

SHORELINE ENVIRONMENTAL REVIEW SUMMARY

During the March 2022 Work Sessions on the Shoreline public-private partnership project, members of the community and decision makers requested more information on the environmental review process generally and the topics of Transportation & Traffic and Geology, Soils & Seismicity more specifically. Following is a summary of the environmental review process for the Shoreline project and the requested topic areas.

ENVIRONMENTAL IMPACT REPORT (EIR) PROCESS:

- In 2015, the City Council certified an Environmental Impact Report (EIR) for the Shoreline development project and approved a General Plan Map Amendment and Zoning Map Amendment (PLN2012-00040) to lay the groundwork for the 2015 Shoreline Development Concept Plan that included an office campus, hotel, conference center, restaurants, and housing.
- The Draft EIR (DEIR) was circulated for an extended public review period from December 9, 2014 to February 6, 2015.
- An updated Final EIR (FEIR) was presented to Planning Commission and City Council after a thorough review of the comments received on the DEIR.
- The DEIR examined the full range of potential environmental impacts based on the eighteen resource topic areas in Appendix G of the CEQA Guidelines, including but not limited to, the following environmental topics:
 - Aesthetics
 - Air Quality
 - Biological Resources
 - Geology, Soils and Seismicity
 - Greenhouse Gas Emissions
 - Hazards and Hazardous Materials
 - Hydrology and Water Quality
 - Land Use and Planning
 - Noise
 - Population and Housing
 - Public Services and Recreation
 - Transportation and Traffic
 - Utilities and Service Systems
- The DEIR identified a number of impacts as less than significant or significant but mitigatable; however, not all of the Project's significant impacts can be avoided or reduced to less than significant and will remain significant and unavoidable, even after feasible mitigation. When the City Council certified the EIR for the Shoreline project, it also adopted a Statement of Overriding Considerations for these significant and unavoidable impacts. The significant and unavoidable impacts relate to greenhouse gas emissions, noise and traffic/transportation.
- The Statement of Overriding Considerations noted that the City Council carefully considered each significant and unavoidable impact in reaching its decision to approve the Project and identified several benefits of the Project in reaching its decision, including but not limited to:
 - It will facilitate development of the underutilized Shoreline site, bringing to fruition nearly a decade of City and community planning for the site and area.

- It improves an underdeveloped site with convenient freeway, street, bicycle, and pedestrian access, this would allow the City to implement its recently adopted Complete Streets program, improve access to the Bay Trail, and provide increased opportunities for local nonvehicular travel within and connecting to the site.
 - It provides a diversity of types of units to meet different types of housing needs and will contribute towards meeting the City's RHNA need for above moderate housing.
 - It promotes economic growth, creates diverse new employment opportunities, expands the City's tax base and will stabilize the Shoreline Enterprise Fund, which is currently burdened with significant debt due to the costs of past dredging operations.
 - Development of the Project site will also provide construction employment opportunities.
- A link to the Statement of Overriding Considerations can be found [here](#).

ADDENDA TO THE EIR:

- In 2017, Cal-Coast substantially modified the Shoreline Development Concept Plan based on feedback from the San Francisco Bay Conservation and Development Commission (BCDC) and evolving market conditions. Most notably, the office campus and conference center were eliminated, the number of planned residential units increased, and the proposed buildings were relocated closer to Monarch Bay Drive to accommodate sea level rise, freeing up land on the waterfront for a nine-acre community park on Mulford Point.
- On February 24, 2020, the City Council approved a General Plan Text Amendment, General Plan Map Amendment, and Zoning Map Amendments, including extending a Planned Development (PD) overlay, to reflect the updated Shoreline Development Concept Plan, which no longer includes an office campus or conference center.
- The California Environmental Quality Act (CEQA), Public Resources Code Section 21000, et seq., and the State CEQA Guidelines Section 15162 require that when an EIR has been certified for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole record, that one or more of the following exists:
 1. Substantial changes are proposed in the project which will require major revisions of the previous EIR 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 to the previous EIR 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 exercise of reasonable diligence at the time of the previous EIR was certified as complete shows any of the following:
 - a. The project will have one or more significant effects not discussed in the previous EIR;
 - 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 measures or alternative.
- Staff and its third-party consultants reviewed the modified project and analyzed it based upon Section 15162 of the CEQA Guidelines. Pursuant to CEQA and the CEQA Guidelines, the City completed an addendum to the certified EIR.
 - The Addendum analyzed the changes to the Shoreline Development Project and whether the environmental effects from the proposed project would be any different from those disclosed in the Certified EIR.
 - The Addendum concluded that the proposed project would not result in any new significant impacts or substantially increase the severity of any significant impacts identified in the Certified EIR. No new information of substantial importance was identified and no new mitigation measures would be necessary to reduce significant impacts. A link to the Addendum can be found [here](#).
 - The applicant is required to implement all applicable mitigation measures identified in the Mitigation Monitoring and Reporting Program (MMRP)

