



Memo

June 29, 2026

TO: Dominique Vogelpohl, Planner, Department of Conservation and Development
FROM: Larry Theis, Engineering Services Division – Consultant Engineer 
SUBJECT: **MINOR SUBDIVISION CDMS22-00011**
STAFF REPORT & RECOMMENDED CONDITIONS OF APPROVAL
(Singh/Withers Ave./Lafayette/APN 166-160-015, 034)
FILE: **CDMS22-00011**

We have reviewed the application for Minor Subdivision MS22-0011 received by your office on August 30, 2022, and subsequent submittals in October 2023 including 4 exception requests and a revised tentative map.

Background

The applicant requests a subdivision of an approximately 2.5-acre property into 3 parcels in conformance with R-20 zoning standards. The site is located along the north side of Withers Avenue approximately 180 feet west of Pleasant Hill Road. A tributary of Murderer's Creek traverses the southeastern property line. Pleasant Hill Elementary School is 0.3 miles to the northeast along Pleasant Hill Road.

The property is currently vacant. A lot line adjustment appears to have been recorded after this application was filed and the new assigned assessor's parcel number (APN) for the subject property is 166-160-034. This boundary appears to match the latest vesting tentative map. The original application referenced the prior APN 166-160-015.

Exception Requests

On behalf of the applicant, the project engineer submitted four exception requests. These exception requests relate to undergrounding of overhead utilities, the construction of frontage improvements, and the placement of a bioretention basin and access road in the creek structure setback. Comments and findings relative to these exceptions requests are included below in the applicable sub-sections of this report.

Traffic and Circulation

All access to the subject property is to come from Withers Avenue, a County maintained road. The internal private road shall consist of 20 feet of pavement within a 25-foot private access and utility easement as indicated on the tentative map.

Withers Avenue is a 24-foot road within a 40-foot right of way and is planned to be a 40-foot road in a 60-foot right of way. The County Ordinance Code will require a 10-foot right-of-way dedication

along the entire Withers Avenue frontage. The Code would also require construction of frontage improvements along the entire frontage.

The project engineer delivered an exception request on March 29, 2023, from the requirement to construct frontage improvements in accordance with the findings outlined in Chapter 92-6 of the County Ordinance.

(1) That there are unusual circumstances or conditions affecting the property:

Withers Avenue is a semi-rural street without any sidewalks. Along a portion of the project frontage, a steep embankment exists adjacent to Withers Avenue. The installation of a sidewalk and pavement widening in this area would require a retaining wall approximately 20 feet in height or major regrading of the embankment to achieve a 2.5:1 slope even if the sidewalk was placed directly next to the existing westbound travel lane. The retaining wall would be unsightly and out of character for the neighborhood and regrading would have considerable impacts to the project site and adjoining properties.

(2) That the exception is necessary for the preservation and enjoyment of a substantial property right of the applicant:

As stated above, the installation of a tall retaining wall or embankment regrading would substantially impact the available space for the development of the property or impact adjoining properties.

(3) That the granting of the exception will not be materially detrimental to the public welfare or injurious to other property in the territory in which the property is situated:

Granting exceptions to the requirements for frontage improvements would not be materially detrimental to the public welfare or injurious to other properties. It would maintain the existing character of Withers Avenue and its surrounding neighborhood. It would be consistent with the remainder of Withers Avenue which has no existing sidewalks and the roadway pavement width is approximately 24'.

Based on the provided findings, Public Works is not adverse to granting the applicant an exception to the frontage improvements requirements.

Underground Utilities

Chapter 96-10 of the County Ordinance Code requires all new and existing utility distribution facilities to be installed underground. This requirement applies to the existing overhead lines along the site's Withers Avenue frontage.

The project engineer delivered an exception request on October 27, 2023, from the requirement to underground existing overhead lines along Withers Avenue in accordance with the findings outlined in Chapter 92-6 of the County Ordinance.

(1) That there are unusual circumstances or conditions affecting the property:

Along a portion of the project frontage, a steep embankment exists adjacent to Withers Avenue. In order to install underground utility lines along northside of Withers Avenue it would require the construction of a retaining wall approximately 20' in height or bury the utility conduit along a steep

side slope embankment. There is no existing flat adjacent space to install an underground conduit that could be properly accessed and maintained by a utility company. There is only one existing joint pole within the project's frontage; therefore, to completely underground the utilities along its frontage additional undergrounding work would be necessary on neighboring properties.

- (2) That the exception is necessary for the preservation and enjoyment of a substantial property right of the applicant:

The installation of underground utilities along Withers Avenue would require substantial impacts on the subject property and its neighboring properties.

- (3) That the granting of the exception will not be materially detrimental to the public welfare or injurious to other property in the territory in which the property is situated:

The existing overhead utility lines would remain as is as it has been for decades. The risk of fire to the public/neighborhood from overhead lines would not be significantly reduced with this short segment (one pole) being undergrounded. The existing overhead utility lines are consistent with the remainder of Withers Avenue.

Based on the provided findings, Public Works is not adverse to granting the applicant an exception to the utility undergrounding requirements.

Drainage

Division 914 of the County Ordinance Code requires that all storm water entering and/or originating on this property to be collected and conveyed, without diversion and within an adequate storm drainage system, to an adequate natural watercourse having a definable bed and banks or to an existing adequate public storm drainage system which conveys the storm water to an adequate natural watercourse. As noted, a tributary of Murderer's Creek is located along the southeast portion of the property and would be considered adequate receiving water for the 10-year design flowrate required by the County Code.

The applicant should consider the creek structure setback requirements of the Code as it applies to future construction of improvements on the property. The Code requires development rights within the creek structure setback be dedicated to the County. A setback line is delineated on the tentative map, but additional information, i.e., cross sections, will be required to verify that the line as delineated meets Code requirements.

Per the tentative map, a portion of the proposed bioretention basin encroaches into the structure setback area. As that is part of the project's drainage infrastructure and above the FEMA determined base flood elevation, this encroachment would be allowable. There is a small portion of the proposed private road serving the subdivision that also encroaches into the setback. According to Code requirements, the road would have to be relocated.

The project engineer delivered an exception request on October 27, 2023, from the creek structure setback requirements in accordance with the findings outlined in Chapter 92-6 of the County Ordinance.

- (1) That there are unusual circumstances or conditions affecting the property:

Due to the overall steepness of the subject property, the access road and accompanying drainage to the bioretention basin needs to be located relatively close to the creek tributary along the east side of the parcel. There is no alternate access point for the private road serving the proposed three lots. In addition, the bioretention basin will need to be located near the creek tributary to drain stormwater runoff that has been treated within the basin. The stormwater drainage system operates based on gravity flow therefore its placement needs to be located near the low point of the property which is also where the existing creek tributary is located.

- (2) That the exception is necessary for the preservation and enjoyment of a substantial property right of the applicant:

The relocation of the access road and bioretention basin outside of the creek structure setback would cause significant impacts to the existing steep slopes on the western side of the property and introduce the need for a mechanical pump for the storm drain system.

- (3) That the granting of the exception will not be materially detrimental to the public welfare or injurious to other property in the territory in which the property is situated:

The exception to allow the proposed access road and bioretention basin within the creek structure setback will not be materially detrimental to the public's welfare since these encroachments are not structures which house human beings. The construction of both the access road and bioretention basin will require grading and stabilization work to the side slope area to the creek tributary which will improve the existing creek bank stability.

Based on the provided findings, Public Works is not adverse to granting the applicant an exception to the creek structure setback requirements.

Stormwater Management and Discharge Control Ordinance

A Stormwater Control Plan (SWCP) is required for applications that will create and/or redevelop impervious surface area exceeding 5,000 square feet in compliance with the County's Stormwater Management and Discharge Control Ordinance (§1014) and the County's Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) Permit. The construction of three new homes and the road infrastructure to serve them will exceed the threshold requiring submittal of a SWCP.

A Preliminary Stormwater Control Plan dated August 2023 was reviewed and determined to be sufficiently complete for the application phase of the project. A Final Stormwater Control Plan will need to be submitted for compliance review with improvement plans.

Provision C.10, Trash Load Reduction, of the County's NPDES Permit requires control of trash in local waterways. To prevent or remove trash loads from municipal storm drain systems, trash capture devices shall be installed in catch basins (excludes those located within a bioretention/stormwater treatment facility). Devices must meet the County's NPDES Permit and approved by the Public Works Department. Location must be approved by the Public Works Department.

Floodplain Management

The easterly boundary of the property lies within the Special Flood Hazard Area (100-year flood boundary) as designated on the Federal Emergency Management Agency Flood Insurance Rate Map. The applicant shall be aware of the requirements of the National Flood Insurance Program and the

County Floodplain Management Ordinance as they pertain to development and construction of any structures on this property.

Annexation to a Countywide Street Light Financing District

The subject property is not annexed into the lighting district. The property owner will be required, as a condition of approval, to annex into the Community Facilities District (CFD) 2010-1 formed for the Countywide Street Light Financing.

Area of Benefit Fee

The applicant will need to comply with the requirements of the Bridge/Thoroughfare Fee Ordinance for the Central County Area of Benefit, as adopted by the Board of Supervisors. The fee shall be paid prior to issuance of building permits.

