SAN FRANCISCO
PLANNING DEPARTMENT

Addendum to Environmental Impact Report

Addendum Date:	April 16, 2018
Case No.:	**2014-001272ENV**
Project Title:	**Pier 70 Mixed-Use District Project**
EIR:	Pier 70 Mixed-Use District Project Environmental Impact Report, certified August 24, 2017
Zoning:	Pier 70 SUD 40-X, 65-X, and 90-X Height and Bulk Districts
Block/Lot:	4052/001, 4052/002, 4110/001, 4100/008A, 4111/003, 4111/004, 4120/002
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1.0 BACKGROUND

The San Francisco Planning Commission certified the Final Environmental Impact Report (FEIR) for the Pier 70 Mixed-Use District Project on August 24, 2017, and the Board of Supervisors affirmed the Planning Commission's certification of the FEIR (Motion No. 19976) on October 24, 2017, following the withdrawal of an appeal of the CEQA determination. The project site is an approximately 35-acre area bounded by Illinois Street to the west, 20th Street to the north, San Francisco Bay to the east, and 22nd Street to the south. The majority of the project site is located within the 69-acre Pier 70 area, which is owned by the City and County of San Francisco through the Port of San Francisco (the Port), with a portion of the project site owned by Pacific Gas & Electric Company.

The Pier 70 Mixed-Use District Project (Original Project) amended the San Francisco General Plan and Planning Code, adding a new Pier 70 Special Use District (SUD), which established land use zoning controls for the project site and incorporated the design standards and guidelines in the Pier 70 SUD Design for Development document. The Original Project analyzed in the FEIR included a range of land uses: market-rate and affordable residential uses (between 1,645 to 3,025 units), commercial use (between 1,102,250 to 2,262,350 gross square feet), and retail/arts/light-industrial (RALI) uses (between 479,980 to 486,950 gross square feet). Parking, geotechnical and shoreline improvements, new and upgraded utilities and infrastructure, transportation and street improvements, and approximately 9 acres of publicly accessible open space were also evaluated. To cover a full range of potential land uses that could be developed under the proposed Special Use District, the FEIR analyzed a Maximum Residential Scenario and Maximum Commercial Scenario for the two development areas that constitute the project site.

Construction is projected to begin in 2018 and would be phased over an approximately 11-year period, concluding in 2029. The Original Project was expected to involve five construction phases.

2.0 PROPOSED MODIFICATIONS TO THE PROJECT

FC Pier 70, LLC (Forest City) and the Port (hereinafter, "Project Sponsors") propose the following three changes to the Pier 70 Mixed-Use District Project (Modified Project): phasing assumption revisions, child care use location, and a phasing change for the construction of the 20th Street Pump Station. These proposed modifications do not change the full buildout analyzed in the FEIR. The Modified Project is described below.

Phasing Assumption Revisions

The FEIR explained that construction phasing is conceptual, with anticipated construction for each of the five phases shown in Table 2.5: Project Construction and Rehabilitation Phasing for the Maximum Residential Scenario, on FEIR pp. 2.80-2.81, and in Table 2.6: Project Construction and Rehabilitation Phasing for the Maximum Commercial Scenario, on FEIR pp. 2.83-2.84. The FEIR stated that phases are subject to change, but would occur within the maximum development ranges presented in the Maximum Residential Scenario and Maximum Commercial Scenario. The Project Sponsors' first major phase submittal proposes development on Parcels A, C2, D, E2, and Buildings 2 and 12. The Project Sponsors propose phasing revisions, as shown in **Attachment A** (Revised FEIR Tables 2.5 and 2.6, with deleted text shown in ~~strikeout~~ and new text shown in double underline). Under this approach, the first major phase proposes an exchange of parcels in EIR Phase 2, as follows:

- Under the Maximum Residential Scenario: Remove Parcel C1 from Phase 2 and move it to Phase 4. Remove Parcel A from Phase 3 and move it to Phase 2.
- Under the Maximum Commercial Scenario: Remove Parcel PKS from Phase 2 and move it to Phase 3. Remove Parcel C2 from Phase 3 and move it to Phase 2.

Proposed changes to phasing would not require different or additional construction equipment because the FEIR and the Air Quality Technical Report analyzed construction-related emissions based on illustrative information on estimated sequences of phase construction (FEIR Appendix D, Air Quality Technical Report, Table 4). The Original Project's specific off-road equipment types were not known, so CalEEMod and URBEMIS 2007 default equipment types were assumed for each phase (FEIR Appendix D, Air Quality Technical Report, p. 10). These default assumptions remain valid for the Modified Project.

Child Care Use Location

Under the Pier 70 SUD Design for Development, child care is permitted as an institutional use on all parcels within the project site. The Project Sponsors plan to add a child care facility in one of four potential locations on the project site. The child care facility (approximately 2,500 gross square feet with an additional 1,250 gross square feet of outdoor area) is anticipated to accommodate up to 50 children and about 7 employees. The precise location will be determined at a later date, and only one child care facility is anticipated as part of this phase submittal. All four potential locations are on parcels that are designated for residential use and analyzed in the FEIR as such, as shown in **Attachment B**.

The proposed child care facility would be located on Parcel C2, D, E1, or E2 within a building that was already assumed as part of the Original Project, and would replace previously assumed ground-floor RALI space. Therefore construction of the child care facility would not require different or additional construction equipment.

20th Street Pump Station Phasing Change

The Project Sponsors also propose a phasing revision concerning construction of the new 20th Street Pump Station, which would be constructed within an approximately 50-by-60-foot area (roughly 3,000 sq. ft.). As described for the Original Project, this new pump station would be constructed to accommodate wastewater flows from the project site, and because the existing pump station would need to be relocated to accommodate construction of the new extension of 20th Street. The FEIR assumes that the pump station would be constructed in Phase 1. Based on discussions with the San Francisco Public Utilities Commission (SFPUC)[1], the Project Sponsors propose moving construction of the pump station to Phase 4, and they have confirmed that this change would not require different or additional construction equipment.

Construction of the pump station in Phase 4 would not require different or additional construction equipment because construction of the new 20th Street Pump Station is a relatively minor portion of the Original Project's overall infrastructure. The pump station structure and ancillary equipment would be constructed within an approximately 50- to 60-foot area; the control panel could be exposed or enclosed in an approximately 15-by-30-foot structure. A 30-by-30 foot wet well would be constructed to a depth of approximately 20 feet below grade. All pumps, valves, and associated mechanical equipment would be enclosed below ground in the wet well and valve vault structures (FEIR, p. 2.59). Project-specific off-road equipment types were not known, so CalEEMod and URBEMIS 2007 default equipment types were assumed for each phase (FEIR Appendix D, Air Quality Technical Report, p. 10). These default assumptions remain valid for the Modified Project including construction of the pump station in Phase 4.

3.0 PURPOSE OF THIS ADDENDUM

Section 31.19(c) of the San Francisco Administrative Code states that the Environmental Review Officer must reevaluate a modified project for which a negative declaration has been adopted or a final EIR has been certified. Section 31.19(c)(1) of the San Francisco Administrative Code further states that that, "If, on the basis of such reevaluation, the Environmental Review Officer determines, based on the requirements of the California Environmental Quality Act (CEQA), that no additional environmental review is necessary, this determination and the reasons therefore shall be noted in writing in the case record, and no further evaluation shall be required by this Chapter." In addition, CEQA section 21166 and CEQA Guidelines sections 15162-15164 provide that when an EIR has been adopted for a project, no subsequent or supplemental Environmental Impact Report shall be required unless one or more of the following events occurs: (1) substantial changes are proposed in the project which will require major revisions of the 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

[1] Email from Craig Freeman, SFPUC, to Bronson Johnson, dated December 12. 2017.

under which the project is being undertaken 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; or (3) new information of substantial importance, which was not known and could not have been known at the time the EIR was certified as complete, becomes available. Pursuant to CEQA Guidelines section 15164, the lead agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary, but none of the three events requiring the preparation of a subsequent or supplemental EIR has occurred.

This Addendum describes the potential environmental effects of the Modified Project compared to the impacts identified in the FEIR, and explains why the proposed modifications would not result in any new significant environmental impacts or a substantial increase in the severity of previously identified environmental impacts and would not require the adoption of any new or considerably different mitigation measures or alternatives. The environmental topics discussed in the FEIR are analyzed herein.

4.0 ANALYSIS OF POTENTIAL ENVIRONMENTAL EFFECTS

Land Use and Land Use Planning

The Modified Project would not result in changes to the land development program analyzed in the FEIR. Revisions to project phasing, including revised phasing of the 20th Street Pump Station, would result in the same overall development program as analyzed in the FEIR.

Under the Pier 70 SUD Design for Development, child care is permitted as an institutional use on all parcels within the project site.[2] Inclusion of a child care facility would not physically divide an established community or conflict with applicable land use plans, policies, or regulations. As such, the Modified Project would not change the analysis or less-than-significant conclusions reached in the FEIR regarding Land Use and Land Use Planning impacts (FEIR pp. 4.B.23-4.B.28).

Population and Housing

Revisions to project phasing, including revised phasing of the 20th Street Pump Station, under the Modified Project would not impact the analysis or conclusions related to Population and Housing presented in the FEIR. The Modified Project would not include different or additional construction equipment or duration, and the number of temporary employees would be the same as analyzed in the FEIR.

The Modified Project would introduce a child care facility, which is anticipated to accommodate up to 50 children and about 7 employees.[3] The child care facility would, however, replace 2,500 square feet of ground-floor RALI use, which would result in a reduction of about 7 employees.[4] The total estimated number of permanent employees analyzed in the FEIR would therefore remain unchanged from the FEIR.

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[2] Pier 70 Mixed-Use District Project Design for Development, Table 2.1.1: Permitted Land Uses, October 24, 2017.

[3] As set forth in California Code of Regulations Section 101216.3, Teacher-Child Ratio, between 5 to 7 teachers or aides are required for a 50-person child care facility.

[4] See FEIR p. 4.C.30, Table 4.C.6, Footnote 3. There is average density of 350 square feet per employee for RALI uses. 2,500 square feet corresponds to approximately 7 employees.

As such, the Modified Project would not change the analysis or less-than-significant conclusions reached in the FEIR regarding Population and Housing impacts (FEIR pp. 4.C.22-4.C.38).

Transportation and Circulation

Changes to Project Phasing

The FEIR evaluated the potential impacts of two primary development scenarios: a Maximum Commercial Scenario and a Maximum Residential Scenario. For each scenario, the FEIR assumed that certain parcels (and thus certain amounts of each land use) would be developed in each EIR phase. The Modified Project proposes revisions to the phasing of some of the parcels. Under the Maximum Residential Scenario, Parcel C1 would move from Phase 2 to Phase 4 and Parcel A would move from Phase 3 to Phase 2. This would result in slightly more commercial and RALI development in Phase 2 than previously contemplated, and substantially less in Phase 3. This would also result in more commercial and slightly more RALI uses in Phase 4 than previously contemplated. Total amounts of building area constructed in Phases 1 and 5 would be identical to what was assumed in the FEIR. Under the Maximum Commercial Scenario, Parcel PKS would move from Phase 2 to Phase 3, and Parcel C2 would move from Phase 3 to Phase 2. This would result in slightly fewer residential units and slightly less RALI space in Phase 2 than previously contemplated. This would also result in more residential units and slightly less RALI uses in Phase 3 than previously contemplated. Phases 1, 4, and 5 would each have the same total amount of building area as previously contemplated.

Overall, while there may be slight differences in terms of travel demand in the interim years, at full buildout, the Modified Project would be identical to what the FEIR evaluated. Because the FEIR evaluated the potential transportation impacts of the Original Project under buildout conditions, and the buildout conditions with the proposed phasing modifications are expected to be identical to what was analyzed in the FEIR, the Modified Project's parcel phasing modifications would not change the analysis or conclusions reached in the FEIR regarding transportation and circulation impacts.

The FEIR analysis only examined transportation impacts at buildout of the Original Project. However, the FEIR did identify that a proposed pump station would be constructed in Phase 1 of the FEIR phasing under both the Maximum Commercial and Maximum Residential scenarios. The 20th Street Pump Station was forecast to generate a negligible amount of peak hour vehicle trips once constructed, and its overall effect on transportation conditions was forecast to be very minor. Under the Modified Project, the pump station would be constructed during Phase 4. Impacts related to travel demand and site design would not be affected because conditions at buildout of the Original Project (the only conditions analyzed in the FEIR for operation of the Original Project) would be identical with or without the proposed modifications related to the pump station. The only potential change in impacts would be to construction impacts. Constructing the pump station in Phase 4 as opposed to Phase 1 would not affect the total amount of construction vehicle trips to and from the site. While it may slightly increase the amount of construction activity in Phase 4 and slightly decrease the amount of construction activity in Phase 1, the traffic associated with the construction of the pump station is expected to be relatively small and the change in scheduling would not create any

new significant construction transportation impacts.[5] Overall, the Modified Project's postponement of construction of the 20th Street Pump Station from Phase 1 to Phase 4 would not change the analysis or conclusions reached in the FEIR regarding Transportation and Circulation impacts.

Child Care Facility

Under the Modified Project, an approximately 2,500-gross-square-foot child care facility, with an additional 1,250 gross square feet of outdoor play space, would be constructed. Although only one facility would be constructed, four potential sites have been identified: Parcel C2, Parcel D, Parcel E1, and Parcel E2. The child care facilities would be part of the previously approved RALI space on the ground floor. A child care facility would likely serve residents and employees at (or very close to) the Pier 70 site. As such, it may increase vehicle trips somewhat in the immediate vicinity of the child care facility, but it would not likely generate new vehicle or transit trips to the overall project area; instead, any vehicle trips or transit trips that travel to the child care facility would likely be trips that would already be coming to the commercial uses in the site or leaving the residential uses at the site. And, to the extent a child care facility would replace other commercial uses already approved at the site, the child care facility may actually serve to reduce vehicle or transit trips to the site. Thus, the proposed modifications with respect to the child care facility would not affect the conclusions in the FEIR related to travel demand (e.g., vehicle miles traveled, transit crowding, or transit delay caused by vehicle congestion).

The construction of a child care facility would not physically alter any of the proposed transportation facilities, such as sidewalks or bicycle facilities. Therefore, it would not affect the FEIR conclusions with respect to bicycle and pedestrian safety and access.

