to 20 feet from the top of the slope.
- The building is to incorporate a basement, approximately 8 to 10 feet below grade for the portion of the building adjacent to the steep slope.
- The proposed north side of the parking area is to be located approximately 10 to 20 feet from the top of the slope.
- The grade for the parking area adjacent to the steep slope is to be raised by approximately 6 to 8 feet.

Foundation recommendations are provided in Section 7.3. Retaining wall recommendations, for both the basement walls and the wall supporting the parking area, are provided in Sections 7.3 and 7.4.

Grading recommendations are provided in Section 7.2.

It is our understanding that you are considering permeable pavers for the parking area. This system is most effective in areas where shallow groundwater is not present and/or the underlying base course and subgrade has the ability to drain. If project requirements dictate the need for permeable pavers, the base course and subgrade should be designed and constructed per the recommendations provided by the Interlocking Concrete Pavement Institute (ICPI). The ICPI provides design guidelines for permeable interlocking concrete pavement systems. The near surface native soils generally consist of clay with a low permeability. We therefore recommend that the paver section be designed assuming no exfiltration. The subgrade should be sloped at a minimum of 2 percent to a subdrain to intercept the groundwater. Mirafi RS380i, or approved equivalent, should be placed between the native subgrade and the rock section to provide additional subgrade stabilization. Additional geotechnical design recommendations for the proposed pavers can be provided upon request.

## 7.2 Site Grading

### 7.2.1 Site Clearing

Prior to grading, the areas to be developed for structures, pavements and other improvements, should be stripped of any vegetation and cleared of any surface or subsurface obstructions, including any existing foundations, utility lines, basements, septic tanks, pavements, stockpiled fills, and miscellaneous debris.

Surface vegetation and organically contaminated topsoil should be removed from areas to be graded. The required depth of stripping will vary with the time of year the work is done and should be observed by the Geotechnical Engineer. It is generally anticipated that the required depth of stripping will be 4 to 8 inches.

Holes resulting from the removal of buried obstructions that extend below finished site grades should be backfilled with compacted engineered fill compacted to the requirements of Subsection 7.2.2.

### 7.2.2 Preparation of On-Site Soils

Drilled, cast-in-place, concrete shafts, require no reworking of materials other than that necessary to rework materials disturbed during earthwork and construction.

For concrete slabs-on-grade, the native soil should be overexcavated a minimum of 1 foot below the bottom of the crushed rock, or 2 feet below existing grade, whichever is greater. The exposed surface should then be scarified, moisture conditioned, and compacted to a minimum of 90 percent relative compaction. If slabs are constructed on the south side of the site, in the area of the existing fill soils, the fill should be overexcavated a minimum of 2 feet below the bottom of the crushed rock, or 3 feet below existing grade, whichever is greater. Mirafi 600X stabilization fabric should be placed on the bottom of the overexcavation. The material which was removed should then be replaced with engineered fill compacted to a minimum of 90 percent relative compaction. This zone of reworking shall extend a minimum of 3 feet laterally beyond the concrete slabs-on-grade.

Beneath the basement slab, the native soil should be overexcavated a minimum of 1 foot below the bottom of the crushed rock. The exposed surface should then be scarified, moisture conditioned, and compacted to a minimum of 90 percent relative compaction. The material which was removed should then be replaced with engineered fill compacted to a minimum of 90 percent relative compaction.

In drive areas (including concrete, asphalt, and non-permeable pavers), the native soil should be overexcavated to a minimum of 1 foot below the bottom of the aggregate base course, or 1.5 feet below existing grade, whichever is greater. The exposed surface should then be scarified, moisture conditioned, and compacted to a minimum of 90 percent relative compaction. For pavements on the south side of

the site, in the area of the existing fill soils, the **fill** should be overexcavated a minimum of 1.5 feet below the bottom of the aggregate base course, or 2 feet below existing grade, whichever is greater. Mirafi 600X stabilization fabric should be placed on the bottom of the overexcavation. The material which was removed should then be replaced as engineered fill compacted to a minimum of 90 percent relative compaction. The upper 6 inches of subgrade and all aggregate base and subbase in drive areas shall be compacted to achieve a minimum relative compaction of 95 percent. This zone of reworking should extend laterally a minimum of 2 feet beyond the drive areas.

Beneath new fills, the native soil should be removed to a minimum of 1 foot below existing grade. The exposed surface should then be scarified, moisture conditioned, and compacted to a minimum of 90 percent relative compaction. The material which was removed should then be replaced as engineered fill compacted to a minimum of 90 percent relative compaction.

**The on-site soils, with the exception of the clay, may be used as engineered fill. Note: If this work is done during or soon after the rainy season, or in the spring, the soil may require significant drying prior to use as engineered fill. Separation and removal of the expansive clay soils will be necessary if the native soils are processed for use as engineered fill.** The soil should be verified by a representative of CMAG in the field during grading operations. All soils, both existing on-site and imported, to be used as fill, should contain less than 3 percent organics and be free of debris and gravel over 2.5 inches in maximum dimension.

Imported fill material should be approved by a representative of CMAG prior to importing. Soils having a significant expansion potential should not be used as imported fill. **The Geotechnical Engineer should be notified not less than 5 working days in advance of placing any fill or base course material proposed for import.** Each proposed source of import material should be sampled, tested, and approved by the Geotechnical Engineer prior to delivery of any soils imported for use on the site.

All fill should be compacted with heavy vibratory equipment. Fill should be compacted by mechanical means in uniform horizontal loose lifts not exceeding 8 inches in thickness. The relative compaction and required moisture content shall be based on the maximum dry density and optimum moisture content obtained in accordance with ASTM D1557. **The Geotechnical Engineer should observe the overexcavations, and placement of engineered fill.**

Any surface or subsurface obstruction, or questionable material encountered during grading, should be brought immediately to the attention of the Geotechnical Engineer for proper processing as required.

### 7.2.3 Cut and Fill Slopes

**Cut and Fill slopes are not anticipated for the project at this time.** Cut and fill slopes may affect the stability of the site, and should be analyzed for overall stability and suitability by the Geotechnical Engineer if project requirements change.

### 7.2.4 Utility Trenches

Bedding material should consist of sand with SE not less than 30 which may then be jetted.

**The on-site soils, with the exception of the clay, may be utilized for trench backfill. Separation and removal of the expansive clay soils will be necessary if the native soils are processed for use as trench backfill.** Imported fill should be free of organic material and gravel over 2.5 inches in diameter. Backfill of all exterior and interior trenches should be placed in thin lifts and mechanically compacted to achieve a relative compaction of not less than 95 percent in paved areas and 90 percent in other areas per ASTM D1557. Care should be taken not to damage utility lines.

Utility trenches that are parallel to the sides of a building should be placed so that they do not extend below a line sloping down and away at an inclination of 2:1 H:V (horizontal to vertical) from the bottom outside edge of all footings.

A 3 foot concrete plug should be placed in each trench where it passes under the exterior footings. Anti-seep collars (trench dams) should also be placed in utility trenches on steep slopes to prevent migration of water and sand.

Trenches should be capped with 1.5± feet of impermeable material. Import material should be approved by the Geotechnical Engineer prior to its use.

Trenches must be shored as required by the local regulatory agency, the State Of California Division of Industrial Safety Construction Safety Orders, and Federal OSHA requirements.

### 7.2.5 Vibration During Compaction

The neighboring buildings are within close proximity to the proposed commercial building. The contractor should take all precautionary measures to minimize vibration on the site during grading operations. This may require that the engineered fill be placed in thin lifts using a static roller or hand operated equipment. It is the contractor's responsibility to ensure that the process in which the engineered fill is placed does not adversely affect the neighboring parcels.

#### 7.2.6 Excavating Conditions

We anticipate that excavation of the on-site soils may be accomplished with standard earthmoving and trenching equipment.

**Wet conditions should be anticipated, geotextile, rock, or other means may be required to stabilize the base of the overexcavations if constructed during, or shortly after the rainy season.**

If drilled shafts extend into the underlying bedrock, difficult drilling conditions due to dense sandstone bedrock should be anticipated.

#### 7.2.7 Surface Drainage

**Surface runoff should not be allowed to discharge over the steep slope to the north of the building pad.**

**Proposed on-site retention / detention systems may affect the stability of the steep slope to the north. Geotechnical input is necessary for the design of on-site retention / detention systems and can be supplied upon request.**

Pad drainage should be designed to collect and direct surface water away from structures to approved drainage facilities. A minimum gradient of 2± percent should be maintained and drainage should be directed toward approved swales or drainage facilities. Concentrations of surface water runoff should be handled by providing the necessary structures, paved ditches, catch basins, etc.

All roof eaves should be guttered with the outlets from the downspouts provided with adequate capacity to carry the storm water away from the structure to reduce the possibility of soil saturation and erosion.

Drainage patterns approved at the time of construction should be maintained throughout the life of the structures. The building and surface drainage facilities must not be altered nor any grading, filling, or excavation conducted in the area without prior review by the Geotechnical Engineer.

Irrigation activities at the site should be controlled and reasonable. Planter areas should not be sited adjacent to walls without implementing approved measures to contain irrigation water and prevent it from seeping into walls and under foundations and slabs-on-grade.

The finished ground surface should be planted with erosion resistant landscaping and ground cover and continually maintained to minimize surface erosion.

### 7.3 Foundations

#### 7.3.1 Drilled, Cast-In-Place Concrete Shafts and Grade Beams

The drilled, cast-in-place concrete shafts adjacent to the slope, for both the proposed building and parking area, should have a minimum embedment depth of **15 feet below the bottom of the grade beams or 20 feet below grade, whichever is greater**. The remaining shafts should have a minimum embedment depth of 15 feet below the bottom of the grade beams. The minimum recommended shaft diameter is 18 inches. Shafts should be spaced no closer than 2.5 diameters, center to center.

Based on the results of our laboratory testing, the underlying clay has a high expansion potential and a swell pressure of approximately 1,600 psf. The grade beams, for foundations at grade, should be designed to withstand 1,600 psf of uplift pressure. The dead load of the building and parking area retaining wall may be used to offset the expansive pressure on the grade beams. Note that this recommendation does not apply to the foundations at the basement level. For foundations at grade, the grade beams should be founded a minimum of 18 inches below lowest adjacent grade.

The clay, exposed in the grade beam, should be pre-soaked to a moisture content of 30 percent to a depth of 2 feet prior to pouring concrete. It is important that the clay be thoroughly saturated for 24 to 48 hours prior to the time the concrete is poured. This applies to all foundation levels, at grade and at the basement level.

The allowable downward and upward axial shaft capacities for 18 inch diameter, drilled, cast-in-place, concrete shafts are included in Table 4. The upward capacity includes the weight of the shaft. The downward capacity includes the weight of the shaft.

**Table 4. 18 Inch Diameter - Drilled, Cast-In-Place Concrete Shaft Axial Capacities**

Depth Below Grade Beams (ft)	Allowable Downward Capacity (Kips)	Allowable Upward Capacity (Kips)
15	20	10
17	24	14
19	28	19
21	33	24
23	37	29

A passive pressure of 280 psft/ft (equivalent fluid pressure) acting over a plane 2 times the shaft diameter, may be assumed for design purposes. Neglect passive pressure in the top 4 feet of soil, below finished grade. Passive pressure may be mobilized from the top of shafts for shafts supporting the partial basement. Passive pressures may be increased by one-third for seismic loading.

The drilled excavations for the cast-in-place concrete shafts should be clean, dry, and free of debris or loose soil. The drilled excavations should not deviate more than 1 percent from vertical.

Caving was not observed during our field exploration, however, the potential for caving is always present and casing of the drilled excavations may become necessary. If the contractor chooses to use casing, it must be pulled during the concrete pour. It must be pulled slowly with a minimum of 4 feet of casing remaining embedded within the concrete at all times. If the bottom of the holes are unable to be cleaned with conventional drilling and hand equipment, a bucket auger should be utilized to clean the bottom of the shafts and remove all loose slough.

It is not anticipated that groundwater will present a problem during construction. However, if drilled during or shortly after the rainy season, groundwater may present a problem. If groundwater is encountered within the shafts and is unable to be pumped from the drilled excavation, a tremie will be required. The tremie must be placed to the bottom of the drilled excavation to remove all groundwater. The end of the tube must remain embedded a minimum of 4 feet into the concrete at all times. The concrete and steel design of the drilled, cast-in-place concrete shaft should be such that a tremie can be easily placed down the center of the excavation.

For drilled, cast-in-place concrete shafts depths in excess of 8 feet, concrete should be placed via a tremie. The end of the tube must remain embedded a minimum of 4 feet into the concrete at all times.

**All shaft construction must be observed by the Geotechnical Engineer before steel reinforcement is placed and concrete is poured.**

### 7.3.2 Concrete Slabs

We recommend that concrete slabs be founded on compacted engineered fill per Subsection 7.2.2. The subgrade should be proof-rolled just prior to construction to provide a firm, relatively unyielding surface, especially if the surface has been loosened by the passage of construction traffic.

The exposed surface should be pre-soaked to a moisture content of 30 percent to a depth of 2 feet prior to pouring concrete. It is important that the clay be thoroughly saturated for 24 to 48 hours prior to the time the concrete is poured.

The slabs should be underlain by a minimum 4 inch thick capillary break of clean crushed rock. It is recommended that neither Class II baserock nor sand be employed as the capillary break material. Where moisture sensitive floor coverings are anticipated or vapor transmission may be a problem, a vapor retarder should be placed between the granular layer and the floor slab in order to reduce moisture condensation under the floor coverings. The vapor retarder should be specified by the slab designer. It should be noted that conventional slab-on-grade construction is not waterproof. Under-slab construction consisting of a capillary break and vapor retarder will not prevent moisture transmission through the slabs. CMAG does not practice in the field of moisture vapor transmission evaluation or mitigation. Where moisture sensitive floor coverings are to be installed, a waterproofing expert should be consulted for their recommended moisture and vapor protection measures.

### 7.3.3 Settlements

Total and differential settlements beneath foundations are expected to be within tolerable limits. Vertical movements are not expected to exceed 1 inch. Differential movements are expected to be within the normal range ( $\frac{1}{2}$  inch) for the anticipated loads and spacings. These preliminary estimates should be reviewed by the Geotechnical Engineer when foundation plans for the proposed structures become available.

## 7.4 Retaining Structures

### 7.4.1 General

Retaining walls should be founded on drilled, cast-in-place concrete shafts per the recommendations of Subsections 7.3.1.

### 7.4.2 Lateral Pressure Due to Earthquake Motions

For design purposes, the lateral force on retaining walls due to earthquake motions is  $6H^2$  lbs/horizontal foot, acting at a point  $\frac{1}{3}H$  above the wall base, where H is the height of the wall in feet.

### 7.4.3 Lateral Earth Pressures

The lateral earth pressures presented in Table 5 are recommended for the design of retaining structures with a backdrain and backfill consisting of the native soils.

**Table 5. Lateral Earth Pressures**

Soil Profile (H:V)	Equivalent Fluid Pressure (psf/ft)	
	Active Pressure	At-Rest Pressure
Level	40	61
6:1	41	72
3:1	46	81
2:1	59	89

Pressure due to any surcharge loads from adjacent footings, traffic, etc., should be analyzed separately. Pressures due to these loading can be supplied upon receipt of the appropriate plans and loads. Refer to Figure 1.

#### 7.4.4 Backfill

Backfill should be placed under engineering control. Backfill should be compacted per Subsection 7.2.2, however, precautions should be taken to ensure that heavy compaction equipment is not used immediately adjacent to walls, so as to prevent undue pressures against, and movement of, the walls.

It is recommended that granular, or relatively low expansivity, backfill be utilized, for a width equal to approximately 1/3 times the wall height, and not less than 1.5 feet, subject to review during construction.

The use of water-stops/impermeable barriers and appropriate waterproofing should be considered for any basement construction, and for building walls which retain earth.

#### 7.4.5 Backfill Drainage

Backdrains should be provided in the backfill. Backdrains should consist of 4 inch diameter SDR 35 PVC perforated pipe or equivalent, embedded in Caltrans Class 2 permeable drain rock. The drain should be a minimum of 18 inches in width and should extend to within 12 inches from the surface. The upper 12 inches should be capped with native soils or the pavement section in drive areas. Mirafi 140N, or approved equivalent, should be placed between the drain rock and the native soil cap / pavement section. The pipe should be 4± inches above the trench bottom; a gradient of 2± percent being provided to the pipe and trench bottom; discharging into suitably protected outlets. See Figure 2 for the standard detail for the backdrain.

Perforations in backdrains are recommended as follows: 1/2 inch diameter, in 2 rows at the ends of a 120 degree arc, at 5 inch centers in each row, staggered between rows, placed downward.

**Backdrains should be observed by the Geotechnical Engineer after placement of bedding and pipe and prior to the placement of clean crushed gravel.**

An unobstructed outlet should be provided at the lower end of each segment of backdrain. The outlet should consist of an unperforated pipe of the same diameter, connected to the perforated pipe and extended to a protected outlet at a lower elevation on a continuous gradient of at least 1 percent.

#### **7.5 Plan Review**

The recommendations presented in this report are based on preliminary design information for the proposed project and on the findings of our geotechnical investigation. When completed, the Grading Plans, Foundation Plans and design loads should be reviewed by CMAG prior to submitting the plans and contract bidding. Additional field exploration and laboratory testing may be required upon review of the final project design plans.