Drainage Area Fee

The applicant will be required to comply with the drainage fee requirements for Drainage Area 46 as adopted by the Board of Supervisors. This fee shall be paid prior to filing a parcel map.

If you have any questions, please contact Larry Theis at (925) 890-9732 or Larry@theis-engineering.com.

LT:

G:\engsvc\Land Dev\MS\CDMS22-00011\Staff Report & COAs CDMS22-00011 (2026-06-29)

cc: J. LaRocque, Engineering Services

A. Vazquez, Engineering Services

Jeanette Sorensen, (*owner*)

1817 Pleasant Hill Road

Pleasant Hill, CA 94523

email: m2786@aol.com

Applicant: Pallav Chatterjee (applicant's engineer)

cpallav@gmail.com

**PUBLIC WORKS RECOMMENDED
CONDITIONS OF APPROVAL FOR MINOR SUBDIVISION CDMS22-00011**

Applicant shall comply with the requirements of Title 8, Title 9 and Title 10 of the Ordinance Code. Any exceptions(s) must be stipulated in these Conditions of Approval. Conditions of Approval are based on the vesting tentative map submitted to the Department of Conservation and Development dated October 12, 2023.

COMPLY WITH THE FOLLOWING CONDITIONS OF APPROVAL PRIOR TO FILING OF THE PARCEL MAP.

General Requirements:

- Applicant shall submit improvement plans prepared by a registered civil engineer to the Public Works Department and pay appropriate fees in accordance with the County Ordinance and these conditions of approval. The below conditions of approval are subject to the review and approval of the Public Works Department.

Roadway Improvements (Withers Avenue):

Exception (Subject to Advisory Agency findings and approval):

Applicant shall be granted an exception from the installation of frontage improvements (such as sidewalk, street lighting, and pavement widening) because of the steep embankment present between the project site and the fronting road.

Access to Adjoining Property:

Proof of Access

- Applicant shall furnish proof to the Public Works Department of the acquisition of all necessary rights of way, rights of entry, permits and/or easements for the construction of off-site, temporary or permanent, public and private road and drainage improvements.

Encroachment Permit

- Applicant shall obtain an encroachment permit from the Public Works Department, if necessary, for construction of driveways or other improvements within the right-of-way of Withers Avenue.

Abutter's Rights:

- Applicant shall relinquish abutter's rights of access along Withers Avenue with the exception of the proposed private road intersection.

Road Alignment/Intersection Design/Sight Distance:

- Applicant shall provide sight distance at the intersection of the private driveway with Withers Avenue in accordance with Chapter 82-18 "Sight Obstructions at Intersections" of the County Ordinance Code. The applicant shall trim vegetation, as necessary, to provide sight distance at this intersection, and any new signage, landscaping, fencing, retaining walls, or other obstructions proposed at this intersection shall be setback to ensure that the sight line is clear of any obstructions.

Private Roads:

- Applicant shall construct an on-site roadway system to current County private road standards with a minimum travel way width of 16 feet, with 2 feet shoulders, within a minimum 25-foot access easement.
- Any proposed roadway over 15.9% in grade shall be surfaced with grooved concrete or open-graded asphalt.
- Applicant shall construct the on-site roadways and the internal road network (serving the residential development) to current County private road standards, subject to the review of the Fire District. Although the proposed on-site roadways are shown as private, the pavement structural section shall conform to County public road standards.
- Applicant shall construct a street type connection with 20-foot radii returns in lieu of standard driveway depressions at the intersection of the access road with Withers Avenue.

Road Dedications:

- Property owner(s) shall convey to the County, by Offer of Dedication, the right-of-way necessary for the planned future half-width of 30 feet along the frontage of Withers Avenue by separate document.

Countywide Street Light Financing:

- Prior to parcel map approval, the applicant shall establish a funding mechanism to cover the ongoing financial impact the Project will have on the ongoing maintenance and operations of public streetlighting. Compliance with this requirement shall be to the satisfaction of the Public Works Director and may be met through the formation of a new Community Facilities District or annexation into the existing Community Facilities District (CFD) 2010-1 formed for Countywide Street Light Financing. Annexation into a street light service area does not include the transfer of ownership and maintenance of street lighting on private roads. All costs associated with meeting this condition of approval shall be paid for by the applicant.

Bicycle - Pedestrian Facilities:Pedestrian Access

- Applicant shall design all public and private pedestrian facilities for accessibility in accordance with Title 24 and the Americans with Disabilities Act. This shall include all sidewalks, paths, driveway depressions, and curb ramps.

Parking:

- Parking shall be prohibited on one side of on-site roadways where the curb-to-curb width is less than 36 feet and on both sides of on-site roadways where the curb-to-curb width is less than 28 feet. "No Parking" signs shall be installed along these portions of the roads subject to the review and approval of the Public Works Department.

Utilities/Undergrounding:

- Applicant shall underground all new utility distribution facilities to the new homes within the project site. Applicant shall provide joint trench composite plans for the underground electrical, gas, telephone, cable television and communication conduits and cables including the size, location and details of all trenches, locations of building utility service stubs and meters and placements or arrangements of junction structures as a part of the Improvement Plan submittals for the project. The composite drawings and/or utility improvement plans shall be signed by a licensed civil engineer.

Exceptions (Subject to Advisory Agency findings and approval)

Applicant shall be granted an exception from the undergrounding requirement of the Ordinance Code for the existing utility poles along the frontage of Withers Avenue because of the steep embankment present and the short segment of undergrounding would only remove one overhead pole within the project frontage.

Maintenance of Facilities:

- Property owner shall record a Statement of Obligation in the form of a deed notification, to inform all future property owners of their legal obligation to maintain the private roadway, street lights, and landscape improvements.

Drainage Improvements:

Collect and Convey

- Applicant shall collect and convey all stormwater entering and/or originating on this property, without diversion and within an adequate storm drainage system, to *an adequate* natural watercourse having definable bed and banks, or to an existing adequate public storm drainage system which conveys the stormwater to *an adequate* natural watercourse, in accordance with Division 914 of the Ordinance Code.

Miscellaneous Drainage Requirements:

- Applicant shall design and construct all storm drainage facilities in compliance with the Ordinance Code and Public Works Department design standards.
- Applicant shall prevent storm drainage from draining across the sidewalk(s) and driveway(s) in a concentrated manner.
- A private storm drain easement, conforming to the width specified in Section 914-14.004 of the County Ordinance Code, shall be dedicated over the proposed storm drain line traversing the site.

Floodplain Management:

- The project is located in a Special Flood Hazard Area (100-year flood boundary) as designated on the Federal Emergency Management Agency's Flood Insurance Rate Maps. The applicant shall be aware of and comply with the requirements of the National Flood Insurance Program (Federal) and the County Floodplain Management Ordinance as they pertain to development and future construction of any structures on this property.

Creek Banks and Creek Structure Setbacks:

- Property owner shall relinquish "development rights" over that portion of the site that is within the structure setback area of Murderers Creek (tributary). The structure setback area shall be determined by using the criteria outlined in Chapter 914-14, "Rights of Way and Setbacks," of the Subdivision Ordinance. "Development rights" shall be conveyed to the County by grant deed.

Exceptions (Subject to Advisory Agency findings and approval)

Applicant shall be granted an exception from the creek structure setback requirement concerning construction of the proposed access driveway and bioretention basin due to the extensive undesirable grading required to relocate it to an alternative location.

Hold Harmless

- The property owner shall be aware that the creek banks on the site are potentially unstable. The property owner shall execute a recordable agreement with the County which states that the developer and the property owner and the future property owner(s) will hold harmless Contra Costa County and the Contra Costa County Flood Control and Water Conservation District in the event of damage to the on-site and off-site improvements as a result of creek-bank failure or erosion.

National Pollutant Discharge Elimination System (NPDES):

- The applicant shall be required to comply with all rules, regulations and procedures of the National Pollutant Discharge Elimination System (NPDES) for municipal, construction and industrial activities as promulgated by the California State Water Resources Control Board, or any of its Regional Water Quality Control Boards (San Francisco Bay - Region II).

Compliance shall include developing long-term best management practices (BMPs) for the reduction or elimination of stormwater pollutants. The project design shall incorporate wherever feasible, the following long-term BMPs in accordance with the Contra Costa Clean Water Program for the site's stormwater drainage:

- Minimize the amount of directly connected impervious surface area.
- Install approved full trash capture devices on all catch basins (excluding catch basins within bioretention area) as reviewed and approved by Public Works Department. Trash capture devices shall meet the requirements of the County's NPDES Permit.
- Place advisory warnings on all catch basins and storm drains using current storm drain markers.
- Offer pavers for household driveways and/or walkways as an option to buyers.
- Construct concrete driveway weakened plane joints at angles to assist in directing run-off to landscaped/pervious areas prior to entering the street curb and gutter.
- Other alternatives comparable to the above as approved by the Public Works Department.