A child care facility may require more on-street designated passenger loading areas than would be required by the previously approved RALI space on the ground floor. While it is likely that a specific proposal for a child care facility would be accompanied by a proposal for handling on-street passenger loading, its adequacy is unknown at this time, and there is potential that passenger loading could create hazards due to inadequate facilities. The FEIR identified a significant loading impact at the site in Impact TR-12 related to commercial truck loading. Mitigation Measure M-TR-12B, FEIR p. 4.E.105, called for monitoring loading activity throughout the site and converting on-street public parking to commercial vehicle loading spaces if monitoring indicates inadequate loading supply. Mitigation Measure M-TR-12B should be revised, as follows, to reference conversion of on-street parking spaces to commercial or passenger loading spaces (new text is double-underlined and deleted text is shown as ~~strikeout~~):

> **Mitigation Measure M-TR-12B: Monitor loading activity and convert general purpose on-street parking spaces to commercial or passenger loading spaces, as needed.**
>
> After completion of the first phase of the Proposed Project, and prior to approval of each subsequent phase, the project sponsors shall conduct a study of utilization of on- and off-street commercial loading spaces, and of passenger loading activities adjacent to child care use. Prior to

[5] Fehr & Peers, Transportation Assessment for Pier 70 SUD Revisions, February 1, 2018. This report is included as Attachment C to the EIR Addendum.

completion, the methodology for the study shall be reviewed and approved by either: (a) Port Staff in consultation with SFMTA Staff for areas within Port jurisdiction; or (b) SFMTA Staff in consultation with Port Staff for areas within SFMTA jurisdiction. If the result of the study indicates that fewer than 15 percent of the commercial loading spaces are available during the peak loading period, or that passenger loading activities at the child care use routinely obstruct travel lanes within the site, the project sponsors shall incorporate measures to convert existing or proposed general purpose on-street parking spaces to commercial or passenger ~~parking~~ loading spaces in addition to the required off-street spaces.

While the Project Sponsors have agreed to the suggested modifications to M-TR-12B, the loading impact identified in the FEIR would remain significant because it is uncertain as to whether the mitigation measure would adequately address the issue. However, overall, the loading impact of the child care facility would not likely be substantially greater than the impact that was analyzed in the FEIR because it would be at one location internal to the site.

The proposed revisions with respect to a child care facility would not create any new or substantially more severe impacts and would not alter conclusions reached in the FEIR regarding Transportation and Circulation impacts.

Noise and Vibration[6]

Construction Noise

Temporary Construction Noise in Excess of Noise Ordinance Standards

Under the Modified Project, proposed phasing changes would alter the timing of construction of proposed development on certain parcels but would not alter the types of equipment used in construction or the locations where this equipment would operate. The Modified Project's proposed phasing changes would not alter the analysis or conclusions described in FEIR Impact NO-1, and therefore construction noise from the pump station would continue to exceed the 86-dBA threshold, but would be mitigated to a less-than-significant level with implementation of Mitigation Measure M-NO-1: Construction Noise Control Plan (FEIR pp. 4.F.33, 4.F.35).

Construction of the proposed pump station during Phase 4 would have similar construction-related noise impacts to those identified in the FEIR (pp. 4.F.32-4.F.35). However, the delay in construction of the pump station until Phase 4 could result in simultaneous operation of construction equipment at the pump station site and the adjacent Parcel B1/B2 under both the Maximum Residential and Maximum Commercial scenarios. Simultaneous operation of pile drivers, other impact equipment, or concrete saws associated with Phase 4 construction, as well as construction of the proposed pump station, could generate a combined noise level of 89 to 91 dBA at 50 feet (as indicated in the FEIR), which would exceed the 86-dBA ordinance limit.

[6] Orion Environmental Associates, Noise Technical Memorandum (DRAFT), February 2, 2018. This report is included as Attachment D to the EIR Addendum.

Therefore, construction noise from the pump station would continue to exceed the 86-dBA threshold but would be mitigated to a less-than-significant level with implementation of Mitigation Measure M-NO-1.

The proposed child care facility would be developed as part of construction of Parcels C2, D, E1, or E2 and would use the same types of construction equipment identified in the FEIR for these parcels. Therefore, operation of certain types of construction equipment would still have the potential to exceed the 86-dBA threshold and this impact would continue to be significant but mitigated to a less-than-significant level with implementation of Mitigation Measure M-NO-1.

Therefore, the Modified Project would not alter the conclusions reached in the FEIR regarding the potential for exceeding the 86-dBA construction noise threshold, and this construction noise impact would remain significant and unavoidable with mitigation. No new mitigation measures would be necessary.

Temporary Construction Noise Effects on Future On-Site Receptors

As indicated in the FEIR (pp. 4.F.36-4.F.41), construction activities would occur intermittently on the project site over the 11-year construction duration and could expose new nearby sensitive on-site receptors to temporary increases in noise levels substantially in excess of ambient levels. Simultaneous operation of the noisiest pieces of equipment associated with demolition (mounted impact hammer or concrete saw) and other construction activities (excavator) would result in maximum combined noise levels that would exceed the average "Ambient+10 dBA" thresholds of 74 dBA (Ldn) or 71 dBA (daytime Leq) at the closest on-site residential receptors, a significant noise impact. With implementation of noise controls during all construction phases (specified in Mitigation Measure M-NO-1) as well as implementation of noise controls during pile driving (specified in Mitigation Measure M-NO-2: Noise Control Measures During Pile Driving, FEIR pp. 4.F.40-4.F.41), the potential for noise disturbance of future on-site residents would be reduced. However, even with implementation of these noise controls, the potential would still exist that combined noise levels from simultaneous operation of the noisiest types of construction equipment could still exceed the Ambient+10 dBA threshold, and therefore construction-related noise impacts on future on-site residential receptors would continue to be significant and unavoidable with mitigation.

Under the Modified Project, proposed phasing changes would alter the timing of construction of proposed development on certain parcels such that different residential receptors would be subject to construction-related noise increases. However, the overall impact on future on-site residential receptors would remain the same. Under the Maximum Residential Scenario, moving up Parcel A construction from Phase 3 to Phase 2 would reduce noise impacts to Phase 2 residential receptors on Parcels D and Building 2. However, delaying Parcel C1 construction from Phase 2 to Phase 4 would increase noise impacts on Phase 2 and 3 residential receptors on Parcel PKS, Parcel C2 and Building 2. Under the Maximum Commercial Scenario, delaying Parcel PKS construction from Phase 2 to Phase 3 while moving up construction of Parcel C2 from Phase 3 to Phase 2 would shift the noise impacts from Phase 3 construction of Parcels HDY and C1 from residential receptors on Parcel PKS to residential receptors on Parcel C2. Therefore, construction-related noise impacts on future on-site residential receptors would continue to be significant and unavoidable with implementation of Mitigation Measure M-NO-1 and M-NO-2. Construction-related noise impacts related to changes in phasing would not be substantially more severe than presented in the FEIR (FEIR pp. 4.F.36-4.F.41).

The Modified Project's proposed delay in construction of the pump station until Phase 4 would alter the number and proximity of workers and residents subject to its construction noise. Under both the Maximum Residential and Maximum Commercial scenarios, the Phase 2 commercial building on Parcel A would be located as close as 100 feet to the southwest while Phase 2/3 residences on Parcels D and E1 would be located a minimum of 400 feet to the southwest and south of the pump station location. The proposed delay could also result in simultaneous operation of construction equipment at the pump station site and the adjacent Parcel B1/B2 during Phase 4 under both the Maximum Residential and Maximum Commercial scenarios. Simultaneous operation of pile drivers, other impact equipment, or concrete saws associated with Phase 4 construction, as well as construction of the proposed pump station could generate a maximum combined Leq noise level of 83 to 85 dBA (Leq) at the commercial building on Parcel A constructed in Phase 2 and 71 to 73 dBA (Leq) at the closest residences on Parcels D and E1 constructed in Phases 2/3, which could exceed the average "Ambient+10 dBA" threshold of 71 dBA (Leq) during the day, resulting in a significant noise impact on future on-site receptors. This impact is the same as identified in the FEIR (pp. 4.F.39-4.F.40), although in a different location on the project site. With implementation of Mitigation Measure M-NO-1 and Mitigation Measure M-NO-2, the potential for noise disturbance of future on-site residents would be reduced but not necessarily to a less-than-significant level. Therefore, this impact would continue to be significant and unavoidable with mitigation.

Under the Modified Project, the proposed child care facility would be developed as part of construction of Parcels C2, D, E1, or E2 and would use the same types of construction equipment identified in the FEIR for these parcels. Therefore, simultaneous operation of the noisiest pieces of equipment would still have the potential to exceed the average "Ambient+10 dBA" thresholds as identified in the FEIR for construction on any of these parcels. However, under both the Maximum Residential and Maximum Commercial scenarios, construction of the child care facility on Parcels D or E2 would reduce the potential for noise impact because construction would occur during Phase 2, prior to construction of any adjacent residential receptors. Construction of this facility on Parcels C2 or E1 under either scenario would occur after residential development occurs on adjacent parcels (Building 2; Parcel D; and Parcel E2), resulting in a temporary significant noise impact on these future on-site receptors, as identified in the FEIR (FEIR pp. 4.F.38-4.F.40). Although implementation of noise controls during all construction phases (specified in Mitigation Measure M-NO-1) as well as implementation of noise controls during pile driving (specified in Mitigation Measure M-NO-2) would reduce the potential for noise disturbance if the child care facility were constructed on Parcels D or E2, construction-related noise impacts on future on-site residential receptors would continue to be significant and unavoidable with mitigation if the child care facility is located on Parcels C2 or E1.

Therefore, the Modified Project would not alter the conclusions reached in the FEIR regarding project construction noise impacts, and the temporary impact on future on-site receptors would remain significant and unavoidable with mitigation.

Groundborne Vibration Levels

As described in the FEIR, vibration from impact or vibratory pile-driving activities could result in cosmetic damage to Proposed Project structures and historic Buildings 113 and 114 if these activities respectively occur within 70 feet and 160 feet, a significant vibration impact. However, implementation of measures such as evaluating specific potentially historic buildings, establishing and enforcing appropriate vibration

limits for the affected structures based on site-specific conditions, and monitoring vibration levels at structures of concern (as specified in Mitigation Measure M-NO-3: Vibration Control Measures During Construction, FEIR pp. 4.F.44-4.F.45) would be adequate to reduce the potential for cosmetic damage to adjacent project and historic structures to a less-than-significant level.

Under the Modified Project, proposed phasing changes would involve changes in timing and not location, and therefore the proximity of vibration sources to historic Buildings 113 and 114 would not change. Proposed phasing changes would not increase the potential for cosmetic damage to these structures. The delay in constructing the pump station until Phase 4 combined with proposed phasing changes would increase the proximity of pump station construction activities to new structures. With the Modified Project's proposed phasing changes, commercial development on Parcel A would be completed in Phase 2 under the Maximum Residential Scenario and was already planned to occur in Phase 2 under the Maximum Commercial Scenario. It is expected that sufficient setbacks could be maintained between the pump station site and the new structure(s) on Parcel A to avoid significant construction vibration impacts during Phase 4 construction of the pump station. The proposed child care facility would be developed as part of construction of Parcels C2, D, E1, or E2 and would use the same types of construction equipment and techniques identified in the EIR for these parcels. Since all four possible locations are more than 160 feet from historic Buildings 113 and 114, vibration associated with construction of the child care facility would not adversely affect these historic structures, as concluded in the FEIR (FEIR pp. 4.F.41-4.F.45).

The Modified Project would continue to present a potential for vibration from impact or vibratory pile-driving activities to result in cosmetic damage to Proposed Project structures, a significant impact. However, as with the Original Project, this impact would continue to be reduced to a less-than-significant level with implementation of Mitigation Measure M-NO-3. Therefore, the Modified Project would not alter the conclusions reached in the FEIR regarding groundborne vibration impacts during construction**.**

Project Operations

Operational Project Noise in Excess of Noise Ordinance Standards

The FEIR evaluated the potential for future permanent noise increases from a variety of noise sources (i.e., stationary equipment such as emergency generators, heating/ventilation/air conditioning systems, a below-grade wastewater pump station, future loading docks, trash bins, and outdoor activities in open space areas) that would be introduced by the Original Project. The FEIR determined that potential noise increases from operation of such noise sources would pose significant noise impacts on noise-sensitive receptors. Likewise, development of an outdoor play area as part of the proposed child care facility could cause localized noise increases and disturbance to any nearby future project residents. However, these impacts would be reduced to a less-than-significant level with implementation of Mitigation Measure M-NO-4a: Stationary Equipment Noise Controls and Mitigation Measure M-NO-4b: Design of Future Noise-Generating Uses near Residential Uses (FEIR pp. 4.F.50-4.F.51).

Under the Modified Project, proposed phasing changes would involve changes in timing and not location. Therefore, the proximity of noise sources to noise-sensitive receptors would not change and the potential

for exceedance of ordinance limits would remain the same. There would be no change in the EIR's determination that this impact would be less than significant with mitigation.

Operation of the proposed pump station after construction in Phase 4 would have the same operational noise impacts on adjacent existing industrial uses and proposed commercial and residential uses as those identified in the EIR after construction in Phase 1 (FEIR pp 4.F.47-4.F.48). Therefore, operation of the pump station would not adversely affect the proposed child care facility, a less-than-significant impact.

The Modified Project would not alter the conclusions reached in the FEIR regarding project operational noise impacts, and impacts from operation of noise sources would remain less than significant, with mitigation.

Operational Project Ambient Noise Levels

As described in the FEIR, operation of the Original Project would result in permanent increases in ambient noise levels, primarily through project-related increases in traffic. Of the 79 road segments examined, traffic noise increases on three road segments would exceed significance thresholds for traffic noise increases: (1) 20th Street (east of Third Street to east of Illinois Street), (2) 22nd Street (east of Tennessee Street to east of Illinois Street), and (3) Illinois Street (20th Street to south of 22nd Street). Even with implementation of transportation demand management measures (required in Air Quality Mitigation Measure M-AQ-1f: Transportation Demand Management, FEIR pp. 4.G.47-4.G.50), project-related noise increases on local streets in the project area would not be reduced to less-than-significant levels on these road segments. Therefore, the FEIR determined that traffic noise increases on these three road segments would be significant and unavoidable with mitigation.

In the FEIR, project-related traffic noise increases were estimated based on trip generation at buildout. While the Modified Project's proposed phasing changes and delayed construction of the pump station until Phase 4 could slightly alter trip generation within each phase, these changes would not affect trip generation at buildout. Therefore, the Modified Project's proposed phasing changes and delayed construction of the pump station would not alter estimated traffic noise increases (presented in FEIR Table 4.F.10, p. 4.F.52) and they would continue to be significant and unavoidable, even with implementation of Mitigation Measure M-AQ-1f.