GEOLOGY, SOILS, AND SEISMICITY:

- The Certified EIR provides an overview of the regulatory framework and existing geologic conditions on the Project site and evaluates potential environmental impacts of the Project related to geology, soils, and seismicity.
- The DEIR provides an overview of the site's geology and summarizes geotechnical investigations for the project site. Borings on the man-made marina area generally encountered 5 to 13 feet of fill underlain by 3 to 16 feet of Bay Mud, which was in turn underlain by older, firmer alluvial, and estuarine deposits. East of the historic shoreline, the project site is underlain by alluvial sediments that typically consist of interbedded clay and silt with some sand. The test borings performed at the site for previous developments encountered potentially liquefiable sands and silts within the alluvial sediments and in the dredged fill created from the alluvial sediments. These materials are intermixed with clays that would not normally be subject to liquefaction.
- The EIR identified potential impacts related to geology, soils, and seismicity that would require mitigations to reduce these potential impacts including:
 - Updated geotechnical reports for the project that address:
 - Potential earthquake related impacts of strong ground shaking amplification due to the soft underlying sediments.
 - Seismic ground motion parameters in accordance with Building Code requirements.
 - Recommendations for both special foundations and other geotechnical engineering measures that shall be implemented during design and construction that may include use of deep foundations engineering and removal or improvement of potentially liquefiable soils.
 - The potential for lateral spreading and any necessary corrective measures that could include retaining structures to stabilize channel margins, use of deep

- foundations, removal or improvement of liquefiable soils, and/or the use of relatively rigid foundations.
- Adverse effects of shallow bay mud on shallow foundations, underground utilities, pavements, and other improvements and mitigation options that may include use of shallow ridged foundations for smaller structures, supporting larger structures with deep foundations such as driven piles, and installing flexible connections for utilities. Preloading consolidation (surcharging) prior to construction of new improvements could also be considered.
 - Specific recommendations for mitigation of expansive soils under pavements and structures, including techniques such as capping expansive soils with a layer of non-expansive fill, or by lime treatment. Typical mitigation measures for pavements could include special pavement design, lime treatment of subgrade soils and/or sub-excavation of expansive soils and replacement with non-expansive fill. These recommendations shall be based on testing of the in-site fill materials.
- Building plans shall incorporate all design and construction criteria specified in the report(s) and the geotechnical engineer shall sign the improvement plans and approve them as conforming to their recommendations prior to issuance of building permits.
 - All construction activities shall meet Building Code regulations for seismic safety (i.e. reinforcing perimeter and/or load bearing walls, bracing parapets, etc.). In addition, all project-related grading, trenching, backfilling and compaction operations shall be conducted in accordance with the City of San Leandro Engineering Department's Standard Plans. All improvements shall conform to regulations for seismic safety contained in the Building Code.
 - The geotechnical engineer shall also assume responsibility for inspection of the work and shall certify to the City, prior to acceptance of the work that the work performed is adequate and complies with its recommendations.
 - The geotechnical engineer of record shall prepare letters and as-built documents to document their observances during construction and to document that the work performed is in accordance with the project plans and specifications
 - The Project civil engineer shall prepare an erosion control plan as a part of building and/or grading plan submittal.
- Additionally, the project Geotechnical Engineers, ENGEO, prepared the letter in Attachment 1 dated March 15, 2022 that outlines plans for a surcharge fill placement program that would help mitigate consolidation settlement from Young Bay Mud by accelerating primary consolidation and reducing settlement from subsequent loading after the buildings are in place.
 - The letter also notes several nearby projects where ENGEO has used a surcharge fill program to mitigate consolidation settlement (see inset table above).