Stormwater Management and Discharge Control Ordinance:

- The applicant shall submit a final Storm Water Control Plan (SWCP) and a Stormwater Control Operation and Maintenance Plan (O+M Plan) to the Public Works Department, which shall be reviewed for compliance with the County's National Pollutant Discharge Elimination

System (NPDES) Permit and shall be deemed consistent with the County's Stormwater Management and Discharge Control Ordinance (§1014) prior to filing of the Parcel Map. All time and materials costs for review and preparation of the SWCP and the O+M Plan shall be borne by the applicant.

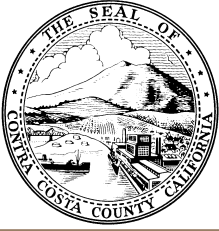
- Improvement plans shall be reviewed to verify consistency with the final SWCP and compliance with Provision C.3 of the County's NPDES Permit and the County's Stormwater Management and Discharge Control Ordinance (§1014).
- Stormwater management facilities shall be subject to inspection by the Public Works Department; all time and materials costs for inspection of stormwater management facilities shall be borne by the applicant.
- Prior to filing of the Parcel Map, the property owner(s) shall enter into a Stormwater Management Facility Operation and Maintenance Agreement with Contra Costa County, in which the property owner(s) shall accept responsibility for and related to the operation and maintenance of the stormwater facilities, and grant access to relevant public agencies for inspection of stormwater management facilities.
- Prior to filing of the Parcel Map, the property owner(s) shall establish a funding mechanism to cover the ongoing financial impact of the development will have for ongoing maintenance and operations of the stormwater treatment facility. Compliance with this requirement shall be to the satisfaction of the Public Works Director and may be met through the formation of a new Community Facilities District or annexation of the subject property into existing Community Facilities District (CFD) No. 2007-1 (Stormwater Management Facilities), which funds responsibilities of Contra Costa County under its NPDES Permit to oversee the ongoing operation and maintenance of stormwater facilities by property owners. All costs associated with meeting this condition of approval shall be paid for by the applicant.
- Any proposed water quality features that are designed to retain water for longer than 72 hours shall be subject to the review of the Contra Costa Mosquito & Vector Control District.

Drainage Area Fee Ordinance:

- Applicant shall comply with the drainage fee requirements for Drainage Area 46 as adopted by the Board of Supervisors prior to initiation of the use requested with this application. This fee shall be paid prior to filing the Parcel Map.

ADVISORY NOTES

Applicant will be required to comply with the requirements of the Bridge/Thoroughfare Fee Ordinance for the Central County Area of Benefit as adopted by the Board of Supervisors. Payment is required prior to issuance of a building permit.



**CONTRA COSTA COUNTY
DEPARTMENT OF CONSERVATION & DEVELOPMENT**

30 Muir Road

Martinez, CA 94553

Telephone: (925) 655-2709 **Fax:** (925) 655-2750

TO: Francisco Avila, Project Planner
FROM: Robert Sarmiento, Transportation Planning Section 
DATE: September 16, 2022
SUBJECT: Withers Avenue Subdivision (MS22-00011)

The Transportation Planning Section has reviewed the subject project. Comments are below; in summary, the comments pertain to pedestrian facilities and electric vehicle (EV) charging infrastructure. Please let me know if you have any questions.

Background

The project is subject to the following policies:

Vehicle Miles Traveled (VMT): On June 23, 2020, in compliance with SB 743 (2013), the Board of Supervisors adopted Transportation Analysis Guidelines (TAG)¹, which defines the County's approach to analyzing VMT impacts from certain projects. As a result of SB 743, VMT is the metric used to define transportation impacts in a CEQA review.

Level of Service (LOS): The County and the Contra Costa Transportation Authority (CCTA) require an LOS analysis in order to comply with the Growth Management Program. CCTA maintains the Technical Procedures Manual², which defines the approach to analyzing LOS impacts from certain projects. While LOS is no longer considered an impact under CEQA, SB 743 does allow local jurisdictions to maintain LOS-based policies and standards.

Contra Costa Complete Streets Policy³: In July 2016, the County adopted the Complete Streets Policy, which ensures that the needs of travelers of all ages and abilities, in a wide variety of travel modes, are considered in all planning, programming, design, construction, operations, and maintenance activities.

Comments

1. The project will not require a VMT analysis, based on the following:

Project Characteristics

¹ County Transportation Analysis Guidelines (TAG): [link](#)

² CCTA Technical Procedures:

https://ccta.net/wp-content/uploads/2018/12/Final_Technical_Procedures_Full_Jan2013-1.pdf

³ Complete Streets Policy:

2016: Complete Streets Resolution [link](#), CS Policy Final Draft [link](#)

- Number of Residential Units: 4 units

VMT Screening Criteria

- Projects of 20 residential units or less

2. The project will not require an LOS review, based on the following:

Estimated Trip Generation

Peak-Hour Trips (based on ITE Category: “Single-Family Detached Housing” land use (Code 210)): 3/4 AM/PM Peak Hour Trips

Threshold for Review

From CCTA’s Technical Procedures:

1.6 Traffic Impact Analysis: The analysis should be conducted for projects that exceed a trip generation threshold of 100 net new peak hour vehicle trips.

From the County’s TAG:

Applicants may be required to prepare a LOS operational analysis if any of the following apply to a proposed project...Development project that adds 50 or more net new peak hour vehicle trips to an intersection.

3. Consistent with the County’s Complete Streets Policy, a pedestrian facility (e.g. sidewalk, paved shoulder) should be installed along the Withers Avenue frontage.
4. In accordance with the County’s EV Ordinance, EV charging infrastructure will be required in each new residential unit. According to Appendix A of the TAG (“Electric Vehicle Charging Chart”), “for each dwelling unit, a listed raceway to accommodate a dedicated 208/240-volt branch circuit” is required to be installed in new single-family residential units.

cc: John Cunningham, DCD
Maureen Toms, DCD
Anna Battagello, DCD
Jerry Fahy, PWD
Jeff Valeros, PWD
Monish Sen, PWD

Contra Costa County



Fire Protection District

September 16, 2022

Mr. Francisco Avila
Contra Costa County – Community Development Division

Subject: Minor Subdivision
0 Withers Ave, Lafayette
Planning #: CDMS22-00011
CCCFPD Project No.: P-2022-019011

Dear Mr. Avila:

We have reviewed the revised plans for minor subdivision application to subdivide an existing 111,364 square foot parcel into 4 parcels at the subject location. The following is required for Fire District approval in accordance with the 2019 California Fire Code (CFC), the 2019 California Building Code (CBC), the 2019 California Residential Code (CRC), and Local and County Ordinances and adopted standards:

1. Access as shown on plans appears to comply with Fire District requirements.

Provide emergency apparatus access roadways with all-weather (paved) driving surfaces of not less than 20-feet unobstructed width, and not less than 13 feet 6 inches of vertical clearance, to within 150 feet of travel distance to all portions of the exterior walls of every building. Access shall have a minimum outside turning radius of 45 feet, and must be capable of supporting the imposed fire apparatus loading of 37 tons. Access roadways shall not exceed 20% grade. Grades exceeding 16% shall be constructed of grooved concrete per the attached Fire District standard. (503) CFC

2. Access roadways of **less than 28-feet** unobstructed width shall have signs posted or curbs painted red with the words: **NO PARKING – FIRE LANE** clearly marked. (22500.1) CVC, (503.3) CFC

Access roadways of **28 feet or greater, but less than 36-feet** unobstructed width shall have **NO PARKING – FIRE LANE** signs posted, allowing for parking on one side only or curbs painted red with the words **NO PARKING – FIRE LANE** clearly marked. (22500.1) CVC, (503.3) CFC

3. Turnaround as shown on plans complies with Fire District requirements. See CCCFPD Ordinance 2022-34.
4. The developer shall provide an adequate and reliable water supply for fire protection as set forth in the California Fire Code. (507.1) CFC
5. The developer shall provide an adequate and reliable water supply for fire protection with a minimum fire flow of 1000 GPM. Required flow must be delivered from not more than 1

hydrants flowing simultaneously for a duration of 120 minutes while maintaining 20-pounds residual pressure in the main. (507.1), (B105) CFC

6. A land development permit is required for access and water supply review and approval prior to submitting building construction plans.

The developer shall submit a minimum of two (2) copies of full size, scaled site improvement plans indicating:

All existing or proposed hydrant locations,
Fire apparatus access to include slope and road surface
Aerial fire apparatus access,
Elevations of building,
Size of building and type of construction,
Gates, fences, retaining walls, bio-retention basins, any obstructions to access.
Detail showing the lowest level of fire department vehicle access and the floor level of the highest occupied floor,
Striping and signage plan to include "NO PARKING-FIRE LANE" markings
This is a separate submittal from the building construction plans. These plans shall be approved prior to submitting building plans for review. (501.3) CFC

7. ***Emergency apparatus access roadways and hydrants shall be installed, in service, and inspected by the Fire District prior to construction or combustible storage on site.*** (501.4) CFC

Note: A temporary aggregate base or asphalt grindings roadway is not considered an all-weather surface for emergency apparatus access. The first lift of asphalt concrete paving shall be installed as the minimum roadway material and must be engineered to support the designated gross vehicle weight of 37 tons.