The Modified Project's proposed child care facility may increase vehicle trip somewhat in the immediate vicinity of the facility, but it would not likely generate new vehicle or transit trips in the overall project area. However, to the extent a child care facility would replace other commercial uses already approved at the site, the child care facility may actually serve to reduce vehicle or transit trips to the site compared to the Original Project. Therefore, the Modified Project would not alter the FEIR's determination that traffic noise would be significant and unavoidable with mitigation on the three identified road segments.

Operational Future Noise Levels

The FEIR determined that future noise levels would be Conditionally Acceptable at all project parcels designated for residential use, a significant impact. However, with incorporation of noise attenuation

measures into the project design as necessary in order to meet the 45-dBA interior noise standard, as specified in Mitigation Measure M-NO-6: Design of Future Noise-Sensitive Uses, FEIR pp. 4.F.70-4.F.71, this impact would be reduced to a less-than-significant level. The Modified Project's proposed phasing changes and delayed construction of the pump station until Phase 4 could alter trip generation within each phase, but these changes would not affect the trip generation at buildout described in the FEIR, pp. 4.F.51-4.F.58. Since future traffic noise levels estimated for on-site roads are based on traffic volumes at buildout, proposed phasing changes and delayed construction of the pump station would not alter estimated future traffic noise levels on the project site, and therefore the compatibility of project occupants with future noise levels at project buildout would remain the same.

The Modified Project's proposed child care facility would introduce a land use that was not specifically considered in the FEIR's noise compatibility evaluation. Development of an outdoor play area as part of the proposed child care facility could cause localized noise increases during parts of the day. This type of noise is typical of the noise near any school elsewhere in the City. While it may be noticeable and disturbing to some nearby residents on the project site, it would not result in new significant noise impacts. The City's Land Use Compatibility Chart for Community Noise (see Figure 4.F.3, FEIR p. 4.F.23) does not specify acceptable noise levels for child care facilities. However, noise levels up to 65 dBA (Ldn) are defined as Satisfactory/Acceptable for school classrooms, the use most similar to child care facilities. Above 65 dBA (Ldn), noise levels are considered Conditionally Acceptable. The proposed child care facility would be located on Parcels C2, D, E1, or E2. As indicated in Table 4.F.11: Noise Compatibility by Parcel – Maximum Residential Scenario (FEIR p. 4.F.61) and Table 4.F.12: Noise Compatibility by Parcel – Maximum Commercial Scenario (FEIR p. 4.F.65), future noise levels on these parcels were estimated to be as follows: 58-70 dBA (Ldn) on Parcel C2; 66-70 dBA (Ldn) on Parcel D; 66-69 dBA (Ldn) on Parcel E1; and 66-69 dBA (Ldn) on Parcel E2. Since future noise levels at all four possible locations would exceed 65 dBA (Ldn), noise levels are considered Conditionally Acceptable for the proposed child care use. Therefore, this impact would continue to be significant under the Modified Project, but mitigated to a less-than-significant level with implementation of Mitigation Measure M-NO-6, similar to the Original Project. This measure would require incorporation of noise attenuation measures into the project design as necessary in order to meet an interior noise limit of 45 dBA (Ldn), the level considered acceptable for residential uses. Reduction of interior noise levels for the child care facility to 45 dBA (Ldn) as well would be adequate to reduce the noise impact on the child care facility to a less-than-significant level.

Other Noise Impact Analyses

The Modified Project would have no effect on proposed special-events-related noise impact (FEIR pp. 4.F.71-4.F.74) nor would it generate excessive operational groundborne vibration or noise. Therefore, the Modified Project would not change the analysis or conclusions regarding these Noise impacts.

The FEIR determined cumulative noise impacts associated with any overlapping construction would be less than significant due to the limited duration and scope of potential concurrent construction activities associated with these two cumulative projects (FEIR pp. 4.F.74-4.F.76). The Modified Project would not substantially alter the potential for overlap or concurrent construction with these two projects, and would not change the analysis or conclusions regarding this cumulative impact.

The FEIR determined that cumulative traffic noise increases were estimated based on the Original Project's trip generation at buildout (FEIR pp. 4.F.76-4.F.83). While the Modified Project's proposed phasing changes and delayed construction of the pump station until Phase 4 could alter trip generation within each phase, these changes would not affect trip generation at buildout. Therefore, proposed phasing changes and delayed construction of the pump station would not alter the Original Project's cumulatively considerable contribution to 2040 cumulative traffic noise increases, and this impact would continue to be significant and unavoidable, even with implementation of Mitigation Measure M-AQ-1f: Transportation Demand Management. Proposed development of a child care facility may increase vehicle trips somewhat in the immediate vicinity of the center, which could in turn slightly increase the Original Project's contribution to 2040 cumulative traffic noise increases along on-site roads. However, such small increases would not substantially alter estimated future traffic noise levels along on-site roads. In addition, to the extent a child care facility would replace other commercial uses already approved at the site, the child care facility may reduce vehicle or transit trips to the site compared to the Original Project. Since the proposed child care facility would not likely generate new vehicle or transit trips in the overall project area, and could reduce such impacts, the Original Project's contribution to identified significant noise increases on off-site roads and the EIR's determination of significant and unavoidable with mitigation would remain unchanged.

Air Quality[7]

Changes to Project Phasing

To quantify the Modified Project's changes in phasing, including the revised phasing of the 20th Street Pump Station, an analysis using the latest version of CalEEMod (2016.3.2) air quality was undertaken. The updated version of CalEEMod is no longer compatible with the version used to calculate emissions estimated for the Draft EIR and FEIR (2013.2.2). Consequently, there would be variations between emission estimates for the same project modeled with the different versions of the model. For example, the newest versions of CalEEMod (2016.3.1 and 2016.3.2) corrected an assumption that was previously made in CalEEMod 2013.2.2 regarding HHD's average trips per day which lead to an underestimation of heavy duty diesel trucks idling exhaust emission factors. Therefore, to determine the difference between the modified project and the project as proposed in the FEIR, both projects' construction emissions were calculated using the latest version of CalEEMod and that difference was then added or subtracted, as appropriate, from those emissions predicted in the FEIR.

Maximum Residential Scenario

Under the Modified Project, Phase 2 in the Maximum Residential Scenario would have a marginal increase in commercial development, exchanging development phases of Parcel C1 for Parcel A under proposed revisions as compared to the Original Project in the Final EIR. Project criteria pollutant emissions with these Modified Project phasing revisions are presented in Table 1 of Attachment E, and compared with the emissions estimated in the FEIR. These changes would not result in a change in the significance

[7] ESA, Technical Memorandum – Air Quality Impact Implication of Proposed Changes to Pier 70 Project, February 2, 2018. This report is included as Attachment E to the EIR Addendum.

determination of construction-related criteria air pollutant impacts (less than significant with mitigation) nor the implementation phasing of mitigation measures identified in the FEIR (pp. 4.G.30-4.G.57).

Under the Modified Project, Phase 3 in the Maximum Residential Scenario would have a reduction in commercial developed square footage under proposed revisions as compared to the Original Project in the FEIR. Unmitigated Original Project criteria pollutant emissions with these Modified Project phasing revisions are presented in Table 2 of Attachment E, and compared with the emissions estimated in the FEIR. Similarly, Table 3 presents the emissions with mitigation that would be implemented beginning in Phase 3 of the Original Project. These changes would not result in a change in the significance determination of construction-related criteria air pollutant impacts (less than significant with mitigation) nor the implementation phasing of mitigation measures identified in the FEIR (FEIR pp. 4.G.30-4.G.57).

Under the Modified Project, Phase 4 in the Maximum Residential Scenario would add Parcel C1 commercial development and the new pump station (about 3,000 square feet), resulting in an overall addition of 235,155 square feet of commercial space and the 3,000-square-foot pump station to the phase under proposed revisions as compared to the Original Project in the FEIR. Unmitigated Project criteria pollutant emissions with these Modified Project phasing revisions are presented in Table 4 of Attachment E, and compared with the emissions estimated in the FEIR. Similarly, Table 5 of Attachment E presents the emissions with mitigation that would be implemented beginning in Phase 3 of the project. Note that emissions identified in Attachment E, Tables 4 and 5, are overstated because the operational analysis assumes that Parcel C1 is already operational as originally proposed and analyzed in the FEIR as part of Phase 2. These changes would not result in a change in the significance determination of construction-related criteria air pollutant impacts (less than significant with mitigation) nor the implementation phasing of mitigation measures identified in the FEIR (FEIR pp. 4.G.30-4.G.57).

Maximum Commercial Scenario

Under the Modified Project, Phase 2 in the Maximum Commercial Scenario would have an increase in residential and RALI development, constructing Parcel C2 in Phase 2 instead of Phase 3. Additionally, Parcel PKS would be substituted from Phase 2 to Phase 3. Project criteria pollutant emissions with these Modified Project phasing revisions are presented in Table 6 of Attachment E and compared with the emissions estimated in the FEIR. These changes would not result in a change in the significance determination of construction-related criteria air pollutant impacts (less than significant with mitigation) nor the implementation phasing of mitigation measures identified in the FEIR (FEIR pp. 4.G.30-4.G.57).

Under the Modified Project, Phase 3 would add Parcel PKS, previously in Phase 2. Project criteria pollutant emissions with these Modified Project phasing revisions are presented in Table 7 of Attachment E and compared with the emissions estimated in the FEIR. Similarly, Table 8 of Attachment E presents the emissions with mitigation that would be implemented beginning in Phase 3 of the project. These changes would not result in a change in the significance determination of construction-related criteria air pollutant impacts (less than significant with mitigation) nor the implementation phasing of mitigation measures identified in the FEIR (FEIR pp. 4.G.30-4.G.57).

Under the Modified Project, the sole change to Phase 4 construction of the Maximum Commercial Scenario would be the addition of the 3,000-square-foot pump station. Project criteria pollutant emissions with construction of the Modified Project's pump station phasing are presented in Table 9 of Attachment E and compared with the emissions estimated in the FEIR. Similarly, Table 10 of Attachment E presents the emissions with mitigation that would be implemented beginning in Phase 3 of the project. This change would not result in a change in the significance determination of construction-related criteria air pollutant impacts (less than significant with mitigation) nor the implementation phasing of mitigation measures identified in the FEIR (FEIR pp. 4.G.30-4.G.57).

Implications of the Modified Project's Construction Phasing Revisions and the 20th Street Pump Station Construction in Phase 4 with Respect to Health Risk

The FEIR (pp. 4.G.62-4.G.69) assessed health risks of the Original Project in consideration of both construction-related emissions of diesel particulate matter (DPM) and fine particulate matter (PM2.5). For the off-site receptors (residential and school), where the background cancer risk is 44 in one million for the Maximum Residential Scenario and 51 in one million for the Maximum Commercial Scenario, the maximum increased cancer risk from construction would be 14 in one million with mitigation. The addition of this contribution to the existing background of 44 in one million resulted in a cumulative incremental cancer risk of 58 in one million and 66 in one million, respectively. These values are well below the 100 in one million significance threshold used to define the Air Pollutant Exposure Zone.

With respect to on-site receptors where the background cancer risk is 34 in one million for the Maximum Residential Scenario and 35 in one million for the Maximum Commercial Scenario, increased cancer risk from construction would be 20 in one million with mitigation for the Maximum Residential Scenario and 51 in one million for the Maximum Commercial Scenario. Addition of these contributions to the existing background resulted in a cumulative incremental cancer risks of 54 in one million and 86 in one million, respectively. These values are also well below the 100 in one million significance threshold.

Maximum Residential Scenario

The Modified Project's construction phasing changes proposed for the Maximum Residential Scenario include Parcel A being developed in Phase 2 instead of Phase 3, while Parcel C1 would be developed in Phase 4 instead of Phase 2. This change moves a Phase 2 construction project (Parcel C1) that would be closest to both off-site and on-site (Parcel PKN developed in Phase 1) receptors to a later construction phase when Mitigation Measure M-AQ-1a: Construction Emissions Minimization (FEIR pp. 4.G.42-4.G.44) will be in place. For the mitigated scenario, all equipment greater the 50 horsepower would be required to have engines that meet U.S. EPA Tier 4 engine standards and impacts would be less than significant for both on-site and off-site receptors. While Parcel A moves earlier, from Phase 3 to Phase 2, it is located further away and downwind from both off-site and on-site (Parcel PKN) receptors, which would result in lesser health impacts than studied in the FEIR. As such, both of these changes would be expected to have a net decrease of construction-related health risks compared to that predicted in the FEIR (FEIR pp. 4.G.62-4.G.69).

With regard to health risk impacts, construction of the 20th Street Pump Station in Phase 4 would reduce the unmitigated impacts to both on-site and off-site receptors predicted in the FEIR as the construction fleet

would be cleaner than the unmitigated fleet that was assumed for Phase 1 of project construction in the FEIR (as discussed earlier for Parcel C1). These changes would not result in a change in the significance determination of toxic air contaminant impacts nor the implementation phasing of mitigation measures identified in the FEIR (FEIR pp. 4.G.44-4.G.45).

Maximum Commercial Scenario

The Modified Project's construction phasing changes proposed for the Maximum Commercial Scenario include residential Parcel C2 being developed in Phase 2 instead of Phase 3, while residential Parcel PKS would be developed in Phase 3 instead of Phase 2. This change moves a Phase 2 construction project (Parcel PKS) that would be closest to both off-site and on-site (Parcel PKN developed in Phase 1) receptors to a later construction phase when Mitigation Measures M-AQ-1a: Construction Emissions Minimization (FEIR pp. 4.G.42-4.G.44) would be in place. For the mitigated scenario, all equipment greater the 50 horsepower will be required to have engines that meet U.S. EPA Tier 4 engine standards and impacts would be less than significant for both on-site and off-site receptors. While Parcel C2 moves to an earlier phase, from Phase 3 to Phase 2, it is located further away and downwind from both off-site and on-site (Parcel PKN) receptors, which would result in a lower health impacts than studied in the FEIR. As such, both of these changes would be expected to have a net decrease on construction-related health risks compared to that predicted in the FEIR (FEIR pp. 4.G.62-4.G.69).