#### **7.6 Observation and Testing**

Field observation and testing must be provided by a representative of CMAG to enable them to form an opinion regarding the adequacy of the site preparation, the adequacy of fill materials, and the extent to which the earthwork is performed in accordance with the geotechnical conditions present, the requirements of the regulating agencies, the project specifications, and the recommendations presented in this report. Any earthwork performed in connection with the subject project without the full knowledge of, and not under the direct observation of CMAG will render the recommendations of this report invalid.

CMAG should be notified **at least 5 working days** prior to any site clearing or other earthwork operations on the subject project in order to observe the stripping and disposal of unsuitable materials and to ensure coordination with the grading contractor. During this period, a preconstruction meeting should be held on the site to discuss project specifications, observation and testing requirements and responsibilities, and scheduling.

## **8.0 LIMITATIONS**

The recommendations contained in this report are based on our field explorations, laboratory testing, and our understanding of the proposed construction. The subsurface data used in the preparation of this report was obtained from the borings drilled during our field investigation. Variation in soil, geologic, and groundwater conditions can vary significantly between sample locations. As in most projects, conditions revealed during construction excavation may be at variance with preliminary findings. If this occurs, the changed conditions must be evaluated by the Project Geotechnical Engineer and the Geologist, and revised recommendations be provided as required. In addition, if the scope of the proposed construction changes from the described in this report, our firm should also be notified.

Our investigation was performed in accordance with the usual and current standards of the profession, as they relate to this and similar localities. No other warranty, expressed or implied, is provided as to the conclusions and professional advice presented in this report.

This report is issued with the understanding that it is the responsibility of the Owner, or of his Representative, to ensure that the information and recommendations contained herein are brought to the attention of the Architect and Engineer for the project and incorporated into the plans, and that it is ensured that the Contractor and Subcontractors implement such recommendations in the field. The use of information contained in this report for bidding purposes should be done at the Contractor's option and risk.

This firm does not practice or consult in the field of safety engineering. We do not direct the Contractor's operations, and we are not responsible for other than our own personnel on the site; therefore, the safety of others is the responsibility of the Contractor. The Contractor should notify the Owner if he considers any of the recommended actions presented herein to be unsafe.

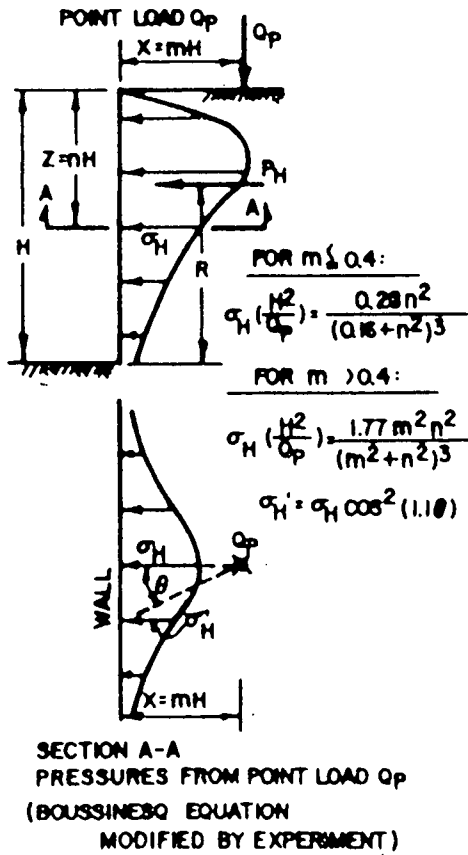
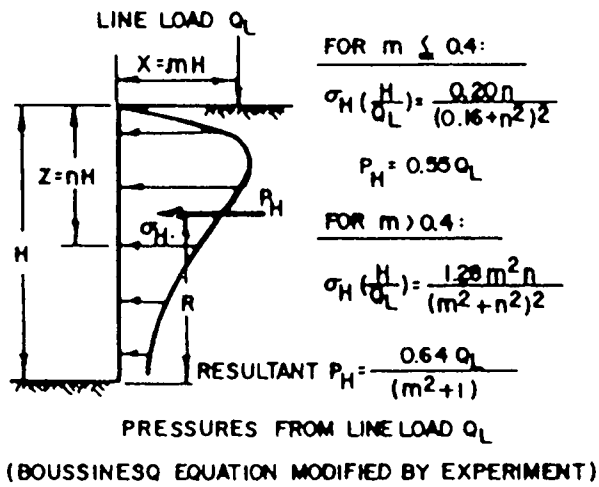
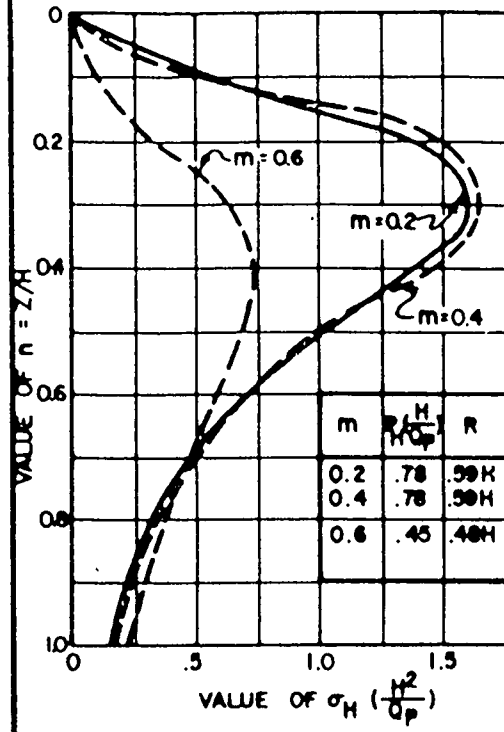
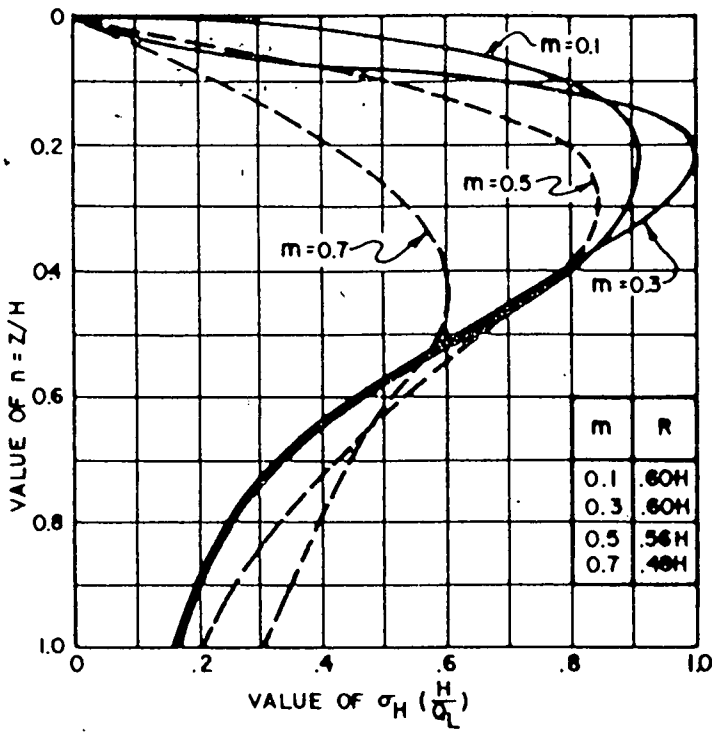
The findings of this report are considered valid as of the present date. However, changes in the conditions of a site can occur with the passage of time, whether they be due to natural events or to human activities on this or adjacent sites. In addition, changes in applicable or appropriate codes and standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, this report may become invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and revision as changed conditions are identified.

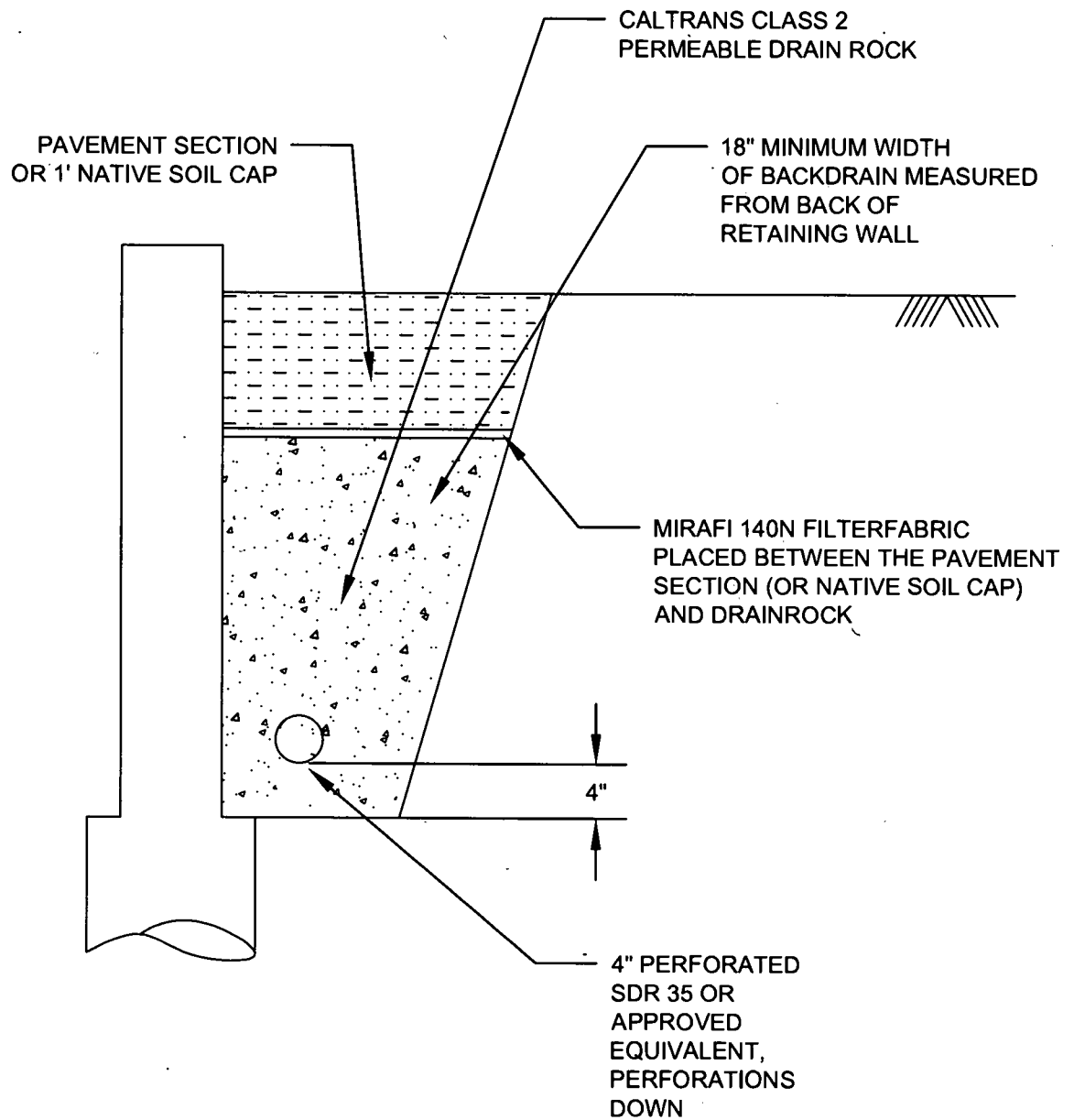
The scope of our services mutually agreed upon did not include any environmental assessment or study for the presence of hazardous to toxic materials in the soil, surface water, or air, on or below or around the site. CMAG is not a mold prevention consultant; none of our services performed in connection with the proposed project are for the purpose

of mold prevention. Proper implementation of the recommendations conveyed in our reports will not itself be sufficient to prevent mold from growing in or on the structures involved.

### REFERENCES

- American Society of Civil Engineers (2010). *Minimum Design Loads for Buildings and Other Structures*. ASCE Standard 7-10.
- ASTM International (2014). *Annual Book of ASTM Standards, Section Four, Construction*. Volume 4.08, Soil and Rock (I): D 420 - D 5876.
- Brabb, E.E. (1989). *Geologic Map of Santa Cruz County, California*. U.S. Geological Survey Miscellaneous Investigation Series, Map I-1905, scale 1:62500.
- Bray, J.D., Rathje, E.M., Augello, A.J., and Merry, S.M. (1998). *Simplified Seismic Design Procedure for Geosynthetic-Lined, Solid-Waste Landfills*. Geosynthetics International, Vol. 5, No 1-2, pp. 203-235.
- California Department of Conservation, California Geologic Survey (2008). *Guidelines for Evaluating and Mitigating Seismic Hazards in California*. Special Publication 117A, 98 pp.
- CMAG Engineering, Inc. (October 22, 2018). *Proposal for Geotechnical Services, Geotechnical Investigation, Proposed Commercial Building, 9041 Soquel Drive, Aptos, Santa Cruz County, California, APN 041-141-56*. Proposal No. P18-86.
- International Code Council (2016). *California Building Code*. Volume 2.
- Southern California Earthquake Center (2003). *Recommended Procedures for Implementation of DMG Special Publication 117: Guidelines for Analyzing and Mitigating Landslide Hazards in California*.
- U.S. Geological Survey. *USGS NSHMP Unified Hazard Tool (UHT)*. (<https://earthquake.usgs.gov/hazards/interactive/>).





NOTES:

1. DRAWING IS NOT TO SCALE
2. 2+ PERCENT TO PIPE AND TRENCH BOTTOM
3. PERFORATED SDR 35 PVC PIPE, OR APPROVED EQUIVALENT, CONNECTED TO CLOSED CONDUITS THAT DISCHARGE TO AN APPROVED LOCATION
4. INSTALL CLEAN OUTS AT APPROVED LOCATIONS

**CMAG ENGINEERING**

TYPICAL BACKDRAIN DETAIL

FIGURE

2

**APPENDIX A**

**FIELD EXPLORATION PROGRAM**

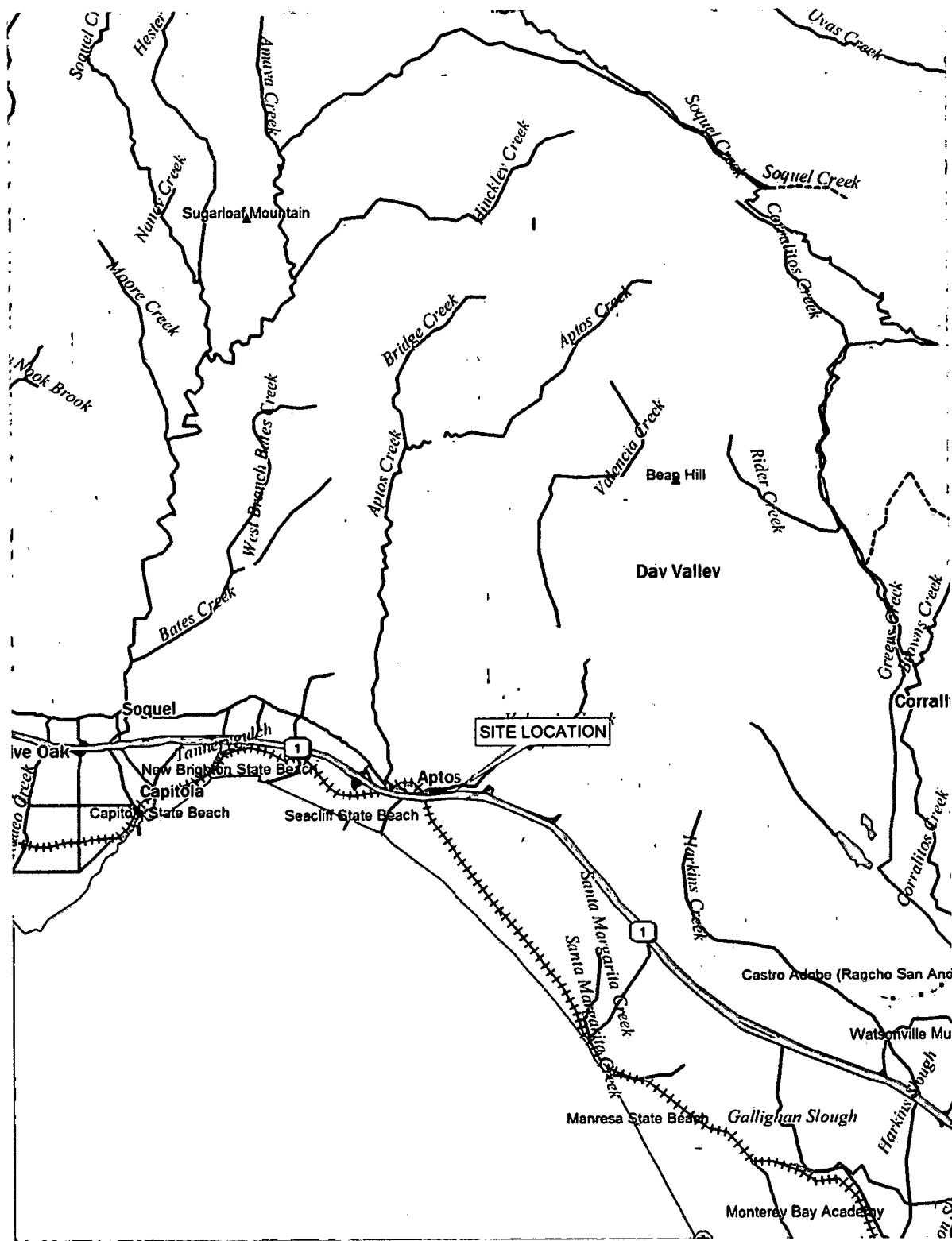
Field Exploration Procedures	Page A-1
Site Location Map	Figure A-1
Boring Location Plan	Figure A-2
Key to the Logs	Figure A-3
Logs of the Borings	Figures A-4 through A-8
Cross Section A-A'	Figure A-9

### **FIELD EXPLORATION PROCEDURES**

Subsurface conditions were explored by drilling 5 borings to depths between 17.5± feet and 36.5± feet below the existing grades. The borings were drilled with a track mounted drill rig equipped with 6 inch diameter solid stem augers. The Key to The Logs and the Logs of the Borings are included in Appendix A, Figures A-3 through A-8. The approximate locations of the borings are shown on the Boring Location Plan, Figure A-2.