8. The homes as proposed shall be protected with an approved automatic fire sprinkler system complying with the 2016 edition of NFPA 13D or Section R313.3 of the 2019 California Residential Code. Submit a minimum of two (2) sets of plans to this office for review and approval prior to installation. (903.2) CFC, (R313.3) CRC, Contra Costa County General Plan / Contra Costa County Ordinance 2019-37.
9. Flammable or combustible liquid storage tanks shall **not** be located on the site without obtaining approval and necessary permits from the Fire District. (3401.4) CFC
10. The owner shall cut down and remove all weeds, grass, vines, or other growth that is capable of being ignited and endangering property. (304.1.2) CFC
11. Development on any parcel in this subdivision shall be subject to review and approval by the Fire District to ensure compliance with minimum requirements related to fire and life safety. Submit three (3) sets of plans to the Fire District prior to obtaining a building permit. (501.3) CFC

Plans shall be submitted to the Fire District for review and approval **prior to** construction of the building or installation of the systems to ensure compliance with minimum requirements related to fire and life safety. Plan review and inspection fees shall be submitted at the time of plan review submittal. (105.4.1) CFC, (901.2) CFC, (107) CBC

CONTACT THE FIRE DISTRICT (MINIMUM 2 WORKING DAYS IN ADVANCE) AT 925-941-3300 EXT 3902 TO SCHEDULE AN INSPECTION OF THE ACCESS AND HYDRANT

**INSTALLATION PRIOR TO CONSTRUCTION OR THE STORAGE OF COMBUSTIBLE
MATERIALS ON THE JOB SITE.**

Our preliminary review comments shall not be construed to encompass the complete project.
Additional plans and specifications may be required after further review.

If you have any questions regarding this matter, please contact this office at (925) 941-3300.

Sincerely,



Michael Cameron
Fire Inspector

File: 0 WITHERS AVE-PLN-P-2022-019011-REV1

From: [Russ Leavitt](#)
To: [Anne Nounou](#); [Francisco Avila](#)
Cc: [Melody LaBella](#); [Stephanie Gronlund](#)
Subject: CDMS22-00011; four lot residential subdivision, 0 Withers Avenue at Pleasant Hill Rd. Lafayette CA 945649; 166-160-015; X1592
Date: Wednesday, September 14, 2022 3:58:41 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image005.png](#)
[image004.png](#)

According to Central Contra Costa Sanitary District (Central San) records, the project site is within Central San's service area and sanitary sewer service is available to the project site. The developer would need to construct a set of on-site public main sewers and private laterals. The spacing of utilities within the PUE & access easement may not be correct and will be commented on further in Central San's Mainline review process. The proposed project would not be expected to produce an unmanageable added capacity demand on the wastewater system, nor interfere with existing, public facilities. The developer should promptly submit full-size building plans for Central San Mainline review in advance and to pay fees and charges at the time of mainline plan submission, sewer permit issuance and residential connection to the sewer system. For details, contact Central San's Permit Section at 925-229-7371. Thanks!

RUSSELL B. LEAVITT
Engineering Assistant III

Direct: (925) 229-7255
Main: (925) 228-9500
Fax: (925) 228-4624

rleavitt@centralsan.org
www.centralsan.org





REVIEW OF AGENCY PLANNING APPLICATION

THIS IS NOT A PROPOSAL TO PROVIDE WATER SERVICES			
The technical data supplied herein is based on preliminary information, is subject to revision and is to be used for planning purpose ONLY			
DATE: 09/16/2022	EBMUD MAP(S): 1542B524	EBMUD FILE:S-11304	
AGENCY: Department of Conservation and Development Attn: Francisco Avila 30 Muir Road MARTINEZ, CA 94553	AGENCY FILE: CDMS22-00011	FILE TYPE: Tentative Map	
APPLICANT: Kewal Singh 1560 Venice Circle Stockton, CA 95206		OWNER: Jeanette Sorensen, Successor Trustee 1817 Pleasant Hill Road Pleasant Hill, CA 94523	
DEVELOPMENT DATA			
ADDRESS/LOCATION: 0 Withers Avenue City:LAFAYETTE Zip Code: 94549			
ZONING:R-20 PREVIOUS LAND USE: Residential			
DESCRIPTION: Minor subdivision to subdivide existing 111,364 square foot parcel into 4 parcels and also remove 10 code protected trees		TOTAL ACREAGE:2.8 ac.	
TYPE OF DEVELOPMENT: Single Family Residential:4 Units			
WATER SERVICES DATA			
PROPERTY: in EBMUD	ELEVATION RANGES OF STREETS: 150-186	ELEVATION RANGE OF PROPERTY TO BE DEVELOPED: 138-238	
Part of development may be served from existing main(s) Location of Main(s):Withers Avenue		Part of development must be served from main extension(s) Location of Existing Main(s):Withers Avenue	
PRESSURE ZONE	SERVICE ELEVATION RANGE	PRESSURE ZONE	SERVICE ELEVATION RANGE
H1A	50-250	H1A	50-250
COMMENTS			
Once the property is subdivided, separate meters for each lot will be required. A main extension at the project sponsor's expense will be required to serve the proposed development. Please see the attached EBMUD documents for California (Waterworks Standards) Code of Regulations, Title 22, Section 64572 (Water Main Separation) and EBMUD requirements for placement of water mains. When the development plans are finalized, the project sponsor should contact EBMUD's New Business Office and request a water service estimate to determine the costs and conditions of providing water service to the development. Engineering and installation of water mains and meters requires substantial lead time, which should be provided for in the project sponsor's development schedule. No water meters are allowed to be located in driveways. The project sponsor should be aware that Section 31 of EBMUD's Water Service Regulations requires that water service shall not be furnished for new or expanded service unless all the applicable water-efficiency measures described in the regulation are installed at the project sponsor's expense. Due to EBMUD's limited water supply, all customers should plan for shortages in time of drought.			
CHARGES & OTHER REQUIREMENTS FOR SERVICE: Contact the EBMUD New Business Office at (510)287-1008.			
Chien Wang, Associate Civil Engineer; DATE WATER SERVICE PLANNING SECTION			

Potable Distribution System

- Potable Pipeline
- Service Lateral
- ⊙ System Valve (*OL = Opens Left*)
- ⊙ Check Valve
- ⊙ Zone Valve
- Change of Pipe ID
- ⊙ Rate Control Station
- ⊙ Regulator
- ⊙ Pressure Reducing Station
- ⊙ Flow Meter
- Manhole
- Service Connection
- Hydrant
- Facility
- ▶ Pumping Plant

Supply System

- Supply Pipeline
- Service Connection

Recycled Distribution System

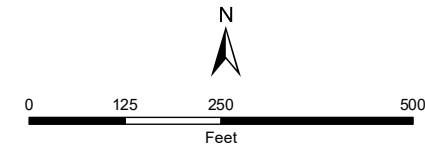
- Recycled Pipeline
- Service Lateral
- Service Connection
- Hydrant

Wastewater System

- Wastewater Interceptor

Landbase

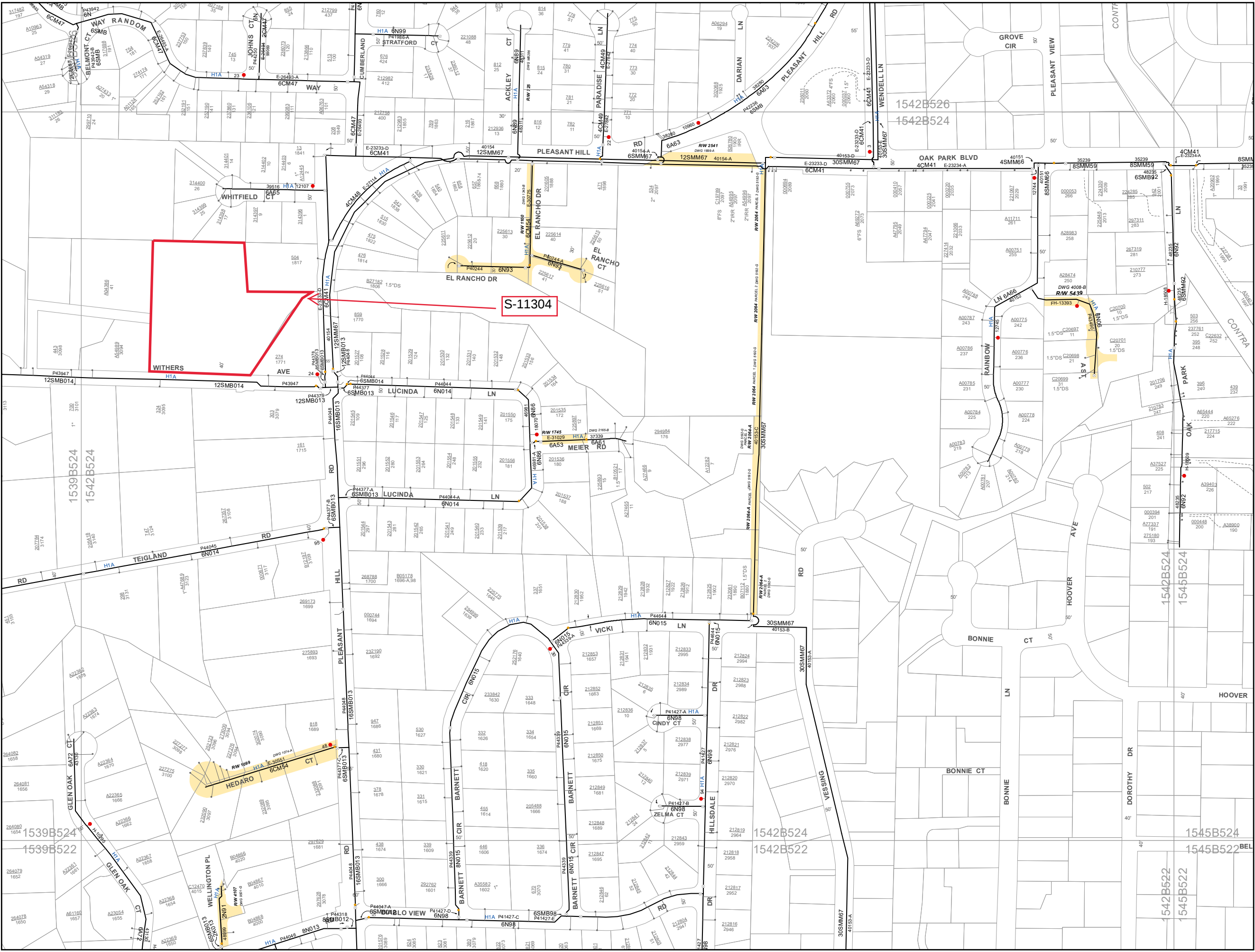
- EBMUD Right of Way
- Shared Right of Way
- Right of Way Crossing
- EBMUD Property