With regard to health risk impacts, construction of the pump station in Phase 4 would reduce the unmitigated impacts to both on-site and off-site receptors predicted in the FEIR as the construction fleet would be cleaner than the unmitigated fleet that was assumed for Phase 1 of project construction in the FEIR (as discussed earlier for Parcel PKS). These changes would not result in a change in the significance determination of toxic air contaminant impacts nor the implementation phasing of mitigation measures identified in the FEIR (FEIR pp. 4.G.44-4.G.45).

Health Risk Implications of Addition of Child Care Facilities to Residential-Designated Parcels

The Modified Project includes consideration of a potential child care facility on one of four parcels: Parcels C2, D, E1 or E2. All four of these parcels were considered to be residential uses in the FEIR for both the Maximum Residential and Maximum Commercial Scenarios (FEIR pp. 4.G.62-4.G.69). Consequently, potential child care locations were considered and analyzed in the FEIR as a sensitive residential receptor (with infants and children present). As such, exposure of infants and children at these locations was explicitly evaluated and the analysis of the FEIR sufficiently predicts health risks for a child care facility at these locations. These changes would not result in a change in the significance determination of criteria air pollutant impacts nor the implementation phasing of mitigation measures identified in the FEIR.

Recreation

Revisions to project phasing, including revised phasing of the 20th Street Pump Station, under the Modified Project would not impact the analysis or conclusions regarding impacts to recreation presented in the FEIR. The Modified Project introduces a child care facility, which is anticipated to accommodate up to 50 children and about 7 employees. The child care facility would, however, replace 2,500 square feet of ground-floor

RALI use, which would result in a reduction of about 7 employees. The total estimated number of permanent employees analyzed in the FEIR would therefore remain unchanged from the FEIR. As such, the Modified Project would not change the analysis or less-than-significant conclusions reached in the FEIR regarding Recreation impacts (FEIR pp. 4.J.29-4.J.46).

Utilities and Service Systems

As described in the FEIR, Impact UT-4 (pp. 4.K.38-4.K.40) analyzes impacts related to the need for construction or expansion of wastewater treatment facilities. As discussed in Impact UT-4, the project site is located within the 20th Street sub-basin of the City's combined sewer system, and the existing pump station has a remaining dry-weather capacity of approximately 1.2 million gallons per day (mgd). The Original Project includes construction of a new 20th Street Pump Station for two reasons: (1) a new 20th Street Pump Station would be necessary to accommodate wastewater flows from the project site, and (2) the existing pump station would have to be relocated to accommodate construction of the new extension of 20th Street.

Under the Modified Project, the 20th Street Pump Station would be constructed in Phase 4 instead of Phase 1. The Project Sponsors conducted more detailed analysis of wastewater flows in support of utility design estimates, including diversion of wastewater flows from buildings on Parcels PKS, HDY2, and HDY3 to the existing combined sewer main in Illinois Street that is not tributary to the 20th Street sub-basin. The analysis found that the total project-related wastewater flows would be an average of 286 gallons per minute (0.4 mgd) at the completion of Phase 4 development.[8] The analysis concluded that the existing pump station has the capacity to accommodate these project-related wastewater flows, as well as the estimated average of 176 gallons per minute (0.3 mgd) of wastewater flows from other sites within this sub-basin (including existing site uses and new uses at the 20th Street Historic Core site, Crane Cove Park, and 19th Street Development). As with the Original Project, the Modified Project would result in less-than-significant impacts related to the construction or expansion of wastewater treatment facilities, and would not change the analysis or conclusions reached in Impacts UT-4 or C-UT-1 (FEIR pp. 4.K.47-4.K.48).

Revisions to project phasing and inclusion of a child care facility would not alter the overall water demand of the project (FEIR pp. 4.K.30-4.K.34), require the construction or expansion of water treatment facilities (FEIR pp. 4.K.34-4.K.37), alter the quantity of wastewater generated at full buildout (FEIR pp. 4.K.37-4.K.38), require the expansion or construction of stormwater facilities (FEIR pp. 4.K.40-4.K.42), alter the quantity of solid waste generation (FEIR pp. 4.K.42-4.K.46), or affect compliance with Federal, State, and Local statutes related to solid waste (FEIR p. 4.K.46). As with the Original Project, the Modified Project would result in less-than-significant impacts related to these topics and would not change the analysis or conclusions of the FEIR.

Public Services

Revisions to project phasing, including revised phasing of the 20th Street Pump Station, under the Modified Project would not impact the analysis or conclusions related to Public Services in the FEIR. The Modified

[8] BkF Engineers, Surveyor, Planners, Pier 70 Combined Sewer Pump Station Analysis, June 16, 2017.

Project introduces a child care facility, which is anticipated to accommodate up to 50 children and about 7 employees. The child care facility would, however, replace 2,500 square feet of ground-floor RALI use, which would result in a reduction of about 7 employees. The total estimated number of permanent employees analyzed in the FEIR would therefore remain unchanged from the FEIR. As such, the Modified Project would not change the analysis or less-than-significant conclusions reached in the FEIR regarding Public Services impacts (FEIR pp. 4.L.22-4.L.33).

Hydrology and Water Quality

As described in the FEIR, pp. 4.O.54-4.O.63, Impact HY-2 analyzes impacts related to the violation of water quality standards, degradation of water quality, exceedance of the stormwater system capacity, and additional sources of stormwater pollution during operation. The project site is located within the 20th Street sub-basin of the City's combined sewer system. The National Pollutant Discharge Elimination System (NPDES) permit for discharges from the Southeast Water Pollution Control Plant, North Point Wet Weather Facility, Bayside Wet Weather Facilities, and Wastewater Collection System (Bayside NPDES permit) requires that the wet-weather facilities within this sub-basin be designed for a long-term average of no more than 10 combined sewer discharge events per year. For the Original Project, impacts related to exceeding the NPDES permit requirements related to the frequency of combined sewer discharges are considered significant. FEIR Mitigation Measure M-HY-2a: Design and Construction of Proposed Pump Station for Options 1 and 3, FEIR p. 4.O.60, would reduce this impact to a less-than-significant level and requires that the new pump station be designed with a wet-weather capacity sufficient to ensure that potential wet-weather combined sewer discharges from the 20th Street sub-basin and associated downstream basins do not exceed this long-term average.

Under the Modified Project, the new pump station would be constructed in Phase 4 instead of Phase 1, which could affect the frequency of combined sewer discharges from the 20th Street sub-basin prior to construction of the pump station. In addition, buildings on Parcels PKS, HDY 2 and HDY 3 that are part of the Pier 70 SUD would direct their sanitary sewer flows and 50 percent of their storm water runoff (1.25 acres) to the existing combined sewer main in Illinois Street that is not tributary to the 20th Street sub-basin. This reduces project flows and tributary area to the 20th Street Pump Station. More detailed analysis conducted by the project sponsor in support of utility design analyzed the change in frequency of combined sewer discharges under the Modified Project using the stormwater management hydrodynamic modeling program XPSWMM.[9] The analysis concluded that under the Modified Project, combined sewer discharges would occur approximately 7.6 times per year, an increase over the existing 7.0 events per year, but well within the long-term average of 10 events specified in the Bayside NPDES permit. Therefore, the Modified Project would result in less-than-significant impacts related to an increase in combined sewer discharge events. The SFPUC has concurred with the Project Sponsors' conclusion that construction of the pump station in Phase 4 would not result in a violation of its NPDES permit.[10]

[9] BkF Engineers, Surveyor, Planners, Pier 70 Combined Sewer Pump Station Analysis, June 16, 2017.

[10] San Francisco Public Utilities Commission, email from Craig Freeman to B.H. Bronson, Pier 70: Confirmation of P70 EIR Changes, December 13, 2017.

Regarding other topics addressed by Impact HY-2, revisions to project phasing and inclusion of a child care facility would not affect the quantity or quality of stormwater runoff from the project site, the uses of non-potable water in accordance with the City's Non-potable Water Ordinance, or the potential for littering. As for the Original Project, the Modified Project would result in less-than-significant impacts related to these topics, and would not change the analysis of the FEIR.

Similarly, revisions to project phasing and inclusion of a child care facility would not alter the overall amount of ground disturbance at the project site (on-land construction), groundwater dewatering, or in-water construction. There would be no change in the potential to violate water quality standards or cause water quality degradation during construction (Impact HY-1), a less-than-significant impact. The Modified Project would create the same area of impervious surfaces and require the same groundwater dewatering and would be required to comply with the Stormwater Management Requirements and Design Guidelines. Therefore, the Modified Project would not change the analysis or conclusions reached in the FEIR regarding the potential for groundwater depletion, interference with groundwater recharge, or alteration of drainage patterns (FEIR pp. 4.O.64-4.O.65) and these impacts would remain less than significant. The Modified Project would include the same provisions for protection against flood hazards and would not exacerbate existing or future flood hazards or tsunami hazards (FEIR pp. 4.O.65-4.O.68) and these impacts would remain less than significant. Therefore, the Modified Project would not change the analysis or conclusions reached in the FEIR regarding any of these Hydrology and Water Quality impacts.

Hazards and Hazardous Materials

The Modified Project would include the construction of a child care facility at one of four locations within the 28-Acre Site. The deed restriction on the 28-Acre Site does not restrict future uses of the site, provided that the durable cover is maintained in accordance with the Pier 70 Risk Management Plan (FEIR pp. 4.P.65-4.P.68 and Mitigation Measure M-HZ-3a: Implement Construction and Maintenance-Related Measures of the Pier 70 Risk Management Plan [FEIR pp. 4.P.61-4.P.62]). Mitigation Measure M-HZ-6: Additional Risk Evaluations and Vapor Control Measures for Residential Land Uses (FEIR pp. 4.P.67-4.P.68) requires additional risk evaluations and vapor control measures for residential uses in areas where soil vapor or groundwater concentrations exceed residential cleanup standards for vapor intrusion (based on information provided in the Pier 70 Risk Management Plan). The same risk evaluations would be necessary if a child care facility were located in such an area. Mitigation Measure M-HZ-5: Delay Development on Proposed Parcels H1, H2, and E3 Until Remediation of the "PG&E Responsibility Area" is Complete (FEIR p. 4.P.65) specifies that development may not occur within the PG&E Responsibility Area until remediation of this area is completed. However, none of the proposed child care locations are within the PG&E Responsibility Area. Therefore, the Modified Project would not change the analysis or conclusions reached in the FEIR regarding any of these topics and they would remain significant as for the Original Project, but mitigated to a less-than-significant level with the mitigation measures specified in the FEIR.

As with the Original Project, the Modified Project would not use extremely hazardous materials (FEIR pp. 4.P.71-4.P.72). The only toxic air contaminants emitted during construction and operation would be DPM and PM2.5, and impacts related to these emissions are addressed in "Air Quality", above. Therefore, as with the Original Project, the Modified Project would result in less-than-significant impacts related to this topic and would not change the analysis or conclusions reached in the FEIR.

The Modified Project would not alter the use of hazardous materials during construction or operation (FEIR pp. 4.P.53-4.P.55) or the potential for interference with emergency response operations or an increase in fire risks (FEIR pp. 4.P.72-4.P.73). As for the Original Project, impacts related to these topics would remain less than significant.

Similarly, the Modified Project would not alter the potential to encounter hazardous building materials during building demolition and renovation (FEIR pp. 4.P.55-4.P.60), the potential to encounter hazardous materials in the soil and groundwater during construction on the 28-Acre Site[11] (FEIR pp. 4.P.60-4.P.62), the potential to encounter hazardous materials in the soil and groundwater at the Hoedown Yard during construction or operation (FEIR pp. 4.P.60-4.P.62 and FEIR pp. 4.P.68-4.P.69), or the potential for exposure to naturally occurring asbestos during use of the Irish Hill Playground (FEIR pp. 4.P.69-4.P.71). As for the Original Project, the Modified Project would result in significant impacts related to these topics that would be reduced to a less-than-significant level with the mitigation measures specified in the FEIR. Therefore, the Modified Project would not change the analysis or conclusions reached in the FEIR regarding any of these hazards and hazardous materials impacts.

Other Environmental Topics

The Modified Project would have similar, less-than-significant impacts on Cultural Resources, Greenhouse Gas Emissions, Wind and Shadow, Biological Resources, Geology and Soils, Minerals and Energy Resources, and Agricultural and Forest Resources. All applicable mitigation measures identified in the FEIR would remain. The Modified Project is consistent with the Pier 70 Mixed-Use District Project evaluated in the FEIR because the proposed phasing changes and inclusion of a child care facility would neither increase the severity of any impacts associated with the Original Project or result in new or substantially different environmental effects. Therefore, the Modified Project would not change the analyses or conclusions reached in the FEIR and the impacts on these other environmental topics would remain less than significant.

5.0 CONCLUSION

Based on the foregoing, it is concluded that the analyses conducted and the conclusions reached in the FEIR certified by the Planning Commission on August 24, 2017 and affirmed by the Board of Supervisors on October 24, 2017 remain valid. The Modified Project would not result in substantially greater impacts, nor would it cause new significant impacts not identified in the FEIR. The Modified Project would not require new mitigation measures that would be necessary to reduce significant impacts. No changes have occurred with respect to circumstances surrounding the Original Project that would cause significant environmental impacts to which the project would contribute considerably, and no new information has become available that shows that the project would cause significant environmental impacts. Therefore, no additional environmental review is required beyond this addendum.

[11] The "28-Acre Site" is an approximately 28-acre area located between 20th, Michigan, and 22nd streets and San Francisco Bay that includes Assessor's Block 4052/Lot 001 and Lot 002 and Block 4111/Lot 003 and Lot 004.

DETERMINATION

I do hereby certify that the above determination has been made pursuant to State and Local requirements.