The earth materials encountered in the borings were continuously logged in the field by a representative of CMAG. Bulk and relatively undisturbed samples for identification and laboratory testing were obtained in the field. These samples were classified based on field observations and laboratory tests. The classification is in accordance with the Unified Soil Classification System (Figure A-3).

Representative samples were obtained by means of a drive sampler, the hammer weight and drop being 140 lb and 30 inches, respectively. These samples were recovered using a 3 inch outside diameter Modified California Sampler or a 2 inch outside diameter Terzaghi Sampler. The number of blows required to drive the samplers 12 inches are indicated on the Boring Logs. The penetration test data for the Terzaghi driven samples has been presented as  $N_{60}$  values. The  $N_{60}$  values are also indicated on the Boring Logs. A representative cross section was obtained for the subject site. See Cross Section A-A', Figure A-9. For an explanation of the symbols and units on the cross section, see Section 4.0 of the report.



BASEMAP: DeLorme Topo USA®

SCALE: 1:100,000

<b>CMAG ENGINEERING</b>	<b>SITE LOCATION MAP</b>	<b>FIGURE</b>
	9041 Soquel Drive	A-1



EXPLANATION OF SYMBOLS

 APPROXIMATE LOCATION OF BORING  
B-1

A |——| A' LOCATION OF CROSS SECTION

BASEMAP: Google Earth

**CMAG ENGINEERING**

**BORING LOCATION PLAN**

**FIGURE**

9041 Soquel Drive

A-2

## KEY TO LOGS

### UNIFIED SOIL CLASSIFICATION SYSTEM

PRIMARY DIVISIONS			GROUP SYMBOL	SECONDARY DIVISIONS
<b>COARSE GRAINED SOILS</b> More than half of the material is larger than the No. 200 sieve	<b>GRAVELS</b> More than half of the coarse fraction is larger than the No. 4 sieve	<b>CLEAN GRAVELS</b> (Less than 5% fines)	GW	Well graded gravels, gravel-sand mixtures, little or no fines
		<b>GRAVEL WITH FINES</b>	GP	Poorly graded gravels, gravel-sand mixtures, little or no fines
			GM	Silty gravels, gravel-sand-silt mixtures, non-plastic fines
			GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines
	<b>SANDS</b> More than half of the coarse fraction is smaller than the No. 4 sieve	<b>CLEAN SANDS</b> (Less than 5% fines)	SW	Well graded sands, gravelly sands, little or no fines
			SP	Poorly graded sands, gravelly sands, little or no fines
		<b>SAND WITH FINES</b>	SM	Silty sands, sand-silt mixtures, non-plastic fines
			SC	Clayey sands, sand-clay mixtures, plastic fines
<b>FINE GRAINED SOILS</b> More than half of the material is smaller than the No. 200 sieve	<b>SILTS AND CLAYS</b> Liquid limit less than 50		ML	Inorganic silts and very fine sands, silty or clayey fine sands or clayey silts with slight plasticity
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
			OL	Organic silts and organic silty clays of low plasticity
	<b>SILTS AND CLAYS</b> Liquid limit greater than 50		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
			CH	Inorganic clays of high plasticity, fat clays
			OH	Organic clays of medium to high plasticity, organic silts
<b>HIGHLY ORGANIC SOILS</b>			Pt	Peat and other highly organic soils

### GRAIN SIZE LIMITS

SILT AND CLAY	SAND			GRAVEL		COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	COARSE		
	No. 200	No. 40	No. 10	No. 4	3/4 in.	3 in.	12 in.
US STANDARD SIEVE SIZE							

RELATIVE DENSITY	
SAND AND GRAVEL	BLOWS/FT*
VERY LOOSE	0 - 4
LOOSE	4 - 10
MEDIUM DENSE	10 - 30
DENSE	30 - 50
VERY DENSE	OVER 50

CONSISTENCY	
SILT AND CLAY	BLOWS/FT*
VERY SOFT	0 - 2
SOFT	2 - 4
FIRM	4 - 8
STIFF	8 - 16
VERY STIFF	16 - 32
HARD	OVER 32

MOISTURE CONDITION
DRY
MOIST
WET

BEDROCK
(GROUP SYMBOL)
Brackets Denote Bedrock

\* Number of blows of 140 pound hammer falling 30 inches to drive a 2 inch O.D. (1 3/8 inch I.D.) split spoon (ASTM D-1586).

## LOG OF EXPLORATORY BORING

Project No.: 18-142-SC	Boring: B-1	
Project: 9041 Soquel Drive Santa Cruz County, California	Location: See Figure A-2, Boring Location Plan	
Date: October 22, 2018	Elevation:	
Logged By: ALG	Method of Drilling: Track Mounted Drill Rig, 6in. Solid Stem Auger, 140lb. Automatic Trip	

Depth (ft.)	Soil Type	Undisturbed	Bulk	Description	Blows / Foot	N <sub>60</sub>	Dry Density (pcf)	Moisture Content (%)	Other Tests
				<div style="display: flex; justify-content: space-around; font-size: small;"> <div style="text-align: center;">  2" Ring Sample                 </div> <div style="text-align: center;">  2.5" Ring Sample                 </div> <div style="text-align: center;">  Bulk Sample                 </div> </div> <div style="display: flex; justify-content: space-around; font-size: small; margin-top: 5px;"> <div style="text-align: center;">  Terzaghi Split Spoon Sample                 </div> <div style="text-align: center;">  Groundwater                 </div> <div style="text-align: center;">  3" Shelby Tube                 </div> </div>					
0	SM/SC			<b>Qof:</b> Dark Brown Silty and Clayey SAND. Dry to Moist, NP. Sand-FG to CG					
1	CL			Dark Grayish Brown Sandy Lean CLAY. Very Stiff, Moist, Plastic. Sand - Fine Grained.	26		84.3	25.0	
2	CL			Light Olive Brown Sandy Lean CLAY. Very Stiff, Moist, Plastic. Sand - Fine Grained.	21	21		27.3	
5									
6	SM			Light Olive Brown and Yellowish Brown Silty SAND. Medium Dense, Moist, Non Plastic. Sand - Fine Grained.	19		96.8	13.4	c' = 0 psf ϕ' = 30° Particle Size: F.C. = 39.9%
10					15	17		10.8	
11	SM/CL			Interbedded: Light Olive Brown and Olive Brown Silty SAND and Clayey SAND. Medium Dense, Moist, Non Plastic. Sand - Fine Grained.	19		99.1	13.7	
12	ML-CL			Sandy SILT to Sandy Lean CLAY. Firm, Moist, Plastic. Sand - Fine Grained.	5	6		43.8	
15									
16	CL			Interbedded: Olive Brown Sandy Lean CLAY. Stiff, Moist, Plastic. Sand - Fine Grained.	19		76.0	43.7	q <sub>u</sub> = 3,778 psf
17	CL-SC			Sandy Lean CLAY to Clayey SAND. Stiff, Moist, Plastic. Sand - Fine Grained.	11	15		27.9	
20									
21	SM/SC			Interbedded: Olive Brown Silty SAND and Clayey SAND. Medium Dense, Moist, Non Plastic. Sand - Fine Grained to Coarse Grained.	19		97.4	21.1	q <sub>u</sub> = 2,022 psf
22	/CL			Sandy Lean CLAY. Stiff. Moist, Plastic. Sand - Fine Grained.	18	25		27.8	
25									
30	(SP-SM)			<b>Tp:</b> Light Olive Brown SANDSTONE. Dense, Moist. (Poorly Graded Sand with Silt), Sand - Predominately Fine Grained.	24	34		16.1	
32	(SP-SM)			Light Olive Brown SANDSTONE. Very Dense, Moist. (Poorly Graded Sand with Silt), Sand - Fine Grained Beds and Fine to Coarse Grained Beds. Trace Gravels - up to 0.5", Subrounded.	43	61		14.6	
35				Boring Terminated at 34.5± ft., No GW, Boring Backfilled With Cuttings.					

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FIGURE  
A-4

## LOG OF EXPLORATORY BORING

Project No.: 18-142-SC	Boring: B-2
Project: 9041 Soquel Drive Santa Cruz County, California	Location: See Figure A-2, Boring Location Plan
Date: December 7, 2018	Elevation:
Logged By: SSC	Method of Drilling: Track Mounted Drill Rig, 6in. Solid Stem Auger, 140lb. Automatic Trip

Depth (ft.)	Soil Type	Undisturbed	Bulk	Description	Blows / Foot	N <sub>60</sub>	Dry Density (pcf)	Moisture Content (%)	Other Tests
	SM/SC			<b>af:</b> Dark Yellowish Brown Silty and Clayey SAND with Trace Gravel. Medium Dense, Moist, Non Plastic to Slightly Plastic. Sand - Fine to Coarse Grained. Gravel - up to 1", Subrounded.	32 17	17	117.4	14.0 15.2	
5	SC-CL			<b>Qof:</b> Black Clayey SAND to Sandy Lean CLAY. Stiff, Moist, Plastic. Sand - Fine to Medium Grained.	26 15	16	106.7	18.9 17.7	q <sub>u</sub> = 3,830psf
10	CL			Dark Olive Brown Lean CLAY. Very Stiff, Moist, Plastic.	22	25		32.7	
15	SM/ML			Interbedded: Light Olive Brown and Olive Brown Silty SAND. Medium Dense, Moist, Non Plastic. Sand - Fine Grained. Sandy SILT. Medium Dense, Moist, Non Plastic. Sand - Fine Grained.	11	14		21.7	
20	CH			Olive Brown Fat CLAY. Soft, Moist, Plastic.	5	7		49.7	
25	CL-CH			Olive Brown Lean to Fat CLAY with Sand. Firm, Moist, Plastic.	7	10		39.8	
30	SC/CL			Interbedded: Dark Olive Brown and Olive Brown Sandy Lean CLAY. Firm to Stiff, Moist, Plastic. Sand - Fine Grained. Clayey SAND. Firm to Stiff, Moist, Plastic. Sand - Fine Grained.	12	17		25.9	
35	(SM)			<b>Tp:</b> Light Olive Brown SANDSTONE. Moist. (Silty Sand), Sand - FG.					

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FIGURE  
A-5.0

## LOG OF EXPLORATORY BORING

Project No.: 18-142-SC	Boring: B-2, Continued.
Project: 9041 Soquel Drive Santa Cruz County, California	Location: See Figure A-2, Boring Location Plan
Date: December 7, 2018	Elevation: .
Logged By: SSC	Method of Drilling: Track Mounted Drill Rig, 6in. Solid Stem Auger, 140lb. Automatic Trip







Depth (ft.)	Soil Type	Undisturbed	Bulk	Description	Blows / Foot	N <sub>60</sub>	Dry Density (pcf)	Moisture Content (%)	Other Tests
	(SM)			<div style="display: flex; justify-content: space-between; font-size: small;"> <div> <input type="checkbox"/> 2" Ring Sample  <input type="checkbox"/> Terzaghi Split Spoon Sample                 </div> <div> <input type="checkbox"/> 2.5" Ring Sample  <input type="checkbox"/> Groundwater                 </div> <div> <input checked="" type="checkbox"/> Bulk Sample  <input type="checkbox"/> 3" Shelby Tube                 </div> </div>					
				<b>Tp:</b> Light Olive Brown SANDSTONE. Dense, Moist. (Silty Sand), Sand - Fine Grained.	33	47		19.4	
-40				Boring Terminated at 36.5± ft. Groundwater Not Encountered. Boring Backfilled With Cuttings.					
-45									
-50									
-55									
-60									
-65									
-70									

CMAG ENGINEERING

FIGURE  
A-5.1

## LOG OF EXPLORATORY BORING

Project No.: 18-142-SC	Boring: B-3	
Project: 9041 Soquel Drive Santa Cruz County, California	Location: See Figure A-2, Boring Location Plan	
Date: December 7, 2018	Elevation:	
Logged By: SSC	Method of Drilling: Track Mounted Drill Rig, 6in. Solid Stem Auger, 140lb. Automatic Trip	

Depth (ft.)	Soil Type	Undisturbed	Bulk	Description	Blows / Foot	N <sub>60</sub>	Dry Density (pcf)	Moisture Content (%)	Other Tests
				<div style="display: flex; justify-content: space-around; font-size: small;"> <div style="text-align: center;">  2" Ring Sample                 </div> <div style="text-align: center;">  2.5" Ring Sample                 </div> <div style="text-align: center;">  Bulk Sample                 </div> </div> <div style="display: flex; justify-content: space-around; font-size: small; margin-top: 5px;"> <div style="text-align: center;">  Terzaghi Split Spoon Sample                 </div> <div style="text-align: center;">  Groundwater                 </div> <div style="text-align: center;">  3" Shelby Tube                 </div> </div>					
	SM			<b>af:</b> Dark Yellowish Brown Silty SAND with Trace Gravel. Very Loose, Moist, Non Plastic. Sand - FC to CG. Gravel - up to 3/4", Angular.	5	3	105.6	10.3	
	SC-CL			<b>Qof:</b> Black Clayey SAND to Sandy Lean CLAY. Very Stiff, Moist, Plastic. Sand - Fine to Medium Grained.	17	17		25.8	
5	CL			Dark Brown Lean CLAY with Sand to Sandy Lean CLAY. Very Stiff to Hard, Moist, Plastic. Sand - Fine Grained.	29		81.8	25.1	Swell
					21	23		22.8	
10	SM/ML			Interbedded: Olive Brown Silty SAND. Medium Dense, Moist, Non Plastic. Sand - Fine Grained. Sandy SILT. Medium Dense, Moist, Non Plastic. Sand - Fine Grained.	16	19		13.6	
15	SC/CL			Interbedded: Olive Brown Clayey SAND. Medium Dense, Moist, Slightly Plastic. Sand - Fine Grained. Sandy Lean CLAY. Stiff, Moist, Plastic. Sand - Fine Grained.	17	22		33.0	
20				Boring Terminated at 17.5± ft. Groundwater Not Encountered. Boring Backfilled With Cuttings.					
25									
30									
35									

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FIGURE  
A-6

## LOG OF EXPLORATORY BORING

Project No.: 18-142-SC	Boring: B-4	
Project: 9041 Soquel Drive Santa Cruz County, California	Location: See Figure A-2, Boring Location Plan	
Date: December 7, 2018	Elevation:	
Logged By: SSC	Method of Drilling: Track Mounted Drill Rig, 6in. Solid Stem Auger, 140lb. Automatic Trip	







Depth (ft.)	Soil Type	Undisturbed	Bulk	Description	Blows / Foot	N <sub>60</sub>	Dry Density (pcf)	Moisture Content (%)	Other Tests
				<div style="display: flex; justify-content: space-around; font-size: small;"> <div style="text-align: center;">  2" Ring Sample                 </div> <div style="text-align: center;">  2.5" Ring Sample                 </div> <div style="text-align: center;">  Bulk Sample                 </div> </div> <div style="display: flex; justify-content: space-around; font-size: small; margin-top: 5px;"> <div style="text-align: center;">  Terzaghi Split Spoon Sample                 </div> <div style="text-align: center;">  Groundwater                 </div> <div style="text-align: center;">  3" Shelby Tube                 </div> </div>					
0	SM/SC			<b>Qof:</b> Black Clayey SAND to Sandy Lean CLAY. Firm, Moist, Plastic.					
2	CL	▧		Sand - Fine to Medium Grained.					
3				Olive Brown Lean CLAY with Sand. Very Stiff, Moist, Plastic.	26		97.6	32.0	q <sub>u</sub> = 7,678psf
4				Sand - Fine Grained.	18	18		25.7	E.I. = 122
5									
6	SM/ML			Interbedded: Light Olive Brown and Yellowish Brown					
7				Silty SAND. Medium Dense, Moist, Non Plastic. Sand - Fine Grained.	17		91.7	13.6	
8				Sandy SILT. Medium Dense, Moist, Non Plastic. Sand - Fine Grained.	16	18		18.5	
10									
12	CL/ML			Interbedded: Light Olive Brown and Olive Brown					
13				Sandy Lean CLAY. Firm to Stiff, Moist, Plastic. Sand - Fine Grained.	9	11		37.2	
14				Sandy SILT. Firm to Stiff, Moist, Plastic. Sand - Fine Grained.					
15									
17	SC/CL			Interbedded: Olive Brown					
18				Clayey SAND. Medium Dense, Moist, Plastic. Sand - Fine Grained.	17	23		24.1	
19				Sandy Lean CLAY. Firm to Stiff, Moist, Plastic. Sand - Fine Grained.					
20									
22	(SP-SM)			<b>Tp:</b> Yellowish Brown and Light Olive Brown SANDSTONE.					
23				Dense, Moist. (Poorly Graded Sand with Silt), Sand - Fine to Medium Grained.	32	44		8.6	
24									
26	(SP-SM)			Yellowish Brown and Olive Brown SANDSTONE.					
27				Dense, Moist. (Poorly Graded Sand with Silt), Sand - Fine Grained Beds	34	48		9.6	
28				and Fine to Coarse Grained Beds. Trace Gravels - up to 0.5", Subrounded.					
29									
30									
32									
34									
35									