TABLE 1: Surcharge Fill Project Experience

PROJECT NAME	CITY
Treasure Island Redevelopment	San Francisco
Candlestick Point Redevelopment	San Francisco
Foster Square Development	Foster City
1548 Maple Street	Redwood City
Hercules Village	Hercules
Alameda Marina	Alameda
Alameda Landing	Alameda
Mare Island Naval Base	Vallejo

- All of the above mitigation measures would be implemented prior to issuance of permits for the project.

TRAFFIC AND TRANSPORTATION:

- The Certified EIR evaluated existing traffic and circulation conditions in the project study area, existing operations of 24 study intersections (see image below for locations), freeway mainline segments, and ramp merge and diverge areas. The assessment was based on data collected from several sources.

- At the time the EIR was prepared, the standard for traffic evaluation was "Level of Service," which describes the operating conditions experienced by motorists. Level of service (LOS) is a qualitative measure of the effect of a number of factors, including speed and travel time, traffic interruptions, freedom to maneuver, driving comfort, and convenience. LOS are designated "A" through "F" from best to worst, which cover the entire range of traffic operations that might occur. LOS "A" through "E" generally represents traffic volumes at less than roadway capacity, while LOS "F" represents over capacity and/or forced flow conditions.



- The EIR identified the threshold for a significant traffic/transportation impact if the project would:
 1. Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit, non-motorized travel, and relevant components of the circulation system, including, but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
 2. Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
 3. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

- The EIR concluded that the 2015 Shoreline Development Concept Plan (including the office campus, hotel, conference center, restaurants, and housing) would have a number of potential impacts on transportation and traffic and would require mitigations to reduce these potential traffic impacts including:
 - Signal optimization on Marina Boulevard
 - Installation of a roundabout at Monarch Bay Drive and Mulford Point Drive
 - Installation of a new traffic signal at Marina Boulevard and Aurora Drive
 - Development of a Transportation Demand Management plan to discourage single-occupancy vehicle trips, including operation of a shuttle
 - Bicycle lane improvements, including adding a Class I separated bike path on Monarch Bay Drive

The Addendum for the updated Shoreline development project (including removal of office) evaluated trip reductions for the modified project, and trips went down in all categories. Per the Addendum, the modified project will result in a reduction in the number of trips projected in the EIR.

- In conclusion, while the EIR identified significant and unavoidable traffic impacts, the modified project will result in a reduced number of trips than analyzed in the 2015 EIR. The project will implement a number of mitigation measures to lessen traffic impacts as outlined in the EIR and a final Transportation Demand Management (TDM) plan will need to be approved to demonstrate trip reductions prior to permit issuance.

LINKS TO ENVIRONMENTAL DOCUMENTS:

- [DEIR Part 1 of 2](#)
- [DEIR Part 2 of 2](#)
- [FEIR](#)
- [Statement of Overriding Considerations](#)

ATTACHMENT:

1. Letter from ENGEO Dated March 15, 2022

Project No.
13480.000.000

March 15, 2022

Mr. Scott Cooper
Cal-Coast Companies, LLC
11726 San Vicente Boulevard, Suite 235
Los Angeles, CA 90049

Subject: San Leandro Marina Redevelopment
San Leandro, California

DISCUSSION OF SURCHARGE PROGRAM FOR MITIGATION OF CONSOLIDATION SETTLEMENT

Reference: ENGEO; Geotechnical Exploration (DRAFT), San Leandro Marina Redevelopment,
San Leandro, California; Project No. 13480.000.000; April 21, 2017.

Dear Mr. Cooper:

As requested, we prepared this letter to provide additional information related to mitigation of consolidation settlement utilizing a surcharge fill placement program within the marina area of the overall project development in San Leandro, California.