Lisa M. Gibson
Environmental Review Officer

4/16/18
Date of Determination

cc: Richard Sucre, Current Planning
Julie Barlow, SWCA
Bulletin Board/Master Decision File
Distribution List

Attachments

Attachment A: Pier 70 Mixed-Use District Phasing Revisions
Attachment B: Pier 70 Mixed-Use District Proposed Child Care Locations
Attachment C: Fehr & Peers Transportation Letter Report
Attachment D: Orion Environmental Associates Supplemental Noise Technical Memorandum
Attachment E: ESA Air Quality Technical Memorandum

Table 2.5: Project Construction and Rehabilitation Phasing for the Maximum Residential Scenario

Phase	Project Site	Parcel or Building	Proposed Construction and Rehabilitation			Open Space	Roadways and Other Improvements
			Residential (gsf / No. of Residential Units)	Commercial (gsf)	RALI (gsf)		
Phase 1 (2018-2019)	*28-Acre Site*						
	Illinois Parcels	PKN	261,700 / 300 units	6,600	6,600	20th Street Plaza	Michigan Street (new) ~~20th Street Pump Station (new)~~
Phase 2 (2018-2020)	*28-Acre Site*	Building 2*, ~~Parcel C1~~, Parcel C2, Parcel D, Parcel E2, Parcel A	578,250 / 662 units	~~221,100~~ 288,200	~~52,035~~ 57,220	Building 12 Market Plaza Market Square Slipways Commons (western portion)	20th Street (new/central portion) 21st Street (new/eastern portion) 22nd Street (existing and new) Louisiana Street (new/southern portion) Maryland Street (new/northern portion)
		Building 12*		60,000	105,500		
	Illinois Parcels						
Phase 3 (2021-2023)	*28-Acre Site*	~~Parcel A,~~ Parcel F, Parcel G	436,100 / 505 units	~~288,200~~ 0	~~57,270~~ 35,000	Irish Hill Playground	Maryland Street (new/southern portion [continued from Phase 2]), and Louisiana Street (new/northern portion) [continued from Phase 2)
	Illinois Parcels	PKS	213,100 / 240 units		11,000		

Table 2.5 Continued~~Table 2.6 Continued~~

Phase	Project Site	Parcel or Building	Proposed Construction and Rehabilitation			Open Space	Roadways and Other Improvements
			Residential (gsf / No. of Residential Units)	Commercial (gsf)	RALI (gsf)		
Phase 4 (2024-2026)	*28-Acre Site*	Parcel B, Parcel E1, Parcel E3, Parcel E4, Parcel C1	378,600 / 436 units	~~526,350~~ 747,450	~~189,675~~ 206,730	Slipways Commons (eastern portion [continued from Phase 3]) Waterfront Terrace Waterfront Promenade (northern portion)	20th Street (western and eastern portions [continued from Phase 2]) 21st Street (eastern portion [continued from Phase 2]) 22nd Street (eastern portion [continued from Phase 2]) 20th Street Pump Station (new)
		Building 21*			10,200		
	Illinois Parcels	Parcel HDY1, Parcel HDY2	285,200 / 335 units		17,200		
Phase 5 (2027-2029)	*28-Acre Site*	Parcel H1, Parcel H2	477,050 / 547 units		40,700	Waterfront Promenade (southern portion [continued from Phase 4])	
	Illinois Parcels						
TOTAL			**2,630,000 / 3,025 units**	**1,102,250**	**479,980**		

Notes:
Phases shown are subject to change, but would occur within the maximum development ranges presented in the two scenarios.
* = denotes an existing building that would be rehabilitated under the Proposed Project.

Source: Forest City; Turnstone/SWCA

Table 2.6: Project Construction and Rehabilitation Phasing for the Maximum Commercial Scenario

Phase	Project Site	Parcel or Building	Proposed Construction and Rehabilitation			Open Space	Roadways and Other Improvements
			Residential (gsf / No. of Residential Units)	Commercial (gsf)	RALI (gsf)		
Phase 1 (2018-2019)	*28-Acre Site*						
	Illinois Parcels	PKN	260,500 / 300 units	6,600	6,600	20th Street Plaza	Michigan Street (new) ~~20th Street Pump Station (new)~~
Phase 2 (2018-2020)	*28-Acre Site*	Parcel A, Parcel D, Parcel E2, Building 2*, Parcel C2	~~389,400 / 445 units~~ 578,400 / 663 units	348,200	~~97,400~~ 110,000	Building 12 Market Plaza Market Square Slipways Commons (western portion)	20th Street (new/central portion) 22nd Street (existing and new) Maryland Street (new/northern portions)
		Building 12*			52,720		
	Illinois Parcels	~~PKS~~	~~215,500 / 245 units~~		~~11,000~~		
Phase 3 (2021-2023)	*28-Acre Site*	~~Parcel C2,~~ Parcel E1, Parcel F, Parcel G	~~325,350 / 375 units~~ 136,350 / 157 units	442,200	~~57,620~~ 45,020	Irish Hill Playground	21st Street (new/eastern portion) Louisiana Street (new) Maryland Street (new/southern portion [continued from Phase 2])
	Illinois Parcels	Parcel HDY1, Parcel HDY2, PKS	215,500 / 245 units	231,700	~~28,135~~ 39,135		

Table 2.6 Continued~~Table 2.6 Continued~~

Phase	Project Site	Parcel or Building	Proposed Construction and Rehabilitation			Open Space	Roadways and Other Improvements
			Residential (gsf / No. of Residential Units)	Commercial (gsf)	RALI (gsf)		
Phase 4 (2024-2026)	*28-Acre Site*	Parcel B, Parcel C1, Parcel E3,	242,250 / 280 units	747,450	85,505	Slipways Commons (eastern portion [continued from Phase 2]) Waterfront Terrace Waterfront Promenade (northern portion)	20th Street (western and eastern portions [continued from Phase 2]) 21st Street (western portion [continued from Phase 3]) 22nd Street (eastern portion [continued from Phase 2]) 20th Street Pump Station (new)
		Building 21*, Parcel E4			110,400		
	Illinois Parcels						
Phase 5 (2027-2029)	*28-Acre Site*	Parcel H1, Parcel H2		486,200	37,570	Waterfront Promenade (southern portion [continued from Phase 4])	
	Illinois Parcels						
Total			**1,433,000 / 1,645 units**	**2,262,350**	**486,950**		

Notes:

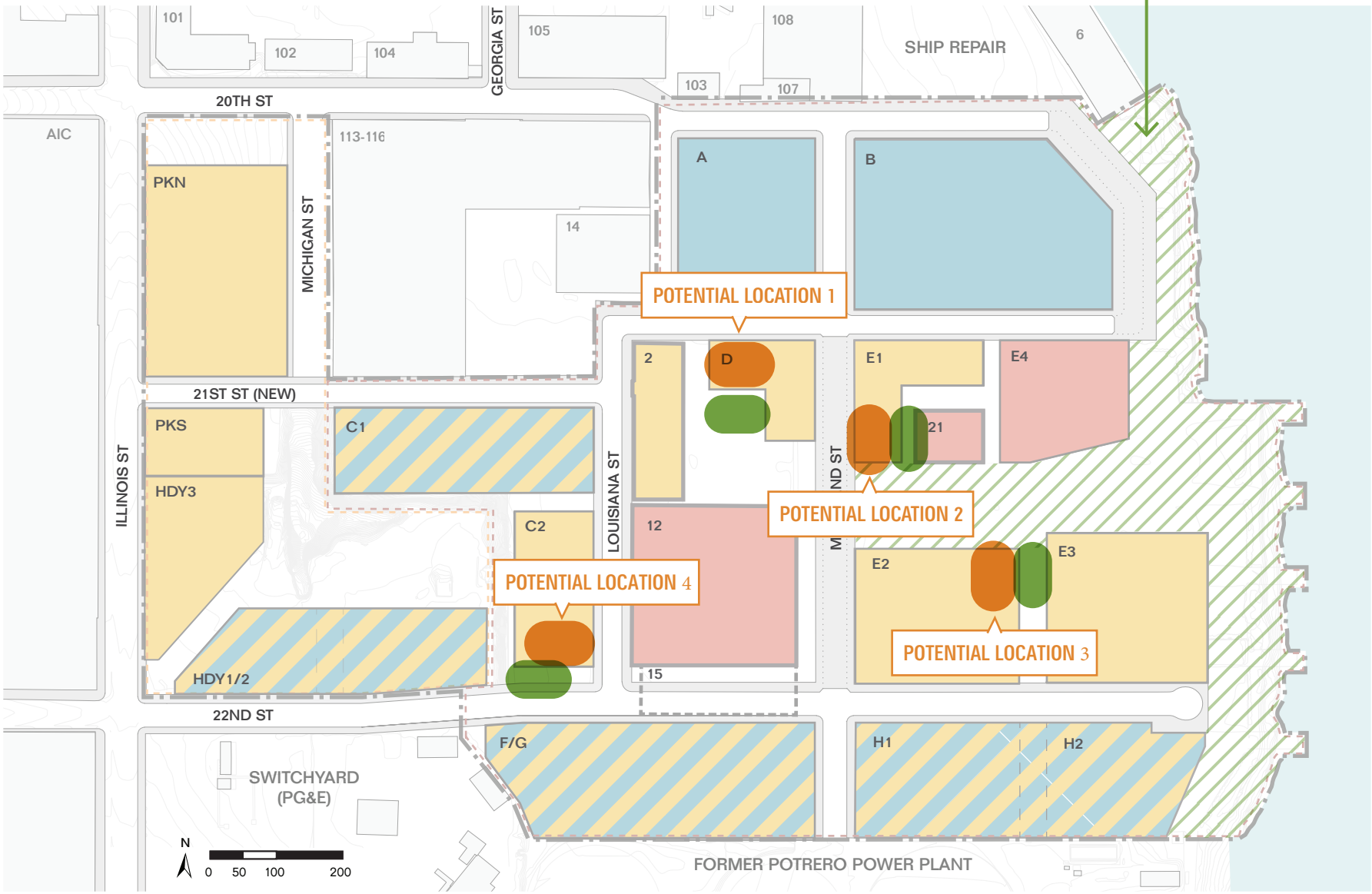
Phases shown are subject to change, but would occur within the maximum development ranges presented in the two scenarios.

* = denotes an existing building that would be rehabilitated under the Proposed Project.

Source: Forest City; Turnstone/SW

ATTACHMENT B

DDA Exhibit B7
Map of Potential Childcare Locations



PIER 70 SUD
LAND USE & CHILD CARE LOCATIONS

SITELAB urban studio 01/11/2018

SITE BOUNDARIES
- Pier 70 SUD
- 28-Acre Site
- Illinois Parcels

PREDOMINANT LAND USE
- Commercial Office
- Residential
- Retail, Arts, and Light Industrial

CHILD CARE AMENITIES
- Potential Indoor Location
- Potential Outdoor Space

FEHR PEERS

February 12, 2018

Ms. Julie Barlow
SWCA
330 Townsend Street, Suite 216
San Francisco, CA 94107

Subject: Transportation Assessment for Pier 70 SUD Revisions

Dear Julie:

We understand that Forest City is proposing some relatively minor refinements to the Pier 70 project and that additional environmental analysis must be performed to determine whether those refinements alter the conclusions related to transportation from the recently-certified EIR. Specifically, the refinements include:

- Defining a land use program between the range of the "bookend" scenarios evaluated in the EIR, and slightly revising the order of development of individual parcels from what was identified in the EIR
- Using some of the approved commercial/RALI space as child care facilities
- Constructing the project's pump station in EIR Phase 4 instead of EIR Phase 1

A discussion of the potential effects of each of the three refinements is included below.

Changes to Block Construction Phasing

The Pier 70 Final EIR (FEIR) evaluated the potential impacts of two primary development scenarios: a Maximum Commercial Scenario and a Maximum Residential Scenario. For each scenario, the FEIR assumed that certain parcels (and thus certain amounts of each land use) would be developed in each EIR phase.

We understand that the proposed modifications include swapping some blocks, such that some new blocks would be constructed earlier and others would be constructed later than originally anticipated in the EIR. This would also result in more commercial and slightly more RALI uses in Phase 4 than previously contemplated. Specifically, under the Maximum Residential Scenario, Parcel C1 would move from Phase 2 to Phase 4 and Parcel A would move from Phase 3 to Phase 2.

This would result in slightly more commercial and retail/arts/light industrial (RALI) development in Phase 2 than previously contemplated, and substantially less in Phase 3. Cumulative amounts of land constructed in Phases 1 and 5 would be identical to what was assumed in the FEIR.

Under the Maximum Commercial Scenario, Parcel PKS would move from Phase 2 to Phase 3, and Parcel C2 would move from Phase 3 to Phase 2. This would result in slightly fewer residential units and slightly less RALI space in Phase 2 than previously contemplated. This would also result in more residential units and slightly less RALI uses in Phase 3 than previously contemplated. Phases 1, 4, and 5 would each have the same cumulative amount of development as previously contemplated.

Overall, while there may be slight differences in terms of travel demand in the interim years, at full buildout, the project would be identical to what the FEIR evaluated. Because the FEIR evaluated the potential impacts of the project under buildout conditions, and the buildout conditions with the proposed phasing modifications are expected to be identical to what was analyzed in the FEIR, the proposed phasing modifications would not result in any new or substantially more severe significant impacts than what was analyzed in the FEIR.

Child Care Facilities

The Maximum Commercial Scenario included 486,950 gross square feet (GSF) of Retail/Arts/Light Industrial (RALI) space (among other uses) and the Maximum Residential Scenario included 479,980 GSF of RALI space (among other uses).

We understand the proposed modifications include constructing an approximately 2,500 GSF childcare facility, with an additional 1,250 GSF of outdoor play space. Although only one facility would be constructed, four potential sites have been identified: Parcel C2, Parcel D, Parcel E1, and Parcel E2. The childcare facilities would be part of the previously-approved RALI space.

A child care facility would likely serve residents and employees at (or very close to) the Pier 70 site. As such, it may increase vehicle trips somewhat in the immediate vicinity of the center, but it would not likely generate new vehicle or transit trips to the overall project area; instead, any vehicle trips or transit trips that travel to the child care facility would likely be trips that would already be coming to the commercial uses in the site or leaving the residential uses at the site. And, to the extent a childcare facility would replace other commercial uses already approved at the site, the child care facility may actually serve to reduce vehicle or transit trips to the site. Thus, the proposed

modifications with respect to the childcare facility would not affect the conclusions in the FEIR related to travel demand (e.g., VMT, transit crowding, or transit delay caused by vehicle congestion).

The construction of childcare facilities would not physically alter any of the proposed transportation facilities, such as sidewalks or bicycle facilities. Therefore, they would not affect the FEIR conclusions with respect to bicycle and pedestrian safety and access.