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FIGURE  
A-7.0

## LOG OF EXPLORATORY BORING

Project No.: 18-142-SC	Boring: B-4, Continued.
Project: 9041 Soquel Drive Santa Cruz County, California	Location: See Figure A-2, Boring Location Plan
Date: December 7, 2018	Elevation:
Logged By: SSC	Method of Drilling: Track Mounted Drill Rig, 6in. Solid Stem Auger, 140lb. Automatic Trip

Depth (ft.)	Soil Type	Undisturbed	Bulk	Description	Blows / Foot	N <sub>60</sub>	Dry Density (pcf)	Moisture Content (%)	Other Tests
				<div style="display: flex; justify-content: space-around; font-size: small;"> <div style="text-align: center;">  2" Ring Sample                 </div> <div style="text-align: center;">  2.5" Ring Sample                 </div> <div style="text-align: center;">  Bulk Sample                 </div> </div> <div style="display: flex; justify-content: space-around; font-size: small; margin-top: 5px;"> <div style="text-align: center;">  Terzaghi Split Spoon Sample                 </div> <div style="text-align: center;">  Groundwater                 </div> <div style="text-align: center;">  3" Shelby Tube                 </div> </div>					
	(SP-SM)			<b>Top:</b> Light Olive Brown SANDSTONE. Dense, Moist. (Poorly Graded Sand with Silt), Sand - Fine Grained.	33	47		7.8	
-40				Boring Terminated at 36.5± ft. Groundwater Not Encountered. Boring Backfilled With Cuttings.					
-45									
-50									
-55									
-60									
-65									
-70									

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FIGURE  
A-7.1

## LOG OF EXPLORATORY BORING

Project No.: 18-142-SC	Boring: B-5	
Project: 9041 Soquel Drive Santa Cruz County, California	Location: See Figure A-2, Boring Location Plan	
Date: December 7, 2018	Elevation:	
Logged By: SSC	Method of Drilling: Track Mounted Drill Rig, 6in. Solid Stem Auger, 140lb. Automatic Trip	

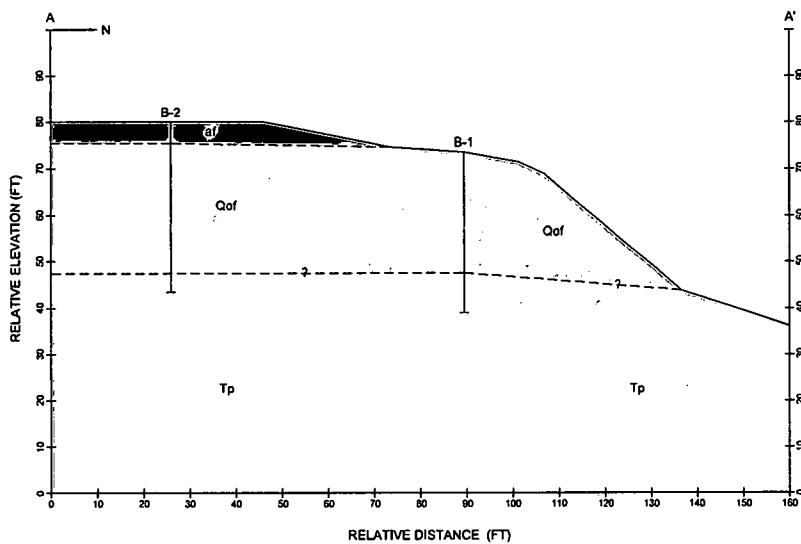
Depth (ft.)	Soil Type	Undisturbed	Bulk	Description	Blows / Foot	N <sub>60</sub>	Dry Density (pcf)	Moisture Content (%)	Other Tests
0 - 5	SM/SC			<p><b>af:</b> Dark Yellowish Brown Silty and Clayey SAND with Trace Gravel. Moist to Wet, Loose to Medium Dense, Non Plastic. Sand - Fine to Coarse Grained. Gravel - up to 1.5", Subrounded. Moist at 2.5'.</p>	4 10 25	10	105.5 9.2 107.6	17.4 9.2 9.4	
5 - 10	SC-CL			<p><b>Qof:</b> Black Clayey SAND to Sandy Lean CLAY. Very Stiff, Moist, Plastic. Sand - Fine to Medium Grained.</p>	15	16		17.2	
10 - 15	CL-CH			<p>Olive Brown Lean to Fat CLAY with Sand. Very Stiff, Moist, Plastic. Sand - Fine Grained.</p>	21	24		29.8	
15 - 20	ML/SM			<p>Interbedded: Light Olive Brown Sandy SILT. Firm, Moist, Plastic. Sand - Fine Grained. Silty SAND. Medium Dense, Moist, Non Plastic. Sand - Fine Grained.</p>	8	10		31.5	
20 - 21.5	ML / CL-CH			<p>Interbedded: Olive Brown and Light Olive Brown Sandy SILT. Firm, Moist, Plastic. Sand - Fine Grained. Lean to Fat CLAY. Stiff, Moist, Plastic.</p>	10	13		42.8	
21.5 - 35				<p>Boring Terminated at 21.5± ft. Groundwater Not Encountered. Boring Backfilled With Cuttings.</p>					

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FIGURE  
A-8

**CROSS SECTION A-A'**

SCALE: 1" = 20' H = V



**EXPLANATION**

**UNITS**



af: Artificial Fill



Qof: Older Flood Plain Deposits



Tp: Purtsima Formation

**SYMBOLS**



Geologic Contact, Oashed Where Approximate, Queried Where Uncertain



B-2  
Approximate Location of Boring B-2

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**CROSS SECTION A-A'**

9041 Soquel Drive

**FIGURE**

A-9

## APPENDIX B

### LABORATORY TESTING PROGRAM

Laboratory Testing Procedures	Page B-1
Direct Shear Test Results	Figures B-1
Unconfined Compression Test Results	Figures B-2 through B-5
Swell Pressure Test Results	Figure B-6
Particle Size Distribution Test Results	Figure B-7
Expansion Index Test Results	Table B-1

## **LABORATORY TESTING PROCEDURES**

### **Classification**

Soils were classified according to the Unified Soil Classification System in accordance with ASTM D 2487 and D 2488. See Figure A-3. Moisture content and dry density determinations were made for representative, relatively undisturbed samples in accordance with ASTM D 2216. Results of the moisture-density determinations, together with classifications, are shown on the Boring Logs in Appendix A.

### **Direct Shear**

A consolidated drained direct shear test was performed in accordance with ASTM D 3080 on a representative, relatively undisturbed sample of the on-site soils. To simulate possible adverse field conditions the sample was saturated prior to shearing. A saturating device was used which permitted the sample to absorb moisture while preventing volume change. The direct shear test results are presented on the Boring Logs and Figure B-1.

### **Unconfined Compression**

Unconfined compression tests were performed on representative samples of the on-site soils in accordance with ASTM D 2166. The test results are presented on the Boring Logs and Figures B-2 through B-5.

### **Swell Pressure**

A swell pressure test was performed on a representative, relatively undisturbed sample of the on-site soils in accordance with the ASTM D 4546. The test results are presented on Figure B-6.

### **Particle Size Distribution**


A particle size distribution test was performed on a representative sample of the on-site soils in accordance with ASTM D 422. The test results are presented on Figure B-7.

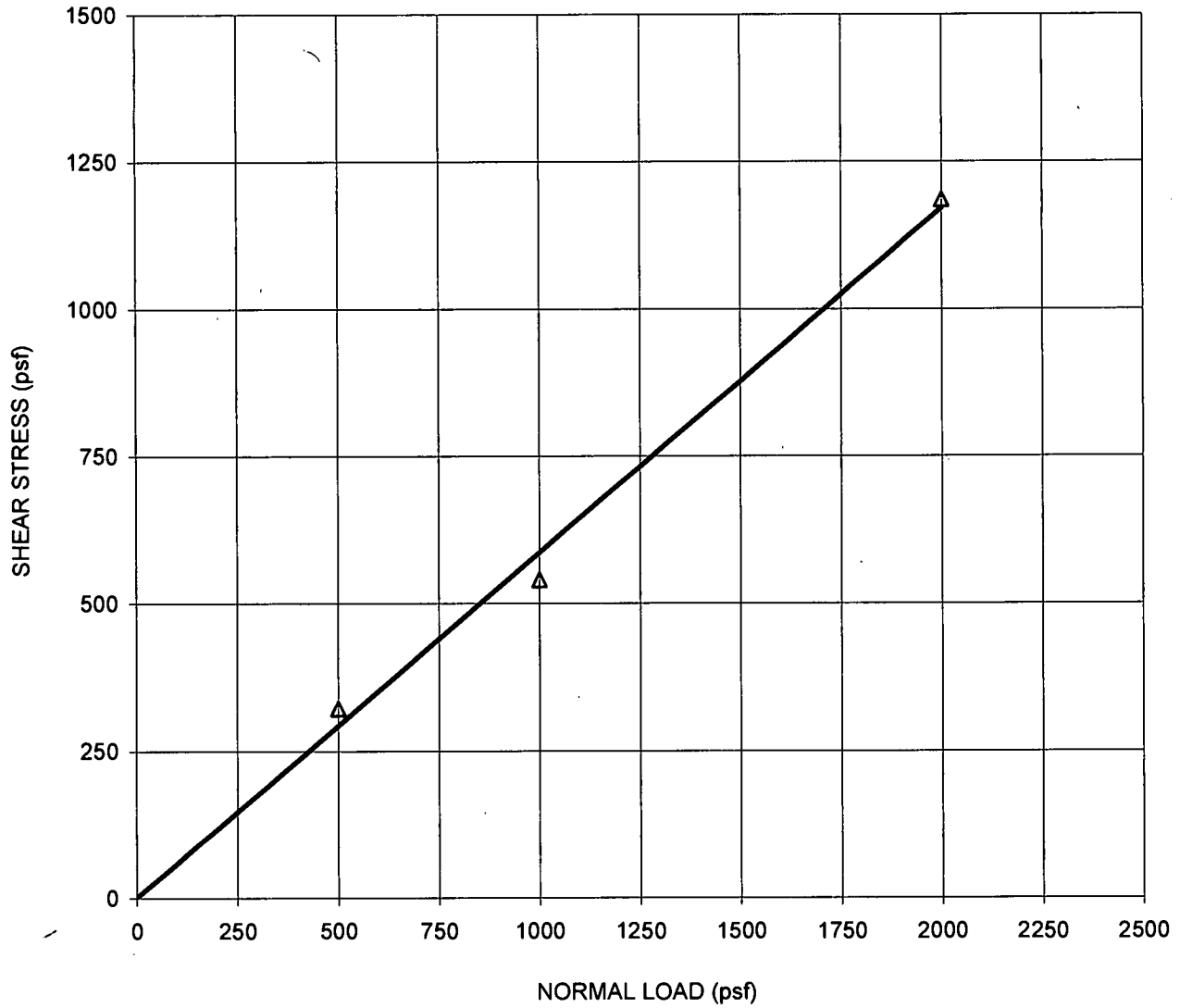
### **Expansion**

An expansion index test was performed on a representative remolded sample of the on-site soils in accordance with the ASTM D 4829. The test results are presented on the Boring Logs and on Table B-1.

**Table B-1. Expansion Index Test Results**

Boring	Depth (ft)	Soil Type	Expansion Index	Expansion Potential
B-3	3	CL	122	High

BORING:	B-1		COHESION	FRICTION
DEPTH (ft):	7		(psf)	ANGLE
SOIL TYPE (USCS):	SM		0	30
MOISTURE: SATURATED		TEST TYPE: CONSOLIDATED - DRAINED		