We previously prepared a DRAFT Geotechnical Exploration report (referenced above) and identified three geotechnical measures to mitigate consolidation settlement within this area of the project where structures or raised grades are planned. The mitigation measures included (1) a surcharge fill placement program, (2) lightweight fill (compensation loading), and (3) drilled or driven concrete piles (deep foundations) for planned buildings. As project plans are developed, we will consult with you and the project team to incorporate these mitigation measures into design of the project. One or several of the mitigation measures may ultimately be used at the project.

CONSOLIDATION SETTLEMENT OF YOUNG BAY MUD

Our explorations encountered up to approximately 15 feet of compressible Young Bay Mud deposits in the marina area. Our study of historical aerial photographs indicates that the reclamation of the site was conducted more than 50 years ago. Settlement due to reclamation has completed; however, future placement of fill or structural loads from buildings and site improvements will trigger additional long-term settlement that may occur over the next 50 years after site development, if not mitigated.

The amount of settlement that could occur depends on the proposed loads, thickness of Young Bay Mud, and previous loads experienced by this deposit. We understand that up to 6 feet of new fill is planned to raise site grades, and one- to five-story buildings are proposed. We estimate that long-term consolidation settlement of several inches to over 1 foot may occur as a result of the planned loads. These estimates of total settlement can exceed the tolerance of building

structures, typical gravity utilities, and service lateral connections to buildings. Therefore, we recommend implementation of the previously described mitigation measure(s) to address consolidation settlement. We provide additional information related to a surcharge fill placement program below.

SURCHARGE FILL PLACEMENT MITIGATION

Surcharge fill placement programs have been successfully used to mitigate consolidation settlement from Young Bay Mud by accelerating primary consolidation and reducing settlement caused by subsequent loading. In a surcharge program, additional fill is placed in areas to receive new loads and removed once we determine that the desired degree of consolidation has been achieved.

The planned improvements will include placement of up to 6 feet of fill to achieve design grades. In areas where ongoing settlement is not acceptable, a surcharge fill placement program can be implemented. Furthermore, additional surcharge fill can be placed above that required for civil fill (e.g., within building pad areas) to mitigate for the loading from light to moderately loaded buildings. Where feasible, the implementation of a surcharge program to mitigate settlement from building loads will allow for design of the buildings to be supported on conventional shallow foundation systems. For preliminary purposes and based on our understanding of the project development, we estimate surcharge fill heights of up to 15 feet may be required to mitigate consolidation settlement resulting from raised site grades and proposed buildings.

The time necessary for a successful surcharge program is a function of the drainage path, which is related to the thickness of the Young Bay Mud. To achieve the level of consolidation required within a reasonable time range, the use of closely spaced, vertical wick drains is often required to help accelerate the surcharge rates. These allow excess pore pressure to drain laterally, shortening the drainage path, and taking advantage of the fact that the horizontal permeability of Young Bay Mud is normally much greater than the vertical permeability. For preliminary purposes and as part of a surcharge fill placement program, we estimate the use of wick drains at a 5- to 7-foot spacing in a triangular grid pattern and extending a minimum of 5 feet below the bottom of the Young Bay Mud layer (estimated depth of 30 feet) would achieve consolidation settlement mitigation in 6 to 12 months. The duration begins once the design surcharge height is reached.

We recommend that settlement plates be installed to monitor settlement as part of the surcharge program. The settlement monitoring plates should be surveyed at regular intervals until we determine that the desired level of pre-consolidation has been achieved. All readings of settlement should be tied to benchmarks established well beyond the zone of surcharge influence. The surcharge fill should be left in place until approximately 80 to 90 percent of the surcharge-induced consolidation has been achieved, based on settlement monitoring. The number and location of the settlement monitoring plates should be established after surcharge location and staging are determined.

Provided below is a list of recent projects in the Bay Area where we successfully implemented a surcharge program to mitigate consolidation settlement.

TABLE 1: Surcharge Fill Project Experience

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Treasure Island Redevelopment	San Francisco
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Hercules Village	Hercules
Alameda Marina	Alameda
Alameda Landing	Alameda
Mare Island Naval Base	Vallejo

If you have any questions or comments regarding this letter, we will be glad to discuss them with you.

Sincerely,

ENGEO Incorporated



Taylor Thompson


Jeff Fippin, GE

tt/af/jaf/jf