A childcare facility may require more on-street designated passenger loading areas than would be required by the previously approved RALI space it is intended to replace. While it is likely that a specific proposal for a childcare facility would be accompanied by a proposal for handling on-street passenger loading, its adequacy is unknown at this time, and there is potential that passenger loading could create hazards due to inadequate facilities. The EIR identified a significant loading impact at the site in Impact TR-12 related to commercial truck loading. Mitigation Measure M-TR-12B called for monitoring throughout the site and the conversion of on-street public parking to commercial vehicle loading spaces if monitoring indicates inadequate loading supply. Mitigation Measure M-TR-12B should be revised, as follows, to reference conversion of on-street parking spaces to commercial or passenger loading spaces, as follows:

> **Mitigation Measure M-TR-12B: Monitor loading activity and convert general purpose on-street parking spaces to commercial or passenger loading spaces, as needed.** After completion of the first phase of the Proposed Project, and prior to approval of each subsequent phase, the project sponsors shall conduct a study of utilization of on- and off-street commercial loading spaces, and of passenger loading activities adjacent to childcare use. The methodology for the study shall be reviewed and approved by the Planning Department prior to completion. If the result of the study indicates that fewer than 15 percent of the commercial loading spaces are available during the peak loading period, or that passenger loading activities at the childcare use routinely obstruct travel lanes within the site, the project sponsors shall incorporate measures to convert existing or proposed general purpose on-street parking spaces to commercial or passenger ~~parking~~ loading spaces in addition to the required off-street spaces.

With modifications to M-TR-12B, the loading impact would remain significant because it is uncertain as to whether the mitigation measure would adequately address the issue. However,

overall, the impact would not likely be substantially greater than what was analyzed in the FIER because it would be at one location internal to the site.

Overall, the proposed revisions with respect to a childcare facility would not create any new or substantially more severe impacts than what was described in the FEIR.

Pump Station Phasing

The FEIR analysis only examined transportation impacts at buildout of the Project. However, the FEIR did identify that a proposed pump station would be constructed in Phase 1 of the FEIR phasing under both the Maximum Commercial and Maximum Residential scenarios. The pump station was forecast to generate a negligible amount of peak hour vehicle trips once constructed and its overall effect on transportation conditions was forecast to be very minor.

We understand the proposed modifications would postpone the pump station from Phase 1 to Phase 4 in either scenario. Impacts related to travel demand and site design would not be affected because conditions at buildout of the project (the only conditions analyzed in the FEIR for operation of the proposed project) would be identical with or without the proposed modifications related to the pump station. The only potential change in impacts would be to construction impacts. Constructing the pump station in Phase 4 as opposed to Phase 1 would not affect the total amount of construction trips to the site. While it may slightly increase the amount of construction activity in Phase 4 and slightly decrease the amount of construction activity in Phase 1, the traffic associated with the construction of the pump station is likely relatively small and the change in scheduling would not create any new significant construction impacts.

Overall, the postponement of construction of the Pump Station from Phase 1 to Phase 4 would not create any new or substantially more severe significant transportation impacts than those identified in the FIER.

We hope you have found this information helpful. As always, please do not hesitate to call with any questions.

Sincerely,
FEHR & PEERS

Chris Mitchell, PE
Principal

SF13-0722

Orion
#800A
Environmental
Associates

550 Kearny Street, Suite

San Francisco, CA 94108
Tel. (415) 951-9503

Noise Technical Memorandum (Final)

Date February 13, 2018

To Julie Barlow, SWCA

From Valerie Chew Geier, Senior Associate

Subject Pier 70 Mixed-Use District Project – Supplemental Analysis of Minor Changes

PURPOSE

This technical memorandum (TM) evaluates noise impacts associated with minor changes to the Proposed Project. These changes relate to: (1) four possible locations for child care use; (2) delaying construction of the pump station from Phase 1 to Phase 4; and (3) changes in phasing of various parcels. A supplemental technical memorandum was prepared in August 2017 and it evaluated noise impacts associated with changing construction of the proposed pump station from Phase 1 to each subsequent phase (Phases 2 though 5). under various construction scenarios. This TM incorporates the conclusions made in that August 2017 memo for construction of the pump station in Phase 4 but updates them to consider the effects of other proposed phasing changes.

DESCRIPTION OF MINOR CHANGES

FC Pier 70, LLC (Forest City) and the Port propose three changes to the Project Description section of the Pier 70 Mixed-Use District Project Final Environmental Impact Report (FEIR). The project changes include:

Phasing Assumption Revisions

The FEIR assumed that certain parcels would be developed in each EIR Phase. Forest City's first major phase submittal proposes development on Parcels A, C2, D, E2, and Buildings 2 and 12. Under this approach, the major phase proposes an exchange of parcels in EIR Phase 2, as follows:

- Under Maximum Residential Scenario: Remove Parcel C1 from Phase 2 and move it to Phase 4. Remove Parcel A from Phase 3 and move it to Phase 2.
- Under Maximum Commercial Scenario: Remove Parcel PKS from Phase 2 and move it to Phase 3. Remove Parcel C2 from Phase 3 and move it to Phase 2.

Forest City has confirmed that this change would not require different or additional construction equipment.

20th Street Pump Station Phasing Change

Construction of the pump station would change from Phase 1, as analyzed in the FEIR, to Phase 4. Forest City has confirmed that this change would not require different or additional construction equipment.

Child Care Use Location

Forest City plans to add a child care facility in one of four potential child care locations. The potential locations would be designated on residential parcels on the project site. (Only one child care facility is anticipated, but that precise location will be determined at a later date.) Under the Maximum Residential Scenario, the child care facility would be constructed during Phase 2 if it is located on Parcels C2, D, or E2 or during Phase 4 if located on Parcel E1. Under the Maximum Commercial Scenario, the child care facility would be constructed during Phase 2 if it is located on Parcels C2, D, or E2 or during Phase 3 if located on Parcel E1. The childcare facility would have indoor (2,500 sf) and outdoor (1,2500 sf) components. Under the Pier 70 SUD Design for Development, child care is permitted as an institutional use on all parcels within the project site. All potential child care locations are within parcels where residential use was analyzed in the FEIR. Forest City has confirmed that this change would not require different or additional construction equipment.

SUPPLEMENTAL NOISE IMPACT EVALUATION

Project Construction

Impact NO-1: Construction of the Proposed Project would expose people to or generate noise levels in excess of standards in the Noise Ordinance (Article 29 of the San Francisco Police Code) or applicable standards of other agencies. ***(No Change in FEIR Determination of Less than Significant with Mitigation)***

The FEIR determined that operation of concrete saws, a rock/concrete crusher, or any other equipment not exempt from the Police Code that exceeds 86 dBA (L_{eq}) at 50 feet would be a significant noise impact. However, implementation of noise control measures as specified in Mitigation Measure M-NO-1: Construction Noise Control Plan would ensure that all construction equipment noise subject to the noise ordinance would be maintained at or below the 86-dBA limit and the potential construction-related noise impacts on off-site residents and future on-site residents affected by later construction phases would be reduced to a less-than-significant level.

Proposed phasing changes would alter the timing of construction of proposed development on certain parcels but would not alter the types of equipment used in construction or locations where this equipment would operate. Therefore, proposed phasing changes would not alter the potential to exceed the 86-dBA threshold and this impact would continue to be significant but mitigated to a less-than-significant level with implementation of Mitigation Measure M-NO-1: Construction Noise Control Plan.

Construction of the proposed pump station during Phase 4 would have similar construction-related noise impacts that were identified in the FEIR under Impact NO-1. However, the delay in construction of the pump station until Phase 4 could result in simultaneous operation of construction equipment at the pump station site and the adjacent Parcel B1/B2 under both the Maximum Residential and Maximum Commercial scenarios. Simultaneous operation of pile drivers, other impact equipment, or concrete saws associated with

Phase 4 construction, as well as construction of the proposed pump station could generate a combined noise level of 89 to 91 dBA at 50 feet (as indicated in the FEIR), which would exceed the 86-dBA ordinance limit. Therefore, Impact NO-1 would continue to be significant but mitigated to a less-than-significant level with implementation of Mitigation Measure M-NO-1: Construction Noise Control Plan.

The proposed child care facility would be developed as part of construction of Parcels C2, D, E1, or E2 and would utilize the same types of construction equipment identified in the FEIR for these parcels. Therefore, operation of certain types of construction equipment would still have the potential to exceed the 86-dBA threshold and this impact would continue to be significant but mitigated to a less-than-significant level with implementation of Mitigation Measure M-NO-1: Construction Noise Control Plan.

Impact NO-2: Construction of the Proposed Project would cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. ***(No Change in FEIR Determination of Significant and Unavoidable with Mitigation)***

As indicated in the FEIR, construction activities would occur intermittently on the project site over the 11-year construction duration and could expose nearby sensitive receptors to temporary increases in noise levels substantially in excess of ambient levels. Simultaneous operation of the noisiest pieces of equipment associated with demolition (mounted impact hammer or concrete saw) and other construction activities (excavator) would result maximum combined noise levels that would exceed the average "Ambient+10 dBA" thresholds of 74 dBA (L_{dn}) or 71 dBA (daytime L_{eq}) at the closest on-site residential receptors, a significant noise impact. With implementation of noise controls during all construction phases (specified in Mitigation Measure M-NO-1) as well as implementation of noise controls during pile driving (specified in Mitigation Measure M-NO-2), the potential for noise disturbance of future on-site residents would be reduced. However, even with implementation of these noise controls, the potential would still exist that combined noise levels from simultaneous operation of the noisiest types of construction equipment could still exceed the Ambient+10 dBA threshold, and therefore, construction-related noise impacts on future on-site residential receptors would continue to be significant and unavoidable with mitigation.

Proposed phasing changes would alter the timing of construction of proposed development on certain parcels such that different residential receptors would be subject to construction-related noise increases. However, the overall impact on future on-site residential receptors would remain the same. Under the Maximum Residential Scenario, moving up Parcel A construction from Phase 3 to Phase 2 would reduce noise impacts to Phase 2 residential receptors on Parcels D and Building 2. However, delaying Parcel C1 construction from Phase 2 to Phase 4 would increase noise impacts on Phase 2 and 3 residential receptors on Parcel PKS, Parcel C2 and Building 2. Under the Maximum Commercial Scenario, delaying Parcel PKS construction from Phase 2 to Phase 3 while moving up construction of Parcel C2 from Phase 3 to Phase 2 would shift the noise impacts from Phase 3 construction of Parcels HDY and C1 from residential receptors on Parcel PKS to residential receptors on Parcel C2. Therefore, construction-related noise impacts on future on-site residential receptors would continue to be significant and unavoidable with implementation of Mitigation Measure M-NO-1: Construction Noise Control Plan and Mitigation Measure M-NO-2: Noise Control Measures During Pile Driving.

Construction of the proposed pump station during Phase 4 would have construction-related noise impacts similar to those that were identified in the FEIR under Impact NO-1. However, the delay in construction of the pump station until Phase 4 would alter the number and proximity of workers and residents subject to its construction noise. Under both the Maximum Residential and Maximum Commercial scenarios, the Phase 2 commercial building on Parcel A would be located as close as 100 feet to the southwest while Phase 2/3 residences on Parcels D and E1 would be located a minimum of 400 feet to the southwest and south. The proposed delay could also result in simultaneous operation of construction equipment at the pump station site and the adjacent Parcel B1/B2 during Phase 4 under both the Maximum Residential and Maximum Commercial scenarios. Simultaneous operation of pile drivers, other impact equipment, or concrete saws associated with Phase 4 construction, as well as construction of the proposed pump station could generate a maximum combined L_{eq} noise level of 83 to 85 dBA (L_{eq}) at the Phase 2 commercial building on Parcel A and 71 to 73 dBA (L_{eq}) at the closest Phase 2/3 residences on Parcels D and E1, which could exceed the average "Ambient+10 dBA" threshold of 71 dBA (L_{eq}) during the day, and a significant noise impact on future on-site receptors. This impact is the same as identified in the FEIR (on pp. 4.F.39-4.F.40), although in a different location on the project site. With implementation of Mitigation Measure M-NO-1: Construction Noise Control Plan and Mitigation Measure M-NO-2: Noise Control Measures During Pile Driving, the potential for noise disturbance of future on-site residents would be reduced but not necessarily to a less-than-significant level. Therefore, this impact would continue to be significant and unavoidable with mitigation.

The proposed child care facility would be developed as part of construction of Parcels C2, D, E1, or E2 and would utilize the same types of construction equipment identified in the FEIR for these parcels. Therefore, simultaneous operation of the noisiest pieces of equipment would still have the potential to exceed the average "Ambient+10 dBA" thresholds as construction on any of these parcels. Under both the Maximum Residential and Maximum Commercial scenarios, construction of the child care facility on Parcels D or E2 would reduce the potential for noise impacts because construction would occur during Phase 2, prior to construction of any adjacent residential receptors. However, construction of this facility on Parcels C2 or E1 under either scenario would occur after residential development occurs on adjacent parcels (Building 2; Parcel D; and Parcel E2), resulting in a temporary significant noise impact on these future on-site receptors. Although implementation of noise controls during all construction phases (specified in Mitigation Measure M-NO-1) as well as implementation of noise controls during pile driving (specified in Mitigation Measure M-NO-2) would reduce the potential for noise disturbance if the child care facility were constructed on Parcels D or E2, construction-related noise impacts on future on-site residential receptors would continue to be significant and unavoidable with mitigation if the child care facility is located on Parcels C2 or E1.

Impact NO-3: Construction of the Proposed Project would expose people and structures to or generate excessive groundborne vibration levels. ***(No Change in FEIR Determination of Less than Significant with Mitigation)***

Vibration from impact or vibratory pile-driving activities could result in cosmetic damage to Proposed Project structures and historic Buildings 113 and 114 if these activities respectively occur within 70 feet and 160 feet, a significant vibration impact. However, implementation of measures such as evaluating

specific potentially historic buildings, establishing and enforcing appropriate vibration limits for the affected structures based on site-specific conditions, and monitoring vibration levels at structures of concern (as specified in Mitigation Measure M-NO-3: Vibration Control Measures During Construction) would be adequate to reduce the potential for cosmetic damage to adjacent project and historic structures to a less-than-significant level.

Proposed phasing changes would involve changes in timing and not location, and therefore, the proximity of vibration sources to historic Buildings 113 and 114 would not change. Proposed phasing changes would not increase the potential for cosmetic damage to these structures. Therefore, the potential for cosmetic damage would continue to be significant but mitigated to less than significant with implementation of Mitigation Measure M-NO-3: Vibration Control Measures During Construction.

The delay in constructing the pump station until Phase 4 combined with proposed phasing changes would increase the proximity of pump station construction activities to Proposed Project structures. With proposed phasing changes, commercial development on Parcel A would be completed in Phase 2 under the Maximum Residential Scenario and was already planned to occur in Phase 2 under the Maximum Commercial Scenario. It is expected that sufficient setbacks could be maintained between the pump station site and the structure(s) on Parcel A. Therefore, the potential for cosmetic damage would continue to be significant but mitigated to less than significant with implementation of Mitigation Measure M-NO-3: Vibration Control Measures During Construction.