**CMAG ENGINEERING**

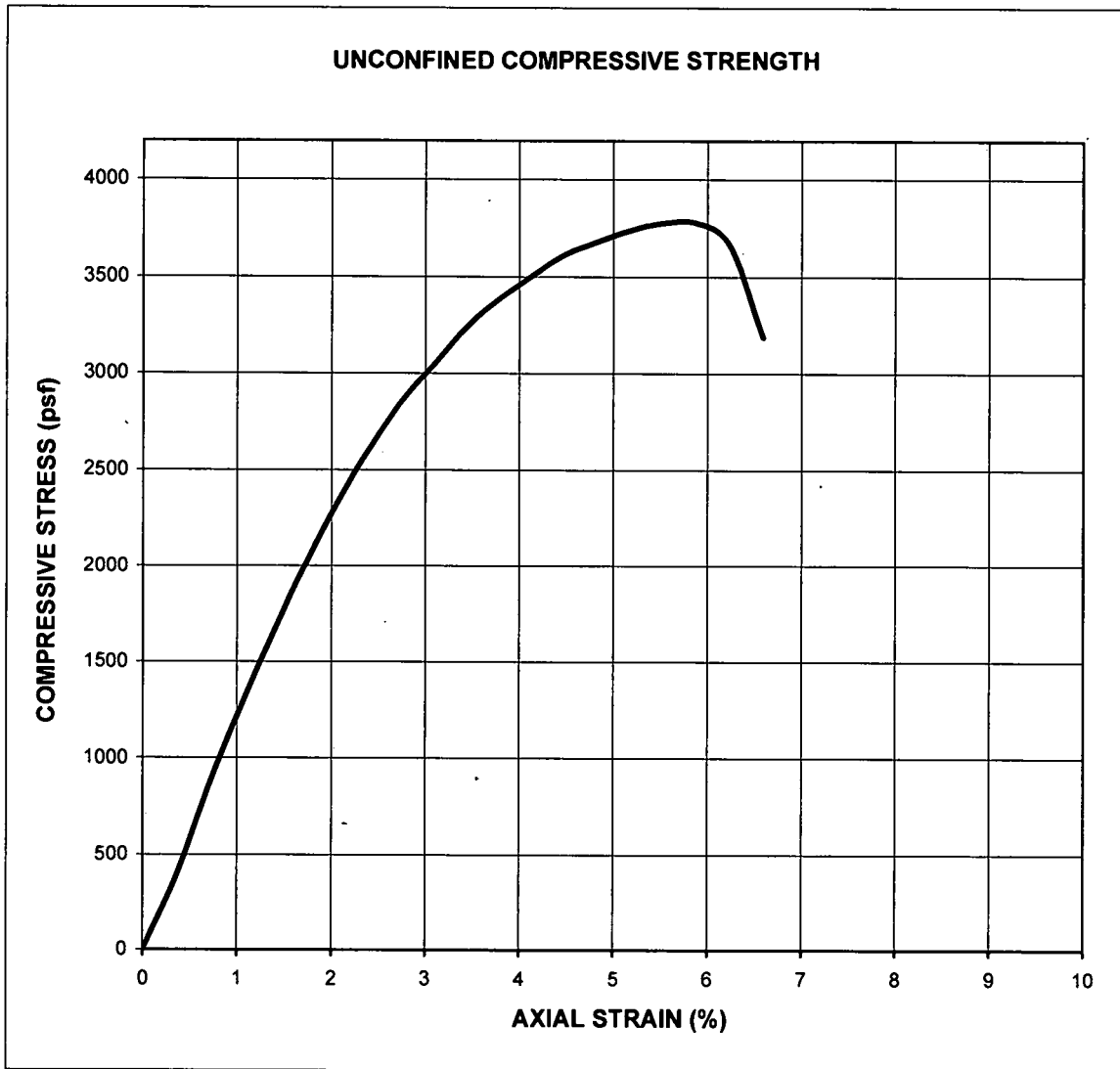
**DIRECT SHEAR TEST RESULTS**

9041 Soquel Drive

**FIGURE**

**B-1**

BORING:	B-1	UNDISTURBED	UCS
DEPTH (ft):	17		$q_u = 3,778$ psf
SOIL TYPE (USCS):	CL		
MOISTURE: INSITU - SATURATED			



**CMAG ENGINEERING**

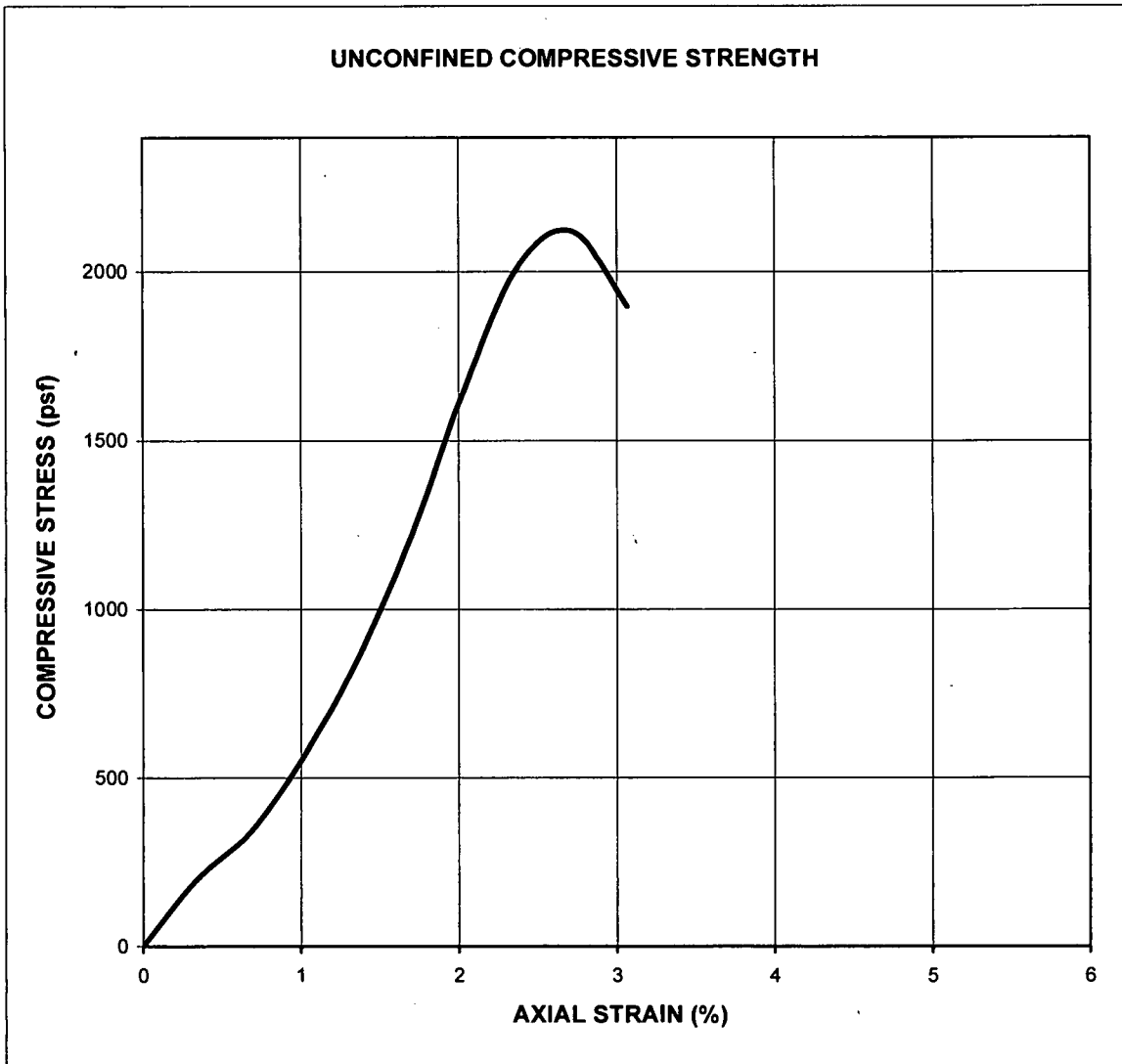
**UNCONFINED COMPRESSIVE STRENGTH RESULTS**

9041 Soquel Drive

FIGURE

B-2

BORING:	B-1	<b>UNDISTURBED</b>	UCS
DEPTH (ft):	22		
SOIL TYPE (USCS):	SM/SC		$q_u = 2,022$ psf
<b>MOISTURE: INSITU - SATURATED</b>			