This information is furnished as a public service by East Bay Municipal Utility District. The District makes every effort to produce and publish the most current and accurate information possible. This information should be accepted and used by the recipient with the understanding that the District makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability for the use of this information. Furthermore, the District assumes no liability associated with the use or misuse of such information. Please notify the District if discrepancies are found.

By receipt of requested documents, the DOCUMENT RECIPIENT agrees that he or she, and/or any other authorized representatives of the DOCUMENT RECIPIENT, will provide no copy (nor partial copy) to any other person or agency, will not redistribute any document to any other entity, business or individual, nor use the document for other than the specified purpose. At the point the document is no longer required for use by the DOCUMENT RECIPIENT, the data shall be returned to the District or destroyed.

1542B524





Applicant Pipeline Design Criteria

EBMUD values applicant pipeline projects and is committed to providing a thorough and efficient design. To ensure an efficient design process and to avoid significant delays the design criteria below should be adhered to when submitting improvement plans.

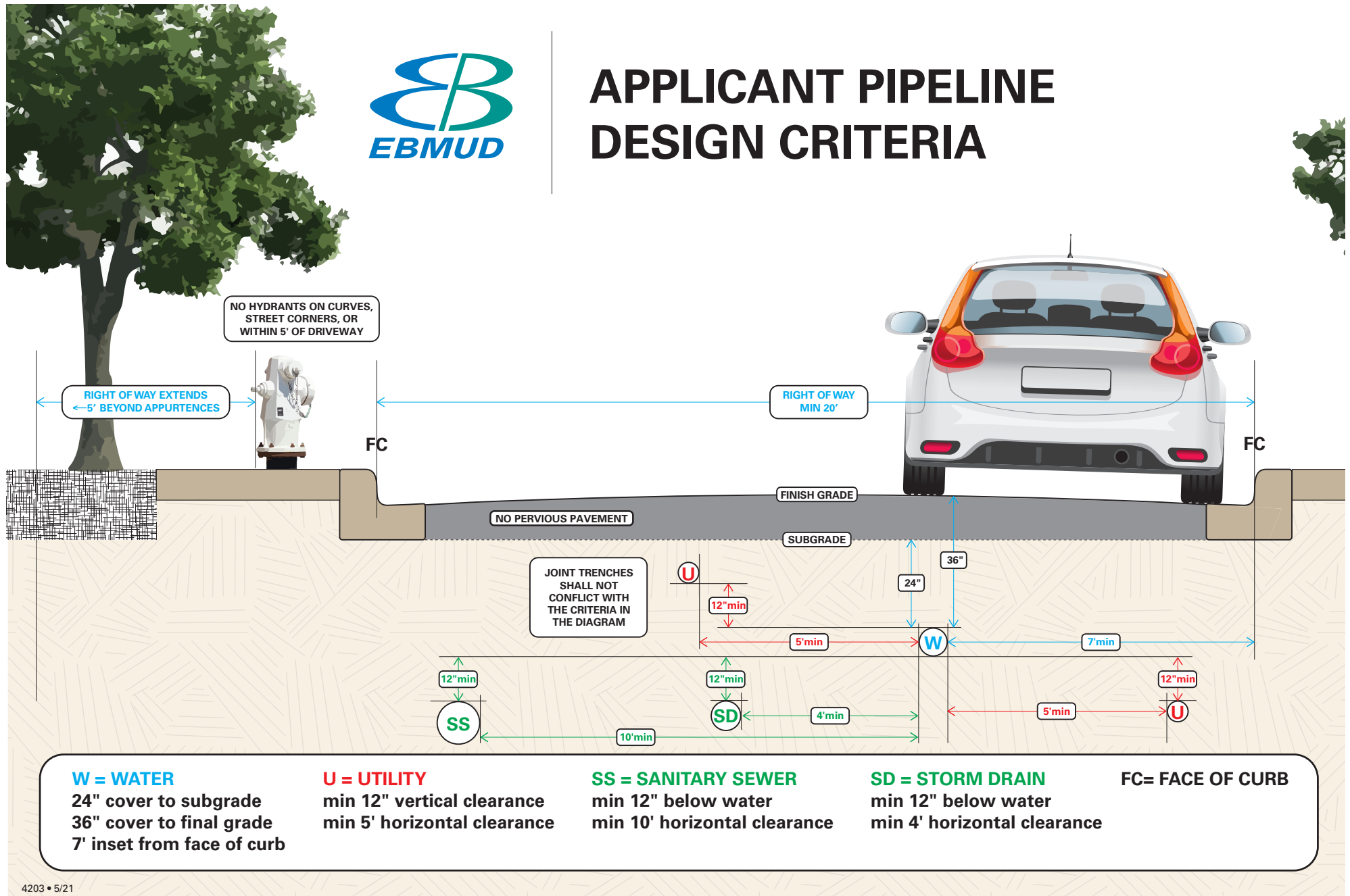
Design Criteria

- Water mains shall be seven (7) feet from face of curb.
- Water mains shall maintain a minimum one (1) foot vertical and five (5) foot horizontal clearance from other utilities.
- Gas mains shall meet the one (1) foot vertical separation requirement by installing the gas main below the water main only.
- Water mains shall maintain a minimum ten (10) foot horizontal clearance (O.D. to O.D.) and be located a minimum one (1) foot above any sewer main. Title 22 CCR
- Water mains shall maintain a minimum four (4) feet horizontal clearance (O.D. to O.D.) and be located a minimum one (1) foot above any storm drain. Title 22 CCR
- Water mains shall have a 36-inch cover to final grade and 24-inch cover to pavement subgrade.
- Joint trenches that are in conflict with the criteria above may delay the project. Submit to EBMUD final joint trench plans (no intent plans) which include the size of the joint trench and the utilities located inside.
- Water mains shall not be installed under pervious pavement.
- Water mains installed under decorative pavement, pavers, or stamped concrete will require an additional paving agreement.
- Hydrants shall not be located on curved sections of street, street corners, or within five feet of a driveway.
- Right of ways for 6-inch and 8-inch water mains shall be a minimum of 20 feet wide and extend five (5) feet past the water main centerline.
- Right of ways for 12-inch to 24-inch water mains shall be a minimum of 20 feet wide and extend eight (8) feet past the water main centerline.

Please contact the New Business Office representative assigned to your project if there are any questions regarding the requirements listed above. Meeting this criteria will enable the most efficient design possible.



APPLICANT PIPELINE DESIGN CRITERIA



CALIFORNIA
HISTORICAL
RESOURCES
INFORMATION
SYSTEM



ALAMEDA
COLUSA
CONTRA COSTA
DEL NORTE

HUMBOLDT
LAKE
MARIN
MENDOCINO
MONTEREY
NAPA
SAN BENITO

SAN FRANCISCO
SAN MATEO
SANTA CLARA
SANTA CRUZ
SOLANO
SONOMA
YOLO

Northwest Information Center
Sonoma State University
1400 Valley House Drive, Suite 210
Rohnert Park, California 94928-3609
Tel: 707.588.8455
nwic@sonoma.edu
<https://nwic.sonoma.edu>

September 29, 2022

File No.: 22-0405

Francisco Avila, Project Planner
Contra Costa County
Department of Conservation and Development
Community Development Division
30 Muir Road
Martinez, CA 94553-4601

re: CDMS22-00011 / APN 166-160-015 at 0 Withers Ave., Lafayette / Kewal Singh

Dear Francisco Avila,

Records at this office were reviewed to determine if this project could adversely affect cultural resources.