The proposed child care facility would be developed as part of construction of Parcels C2, D, E1, or E2 and would utilize the same types of construction equipment and techniques identified in the FEIR for these parcels. Since all four possible locations are more than 160 feet from historic Buildings 113 and 114, vibration associated with construction of the child care facility would not adversely affect these historic structures. However, there would continue to be a potential for vibration from impact or vibratory pile-driving activities to result in cosmetic damage to Proposed Project structures, a significant impact. However, this impact would continue to be reduced to a less-than-significant level with implementation of Mitigation Measure M-NO-3: Vibration Control Measures During Construction.

Project Operations

Impact NO-4: Operation of the Proposed Project would result in a substantial permanent increase in ambient noise levels in the immediate project vicinity, or permanently expose persons to noise levels in excess of standards in the San Francisco General Plan and San Francisco Noise Ordinance. ***(No Change in FEIR Determination of Less than Significant with Mitigation)***

The FEIR evaluated the potential for future permanent noise increases from a variety of noise sources (i.e., stationary equipment such as emergency generators, heating/ventilation/air conditioning systems, a below-grade wastewater pump station, future loading docks, trash bins, and outdoor activities in open space areas) that would be introduced by the Proposed Project. The FEIR determined that potential noise increases from operation of such noise sources would pose significant noise impacts on noise-sensitive receptors. Likewise, development of an outdoor play area as part of the proposed child care facility could cause localized noise increases and disturbance to any nearby future project residents. However, these

impacts would be reduced to a less-than-significant level with implementation of Mitigation Measure M-NO-4a: Stationary Equipment Noise Controls and Mitigation Measure M-NO-4b: Design of Future Noise-Generating Uses near Residential Uses.

Proposed phasing changes would involve changes in timing and not location. Therefore, the proximity of noise sources to noise-sensitive receptors would not change and the potential for exceedance of ordinance limits would remain the same. There would be no change in the FEIR's determination of less than significant with mitigation for this impact.

Operation of the proposed pump station after construction in Phase 4 would have the same operational noise impacts on adjacent existing industrial uses and proposed commercial and residential uses that were identified in the FEIR for Phase 1 (FEIR pp. 4.F.47-4.F.48). Therefore, potential noise impacts on these residential receptors would continue to be less than significant with mitigation.

Development of the proposed child care facility on Parcels D or E1 would place this facility a minimum of 400 feet from the pump station site. Operation of the pump station would generate 29 dBA (L_{eq} or L_{90}) at 400 feet, which would be well below the daytime ambient noise level at the proposed child care facility. If the facility were developed on the more distant Parcels C2 or E2, operational noise from the pump station would be even lower. Therefore, operation of the pump station would not adversely affect the proposed child care facility, a less-than-significant impact.

Impact NO-5: Operation of the Proposed Project would cause substantial permanent increases in ambient noise levels along some roadway segments in the project site vicinity. ***(No Change in FEIR Determination of Significant and Unavoidable with Mitigation)***

Operation of the Proposed Project would result in permanent increases in ambient noise levels, primarily through project-related increases in traffic. Of the 79 road segments examined, traffic noise increases on three road segments would exceed significance thresholds for traffic noise increases: (1) 20th Street (east of Third Street to east of Illinois Street), (2) 22nd Street (east of Tennessee Street to east of Illinois Street), and (3) Illinois Street (20th Street to south of 22nd Street). Even with implementation of transportation demand management measures (required in Air Quality Mitigation Measure M-AQ-1f: Transportation Demand Management), project-related noise increases on local streets in the project area would not be reduced to less-than-significant levels on these road segments. Therefore, the FEIR determined that traffic noise increases on these three road segments would be significant and unavoidable with mitigation.

In the FEIR, project-related traffic noise increases were estimated based on trip generation at buildout. While proposed phasing changes and delayed construction of the pump station until Phase 4 could slightly alter trip generation within each phase, these changes would not affect trip generation at buildout. Therefore, proposed phasing changes and delayed construction of the pump station would not alter estimated traffic noise increases (presented in FEIR Table 4.F.10, p. 4.F.52) and they would continue to be significant and unavoidable, even with implementation of Mitigation Measure M-AQ-1f: Transportation Demand Management.

Proposed development of a child care facility may increase vehicle trips somewhat in the immediate vicinity of the center, but it would not likely generate new vehicle or transit trips in the overall project

area. However, to the extent a child care facility would replace other commercial uses already approved at the site, the child care facility may actually serve to reduce vehicle or transit trips to the site compared to the Original Project. Therefore, operation of the proposed child care facility would not alter the FEIR's determination of significant and unavoidable with mitigation on the three identified road segments.

Impact NO-6: The Proposed Project's occupants would be substantially affected by future noise levels on the site. ***(No Change in FEIR Determination of Less than Significant with Mitigation)***

The FEIR determined that future noise levels would be Conditionally Acceptable at all project parcels designated for residential use, a significant impact. However, with incorporation of noise attenuation measures into the project design as necessary in order to meet the 45-dBA interior noise standard, as specified in Mitigation Measure M-NO-6: Design of Future Noise-Sensitive Uses, this impact would be reduced to a less-than-significant level. As indicated in Impact NO-5, proposed phasing changes and delayed construction of the pump station until Phase 4 could alter trip generation within each phase, but these changes would not affect trip generation at buildout. Since future traffic noise levels estimated for on-site roads are based on traffic volumes at buildout, proposed phasing changes and delayed construction of the pump station would not alter estimated future traffic noise levels and therefore, the compatibility of project occupants with future noise levels at project buildout would remain the same.

Proposed development of a child care facility would introduce a land use that was not specifically considered in the FEIR's noise compatibility evaluation. The City's Land Use Compatibility Chart for Community Noise (see Figure 4.F.3, FEIR p. 4.F.23) does not specify acceptable noise levels for child care facilities. However, noise levels up to 65 dBA (L_{dn}) are defined as Satisfactory/Acceptable for school classrooms, the use most similar to child care facilities. Above 65 dBA (L_{dn}), noise levels are considered Conditionally Acceptable. The proposed child care facility would be located on Parcels C2, D, E1, or E2. As indicated in Table 4.F.11: Noise Compatibility by Parcel - Maximum Residential Scenario (FEIR p. 4.F.61) and Table 4.F.12: Noise Compatibility by Parcel – Maximum Commercial Scenario (FEIR p. 4.F.65), future noise levels on these parcels were estimated to be as follows: 58-70 dBA (L_{dn}) on Parcel C2; 66-70 dBA (L_{dn}) on Parcel D; 66-69 dBA (L_{dn}) on Parcel E1; 66-69 dBA (L_{dn}) on Parcel E2. Since future noise levels at all four possible locations would exceed 65 dBA (L_{dn}), noise levels are considered Conditionally Acceptable for the proposed child care use. Therefore, this impact would continue to be significant but mitigated to a less-than-significant level with implementation of Mitigation Measure M-NO-6: Design of Future Noise-Sensitive Uses. This measure would require incorporation of noise attenuation measures into the project design as necessary in order to meet an interior noise limit of 45 dBA (L_{dn}), the level considered acceptable for residential uses. Reduction of interior noise levels for the child care facility to 45 dBA (L_{dn}) as well would be adequate to reduce the noise impact on the child care facility to a less-than-significant level.

Impact NO-7: The Proposed Project's special events would result in substantial periodic, temporary noise increases. ***(No Change in FEIR Determination of Less than Significant with Mitigation)***

Proposed phasing changes, delayed construction of the pump station, and development of a child care facility would not alter proposed special events. Therefore, the FEIR's discussion of special event-related

noise increases and determination that they would be significant but reduced to a less-than-significant level with implementation of Mitigation Measure M-NO-7: Noise Control Plan for Special Outdoor Amplified Sound would remain the same.

Impact NO-8: Operation of the Proposed Project would not expose people and structures to or generate excessive groundborne vibration or noise levels. ***(No Change in FEIR Determination of Less than Significant)***

Proposed phasing changes, delayed construction of the pump station, and development of a child care facility would have no effect on the Proposed Project's potential to generate excessive groundborne vibration or noise during project operation. Therefore, the FEIR's discussion and determination would remain the same (less than significant).

Impact C-NO-1: Construction of the Proposed Project combined with cumulative construction noise in the project area would not cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity during construction. ***(No Change in FEIR Determination of Less than Significant)***

The FEIR identified two cumulative projects where concurrent construction could cumulatively increase noise levels in the vicinity of the project site (the BAE Lease Renewal project, located immediately north of the 28-Acre Site and Crane Cove Park, located north of the 20th Street Historic Core project and BAE Lease Renewal project). The FEIR determined cumulative noise impacts associated with any overlapping construction would be less than significant due to the limited duration and scope of potential concurrent construction activities associated with these two cumulative projects (i.e., neither would involve the extended duration of construction and pile driving activities like those associated with project construction). Proposed phasing changes, delayed construction of the pump station, or development of a child care facility would not substantially alter the potential for overlap or concurrent construction with these two projects. Therefore, the FEIR's determination that cumulative construction-related impacts would be less than significant would remain the same.

Impact C-NO-2: Operation of the Proposed Project, in combination with other cumulative development would cause a substantial permanent increase in ambient noise levels in the project vicinity. ***(No Change in FEIR Determination of Significant and Unavoidable with Mitigation)***

In the FEIR, cumulative traffic noise increases were estimated based on the Proposed Project's trip generation at buildout. While proposed phasing changes and delayed construction of the pump station until Phase 4 could alter trip generation within each phase, these changes would not affect trip generation at buildout. Therefore, proposed phasing changes and delayed construction of the pump station would not alter the Proposed Project's cumulatively considerable contribution to 2040 cumulative traffic noise increases, and this impact would continue to be significant and unavoidable, even with implementation of Mitigation Measure M-AQ-1f: Transportation Demand Management.

Proposed development of a child care facility may increase vehicle trips somewhat in the immediate vicinity of the center, which could in turn slightly increase the Proposed Project's contribution to 2040 cumulative traffic noise increases along on-site roads. However, such small increases would not

substantially alter estimated future traffic noise levels along on-site roads. However, such small increases would not substantially alter estimated future traffic noise levels along on-site roads. In addition, to the extent a child care facility would replace other commercial uses already approved at the site, the child care facility may reduce vehicle or transit trips to the site compared to the Original Project. Since the proposed child care facility would not likely generate new vehicle or transit trips in the overall project area, and could reduce such impacts, the Proposed Project's contribution to identified significant noise increases on off-site roads and the FEIR's determination of significant and unavoidable with mitigation would remain unchanged.

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Technical memorandum

date	February 6, 2018
to	Julie Barlow, Senior Planner, SCWA
cc	
from	Chris Sanchez, Senior Technical Associate, ESA
subject	Air Quality Impact Implications of Proposed Changes to Pier 70 Project

This memorandum summarizes the implications of proposed changes to the Pier 70 Project with regard to air quality impacts identified in the Draft Environmental Impact Report (Draft EIR) for the proposed project.

Proposed Project Changes

FC Pier 70, LLC ("FC") proposes three changes to the Project Description section of the Pier 70 Mixed-Use District Project Environmental Impact Report ("EIR"). The project changes include:

Phasing Assumptions

The EIR assumed that certain parcels would be developed in each EIR Phase. FC's major phase submittal proposes development on Parcels A, C2, D, E2, and Buildings 2 and 12. Under this approach, the major phase proposes the following:

Pump Station

Construction of the pump station would change from Phase 1 to Phase 4. FC has confirmed that this change would not require different or additional construction equipment.

Child Care Use

Four potential child care locations are proposed to be designated on residential or flex residential/commercial use parcels on the Project site. Under the Pier 70 SUD Design for Development, child care is permitted as an institutional use on all parcels within the Project site.

Implications of Construction Phasing Assumptions and the Pump Station Construction in Phase 4 with Respect to Emissions of Criteria Air Pollutants

To quantify the changes in phasing under the new project revisions an analysis using the latest version of CalEEMod (2016.3.2) air quality was undertaken. Because the model has been updated twice in the intervening years between the original analysis and the present, a comparative analysis was prepared solely using the latest version of the model to examine only those construction phases for which there would be a change under the Modified Project as compared to the Original Project analyzed in the FEIR (FEIR pp. 4.G.30-4.G.57).

Maximum Residential Scenario

Phase 2 in the Maximum Residential Scenario would have a marginal increase in commercial development, exchanging development phases of parcel C1 for Parcel A under proposed revisions as compared to the proposed Project in the Draft EIR. Project criteria pollutant emissions with these Project phasing revisions are presented in Table 1 and compared with the emissions estimated in the Draft EIR. These changes would not result in a change in the significance determination of construction-related criteria air pollutant impacts (Less than significant with Mitigation) nor the implementation phasing of Mitigation Measures identified in the Draft EIR.

Phase 3 in the Maximum Residential Scenario would have a reduction in commercial developed square footage under proposed revisions as compared to the proposed Project in the Draft EIR. Unmitigated Project criteria pollutant emissions with these Project phasing revisions are presented in Table 2 and compared with the emissions estimated in the Draft EIR. Similarly, Table 3 presents the emissions with mitigation that would be implemented beginning in Phase 3 of the project. These changes would not result in a change in the significance determination of construction-related criteria air pollutant impacts (Less than significant with Mitigation) nor the implementation phasing of Mitigation Measures identified in the Draft EIR.

Phase 4 in the Maximum Residential Scenario would add Parcel C1 commercial development and the new pump station (about 3,000 sf) resulting in an overall addition of 235,155 sf of commercial and the 3 ksf pump station to the phase under proposed revisions as compared to the proposed Project in the Draft EIR. Unmitigated Project criteria pollutant emissions with these Project phasing revisions are presented in Table 4 and compared with the emissions estimated in the Draft EIR. Similarly, Table 5 presents the emissions with mitigation that would be implemented beginning in Phase 3 of the project. These changes would not result in a change in the significance determination of construction-related criteria air pollutant impacts (Less than significant with Mitigation) nor the implementation phasing of Mitigation Measures identified in the Draft EIR.