**CMAG ENGINEERING**

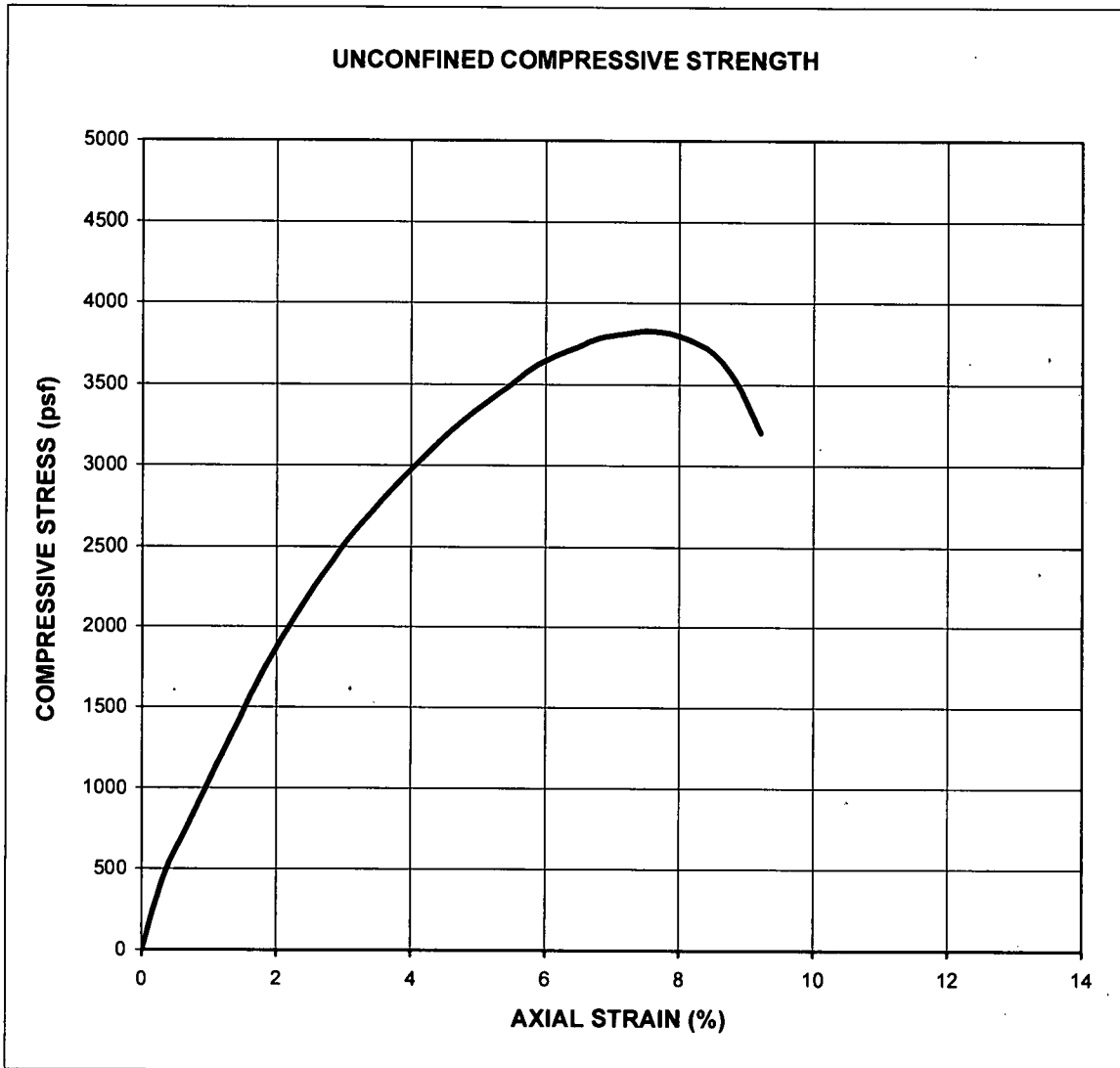
**UNCONFINED COMPRESSIVE STRENGTH RESULTS**

9041 Soquel Drive

**FIGURE**

**B-3**

BORING:	B-2	UNDISTURBED	UCS
DEPTH (ft):	6		
SOIL TYPE (USCS):	SC-CL		$q_u = 3,830$ psf
MOISTURE: INSITU - SATURATED			



**CMAG ENGINEERING**

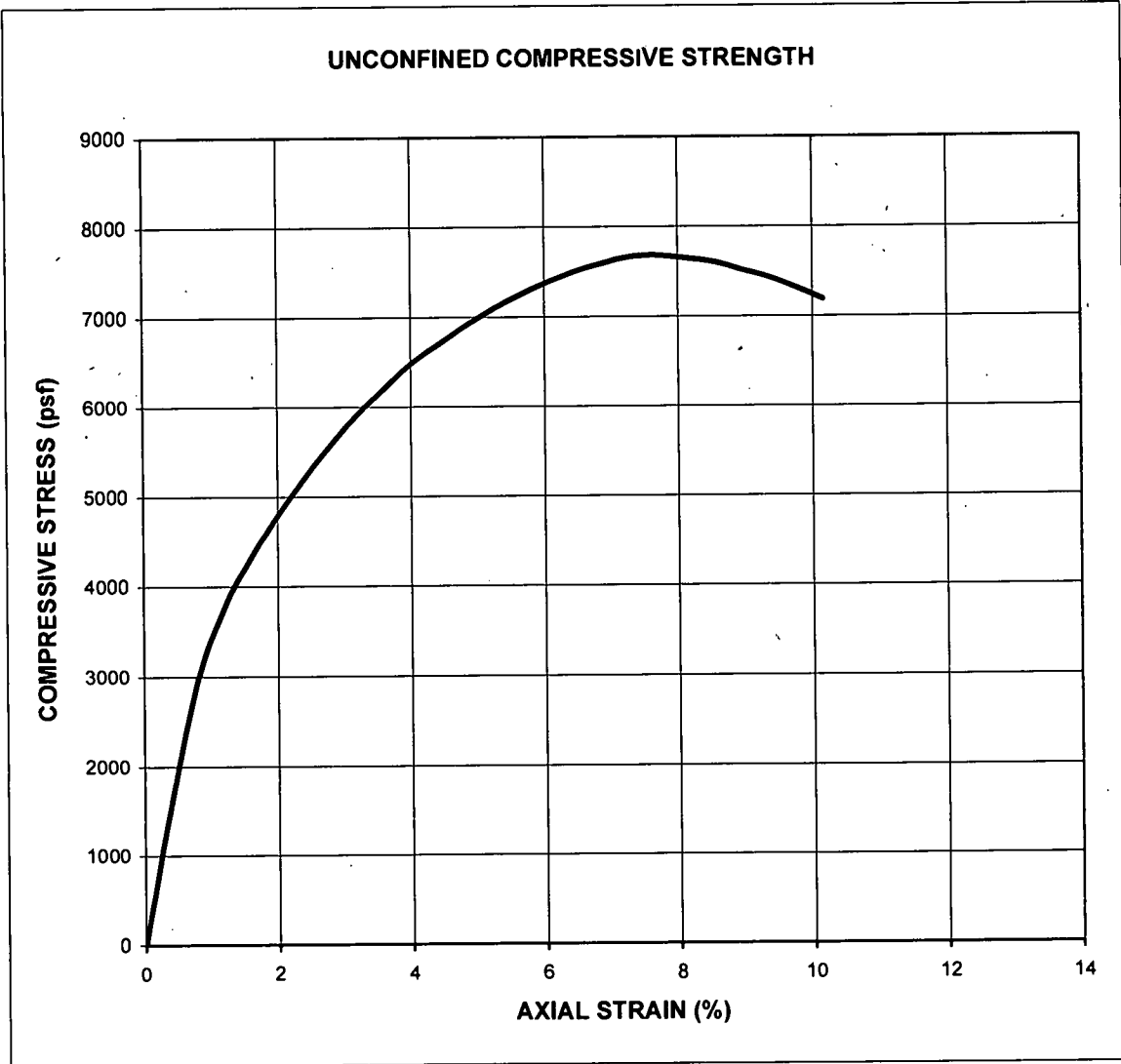
**UNCONFINED COMPRESSIVE STRENGTH RESULTS**

9041 Soquel Drive

FIGURE

B-4

BORING:	B-4	UNDISTURBED	UCS
DEPTH (ft):	3		
SOIL TYPE (USCS):	CL		$q_u = 7,678$ psf
MOISTURE: INSITU - SATURATED			



**CMAG ENGINEERING**

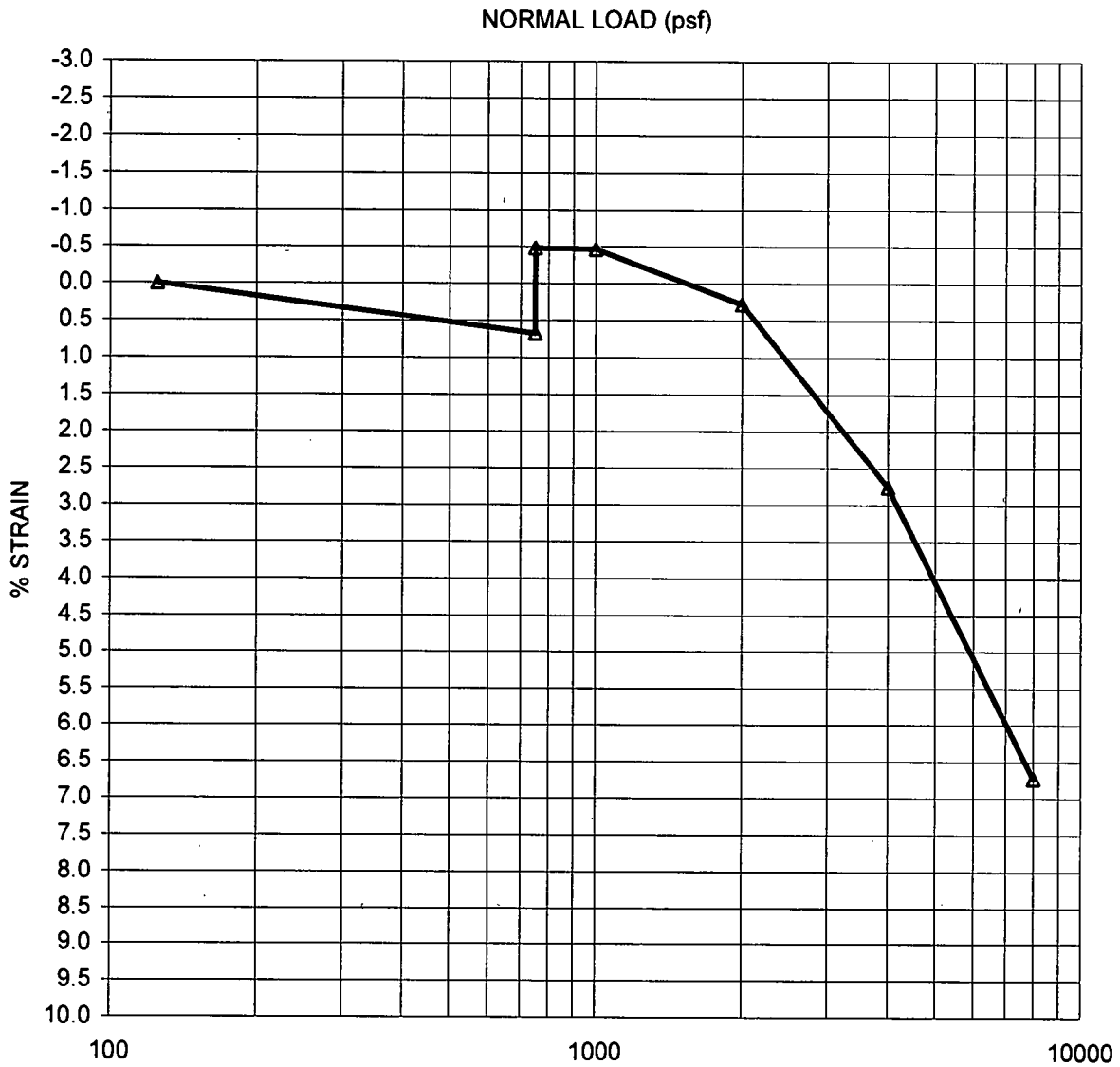
**UNCONFINED COMPRESSIVE STRENGTH RESULTS**

9041 Soquel Drive

FIGURE

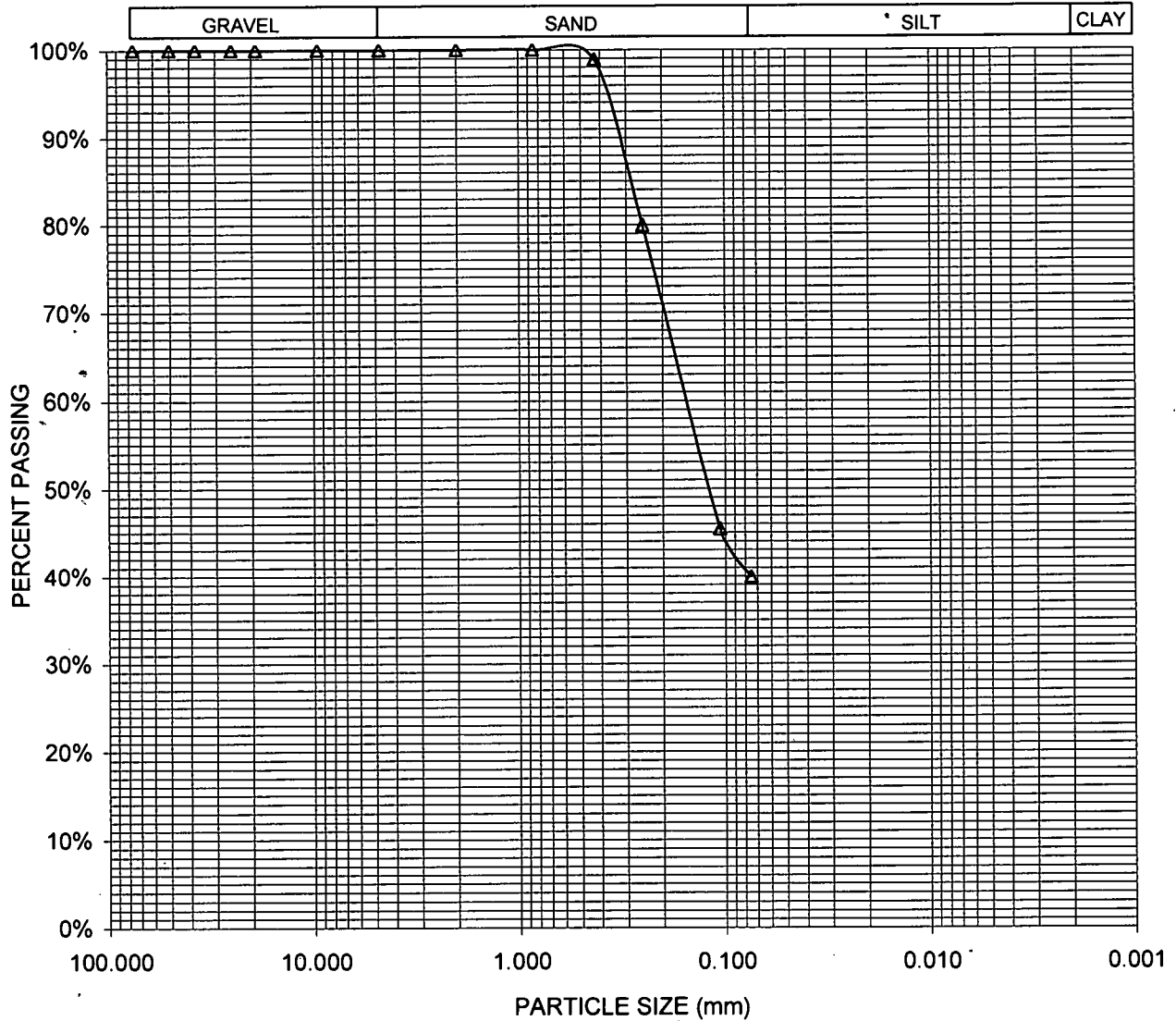
B-5

BORING:	B-3	FIELD MOISTURE:	25.1%
DEPTH (ft):	5	INITIAL SATURATION:	63.8%
SOIL TYPE (USCS):	CL	FINAL MOISTURE:	33.4%



<b>CMAG ENGINEERING</b>	<b>SWELL TEST RESULTS</b>	FIGURE
	9041 Soquel Drive	B-6

BORING:	B-1	PERCENT	PERCENT
DEPTH (ft):	7	PASSING No. 4	PASSING No. 200
SOIL TYPE (USCS):	SM	100.0%	39.9%



CMAG ENGINEERING

PARTICLE SIZE DISTRIBUTION

9041 Soquel Drive

FIGURE

B-7

## APPENDIX C

### SLOPE STABILITY PROGRAM

Slope Stability Results and Methodology	Page C-1
Shear Strength Properties	Table C-1
Slope Stability For Cross Section A-A'	
Static Case	Figure C-1
Pseudostatic Case	Figure C-2
Static Case - Infinite Slope	Figure C-3

**SLOPE STABILITY RESULTS AND METHODOLOGY**

The stability of Cross Section A-A' was analyzed using the computer program Slide, Version 7.0 from Rocscience, Inc. This program utilizes a limiting equilibrium method for determining the Factor of Safety against sliding on an assumed failure surface. The cross section was analyzed and the results of the analyses are presented on Figures C-1 and C-2. The location of the cross section analyzed is shown in Appendix A, Figure A-2.

We have also analyzed the condition assuming seepage parallel to the ground surface within the upper 4 feet of the slope adjacent to the proposed commercial building using an infinite slope analysis. The results of the analysis are presented on Figure C-3.

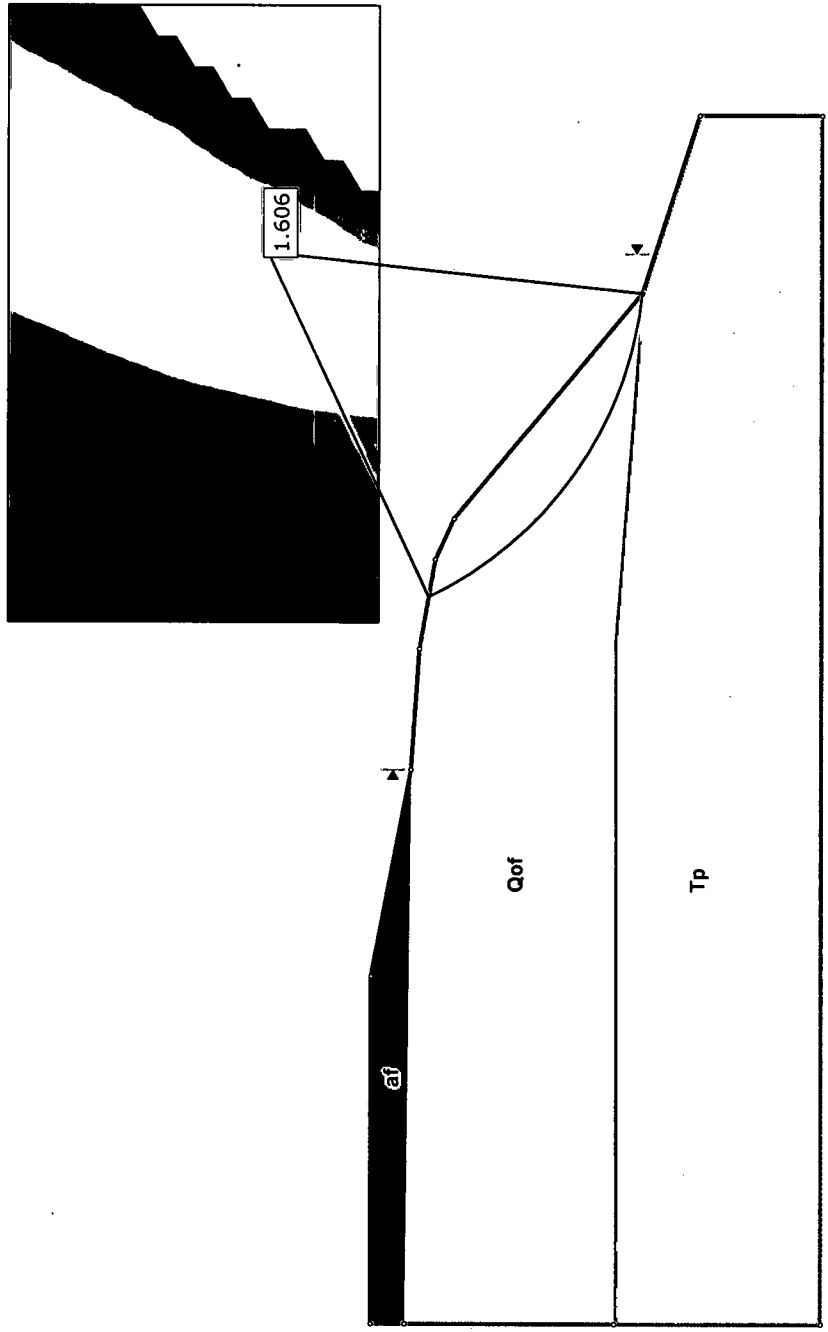
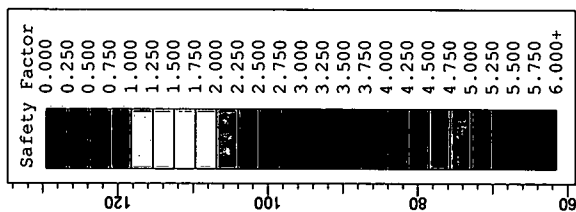
Material properties chosen for these analyses are conservatively based on laboratory test results and on experience in the vicinity. Shear parameters are based on saturated strengths. The shear strength properties used in our slope stability analyses are presented on Table C-1.

See the Slope Stability section of this report for discussions regarding the calculated Factors of Safety.

**Table C-1. Material Properties For Cross Section A-A'**

Geologic Unit	Wet Density (lbs/ft <sup>3</sup> )	Sat'd Density (lbs/ft <sup>3</sup> )	Angle of Internal Friction (°)	Cohesion (lb/ft <sup>2</sup> )
			Static / Pseudostatic	Static / Pseudostatic
af	118	128	34 / 34	30 / 30
Qof	113	124	30 / 0	250 / 1,000
Tp	120	125	38 / 38	500 / 500

STATIC FACTOR OF SAFETY = 1.6



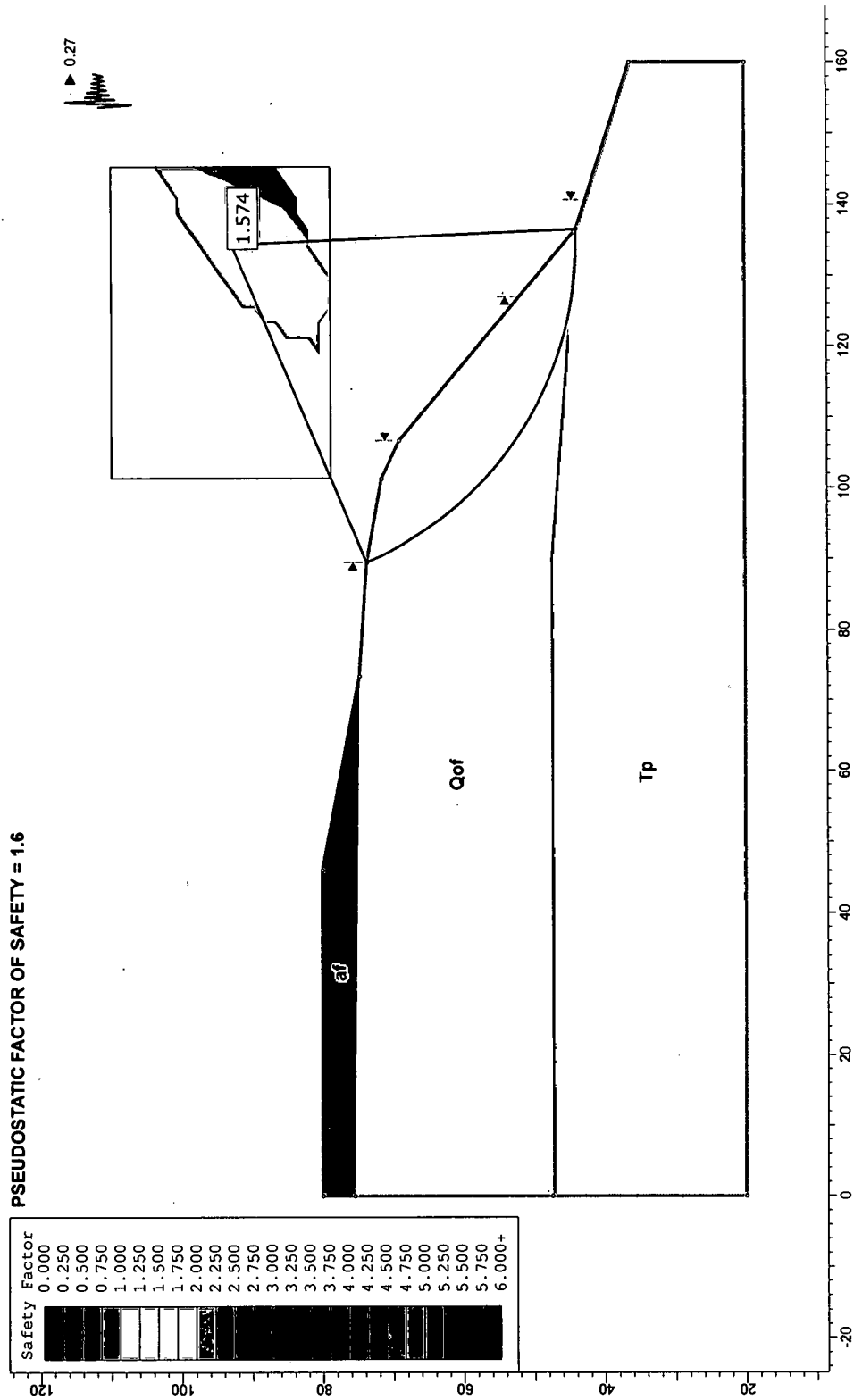
CMAG ENGINEERING

SLOPE STABILITY - CROSS SECTION A-A' - STATIC CASE

9041 Soquel Drive

FIGURE

C-1



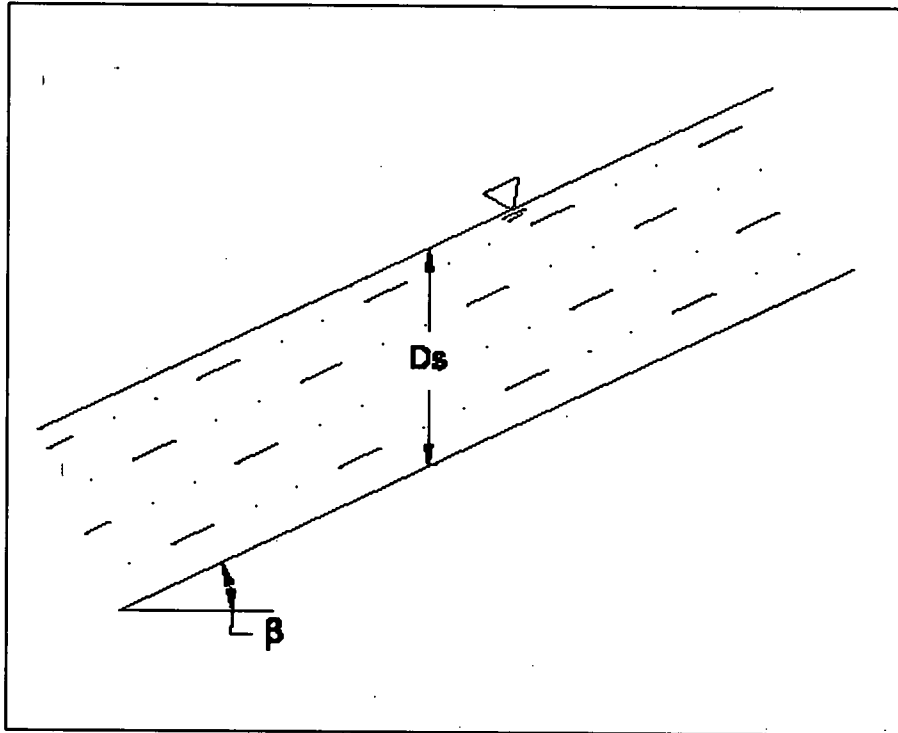
**CMAG ENGINEERING**

SLOPE STABILITY - CROSS SECTION A-A' - PSEUDOSTATIC CASE

9041 Soquel Drive

FIGURE

C-2



**GEOLOGIC UNIT:** Qof

**INPUT PARAMETERS:**

$c'$  = COHESION (psf) = 250  
 $\Phi'$  = ANGLE OF FRICTION (deg) = 30  
 $\gamma_s$  = SATURATED DENSITY (pcf) = 124  
 $\beta$  = SLOPE ANGLE (deg) = 40  
 $D_s$  = DEPTH (ft) = 4

**EFFECTIVE STRESS ANALYSIS:**

$$FS = \frac{c' + (\gamma_s - \gamma_w) D_s \cos^2 \beta \tan \Phi'}{\gamma_s D_s \cos \beta \sin \beta} = 1.37$$

**CMAG ENGINEERING**

**INFINITE SLOPE - SLOPE PARALLEL SEEPAGE**

**FIGURE**

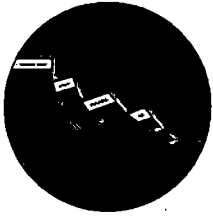
9041 Soquel Drive

C-3

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## Attachment 3

Geotechnical Report Acceptance Letter  
Dated January 9, 2020



# CMAG ENGINEERING, INC.

P.O. BOX 640, APTOS, CALIFORNIA 95001

PHONE: 831.475.1411

WWW.CMAGENGINEERING.COM

April 13, 2020  
Project No. 18-142-SC

Testorff Construction  
335 Spreckels Drive, Suite D  
Aptos, California 95003

Attn: Pete Testorff

**SUBJECT: ON-SITE RETENTION**  
Proposed Commercial Building  
9041 Soquel Drive,  
Aptos, Santa Cruz County, California  
APN 041-141-56

**REFERENCES:** CMAG Engineering, Inc. (December 30, 2018). *Geotechnical Investigation , Proposed Commercial Building, 9041 Soquel Drive, Aptos, Santa Cruz County, California, APN 041-141-56*. Project No. 18-142-SC.