Please note that use of the term cultural resources includes both archaeological sites and historical buildings and/or structures. The review for possible historic-era building/structures, however, was limited to references currently in our office and should not be considered comprehensive.

Project Description:

The applicant requests a minor subdivision application to subdivide an existing 111,364 square foot parcel into 4 parcels and also requests a tree permit to remove 10 code protected trees for the proposed roadway, 4 code protected trees for the bio-retention basin and 20 code protected trees due to poor health for a total of 34 code protected trees.

Previous Studies:

XX This office has no record of any previous cultural resource field survey for the proposed project area conducted by a professional archaeologist or architectural historian (*see recommendation below*).

Archaeological and Native American Resources Recommendations:

XX The proposed project area has the possibility of containing unrecorded archaeological site(s). A study by a qualified professional archaeologist is recommended prior to commencement of project activities.

XX We recommend that the lead agency contact the local Native American tribe(s) regarding traditional, cultural, and religious heritage values. For a complete listing of tribes in the vicinity of the project, please contact the Native American Heritage Commission at (916) 373-3710.

 The proposed project area has a low possibility of containing unrecorded archaeological site(s). Therefore, no further study for archaeological resources is recommended.

Built Environment Recommendations:

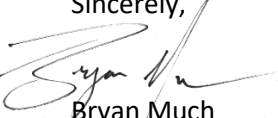
XX Since the Office of Historic Preservation has determined that any building or structure 45 years or older may be of historical value, if the project area contains such properties, it is recommended that prior to commencement of project activities, a qualified professional familiar with the architecture and history of Contra Costa County conduct a formal CEQA evaluation.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

For your reference, a list of qualified professionals in California that meet the Secretary of the Interior's Standards can be found at <http://www.chrisinfo.org>. If archaeological resources are encountered during the project, work in the immediate vicinity of the finds should be halted until a qualified archaeologist has evaluated the situation. If you have any questions please give us a call (707) 588-8455.

Sincerely,



Bryan Much
Coordinator



November 17, 2023

Francisco Avila, Principal Planner
Contra Costa County
Department of Conservation & Development
Community Development Division
30 Muir Road
Martinez, CA 94553

Subject: Geologic Peer Review / 2nd Letter
CDMS22-00011 / APN 166-160-015 (2.56 ac.)
Roberta McCoy (owner) / Kewal Singh (applicant)
Lafayette Area, Contra Costa County
DMA Project # 3043.23

Dear Francisco,

On May 26, 2023 we provided peer review comments on the captioned project.¹ At that time we reviewed a geotechnical report prepared by Ting & Associates,² and a Vesting Tentative Parcel Map (VTPM) prepared by the project civil engineers.³ At that time the application was a request for approval of a 4-parcel minor subdivision. Subsequently the applicant elected to modify the application to reduce the proposed lot yield to 3 residential parcels, and the geotechnical engineer provided an update to their report that responded to our comments and the revised VTPM.⁴ Additionally, the project civil engineers updated the Storm Water Control Plan.⁵

Purpose

Our May 26, 2023, peer review identified several specific concerns. For ease of reference, they are summarized in Table 1. Therefore, the purpose of this peer review is to update our previous comments on the project (i.e., the comment presented herein supersede those presented in our previous peer review letter. That peer review provided background information on the geologic setting of the project site and potential hazards. We shall not repeat that discussion. The focus of this review is aimed at characterizing the new

¹ Darwin Myers Associates, 2023, *Geologic Peer Review / 30-Day Comments*, CDMS22-00011 / APN 166-160-015 (2.56 ac.), Roberta McCoy (owner) / Kewal Singh (applicant), Pleasant Hill Area, Contra Costa County, DMA Project #3016.23

² Ting & Associates, Inc., 2022, *Geotechnical Investigation, Proposed Single Family Structure Subdivision, Withers Avenue*, APN 166-160-015, Lafayette, California, *Vesting Tentative Map*, TAI Job #6222 (dated September 20, 2022).

³ Humann Company, Inc., 2023, *Vesting Tentative Parcel Map, MS22-000, Parcel A (39 LSM 6), Withers Avenue*, (APN 166-160-015), Contra Costa County, California (3 Sheets), Humann Job #E1-197 (dated March 27, 2023).

⁴ Ting & Associates, Inc., 2023, *Geotechnical Investigation, Proposed Single Family Structure Subdivision, Withers Avenue*, APN 166-160-015, Lafayette, California, TAI Job #6222 (dated September 20, 2023).

⁵ Humann Company, Inc., 2022, *Storm Water Control Plan for Withers Avenue, Parcel Map 22-00011, APN 166-160-150-3, Lafayette, CA 94549* Humann Job #21-197 (report dated August 2023).

documents that have been submitted by the applicant's design team and presenting an updated *Evaluation* and *Findings*. It should be noted that Contra Costa County requires sufficient data on site conditions to allow: (i) delineation the potential geologic hazards based on adequate subsurface data, and (ii) the data must be sufficient to serve as the primary basis for preparation of the "Geology and Soils" chapter of the CEQA document. Appendix G of the CEQA Guidelines issued by the State of California identifies the potential geologic and seismic hazards that must be evaluated by the CEQA document.

Table 1
DMA Concerns Identified in Previous Peer Review Letter

Geotechnical Report

The geotechnical report failed to (a) address the details of the specific approach to grading and development, (b) did not evaluate slope stability, (c) laboratory testing was very limited for a hillside project where substantial grading and extensive use of retaining walls is being proposed, and (d) corrosion potential testing was not included.

Furthermore, it is our opinion it would be appropriate to perform supplemental exploration of Parcel B prior to deeming the application complete. The data gathered should be used to provide a detailed/ accurate geologic cross-section that extends from the Parcel B building site to the creek. The subsurface data will also need to evaluate the suitability of the bio-retention basin site and provide recommendations for any corrective grading and drainage improvements needed to assure long-term stability of the bio-retention facility and its outfall.

VTPM

We requested that the project civil engineer provide (a) cut/ fill map of the project site, (b) details of the retaining wall proposed (permanent walls – materials, color, purpose, drainage), and where are wood walls proposed, if any, and (c) design details of the bio-retention basin, and (d) an exhibit that identifies slides and areas of high erosion / landslide evidence noted on pg. 6 of the Ting Associates geotechnical report.

Ground Failure Policies

The Safety Element contains policies aimed at protecting new development projects from landslide hazards and minimize grading of steep slopes. Those which appear most applicable to the project are presented in Table 2. Safety Element Policy 10-22 states that "slope stability shall be a primary consideration on the ability of land to be developed or designated for urban uses." Policy 10-27 indicated that geotechnical reports are subject to peer review by the County, and Policy 10-28 states that residential density shall decrease as slope increases, especially above 15 percent slopes. Due to the distance of the site from the landslides mapped by the USGS, and the relatively shallow depth to bedrock in test pits 1 through 8, the risk of landslides impacting of project appear limited to the southeast-facing hillside area that overlooks the tributary channel of Grayson Creek. This natural channel presents a risk of erosion and retreat of the creek bank, as well as sloughing of the creek bank. The updated geotechnical report responded to our concerns and VTPM has reduced the proposed lot yield.

Seismicity

Areas that are subject to landslides and slippages from other natural causes may be very hazardous under earthquake conditions. Earthquake effects will be more extensive if a major earthquake occurs during the rainy season when risks of landslide displacement/ ground slippage ground are highest. In the case of the proposed project, there is an unknown (but potentially significant) risk of a lateral

Table 2
General Plan Ground Failure and Landslide Hazard Policies

Policy 10-22.	Slope stability shall be a primary consideration in the ability of land to be developed or designated for urban uses.
Policy 10-23.	Slope stability shall be given careful scrutiny in the design of developments and structures, and in the adoption of conditions of approval and required mitigation measures.
Policy 10-24.	Proposed extensions of urban or suburban land uses into areas characterized by slopes over 15 percent and/or generally unstable land shall be evaluated with regard to the safety hazard prior to the issuance of any discretionary approvals.
Policy 10-25.	Development on open hillsides and significant ridgelines throughout the County shall be restricted, and hillsides with a grade of 26 percent or greater shall be protected through implementing zoning measures and other appropriate actions
Policy 10-26.	Approvals of public and private development projects in areas subject to slope failures shall be contingent on geologic and engineering studies which define and delineate potentially hazardous conditions and recommend adequate mitigation.
Policy 10-27.	Soil and geological reports shall be subject to the review and approval of the County Planning Geologist.
Policy 10-28.	Generally, residential density shall decrease as slope increases, especially above a 15 percent slope.
Policy 10-29.	Significant hillsides shall be considered unsuitable for types of development which require extensive grading or other land disturbance.
Policy 10-30.	Development shall be precluded in areas when landslides cannot be adequately repaired.
Policy 10-31.	Subdivisions approved on hillsides which include individual lots to be resold at a later time shall be large enough to provide flexibility in finding a stable buildable site and driveway location.
Policy 10-32.	The County shall not accept dedication of public roads in unstable hillside areas, or allow construction of private roads there which would require an excessive degree of maintenance and repair costs.

spreading failure. This type of slope failure can occur on very gentle slopes where there is a “free face” (i.e., the Grayson Creek channel). This type of failure requires a saturated, relatively loose to medium dense sand body in the subsurface. In the event of liquefaction of the sandy material, the overlying soils can experience rapid, fluid-like displacement toward the free face.