Table 1: Unmitigated Average Daily Emissions for the Maximum Residential Scenario During Construction of Phase 2

	Average Daily Emissions (lb/day)			
	ROG	**NOx**	**PM_{10}**	**$PM_{2.5}$**
Phase 1 and 2 Construction Draft EIR	**22**	**42**	**1.9**	**1.8**
Significance Threshold	54	54	82	54
Above Threshold?	No	No	No	No
Phase 1 and 2 Construction with Project Revisions[a]	**23**	**43**	**1.9**	**1.8**
Significance Threshold	54	54	82	54
Above Threshold?	No	No	No	No

a These emissions were estimated using CalEEMod version 2016.3.2. This comparative analysis was necessary because the newest version of CalEEMod is not compatible with the earlier version used for the Draft EIR. Consequently, the net change between construction under the proposed revisions as compared to the proposed Project in the Draft EIR was conducted using the same analysis tool to determine the incremental change. This increment was then added or subtracted, as appropriate, to the values reported in the Draft EIR.

Table 2: Unmitigated Average Daily Emissions for the Maximum Residential Scenario During Construction of Phase 3

	Average Daily Emissions (lb/day)			
	ROG	**NOx**	**PM_{10}**	**$PM_{2.5}$**
Phase 3 Construction Draft EIR	21	28	1.2	1.1
Phases 1 and 2 Operation Draft EIR	65	47	29	9.5
Phase 3 Total Draft EIR	**86**	**75**	**31**	**11**
Significance Threshold	54	54	82	54
Above Threshold?	**Yes**	**Yes**	No	No
Phase 3 Construction with Project Revisions	17	27	1.3	1.2
Phases 1 and 2 Operation Draft EIR	65	47	29	9.5
Phase 3 Total with Project Revisions	**82**	**74**	**31**	**11**
Significance Threshold	54	54	82	54
Above Threshold?	**Yes**	**Yes**	No	No

Table 3: Mitigated Average Daily Emissions for the Maximum Residential Scenario During Construction in Phase 3

	Average Daily Emissions (lb/day)			
	ROG	**NOx**	**PM_{10}**	**$PM_{2.5}$**
Phase 3 Construction Draft EIR	19	10	0.21	0.20
Phases 1 and 2 Operation Draft EIR	53	37	21	7.1
Phase 3 Total Draft EIR	**72**	**47**	**21**	**7.1**
Significance Threshold	54	54	82	54
Above Threshold?	**Yes**	No	No	No
Phase 3 Construction with Project Revisions	15	9	0.32	0.30
Phases 1 and 2 Operation Draft EIR	53	37	21	7.1
Phase 3 Total with Project Revisions	**68**	**46**	**21**	**7.4**
Significance Threshold	54	54	82	54
Above Threshold?	**Yes**	No	No	No

Table 4: Unmitigated Average Daily Emissions for the Maximum Residential Scenario with Pump Station During Construction in Phase 4

	Average Daily Emissions (lb/day)			
	ROG	**NOx**	**PM_{10}**	**$PM_{2.5}$**
Phase 4 Construction Draft EIR	25	24	0.9	0.9
Phases 1, 2, and 3 Operation Draft EIR	102	64	49	16
Phase 4 Total Draft EIR	**127**	**88**	**50**	**17**
Significance Threshold	54	54	82	54
Above Threshold?	**Yes**	**Yes**	No	No
Phase 4 Construction with Project Phasing Revisions and Pump Station	28	27	1.8	1.6
Phases 1, 2, and 3 Operation Draft EIR	102	64	49	16
Phase 4 Total with Project Phasing Revisions and Pump Station	**130**	**91**	**50**	**18**
Significance Threshold	54	54	82	54
Above Threshold?	**Yes**	**Yes**	No	No

Table 5: Mitigated Average Daily Emissions for the Maximum Residential Scenario with Pump Station During Construction in Phase 4

	Average Daily Emissions (lb/day)			
	ROG	**NOx**	**PM_{10}**	**$PM_{2.5}$**
Phase 4 Construction Draft EIR	23	11	0.25	0.24
Phases 1, 2, and 3 Operation Draft EIR	93	57	42	14
Phase 4 Total Draft EIR	**116**	**68**	**42**	**14**
Significance Threshold	54	54	82	54
Above Threshold?	**Yes**	**Yes**	No	No
Phase 4 Construction with Project Phasing Revisions and Pump Station	26	13	0.27	0.25
Phases 1, 2, and 3 Operation Draft EIR	93	57	42	14
Phase 4 Total with Project Phasing Revisions and Pump Station	**119**	**70**	**42**	**14**
Significance Threshold	54	54	82	54
Above Threshold?	**Yes**	**Yes**	No	No

Maximum Commercial Scenario

Phase 2 in the Maximum Commercial Scenario would have an increase in residential and RALI development, constructing parcel C2 in Phase 2 instead of Phase 3. Additionally, parcel PKS would be substituted from Phase 2 to Phase 3. Project criteria pollutant emissions with these Project phasing revisions are presented in Table 6 and compared with the emissions estimated in the Draft EIR. These changes would not result in a change in the significance determination of construction-related criteria air pollutant impacts (Less than significant with Mitigation) nor the implementation phasing of Mitigation Measures identified in the Draft EIR.

Phase 3 would add Parcel PKS previously in Phase 2. Project criteria pollutant emissions with these Project phasing revisions are presented in Table 7 and compared with the emissions estimated in the Draft EIR. Similarly, Table 8 presents the emissions with mitigation that would be implemented beginning in Phase 3 of the project. These changes would not result in a change in the significance determination of construction-related criteria air pollutant impacts (Less than significant with Mitigation) nor the implementation phasing of Mitigation Measures identified in the Draft EIR.

The sole change to Phase 4 construction of the Maximum Commercial Scenario would be the addition of the 3,000 SF pump station. Project criteria pollutant emissions with construction of the pump station are presented in Table 9 and compared with the emissions estimated in the Draft EIR. Similarly, Table 10 presents the emissions with mitigation that would be implemented beginning in Phase 3 of the project. This change would not result in a change in the significance determination of construction-related criteria air pollutant impacts (Less than significant with Mitigation) nor the implementation phasing of Mitigation Measures identified in the Draft EIR.

Table 6: Unmitigated Average Daily Emissions for the Maximum Commercial Scenario During Construction in Phase 2

	Average Daily Emissions (lb/day)			
	ROG	**NOx**	**PM_{10}**	**$PM_{2.5}$**
Phase 1 and 2 Construction Draft EIR	**24**	**42**	**1.9**	**1.8**
Significance Threshold	54	54	82	54
Above Threshold?	No	No	No	No
Phase 1 and 2 Construction with Project phasing revisions	**23**	**42**	**1.9**	**1.8**
Significance Threshold	54	54	82	54
Above Threshold?	No	No	No	No

Table 7: Unmitigated Average Daily Emissions for the Maximum Commercial Scenario During Construction in Phase 3

	Average Daily Emissions (lb/day)			
	ROG	**NOx**	**PM_{10}**	**$PM_{2.5}$**
Phase 3 Construction Draft EIR	20	28	1.2	1.1
Phases 1 and 2 Operation Draft EIR	70	49	32	10
Phase 3 Total Draft EIR	**90**	**77**	**33**	**11**
Significance Threshold	54	54	82	54
Above Threshold?	**Yes**	**Yes**	No	No
Phase 3 Construction with Project phasing revisions	21	30	1.3	1.2
Phases 1 and 2 Operation Draft EIR	70	49	32	10
Phase 3 Total with Project phasing revisions	**91**	**80**	**33**	**11**
Significance Threshold	54	54	82	54
Above Threshold?	**Yes**	**Yes**	No	No

Table 8: Mitigated Average Daily Emissions for the Maximum Commercial Scenario During Construction in Phase 3

	Average Daily Emissions (lb/day)			
	ROG	**NOx**	**PM_{10}**	**$PM_{2.5}$**
Phase 3 Construction Draft EIR	19	11	0.22	0.21
Phases 1 and 2 Operation Draft EIR	63	43	27	8.8
Phase 3 Total Draft EIR	**82**	**54**	**27**	**9.0**
Significance Threshold	54	54	82	54
Above Threshold?	**Yes**	**Yes**	No	No
Phase 3 Construction with Project phasing revisions	20	12	0.25	0.23
Phases 1 and 2 Operation Draft EIR	63	43	27	8.8
Phase 3 Total with Project phasing revisions	**83**	**55**	**27**	**9.0**
Significance Threshold	54	54	82	54
Above Threshold?	**Yes**	**Yes**	No	No

Table 9: Unmitigated Average Daily Emissions for the Maximum Commercial Scenario with Pump Station During Construction in Phase 4

	Average Daily Emissions (lb/day)			
	ROG	**NOx**	**PM_{10}**	**$PM_{2.5}$**
Phase 4 Construction Draft EIR	21	24	0.9	0.9
Phases 1, 2, and 3 Operation Draft EIR	115	73	58	18
Phase 4 Total Draft EIR	**136**	**97**	**59**	**19**
Significance Threshold	54	54	82	54
Above Threshold?	**Yes**	**Yes**	No	No
Phase 4 Construction with Pump Station	21	25	1.0	0.9
Phases 1, 2, and 3 Operation Draft EIR	115	73	58	18
Phase 4 Total with Pump Station	**136**	**98**	**59**	**19**
Significance Threshold	54	54	82	54
Above Threshold?	**Yes**	**Yes**	No	No

Table 10: Mitigated Average Daily Emissions for the Maximum Commercial Scenario with Pump Station During Construction in Phase 4

	Average Daily Emissions (lb/day)			
	ROG	**NOx**	**PM_{10}**	**$PM_{2.5}$**
Phase 4 Construction Draft EIR	19	10	0.24	0.23
Phases 1, 2, and 3 Operation Draft EIR	103	64	49	16
Phase 4 Total Draft EIR	**122**	**74**	**49**	**16**
Significance Threshold	54	54	82	54
Above Threshold?	**Yes**	**Yes**	No	No
Phase 4 Construction with Pump Station	19	10	0.27	0.23
Phases 1, 2, and 3 Operation Draft EIR	103	64	49	16
Phase 4 Total with Pump Station	**122**	**74**	**49**	**16**
Significance Threshold	54	54	82	54
Above Threshold?	**Yes**	**Yes**	No	No

Implications of Construction Phasing Revisions and the Pump Station Construction in Phase 4 with Respect to Health Risk

Findings of Draft EIR

The Draft EIR assessed Health risks of the proposed project in consideration of both construction-related emissions of diesel particulate matter (DPM) and fine particulate matter (PM2.5). for the off-site receptors (residential and school), where the background cancer risk is 44 in one million for the maximum Residential Scenario and 51 in one million for the Maximum Commercial Scenario, the maximum increased cancer risk from construction would be 14 in one million with mitigation. Addition of this contribution to the existing background resulted in cumulative incremental cancer risk of 58 in one million and 66 in one million, respectively. These values are well below the 100 in one million significance threshold used to define the Air Pollution Exposure Zone.

With respect to on-site receptors where the background cancer risk is 34 in one million for the maximum Residential Scenario and 35 in one million for the Maximum Commercial Scenario, increased cancer risk from construction would be 20 in one million with mitigation for the Maximum Residential Scenario and 51 in one million for the Maximum Commercial Scenario. Addition of these contributions to the existing background resulted in cumulative incremental cancer risks from construction of 54 in one million and 86 in one million, respectively. These values are also well below the 100 in one million significance threshold.

Maximum Residential Scenario

Construction phasing changes proposed for the Maximum Residential Scenario include Parcel A being developed in Phase 2 instead of Phase 3 while Parcel C1 would be developed in Phase 4 instead of Phase 2. This change moves a phase 2 construction project (parcel C1) that would be closest to both off-site and on-site (parcel PKN developed in Phase 1) receptors to a later construction phase when Mitigation Measures M-AQ-1a: Construction Emissions Minimization will be in place. For the mitigated scenario, all equipment greater the 50 horsepower would be required to have engines that meet U.S. EPA Tier 4 engine standards and impacts would be less than significant for both on-site and off-site receptors. While parcel A moves earlier, from Phase 3 to Phase 2, it is located further away and downwind from both off-site and on-site (parcel PKN) receptors, which would result in a lesser health impacts than studied in the Draft EIR. As such, both of these changes would be expected to have a net decrease of construction-related health risks compared to that predicted in the Draft EIR.

With regard to health risk impacts, construction of the pump station in Phase 4 would reduce the unmitigated impacts to both on-site and off-site receptors predicted in the Draft EIR as the construction fleet would be cleaner than the unmitigated fleet that assumed for Phase 1 of project construction in the Draft EIR (as discussed earlier for parcel C1). These changes would not result in a change in the significance determination of toxic air contaminant impacts nor the implementation phasing of Mitigation Measure 1A identified in the Draft EIR.

Maximum Commercial Scenario

Construction phasing changes proposed for the Maximum Commercial Scenario include residential parcel C2 being developed in Phase 2 instead of Phase 3 while residential Parcel PKS would be developed in Phase 3 instead of Phase 2. This change moves a phase 2 construction project (parcel PKS) that would be closest to both off-site and on-site (parcel PKN developed in Phase 1) receptors to a later construction phase when Mitigation Measures M-AQ-1a: Construction Emissions Minimization will be in place. For the mitigated scenario, all equipment greater the 50 horsepower would be required to have engines that meet U.S. EPA Tier 4 engine standards and impacts would be less than significant for both on-site and off-site receptors. While parcel C2 moves earlier, from Phase 3 to Phase 2, it is located further away and downwind from both off-site and on-site (parcel PKN) receptors, which would result in a lower health impacts than studied in the Draft EIR. As such, both of these changes would be expected to have a net decrease on construction-related health risks compared to that predicted in the Draft EIR.

With regard to health risk impacts, construction of the pump station in Phase 4 would reduce the unmitigated impacts to both on-site and off-site receptors predicted in the Draft EIR as the construction fleet would be cleaner than the unmitigated fleet that assumed for Phase 1 of project construction in the Draft EIR (as discussed earlier for parcel PKS). These changes would not result in a change in the significance determination of toxic air contaminant impacts nor the implementation phasing of Mitigation Measure 1A identified in the Draft EIR.

Health Risk Implications of Addition of Day Care Facilities to Residential-designated Parcels

Project revisions include consideration of potential child care facilities in parcels C2, D, E1 and E2. All four of these parcels were considered to be residential uses in Impact AQ-3 of the Draft EIR for both Maximum Residential and Maximum Commercial Scenarios. Consequently, potential child care locations were considered and analyzed in the FEIR as a sensitive residential receptor (with infants and children present). As such,

exposure of infants and children at these locations was explicitly evaluated and the analysis of the FEIR sufficiently predicts health risks for a child care facility at these locations. These changes would not result in a change in the significance determination of toxic air contaminant impacts nor the implementation phasing of Mitigation Measure 1A identified in the Draft EIR.