Ramsey Civil Engineering, Inc. (April 1, 2020). *Testorff Construction, 9041 Soquel Drive, Aptos, CA, APN 041-141-56*. Sheets C1.0, C2.0, C2.1, C3.0, C4.0, C5.0 and C5.1. Project No. 18-001.

Dear Mr. Testorff:

Per our conversations with the project Civil Engineer, David Ramsey, PE, we have prepared this letter to provide geotechnical recommendations related to on-site retention of stormwater. As indicated in the referenced *Geotechnical Investigation* report (CMAG, 2018), "Proposed on-site retention / detention systems may affect the stability of the steep slope to the north" and, "The near surface native soils generally consist of clay with a low permeability. We therefore recommend that the paver section be designed assuming no exfiltration."

It is our opinion that the site is not feasible for "typical" retention of on-site stormwater. We have worked closely with David Ramsey, PE on the design of the stormwater system outlined in the referenced plans (Ramsey Civil Engineering, Inc., April 1, 2020) consisting of a series of raingardens that consist of treatment, detention, and discharge of the stormwater, at pre-development rates, at the base of the slope to the north of the proposed development. It is our opinion that this system is acceptable from a geotechnical standpoint.

**EXHIBIT G**

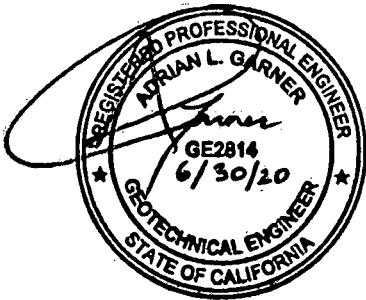
On-Site Retention  
9041 Soquel Drive  
Santa Cruz County, California

April 13, 2020  
Project No. 18-142-SC  
Page 2

It is a pleasure being associated with you on this project. If you have any questions or if we may be of further assistance please do not hesitate to contact our office.

Sincerely,

**CMAG ENGINEERING, INC.**



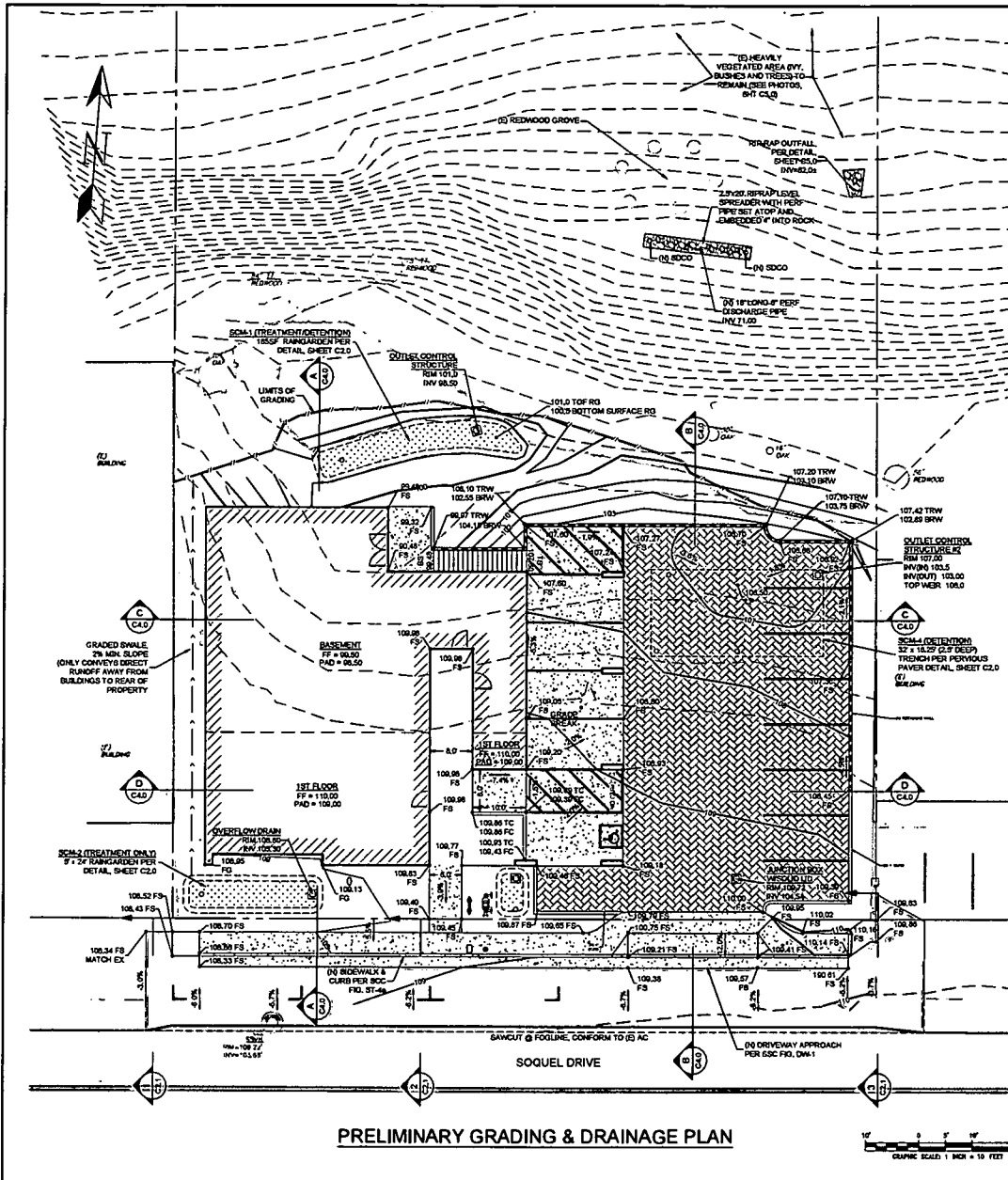
Adrian L. Garner, PE, GE  
Principal Engineer  
C 66087, GE 2814  
Expires 6/30/20

Distribution:            Addressee (Electronic Copy)  
                                 David Ramsey (Electronic Copy)

---

## Attachment 4

### Approved Locations of Drainage Outlets



PRELIMINARY GRADING & DRAINAGE PLAN



### GRADING/PAVING LEGEND

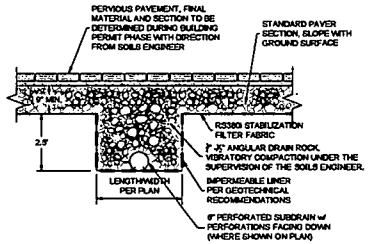
- ASPHALT
- PERVIOUS PAVERS
- CONCRETE

### NOTES

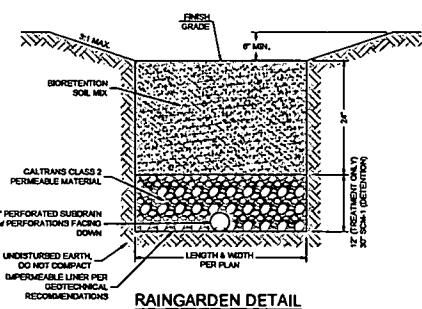
- FOUNDATION PREPARATION PER GEOTECHNICAL RECOMMENDATIONS:
  - DRILLED CAST-IN-PLACE CONCRETE SHAFTS. REQUIRE NO REMEDIATION OTHER THAN THAT NECESSARY TO REMOVAL MATERIALS DISTURBED DURING EARTHWORK AND CONSTRUCTION.
  - FOR CONCRETE SLABS-ON-GRADE, THE NATIVE SOIL SHOULD BE OVEREXCAVATED A MINIMUM OF 1 FOOT BELOW THE BOTTOM OF THE CRUSHED ROCK OR 3 FEET BELOW EXISTING GRADE, WHICHEVER IS GREATER. THE EXPOSED SURFACE SHOULD THEN BE SCARIFIED, MOISTURE CONDITIONED, AND COMPACTED TO A MINIMUM OF 90 PERCENT RELATIVE COMPACTION. IF SLABS ARE CONSTRUCTED ON THE SOUTH SIDE OF THE RTTL, IN THE AREA OF THE EXISTING FILL SOILS, THE FILL SHOULD BE OVEREXCAVATED A MINIMUM OF 2 FEET BELOW THE BOTTOM OF THE CRUSHED ROCK OR 3 FEET BELOW EXISTING GRADE, WHICHEVER IS GREATER. MEANS FOR STABILIZATION FABRIC SHOULD BE PLACED ON THE BOTTOM OF THE OVEREXCAVATION. THE MATERIAL WHICH WAS REMOVED SHOULD THEN BE REPLACED WITH ENGINEERED FILL COMPACTED TO A MINIMUM OF 90 PERCENT RELATIVE COMPACTION. THIS ZONE OF REMEDIATION SHALL EXTEND A MINIMUM OF 3 FEET LATERALLY BEYOND THE CONCRETE SLABS-ON-GRADE.
  - BEHIND THE BASEMENT SLAB, THE NATIVE SOIL SHOULD BE OVEREXCAVATED A MINIMUM OF 1 FOOT BELOW THE BOTTOM OF THE CRUSHED ROCK OR 3 FEET BELOW EXISTING GRADE, WHICHEVER IS GREATER. MEANS FOR STABILIZATION FABRIC SHOULD BE PLACED ON THE BOTTOM OF THE OVEREXCAVATION. THE MATERIAL WHICH WAS REMOVED SHOULD THEN BE SCARIFIED, MOISTURE CONDITIONED, AND COMPACTED TO A MINIMUM OF 90 PERCENT RELATIVE COMPACTION. THE MATERIAL WHICH WAS REMOVED SHOULD THEN BE REPLACED WITH ENGINEERED FILL COMPACTED TO A MINIMUM OF 90 PERCENT RELATIVE COMPACTION.
- IN DRIVE AREAS (INCLUDING CONCRETE, ASPHALT, AND NON-PERFORABLE PAVERS), THE NATIVE SOIL SHOULD BE OVER EXCAVATED TO A MINIMUM OF 1' BELOW THE BOTTOM OF THE AGGREGATE BASE COURSE, OR 1.2' BELOW EXISTING GRADE, WHICHEVER IS GREATER AND SHALL EXTEND LATERALLY A MINIMUM OF 2' BEYOND THE DRIVE AREAS. CONTRACTOR TO COORDINATE WITH GEOTECHNICAL ENGINEER FOR OVER EXCAVATION LIMITS ON NORTH SIDE OF PROPERTY.
- THE MATERIAL REMOVED SHOULD BE REPLACED WITH ENGINEERED FILL COMPACTED TO A MINIMUM OF 80% RELATIVE COMPACTION. THE UPPER 6 INCHES OF SUBGRADE AND ALL AGGREGATE BASE AND SUBBASE IN DRIVE AREAS SHALL BE COMPACTED TO ACHIEVE A MINIMUM RELATIVE COMPACTION OF 90%.
- GROUND IMMEDIATELY ADJACENT TO BUILDING SHALL BE A MINIMUM OF 6" BELOW FINISHED FLOOR AND SLOPE AWAY FROM FOUNDATION AT A MINIMUM OF 5% PER 2010 CDC 11.0.4.
- PERVIOUS PAVEMENT STRUCTURAL SECTION IS SUBJECT TO CHANGE UPON RECOMMENDATIONS FROM THE GEOTECHNICAL ENGINEER DURING CONSTRUCTION DOCUMENT PHASE. TRENCH DIMENSIONS WITHIN PERVIOUS AREA IS NECESSARY FOR STORMWATER MITIGATION PURPOSES.
- THE SUBJECT PARCEL RECEIVES MINIMAL RUNOFF FROM ADJACENT PARCELS AND SOQUEL DRIVE. THE MINIMAL RUNOFF ALONG THE WESTERN PROPERTY LINE WILL BE DIRECTED TO THE NORTH VIA A NEW VEGETATED SWALE. SEE PLANS. PROPERTY OWNER UNDERSTANDS THAT THE SITE DOES RECEIVE SOME RUNOFF AND SHALL NOT BLOCK THE DRAINAGE FROM ADJACENT PARCEL.
- RIPRAP OUTFALLS TO BE LOCATED AT BASE OF SLOPE WITH A NOTE: "FINAL LOCATION TO BE DETERMINED BY GEOTECHNICAL ENGINEER IN THE FIELD DURING CONSTRUCTION"

### ROOF DRAINAGE NOTE

FLAT ROOF SHALL BE SLOPED AND DRAINED PER THE STORMWATER CONTROL PLAN, SHEET C2.0. ROOF IS DIVIDED INTO THREE SEPARATE DRAINAGE AREAS, EACH DRAINING TO A RAIN ORDEEN FACILITY FOR TREATMENT PURPOSES. ASSOCIATED DOWNSPOUTS SHALL DISCHARGE AT GRADE AND DIRECTED TOWARDS MITRATION FACILITY, AS SHOWN ON SHEET C2.0.



PERVIOUS PAVEMENT DETAIL



RAINGARDEN DETAIL

CIVIL ENGINEERING  
LAND PLANNING  
PROPERTY MANAGEMENT  
CONSTRUCTION SUPPORT  
CDD AND SDP SERVICES

2905 KRISTE COURT  
SANTA CRUZ, CA 95065  
TEL (831) 482-2925  
WWW.DAVIDRAMSEY.COM

DAVID RAMSEY DATE  
KEEA 7/13

APN 041-141-50  
PLAN TYPE  
MIXED USE

**PRELIMINARY GRADING & DRAINAGE PLAN**  
**TESTORFF CONSTRUCTION**  
 9041 SOQUEL DRIVE, APTOS, CA

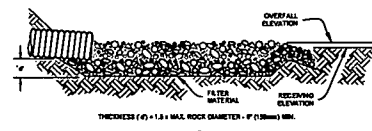
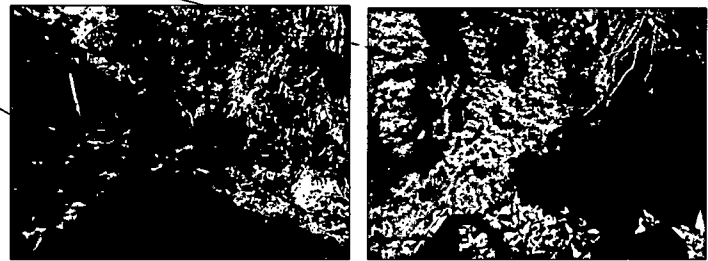
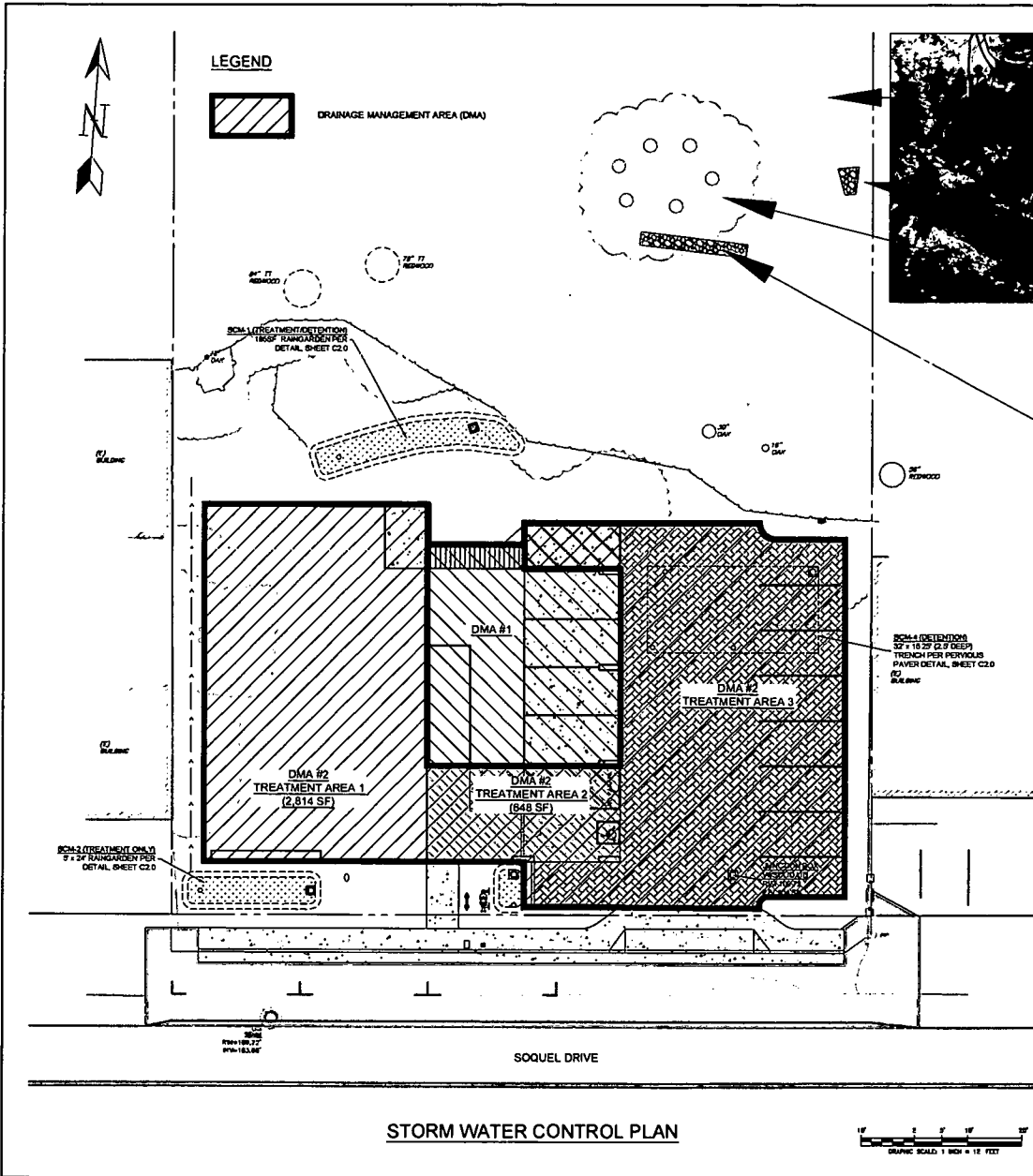
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6	7/13/2021	ISSUED FOR PERMITS
7	7/13/2021	ISSUED FOR PERMITS
8	7/13/2021	ISSUED FOR PERMITS
9	7/13/2021	ISSUED FOR PERMITS
10	7/13/2021	ISSUED FOR PERMITS

DRAWN BY: DWR  
 CHECKED BY: DWR  
 DATE: 8/12/2021  
 SCALE: AS NOTED  
 PROJECT NO.: 18-001  
 SHEET:

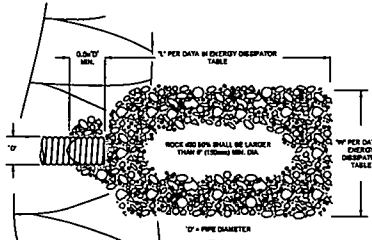
C2.0

Know what's below.  
 Call before you dig.