Ting & Associates Update Report

1. Purpose and Scope

Ting & Associates state that the intent of their 2023 update report was to respond to concerns raised by our peer review. The scope of work included (a) site reconnaissance by the geotechnical engineer to evaluate existing site conditions following the 2022-2023 winter rainy season, (b) logging of two auger borings, (c) laboratory analysis of expansion potential and corrosivity testing, and (d) engineering analysis of the data gathered and (e) preparation of a geotechnical report documenting the investigation and presenting updated conclusions and recommendations (report dated September 20, 2023).

The report did not include a bibliography of key references, but it did include Figure 12, Titled Site Plan. This figure shows the southern portion of the site Revised VTPM (including the currently proposed building sites on proposed Parcels A and B, the private road that is to provide immediate access to the three parcels,

the proposed C.3 water quality basin, borehole locations, and a line-of-section labeled A-A'.

2. Subsurface Investigation and Laboratory Testing

The subsurface exploration plan consisted of logging and sampling of eight (8) test pits and two (2) borings at the approximate locations shown on Figure 1 of the Ting & Associated report. The logs of the test pits are presented in Figures 2 through 9. The test pits ranged from 3 to 9 ft. in depth; tests pits 2 through 7 penetrated bedrock that was described as weathered, moist sandstone. Test pits 7 and 8 were only 3 ft deep and failed to penetrate bedrock. (Note that test pits 7 and 8 were located on Parcel B. Consequently, the test pit data gathered on Parcel B is of limited use. However, Borings B1 and B2 are located on proposed Parcel B (see Figure 12). As shown, those borings are immediately upslope and downslope for the site of the C.3 water quality planter. The logs of Borings B1 and B2 are presented in Figures 10 & 11, respectively. The borings were extended to a maximum depth of 12 ft. Briefly summarized, the logs indicate the depths where samples were collected, and they present blow count data that was gathered during drilling. The laboratory data is also shown on the boring logs (i.e., dry density and moisture content of each sample, as well as the Unified Soil Classification of the intervals sampled). The logs indicate little if any change in the materials penetrated. From the ground surface to a depth of 2½ to 4 ft. the logs indicate a brown sandy silt with a clay binder; this native soil and which is characterized as firm and moist. Below the native soil the logs indicate a medium brown sandy clay that is stiff and moist. We note that the log does not present an interpretation of this material (i.e., colluvium? possible landslide deposit? or very severely weathered / decomposed bedrock?)

3. Analysis of Laboratory Test Data

The project geotechnical engineer has concluded that the native soils on the site are highly expansive. With respect to the results of the corrosion potential testing, the project geotechnical engineer indicates that the test data is presented in their report on pg. 32, but there is no interpretation of the findings/ implications of the test data, which indicates that Ting & Associates have elected not to comment on the test results because they are not corrosion engineers. Similarly, the testing firm (Cooper) presents the test data but without an interpretation of the implications of the test data. Cooper identifies the sample that Ting & Associates provided for as Sample #2; Cooper's visual description of the sample that was provided for testing as a *brown CLAY w. Sand & organics* and possessing a moisture content of 14.5%. The depth of the sample below the ground surface and boring # was not provided to Cooper. The tests performed Cooper included a) resistivity, b) chloride ion concentration at 100% saturation, c) sulfate ion concentration at 100% saturation, d) pH, e) Redox potential, f) sulfide (i.e., qualitative by Lead on acetate paper). Although we are not Soil Corrosion Engineers, we are familiar with the classification of soil resistivity developed by William J. Ellis.⁶ The resistivity test performed by Cooper yielded a value of 1,075 Ohm-cm. The Ellis classification considers soils with a resistivity in the range of 501-2,000 to be corrosive / potentially corrosive. Concrete that is in contact with the ground can be impacted by water soluble Sulfates (SO₄). The test results of Cooper indicate a value of 11 mg/kg for water soluble sulfate, which appears to be mildly corrosive (generally considered to be below the reporting limit). The water-soluble chloride concentration relates to the corrosivity of the soils on ferrous materials (e.g., buried iron or steel pipelines). The testing performed by Cooper indicates chloride concentrations to be < 2 mg/ kg (i.e., the chloride test failed to detect concentrations of chloride within the range required for special design measures). Nevertheless, positive drainage that directs water away from the foundations will tend to mitigate the corrosion hazard. In our opinion it would be prudent for the project proponent to provide the test results to underground contractors for the project. Finally, it should be recognized that the results of one corrosion potential test may not be representative of prevailing conditions within the project site.

⁶ Ellis, W.J., 1978, *Corrosion of Concrete Pipelines*, Western States Corrosion Seminar, 1978.

4. Discussion of Potential Hazards.

Commencing on pg. 4 of the Ting & Associates report the consultant presents their conclusions and recommendations. The consultant's primary conclusion is that the site is suitable, from a geotechnical engineering standpoint, provided their recommendations are incorporated into the design and construction of the project. Based on their screening investigation, the consultant provides a hazards assessment. The following is intended to highlight and summarize (not supersede) the assessment of Ting & Associates:

- (i) **Seismicity.** The site is within the seismically active San Francisco Bay Region, where a moderate to high magnitude earthquake is a foreseeable event. The risk of damage from ground shaking is a foreseeable event. The risk of damage from ground shaking is controlled by using sound engineering judgment and compliance with the latest provision of the California Building Code (CBC), as a minimum. The seismic design provisions of the CBC prescribe minimum lateral forces applied statistically to the structures(s), combined with the gravity forces and dead-and-live loads. The code prescribed lateral forces are generally considered to be substantially smaller than the comparable forces that would be associated with a major earthquake. The intent of the code is to enable structures to (a) resist minor earthquakes without damage, (b) resist major earthquakes without collapse but with some structural as well as non-structural damage, and (c) resist major earthquakes without collapse but with some structural as well as non-structural damage. The update report of Ting & Associates presents 2022 CBC Seismic Design Parameters. Those parameters are used by the project structural engineer in the design of structures that require building permits. With implementation of the CBC and County Grading Ordinance, conservative design and quality construction, risks of earthquake damage potential can be considered less-than-significant, assuming that the ground is stable.
- (ii) **Slope Stability.** Ting Associates characterizes the site as *a nearly level area surrounded by sloping ground throughout the proposed lots, with the risk of landslide displacement to be low, and posing no slope stability concerns*. This characterization of the site conflicts with the site topography survey and the slope map that is presented in the VTPM. Test pit logs on proposed Parcel A and C penetrated approximately 3 ft. of native soil overlying bedrock described as *brown, severely weathered, fractured, moist sandstone* to the maximum depth explored (7 ft.) On Parcel B the test pits were only 3 ft in depth and did not penetrate bedrock. The two borings on Parcel B are not located in proximity to the potential building site (see Figure 2 of the geotechnical report. Those borings were 12 ft. deep and failed to penetrate bedrock. The logs indicate native soils are 3½ ft. thick and underlain by *medium brown sandy clay, stiff and moist*. The description does not indicate the presence of relic bedrock structure or rock fragments. Perhaps the sandy clay is colluvium (i.e., thick slope wash deposits)? In summary, no information is provided on the depth to bedrock and there is no stability of slope stability on proposed Parcel B, which includes a building site as well as a proposed bio-retention basin. We do know that the slopes on Parcel B are relatively steep and underlain by highly expansive clay soils that are subject to slope creep. Moreover, the creek has potential to undermine the toe-of- slope, and create sloughing that can migrate up the slope, possibly impacting structures on shallow foundations.
- (iii) **Liquefaction Potential.** The subsurface data gathered by the project geotechnical engineer might be termed a screening investigation for liquefaction. Briefly summarized the test pits and borings indicates that the native soils on proposed Parcel A and B are underlain by weathered bedrock at shallow depth, and the borings encountered stiff clays (colluvium?) beneath the native soils. These materials were considered to be too dense and too cohesive to liquefy. Moreover, free water was not encountered in the test pits and borings. Based on the data gathered, Ting & Associates conclude the risk of liquefaction is low and no further evaluation of liquefaction was recommended by the project geotechnical engineer.