Section



Plan

**CONSTRUCTION SPECIFICATIONS:**  
 CHECK THAT THE SUBGRADE FOR THE FILTER AND APRON FOLLOWS THE REQUIRED LINE & GRADES SHOWN IN THE PLAN. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO THE DEPTH OF THE SURROUNDING UNDISTURBED WATER TABLE. LOW AREAS IN THE SUBGRADE OR UNDISTURBED SOIL MAY ALSO BE FILLED BY INCREASING THE APRON THICKNESS.  
 THE APRON AND GRAVEL FILTER MUST CONFORM TO THE SPECIFIED GRADING LIMITS SHOWN ON THE PLANS.  
 FILTER CLOTH, WHEN USED, MUST MEET DESIGN REQUIREMENTS AND BE PROPERLY PROTECTED FROM PUNCHING OR TEARING DURING INSTALLATION. REPAIR ANY DAMAGED FABRIC BY REMOVING THE APRON AND PLACING ANOTHER PIECE OF FILTER CLOTH OVER THE DAMAGED AREA. ALL CONNECTING JOINTS SHOULD OVERLAP A MINIMUM OF 1 FOOT (300 MM) IF THE DAMAGE IS EXTENSIVE, REPLACE THE ENTIRE FILTER CLOTH. REFER TO APPENDIX 4-GEO-TEXTILES/GEOTECHNICALS.  
 APRON MAY BE PLACED BY EXCAVATION, BUT TAKE CARE TO AVOID DAMAGING THE FILTER.  
 THE MINIMUM THICKNESS OF THE APRON SHOULD BE 1.5 TIMES THE MAXIMUM STONE DIAMETER.  
 APRON MAY BE FIELD STONE OR ROUGH QUARRY STONE. IT SHOULD BE HARD, ANGULAR, HIGHLY WEATHER-RESISTANT AND WELL GRADED. CONSTRUCT THE APRON ON ZERO GRADE WITH NO OVERFALL AT THE END. MAKE THE TOP OF THE APRON AT THE DOWNSTREAM END LEVEL WITH THE RECEIVING AREA OR SLIGHTLY BELOW IT.  
 INSURE THAT THE APRON IS PROPERLY ALIGNED WITH THE RECEIVING STREAM AND PRESENTLY STRAIGHT THROUGHOUT ITS LENGTH. IF A CURVE IS NEEDED TO FIT SITE CONDITIONS, PLACE IT IN THE UPPER SECTION OF THE APRON.  
 IMMEDIATELY AFTER CONSTRUCTION, ESTABLISH ALL DISTURBED AREAS WITH VEGETATION.

**INSPECTION AND MAINTENANCE:**  
 INSPECT TRAP AND OUTLET STRUCTURES AFTER HEAVY RAINS TO SEE IF ANY CLOGGING AROUND OR BELOW THE APRON HAS TAKEN PLACE OR IF STONES HAVE BEEN DISLOOSED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

**NOTES:**

1. 1/2" LENGTH OF APRON. DISTANCE 1/2" SHALL BE OF SUFFICIENT LENGTH TO DETERMINE EXACTLY.
2. APRON SHALL BE SET AT A ZERO GRADE AND ALLOWED STRAIGHT.
3. FILTER MATERIAL SHALL BE FILTER FABRIC OR #1 (100MM) THICK WASHABLE GRADED GRAVEL LAYER.

Energy Dissipator  
 NTS

**R**  
 CIVIL ENGINEERING  
 LAND PLANNING  
 PROJECT MANAGEMENT  
 CONSTRUCTION SUPPORT  
 G&M INCORPORATED  
 2900 LORISTE COURT  
 SANTA CRUZ, CA 95065  
 TEL: (408) 462-2900  
 www.gandm.com



DAVID RAMSEY DATE  
 PCE# 72735

APN# 041-141-50

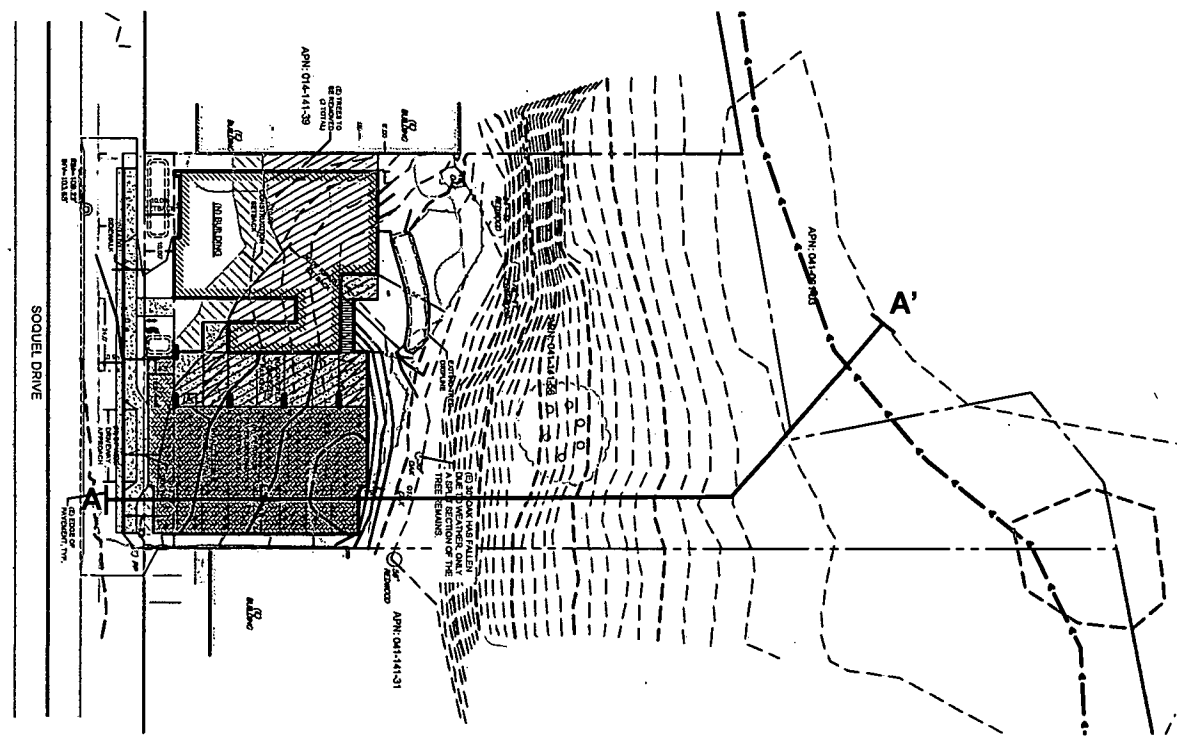
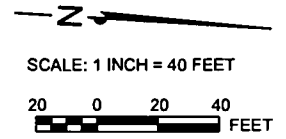
PLAN TYPE  
 MIXED USE

STORM WATER CONTROL PLAN  
**TESTORFF CONSTRUCTION**  
 9041 SOQUEL DRIVE, APTOS, CA

NO.	DATE	BY	DESCRIPTION
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2	01/26/21	DAVID RAMSEY	ISSUED FOR PERMITS
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5	01/26/21	DAVID RAMSEY	ISSUED FOR PERMITS
6	01/26/21	DAVID RAMSEY	ISSUED FOR PERMITS
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9	01/26/21	DAVID RAMSEY	ISSUED FOR PERMITS
10	01/26/21	DAVID RAMSEY	ISSUED FOR PERMITS



C5.0



EXPLANATION OF SYMBOLS

A-A' LOCATION OF CROSS SECTION

BASEMAP: Ramsey CM4 Engineering, Inc. (January 26, 2021). Preliminary Site Plan.  
 Testorf Construction, 9041 Soquel Drive, Aptos, CA. Original Scale: 1" = 20'.

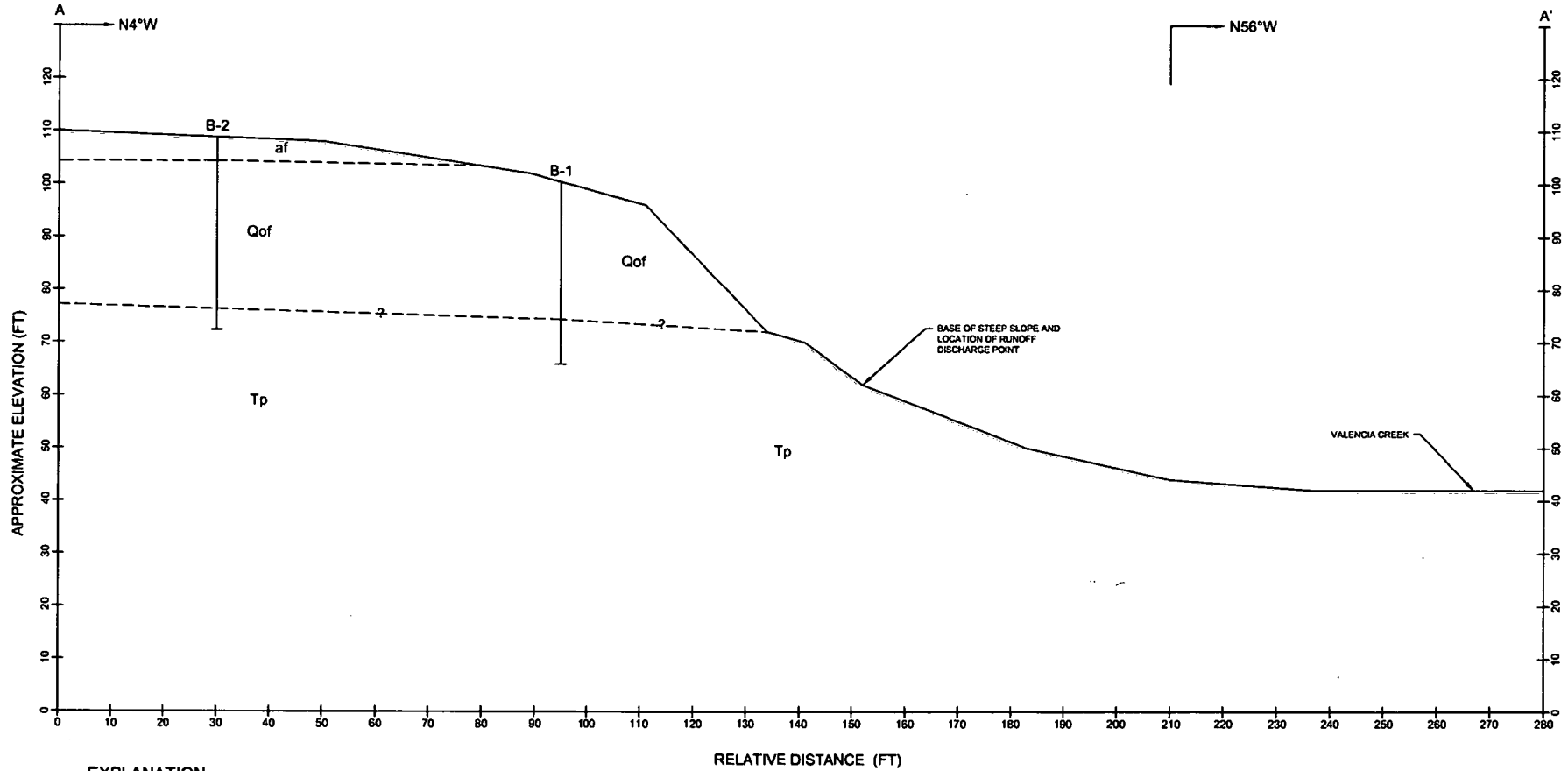
**CMAG ENGINEERING**

**SITE MAP**  
 9041 Soquel Drive

**FIGURE**  
 1

# CROSS SECTION A-A'

SCALE: 1" = 20' H = V.



### EXPLANATION

UNITS

af

af: Artificial Fill

Qof

Qof: Older Flood Plain Deposits

Tp

Tp: Purtsime Formation

### SYMBOLS

— — ?

Geologic Contact, Dashed Where Approximate, Queried Where Uncertain

B-2

┆

Approximate Location of Boring B-2

CMAG ENGINEERING

CROSS SECTION A-A'

9041 Soquel Drive

FIGURE

2

# Sample Summary for Electronic Document Submittal

15 copies of this document may be included when a Lead Agency is submitting electronic copies of environmental impact reports, negative declarations, mitigated negative declarations, or notices of preparation to the SCH. The SCH will still accept other summaries, such as an EIR summary prepared pursuant to CEQA Guidelines Section 15123, attached to the electronic copies of the document.

SCH # \_\_\_\_\_

Lead Agency: County of Santa Cruz Planning Department

Project Title: 9041 Soquel Drive

Project Location: 9041 Soquel Drive Santa Cruz  
*City* *County*

Please provide a Project Description (Proposed Actions, location, and/or consequences).

This is a proposal to construct an approximately 10,981 square foot mixed-use building with a 1,929 square foot basement, 2,889 square feet of office space on the first floor with a covered carport for 5 vehicles, and three residential apartment units on the second floor, located in the PA (Professional-Administrative Office) district. This requires a Commercial Development permit including a Master Occupancy Permit for the two tenant spaces on the ground floor, and a Riparian Exception.

The project site is located on Soquel Drive just north of Highway One between Rio Del Mar Boulevard and Trout Gulch Road in Aptos. The vacant parcel is approximately 32,000 square feet. While relatively flat at the front of the parcel, the parcel gently slopes downward towards the rear (north) followed by a sharp decline of about 50% slope where the parcel descends to Valencia Creek. The south side of Soquel Drive is lined with both deciduous and evergreen trees which screen views of the site from Highway One, a designated scenic road.

The applicant is proposing to construct an approximately 10,981 square foot mixed-use building with a basement, office space on the first floor, and three residential units on the second floor. As shown on the project plans (Exhibit D), the proposed building will be located along the Soquel Drive frontage with parking in carports beneath the second floor of the building and uncovered parking located on the east side of the parcel. From the street, the proposed building will be two stories with office tenant spaces on the lower floor. Directly above will be three residential units, two of which will be over the office space, with the third over a parking area. Below the office space in the rear is a basement that will serve as storage for the tenants of the office space.

Please identify the project's significant or potentially significant effects and briefly describe any proposed mitigation measures that would reduce or avoid that effect.

The project site is located in an area that was identified as a potential area of biotic concern during preliminary analysis. A resource planner was consulted who indicated the following:

Valencia Creek is a tributary to Aptos Creek in the Aptos Creek watershed. Valencia Creek supports steelhead (*Oncorhynchus mykiss*), which are part of the Central California Coast Distinct Population Segment, listed as threatened under the federal Endangered Species Act. The project site sits above lower Valencia Creek, which serves as a migration corridor for adults to reach spawning habitat further upstream and also supports low densities of juvenile steelhead throughout the year.

Development impacts include the reduction or removal of riparian vegetation, which provides shade, organic material that supports the aquatic food web, and habitat for both terrestrial and aquatic insects, which are important food sources for steelhead. Development impacts can also include the modification of streambanks and stream channels, which typically reduce instream habitat complexity.

Mitigation measures to ensure steelhead are protected is to plant native groundcover along the slopes for erosion control and install a three-foot high fence at the top of the site before it begins to slope down to keep people from the area. With these mitigation measures, the project is not expected to result in significant impacts to sensitive species associated with the project site.

If applicable, please describe any of the project's areas of controversy known to the Lead Agency, including issues raised by agencies and the public.

There have not been any other issues raised by agencies or the public regarding this project. County staff considered effects on the riparian area along the slope in the back of the parcel and Valencia Creek below and is highlighted in the previous section.

Please provide a list of the responsible or trustee agencies for the project.

1. California Department of Fish and Wildlife for the work in the riparian area.
2. Regional Water Quality Control Board.
3. County of Santa Cruz.