- (iv) ***Total and Differential Settlement.*** For earthquake ground shaking to cause consolidation, the soil and Quaternary deposits on a project site must be relatively soft or loose. Ting & Associates conclude the subsurface data gathered indicate the presence of stiff, clayey surficial deposits that overlie bedrock at relatively shallow depths. The project geotechnical engineer concludes that the data gathered indicate site conditions are not a significant hazard to structures on the project site.
- (v) ***Lateral Spreading Failure.*** Ting & Associates state this type of ground failure is a potential consequence of liquefaction. Because the data gathered indicate the risk of liquefaction is low. Consequently, Ting & Associates concludes that the risk of a lateral spreading failure is nil. (Note there is no pertinent subsurface data to evaluate the slope stability risks on proposed Parcel B.)
- (vi) ***Erosion Hazard.*** Areas of the site that are disturbed by grading present a high erosion hazard. The erosion hazard is not addressed by the TAI report.
- (vii) ***Expansive Soils.*** Ting & Associates confirm that the clayey soil on the project site are highly expansive, and recommendations are provided to mitigate this hazard.
- (viii) ***Directly or Indirectly Present a Risk to Unique Geological or Paleontological Resource.*** The CEQA initial study must address the risk of the project destroying potentially significant geological and paleontological resources. Although this issue is not addressed by the project geotechnical engineer, test pit and boring logs do not indicate any evidence of fossil remains, and the potential for significant fossil resources is low, and review of site conditions do indicate the possible presence of significant geological resources.

5. Conclusions of Ting & Associates

Ting & Associates consider the site suitable for residential construction provided their geotechnical recommendations are incorporated into the design of the project. Additionally, the consultant recommends they be (a) provided the opportunity to review foundation plans and specifications for compliance with their geotechnical recommendations, and (b) retained to provide observation and testing services during construction to ensure that their recommendations are correctly interpreted and implemented during construction. Monitoring services also provide the geotechnical engineer to view exposed conditions during construction. Those monitoring services are intended to verify that exposed conditions closely match the conditions upon which the geotechnical recommendations were based. If warranted by exposed conditions, Ting & Associates will provide supplemental recommendations. (Any supplemental recommendations provided after permits have been issued are subject to review and approval by the professional staff of the Building Inspection Division prior to their implementation.)

6. Geotechnical Recommendations

The recommendations provided by Ting & Associates are intended as design level recommendations. Table 2 is intended to highlight and summarize those recommendations. (Note that the geotechnical recommendations did not stress the importance of observation and testing services during construction. These are needed to ensure geotechnical recommendations are properly interpreted and implemented by the contractor. Monitoring also provides the geotechnical engineer to view exposed conditions during grading and foundation-related work to ensure that exposed conditions closely match those that were the basis of design recommendations. Where there are substantial differences, the geotechnical engineer can provide a revised recommendation. Note that if there are proposed revisions that affect project plans, those modifications must be submitted for review and approval of the Building Inspection Division prior to their implementation.

Table 2
Geotechnical Recommendation of Ting & Associates

Clearing and stripping, Prior to grading the proposed structure areas are to be cleared of all obstructions and deleterious materials. After clearing, those areas should be stripped of all organic topsoil. It is recommended by the geotechnical engineer that those materials be removed from the site.

Earthwork Recommendations provided including allowable slope gradient, stabilization of a possible slide area on the Withers Avenue frontage of the project site, keying of fill slopes into competent material (as determined by the geotechnical engineer; Figure 14 of the report provide a typical section for the keyway design as well as a typical section for the recommended keyway subdrain). This section of the recommendations provides compaction standards for engineered fill, outlines preparation of building pads, and addresses specifications for any import fill,

Basement Design recommendations are provided for the excavation for construction of basements, including reference to Figure 15, which provides a typical section of the recommended subdrain.

Foundation Use of a pier and grade beam foundation system, including associated technical details (e.g., report recommends 17 ft. depth for piers, and Figure 16 provides a typical section for a foundation related subdrain.). We note that the depth to bedrock has not been established for the Parcel B building site.

Slabs-on Grade Design criteria are provided for construction of concrete slab-on-grade.

Trench Backfill Specifications are provided for backfilling of utility and drainages-related trenches,

Bioretention Wall Specifications are provided for the design of the wall system needed for the required C.3 basin.

Pavement Design recommendations address the earthwork related aspects of roadbed preparation, including ripping and compaction of the subgrade and aggregate base material and pavement section,

General construction requirements. The project geotechnical engineer provides additional foundations recommendations, including collecting roof water and conveying it away from foundations, providing positive drainage away from foundations and indicating that flowerbeds, are not desirable near foundations.

VTPM – Humann Company, Inc.

The VTPM has been modified since our previous review and there is an updated Stormwater Control Plan. We have found that the revised VTPM adequately responds to our previous comments. The C.3 basin is located on a steep slope that is underlain by sandy clay soils that are underlain by stiff clays at depth. We shall not comment on the basin design other than to indicate that a) testing performed by Ting & Associates confirms the topsoil is highly expansive, b) expansive soils on steep slopes are prone to slope creep, c) located at the toe of the slope is a tributary of Grayson Creek. Erosion of the creek bank is capable of triggering active mass wasting of the lower portion of the slope (sloughing, shallow slides, etc.), and d) two boring logged by the project geotechnical engineer in the immediate area of the C.3 basin failed to encounter bedrock to the maximum depth explored (12 ft.)

It is our concern that lateral and vertical displacement of the basin is a risk, and basin failure would threaten the stability of the proposed internal road. For that reason, it is our opinion that consideration should be given to construction of permanent pier supported retaining walls on the perimeter of the basin, with piers gaining support from competent bedrock.

DMA Evaluation

In our opinion the report of Ting & Associates provides an adequate evaluation of potential geologic, geotechnical and seismic hazards to serve as the primary source for preparation of the Geology & Soils Chapter of the CEQA document. Additionally, it is our opinion that the application can be deemed adequate from a geological perspective. This conclusion is based on the assumption that additional subsurface investigation of the footprint of the Parcel B building site and C.3 basin is performed as a condition of approval of the Parcel Map. That investigation shall include data that established the a) depth to bedrock and b) provides slope stability analysis that is compliant with the standards for projects in the Seismic Hazard Zone (SHZ) delineated by the California Geological Survey.

DMA Recommendations

Our recommendation is that the following be made Conditions of Approval for CDMS22-00011:

GEO-1

At least 30 days prior to requesting recordation of the Parcel Map, the project proponent shall submit a geotechnical report that evaluates the sites of proposed Parcel B improvements. This report to provide the following: *(i)* original geologic map showing the consultant's interpretation of site conditions, with delineation of any potentially hazardous soil condition; *(ii)* the scope of the investigation shall include subsurface exploration that is adequate to establish the depth to bedrock within the Parcel B building site and at the site of the C.3 basin; the logs of borings and/or test pits shall show the details of observed conditions and features; generalized logs are not acceptable. *(iii)* provide laboratory test data to evaluate engineering properties of the native soil, Quaternary deposits and underlying bedrock, *(iv)* provide slope stability analysis for the slope area between the Parcel B building site and flow line of the creek at the toe-of-slope, as well as analysis of slope stability for the C.3 basin. The methodology used in the analysis shall be compliant with standards for project in the official Seismic Hazard Zone (SHZ) delineated by the California Geological Survey and be compliant with the Policies and Criteria adopted by the State Mining & Geology Board. Based on the findings of this investigation, recommendations for foundations should be reviewed and updated as may be warranted.

GEO-2

The geotechnical report required by GEO-1 is subject to review by the peer review geologist, and review and approval of the Community Development Division prior to issuance of construction permits. An investigation that does not adequately respond to each provision of GEO-1 shall require submittal of an update report.

GEO-3

Geotechnical observation and testing services shall be required for the construction of improvements in each of the three parcels in CDMS20-00011. These services are *(i)* ensure that geotechnical recommendations for the project are properly interpreted and implemented by contractors, *(ii)* allow the geotechnical engineer to view exposed conditions during construction to ensure that field conditions match those that were the basis of the design recommendations in the approved report, and *(iii)* provide the opportunity for field modifications of geotechnical recommendations (with BID approval), based on exposed conditions. The monitoring shall commence during clearing, and extend through grading, placement of engineered fill, installation of recommended drainage facilities, and foundation related work. A ***hard hold*** shall be placed on the "final" grading inspection, pending submittal of a report from the project geotechnical engineer that documents their observation and testing services to that stage of construction, including monitoring and testing of backfilling required for utility and drainage facilities.

Similarly, a *hard hold* shall be placed on the final building inspection, pending submittal of a letter-report from the geotechnical engineer documenting the monitoring services associated with implementation of final grading, drainage, and foundation-related work. The geotechnical monitoring shall include documentation of conformance of retaining wall, pier hole drilling/ foundation preparation work and installation of drainage improvements. If the three parcels in MS20-00011 are developed separately, the required geotechnical letters can be issued on a parcel-by-parcel basis rather than a single letter that addresses all three (3) parcels.

GEO-4

All grading, excavation and filling shall be conducted during the dry season (April 15 through October 15) only, and all areas of exposed soil shall be revegetated to minimize erosion and subsequent sedimentation. After October 15, only erosion control work shall be allowed by the grading permit. Any modification to the above schedule shall be subject to review by the Grading Inspector.

Limitations

This review has been performed to provide technical advice to assist the Department of Conservation & Development with discretionary permit decisions. Our services have been limited to review of the documents identified in this peer review letter. Our opinions and conclusions are made in accordance with generally accepted principles and practices of the engineering geology profession.

We trust this letter provides the evaluation and comments that you requested. Please call if you have any questions.

Sincerely,
DARWIN MYERS ASSOCIATES



Darwin Myers, CEG 946
Principal

